



Pre-information
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The new edition of an icon

Factsheet: The new Mercedes-AMG SL1

Affalterbach. Dynamic and precise driving characteristics, balanced comfort and extensive equipment on a par with a luxury saloon characterise the new Mercedes-AMG SL. The new edition of an icon returns to its roots with a classic soft top and is, at the same time, particularly suitable for everyday use as a 2+2-seater. High-tech components such as the AMG ACTIVE RIDE CONTROL suspension with semi-active roll stabilisation, rear-axle steering, the optionally available AMG ceramic high-performance composite braking system or DIGITAL LIGHT with projection function all sharpen the sporty profile. For the first time, an SL is also putting its performance on the road with all-wheel drive. In conjunction with the AMG 4.0-litre V8 biturbo M177 engine, this results in a driving experience of the highest order.

- Exterior design: the extended dimensional concept with 2+2 seats offered the designers completely new design possibilities.
  - The long wheelbase, short overhangs and steeply raked windscreen with a black-painted frame give the SL a compact and powerful appearance.
  - o The typical SL proportions with a long bonnet signal the appearance of a luxurious roadster that is also very suitable for everyday use.
  - o Flowing surfaces without beading or edges, right down to the recessed door handles, characterise the side view.
  - The voluminously sculpted wheel arches and the light-alloy wheels that are almost flush with the body emphasise power and dynamism.
  - o The active rear spoiler is seamlessly integrated into the tailgate.
  - o Closed, the high-quality soft top underlines the light, purist impression.
- Interior design: the interior caters to the sporty target group as well as customers who are focused
  on maximum comfort. The cockpit design, right down to the adjustable central display in the centre

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Further information on the official fuel consumption and the official specific  $CO_2$  emissions of new passenger cars can be found in the "Guide to Fuel Consumption,  $CO_2$  Emissions and Electricity Consumption" of new passenger cars, which is available free of charge at all sales outlets and from Deutsche Automobil Treuhand GmbH at www.dat.de.



<sup>&</sup>lt;sup>1</sup> Technical data on fuel consumption, emissions and performance in this publication are provisional and have been determined internally in accordance with the applicable certification method. Neither confirmed values from TÜV nor an EC type approval nor a certificate of conformity with official values are available to date. Deviations between the data and the official values are possible.

console, is focused on the driver and impresses with a harmonious overall impression. The dimensional concept with 2+2 seats offers more function and space in the interior. The current-generation MBUX infotainment system also offers a choice of several specific display styles and different modes.

- o Sculptural seat design; electrically adjustable AMG sports seats as standard.
- o Optional AMG performance seats.
- o AIRSCARF (head space heating) as standard.
- o AMG Performance steering wheel with AMG steering wheel buttons as standard.
- o Hyperanalog cockpit: mix of analogue geometry and digital world.
- o Fully digital instrument cluster integrated into a three-dimensional visor (anti-glare).
- o Centre console with adjustable touchscreen (inclination from 12° to 32°) in portrait format (media display).
- Latest-generation MBUX with AMG-specific displays and content and the additional, exclusive AMG Performance and AMG Track Pace menu items.
- Bodyshell with completely newly developed roadster architecture and 2+2 seats: lightweight composite aluminium structure with maximum rigidity provides the basis for precise driving dynamics, high comfort and optimum packaging.
  - o Combination of an aluminium spaceframe with a self-supporting structure.
  - o Not a single component was carried over from the predecessor SL or the AMG GT Roadster.
  - o Intelligent material mix of aluminium, steel, magnesium and fibre composites.
  - o Aluminium panels on the underbody and function-integrated struts on the front and rear.
  - o Windshield frame made of high-strength, hot-formed tubular steel.
  - o Quick-release bar system behind the rear seats for rollover protection.
  - Compared with the predecessor series, the torsional rigidity of the bodyshell structure has increased by 18 percent. The transverse rigidity is 50 percent higher than that of the AMG GT Roadster, while the longitudinal rigidity is 40 percent higher.
- Fabric top with Z-fold for light weight and low centre of gravity.
  - o 21 kg less weight than vario-roof of the previous model.
  - o Three-layer with integrated acoustic mat for high noise comfort.
  - o Heated rear window made of glass.
  - o Opens and closes in 15 seconds up to 50 km/h.
  - o Operation via switch panel or multimedia touch screen.
  - Variable top tray made of fabric.
- Active aerodynamics for high balance and greater efficiency: a key development focus for the new SL was high aerodynamic efficiency, i.e. a perfect balance between low drag and high downforce or reduced lift. Aesthetic aspects were also to be taken into account: all flow-optimising elements are seamlessly integrated into the exterior design.
  - o Front apron with large air intakes for targeted airflow to the radiators and brakes.
  - o Underbody covered on a large scale.
  - o AIRPANEL air-control system at the front in two parts for the first time, for even more demand-oriented control.
  - Active rear spoiler with intelligent operating strategy and six settings.
  - o Aerodynamically optimised light alloy wheels.
  - Optional Aerodynamic Package with larger flics on the front and rear bumpers, active aerodynamic profile in the front underbody and a larger rear diffuser.

- Two models with V8 engines and all-wheel drive at market launch: SL 63 4MATIC+ and SL 55 4MATIC+.
  - o AMG 4.0-litre V8 biturbo engine with two twin-scroll turbochargers.
  - o 430 kW (585 hp) and 800 Nm or 350 kW (476 hp) and 700 Nm.
  - o For use in the SL new oil pan, a repositioned intercooler and active crankcase ventilation.
  - Intake and exhaust ducts have been optimized for even more effective gas exchange, and the exhaust-gas routing for the catalytic converter box and gasoline particulate filter has been enlarged.
  - o Increased performance of the SL 63 4MATIC+ primarily due to higher boost pressure and greater air flow as well as modified engine software.
  - o "One Man, One Engine" production in Affalterbach.
  - o SL 63 4MATIC+ with active engine mounts as standard (optional for SL 55 4MATIC+).
  - o Three cooling circuits for temperature control of engine, turbochargers, transmission, charge air, engine oil, heating and engine control unit.
- AMG SPEEDSHIFT MCT 9G transmission (MCT = Multi-Clutch Transmission): combines an emotional gearshift experience with extremely short shift times.
  - A wet starting clutch replaces the torque converter. It reduces weight and, due to its lower inertia, optimises the response to accelerator pedal commands, especially during spurt and load changes.
  - o Extremely short switching times as well as fast multiple switchbacks if required.
  - Defined ignition interventions in the "Sport" and "Sport+" driving modes enable even faster gear changes than in the other modes.
  - o In all driving programs, starting in first gear to ensure a dynamic driving experience at all times.
  - o RACE START function for optimum acceleration from a standstill.
- AMG Performance 4MATIC+ fully variable all-wheel drive: for the first time in its almost 70-year history, the SL is available with power to all four wheels.
  - o The fully variable torque distribution on the front and rear axles not only ensures optimum traction at the physical limit. The driver can also rely on high driving stability and driving safety in all conditions: on dry roads as well as in the wet or on snow.
  - The transition from rear-wheel to all-wheel drive and vice versa takes place continuously on the basis of a sophisticated matrix that integrates the intelligent control system into the overall vehicle system architecture.
  - An electromechanically controlled clutch variably connects the permanently driven rear axle with the front axle. The best possible torque distribution is continuously calculated depending on the driving situation and the driver's wishes.
- The SL 55 4MATIC+ is equipped as standard with a newly developed AMG RIDE CONTROL steel suspension with particularly lightweight coil springs.
  - o For the first time, a production vehicle from Mercedes-AMG is equipped with a semi-trailingarm front axle with five links arranged completely inside the wheel rim. This significantly improves kinematics and elastokinematics. The wheel guidance and wheel suspension elements, which are independent of one another, enable high lateral acceleration with minimal drive influences on the steering system.
  - o At the rear axle, a five-link space design also guides the wheels.
  - o The lightweight coil springs are also a new development: with a special heat treatment, it was possible to reduce their weight without reducing their performance.

- o During assembly, the spring pad is glued to the spring for the first time. This firm connection avoids wear caused by road abrasion, sand or dirt in the course of a vehicle's life. The spring does not corrode over its life cycle, and the maximum tension can consequently be increased with less weight. This saves around 0.2 kilograms per spring.
- Another lightweight design measure concerns the torsion bar stabilisers on the front and rear axles. Thanks to their variable wall thickness, their weight is also reduced. For this purpose, the raw material is tailored to the load of the vehicle by means of a special stretching process. The maximum wall thickness is now only required where the maximum load occurs, i.e. in the bearing area.
- Adaptive adjustable damping and two pressure relief valves per damper as standard.
- The SL 63 4MATIC+ also celebrates the premiere of the innovative AMG ACTIVE RIDE CONTROL
  suspension with semi-active, hydraulic roll stabilisation. The system enables optimum turn-in and
  load-change behaviour with AMG-typical handling characteristics in terms of dynamics, precision and
  feedback for the driver. At the same time, it increases ride comfort when driving straight ahead and
  when negotiating bumps.
  - o Semi-active hydraulic elements replace the conventional mechanical torsion-bar crossstabilizers and compensate for rolling movements of the new SL in fractions of a second.
  - o For this purpose, the adaptive shock absorbers are additionally equipped with two hydraulic connections. One of these is located on the pressure side of the shock absorber, the other on the traction side.
  - The damper chambers on all four wheels and the lines are connected directly via the control valves of the adaptive dampers.
  - o The intelligent hydraulic interconnection of the four spring struts and the pressure regulation of the pump and switching valves allow a very wide roll spring rate with reduced roll movements at the same time.
  - o Figuratively: every torsion bar from zero to extremely stiff can be displayed automatically in a flash. In everyday use, this increases comfort because even unevenness that occurs on one side is compensated for individually.
  - o During dynamic cornering, the hydraulics also actively reduce camber loss. Thanks to the resulting high camber stiffness, the roadster steers with extreme precision.
  - o When driving straight ahead, the system is opened completely, depending on the driving program and driving situation. The system compensates for individual obstacles that would otherwise cause the vehicle to roll. Driver and passengers experience a significantly more comfortable driving experience. The reduced body roll during cornering contributes equally to comfort and driving dynamics. The driving characteristics in the individual driving programs can also be varied even more between comfort and sport.
  - The semi-active system does not require any additional energy to perform the desired function, so it is very efficient. Instead, it uses the available energy to positively influence the roll behaviour of the vehicle.
  - o The same technology feeds the optional lift system for the front axle, which is made possible by additional lift elements. If required, the front axle is raised by 30 millimetres, making it easier to enter underground garages, for example.

## Rear-axle limited-slip differential

- o The SL 63 4MATIC+ comes as standard with an electronically controlled rear-axle limited-slip differential, which ensures outstanding traction and maximum driving safety in all driving conditions. It is available as optional equipment for the SL 55 4MATIC+ (part of the optional AMG DYNAMIC PLUS package).
- Excellent deceleration values and precise control

- o The newly developed AMG high-performance composite braking system guarantees excellent deceleration values and precise control. It impresses with short braking distances, sensitive response and, last but not least, high stability and durability even under extreme loads.
- o In the SL, the brake disc (made of cast steel) and brake pot (made of aluminium) are connected with special pins and no longer with screws as before. This design saves space, which is used for even better brake cooling.
- The directional perforation is also new: In addition to the weight saving and better heat dissipation, this solution scores with a faster response in wet conditions as well as better pad cleaning after braking.
- o The AMG ceramic high-performance composite braking system is available as an option.
- Active rear-axle steering: combines stability and agility. Both model variants are equipped with active rear-axle steering as standard.
  - o Depending on the speed, the rear wheels steer either in the opposite direction of the front wheels (up to 100 km/h) or in the same direction as the front wheels (over 100 km/h). The system, which is precisely tuned to the new SL, thus enables agile and stable handling in equal measure.
  - Other advantages include easier vehicle control at the limits and less steering effort because the front-wheel steering ratio is more direct at 12.8:1 (instead of 14.2:1 without rear-axle steering).
  - o The turning circle is reduced from 13.1 (without rear-axle steering) to 12.3 metres.
  - Two electromechanical steering actuators replace the conventional track control arms on the rear axle.
  - o The toe angle change is up to 2.5 degrees at the rear wheel.
- The six AMG DYNAMIC SELECT driving programs "Smooth," "Comfort," "Sport," "Sport +," "Individual" and "RACE" (standard for SL 63 4MATIC+) permit a wide spread of vehicle characteristics from comfortable to highly dynamic.
- DIGITAL LIGHT with projections of warning symbols onto the road surface
  - o The revolutionary DIGITAL LIGHT headlamp technology (standard) enables innovative functions such as the projection of auxiliary markings or warning symbols onto the road.
  - o DIGITAL LIGHT has a light module in each headlamp with three extremely powerful LEDs, whose light is refracted and directed with the aid of 1.3 million micro-mirrors. The resolution per vehicle is therefore over 2.6 million pixels. The micro-mirrors are housed on a surface the size of a thumbnail.
  - A control unit with a powerful graphics computer generates a permanent video stream to the mirrors via an HDMI-like connection. DIGITAL LIGHT thus takes up the technology of video projectors. The innovative spotlight can be recognized by its concave lens.
  - The high-beam assistant is highly accurate when fading out oncoming traffic or traffic signs.
  - o The light-dark boundaries and the light distribution of all other adaptive light functions are also displayed with significantly improved precision, which optimizes illumination in fog, on the motorway or in the city, for example.
  - The assistance functions are revolutionary: warning of detected roadworks by projecting an excavator symbol on the roadway, warning and marking by a spotlight on detected pedestrians at the edge of the roadway, indication of traffic lights, stop sign or no-entry zone by projecting a warning symbol on the roadway.
- With the aid of numerous sensors, radar and cameras, the driving assistance systems in the new SL monitor traffic and the surrounding area and can intervene to warn and assist where necessary.

- o As in the new generations of Mercedes C-Class and S-Class, the driver is supported by numerous new or enhanced systems.
- This allows them to drive comfortably and safely in everyday situations by easing the burden of speed adaptation, distance control, steering and lane changes.
- o In the event of danger, the systems help the driver to react appropriately to an impending collision.
- o The functionality of the systems can be experienced through a new display concept in the instrument cluster.