



MERCEDES-EQ

Press Information

March 2023

The new EQE SUV: high-tech and luxury meet versatility

Contents

The essential information and innovations

The new EQE SUV: the key points at a glance 3

Interesting facts & figures

The new EQE SUV: at a glance 7

On the way to "Electric Only"

The new EQE SUV: a commitment to sustainability 8

Powerful and efficient

The new EQE SUV: the electric drive..... 10

Powerful cell chemistry meets intelligent software

The new EQE SUV: the traction battery 12

Intelligent support in many situations

The new EQE SUV: the driving assistance systems 13

High levels of driving dynamics and handling

The new EQE SUV: the suspension..... 15

Activating additional functions after buying a new car

The new EQE SUV: over-the-air technology (OTA) 17

Personalized content, impressively presented

The new EQE SUV: MBUX (Mercedes-Benz User Experience)..... 18

Intelligent glimpse into the future

The new EQE SUV: Navigation with Electric Intelligence 20

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

Mercedes-Benz AG, Stuttgart, Germany | Domicile and Court of Registry: Stuttgart, Commercial Register 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

Efficient use of waste heat from the powertrain	
The new EQE SUV: climate control.....	21
Four different soundscapes for a special acoustic experience	
The EQE SUV: the Sound Experiences.....	22
Intelligent light assistance and comprehensive wellness program	
The new EQE SUV: the equipment highlights.....	23
Sporty, robust SUV character featuring purpose design	
The EQE SUV: the exterior design.....	25
High aerodynamic performance with many detailed measures	
The new EQE SUV: aerodynamics.....	26
Airy, spacious, variable	
The new EQE SUV under the magnifying glass: dimensional concept.....	28
Avant-garde architecture with a special atmosphere	
The new EQE SUV: the interior design.....	29
Designed for many eventualities	
The new EQE SUV: passive safety.....	30
Highly flexible and comprehensively digitized	
The new EQE SUV: production.....	34
Quick Reference Guide	
The new EQE SUV: production.....	35

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 information about the vehicles offered, including the WLTP figures, can be found for each country at <https://www.mercedes-benz.com>

The essential information and innovations

The new EQE SUV: the key points at a glance

Stuttgart. The EQE SUV is the multipurpose variant of the EQE executive sedan. Like the latter, it is available with the essential innovations found in the EQS and at the same time is more dynamic than the EQS SUV. The EQE SUV is one of the most spacious representatives of its class, yet it is more compact than the EQE Sedan, at 119.3 inches it has a wheelbase that is 3.5 inches shorter. The external dimensions are 191.5/76.4/66.3 inches (length/width¹/height). As the fourth model after the two EQS and EQE Sedans, as well as the EQS SUV, the EQE SUV uses the new all-electric platform.

Range of up to 279 miles according to EPA estimates

The modular drive concept enables the EQE SUV to offer a wide range of maximum total outputs from 215 kW to 300 kW. Fitted standard with a 90.6 kWh battery, the EQE 350+ SUV delivers 279 miles of range according to EPA estimates. In the EQE SUV, the lithium-ion battery consists of ten modules. In certain cases the innovative battery management software, which was developed in-house, allows updates over the air (OTA).

Extensive range of driving assistance systems

The current generation of driving assistance systems includes numerous functions that support the driver. The general standard equipment of the EQE SUV includes Active Brake Assist, Active Lane Keeping Assist, and Parking Package with Surround View System. The status and activity of the systems are shown in a full-screen view in the assistance display in the driver's display. Further options are available in the Driver Assistance Package.

Particularly maneuverable and agile

The chassis of the new EQE SUV comprises a four-link suspension at the front and an independent multi-link suspension at the rear. Due to the comparatively short wheelbase of 119.3 inches and the corresponding suspension tuning, it feels particularly agile and maneuverable. The AIRMATIC air suspension with ADS+ continuously adjustable damping is available as an optional extra. To increase ground clearance, the vehicle level can be raised by up to 1 inch. In addition to the DYNAMIC SELECT programs of ECO, COMFORT, SPORT and INDIVIDUAL, the EQE SUV models with 4MATIC also boast the OFFROAD program for off-road driving. A rear axle steering system with a maximum steering angle of 10 degrees is available as an option.

Always up to date

The EQE SUV offers the possibility of activating additional vehicle functions via over-the-air technology (OTA) in a number of functional areas. This means that after purchase and having chosen the original new car configuration, some of the EQE SUV's equipment can be individually customized. The OTA functions are available in the Mercedes me Store², and the range will be successively expanded.

Clever route planning

When it comes to Navigation with Electric Intelligence, the name says it all as it plans the fastest and most convenient route, including charging stops, based on numerous factors. It also reacts dynamically to traffic jams or a change in driving style, for example. Navigation with Electric Intelligence also calculates the

¹ Without mirrors.

² 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.

expected charging costs for a charging stop. The customer also has the option of editing the planned route individually. They can add preferred charging stations along the route or exclude suggested charging stations.

Pre-entry climate control based on driver habits

The new LEA allows greater convenience and gentler battery charging. This algorithm uses machine learning to predict customer behavior surrounding departure times. If the system detects that the vehicle regularly sets off from a certain place at a certain time, this recurring process is entered into the departure time menu automatically, enabling pre-entry climate control in the interior at just the right time. In addition, the battery can be charged to the required level in time for departure if the corresponding charging program is selected.

Heat pump as standard

The EQE SUV features a sophisticated thermal architecture with a heat pump as standard. This makes the system work very efficiently: the waste heat from the electric drive (inverter and electric motor) and also the high-voltage battery can be used to heat the interior. This drastically reduces the draw on battery power for the heating system, thus increasing the range. Another pleasant and efficient function is pre-entry climate control. The THERMATIC automatic climate control system with two climate zones is fitted as standard, while the THERMOTRONIC with four zones is available as an option. **New sound experience**

"Serene Breeze" is the name of the new, fourth soundscape that makes its debut in the EQE SUV. It offers a relaxed and natural sound. With the holistic sound staging, the paradigm shift from combustion engine to electric car becomes audible for the occupants in the Mercedes-EQ models. A variety of soundscapes allows for an individual acoustic set-up. An optional interior driving sound is available. This adjusts adaptively to the driving style.

DIGITAL LIGHT with selectable animations

New features in the EQE SUV include the DIGITAL LIGHT Custom Animations, which is part of the DIGITAL LIGHT system (optional)³. In addition to Digital Rain and Brand World, customers can select further welcome and goodbye animations. Mercedes-Benz is successively expanding this offering. Custom Animations will also include market-specific and seasonal animations, such as Thanksgiving in the US.

A host of high-tech features

Another equipment highlight is ENERGIZING AIR CONTROL Plus. A HEPA (High Efficiency Particulate Air) filter cleans the incoming outside air at its very high filtration level. ENERGIZING COMFORT links together various comfort systems in the vehicle. The individual ENERGIZING COMFORT programs enable a special feel-good program depending on the mood or needs of the customer. This enhances physical comfort and performance while driving and during a break. Dolby Atmos®, part of the standard Burmester® 3D Sound System, takes the audio experience in the EQE SUV to a new level.

Distinctive purpose design

The proportions of the EQE SUV combine function and aesthetics with the sporty character of the SUV. The new model, with its unmistakable purpose design, marks a turning point in its class. The overhangs and the front-end assembly have been kept compact. The wheels vary in sizes from 19 to 21 inches and are positioned flush with the outer edge of the body and lend a commanding stance.

³ Expected to be available from the second half of 2023 onwards. The car needs to be equipped with DIGITAL LIGHT with projection function and the Individualization Package. 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.

A great deal of aerodynamic fine tuning

The EQE SUV shares some aerodynamic measures with its model siblings⁴. The underbody with its numerous aerodynamic details plays a central role in a very good C_d value, which was achieved despite the large load volume and short rear overhang. But the dimensional concept with the flat windshield, sweeping roof line and indents were also important factors.

High level of passive safety

The principles of Integral Safety apply regardless of the type of drive system. Like all other Mercedes-Benz models, the EQS SUV therefore has a rigid passenger cell, special deformation zones and modern restraint systems. The EQE SUV can detect whether the rear seats are actually occupied. If a passenger in the rear is not wearing a seat belt, the driver receives a specific warning. The occupant presence reminder can indicate children who may have been overlooked in the rear of the vehicle. In vehicles for Europe, Australia, New Zealand, USA, and Canada, this system is on board as standard.

Net carbon-neutral production as part of the eco-balance

Production of the EQE SUV began at the Mercedes-Benz plant in Tuscaloosa (USA) in December 2022. The battery factory in nearby Bibb County supplies the batteries for this model as well as for the EQS SUV. Since 2022, all of Mercedes-Benz's own passenger car and van plants worldwide have achieved net carbon neutral production as part of their eco-balance - including the two Mercedes-Benz plants in Alabama.

⁴ The EQE SUV achieves an outstanding c_d value of 0.25 with AIRMATIC, a 19-inch wheel/tire combination (optional equipment Code R17) and running boards.

The key technical data

		EQE SUV
Drive system and battery		Rear wheel or all-wheel drive
Electric motor(s):	Typ	Permanently excited synchronous motor(s) (PSM)
Output	kW, (hp)	EQE 350+ - 215 kW (288 hp) EQE 350 4MATIC - 215 kW (288hp) EQE 500 4MATIC - 300 kW (402 hp)
Torque	lb-ft	EQE 350+ - 417 lb-ft EQE 350 4MATIC - 564 lb-ft EQE 500 4MATIC - 633 lb-ft
Rated voltage	Volt	330
On-board charger (standard/optional)	kW	9.6
Battery capacity, usable	kWh	90.6
AC charging time, three-phase (11/22 kW)	h	10.75 hours (0% - 100% SOC)
DC charging capacity, max.	kW	170
DC charging time at fast charging station	min	32 min (10%-80%)
Vehicle		
Length/width/height	in	191.5/76.4/66.3
Wheelbase	in	119.3
Turning circle (without/with rear axle steering, 10°)	ft	40.4/34.5
Trunk volume	Cu-ft	14.0 behind second row 55.0 with seats folded flat
Range		
Range (EPA)	mi	Up to 279 miles

Interesting facts & figures

The new EQE SUV: at a glance

The electric motor on the rear axle is particularly powerful due to its **6-phase** operation: it has two windings with three phases each.

To recuperate, the driver does not need to press the brake pedal - pure **1-pedal** driving. Thanks to ECO Assist, the EQE SUV also decelerates automatically to a standstill when it detects vehicles ahead, for example at traffic lights.

The charging system is located above the rear axle of the EQE SUV. It can be used to charge the battery from a home wallbox or public charging with a charging capacity of up to **9.6 kW**.

Mercedes-Benz issues a battery warranty for its high-voltage batteries, and thus a performance guarantee to customers: **10 years** or a mileage of **155,000 miles** with a defined residual capacity.

The chassis of the new EQE SUV comprises a four-link suspension at the front and an independent multi-link suspension at the rear. Due to the comparatively short wheelbase of **119.3 inches** and the corresponding suspension tuning, it feels particularly agile and maneuverable even with the basic set-up.

The AIRMATIC air suspension with ADS+ continuously adjustable damping is available as an optional extra. To increase ground clearance, the vehicle level can be raised by up to **1 inch**. Optionally, customers can opt for rear axle steering with a maximum steering angle of **10 degrees**.

Many aerodynamic measures contribute to the high aerodynamic efficiency of the EQE SUV. These include novel, patent-pending wheel spoilers in front of the front axle. The lower edges have **17 prongs** each. Together with other details such as a small bumper and longitudinal ribs, they improve the flow of air to the front wheel.

With the holistic sound staging, the paradigm shift from the combustion engine to the electric car becomes audible in the Mercedes-EQ models. "Serene Breeze" is the name of the new, **4th** soundscape, which celebrates its premiere in the EQE SUV. It offers a relaxed and natural sound.

During CES 2023, Mercedes-Benz announced far-reaching plans to launch a global high-power charging network across North America, Europe, China and other key markets. By 2027, a network totaling more than **400 hubs** across North America with more than **2,500 high-power chargers** is planned to offer a premium, sustainable and reliable charging experience.

US customers of EQE SUV, will receive **two years** of complementary 30-Minute DC Fast Charging Sessions on the Electrify America Network (requires Mercedes Me Charge activation).

While conventional stereo systems usually have a left-right dynamic, Dolby Atmos® can use the entire range and create a **360-degree experience**.

The permissible trailer load for the 4MATIC models with all-wheel drive is up to **3500 lbs**.

On the way to "Electric Only"

The new EQE SUV: a commitment to sustainability

- Mercedes-Benz is setting the course for an all-electric future
- The EQE SUV contains resource-saving materials such as secondary steel
- Mercedes-Benz takes account of the entire value chain for all vehicle models

Nine important building blocks of the transformation towards sustainable mobility.

Electrified product portfolio

Since 2022, Mercedes-Benz has offered battery-electric vehicles (BEVs) in all segments in which the brand is represented. According to current plans, all new vehicle architectures are to be exclusively electric from 2025. Customers should then have a fully electric alternative to choose from for each model. The company is investing significantly more in research and development to achieve this. Between 2022 and 2030, a total of more than 40 billion euros has been earmarked for investments in battery-electric vehicles. The faster expansion of the range of electric vehicles will lead to a faster breakthrough of electric mobility. In 2025, Mercedes-Benz plans to introduce three all-electric architectures: MB.EA, AMG.EA and VAN.EA.

Transparent dialogue

Since 2005, Mercedes-Benz has already published product-related environmental information according to the ISO 14021 standard. The "360° environment check", which is conducted by external experts, is based on a comprehensive life-cycle assessment of the respective vehicle, in which many environmentally relevant details are documented. The Group's sustainability report has provided information on this annually since 2006. The annual Sustainability Dialogue brings together over 200 representatives from politics, business, science and society.

Net carbon-neutral production as part of the eco-balance

Mercedes-Benz is integrating the all-electric Mercedes-EQ models into the ongoing series production of its global production network. Eight Mercedes-EQ electric vehicles have been rolling off the production lines at seven locations on three continents since 2022. Since then, all Mercedes-Benz-owned passenger car and van plants worldwide have also achieved net carbon-neutral production as part of their eco-balance - including the two Mercedes-Benz plants in Alabama. To this end, emissions generated in Mercedes-Benz vehicle production and in the energy supply of the plants are consistently reduced and, where possible, avoided altogether. The company relies on three strategic pillars for doing so: continuous increase in energy efficiency, use of green power and realization of a sustainable heat supply. In addition, concrete CO₂ measures are agreed with suppliers.

Sustainable battery production as the goal

The local production of batteries is an important success factor for the electric offensive of Mercedes-Benz AG. It is crucial in order to be able to meet the global demand for electrified vehicles in a flexible and efficient manner. The Mercedes-Benz plant in Bibb County ensures net carbon-neutral production of battery systems as part of its eco-balance. In addition, as part of strategic partnerships, Mercedes-Benz has agreed to purchase battery cells manufactured in a CO₂-neutral manner.

Decarbonization of the supplier network

Almost 40 percent of the steel required for the EQE SUV bodyshell comes from the resource-saving secondary route. More than 100 kg of steel scrap is used as secondary raw material. In addition to a recycling rate of over 50 per cent, the materials used have a significantly reduced carbon footprint compared to the blast furnace route. In general, the supplier network provides a considerable part of the value creation and is

of crucial importance for the decarbonization goals. The majority of suppliers, who account for almost 90 percent of the annual purchasing volume, have already signed an [Ambition Letter](#). In it, they declare their willingness to exclusively supply parts produced in a net carbon-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 CO₂-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.

Raw materials from certified mining

Responsibly mined and processed raw materials provide the foundation for a sustainable fully electric Mercedes-Benz vehicle fleet. Mercedes-Benz therefore has the complex supply chains of battery cell suppliers audited according to OECD standards. In addition, Mercedes-Benz makes the "Standard for Responsible Mining" of the "Initiative for Responsible Mining Assurance" (IRMA) a key criterion for supplier decisions and contracts in raw material supply chains. In the future, the company will only work with suppliers who agree to these requirements. The goal is for the company to exclusively source battery cells with cobalt and lithium from audited sources in the future⁵.

Resource-conserving materials

Numerous EQE SUV components are made partly from resource-saving materials (recycled and renewable raw materials). These include, for example, grab handles with plastics from chemical recycling. In their production, fossil-based raw materials were replaced by biomethane and pyrolysis oil from recycled used tires. What's special is that the used tires come from Mercedes-Benz vehicles, among others. In this way, Mercedes-Benz is not only closing the materials cycle of used tires, the recycling of secondary materials also reduces the use of fossil-based resources as well as the CO₂ footprint of the plastic. The innovative recycled plastic has the same properties as virgin plastic made from fossil-based raw materials. For the interior, Mercedes-Benz uses a microfiber fleece fabric that has a suede look and feel, consisting of over 40 per cent recycled material.

Sustainable green electricity for charging en route

Since 2021 Mercedes-Benz has ensured a subsequent offset with green electricity when customers use Mercedes me Charge⁶ to charge their vehicles in Europe. It is guaranteed that corresponding amounts of green electricity are fed into the grid for charged energy quantities after the actual charging process. In addition, incentives are created to invest in renewable energy systems. In the first year after the purchase of an EQE SUV, there is no basic fee for Mercedes me Charge.

Sustainable battery usage is the goal

Mercedes-Benz takes a holistic approach to the battery life cycle: re-use, remanufacture and recycle. When the traction batteries of the Mercedes-EQ fleet reach the end of their life on the road, it is far from over. Mercedes-Benz Energy, based in Kamenz, develops innovative energy storage solutions as a subsidiary of Mercedes-Benz AG. Batteries from cars are connected to the grid as stationary energy storage devices. The spectrum for large-scale storage applications from Mercedes-Benz Energy ranges from peak load balancing and black start (power plant start-up independent of the mains supply) to uninterruptible power supply (UPS). The company's focus is in particular on applications from the 2nd life and replacement parts storage unit sector. Only then does material recycling take place.

⁵ For more information, see [here](#)

⁶ In order to allow use of the Mercedes me connect service "Mercedes me Charge", a separate charging contract with a selected third-party provider is required for charging payment and billing purposes. A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required for use of the Mercedes me connect services.

Powerful and efficient

The new EQE SUV: the electric drive

- **Modular drive concept with maximum total outputs ranging from 215–300 kW**
- **EQE 350+ delivers 305 miles of range according to EPA estimates**
- **Intelligent recuperation ensures a particularly efficient driving style**

All EQE SUVs have an electric drivetrain (eATS) on the rear axle. The versions with 4MATIC also have an eATS on the front axle. In the 4MATIC models, the Torque Shift function ensures intelligent, continuously variable distribution of drive torque between the rear and front electric motors and thus the use of the most efficient eATS in each case. The modular drive concept enables high overall performance and a long range.

To further increase the range, the electric motor at the front axle can be completely decoupled. This step is undertaken by what is known as the Disconnect Unit (DCU). The intelligent disconnection system works complete automatically depending on the driving situation and the required output. At low loads, the DCU switches into 4x2 driving mode, and both the electric motor and the relevant transmission at the front axle cease operation. This ensures that the drag losses otherwise normally experienced are largely eliminated.

The electric motors on the front and rear axles are permanently excited synchronous motors (PSM). On a PSM, the rotor of the AC motor is fitted with permanent magnets and therefore does not need to be supplied with power. The magnets – and thus the rotor – follow the rotating alternating current field in the stator windings. In the EQE SUV, Mercedes-Benz uses a pull-in winding for a particularly strong magnetic field. The motor is referred to as synchronous because the rotor turns at the same rate as the magnetic field of the stator. The frequency is adjusted in the power electronics inverters to the speed requirements of the driver. The advantages of this design include high power density, high efficiency and high power constancy. The motor on the rear axle is very powerful due to the six-phase design: it has two windings with three phases each.

Cooling: sophisticated thermal concept for high load capacity

Consistently high performance and multiple accelerations without a drop in power characterize the drive philosophy of the EQE SUV. This includes a sophisticated thermal concept with some special features. What is known as a water lance in the shaft of the rotor cools it from the inside. Other cooling elements in the cooling circuit are fins on the stator, a needle-shaped pin-fin structure on the inverter and a transmission oil cooler. This also brings more efficiency during cold driving, because the heat exchanger then serves to heat the transmission oil and thus reduces friction in the transmission.

Intelligent energy recovery: one-pedal driving to a standstill

The EQE SUV offers several variants of energy recovery by means of recuperation. In this process, the high-voltage battery is charged by converting the mechanical rotary motion into electrical energy during overrun or braking mode. The driver can manually select the deceleration in overrun mode in three stages (D⁺, D, D⁻) as well as the coasting function via shift paddles behind the steering wheel. Also available: D^{Auto}.

ECO Assist also offers situation-optimized recuperation; deceleration is so strong or weak that it ultimately results in the most efficient driving style. Recuperative deceleration is also used as far as possible for vehicles detected ahead until they come to a standstill, for example at traffic lights. The driver does not need to press the brake pedal for this; literally one-pedal driving.

Noise and vibration comfort: comprehensive measures

Even the design of the electric drivetrains (eATS) takes into account noise and vibration comfort, or NVH for short (Noise, Vibration and Harshness). The magnets are arranged inside the rotors in an NVH-optimized way

(known as 'lamination'). This also reduces the use of rare earths. The shape of the winding, the stator tilt, also causes less vibration, especially at low speeds. The coils in the stator are at an angle in relation to the permanent magnets of the rotor. Otherwise, what is known as cogging torque could occur, they would lead to slight but unpleasant vibrations when driving very slowly.

In addition, the eATS have a special foam mat all around as an NVH cover. The inverter cover has a sandwich construction of three metal and plastic layers. The eATS are doubly decoupled from the body via elastomer bearings: at the front axle opposite a supporting frame and this against the body, at the rear axle with a subframe.

Highly effective spring/mass components provide continuous sound insulation from the cross member under the windshield to the floor of the load compartment. Acoustic foams are inserted into many members during construction of the bodyshell.

The electric refrigerant compressor has an NVH cover as encapsulation. In the rear-wheel-drive EQE SUVs it is also soft-suspended, while in the 4MATIC models it is bolted directly to the front eATS. The operating strategy of the refrigerant compressor also contributes to the low noise level of the vehicle. Certain rpm ranges at which disturbing resonances may be audible when stationary or in a traffic jam are avoided or quickly passed through.

Charging components and functions: always connected

A latest-generation charging system sits above the rear axle of the EQE SUV. It can be used to charge the battery with a charging capacity of up to 9.6 kW. In addition, intelligent wallboxes from national partners are available to customers in the individual markets. Mercedes-Benz also has a partnership to provide an installation service for these wallboxes. This includes a preliminary check of the installation conditions, detailed advice and installation.

A DC fast charging system with a charging capacity of up to 170 kW is fitted on board for fast charging via direct current. High charging currents can be maintained for a long time through temperature and charging management.

Three charging programs are offered in the EQE SUV - Standard, Home and Work. In these, parameters such as departure time, air conditioning and maximum charge level can be preset. The Home and Work charging programs can be activated based on location. This means that they are switched on automatically as soon as the vehicle is parked at a charging point at the positions stored in the system. The user is informed about this in MBUX.

The new LEA allows greater convenience and gentler battery charging. This algorithm uses machine learning to predict customer behavior in respect of departure times. If the system detects that the vehicle regularly sets off from a certain place at a certain time, this recurring process is entered into the departure time menu automatically, enabling pre-entry climate control in the interior at just the right time. What's more, the battery can be charged to the required level in time for departure if the corresponding charging program is selected.

The EQE SUV also features the intelligent charging functions of ECO Charging (gentle program for the battery) and charging interruptions.

Powerful cell chemistry meets intelligent software

The new EQE SUV: the traction battery

- The lithium-ion battery in the EQE SUV consists of ten cell blocks
- Battery warranty is valid for ten years or 155,000 miles
- Updates Over the Air (OTA) possible for the battery management software

Battery development is a decisive factor in Mercedes-Benz's electrification strategy. After all, the battery is the heart of an electric car and makes a decisive contribution to, among other things, the range and thus the driving characteristics of the electric vehicle. With the EQS, a new generation of batteries with significantly higher energy density has been launched, from which the EQE SUV now also benefits. The new batteries set standards in terms of performance, efficiency and charging capacity.

They also meet the high Mercedes requirements in terms of safety, durability and sustainability. Mercedes-Benz issues a battery warranty for its high-voltage batteries, and thus a performance guarantee to customers: 10 years or a mileage of 155,000 miles with a defined residual capacity.

Comprehensive battery expertise

A team of experts at the Mercedes-Benz Battery Competence Center developed the highly efficient batteries entirely in-house. The software of the intelligent control system was also developed and programmed in the company.

A lithium-ion battery with ten cell modules is installed in the EQE SUV. This generation of batteries takes a big step towards the sustainability of cell chemistry: the optimized active material consists of nickel, cobalt and manganese in a ratio of 8:1:1. This has reduced the cobalt content to less than ten percent. The continuous optimization of the recyclability is part of Mercedes-Benz's holistic battery strategy. The aim is to be able to dispense entirely with materials such as cobalt through the use of innovative post-lithium-ion technologies.

Intelligent operating strategy

The battery is integrated into the EQE SUV's intelligent thermal management system with heat pump as standard. If the intelligent Navigation with Electric Intelligence is activated, the battery is preheated or cooled as needed while driving. As a result, the temperature at the charging point is in an optimal range for efficient charging. The desired temperature range of the battery is achieved with the aid of the cooling circuit and a PTC (Positive Temperature Coefficient) booster heater integrated into it.

Intelligent support in many situations

The new EQE SUV: the driving assistance systems⁷

- Active Brake Assist, Blind Spot Assist, Active Lane Keeping Assist and Parking Assist Package with surround view system as standard
- Driving Assistance Plus Package with an intersection approach function is available as an option
- Driving assistance system status and activity are shown on the driver's display

The **Driver Assistance Package** is also offered as an optional extra. This includes:

- A new feature is the intersection start-off function, which provides additional safety measures when moving at intersections with cross traffic. The system uses intuitive arrows in the driver's display to indicate which direction cross traffic is approaching. If the driver attempts to drive 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 Steering Assist helps the driver to follow within the lane. Special features include lane detection at low speeds additionally with 360° camera, very high availability and cornering performance on rural roads and improved lane centering on highways. Depending on the situation, a driving position which is off the center of the lane (i.e. on rural roads without center markings) can be used.
- 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 from the present lane by broken lane markings, and no other vehicles are detected in the relevant danger zone.
- Active Emergency Stop Assist brakes the vehicle to a standstill in its own lane if it recognizes that the driver is no longer responding to the traffic situation for a longer period.
- The Active Brake Assist with cross-traffic function can use the sensors installed in the vehicle to register whether there is a risk of collision with vehicles in front, crossing or oncoming. 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 EQE, in addition to standing, crossing pedestrians, pedestrians walking alongside and vehicles and cyclists can also be taken into account. The speed range is up to 68 mph, support is also provided on inner city routes.
- 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 warnings and steering intervention.

⁷ The driving assistance and safety systems from Mercedes-Benz are aids and do not relieve drivers of responsibility. The driver should follow the instructions in the Owner's Manual and note the system limits described there.

- 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 6 mph. If the driver ignores the warnings and still tries to change lanes, the system can take corrective action by one-sided braking intervention at the last moment at speeds over 19 mph. 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 of 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.
- PRE-SAFE® Impulse Side (availability depending on selected equipment) can move the affected driver or front passenger away from the danger 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 backrest are inflated in fractions of a second.

High levels of driving dynamics and handling

The new EQE SUV: the suspension

- **AIRMATIC air suspension is available as an option**
- **4MATIC versions with OFFROAD program for off-road driving**
- **Optional rear axle steering for manoeuvrability in the city and agility over land**

The optional AIRMATIC air suspension responds in a particularly perceptive way. It combines air suspension bellows with adaptive ADS+ dampers whose characteristics can be varied at each individual wheel, fully automatically, in both the compression and rebound stages. 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. Spring and damper are combined in one strut on the front axle.

This level control is part of AIRMATIC. It keeps the ground clearance constant irrespective of the vehicle load, but also makes changes when needed. To increase ground clearance, the vehicle level can be raised by up to 1 inch. This is possible up to a speed of 50 mph. The body can be raised by 1 inch at the touch of a button below 37 mph. Above 43 mph it is automatically lowered back to normal level. Furthermore, in the COMFORT and SPORT programs, the body is automatically lowered by 0.4 and 0.8 inches, respectively, at speeds above 75 mph to reduce wind resistance and increase driving stability. If the vehicle drops below 50 mph, the body level returns to the initial position.

As maneuverable as a compact car: both axles can do the steering

Thanks to rear axle steering (optional extra), the EQE feels as maneuverable as a compact car in the city. The steering angle at the rear axle is up to ten degrees. The turning circle is reduced from 40.4 to 34.4 feet with rear axle steering.

The interaction between the front axle and rear axle steering was designed so that the steering offers agile response and requires little effort when driving in the city and on country roads. At the same time, a very high level of stability is achieved. This results in small side-slip angles and a high level of yaw suppression. At high speeds, the focus is more on stability, though without compromising precision and responsiveness. This added value is achieved by the integrated actuation of steering and brakes (ESP®), and considerably improves driving safety as a result.

DYNAMIC SELECT: with off-road drive program

The driver can change the characteristics of the drive, ESP®, suspension and steering using DYNAMIC SELECT. In addition to ECO, COMFORT, SPORT and INDIVIDUAL, the 4MATIC versions of the EQS SUV feature OFFROAD, a further mode for off-road driving. Overall, the accelerator pedal curve is much flatter. When equipped with AIRMATIC, the vehicle level is raised by 1 inch. At speeds above 43 mph, the vehicle lowers to normal level. If the speed falls below 31 mph, the vehicle is raised again. Two versions of the OFFROAD driving mode with and without ESP® can be selected:

In the OFFROAD driving mode with activated ESP®, little slip is permitted on the potentially spinning wheels. With this, significantly fewer tracks are left behind on, for example, wet grass. This is achieved through torque balancing between eATS and ESP®. The pressure in the control system thus matches the torque at the wheel exactly. When articulated in the terrain, a kind of pre-filling takes place. This means that the unloaded wheel is already supplied with pressure in the wheel brake during the rebound phase in order to prevent it from spinning.

The aim of the OFFROAD drive program with ESP® OFF is to allow sufficient slip, but still make the vehicle safely controllable. A lot of wheel slip, for example, is helpful to have enough propulsion on sand - the vehicle burrows forward. The control thresholds of the ASR traction control system are significantly widened here. Even in potentially critical situations, such as turning around on a dune, when the momentum is not enough to reach the top, the driver always has full torque available. Power is sufficiently available from the eATS.

The off-road ABS works with significantly more slip. The slip is reduced via the steering angle so that the vehicle remains steerable. Downhill Speed Regulation (DRS) is now realized via the iBooster and not via a hydraulic unit (ESP®), as the models with combustion engine. As a result, DRS now controls much more quietly and even more smoothly.

The default setting is the COMFORT driving mode. The selection is acknowledged by audible and visual feedback. The desired driving mode is shown as the status and depicted on the central display.

Activating additional functions after buying a new car

The new EQE SUV: over-the-air technology (OTA)

- OTA activation of additional vehicle functions is possible in certain areas
- Allows personalization options after buying a new car
- Range of OTA functions is being successively expanded in the Mercedes me Store

The Individualization Package is available in the Mercedes me Store⁸. It comprises:

- Further Coming Home/Leaving light animations such as the DIGITAL LIGHT Custom Animations (see section on equipment highlights for details) and Brand World
- The additional Sound Experience "Roaring Pulse". It is reminiscent of powerful elements such as large-volume combustion engines, turbines and the forces of nature.
- Several entertaining mini-games for the front passenger such as Sudoku, Pairs and Shuffle Puck
- Emotional and individual modes such as Romance mode.

Two **digital safety functions** allow the handling characteristics of the EQE SUV to be adapted for specific target groups. In both modes not only is the maximum speed restricted, but the acceleration capacity is also reduced:

- In beginner driver mode, the driving characteristics are deliberately gentle. The DYNAMIC SELECT drive program Comfort is automatically activated, the drive programs Sport and Individual are locked. The maximum speed is limited to approx. 75 mph, ESP-OFF cannot be activated.
- With valet mode, the characteristics are similar to the beginner driver mode. A maximum of approx. 50 mph is possible. Personal profile data such as the home address or "last destinations" are protected from unauthorized access.

The main user activates and deactivates these programs via their personal profile, which is protected with a PIN and/or biometric recognition, or conveniently via the Mercedes me App from the smartphone. The modes cannot be activated while driving, but only when the vehicle is stationary.

Independently of these new functions, it is also possible to update most of the control units in the vehicle via OTA. This technology saves the customer time, as there is no need to visit a dealership for this purpose. Furthermore, many functions of their vehicle can be updated throughout its lifetime. The explicit consent of the user is always a precondition for OTA updates. Mercedes-Benz relies on mobile radio technology and the communication module installed in the vehicle because of the high security standard.

⁸ 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.

Personalized content, impressively presented

The new EQE SUV: MBUX (Mercedes-Benz User Experience)

- Exceptionally user-friendly zero-layer interface
- Online Music⁹ fully integrates a wealth of music streaming services

Supported by artificial intelligence, the MBUX system proactively shows the right functions for the user at the right time. The system responds to changes in the environment and user behavior to optimize itself on an ongoing basis. Zero layer offers the user dynamic, aggregated content from the entire MBUX system and associated services at the top level of the MBUX information architecture.

The navigation app is in the center of the screen unit with its full range of functions. Over 20 other functions – from ENERGIZING COMFORT to birthday reminders and suggestions for the to-do list – are automatically offered with the help of artificial intelligence when they are relevant to the customer. The user can accept or reject the respective suggestion with just one click. Here are three example use cases:

- When approaching a charging station that allows Plug & Charge, the Charging module appears automatically. The driver can then start charging immediately.
- If someone always calls one particular friend on the way home on Tuesday evenings, in future they will always receive a suggestion regarding this particular call on this day of the week and at this time. A business card appears with their contact information and – if this is stored – their photo. All the suggestions from MBUX are linked with the profile of the user.
- If the user regularly switches on the heating of the steering wheel in addition to the seat heating, this is suggested to them as soon as they activate the seat heating.

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. Moreover, certain actions can be performed even without the activation keyword "Hey Mercedes". For example, taking a telephone call. "Hey Mercedes" also explains vehicle functions, and, for example, can help when asked how to connect a smartphone via Bluetooth. "Hey Mercedes" can also detect occupants audibly. Once the individual voice characteristics have been learned, this can be used to access personal data and functions by activating a profile.

Online music: music streaming with millions of songs to choose from

With the "Online Music" service, Mercedes-Benz has now fully integrated the major music streaming services – Spotify, Amazon Music and Apple Music – into the MBUX infotainment system. MBUX enables access to the personal user profile at the linked music providers. This allows customers to seamlessly access their favorite songs and playlists and discover millions of songs as well as curated playlists.

Personalization is simple and convenient

A personal profile can be created directly in the EQE SUV and synchronized with the existing profile data of the Mercedes me account. By scanning a QR code with the Mercedes me App, the vehicle is automatically connected to the Mercedes me account.

⁹ In order to be able to use the Online Music service, customers will require a separate personal contract with a selected streaming provider. A certain data volume is also necessary.

Personal preferences such as a favorite radio station and preselected settings can be transferred to any seat via the personal Mercedes me profile. Up to seven different profiles with a total of around 800 parameters are possible in the vehicle. The ambient lighting can be individually set by remote configuration, i.e. from home. 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 new MBUX generation.

In addition to the classic entry of a PIN, a special authentication procedure ensures a high level of security. Fingerprint and voice recognition are combined. This allows access to individual settings or verification of digital payment processes from the vehicle.

Intelligent glimpse into the future

The new EQE SUV: Navigation with Electric Intelligence

- Plans the fastest and most convenient route, including charging stops, based on numerous factors
- Reacts dynamically to traffic jams or a change in driving style
- Customers can edit the planned route and add preferred charging stations

While a conventional range calculator relies on past data, the Navigation with Electric Intelligence system looks to the future. The energy demand is computed for the calculation of the route. The topography, route, ambient temperature, speed, heating and cooling requirements are all taken into account. Further factors include the traffic situation along the planned route, as well as the available charging stations to be found there, their capacity and payment functions. Calculation takes place in the cloud and is combined with on-board data.

The customer does not necessarily always have to take on a full charge, but will be given a specific recommendation as to the required charging time at the charging station. The charging station stops are planned in the way that takes into consideration the overall traveling time: under certain circumstances, two short charging stops with a higher charging capacity can be more advantageous than charging once for a long time. In addition, Navigation with Electric Intelligence automatically adjusts the vehicle's charging settings and optimizes them for fast charging along the route.

MBUX displays whether the available battery capacity is sufficient to return to the starting point without charging. Charging stations along the route that have been added manually are given preference in the route calculation. Proposed charging stations can be excluded. The system calculates the expected charging costs per charging stop.

If there is a risk of not reaching the destination or the charging station with the selected settings, Active Range Monitoring issues the prompt to activate ECO driving functions. In addition, the driving speed for reaching the next charging station or the destination is calculated and displayed in the speedometer. Under the menu item "Range", the driver can switch off various energy consumers to increase the range and activate the ECO driving functions to support a more efficient driving style.

Efficient use of waste heat from the powertrain

The new EQE SUV: climate control

- Sophisticated thermal architecture with a heat pump as standard
- Pre-entry climate control enhances comfort and efficiency
- Standard-fit two-zone climate control, optional four-zone available

A heat pump – a familiar concept from domestic heating systems – transports the warmth from a low to a higher temperature level. In this way, "cold thermal energy"¹⁰, which occurs frequently in electric vehicles in particular, can be accessed for heating the interior.

Thanks to the heat pump, the system works very efficiently: the waste heat from the electric drive (inverter and electric motor) and also the high-voltage battery can be used to heat the interior. This reduces drastically the draw on battery power for the heating system, thus increasing the range.

But the other functions of the intelligent thermal management also support the occupants in many ways. Did you know that...

... the pre-entry climate control works using target values? This means that if the driver enters their departure time directly via MBUX or via the Mercedes me App and the vehicle is at a charging station, the EQE SUV is air-conditioned to the preset temperature at the start of the journey. The driver can do this either individually for each journey and every stretch of the journey, or with the help of a weekly profile. Pre-entry climate control is also activated automatically for five minutes as soon as the vehicle is unlocked using the key.

... the automatic climate control system offers ECO and ECO+ modes in addition to the comfort setting? With ECO, the operation of the air conditioning is still possible without restrictions with reduced heating and cooling capacity. In ECO+ mode, only the fan and, if necessary, the waste heat from the eATS are used. The HV components compressor and heater, on the other hand, remain switched off. ECO and ECO+ reduce the energy consumption of the climate control functions, so minimizing the impact on the vehicle's range.

... several sensors ensure that the air in the interior is cooled or heated as required. In addition to indoor and outdoor temperatures, they also record the position of the sun. To prevent misted windows, a sensor in the base of the inside mirror measures the temperature of the window surface and the interior humidity. In addition, a humidity sensor is used to determine the humidity of the intake air. Thanks to this strategy, the energy demand of the system can be reduced in A/C mode with dry ambient air and no cooling requirement - a gain in efficiency. At the same time, this helps to prevent the passengers from suffering from dry eyes.

¹⁰ Temperatures just a few degrees above zero which are not perceived as warm

Four different soundscapes for a special acoustic experience

The EQE SUV: the Sound Experiences

- A variety of soundscapes for an individual acoustic set-up
- The fourth soundscape, Serene Breeze, is celebrating its premiere in the EQE SUV
- This sound, which can be activated subsequently, is relaxed and natural

The EQE SUV features the two soundscapes: Silver Waves and Vivid Flux. Silver Waves is a sensuous and clean sound. Aimed at EV enthusiasts, Vivid Flux is crystalline, synthetic yet humanly warm. They can be selected or switched off as Sound Experiences on the central display.

Two additional soundscapes can be unlocked using over-the-air technology:

- "Roaring Pulse" fits the character of the SUV particularly well. This Sound Experience is reminiscent of powerful machines, and is sonorous and extroverted.
- "Serene Breeze" offers a relaxed sound that is close to nature. The sound character picks up on the theme of wellness and unfolds an independent, unagitated interaction mechanism in the driving sound. The result is a symphonic blend of natural sound and sublime soundtrack.

Driver and passengers are already greeted acoustically when approaching the vehicle and when getting in. A corresponding aura sound also accompanies the exiting and locking of the EQE SUV. Also part of the particular soundscape is the driving sound, which is reproduced by the speakers in the interior. It evokes emotions and inspires. At the same time, the driving sound is interactive, as it responds to a good dozen parameters such as the accelerator position, speed or energy recovery. The amplifier of the Burmester® surround sound system uses intelligent sound design algorithms to compute the sounds in real time, and the speakers reproduce them.

The algorithms and sounds for the sound design are created in-house at Mercedes-EQ. In addition to physicists, the interdisciplinary team also includes sound designers, media designers and mechatronics specialists. In the acoustics laboratory, which is completely shielded from outside noise and vibrations, they work on the sound of the Mercedes-EQ model family. The sound experts determine which emotions the soundscapes evoke in real traffic during test drives. The mobile listening tests take place with interactive demonstrator vehicles, including at the Immendingen Test and Technology Centre (PTZ).

The experts used musical composition techniques such as harmony theory. The soundscape varies as the result of many sound dimensions. The sound design interacts with the vehicle. The multi-sensory experience is a balance between comfortable tranquility and precise, emotionally designed feedback on driving and driver behavior.

Intelligent light assistance and comprehensive wellness program

The new EQE SUV: the equipment highlights

- **DIGITAL LIGHT** with new animations
- **ENERGIZING AIR CONTROL Plus** with HEPA filter
- **Dolby Atmos®** for a new audio experience

DIGITAL LIGHT welcomes and says goodbye to the driver with a special light show. New features in the EQE SUV include the **DIGITAL LIGHT Custom Animations**¹¹. In addition to Digital Rain and Brand World, customers can change to further welcome and goodbye animations that will continue to expand in the future. Custom Animations will also include market-specific and seasonal animations, such as Thanksgiving in the US. The general and seasonal animations, stored in the back end, are selectable in the Mercedes me App. The vehicle then downloads the animation and transfers the software to the headlamp control unit.

DIGITAL LIGHT has a light module with three extremely powerful LEDs in each headlamp, 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. Based on data from the navigation maps, the topographic light takes driving up and down hills into account, especially peaks and valleys. Other special features include the following assistance functions¹²:

- Aiming a spotlight at pedestrians detected at the roadside as a warning
- Indication of the start of an automatic lane change (via Active Lane Change Assist)
- Warning and directional guidance when Lane Keeping Assist or Blind Spot Assist detects a hazard

With **ENERGIZING AIR CONTROL Plus**, Mercedes-Benz is thinking holistically about air quality in the EQE SUV. The system is based on filtration, sensors, a display concept and air conditioning. The HEPA (High-Efficiency Particulate Air) filter has a very high filtration level to trap fine particles, microparticles, pollen and other substances entering with the outside air. An activated carbon coating reduces Sulphur dioxide and nitrogen oxides as well as odors in the interior. The interior air filter of this optional feature was submitted by Mercedes-Benz in 2021 for "OFI CERT" ZG 250-1 certification from the Austrian Research and Testing Institute (OFI) with respect to viruses and bacteria, which it duly received.

Using pre-entry climate control, it is also possible to clean the interior air before getting into the vehicle. The fine-particle values outside and inside the vehicle are also displayed in the climate line. If the quality of the outside air is low, the system can also recommend closing the side windows or sunroof, as well as automatically switching to air-recirculation mode.

¹¹ Expected to be available from the second half of 2023 onwards. The car needs to be equipped with **DIGITAL LIGHT** with projection package and the Individualization Package (free for 12 months following activation when buying a new EQE SUV). 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.

¹² Due to the approval regulations, the availability and scope of functions may be restricted depending on the market.

The EQE SUV's active fragrance system, which is part of the AIR-BALANCE Package, appeals to the sense of smell. A special fragrance was composed for the new electric model: Hibiscus and lemongrass characterize No.6 MOOD hibiscus.

The holistic "Fit & Healthy" approach of **ENERGIZING COMFORT** makes it possible to experience the various comfort systems by touch input or voice command and bundles them together in programs to create worlds of experience. At the same time, the system creates a matching atmosphere in the interior – for example, invigorating in case of fatigue or relaxing in case of an elevated stress level. The ENERGIZING COMFORT offering in the EQE SUV includes:

- the programs Refresh, Warmth, Vitality, Joy and Well-being
- the three ENERGIZING NATURE programs Forest Glade, Sound of the Sea and Summer Rain
- as well as training and ENERGIZING tips

During a break in the journey, i.e. at a charging station, the Power Nap program can also be selected. The program has three phases – falling asleep, staying asleep and waking up – and can increase the driver's performance and give them new energy.

The Dolby Atmos® sound format, as part of the Burmester 3D Sound System takes the audio experience in the EQE SUV to a new level. Individual instruments or voices of the studio mix can be placed all around the listening area. A new kind of sound animation thus becomes possible, while conventional stereo systems usually have a left-right dynamic, Dolby Atmos® can use the entire space and create a 360-degree experience.

Sporty, robust SUV character featuring purpose design

The EQE SUV: the exterior design

- The proportions combine function and aesthetics with a sporty character
- The overhangs and the front-end assembly have been kept compact
- The wheels measuring up to 21 inches are positioned flush with the outer edge of the body and lend the vehicle a commanding stance

Key features of the front-end design:

The distinctive front is combined into a black panel unit and consistently continues the face of the new generation of Mercedes-EQ vehicles. As an optional extra, the black panel front is also available with the Mercedes-Benz three-dimensional star pattern. The concise daytime running light signet interprets the brand's characteristic flare. LED High Performance headlamps are standard, DIGITAL LIGHT is available as an optional extra. The simulated underguard gives the front a robust character. Depending on the equipment, it features a high-gloss chrome or dark finish. An air intake is integrated into the component.

Key features of the side design:

The side windows have a generous, dynamically running chrome surround in a 3D design. The exterior mirrors sit on the vehicle shoulder for aerodynamic and aeroacoustic reasons. Flush-fitting door handles are standard. A running board is optionally available, also offering aerodynamic advantages. On EQE SUVs without this option, a three-dimensional chrome trim divides the lower area. The service flap for the washer fluid is located on the side of the left wing. The large wheels in sizes ranging from 19 to 21 inches, together with the muscular shoulder area, give the EQE SUV a sporty, robust character.

Key features of the rear-end design:

Flowing surfaces and smooth transitions dominate at the rear and even visually conceal the luggage compartment sill. The light strip at the rear is continuous. The interior of the innovatively designed LED lights has the shape of a curved and illuminated 3D helix. The reversing camera is hidden behind the star, protected from dirt. Depending on the design and equipment line, a visual chrome underguard sits in the black surroundings of the lower bumper.

High aerodynamic performance with many detailed measures

The new EQE SUV: aerodynamics

- Impressive c_d value¹³ from 0.25 despite large load capacity and short rear overhang
- The underbody features numerous aerodynamic details such as turbulators
- A raft of aerodynamic fine-tuning measures to combat wind noise

Many aerodynamic measures result in the high aerodynamic efficiency of the EQE SUV. These include novel, patent-pending wheel spoilers in front of the front axle. With a serrated lower edge, small bumper and longitudinal ribs, numerous details contribute to improving the flow of air to the front wheel.

Special aero-claddings were developed for the aerodynamically optimized wheels. Depending on the equipment, these wheel trims mean an improvement of up to two C_d points compared with an aero-wheel without inserts. The optionally available running board drops down in the non-visible area on the underside. This has a positive influence on the airflow to the rear wheels and results in a measurable aerodynamic advantage.

Wheel spoilers also sit in front of the rear axle which have a bumper on the inside. Special cladding spoilers in the area of the rear side wall have a very large influence on the aerodynamic performance. They direct the airflow around the rear wheels. Depending on the rim size, the cladding spoilers on the EQE SUV are installed in two lengths.

The underbody paneling has striking details such as the jagged turbulators in the front section. They prevent displacement of the underbody airflow. The flow is directed downwards from the wheel arches. In addition, the underbody paneling on the EQE SUV has been supplemented with a thrust arm covering and a spring link covering. The latter is designed with a slope that directs the airflow from the battery to the diffuser. The diffuser angle of the rear diffuser has been optimized in the wind tunnel.

The side spoilers and roof spoiler on top of the rear moves the end of the roof edge back. In combination with the stronger constriction, this offers aerodynamic advantages. Even the tail lights have an integrated edge that functions as a spoiler. These details result in an aerodynamically advantageous rear end with sharp airflow break-away edges.

The following is an overview of the details of the aerodynamic development:

- Aerodynamically favorable dimensional concept
- Aerodynamically optimized wheels in all sizes, in the 19-inch entry size with aero-claddings, and equally aerodynamically optimized tires with improved geometry
- Cooling air control system
- Continuous seals in the front area, i.e. between service flap, black panel, headlamps and light strip
- Streamlined design of the A-pillar and water trap for better visibility of the outside mirrors even in adverse weather conditions
- Wheel spoilers at front and rear
- Special cladding spoilers in the rear side wall in front of the wheels

¹³ The EQE SUV achieves an outstanding C_d value of 0.25 with AIRMATIC, 19-inch wheel/tire combination (optional equipment Code R17, Continental ContiEco Contact 6Q MO tires) and running-boards. WLTP power consumption and range were determined on the basis of Commission Regulation (EU) No. 2017/1151.

- Spoiler integrated into tail lights
- Side spoilers and roof spoiler at the top of the rear end
- Extensive underbody paneling

Extensive sealing and insulation measures reduce wind noise

In an electric car without the usual level of drive noise, occupants often perceive wind noise more clearly. That's why the aeroacoustics behavior is particularly important. Lots of fine-tuning in the details: in order to reduce or prevent low-frequency noises that can be perceived as reducing comfort, numerous cavities in the car body were filled with acoustically effective foam, for example.

The high-frequency components of wind noise have also been reduced in the EQE SUV through improved seals on the windshield mount and on the outside mirrors. The aeroacousticians paid special attention to the seals of the transitions between the five side windows.

The optional Acoustic Comfort Package further enhances noise comfort. This includes acoustically effective laminated glass on the windshield and the side windows of the driver and passenger doors. On the panoramic roof, various wind deflectors, covers and seals with improved geometry ensure low noise levels despite the large roof opening.

Airy, spacious, variable

The new EQE SUV under the magnifying glass: dimensional concept

- Spacious despite compact external dimensions (length/width¹⁴/height: 191.6/76.4/66.4 inches)
- Wheelbase of 119.3 inches is 3.5 inches shorter than that of the EQE Sedan
- Practical cargo position of the rear seat backrests (optional) increases the load capacity

The space offered by the five-seater is very generous thanks to intelligent packaging based on the large electric platform. The headroom in the first row of seats is 39.4 inches, and in the second row it is 39.3 inches (figures with sliding sunroof). The subjective feeling of the high level of spaciousness is also confirmed by the elbow width of 60.6 inches on the driver's side. At 40.5 inches, legroom in the rear boasts a comfortable level.

The volume of the luggage compartment is 14.0 cu-ft. as standard. The backrests of the rear seats can be split in a 40/20/40 ratio. When the rear seat backrests are folded down completely, the load volume is basically 59 cu-ft. with roof-high loading. Diagonally, the loading dimension is 35 inches - a top value in this class.

If desired, the variability can be increased: if the rear seat backrests are set about 10 degrees steeper in the optional cargo position, the load volume is 20 cu-ft. In addition, this optional extra allows the rear seat backrests to be split in a 40/20/40 ratio. The smaller part in the middle can be folded down separately, so that a through-loading space is available and the two outer seats can still be used.

¹⁴ Without mirrors.

Avant-garde architecture with a special atmosphere

The new EQE SUV: the interior design

- Based on the large electric platform from Mercedes-EQ
- Systematically digitalized interior

The standard center console incorporates a soft armrest in the rear section. It is first visually interrupted before being transitioned into the floating central display. The smooth transition from 3D in the center console compartment to 2D on the touchscreen is seamless, i.e. without interrupting the glass-look design.

The Electric Art equipment line includes luxury seats with lavishly crafted covers. The comfort-oriented seats meet high demands with form-following, customized perforations in different layouts.

The vent band from the cockpit is visually continued in the front doors. A floating control cluster with integrated door opener and seat controls takes over the functional interpretation of formerly purely decorative elements. The door center panel develops in a sensual, dynamic movement from the vertical surface into the horizontal and thus integrates the armrest seamlessly. The front section of the armrest is designed as a metallic high-tech element that can be used as a free-floating grab and pull handle and contains the power window switch. In the dark, this floating, avant-garde aesthetic is particularly impressive thanks to an ambient light corona.

A special welcome & goodbye scenario has been developed for the Mercedes-EQ models, which is also coordinated with the ambient lighting.

Color & trim: avant-garde and tradition for a special ambience

Avant-garde, as well as traditional materials and colors, give the interior a special atmosphere. The modern, delicate NEOTEX structure combines the look of nubuck leather and high-tech neoprene. It can be found on the instrument panel and the armrest.

Five coordinated color combinations in the interior emphasize the generous sense of space. The EQE SUV is immersed in a progressive and luxurious color scheme of warm and cool tones that emphasize the sculptural and sensual design. For example, warm, modern sable brown is combined with techy-looking neva grey and biscaya blue/black. The color rose gold, derived and evolved from the electric coil, emphasizes the design of the vent band and is used as a contrasting color.

The innovative trim parts make a key contribution to the aesthetics in the EQE. A hybrid trim element brings together the warmth of wood with the technical coolness of real aluminum. The trim in an anthracite 3D relief-look finish, on the other hand, features fine metal pigments. The laser-cut trim element backlit with the Mercedes-Benz pattern also creates a special ambience. The star pattern is lasered into the plastic trim and is adaptively backlit.

UX design: multiple display styles and modes to choose from

The functional content and the operating structure are adapted to electric driving. Visually, all graphics are designed in a new color scheme of blue/orange throughout. The classic cockpit display of the two round dials has been reinterpreted with a digital light sabre in a glass lens. All content relevant to driving can be accessed between the round dials.

The appearance of the screens can be individualized with three display styles (Understated, Sport and Classic) and three modes (Navigation, Assistance, Service).

Designed for many eventualities

The new EQE SUV: passive safety

- Mercedes-Benz Integral Safety principles apply regardless of the type of drive system
- Rigid passenger compartment, special deformation zones and state-of-the-art restraint systems
- Occupant presence reminder can indicate children who may have been overlooked in the rear of the vehicle

The fact that the EQE SUV is based on an all-electric architecture also opened up new design possibilities for its safety concept. This made it possible to select the appropriate installation space for the battery in a crash-protected area in the underbody. And because there is no large engine block on board, the behavior in a frontal crash could be modeled even better. In addition to the standard crash tests, the car's performance in various additional load situations was verified and extensive component tests carried out at the [Vehicle Safety Technology Centre](#) (TFS). The particular focal points in an SUV include pedestrian protection and roof strength.

Safety structure: Accident protection is not a question of the powertrain concept

The bodyshell of the EQE SUV is largely made of different types of steel. Reinforcements made of high-strength steel are used in the main floor. Press-hardened steel reinforcements are intelligently integrated in the bodyshell structure and combined with high-strength, hot-formed steel components. The hot-formed steels in the A and B-pillars are partially annealed in the flange areas, i.e. they feature special thermal after treatment there. In the event of a crash, this can prevent the formation of cracks. This is how the strict Mercedes-Benz crash requirements are achieved.

Frontal impact

To ensure that the front end of the EQE SUV absorbs the energy as evenly as possible, a large crossmember connects the two longitudinal members. As in every Mercedes-Benz, the cross connection not only serves as self-protection, but is also a key component for the protection of other road users. Deformable crash boxes connect to the crossmembers, making it easier to repair minor damage.

In the event of a severe frontal impact, two longitudinal members made of high-strength steel absorb the main energy, depending on the accident scenario. A supporting role is played by an upper load path on the shock-absorber strut tower and a lower load path along the integral carrier. The integral carrier made of steel not only accommodates the eATS components, axle components and the steering gear, but also plays this key role in the event of a crash. In the event of more severe deformations, the wheels form an additional load path, whereby they are able to move towards the rear and be braced against the sill and/or sidewall. The geometry and strength of the sills have been designed for this accordingly. Honeycomb deformation elements are installed between the integral support and the battery housing, which can limit the force on the battery housing. The battery housing itself is extremely rigid and allows for relatively little deformation, so that the cells inside are not damaged. Reinforcing structural components have been additionally integrated into the front area of the underbody with minimal overlap for the load case.

Side impact

In principle, in a side impact, only a very small deformation path is available. High-strength structures in the EQE SUV therefore serve to protect the occupants, but also the battery. Alongside the doors with their reinforcements, the sidewall structure also comprises the pillars, the side roof frame and the side members/sills. Cross reinforcements in the underbody, as well as the very rigid battery housing, contribute to the high stability in a side impact. The sills are made of steel and feature a shell design, with an additional aluminum profile inserted. For a side impact, the sills are specifically designed to be deformable in order to avoid critical damage to battery modules as far as possible.

Rear impact

The EQE SUV is also equipped for rear impacts. As with the front-end assembly, a cross-member with bolted-on crash boxes helps to distribute the impact energy from a one-sided load to both longitudinal members. Thanks to the specific design of the structural components and the rear axle carrier, the requirements on battery safety have also been fulfilled.

Rollover

In the event of a rollover, it is particularly important that sufficient headroom is maintained and that measures are taken to prevent heads from possibly swinging out. At Mercedes-Benz, strict survival space requirements apply worldwide as part of its Real-Life Safety philosophy. For the EQE SUV, these were validated by roof-drop tests and roof indentation tests, among others. This means that even the strict requirements of the IIHS (Insurance Institute for Highway Safety) for roof indentation resistance can be met. In these tests, a pressure plate is applied to the roof structure on the A-pillar above the windshield on the driver's side and then on the passenger's side. The vehicle roof must withstand a compressive force that can reach up to four times the vehicle weight.

High-voltage system: automatic shutoff in the event of serious accidents

The battery, high-voltage (HV) cables and other HV components have been designed and protected in such a way that they meet Mercedes-Benz's high safety requirements in the event of an accident.

The multi-stage protection concept of the high-voltage (HV) system has already proven itself in the other Mercedes-EQ models. In case of danger, it can be automatically switched off and disconnected from the battery. A distinction is made between a reversible and an irreversible shutoff. A reversible shutoff can take place in the event of minor frontal collisions. Afterwards, it is possible to reconnect the high-voltage system by pressing the start button again.

If the vehicle does not detect a fault during the system check with insulation measurement initiated by this, the EQE SUV therefore remains maneuverable. Only in the event of severe frontal collisions, in which the vehicle is usually no longer drivable anyway, is the high-voltage system irreversibly switched off. It can no longer be activated without repair. This also applies to collisions from the side and in rollovers when restraint systems are triggered. The HV system is also irreversibly switched off in the event of a severe rear-end collision. When shutting down, there is a provision to ensure that within a few seconds, there is no residual voltage in the high-voltage system outside the battery that could cause injury.

In addition, disconnection points are also provided for the rescue forces, where they can deactivate the high-voltage system themselves.

A special feature is that the sensor system of the airbag control unit remains active even during the charging process. If an impact of a certain severity is detected while the vehicle is connected to a charging station, the EQE SUV can automatically interrupt the charging process.

Acoustic ambient protection: special sound as a warning for pedestrians

The acoustic ambient protection (standard) is an artificially generated vehicle noise. This makes it easier for pedestrians to perceive the EQE SUV at low speeds. One sound generator each is located in weatherproof locations in the front and at the rear in the underbody. An EQ-specific sound is generated up to a vehicle speed of approx. 18 mph. Initially it becomes louder and higher with increasing speed. This change allows conclusions to be drawn about the driving status (braking/acceleration).

Above 12 mph, the volume is then already gradually reduced, since the vehicle can then be perceived by its tire and wind noise. If the speed drops from a higher speed back down to 18 mph, the sound is faded in again. When reversing, an intuitively recognizable interval tone sounds regardless of the speed.

Sophisticated restraint systems

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. This is to prevent or mitigate injuries.

The standard window airbags can reduce the risk of head impact with the side window or penetrating objects. 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.

Pyrotechnic belt tensioners and force limiters are standard on all outer seats. There are optional side airbags for the second row of seats. They cover the chest area of the occupants in the outer rear seats in the event of a severe side impact and can therefore supplement the protection provided by the standard window airbags.

The EQE SUV 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 are installed particularly quickly and securely. Top-tether attachment points on the rear of the rear seat backrests provide additional support.

Warnings: if children and animals are overlooked

The occupant presence reminder can help to indicate children or animals that may have been overlooked in the rear of the vehicle. It activates and deactivates automatically if it can be assumed, for example, that small children could get in or out by opening a rear door for a longer period of time.

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 as standard

The PRE-SAFE® preventive occupant protection system comes as standard in the EQE SUV. Together with the familiar precautionary measures in the event of a potential frontal and rear-end crash, PRE-SAFE® Impulse Side (available in conjunction with the Driving Assistance Plus Package) forms a kind of virtual crumple zone that extends around the vehicle.

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 center of the vehicle even before the crash as soon as the system detects an impending side collision. For this purpose, air chambers in the side bolsters of the front seat backrest are inflated in fractions of a second.

Highly flexible and comprehensively digitized

The new EQE SUV: production

- Production started in December 2022 at the Mercedes-Benz plant in Tuscaloosa, Alabama (USA)
- Batteries are supplied from the factory in nearby Bibb County
- All Mercedes-Benz-owned passenger car and van plants have been achieving net carbon-neutral production as part of their eco-balance since 2022

The Mercedes-Benz plant in Tuscaloosa, Alabama, has been the production site for large SUVs bearing the three-pointed star since 1997. Mercedes-Benz also exclusively produces the all-electric EQE SUV at the North American plant. The EQE SUV is integrated into the ongoing series production at the Mercedes-Benz Tuscaloosa plant. The highly flexible production system of Mercedes-Benz makes it possible to assemble different models and powertrains on a single production line. This is evident in what is known as the "wedding station", for example, where bodywork and powertrain come together. This "full-flex wedding" comprises several modular stations that allow joining different powertrain variants with the respective vehicle bodies on the same assembly line. For example, the EQS SUV is produced on the same line as the conventionally powered SUVs, allowing the plant to adapt quickly to changes in customer demand.

Local battery production is a key success factor for Mercedes-Benz's electrification initiative. The battery factory in nearby Bibb County, which opened in March 2022, produces the battery systems for the EQE SUV on an approximately 984-foot-long production line with more than 70 work stations. In a fully digitalized production process, a large number of components are assembled into a complete system, including the cell modules and the EE compartment for the intelligent integration of the power electronics. The battery of the EQE SUV is based on a modular architecture that is also used in EQS, EQS SUV and EQE. When running at full capacity, up to 600 employees in two-shift operation produce batteries in the six digits annually.

Thanks to comprehensive digitization with the MO360 production ecosystem and the consistent application of Industry 4.0 technologies, the Tuscaloosa and Bibb County plants operate flexibly and highly efficiently. MO360 obtains real-time information from the most important production processes and IT systems of the approximately 30 Mercedes-Benz passenger car plants worldwide, and integrates important software applications.

Mercedes-Benz has invested more than seven billion dollars overall in Alabama since the 1990s. This includes one billion dollars in the construction of the new battery factory in Bibb County, in the logistics center and in the flexibilization of the production sites. At present, Mercedes-Benz U.S. International (MBUSI) employs a workforce of about 4500 and in addition secures some 11,000 more jobs at suppliers and service providers in the region. Since 1997, about four million vehicles rolled off the assembly line at the plant in Tuscaloosa. In 2021 alone, it was some 260,000 SUVs. About two thirds of the annual production output is exported, making MBUSI one of the biggest vehicle exporters in the USA.

At a Glance

	EQE 350+	EQE 350 4MATIC	EQE 500 4MATIC
MSRP	\$77,900*	\$77,900*	\$89,500*
Motor	Rear Axle, 215 kW Permanently Excited Synchronous Motor	Dual Motors – Front and Rear Axle Permanently Excited Synchronous Motors with 215 kW Total Output	Dual Motors – Front and Rear Axle Permanently Excited Synchronous Motors with 300 kW Total Output
Battery	Lithium Ion	Lithium Ion	Lithium Ion
Battery Capacity (kWh)	90.6	90.6	90.6
All-electric range (EPA)	279	253 (w/ all-season tires)	269
Charging time, wallbox (240V/32A)	9.5 hours (10 – 100%)	9.5 hours (10 – 100%)	9.5 hours (10 – 100%)
Charging time, DC Fast Charging (170kW, 10%-80%)	32 mins (10 – 80%)	32 mins (10 – 80%)	32 mins (10 – 80%)
Length	191.5	191.5	191.5
Width w/ mirrors (w/o mirrors)	84.3 (76.4)	84.3 (76.4)	84.3 (76.4)
Height	66.3	66.3	66.3
Wheelbase	119.3	119.3	119.3
Curb Weight (lbs)	5,300	5,635	5,665
Drive Config.	Rear Wheel Drive	Fully Variable 4MATIC All-Wheel Drive with Torque Shift	Fully Variable 4MATIC All- Wheel Drive with Torque Shift
Performance	288 hp / 417 lb-ft	288 hp / 564 lb-ft	402 hp / 633 lb-ft
Transmission	Single-speed	Single-speed	Single-speed
Estimated 0-60 mph (sec)	6.3	6.2	4.6
Estimated Top speed (mph)	130	130	130
Main Competitors	BMW iX SUV Audi e-tron SUV	BMW iX SUV Audi e-tron SUV	BMW iX SUV Audi e-tron SUV

* Above prices exclude \$1,150 destination and delivery charge

###

About Mercedes Benz

Mercedes-Benz USA (MBUSA), headquartered in Atlanta, is responsible for the distribution, marketing and customer service for all Mercedes-Benz products in the United States. MBUSA offers drivers the most diverse lineup in the luxury segment with 18 model lines ranging from the sporty GLA SUV to the flagship S-Class and the dynamic all-electric Mercedes-EQ family. MBUSA is also responsible for Mercedes-Benz Vans in the U.S. More information on MBUSA and its products can be found at www.mbusa.com and www.mbvans.com.

Accredited journalists can visit our media site at www.media.mbusa.com.

Contacts:

Michael Minielly michael.minielly@mbusa.com
Cathleen Decker cathleen.decker@mbusa.com