

The new Mercedes-Benz GLE

Press Information

The SUV trendsetter – completely re-conceived

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

The new Mercedes-Benz GLE under the microscope:
E-ACTIVE BODY CONTROL suspension system

The aspiration: the world's most intelligent suspension system

Even better ride comfort and agility, plus completely new functions such as free-driving mode, are provided by the optional E-ACTIVE BODY CONTROL suspension, which is now combined with the newly developed AIRMATIC air suspension. This is the only system in the market that can individually control spring and damping forces at each wheel, suppressing rolling, pitching and lifting movements. Together with ROAD SURFACE SCAN and the curve inclination function CURVE, E-ACTIVE BODY CONTROL makes a quite exceptional level of comfort possible, underscoring Mercedes-Benz's aspiration to build the world's most intelligent SUV suspension.

Active suspension systems have a long tradition at Mercedes-Benz. More than 40 years ago, research was already being conducted on spring and damper systems that would allow the power at each wheel to be individually controlled. The objective: to improve both ride comfort and vehicle dynamics. ABC (Active Body Control) first entered series production in 1999. In subsequent years ABC was continuously developed further, with the ROAD SURFACE SCAN function added in 2013 to produce the first predictive suspension that already responds to surface undulations before they are reached.

E-ACTIVE BODY CONTROL continues this tradition in a unique way. E-ACTIVE BODY CONTROL was developed in-house by Mercedes-Benz, has a 48 V operating voltage and is available in the GLE as optional equipment for engine variants with six and more cylinders. The system is based on the full AIRMATIC air suspension system, and therefore offers all-round level control which keeps the vehicle level constant irrespective of the load. The level can also be raised or lowered as required, to increase ground clearance. Different levels can also be selected in special off-road driving modes.

Furthermore, the hydropneumatics generate dynamic forces that overlay the air suspension forces and actively support and dampen the vehicle body, e.g. during linear and lateral acceleration or when driving on uneven roads. The body no longer squats or pitches during braking and acceleration, and on poor

road surfaces the system is even able to recuperate energy, roughly halving the energy requirement compared to the preceding system in the S-Class.

The active suspension also allows a very wide spread of handling characteristics that can be set with the driving mode – from the comfort of a luxury saloon to the agility of a sporty SUV. In addition the engineers have realised a number of new functions for the GLE:

- **Rocking mode:** If the GLE has become bogged down in a sand dune, for example, this mode - which is only available in the Offroad program - can help to free the vehicle more easily in many such situations. If possible the suspension level is automatically raised and lowered several times, thus alternately increasing and reducing the ground pressure of the tyres and improving traction – the GLE rocks itself free.
- **Individual wheel actuation:** Individual wheel actuation is another new function for off-road driving. After selecting the Offroad program, this allows the spring level at each wheel to be individually adjusted via the touchscreen of the media display, thus improving the vehicle's off-road attitude on rough terrain when e.g. one wheel is stuck in a ditch or a wheel spring is fully compressed.
- **Rear-end lowering when loading/unloading:** When the button for rear-end lowering in the luggage compartment is pressed, the vehicle is lowered to a defined level at the rear axle. This allows the luggage compartment to be more conveniently loaded and unloaded. The level at the front axle remains unchanged. The rear axle is lowered by 40 mm from its currently set level, but not lower than -70 mm. This function is deactivated when a trailer is connected.

E-ACTIVE BODY CONTROL in the GLE also has functions already familiar from the S-Class, which have been improved further:

- **Curve tilting function:** In driving mode CURVE, the GLE actively leans into bends by up to 3° in three stages, like a motorcycle. This reduces the lateral forces acting on the occupants. Cornering is therefore made much more pleasant, especially for the front and passengers.
- **ROAD SURFACE SCAN:** If the GLE is equipped with a stereo multi-purpose camera, this continuously monitors the road surface ahead of the vehicle. The suspension struts are then activated so as to substantially reduce the body movements when driving over surface

undulations, as the suspension responds even before the uneven stretch is reached.

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Operating principle: How E-ACTIVE BODY CONTROL WORKS

E-ACTIVE BODY CONTROL in the GLE supplements the air suspension with semi-supporting hydropneumatics. The air springs bear the base load of the vehicle body and gradually regulate the level. The hydropneumatics generate dynamic forces that overlay the air suspension forces, and actively support and dampen the vehicle body.

At each wheel, a damper is installed within the axle whose two working chambers have an adjustable damping valve and a hydraulic pressure reservoir. The damper is connected to an intelligent motor/pump unit in the 48 V network by hydraulic lines. Actuation of the motor/pump unit enables the hydraulic fluid to be displaced to create a difference in pressure within the damper, allowing an active force to be generated.

The motor/pump units at all four wheels are coordinated by a central control unit which also actuates the valves and the compressor for the air spring, and therefore always controls the entire suspension system. It was developed according to the safety standard ISO 26262.

The transition from a belt-driven hydraulic pump to an electric 48-volt pump also takes into account the increasing electrification of the powertrain: the combustion engine is idle increasingly often – or not used at all.

Powertrain

The six-cylinder diesel already meets Euro 6d and the RDE 2 emissions standard

Four powerful engines from the off: The new Mercedes-Benz GLE initially comes with a choice of three diesel engines - the six-cylinder GLE 400 d 4MATIC (combined fuel consumption: 7.5-7.0 l/100 km; combined CO₂ emissions: 199-184 g/km),¹ the GLE 350 d 4MATIC (combined fuel consumption: 7.5-6.9 l/100 km; combined CO₂ emissions: 198-184 g/km)¹ and the four-cylinder GLE 300 d 4MATIC (combined fuel consumption: 6.4-6.1 l/100 km; combined CO₂ emissions: 169-161 g/km)². The line-up also includes the new six-cylinder petrol engine in the GLE 450 4MATIC with EQ Boost (combined fuel consumption: 9.4-8.3 l/100 km; combined CO₂ emissions: 214-190 g/km)². Other engines, among them a plug-in hybrid, will follow.

For the first time the OM 654 and OM 656 four- and six-cylinder diesel engines in the new GLE make use of an additional SCR catalytic converter including ammonia slip catalyst in the underbody. Thanks to this enhanced exhaust gas aftertreatment, the GLE 400 d 4MATIC and GLE 350 d 4MATIC with six-cylinder diesel engine already meet the Euro 6d (RDE (Real Driving Emissions) level 2) standard which will not become mandatory until 2020. RDE measurements conducted by independent testing institutes confirm that nitrogen oxide emissions fall to around 20 milligrams per kilometre as a result of application of this advanced technology on the GLE 400 d 4MATIC, and even drop to substantially lower levels on individual journeys.

The new in-line six-cylinder diesel engine is initially available in the GLE 350 d 4MATIC and the GLE 400 d 4MATIC. With a rating of **243 kW** (330 hp) and

¹Figures for fuel consumption and CO₂ emissions are provisional and were determined by the technical service for the certification process in accordance with the WLTP test method and correlated into NEDC figures. EC type approval and certificate of conformity with official figures are not yet available. Differences between the stated figures and the official figures are possible.

² The stated figures were determined in accordance with the prescribed measuring method. These are the "NEDC CO₂ figures" according to Art. 2 No. 1 Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures. Further information on the vehicles on offer, including the WLTP values, can be found for each country at www.mercedes-benz.com

700 Nm, the GLE 400 d is the most powerful series-production diesel SUV ever offered by Mercedes-Benz. Most of the components relevant for efficient emissions reduction are installed directly on the engine. The integrated technology approach combining the new stepped-bowl combustion process, dynamic multi-way exhaust gas recirculation and near-engine exhaust gas aftertreatment, combined for the first time with variable valve-lift control, makes further reduced consumption with low emissions possible. Thanks to the near-engine insulated configuration, exhaust-gas aftertreatment does not suffer great levels of heat loss and generates extremely favourable operating conditions. The measures taken include

- high- and low-pressure exhaust gas recirculation including cooling,
- a diesel oxidation catalytic converter (DOC) to avoid the emission of carbon monoxide (CO) and unburned hydrocarbon (HC),
- a particulate filter with SCR catalytic function (sDPF),
- an SCR catalytic converter (selective catalytic reduction) for reducing nitrogen oxides. For this purpose, ammonia in the form of the carrier AdBlue® is added to the exhaust gases before entering the sDPF,
- an additional selective catalytic reduction (SCR) converter with an ammonia slip catalyst (ASC) in the exhaust tract.

The special features of the top-of-the-line engine in the premium diesel family include the stepped-bowl combustion process, two-stage turbocharging and, for the first time, the use of CAMTRONIC variable valve-lift control. Its design is characterised by the combination of an aluminium engine block and steel pistons, as well as the further improved NANOSLIDE® coating of the cylinder walls.

In the diesel models the AdBlue® reservoir is generously sized at 31 litres, as in the preceding generations. As before, refilling is convenient via a separate pipe behind the fuel filler flap.

GLE 300 d 4MATIC remains below all emission limits

The **GLE 300 d 4MATIC** with **180 kW** (245 hp) and 500 Nm is available as a four-cylinder diesel from the current engine family. Thanks to further expanded emission control technologies, the powerful four-cylinder from the modern OM 654 engine family remains below all Euro 6d TEMP emission limits even in demanding driving situations and environmental conditions. This is achieved

with an additional selective catalytic reduction (SCR) converter with an ammonia slip catalyst (ASC) in the exhaust tract of the GLE.

Other technological highlights of the four-cylinder diesel include:

- the stepped-bowl combustion system named after the shape of the combustion recess in the piston,
- the combination of an aluminium engine block and steel pistons,
- enhanced NANOSLIDE® coating of the cylinder walls,
- optimised airflow on the intake and exhaust sides,
- two-stage charging with a smaller high-pressure and a larger low-pressure turbocharger arranged in series
- a water-to-air intercooler and
- the use of fourth-generation common-rail injection with pressures up to 2500 bar.

Six-cylinder petrol engine: Systematic electrification

The **Mercedes-Benz GLE 450 4MATIC** as the first petrol model on market launch is powered by an M 256 in-line six-cylinder engine systematically electrified with 48-volt technology (combined market launch: Its performance data: **270 kW** (367 hp) and 500 Nm of torque, with a further 250 Nm of torque and **16 kW/22** hp available via EQ Boost over short periods. The integrated starter/alternator (ISG) is responsible for hybrid functions such as EQ Boost or energy recuperation, while allowing fuel savings that were previously reserved for high-voltage hybrid technology.

ISG eliminates the need for a belt drive for ancillary components at the front of the engine, which reduces its overall length. The slim design, together with the physical separation of intake/exhaust, creates space for near-engine exhaust aftertreatment. The 48-volt on-board power supply serves not only high power consumers such as the water pump and air-conditioning compressor, but also the Integrated Starter Generator (ISG), which also supplies energy to the battery by means of highly efficient energy recuperation.

	GLE 300 d 4MATIC	GLE 350 d 4MATIC	GLE 400 d 4MATIC	GLE 450 4MATIC
Number of cylinders/arrangement	4/in-line	6/in-line	6/in-line	6/in-line
Displacement (cc)	1950	2925	2925	2999
Rated output (kW/hp)	180/245	200/272	243/330	270/367
at rpm	4200	3.400-4.600	3600-4000	5500-6100
Extra output from EQ Boost (kW/hp)	-	-	-	16/22
Rated torque (Nm)	500	600	700	500
at rpm	1600-2400	1200-3200	1200-3000	1600-4500
Add. torque from ECO Boost (Nm)	-	-	-	250
Fuel consumption combined (l/100 km)	6.4-6.1	7,5-6,9	7,5-7,0	9.4-8.3
Combined CO ₂ emissions (g/km)	169-161	198-184	199-184	214-190
Emission class	Euro 6d-TEMP	Euro 6d	Euro 6d	Euro 6d-TEMP
Acceleration 0-100 km/h (s)	7.2	6.9	5.8	5.7
Top speed (km/h)	225	230	240	250

Nine gears for comfortable and efficient gear shifts

In all variants of the new GLE, power is transmitted by the 9G-TRONIC automatic transmission. The broad ratio spread of gears one to nine allows a clearly perceptible reduction in engine speed and is a decisive factor behind the high level of energy efficiency and ride comfort. The high overall efficiency is reflected in the fuel economy. Shortened shift and response times ensure optimum spontaneity combined with outstandingly smooth gear changes. Particularly in manual mode and S mode, 9G-TRONIC responds immediately and enhances driving pleasure.

The particularly good gearshifting comfort of the 9-speed automatic transmission is the result of extensive measures. These include the novel direct control system which enables short, barely perceptible gear changes. The combination of twin-turbine torsional damper and centrifugal pendulum technology in the torque converter ensures outstanding drive comfort. An additional, electric transmission oil pump is activated in start/stop operation, ensuring a basic supply to the control elements and actuators. The time delay between the desire to move off and the vehicle's actual movement is reduced by the electric transmission oil pump.

In ECO driving mode, the gliding function assists the driver's active fuel economy measures. When the driver's foot leaves the accelerator, the combustion engine

is decoupled from the drive system and runs at idling speed. The vehicle rolls for a measurably longer distance than when on the overrun. When the accelerator is depressed again, the connection between the engine and drive system is re-established.

When the driving situation and charge level of the battery allow, the combustion engine is decoupled from the drivetrain and switched off, so that the vehicle can coast freely ("gliding"). This involves shifting the transmission into neutral position, thereby reducing drag losses in the drivetrain. The starter-alternator serves as an electric drive and helps to extend the energy-efficient gliding phase. During deceleration, the kinetic energy from the starter-generator is converted into electric power ("recuperated") as appropriate to the driving situation and used to charge the battery.

Especially in conjunction with the new transfer case with Torque on Demand, a clear difference between the individual on-road driving modes Comfort, Sport and Sport+ (only in conjunction with eABC) is perceivable and selectable by any customer. The vehicle characteristics can be varied from neutral/slight understeer right up to slight and controllable oversteer.

DYNAMIC SELECT has the following settings in Onroad mode:

Mode	Abbreviation	Description
Eco	E	The aim is the lowest possible fuel consumption with reduced vehicle dynamics (accelerator pedal curve, maximum torque, transmission mode, gliding)
Comfort	C	The aim is a balanced drive configuration for low fuel consumption
Sport	S	Taut engine/transmission configuration (accelerator pedal curve, transmission mode)
Sport Plus*	S+	The aim is maximum dynamism and engine/transmission response; ECO start/stop is deactivated
Manual	M _P	Manual transmission mode (permanent)

* Only for petrol engines in conjunction with E-ACTIVE BODY CONTROL (eABC)

A new control experience

The GLE is equipped with the latest generation of the multimedia system MBUX - Mercedes-Benz User Experience. As standard the enhancements include two large 12.3-inch/31.2 cm screens arranged next to each other for a sublime widescreen look. The information of the instrument cluster and media display is easily legible on the large, high-resolution screens. An emotive presentation with brilliant graphics underlines the comprehensibility of the intuitive control structure. MBUX Interior Assist is a completely new feature (see separate section).

Depending on mood or to suit the chosen interior, the user has a choice of four different styles:

- **Modern Classic** is a further development of the classic display style in an elegant and light material mix.
- **Sport** has a high-tech turbine look with decidedly sporty black/yellow contrasts.
- **Progressive** presents digitality in reduced form.
- In the **Discreet** style, all displays are reduced to the absolutely necessary.

General MBUX operation has been improved in numerous respects. For example, the settings menus are in a new design and the initial setup assistant has been improved. The 40 or so new MBUX functions in the GLE include

- Support for off-road specific driving modes (free-driving mode and individual wheel actuation),
- Extended off-road displays in the instrument cluster and head-up display (linear and lateral inclination, Torque on Demand, vehicle level). The off-road-specific displays can also be consolidated as a special screen in the central display,
- The setting for the full-screen map in the instrument cluster can be changed directly there,
- ENERGIZING COACH,

- ADAPT driver's seat adjustment: if the body size is entered, the seat automatically moves to a generally suitable position,
- Extension of online functions: for example, "In-car office" can now read out emails and have them dictated,
- integration of online music (TIDAL) in Europe,
- Extended range of apps, e.g. specific functions in the individual regions. Online music is available via the provider Kuwo in China, for example. Extensive information about points of interest (POIs) is made available by Baidu Wiki in China.

A unique feature of MBUX - Mercedes-Benz User Experience is its learning capability thanks to artificial intelligence. With its predictive functions, MBUX e.g. anticipates what the user would like next. For instance, anyone who often telephones their mother on Tuesdays during the journey home will receive her telephone number as a suggestion in the display on this day of the week. Anyone who regularly switches over to a radio station with news at a certain time also receives this as a suggestion.

Augmented reality: additional navigation assistance

Other strengths include touchscreen control of the media display as standard and the use of augmented reality technology for the navigation display when the navigation function is active: a video image of the surroundings is enhanced with helpful navigation information, for example arrows or house numbers are automatically superimposed directly onto the image in the media display. This makes it easier for the driver to search for a certain house number, or to find the correct side road for turning off. The intelligent voice control with natural language comprehension has also been improved, and is e.g. activated by the keyword "Hey Mercedes". Much more complex commands and questions are now understood, initially in the three top languages Mandarin, US English and German.

Interior Assist

An even greater experience

MBUX – Mercedes-Benz User Experience revolutionises control of and communication with the vehicle. Optional Interior Assist goes even further: it facilitates the natural operation of various comfort and MBUX functions through the recognition of gestures and contributes to an intelligent interior.

Interior Assist operates in non-contact mode and functions reliably both in sunlight and in complete darkness. It enables the adaptation of screen content as soon as a hand approaches the touchscreen in the dashboard or the touchpad on the centre console, for example. Individual elements are highlighted according to the currently active menu, for example. In addition, the system is able to distinguish between the driver and front passenger and thus knows for whose seat the massage function is to be activated, for example.

A special feature of Interior Assist is the personal favourites function. It is accessed by holding a hand over the centre console with the index and middle finger spread in a V-shape. In this way, any command which is controllable via MBUX can be stored for simple access. One typical favourite command is "navigate me home". As the system is able to reliably recognise who is operating it, driver and front passenger respectively can even assign different favourites to the same hand position.

There are other functions which can be controlled intuitively, without any need to practice corresponding gestures: in the dark, the reading lamp can be switched on and off by briefly extending a hand towards the rear-view mirror, for example. If the driver reaches over towards the (unoccupied) front passenger seat in the dark, it will be illuminated automatically. This makes it easier to find any items which may have been deposited on the seat. As soon as the hand leaves this area, the light is deactivated again automatically.

Variable interior

Comfort in up to seven seats

The interior of the new GLE has grown considerably compared to the preceding model. Its 80 mm longer wheelbase (2995 mm) particularly benefits rear seat passengers, who now have well over one metre of legroom (1045 millimetres, +69 mm compared to the predecessor). This is where the new GLE also unveils a premiere in the form of the first fully electrically adjustable second seat row in this segment. A third seat row with two further seats which are almost full-size is available as another option. And also in the front seats, the impression of spaciousness is much more generous thanks to a steeper A-pillar.

A spacious, variable interior is important to many SUV buyers, and they receive it in full measure. The generous interior can be conveniently and easily varied. Three child seats fit into the rear next to another, for example, and the increased legroom makes it easier to strap children in. Even the rear seat unit of the standard version, with a continuous bench seat and 40:20:40 split-folding backrest plus a folding centre armrest, makes it possible to enlarge the luggage compartment when all five seats are not needed. When folded down, the backrest sections extend the luggage area forward without a step. A handy 138-litre stowage compartment is available under the luggage compartment floor – except on the seven-seater and the future hybrid.

World premiere: variability and spacious comfort at the touch of a button

With the adjustable rear bench seat as optional equipment, the new GLE opens up a new dimension in SUV spatial comfort. With this feature, the right and left seats with a 60:40 division can be separately adjusted fore-and-aft by up to 100 millimetres and folded down with a 40:20:40 split ratio, while the head restraints are adjustable for height. The backrest angle can be altered by 18°, offering a choice between cargo position for maximum luggage space, the ideal torso angle according to the occupant's height and personal preference or a relaxed sleeping position for children in a child seat. In typical Mercedes fashion, the rear seat adjustments are controlled by a switch in the door panel. The backrest can also be completely folded down electrically, using a switch array in the luggage compartment. It goes without saying that the electric rear seats can also be heated.

Access to the third seat row is by way of an electric Easy-Entry function which allows through-access to the rear at the push of a button while also enabling the luggage compartment to be accessed from the rear door. The seating space in the third row is designed to allow people of up to 1.80 metres in height to sit here. Fully fledged seat belts are also provided here, of course (see "Passive safety" section), while between the two seats there are two cup holders and a double USB-C port. Naturally the stowage compartment under the luggage compartment floor is omitted in this case.

Front seats: comprehensive comfort

As standard the front seats are electrically adjustable for seat cushion length, height and angle, backrest angle, 4-way power lumbar support and head restraint height. On the European versions their fore-and-aft and height adjustment ranges have been increased by 15 mm and 10 mm respectively, so that very tall drivers in particular enjoy more space and comfort. If the chauffeur function is specified, the driver is able to operate the front passenger seat. Multicontour seats as optional equipment for the driver and front passenger include air chambers in the backrest side bolsters for adjustable support, active cushions in the seat surface and backrest for massage functions, a hot-stone massage effect, fast two-zone seat heating Plus and seat ventilation.

The luggage capacity is up to 630 litres behind the rear seats (up to 825 litres with adjustable rear seat), and up to 2055 litres when the second seat row is folded down. A 72 mm increase to over 1.10 m in the through-loading width between the wheel arches allows bulky items to be stowed more easily. Useful holders and protective elements have been specially developed as accessories for practical stowage of recreational equipment in the interior. In conjunction with the AIRMATIC air suspension, the loading sill can be lowered by over 50 millimetres at the flick of a switch, for easier loading and unloading.

The most important dimensions		New GLE	Predecessor	Diff.
Headroom, front	mm	1074	1059	+15
Headroom, rear	mm	1027	992	+35
Legroom, front	mm	1024	1024	0
Legroom, rear	mm	1040	976	+64
Rear legroom with longitudinal rear seat adjustment	mm	max. 1045	(976)	+69
Elbow room, front	mm	1545	1540	+5
Elbow room, rear	mm	1520	1528	-8
Shoulder room, front	mm	1506	1485	+21
Shoulder room, rear	mm	1482	1482	0
Load compartment width	mm	1106	1034	+72
Load compartment depth	mm	1051	1046	+5
Load compartment depth with longitudinal rear seat adjustment	mm	max. 1151	1046	+105
VDA load compartment capacity behind the rear seats, to upper edge of seat backrest	l	630	690	-60
VDA load compartment capacity behind the rear seats, with longitudinal rear seat adjustment	l	max. 825	690	+135
Maximum luggage compartment capacity	l	2055	2010	+45

The exterior design

Powerful presence

Modern luxury both on and off the road: that is the design message of the new GLE. The vehicle's proportions with a long wheelbase, short overhangs and large, flush-fitted wheels already leave no doubt that it feels at home and cuts a good figure on any terrain.

The Mercedes-Benz GLE follows the design strategy of sensual purity, and dispenses with individual edges and beading in favour of generously modelled surfaces. The surfaces interact with precise graphic elements.

The aesthetic appeal of the GLE is based on the harmonious interaction between emotion and intelligence, which is designed to awaken desire. This is characterised by timeless beauty, a combination of high-grade technology and craftsmanship and reduction to what is really important.

The front section of the GLE exudes presence and power: this is ensured by the upright radiator grille in an octagonal SUV interpretation, the prominent, chrome-plated underguard and the bonnet with two powerdomes. This striking appearance is emphasised by the distinctive headlamp design by day and night.

Viewed from the side, the wide C-pillar typical of the GLE conveys self-assured stability. The striking, dark wheel arch claddings and the new, larger wheels in sizes 18 to 22 inches clearly emphasise the SUV character of the vehicle, and ensure a powerful presence. The pillared roof rails or the optional illuminated running boards likewise confirm the robust SUV character of the vehicle. The chrome surrounds of the windows are however reminiscent of a premium saloon model.

The sporty and athletic appearance of the GLE is continued into the rear end. This is particularly ensured by the powerful shoulder muscle extending from the C-pillar to the rear lights. The reflectors are relocated lower down, giving the rear lights a flatter appearance. They are also in two sections. This not only gives an impression of width, but also creates an unmistakable night design with illuminated blocks typical of Mercedes-Benz SUVs, in this case with backlit edge lighting. The rear is strikingly rounded off with the chrome-plated underguard.

Key dimensions of the new GLE:

		New GLE	Predecessor	Diff.
Length	mm	4924	4819	+105
Width	mm	1947	1935	+12
Width incl. exterior mirrors	mm	2157	2141	-16
Height incl. roof rails	mm	1772	1796	-24
Wheelbase	mm	2995	2915	+80
Front track*	mm	1667	1642	+25
Rear track*	mm	1687	1657	+30
Turning circle	m	12.0	11.8	+0.2

* with 255/50 R 19 tyres

Shaped by the wind

The lowest aerodynamic drag of any SUV in its segment, and even less wind noise than in the preceding model – this was the development goal for the new GLE. This was achieved with C_d figures from 0.29 – a significant improvement over the preceding model ($C_d = 0.32$). The good aerodynamic properties make a key contribution to low fuel consumption under everyday conditions. A host of details were optimised with numerous computation loops, CAE simulations (computer-aided engineering) and measurements in the wind tunnel in Sindelfingen.

Major measures include an active cooling air control system behind the radiator grille for need-related metering of the airflow (AIRPANEL), so that only as much air as is absolutely necessary flows through and as much as possible flows around the vehicle. To ensure that it meets little resistance, wheel spoilers with aerodynamically shaped deflectors ahead of the front wheels were developed, with additional wheel spoilers ahead of the rear wheels. The exterior mirrors were optimised, as the turbulence they create not only increases drag, but also noises that are very close to the driver's ears. Acting together with the airflow around the A-pillars, this airflow substantially ensures that the side windows remain clean even when driving in the rain. The roof spoiler and the side spoilers, which are sealed against the D-pillar on the tailgate, as well as rear lights with special spoiler lips, ensure reduced turbulence at the rear end.

The high ground clearance of SUVs makes detailed improvements to the underbody particularly beneficial to the aerodynamics. In the new GLE, a large area of cladding on the underbody and propshaft tunnel is used to good effect. A flush fuel tank cladding, aerodynamic cladding at the rear axle and an aerodynamically optimised diffuser cladding reduce drag and noisy turbulence at the underbody, where particularly low-frequency wind noise occurs. The wheels, a constant thorn in the side for aerodynamics engineers, have also been optimised to the extent that they could almost be called aero-wheels. The detailed work even went as far as to recess the lettering on the tyre sidewalls.

The large panoramic sliding sunroof, an item that takes pride of place in the list of optional equipment, is not exactly welcomed by the engineers working in the

wind tunnel, as its unavoidable joints and apertures are always sources and opportunities for wind noise. However, the aerodynamicists dedicated themselves to the task and used numerous air deflection measures, specially shaped seals and facings to ensure a level of noise comfort corresponding to that of a much smaller sliding sunroof. Indeed a special programme was developed for the panoramic sliding sunroof to adapt the tilted position of the roof to the vehicle speed, so that the wind noise presumably desired by the driver always remains pleasant without becoming intrusive.

The good aeroacoustics of the new GLE are also the result of painstaking attention to detail in other areas which can only be seen if one knows what to look for. Numerous examples are revealed in the form of joint and seals that become apparent when the bonnet or doors are opened.

Superior support in tailbacks

The new GLE is the debut of the latest generation of Mercedes-Benz driving assistance systems giving cooperative support to the driver. The level of active safety has not only been improved further compared to the preceding model - some Intelligent Drive functions are also without parallel beyond the SUV segment.

Not only high-mileage drivers are familiar with this tricky situation on motorways: on rounding a bend, the end of a traffic tailback suddenly appears. This is where the new GLE supports its driver with the Driving Assistance package, as tailback management on motorways now already begins in advance of a tailback, including assistance in stop-and-go traffic and after the tailback has dissolved.

When **Active Distance Assist DISTRONIC with route-based speed adaptation** is active, the new GLE is able to respond to LiveTraffic info - ideally before the driver or the radar and camera sensors detect the hold-up or hazard. When a traffic jam is detected, the speed is reduced by way of precaution to approx. 100 km/h, unless the driver specifically decides otherwise.

New feature of Driving Assistance package Plus: When actually driving in a tailback, **Active Stop-and-Go Assist** can markedly reduce the driver's workload: where there are lane markings, the system is substantially able to perform the tasks of keeping in lane and maintaining the safety distance with a high level of availability at speeds up to around 60 km/h. The vehicle can move off again automatically up to one minute after coming to a stop.

Once the tailback dissolves, the GLE accelerates back up to the set speed for Active Distance Assist DISTRONIC with route-based speed adaptation. If the driver has not set a specific speed, this is the recommended motorway speed of 130 km/h in the case of Germany. Where traffic signs specify a different speed, **Active Speed Limit Assist** automatically selects the signposted speed limit.

To recognise tailbacks, Active Stop-and-Go Assist evaluates the road category, speed and distances from vehicles travelling ahead and in adjacent lanes. In

addition to the stereo multi-purpose camera (SMPC) and long-range radar, it uses the front multi-mode corner radar sensors to recognise vehicles that are cutting in. If Active Steering Assist and Active Distance Assist are activated, Active Stop-and-Go Assist is switched on automatically when a motorway tailback is recognised. This is indicated by "Stop-and-Go Assist active" in the instrument cluster. As soon as Stop-and-Go Assist is active and the vehicle is moving in a tailback, a tailback symbol is added to the "green steering wheel" symbol of Active Steering Assist in the instrument cluster.

Active Steering Assist assists in forming a rescue corridor

A new feature of **Active Steering Assist** is that it can support the driver with the **emergency corridor function** on multi-lane roads. On motorways, at speeds under 60 km/h the vehicle refers to detected lane markings and applies swarm intelligence to take its bearings from vehicles in the surrounding area. If no such vehicles or markings are detected, the GLE will take its bearing from the vehicle ahead, as previously.

Always ready to help: numerous other assistants are available

It is not only by giving driver support in tailbacks that the new GLE further expands Mercedes-Benz Intelligent Drive and takes another major step towards autonomous driving. **Active Distance Assist DISTRONIC** and **Active Steering Assist** now provide even more comfortable support for the driver in keeping a safe distance and steering. With Active Speed Limit Assist, identified speed restrictions are adopted automatically in anticipatory mode. Active Lane Change Assist, Active Emergency Stop Assist and Evasive Steering Assist are also available.

A totally new feature of **Active Brake Assist in the Driving Assistance Package** is the **turning-off function**, which comes into play when the driver intends to turn off across the oncoming lane: in the event of a risk of collision with oncoming traffic, the GLE can carry out autonomous braking. Braking intervention takes place when the driver activates the turn signal indicator signalling an intention to turn off and the vehicle can be braked to a standstill before passing over the lane marking. If not, no braking takes place, so as to enable the GLE to leave the oncoming lane swiftly. Oncoming vehicles are detected via an intelligent fusion of radar and camera signals.

Other functions of Active Brake Assist include driver support to avoid impending collisions with stationary vehicles, vehicles ahead and crossing vehicles or pedestrians. This takes the form of

- a distance warning from a warning lamp in the instrument cluster if the distance from a vehicle in front is insufficient,
- an additional acoustic warning if the danger of a collision is identified,
- braking assistance as appropriate to the given situation, should the driver fail to apply the brakes sufficiently firmly,
- autonomous emergency braking to avoid a collision with moving, stationary or crossing vehicles ahead if the driver fails to respond,
- autonomous emergency braking also for stationary or crossing pedestrians/cyclists.

The new GLE is additionally equipped with **Active Blind Spot Assist including exit warning**. This can provide the driver with intuitive warnings of vehicles, including bicycles, in the danger zone alongside their own vehicle. It can also apply one-sided braking to prevent impending side-on collisions or reduce the severity of such a collision. When the vehicle is at a standstill it can also signal to the driver with a visual warning in the exterior mirror before they climb out that a vehicle is driving past in the critical area. If the door handle is pressed at this moment, an audible warning will additionally sound, the ambient door lighting will flash in red and a message will appear in the instrument cluster. The function is also available when the vehicle is stationary and up to three minutes after the ignition has been switched off. **Active Lane Change Assist**: When the driver wishes to change lanes on multi-lane roads (recognised by the navigation system) at speeds from 80 to 180 km/h, it is sufficient to nudge the indicator stalk in order to activate support. Within the next ten seconds, the sensor system checks together with the driver whether the next lane is clear in front of, alongside and behind the vehicle, also taking into account the speed of any other vehicles. If there is no other vehicle within the relevant safety zone, the driver is supported in changing lane. The initiated lane change is indicated in the instrument cluster and in the head-up display. The system is available in certain countries, depending on certifiability.

Active Emergency Stop Assist: Active Emergency Stop Assist brakes the vehicle to a standstill in its lane if it detects that the driver is no longer actively driving the vehicle while it is on the move with Active Steering Assist switched on. If there is no steering wheel movement over a longer period when Active Steering Assist is active, the system gives the driver a visual and audible prompt to place

his/her hands on the wheel. If the driver fails to respond after repeated visual and acoustic warnings by moving the steering wheel, accelerating, braking or operating the touch controls or other buttons on the steering wheel, the car is slowed down in the identified lane until it comes to a standstill. At speeds below approx. 60 km/h the traffic behind is warned by means of hazard warning lights. When the vehicle comes to a standstill, the parking brake is engaged automatically and the Mercedes-Benz emergency call system is activated. The vehicle is also unlocked, to allow first responders access to the interior. The functions are aborted as soon as the driver takes control of the vehicle again.

Evasive Steering Assist: Within a speed range from 20 to 70 km/h, Evasive Steering Assist can help the driver to avoid a pedestrian detected by the assistance system using the radar sensors and stereo multi-purpose camera. If the driver initiates an evasive manoeuvre by turning the steering wheel, the system provides assistance by adding precisely calculated steering torque to support the movement of the steering wheel. This torque helps the driver to avoid the pedestrian in a controlled manner and then makes it easier to straighten the vehicle up again so that it can drive past safely. While the philosophy behind Evasive Steering Assist is to provide the driver with significant assistance, the initiative to take evasive action must come from the driver. This is because if evasive action were automatic, a previously inattentive driver might be so surprised by the spontaneous movement of the steering wheel that they might react incorrectly and, for example, attempt intuitively to steer in the opposite direction.

Traffic Sign Assist: Image recognition and information from the digital road map in the navigation system allow the permitted maximum speed and any restrictions on overtaking for the current route section and zebra crossings to be computed and shown in the instrument cluster. Additional restrictions such as speed limits in wet conditions (warning when the windscreen wipers are switched on) or speed limits for trucks only are also taken into account or ignored as appropriate in the individual case concerned. The vehicle speed is compared with the speed limit. If set to do so by the driver, a visual/visual-audible warning is given if the speed limit is exceeded. No-entry signs are also recognised and the driver is prompted to check the vehicle's direction of travel. A warning additionally appears in the instrument cluster and on the head-up display if pedestrians are detected in the area of a zebra crossing. Traffic Sign Assist is also separately available outside the assistance package.

Active Speed Limit Assist: In conjunction with MBUX and the Driving Assistance package, Active Speed Limit Assist - a selectable subfunction of Traffic Sign Assist - is also able to recognise sign gantries and road works signs by camera. Known limits, such as 50 km/h in built-up areas or 100 km/h on country roads, are also adopted from the navigation system. Active Distance Assist DISTRONIC adapts the vehicle's speed to the recognised speed limits automatically (in combination with navigation and traffic sign recognition). In this case, the speed can be anticipatorily adapted when entering towns based on map data. On roads without speed limits, such as stretches on German motorways, the recommended speed – in this case 130 km/h - is adopted as the set speed. This speed can be adjusted by the driver. The desired maximum speed is always adopted in the course of the journey when the speed limit is cancelled. It remains preset until the vehicle leaves the motorway or until the engine is switched off.

PRE-SAFE® PLUS: When a sustained danger of collisions applies, this system can warn any following vehicles which are approaching too fast by quickly flashing the rear hazard warning lamps, initiate the belt tensioning function and lock the stationary vehicle's brakes in anticipation of a rear-end collision in order to minimise the risk of injury by reducing the forward jolt resulting from impact.

Easier parking and manoeuvring: further assistance systems on request

Active Parking Assist with PARKTRONIC assists the driver when searching for a parking space and when entering or leaving parallel or end-on parking spaces. In the case of end-on parking spaces it is active in both forward and reverse direction. It manoeuvres the vehicle into the selected parking space and back out again. In the process acceleration, braking and gear-changing is automatic. In combination with Blind Spot Assist, the system can warn the driver of cross-traffic when reversing out of end-on parking spaces, and also initiate automatic braking if necessary. Parking Assist PARKTRONIC gives a visual and acoustic warning of recognised obstacles with the help of six ultrasonic sensors in each bumper. These can be in front of, to the side or behind the vehicle, and are recognised at speeds up to approx. 10 km/h.

The **Parking package with reversing camera** combines Active Parking Assist with a reversing camera in the boot lid. Its image is shown with superimposed guide lines in the media display. The GLE is equipped with a **reversing camera** as standard.

If the **Parking package with 360° camera** is specified, an all-round view is provided by the 360° camera with four networked close-range cameras in the radiator grille, boot lid handle and exterior mirror housings. The information is clearly presented in selectable views in the media display.

ATTENTION ASSIST, Active Lane Keeping Assist, Speed Limit Assist and Active Brake Assist are on board as standard, offering a comprehensive range of safety functions, such as:

- a distance warning from a warning lamp in the instrument cluster, if the distance from a vehicle in front is inadequate,
- an additional acoustic warning if the danger of collision is identified,
- braking assistance appropriate to the given situation as soon as the driver applies the brakes,
- autonomous emergency braking for moving, stationary or crossing vehicles ahead if the driver fails to respond,
- autonomous emergency braking also for stationary or crossing pedestrians/cyclists.

ENERGIZING COMFORT

Active comfort, now with instructions

ENERGIZING comfort control networks various comfort systems in the vehicle, and uses musical and lighting moods plus a number of massage modes for a wide range of feel-good programmes. New features include the ENERGIZING COACH, which recommends programmes according to the situation. Also new are the ENERGIZING seat kinetics. The system supports advantageous changes in the seating posture by means of minute movements of the seat cushion and backrest when on a journey.

The optional ENERGIZING comfort control systematically uses the functions of the climate control system (including fragrancing) and the seats (heater, ventilation, massage), the surface heating as well as lighting and musical atmospheres, and allows a specific wellness set-up tailored to the mood and need of the customer. Rather than just sporadically using a few (favourite) systems, customers with ENERGIZING comfort control are able to benefit even more from the multi-faceted comfort features in their GLE.

These programmes can be selected:

- Freshness
- Warmth
- Vitality
- Joy
- Comfort

The programmes all run for ten minutes. They are visualised on the head unit with colour graphics, and backed by suitable music. Individual functions of the programmes can be deactivated.

ENERGIZING comfort control also offers three training modes – muscle relaxation, muscle activation and balance - each with several exercises.

ENERGIZING comfort control also incorporates ambience lighting, which is harmoniously tailored to each of the individual screen designs. The light stages

the interior like a work of art by composing colour worlds from different colours.

ENERGIZING COACH: Comfort with instructions

The ENERGIZING COACH is a new feature. This function based on an intelligent algorithm recommends one of the programmes depending on the situation and individual. If a Garmin® wearable is worn, personal values such as stress level or quality of sleep optimise the accuracy of the recommendation. The aim is for passengers to feel well and relaxed even during demanding or monotonous journeys. In addition, the pulse rate supplied by the integrated Garmin wearable is shown on the media display.

ENERGIZING seat kinetics: Active sitting whilst driving.

Good for the back: The new ENERGIZING seat kinetics supports orthopaedic changes in the seating posture by means of minute changes to the inclination of the seat cushions and backrest. The innovation is available for the front seats in combination with all-electric seat adjustment with memory function.

"The best seat position is the next one" - this is what many doctors say about sitting in the car. Because sitting in almost the same position for several hundred kilometres and many hours is not good for your back or discs. In the GLE, Mercedes-Benz is now introducing an innovation that supports varied seating positions in the form of ENERGIZING seat kinetics.

ENERGIZING seat kinetics uses the electric seat adjustment. If the driver selects this programme, the inclination of the seat cushions and backrests are continuously minutely adjusted using the seat settings selected by the driver and the front passenger as the starting point (the so-called "Home" position). The changes are only minimal - a few degrees or millimetres.

Slightly changing position during the trip improves back health because the natural strain and relief of muscles, joints and discs can lead to muscle relaxation and improved supply of nutrients to the joints and discs.

ENERGIZING seat kinetics is based on a patented algorithm and offers three programmes for short, medium-length and long journeys. These differ with regard to the number of adjustment cycles and above all the length of the pauses between the adjustment cycles. Convenient selection of the

programmes is visually supported via the MBUX (Mercedes-Benz User Experience) media display.

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The system is based on an invention by Comfort Motion Global (CMG) and was significantly refined by Mercedes-Benz for series use in the automobile. The brand's seating experts optimised the angle of adjustment and the number of cycles, among other things, and they also established that the system should be stopped when braking. If PRE-SAFE® measures are initiated in an emergency situation, the ENERGIZING seat kinetics are completely deactivated. Mercedes-Benz tested the system with the aid of extensive test subjects on the roads, thereby confirming the system's benefits and acceptance.

4MATIC all-wheel drive

Agile on the road, superior when off-road

Available for the first time for models featuring an engine with six or more cylinders and for the plug-in hybrid, fully variable all-wheel drive (Torque on Demand, TonD) controls torque distribution between the front and rear axle from 0-100 % depending on the selected driving mode. With the optional Offroad package, and as a world first, likewise fully variable all-wheel drive (TonD) with a low and high range is available. This makes the GLE more off-road capable than ever.

In the four-cylinder models, the transfer case of 4MATIC all-wheel drive directs the drive torque to the axles in a fixed 50:50 percent ratio. Spinning wheels are braked by braking intervention at the relevant wheel. Other functionalities such as Start-off Assist and Downhill Speed Regulation (DSR) support the driver both on and off the road. Decades of experience with the system by engineers at Mercedes-Benz are reflected in the dynamic performance and comfort of the GLE. This is achieved by finely-tuned interaction between 4MATIC and the electronic braking, control and traction systems.

New: transfer case with an electronically controlled multi-disc clutch

A transfer case with an electronically controlled multi-disc clutch is used for the other engines, e.g. in the GLE 450. This allows a variable transfer of drive torque from 0-100 percent (torque on demand) between the axles. Also new, and available as an option, is a transfer case specially configured for superior off-road driving characteristics. In addition to the controlled multi-disc clutch with torque-on-demand function, this has a reduction gear set and an automatic locking effect from 0-100 percent for off-road driving.

Also when driving on the road, and particularly when cornering, the two fully networked transfer cases with torque on demand allow a further improvement in handling safety and agility by specifically influencing the degree of yaw to induce oversteer or understeer.

Torque on demand: shows just how efficient an SUV can be

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Depending on the driving situation, the new transfer case can feed the front axle with suitable, variable drive torque as required. This takes into account the driver's wishes and the selected driving mode, and physical factors such as the current yaw rate or actual traction are also considered. These are used to continuously calculate the best torque distribution, so as to transfer correspondingly more drive torque to the front axle via the multi-disc clutch in the transfer case. This makes safe and sporty handling characteristics possible even on surfaces with varying friction coefficients.

When moving off either forwards or in reverse, Torque on Demand ensures the best possible traction even on ice and snow. The physical operating principle of the clutch corresponds to that of a centre differential lock familiar from purely off-road vehicles.

During dynamic driving manoeuvres such as slaloming, evasive action or cornering, on the other hand, maximum lateral stability at the front axle can be assured by reducing the drive torque at these wheels.

The new transfer case also has a positive effect on longitudinal dynamics and ride comfort, as the engine torque no longer requires to be reduced for the purposes of load reversal damping.

Torque on Demand with off-road reduction: more power off-road

This variant of the transfer case has a reduction gear (known as low-range, with a ratio of 1:2.93), which allows an even higher torque transfer to the wheels. When operating with inter-axle locking, this ensures optimum traction at both drive axles when driving off-road, especially on sand and above all on rocky terrain. In addition, power output can be controlled more finely when off-road, especially at slow and crawling speeds.

New brake control system: for even more safety

The modular dynamix control system includes the basic functions of anti-lock braking system (ABS) and acceleration skid control (ASR), as well as yaw control, configured for the special features of 4MATIC. When the Offroad key is pressed, the characteristic curves are adjusted accordingly. When critical driving situations are detected, traction and handling stability within the physical limits

are maintained or restored much more rapidly and efficiently by braking intervention and engine management.

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This gives rise to benefits in particular during

- evasive manoeuvres,
- braking on surfaces with different left and right friction values,
- ABS intervention on changing friction surfaces,
- when braking on bends with large changes in wheel load.

Off-road ABS: blocking for a digging-in effect

Off-road ABS was specially developed for off-road operations at under 30 km/h, and allows cyclical blocking of the front wheels. The resulting digging-in effect allows the braking distance to be reduced, depending on the surface. On extreme downhill gradients, this makes stopping possible at all. The transition from the normal ABS function to off-road ABS is gradual when below the limiting speed.

Organo panel front-end member

Plastic body panels

Light, strong and innovative: the front-end member of the GLE is of organo panels. This is the first time that Mercedes-Benz has used this innovative material for such a large and visible component.

Organo panelling provides an alternative to sheet metal panels. It consists of fibre-reinforced plastic panels. After heating in a press, these panels are formed into three-dimensional components via a process which involves very short cycle times.

The fibre reinforcement endows organo panels with very good mechanical properties, such as rigidity and strength, combined with only a fraction of the weight of their sheet-metal counterparts. The thermoplastic plastic matrix offers another crucial advantage. An injection moulding process follows in a second, integrated production step, in the course of which ribs, mountings, etc. are added. This takes place in the same tool in which the organo panel was formed.

The organo panelling of the GLE can be permanently fused to adjacent parts made of polypropylene (PP). Only butt-welding was possible previously, with the risk of fractures. Use of the sandwich construction principle means that fewer components are needed overall, as air ducts and sleeves for bolt-on components are directly integrated. As organo panels do not corrode, they do not need to be painted.

The front-end member of the GLE consisting of organo panels

- is around 30 percent lighter than a conventional design,
- contributes to the high torsional rigidity of the GLE
- improves crash performance, especially together with the crash boxes attached to the member
- combines an innovative material with an integrated production process to produce an innovative component.

The Society of Plastic Engineers, a global association of plastics experts, recognised these merits by awarding the organo panelling 1st place in the Structural Components category at the 2018 Automotive Awards.

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The next-generation head-up display

Larger, sharper, brighter

Also available as an option is a next-generation head-up display which sets a new benchmark in the SUV segment with a resolution of 720 x 240 pixels and an extended projection distance. Important information is projected into the windscreen, reducing distraction from the traffic situation. There is also less eye fatigue for the driver, as the eyes do not constantly have to refocus between close-up and long-distance vision.

A system of lenses and mirrors projects a full-colour image measuring around 45 x 15 centimetres into the windscreen. To the driver it appears to float above the bonnet at a distance of around 3 metres. Now more than twice the size, the virtual image is 20 percent brighter for better legibility in bright conditions. Moreover, it has space for further information about e.g. the current audio source, the current phone call and the reception and battery status of the connected phone. In addition it shows the arrival time and distance to destination if route guidance is active. The driver is able to select the information considered relevant, including additional off-road content such as vehicle inclination, torque distribution and acceleration forces.

MAGIC VISION CONTROL and panoramic sliding sunroof

A brighter view: a clear view to the front – and of the stars

Nobody buys a car because of its windscreen wipers. But once you have purchased it, the windscreen wipers can quickly tell you the standard to which the car you are sitting in has been designed. Anybody driving the new GLE and using the windshield wipers will notice the high standard of Mercedes-Benz: The best or nothing.

As standard the new GLE features twin wiper arms with flat wiper blades powered by an electronically controlled reversing motor, which means that it changes its direction of rotation without a mechanical gear. Their precise and regular action allows low-noise cleaning of the largest possible swept area, helped by the extending wiper arm on the front passenger side.

A rain sensor which adapts the wiper interval to the level of rainfall is included as standard. As an optional feature, the washer system can be heated by the waste heat from the engine coolant, which especially increases the cleaning action of the washer fluid in the winter and allows economical use of the generous, five-litre capacity.

The ultimate in windscreen wiper/washer systems

However, the ultimate in windscreen wiper/washer systems is MAGIC VISION CONTROL, which was developed further for the new GLE and saves up to 50 percent of washer fluid compared to a conventional system – while ensuring a perfect view to the front. The intelligent system precisely meters the washer fluid according to the prevailing conditions, e.g. the ambient temperature and road speed. The warm washer fluid is distributed onto the windscreen along the entire length of the wiper blades by sophisticated channels and hoses, always on the side towards which the blade is currently moving.

There is no film of water to obscure the driver's vision. Accordingly the washing procedure can be fully automated according to the current conditions.

Corresponding washer programmes are stored in the control unit of the wiper motor. It is enough for the driver to briefly nudge the control switch: MAGIC VISION CONTROL then cleans and wipes the windscreen with as little water as

currently necessary, and the driver can concentrate on what is happening ahead.

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Apart from the washer fluid, the wiper blades of MAGIC VISION CONTROL are also ideally equipped for wintry conditions, thanks to a newly developed wiper blade heating system. Annoying blockages caused by snow or freezing slush become a thing of the past.

Let there be light: the largest panoramic roof in the segment

Another advantage of MAGIC VISION CONTROL is that the amount of water sprayed onto the windscreen is never enough for the slipstream to propel it into the open panoramic roof – because the control unit also knows the roof's status. The newly developed panoramic roof available as an optional extra transforms the interior of the new GLE by admitting a great deal of light and fresh air when required. It is a full 50 percent larger than in the preceding model, the largest panoramic roof on a series-production SUV, and consists entirely of thermally insulated, tinted single-pane safety glass.

Its two glass sections extend over the entire width and length of the roof. The centre section can be raised at the rear (in this position the degree of lift is automatically adjusted to suit the road speed for noise optimisation), and slid well over the fixed, rear glass section which extends to the C-pillar.

The glass roof allows a clear view of the sky on every seat, also in the optional third row. And when the sun shines too brightly, it can be shaded along its entire length with an electrically adjustable roller blind.

The new GLE in trailer operation

A real workhorse

One of the strongest reasons for purchasing an SUV is its great suitability for towing a trailer. All-wheel drive and a transmission ratio configured for pulling power allow high towing capacities, while the height, width and relatively high vehicle weight improve the driving stability of the combination. The new GLE is designed to do all this even better.

And it is aided in this by Trailer Manoeuvring Assist.

Doing things better already begins with the trailer coupling. A fully electric version of this is available for the European market. Using buttons in the tailgate or driver's door, the ball neck including the socket for the trailer electrics swings up from under the vehicle and automatically engages in its operating position. After use it retracts back into its idle position behind the bumper equally effortlessly.

To prevent any misuse by children, the button in the tailgate is inaccessible when the tailgate is closed, and out of reach of children when the tailgate is open. For additional safety, the trailer coupling has an obstruction sensor similar to the one for the power windows. To prevent incorrect operation due to snagged items of luggage, a pull switch is used instead of a pushbutton.

Fix4Bike: new holding device for cycle racks

A special feature is also provided for those who do not use the coupling to tow a trailer, but e.g. to carry bicycles: the trailer coupling has two extra bolts on the ball neck to carry a suitable cycle rack in safety. This design allows the load-carrying capacity to be increased to 100 kg and four cycles - particularly useful in the case of e-bikes, which could previously only be carried to a limited extent. The carrier is particularly easy to install, and also protects the rear bumper against damage. Previous racks can still be used, although these remain limited to carrying three cycles and 75 kg.

In conjunction with the Parking package, attaching a trailer is convenient even without outside help: lining up with the drawbar is done with the help of the reversing camera, which has a zoom mode for the purpose so as to show in close-up where the drawbar and ball neck are in relation to each other. Once the combination is hitched, briefly driving straight ahead calibrates Trailer Manoeuvring Assist with its articulation angle protection. This makes manoeuvring with a trailer easy even for the inexperienced.

Trailer Manoeuvring Assist controls the steering angle of the towing vehicle automatically up to a limited speed. An articulation angle sensor in the ball neck of the trailer coupling supplies the necessary information.

Four cameras (at the front in the radiator grille, at the rear in the tailgate handle and in both exterior mirror housings) monitor the vehicle's surroundings. It is not only their respective images that can be displayed, as a combination of them also generates a virtual bird's-eye view of the vehicle. When reversing with a trailer, a wide-angle view of the trailer and a symbolic representation of the combination are displayed. The driver can then select the articulation angle at which the combination is to reverse. The steering is automatically influenced to maintain this angle. When the trailer has moved in the right direction and is to continue reversing in a straight line, the driver presses the "Straighten up" icon in the touchscreen and the steering automatically performs the manoeuvre. Skilfully controlled by the GLE, the trailer moves in a dead straight line.

When a trailer has been hitched up and connected, Trailer Manoeuvring Assist is activated when at standstill by engaging reverse gear and pressing the Parking button to the left of the touchpad in the centre console, and works at speeds up to 8 km/h and even on uphill gradients up to 15 %. Trailer Manoeuvring Assist can be intuitively operated via the multimedia system MBUX – Mercedes-Benz User Experience: using the media display or the touchpad in the centre console, the driver only needs to select the required manoeuvre (indicating the direction by entering the desired articulation angle or selecting the "Straighten up" function). The manoeuvre can then be monitored from different camera angles. Dynamic guide lines show the trajectory, vehicle width and distance from recognised objects.

If the articulation angle exceeds 5 degrees, the speed of reverse travel is reduced to 5 km/h. And if the driver turns the steering wheel or the articulation angle threatens to become too large, the vehicle automatically stops. Trailer Manoeuvring Assist particularly ensures additional safety for drivers who only occasionally manoeuvre with a trailer in situations that could quickly lead to stress.

A real workhorse: towing capacity up to 3500 kg

However, the new GLE is also an excellent towing vehicle for straightforward operations. It will effortlessly manage braked trailers with a total weight of up to 3500 kg and tongue weights of up to 140 kg. ESP® features a trailer stabilisation function that recognises any oscillating tendency by the combination and counters this with specific braking intervention, right up to full braking of the combination. When the trailer has ceased to oscillate, the system ends its intervention.

The control systems of the AIRMATIC and eABC suspension systems also adapt automatically to an attached trailer, and control the suspension level and damping accordingly. Assistance systems that are not compatible with trailer operation, e.g. Active Parking Assist, are likewise automatically deactivated, though naturally with a corresponding warning for the driver in the cockpit display.

Untrammelled calm

The aura of luxury, generosity and superiority so self-assuredly exuded by the exterior and interior of the new GLE is accentuated and made tangible on a daily basis by something much more subtle and even more effective in the long term – namely all the things that go unnoticed. The new GLE is a haven of peace and calm. Numerous measures come together to produce this result – and the designers, developers and testers work together closely to achieve it.

The body structure is of central importance for noise and vibration comfort. How it responds to impulses from the suspension, the vehicle's mechanical components and the airstream (see section on aeroacoustics) decisively affects how unavoidable road, powertrain and wind noises are perceived when driving.

Both statically and dynamically, the body structure of the new GLE is around 20 percent more torsionally rigid than that of the previous model. Its natural frequencies are far from the resonances caused by the typical input frequencies of wheels and drive components. The areas carrying the elastomer bearings of the powertrain and subframes are particularly rigid. This means that these assemblies and their vibrations are very effectively isolated from the bodyshell.

Both axles are connected to the body by subframes, and therefore doubly isolated. The bearings of the subframes were completely redesigned and made larger. The geometry of the engine and suspension mounts was redesigned to transfer less vibration energy to the body structure, and adapted to suit the different engine variants. For the first time, the domes of the shock absorber mounts are of diecast aluminium. The housing of the electro-mechanical steering was also made more rigid, so that steering and road noises transmitted into the interior are reduced.

The insulation of transmitted sound from the powertrain to the passenger cell has also been optimised. The firewall insulation is injection-moulded rather than deep-drawn, and therefore does not have the uneven wall thicknesses resulting from the stretching of deep-drawn sheet metal. So despite its complex shape extending to the side area of the A-pillars and the windscreen cross-member, there are no acoustic weak spots. The weight per unit area of this noise

insulation is locally configured for the actual noise input – heavy where needed for effective insulation, but with a weight-saving overall design. Insulation is augmented by the powertrain partition of sound-absorbing plastic and the engine compartment insulation. In terms of thermal and acoustic insulation, these are configured to suit the engine variant.

The insulation measures for the vehicle floor and wheel arches are also specific to each engine variant. Computer simulations were used to configure the torsional dampers and isolation elements, and incorporate reinforcements into the floor assembly. All these measures were rounded off with insulating membranes, foam-lined cavities and floor carpeting that performs far more functions than just a floor covering: it consists of a four-layered acoustic structure with foam, a heavy layer, matting and finally carpet.

The calm in the interior of the new GLE reaches new heights if the optional Acoustic package is ordered. This includes laminated safety glass with a sound and infrared absorbing membrane, as well as numerous additional insulation measures right up to special tyres. These have a foam layer on the inside of the tread which absorbs low-frequency noises generated within the tyre itself, thereby noticeably improving noise comfort.

The gentle sound of a Mercedes-Benz door closing

The new GLE is so quiet that previously insignificant noises take on a new importance. This is because operating and functional noises are suddenly more obvious, and must be reduced or modified to produce a harmonious and homogeneous sound impression (also see "Under the Microscope" in the next section). This applies to mechanical sounds such as the running noise of the air suspension compressor, noises from the ventilation and air conditioning system, the actuator motors for electric seat adjustment and the closing noise of the glove compartment. The door locks and doors of Mercedes-Benz models have always been designed to produce a typical sound when closing.

Passive safety

All-round protection when the worst happens

Protecting the occupants from the consequences of an accident is one of the most important development goals of Mercedes-Benz. In-house safety standards are applied in all models which in many cases go well beyond the legal requirements. Especially the crash-related requirements are aligned to the so-called Real Life Safety philosophy. These take findings from in-house accident research into account in the development specifications, e.g. the roof drop test. Alongside verification of crash behaviour, all Mercedes-Benz vehicles undergo additional component tests at system level. For many years PRE-SAFE®, the preventive occupant protection system, has supplemented the classic design measures. The result is all-round protection that commences well before an accident and also takes effect afterwards, as in the GLE.

The basis for occupant protection is the body structure with a particularly rigid passenger cell, whose strength is suited to the deformation resistance of the front-end and rear-end structures. To this end all structures within the vehicle body are optimised in terms of dimensions and materials, either by virtue of material strength or the wall thickness of the panels. This allows the occupants sufficient protective space and protects them from excessive deceleration forces, which are as far as possible reduced by intelligently responding restraint systems.

In addition to the passenger cell, the area of the body structure that accommodates the fuel tank is of particularly rigid design to limit the consequences of a serious collision. To this end the new GLE has cast aluminium sections with steel inserts which limit deformation of this area ahead of the rear axle even in very severe accidents.

The extensive driving assistance systems of the new GLE, as well as the sophisticated crash sensor system, allow PRE-SAFE® to mitigate the effects of an impact regarded as probable even before the impact itself, with a precisely coordinated response by the restraint systems and a number of other measures. The scenarios to which PRE-SAFE® can respond and the parameters relevant to them have been further extended in the new GLE. The system is now able to

- recognise a critical situation by the way in which the driver's foot moves from the accelerator to the brake pedal,
- assess critical steering movements even at low speeds,
- take intervention by Crosswind Assist into account and
- register an impending side impact, for example when an accident occurs at a junction, with the help of the close-range sensors.

Depending on the situation and equipment level, the seat belts of the driver and front passenger can be tensioned, the seat unit of the front passenger brought to a more favourable position (if the front passenger seat has the memory function) and the side windows and panoramic roof closed. These measures are reversible – if it is still possible to avoid the accident, the system is immediately ready to go into action again.

Even more precautions: PRE-SAFE® Sound and PRE-SAFE® Impulse Side

PRE-SAFE® Sound occupant preconditioning is standard equipment in the new GLE. The noise generated by a severe collision can lead to auditory damage in individuals with sensitive hearing. The system is able to prevent this. When an impending impact is detected, the vehicle's sound system emits a rushing noise to prepare the hearing of the occupants. This is able to activate a natural reflex: the stapedius muscle in the inner ear contracts, damping the noise reaching the inner ear.

In the event of an unavoidable side collision recognised by the outer front radar sensors in the bumper, PRE-SAFE® Impulse Side gives the driver or front passenger an impulse on the impact side. An actuator in the seat side bolster is rapidly inflated by a gas cartridge, and gently pushes the upper body of the seat occupant away from the impact side. The distance from the door is increased, and the speed difference with which the side structure impacts the occupant is reduced. Both can reduce the risk of particularly serious injuries.

PRE-SAFE® PLUS: Protection against danger from the rear

PRE-SAFE® PLUS can intervene when following traffic presents a danger. To this end the radar sensors in the rear bumper monitor following traffic to detect an impending rear-end collision. If a hazardous situation is detected, the system warns drivers of the vehicles following behind of the risk by flashing the hazard warning lights at a faster frequency. It also pre-emptively initiates PRE-SAFE® occupant protection measures as the next escalation stage, especially the

reversible belt tensioners. If the vehicle is at a standstill, PRE-SAFE® PLUS also applies the brakes firmly. This reduces the forward jolt from the impact, considerably lowering the loads acting on the occupants and the risk of whiplash injuries. Moreover, locking the brakes can prevent secondary collisions e.g. on junctions with crossing pedestrians or a vehicle ahead.

Restraint systems: state-of-the-art belts and airbags

The GLE has 3-point inertia-reel seat belts with belt tensioners and belt force limiters on all outer seats, including those in the optional third seat row. The centre belt in the second row is a standard three-point seat belt. Reversible PRE-SAFE® reel tensioners are also available for the front seats, so that the belts can be pretensioned as a precaution in certain hazardous situations. For child seats, the two outer rear seats in the second row have i-Size- or ISOFIX child seat attachment systems, depending on the country.

For severe frontal collisions, the airbags in the new GLE include a driver kneebag, a driver airbag and a front passenger airbag. As standard, a sensor system in the front passenger seat automatically deactivates the front passenger airbag when a rear-facing child seat or an unoccupied seat is detected. The windowbags can also be activated during a frontal collision involving lateral forces.

During a severe lateral collision, only the airbags on the impact side are normally activated: windowbags are available as a head protection system extending down from the roof to cover the side windows between the A, B and C-pillars. If the optional third seat row is specified, the bag extends to the D-pillar. This enables all the rear passengers on the outer seats to be protected. Combined thorax-pelvis sidebags are also available for the driver and front passenger, and optionally also sidebags for the outer rear seats.

In addition the airbag control unit is equipped with rollover sensors. These can e.g. activate belt tensioners and windowbags when a rollover is detected.

Typical of Mercedes-Benz: support even after an accident

The phase shortly after a severe accident is also addressed by numerous innovative systems. Like other Mercedes-Benz models, the GLE initiates measures that mitigate the consequences: automatically activated hazard

warning flashers, emergency lighting in the interior, emergency shutoff of the engine and fuel pump, emergency unlocking of the doors and lowering the windows for ventilation, and of course automatic placement of an emergency call, are among the measures the car can initiate automatically after an accident. And from stickers with a QR code, arriving emergency services can quickly obtain information for the safe rescue of injured occupants.

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Interior design

Luxuriously elegant and powerfully progressive

The interior of the new GLE derives its fascination from the contrast between the luxurious, elegant ambience of a Mercedes-Benz luxury saloon and the robust, progressive features of an SUV.

The central element in the dashboard's design is a sporty, stylish cockpit unit embedded in a striking dashboard support. The dashboard support flows into the door panels, and the integral trim element likewise extends around the driver and front passenger to meet the doors. As in the luxury-class saloons, this greatly accentuates the impression of width while conveying security and elegance. At the same time it creates the impression that the upper cockpit section is free-floating.

The instrument cluster and media display (2 x 12.3-inch as standard) are housed behind a shared, continuous glass surface to form a large, free-standing screen. There is a touchpad in the centre console as a further means of controlling many vehicle functions. The ambience lighting impressively illuminates the dashboard, with optical fibres coursing throughout the cockpit. The four rectangular air vents are prominently embedded in the trim element.

The prominent, raised centre console creates a robust contrast with the free-floating appearance of the dashboard. As a typical feature of off-roaders, there are two prominent grab handles on the centre console. They are lined with leather, and not only provide a firm grip but are also pleasant to the touch. The modern, luxurious impression is rounded off by the flowing leather surface behind them, the large trim element and the flush-fitted roller blind.

All the controls and displays are in a new design. The controls with haptic and audible feedback appear to have been milled from a solid metal block. Very fine chiselling and pyramid structures show the desire for perfection and craftsmanship. The new sport steering wheel with its striking, sculptured spoke design accentuates the impressive appearance of the SUV's interior.

The door panels exude calm with a harmonious transition from the dashboard and accentuated horizontal design lines. The interplay between the powerfully

sculptured armrest and the discreet, recessed door trim creates a dramatic contrast. The closing handle carries the iconic, stylised miniature seat as a hallmark Mercedes-Benz seat adjustment control feature. The closing handles of the doors blend into the shape of the armrest, whose front end houses the controls for the windows and exterior mirrors. The result is a homogeneous design unit that harmonises with the grab handles on the centre console.

With its geometrical structure, the design of the seats accentuates the striking character of the SUV's interior. The backrest with its wave-like surface divisions is heavily reminiscent of the typical design found in the E-Class, but with a decidedly SUV-specific interpretation.

Colours and materials: attractive and varied choice

The different equipment lines have a wide range of materials and colours, from modern and luxurious to extremely sporty. Inspired by colour shades from architecture and fashion, bicolor interiors such as magma grey/macchiato beige, magma grey/espresso brown or the cool combination of black/tartufo were developed.

In the Exclusive line, the off-road character is accentuated by a rougher natural leather structure. This can be harmoniously combined with natural, open-pored wood trim. Trim surfaces in aluminium or with interwoven stainless steel are more progressive and sporty, with the black/white colour scheme adding a particularly sporty emphasis.

Other special features include the following:

- the combination of "Lugano" leather with the new "Locarno" rough leather, which in the Exclusive line is used on the seat side bolsters and head restraints as an SUV characteristic. This only applies when the dark colours black and espresso brown are specified. Light colours such as macchiato are in "Lugano" throughout,
- the new hand-crafted finish for the designo seat in nappa leather, with multiple box pleats,
- a choice of mostly new, open-pored, linear wood such as: plain anthracite oak, brown American walnut and black sectioned ash wood.

Climate control

Mastering the atmosphere

The completely newly developed air conditioning system of the new GLE has the qualities of a very good butler: working as quietly as possible, effortlessly guessing the wishes of the occupants and carrying them out unobtrusively. And it has a few more, mysterious tricks which allow wellbeing to be heightened even further. Depending on the equipment level, two different versions of the air conditioning system are available: THERMATIC two-zone automatic climate control and THERMOTRONIC four-zone air conditioning. Other options improve climatic comfort even further.

As the new GLE is so quiet, the heater fan needs to be quieter than ever. Accordingly the fan motor rests on rubber bearings so that no vibrations are transferred to the housing that might lead to a noise in the interior. A coating on the air ducts additionally dampens airflow noises. The air is then conducted to the vents after thorough filtering and temperature control according to the weather and the occupants' wishes: separately for the driver and front passenger sides in the case of THERMATIC, or also separately climatized for the left and right sides of the second seat row with THERMOTRONIC, which also has additional vents in the B-pillars and footwells.

Convenient: the air conditioning system thinks for itself

In both versions, the aim of the air conditioning control system is for the driver to make a setting and the rest to be done automatically. This is why several sensors measure the inside and outside temperatures, the angle of the sun and even the air humidity at the windscreen, so as to prevent misted-up windows before they can disturb the driver.

In the case of THERMOTRONIC, the control unit of the air conditioning system also detects poor air quality outside the vehicle, or receives a warning from the navigation system if the vehicle is approaching a tunnel. In both cases the system automatically switches to air recirculation mode, and the side windows and sliding sunroof are closed.

Like a good butler, the control system also remembers the personal preferences of up to seven different, regular users and one guest.

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The ultimate on request: surface heating and AIR-BALANCE

Customers living in a cold region who attach particular importance to maximum thermal comfort can opt for the Warmth Comfort package rather than normal seat heating – which is of course also available. This includes particularly fast-acting heating of the front seats, and also of the centre armrest and the front door panels with their armrests. Heating wires in these surfaces ensure more homogeneous and cosy warmth after entering the cold vehicle. Naturally seat heating is also available for the second seat row.

Even more wellness is assured by the AIR-BALANCE package. This has two particularly clever features. One is active fragrancing of the interior: activated, deactivated and variably controlled via a separate menu in the multimedia system, a fragrance generator perfumes the air entering the interior with a pleasant fragrance from a glass flask. There is a choice of eight different, meticulously composed fragrances, such as "Forest Mood". They can be changed by replacing the flask, which is reminiscent of a high-quality perfume bottle.

But even those who want to smell less will like the AIR-BALANCE package, as it includes an enlarged activated charcoal filter filled with activated charcoal from coconut shells which can trap unpleasant pollutants in the outside air before they enter the interior.

Yet another benefit of the AIR-BALANCE package is air ionisation by a high-voltage ioniser in the air duct. The ioniser generates negative ions which are attracted by the mainly positively charged airborne particles. Owing to the magnetic attraction, the particles form heavier agglomerations and fall to the floor. The particles concerned are certain viruses, bacteria and spores whose deactivation measurably benefits asthmatics and allergy sufferers. Ionisation freshens the air and keeps the driver fit for longer.

Sound systems

Let the music play

The new GLE's ultra-quiet running is a standing invitation to listen to music when on a journey. Even equipping MBUX – Mercedes-Benz User Experience in the new GLE with seven loudspeakers as standard improves the overall acoustics and performance. Two audio systems specially configured for the interior of the new GLE are available as optional equipment – a Burmester® surround sound system with 14 speakers and an additional amplifier, and a Burmester® high-end 3D surround sound system which ensures an impressive musical experience in every respect with its design features and a total of 26 speakers.

The standard audio system of the new GLE has seven speakers for media reproduction plus a speaker for control, warning and message functions and a mid-range speaker in the dashboard for the emergency call system. In addition to ferrite mid-range speakers in the rear door panels and Neodym mid-range speakers in the front doors, all installed at a relatively high level, as well as tweeters in the exterior mirror triangles, there is a Frontbass speaker installed in the firewall in front of the front passenger which uses the volume of the cross and side members as a resonance chamber. Its sound is particularly brilliant as a result.

Bathed in sound: Burmester® surround sound system

This sound system newly available as optional equipment is specially configured for the GLE, and floods the interior with sound from a total of 14 speakers of higher quality than the standard speakers. These are actuated by an additional amplifier with digital sound processing which produces an output of 8 x 50 watts and 2 x 120 watts and is installed on the left in the luggage compartment. When this system is specified, the GLE has a Frontbass in both front footwells, a tweeter and mid-range speaker in all four side doors and two further mid-range speakers in the roof panelling ahead of the tailgate. The mid-range speaker in the dashboard is a dual coil speaker, with one coil reserved for the emergency call system and the other used by the audio system.

Brilliant sound experience: Burmester® high-end 3D surround sound system

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All the installation spaces for the system already described are also used by this top-class system, however it uses higher-quality speakers with particularly strong, lightweight membranes of composite material which have even more resilience and dynamic sound reproduction. But that is not all: three additional tweeters augment the sound on both sides of the roof lining in the luggage compartment and in the centre of the dashboard. Four additional 3D mid-range speakers in the roof next to the B-pillars and in front of the rear-view mirror reproduce the medium frequencies and ensure an impressive surround sound. While full, powerful bass tones not only come from the Frontbass speakers, but also from an additional woofer in each side door, and particularly from a 25-litre subwoofer in the luggage compartment, which has its own 400-watt amplifier.

Both Burmester® systems naturally have numerous adjustment options, and all audio systems for the new GLE allow the connection of a wide range of mobile devices.

Headlamps

Very bright indeed – LED as standard, MULTIBEAM LED
as an option

The new GLE relies on LED technology for all of its lighting. Even the standard specification has headlamps operating with this efficient, bright and long-lived technology. The brand's typical lighting signature with tri-functional torches for the daytime running lamps, parking lights and indicators is a design feature and an identifying function. Illumination of the road surface with projected LED low beam and reflected LED high beam is effective and pleasant. On request the MULTIBEAM LED headlamp system with 84 LEDs per headlamp can be installed.

The central comfort feature of the optional MULTIBEAM LED is Highbeam Assist Plus. This is able to control the LEDs of the headlamps individually, and therefore continuously adapt the range and form of the light cone to the current traffic situation. This enables other road users to be specifically excluded from the light beam, and the high-beam headlamps can make full use of their range. Another advantage is that when approaching strongly reflecting traffic signs, the MULTIBEAM LED headlights dim their light intensity accordingly.

All-new: the off-road lighting

If the GLE is equipped with the Off-Road Engineering package and the driving mode Offroad+ has been selected, the lighting system provides support with a particularly wide and bright light distribution. The cornering lights are permanently switched on. This helps when negotiating difficult stretches of terrain at night, as obstacles can be recognised more easily.

Whether in poor weather or on the motorway: the lights adapt accordingly

On country roads the nearside road verge is illuminated more brightly and widely than with conventional low beams. When the system recognises a built-up area, it automatically activates the city light function for urban traffic. Thanks to symmetrical distribution of the low beams and dimmed cornering lights, paths or not easily seen entrances and exits are illuminated to best effect. If the

low beam headlamps are able to use data from the HDD navigation system, they already activate a wide cone of light ahead of junctions and roundabouts. Low beam is also activated on the relevant side when steering into tight bends at slow speeds.

The Active Light System also provides support at higher speeds on long bends – and even predictively in conjunction with Active Lane Keeping Assist or the Driving Assistance packages. It already illuminates the bend before the driver turns the steering wheel.

The headlamps also have the right answers to inclement weather conditions that often lead to irritating reflections: in unfavourable light conditions, the extended fog light function illuminates the outer half of the road lane more brightly. Adverse weather light is activated when the windscreen wipers are operating constantly, specifically dimming individual LEDs in rainy and wet conditions. The two together ensure that oncoming traffic and the driver suffer less dazzle.

The integrated ULTRA RANGE high beam gives an even longer range. This auxiliary high beam is switched on when Highbeam Assist Plus has been activated, no other road user is detected, the road ahead is straight and the speed is above 40 km/h.

And finally, MULTIBEAM LED in conjunction with HDD navigation adapts to right or left-hand traffic when crossing a border.

Intelligent light: the rear lights also adapt

The light intensity of the brake lights and indicators in the adaptive all-LED rear lights is automatically adjusted to suit the ambient light conditions. This makes the GLE easily recognisable for other road users – and avoids dazzling them.

Whenever it is unlocked or locked, the vehicle welcomes its driver with a brief light show – the headlamps are discreetly activated and transition into a shining white beam.

Suspension and brakes

Surefooted both on and off the road

The new GLE offers a choice of three suspension systems. In the basic version, the newly developed suspension is steel-sprung. On request a likewise newly developed AIRMATIC air suspension with the Adaptive Damping System Plus (ADS+) is available. As the ultimate alternative, the new 48 V onboard electrics allow a major suspension innovation to the highest standard: E-ACTIVE BODY CONTROL (see separate section below). The braking systems for the new GLE have also undergone an evolutionary improvement and are far more powerful.

All the suspension versions share the same front and rear axle architecture - each is attached to a subframe and therefore doubly isolated from the bodyshell. The bearings of the steering arms and axle housings are larger than in previous generations. Together with more rigid points where the forces resulting from wheel responses are introduced, this considerably improves vibration and ride comfort.

The front wheel suspension is a double wishbone suspension with the upper wishbone in a high position, which benefits spring travel when driving off-road. All transverse control arms and the steering knuckles are weight-optimised forged aluminium components whose light weight and rigidity provide ideal conditions for low rolling noises. The new design of the front axle ensures separate introduction of longitudinal and lateral forces, which benefits both the vehicle dynamics and suspension comfort.

The four-link rear suspension adopts the concept of the preceding version, but has been developed further with respect to weight, suspension comfort, vehicle dynamics and vibration comfort. Its control arms are also mostly of aluminium: wheel control is by a cast aluminium lower wishbone and a forged aluminium upper strut rod, as well as an upper camber strut of sheet steel.

The front and rear axles are designed to accommodate all three suspension systems, and dimensioned so that they can cope with even the hardest stresses in off-road operations. The AIRMATIC air suspension and E-ACTIVE BODY CONTROL variants include the possibility of adjustable ground clearance in

different driving modes. The steel suspension already provides a well-balanced compromise between high suspension comfort and safe vehicle dynamics.

The standard for comfort: AIRMATIC air suspension with adaptive damping

Naturally the optional AIRMATIC air suspension can do things even better, as it responds particularly sensitively and has integrated level control with the ability to vary the ground clearance according to the driving situation. It combines air suspension bellows with adaptive ADS+-dampers whose characteristics can be fully automatically varied at each individual wheel, in both the compression and rebound stages. Using a sophisticated sensor system and algorithms, the dampers can be set for different damping responses according to the road surface conditions. If an obstacle is driven over by only one wheel, for example, the damper is set for softer characteristics to reduce transmission of the jolt to the rest of the axle, and therefore to the passenger compartment.

At the front axle the springs and dampers are housed in one suspension strut, but they are separate at the rear axle. As a Mercedes-Benz first, the AIRMATIC air suspension system has a closed air circuit which is able to raise and lower the suspension more rapidly, while operating with less noise. The pump is driven by a 400 W electric motor.

Apart from giving the driver the ability to make own adjustments to the ground clearance and select driving modes, the control system of AIRMATIC uses sophisticated sensor systems and algorithms to analyse the driving situation and make automatic adjustments. On the motorway, for example, it lowers the car by 15 mm in order to establish the best possible conditions for driving safety at high speeds.

Wide choice: driving modes for on and off-road operation

By selecting the driving mode Sport, the driver can permanently lower the ground clearance by the same amount, and by as much as 25 mm in Sport+ mode. This lowering is to ensure a lower centre of gravity, thus enabling higher stability and agility. When driving off-road, the standard version of AIRMATIC allows a 60 mm increase in ground clearance.

The optional ON&OFFROAD package enables three different increases in ground clearance: by 30, 60 or even 90 mm. Control of the ground clearance when off-

road takes a range of other parameters into account, e.g. uphill inclines and the vehicle's axle articulation.

When the driver selects the ground clearance when stationary or on the move, a control lamp flashes until the chosen level has been reached. If a raised ground clearance is not cancelled by the driver when the vehicle is on the road, the suspension control system lowers the suspension depending on speed to ensure safe driving characteristics at all times.

AIRMATIC offers a further practical feature to facilitate loading and unloading of the luggage compartment: the rear end can be lowered by 50 mm via a separate switch in the luggage compartment. The function is however deactivated if a trailer is connected.

The functions of AIRMATIC can be extended even further with the innovative E-ACTIVE BODY CONTROL suspension. (See next section).

Braking system: Even larger dimensions

The brakes of the new GLE have been systematically improved. In line with further development of the suspension, the disc brakes are now larger and measure up to 400 mm in diameter. From an engine output of 200 kW upwards, the rear brake discs are also internally ventilated. Larger brake linings all-round ensure better deceleration with reduced wear. The two-piston floating callipers of the front brakes are of larger and more rigid design. This results in shorter braking distances, better directional stability when braking and a longer operating life for wearing parts.

With the Engineering package in conjunction with E-ACTIVE BODY CONTROL, an even more powerful braking system with six-piston fixed calliper disc brakes is available in combination with specific wheel/tyre combinations in 21-inch size or over.

The parking brake of the new GLE is electrically operated, and uses a combination brake calliper. If its switch to the lower left of the rotary light switch on the dashboard is pressed and held at speeds above 4 km/h, this initiates emergency braking which is not performed by the parking brake but by the service brakes, and accompanied by activation of the hazard warning system.

Bodyshell and lightweight design

The battle for the ideal weight

A vehicle body must be capable of all things: dissipating energy during a crash while keeping the passenger cell as undeformed as possible (see section "Passive safety"), keeping vibrations and noises away from the interior (see section "Vibration and noise comfort"), allowing plenty of space for passengers and comfort features (see all the other sections). Given all these requirements, it is obvious that an SUV bodyshell cannot be a flyweight. Yet it must weigh as little as possible. This requires a great deal of effort, a number of compromises – and a lot of good ideas.

With its high rigidity, the bodyshell of the new GLE makes a major contribution to meeting the demanding standards for vehicle dynamics, noise comfort, perceived quality and crash safety. This means that many of its components must integrate several functions that impose high requirements, while following the principles of modern, future-proof lightweight construction.

The answer lies in a combination of high-strength sheet steel and lightweight materials for assemblies where this achieves the desired attributes, and in the optimum dimensioning and geometry of all components. For example, the bonnet and front wings of the new GLE are of sheet aluminium, the shock absorber consoles at the front and rear axles are of diecast aluminium and the side members at the rear are partially reinforced with diecast aluminium. The front-end member consists of innovative organo panels (see next section).

Precision-fitted panels with variable material thickness

For the first time, the floor assembly of the passenger cell uses so-called tailored, rolled blank panels. These panels are rolled to different thicknesses, so that the finished, pressed component has the ideal wall thickness in every area. This means that high wall thicknesses only occur where they are really needed - on the new GLE this is in the area of the centre tunnel that forms the backbone of the floor panel and greatly influences the rigidity of the bodyshell in a crash.

Some reinforcements differ according to the model variant, so as to cope with different vehicle weights and engine outputs while remaining as light as

possible. The rear end is constructed in three different variants to take into account the different rear seat row configurations.

For the greatest possible rigidity, the bodyshell components are for the most part bonded and spot-welded, and the flanges connecting the parts are designed to allow joining with minimal tension so that tolerances between the panels are compensated during assembly. The resulting bodyshell is so torsionally rigid that despite the large roof aperture to allow for the optional panoramic sliding sunroof, it offers more resistance to torsional forces than that of the preceding model.

At the same time, with the same equipment level, the bodyshell of the new GLE is no heavier than that of the previous generation although it has a longer wheelbase and a substantially greater overall length, and although it is designed to meet the substantially more stringent requirements of the US/NCAP and EuroNCAP safety tests.

In all, weight savings of 62 kg have been achieved for the four-cylinder diesel version of the new GLE, for example, in comparison to its predecessor with a corresponding standard of equipment. Various lightweight design measures have made this possible:

- an increase in the proportion of aluminium from three to 5.5 percent,
- an increase in the proportion of high-strength/hot-formed steels,
- the use of more sophisticated joining methods, including adhesive bonding in the body-in-white,
- a flexible load level concept,
- optimised seats,
- a marked reduction in engine weight,
- a lighter drivetrain and
- a host of improvements to points of detail, such as a brake system with aluminium brake callipers or the front-end member made of organo panels.

This has substantially enhanced the utility value of the new GLE through attributes such as a larger vehicle length on a longer wheelbase, a 30 kW increase in engine power, compliance with higher crash and NVH standards and higher emission standards in accordance with WLTP while maintaining the same gross vehicle weight. In addition, the standard scope of equipment has been

extended to include the automatic tailgate, a reversing camera, LED headlamps and state-of-the-art infotainment with two 12.3" displays.

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New operating and warning sounds

Precise feedback

With the introduction of MBUX – Mercedes-Benz User Experience, a completely new challenge was the acoustic feedback when operating the functions using the touch controls in the steering wheel. This not only meant generating a pleasant and natural operating sound, as the speed of the acoustic feedback is also very important: it must take place with no discernible delay, so that the subconscious perceives the connection between operation and feedback as natural.

This time constraint was not a trivial matter, as the touch controls actuate very different control units. This also made generation of the sound a challenge, as it had to sound the same for all functions even if coming from different loudspeakers. The reward for these efforts, which also involved a large number of customer tests, is the special sound when scrolling down to the end of a menu.

Similar efforts went into the sound of the indicators, citing the natural rhythm of conventional relays. The volume is graduated to suit the ambient noise, so the acoustic feedback is never obtrusive but always easily audible.

Adaptation to the ambient noise level is also a principle behind the bouquet of warning sounds that were newly defined, composed and integrated for the new GLE. Empirical customer tests were conducted to ensure that the sounds are prominent but not irritating, and that their urgency suits the situation. The acoustic warnings are graduated according to priority: the warning that a passenger is not wearing a seat belt is less urgent than the alarm when there is imminent danger of a collision. Though this is by no means has the intensity of a siren: the aim is to claim the driver's attention without paralysing him/her with a shock effect.

Production

Made in Tuscaloosa

The history of premium SUVs from Mercedes-Benz is also the history of the plant in Tuscaloosa, Alabama. Since 1995 Daimler has invested more than six billion dollars in this location in the southern USA, and since 1997 it has produced more than two million SUVs of which two thirds went for export. Tuscaloosa is the only production location for the new GLE. The GLE Coupé and the GLS are also produced here, as is the C-Class for the North-American market. One billion euros is being invested in Tuscaloosa to prepare the plant for the production of future SUVs and the coming plug-in versions of the new GLE, including the construction of a battery factory close to the plant.

Daimler's history in the USA goes back to the year 1888, when the first distributorship in the United States was founded, and since 1981 it has also included the heavy trucks of the American icon Freightliner. However, the major strategic decision to produce passenger cars in the USA was closely allied to the introduction of the large SUVs, for which the American market is by far the most important worldwide. The Tuscaloosa plant and the M-Class were therefore two parts of one and the same decision announced in April 1993: the history of Mercedes-Benz U.S. International, Inc. – MBUSI for short – had begun.

The plant was completed in July 1996, and production of the first M-Class commenced in the following year. Daimler took its corporate culture to the USA with thorough preparatory training and education. The originally planned production output of 65,000 units quickly became more. In recent years over 300,000 vehicles have rolled off the production lines in Tuscaloosa. More than three million vehicles have left the plant since 1997. Around two thirds of the installed parts and components come from North American suppliers. Some two thirds of the SUVs produced in Alabama are exported from the USA. This makes MBUSI the second-largest automobile exporter in the USA.

One billion dollars for electromobility

One billion US dollars is the investment with which Tuscaloosa is being prepared for a new chapter in the history of Daimler: the expansion of electromobility at Mercedes-Benz. Most of this sum is going into the construction of an American

location within the Mercedes-Benz Cars battery production network. In Bibb County, eleven kilometres from the Mercedes-Benz car plant, the new plant is being built that will produce the batteries for future electric SUVs of the EQ product and technology brand. Directly adjacent to this is a logistics centre to supply the car production plant with the necessary parts. Both will be opened next year.

This means that a further 600 or so new jobs will be created in Alabama, in addition to the current 3700 employees at the car plant. All in all the group employs around 26,000 people in 23 USA locations, providing around 150,000 jobs if indirect employment is taken into account.

The heritage

Success story

In 1997 Mercedes-Benz founded the premium SUV segment with the launch of the M-Class. At the same time this was the brand's first model to be produced in the USA, at the new plant in Tuscaloosa/Alabama. Since autumn 2015 the model family has borne the name GLE, emphasising its positioning as an SUV in the E-Class model family. More than two million customers have decided in favour of the off-roader since the launch of the M-Class, and the GLE is the bestselling SUV in the history of Mercedes-Benz.

First generation (W 163): 07/1997 – 12/2004

The new model, designated the AAV (All Activity Vehicle) when it was presented as a concept study in January 1996, was officially known as the M-Class from the time of its market launch in the spring of 1997. The respective model designations also always included the two letters "ML" on legal naming-related grounds. The first Mercedes-Benz model produced in the USA featured electronically controlled all-wheel drive which had its debut in the M-Class under the name 4ETS. In traditional off-roader fashion, the body was mounted on a separate chassis. The interior was variable, two sunroofs could be installed in the roof, and GPS navigation plus a car phone with a hands-free system were state-of-the-art when it came to connectivity at the time. The engine range consisted of two turbodiesels and two petrol variants. A facelift in the autumn of 2001 comprised more than 1100 new and modified components which markedly upgraded the vehicle in terms of design, interior, technology and standard equipment.

Second generation (W 164): 02/2005 – 06/2011

In its second generation the M-Class became more car-like: the ladder-type frame gave way to a unibody, and the transmission no longer had an off-road reduction as standard. This did not mean that the technical effort for off-road driving became any less: optional items were an Offroad package with 100 percent locking of the centre and rear axle differentials, a reduction gear that allows engagement of reverse gear while on the move (shift on the move), an underguard, a compass, a manual mode for the automatic transmission and a

five stage adjustment range for the optional air suspension, of which three were freely selectable.

This ML shared the same technical basis as its sister models of the R-Class (251 series) and the GL presented in 2006. There was a choice of four petrol engines with 6 and 8 cylinders, and in 2009 these were joined by the first hybrid SUV by Mercedes-Benz, the ML 450 HYBRID. In the diesel sector, six different common-rail turbodiesels with six and eight cylinders were introduced successively or simultaneously.

With the model facelift in March 2008, the M-Class underwent a number of design changes and received the preventive occupant protection system PRE-SAFE®.

Third generation (W 166): 11/2011 – 09/2018

On its introduction, the third generation of the M-Class was given the 7-speed automatic transmission 7G-TRONIC PLUS with start/stop system as standard, acceleration skid control, vehicle dynamics control, 4ETS (electronic traction system) and downhill speed regulation (DSR). The smallest petrol variant (of a total of five petrol models up to the facelift in 2015) and both diesel variants featured a steel suspension as standard, but could optionally be equipped with the two-chamber air suspension AIRMATIC with adaptive damping system and level control, which more powerful petrol variants featured as standard.

Also available on request were the ACTIVE CURVE SYSTEM, stabilisers whose spring stiffness was automatically adjustable for reduced body roll, Night View Assist and Active Parking Assist.

With the model facelift in 2015 the M-Class became the GLE, and a particularly sporty sister model was added in the form of the GLE Coupé. Eight petrol engines with more V6 than V8 variants and two common-rail diesel engines provided the power, which was in some cases transferred by a 9G-TRONIC transmission. As a favourably priced entry-level model intended mainly for the American market, the GLE 350 now also became available with only rear-wheel drive.

Mercedes-Benz GLE 300 d 4MATIC

Engine

Number of cylinders/arrangement		4/in-line, 4 valves per cylinder
Displacement	cc	1950
Bore x stroke	mm	82.0 x 92.3
Rated output	kW/hp	180/245 at 4200 rpm
Rated torque	Nm	500 at 1600-2400 rpm
Compression ratio		15.5: 1
Mixture formation		Common-rail high-pressure injection

Power transmission

Drive system		Permanent all-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.27
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle		Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle		Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system		Disc brakes all-round, internally ventilated at the front, electric parking brake , ABS, Brake Assist, ESP*
Steering		Electrically supported rack-and-pinion power steering system
Wheels		7.5 J x 18 H2
Tyres		235/60 R 18 V

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear*	mm	1.685/1.705
Length	mm	4924
Width	mm	1947
Height	mm	1772
Turning circle	m	12.0
Boot capacity, German	l	630-2055
Association of the Automotive Industry		
Kerb weight acc. to EC	kg	2165
Payload	kg	745
Perm. GVW	kg	2910
Tank capacity/of which reserve	l	65/9.0

* With tyre size 255/50 R19

Performance and fuel consumption

Acceleration 0-100 km/h	s	7.2
Top speed	km/h	225
NEDC fuel consumption, combined ¹	l/100 km	6.4-6.1
CO ₂ emissions combined ¹	g/km	169-161

¹ The stated figures were determined in accordance with the prescribed measuring method. These are the "NEDC CO₂ figures" according to Art. 2 No. 1 Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures. Further information on the vehicles on offer, including the WLTP values, can be found for each country at www.mercedes-benz.com

Mercedes-Benz GLE 350 (USA only)

Engine

Number of cylinders/arrangement		4/in-line, 4 valves per cylinder
Displacement	cc	1991
Bore x stroke	mm	83.0 x 92.0
Rated output	kW/hp	190/258 at 5800-6100 rpm
Rated torque	Nm	370 at 1800-4000 rpm
Compression ratio		10.5: 1
Mixture formation		High-pressure injection

Power transmission

Drive system		Rear-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.69
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle	Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle	Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system	Disc brakes all-round, internally ventilated at the front, electric parking brake , ABS, Brake Assist, ESP®
Steering	Electrically supported rack-and-pinion power steering system
Wheels	7.5 J x 18 H2
Tyres	235/60 R 18 V

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear	mm	1.661/1.678
Length	mm	4924
Width	mm	1947
Height	mm	1.794
Turning circle	m	12.0
Boot capacity, German	l	630-2055
Association of the Automotive Industry		
Kerb weight acc. to EC	kg	n/a
Payload	kg	n/a
Perm. GVW	kg	n/a
Tank capacity/of which reserve	l	85/9.0

Performance and fuel consumption

Acceleration 0-100 km/h	s	n/a
Top speed	km/h	n/a
NEDC fuel consumption, combined ¹	l/100 km	n/a
CO ₂ emissions combined ¹	g/km	n/a

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Mercedes-Benz GLE 350 4MATIC (USA only)

Engine

Number of cylinders/arrangement		4/in-line, 4 valves per cylinder
Displacement	cc	1991
Bore x stroke	mm	83.0 x 92.0
Rated output	kW/hp	190/258 at 5800-6100 rpm
Rated torque	Nm	370 at 1800-4000 rpm
Compression ratio		10.5: 1
Mixture formation		High-pressure injection

Power transmission

Drive system		Permanent all-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.69
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle		Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle		Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system		Disc brakes all-round, internally ventilated at the front, electric parking brake , ABS, Brake Assist, ESP®
Steering		Electrically supported rack-and-pinion power steering system
Wheels		7.5 J x 18 H2
Tyres		235/60 R 18 V

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear	mm	1.661/1.678
Length	mm	4924
Width	mm	1947
Height	mm	1.794
Turning circle	m	12.0
Boot capacity, German	l	630-2055
Association of the Automotive Industry		
Kerb weight acc. to EC	kg	n/a
Payload	kg	n/a
Perm. GVW	kg	n/a
Tank capacity/of which reserve	l	85/9.0

Performance and fuel consumption

Acceleration 0-100 km/h	s	n/a
Top speed	km/h	n/a
NEDC fuel consumption, combined ¹	l/100 km	n/a
CO ₂ emissions combined ¹	g/km	n/a

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Mercedes-Benz GLE 350 d 4MATIC

Engine

Number of cylinders/arrangement		6/in-line, 4 valves per cylinder
Displacement	cc	2925
Bore x stroke	mm	82.0 x 92.3
Rated output	kW/hp	200/272 at 3400-4600 rpm
Rated torque	Nm	600 at 1200-3200 rpm
Compression ratio		15.5: 1
Mixture formation		Common-rail high-pressure injection

Power transmission

Drive system		Permanent all-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.27
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle		Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle		Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system		Internally ventilated disc brakes all-round, electric parking brake, ABS, Brake Assist, ESP®
Steering		Electrically supported rack-and-pinion power steering system
Wheels		7.5 J x 18 H2
Tyres		235/60 R 18 V

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear*	mm	1667/1687
Length	mm	4924
Width	mm	1947
Height	mm	1772
Turning circle	m	12.0
Boot capacity, German	l	630-2055
Association of the Automotive Industry		
Kerb weight acc. to EC	kg	2235
Payload	kg	835
Perm. GVW	kg	3.070
Tank capacity/of which reserve	l	65/9.0

* With tyre size 255/50 R19

Performance and fuel consumption

Acceleration 0-100 km/h	s	6.9
Top speed	km/h	230
NEDC fuel consumption, combined ¹	l/100 km	7,5-6,9
CO ₂ emissions combined ¹	g/km	198-184

¹ Figures for fuel consumption and CO₂ emissions are provisional and were determined by the technical service for the certification process in accordance with the WLTP test method and correlated into NEDC figures. EC type approval and certificate of conformity with official figures are not yet available. Differences between the stated figures and the official figures are possible.

Mercedes-Benz GLE 400 d 4MATIC

Engine

Number of cylinders/arrangement		6/in-line, 4 valves per cylinder
Displacement	cc	2925
Bore x stroke	mm	82.0 x 92.3
Rated output	kW/hp	243/330 at 3600-4000 rpm
Rated torque	Nm	700 at 1200-3000 rpm
Compression ratio		15.5: 1
Mixture formation		Common-rail high-pressure injection

Power transmission

Drive system		Permanent all-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.27
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle		Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle		Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system		Internally ventilated disc brakes all-round, electric parking brake, ABS, Brake Assist, ESP*
Steering		Electrically supported rack-and-pinion power steering system
Wheels		8.0 J x 19 H2
Tyres		255/50 R 19 W

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear*	mm	1667/1687
Length	mm	4924
Width	mm	1947
Height	mm	1772
Turning circle	m	12.0
Boot capacity, German	l	630-2055
Association of the Automotive Industry		
Kerb weight acc. to EC	kg	2.265
Payload	kg	805
Perm. GVW	kg	3.070
Tank capacity/of which reserve	l	65/9.0

* With tyre size 255/50 R19

Performance and fuel consumption

Acceleration 0-100 km/h	s	5.8
Top speed	km/h	240
NEDC fuel consumption, combined ¹	l/100 km	7,5-7,0
CO ₂ emissions combined ¹	g/km	199-184

¹ Figures for fuel consumption and CO₂ emissions are provisional and were determined by the technical service for the certification process in accordance with the WLTP test method and correlated into NEDC figures. EC type approval and certificate of conformity with official figures are not yet available. Differences between the stated figures and the official figures are possible.

Mercedes-Benz GLE 450 4MATIC

Engine

Number of cylinders/arrangement		6/in-line, 4 valves per cylinder
Displacement	cc	2999
Bore x stroke	mm	83.0 x 92.4
Rated output	kW/hp	270/367 at 5500-6100 rpm
Rated torque	Nm	500 at 1600-4500 rpm
EQ Boost	kW/hp (Nm)	16/22 (250)
Compression ratio		10.5: 1
Mixture formation		High-pressure injection

Power transmission

Drive system		Permanent all-wheel drive
Transmission		9G-TRONIC 9-speed automatic
Gear ratios	Final drive ratio	3.27
	1st gear	5.35
	2nd gear	3.24
	3rd gear	2.25
	4th gear	1.64
	5. gear	1.21
	6th gear	1.00
	7th gear	0.86
	8th gear	0.72
	9th gear	0.60
	Reverse	4.80

Suspension

Front axle		Double wishbone, coil springs, single-tube gas-filled shock absorber, stabiliser bar
Rear axle		Multi-link suspension, coil springs, twin-tube gas-filled shock absorbers, stabiliser bar
Braking system		Internally ventilated disc brakes all-round, electric parking brake, ABS, Brake Assist, ESP®
Steering		Electrically supported rack-and-pinion power steering system
Wheels		8.0 J x 19 H2
Tyres		255/50 R 19 W

Dimensions and weights

Wheelbase	mm	2995
Track, front/rear	mm	1667/1687
Length	mm	4924
Width	mm	1947
Height	mm	1772
Turning circle	m	12.0
Boot capacity, German Association of the Automotive Industry	l	630-2055
Kerb weight acc. to EC	kg	2220
Payload	kg	780
Perm. GVW	kg	3000
Tank capacity/of which reserve	l	85/9.0

Performance and fuel consumption

Acceleration 0-100 km/h	s	5.7
Top speed	km/h	250
NEDC fuel consumption, combined ¹	l/100 km	9.4-8.3
CO ₂ emissions combined ¹	g/km	214-190

¹ The stated figures were determined in accordance with the prescribed measuring method. These are the "NEDC CO₂ figures" according to Art. 2 No. 1 Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures. Further information on the vehicles on offer, including the WLTP values, can be found for each country at www.mercedes-benz.com