

G-Guard



Mercedes-Benz

The finest World of Protection. G-Guard

For more than 30 years the G-Guard has been accomplishing its mission virtually unchanged. This is because there is nothing more to improve once the top form has been found. But it also shows how rigorously the concept of integrated protection is being implemented. From the outside the modifications are hardly noticeable, but on the inside the sophisticated system was advanced considerably. The result is highest protection at its best, even in extreme terrain.



With great expectations

It calls for personal dedication, decisions made with courage and conviction. In the middle of nowhere and at the end of the world. Precise planning is a must, the effort is tremendous, the challenges great. The G-Guard is indispensable in the process.



Under lock and key

Far away from the city and civilisation visions become reality, setting the course for the future. Top secret, pushing the envelope. Anyone coming here is in the know, holds the secret, knows of the significance. That's what the G-Guard is made for. His strengths – no secret!



A brilliant plan



The fascination exuded by the valuable cargo is everlasting. Figures and yet so much more than numbers. Now en route desires are awakened, imaginations inspired. Nothing is left to chance, every step is meticulously planned, timed and monitored. Full protection. The G-Guard for the route. A matter of course and anything but a product of chance.

A wide-angle, panoramic view from the driver's perspective inside a car at night. The car's interior is visible in the foreground, including the steering wheel, dashboard with a digital display showing a map and the time 3:42, and the rearview mirror. The car is parked on a gravel lot. In the background, a large industrial facility, possibly a refinery or chemical plant, is illuminated by numerous bright lights, creating a complex, glowing structure against the dark night sky. A large spherical storage tank is prominent in the middle ground. To the right, a concrete wall with a fence on top runs along the edge of the lot. The overall atmosphere is mysterious and industrial.

With sharpened senses

The facilities are like a work of art, so sensitive in their complexity. Everything under control. The night retreats mysteriously, a new dawn breaks. On a mission with full concentration to guarantee maximum safety, on a mission the G-Guard with maximum protection.

Under the spell of the evening

A significant invitation. An evening that marks the beginning of a new society. With pleasure you honour the hosts, being a part from the very beginning. The anticipation increases already on the drive in the G-Guard, upon arrival the tingling of departure mixes with optimism and trust.



Under fire from all sides

BRV 2009	Sample weapons	Resistance
VR1		Weapons up to .22 LR
VR2		Handguns up to 9 mm Luger (Para)
VR3		Handguns up to 9 mm Luger (Para)
VR4		Handguns up to .44 Magnum
VR5		Handguns up to .357 Magnum
VR6		7.62 x 39 mm, full steel jacket, iron core

BRV 2009	Sample weapons	Resistance
VR7		7.62 x 51 mm, full steel jacket, soft core
<p>The G-Guard provides extensive protection above and beyond the standards in transparent areas in line with the armouring classes:</p>		
9		7.62 x 51 mm, full metal jacket, hard core
10		7.62 x 54 mm, full metal jacket, hard steel core



The ballistic tests leave no margin for weak points. The vehicle is fired upon from all angles, the locations are specified by the German Department of Firearms Testing. The certificate documents the ballistic resistance of the vehicle. Above and beyond this, the systematic search is on to find weak points in the G-Guard. But the vehicle resistance class VR7 all round and the reinforcement of some of the glazed areas up to class 10 ensure that protection really means bullet-resistant protection.

VR = Vehicle Resistance BRV = Guideline for the testing and certification of bullet-resistant vehicles

VERSUCH LÄUFT

Safe and rooted to the ground



The effectiveness of protective measures is best evaluated after they have been tested and officially certified. That's why the G-Guard runs through extensive testing, being subjected to massive explosions from various directions. Special improved armour on underfloor and roof are part of the standard features of the G-Guard. The optional "mine protection" further enhances personal protection. Even when exposed to explosions from the sides the vehicle demonstrates the required detonation resistance. The documentations and certificates provide proof – the G-Guard stays where it belongs: on the ground.

What you can't see here will surely still create a stir



The stature of a protection system is ultimately evident in its smallest parts. In particular the protection against the devastating effect of mines is a special challenge in some parts of the world. The optional "mine protection" makes the G-Guard resistant against DM31 mines as specified by ERV 2010 and STANAG 4569, and consequently significantly improves personal protection. To further expand on the measures, the fuel reservoir and lines are optionally available for the G-Guard in a version protected against explosions.



Everything geared toward safety



Of course the protective components and their weight have effects on the ladder frame, the axles and the braking characteristics. That's where the benefits of an integrated protection ex-factory once more come into play. The appropriate adaptations, the special dimensioning and additional stabilising elements are already part of the vehicle development. Because directional stability and control during a braking manoeuvre are also essential safety factors of a vehicle and thus also part of the protection components on the G-Guard.

Integrated protection starts during development



The sooner protection components are taken into account, the better they can be integrated. Already in the body shop highest demands are placed on material quality and workmanship. Experience, know-how, innovative technology and diligence lead to results that impress with perfection and precision. The pre-formed parts for the G-Guard are the work of masters, precision work and high-tech ensure optimal solutions even on seams or areas that are susceptible to corrosion.

Nürburg 460. „Großer Mercedes“ Typ 770. Pullman-Limousi
280 SE 3.5. 350 SE. 350 SEL. 450 SE. 450 SEL. 280 GE. 230
SEL. 560 SEL. 500 SEL/S 500 lang. 600 SEL/S 600 lang. G
500 lang. S 600 lang. E 320 CDI. E 350. E 500. S 600 Pullm
S 420 CDI. S 450. S 600. S 600 Pullman. S 450 CDI. S 600.
350 BlueTEC. ML 500.

ne Typ 770. „Großer Mercedes“ Typ 770. 540 K. 600 Pullman.
G Papamobil. 380 SE. 380 SEL. 420 SE. 420 SEL. 500 SE. 500
320. G 350 TD. S 600 Pullman. E 320. E 420. E 430. G 500. S
an. **Special protection ex-factory. Experience means safety.**
E 350 CDI BlueEFFICIENCY. E 250. E 350 BlueTEC. E 500. ML

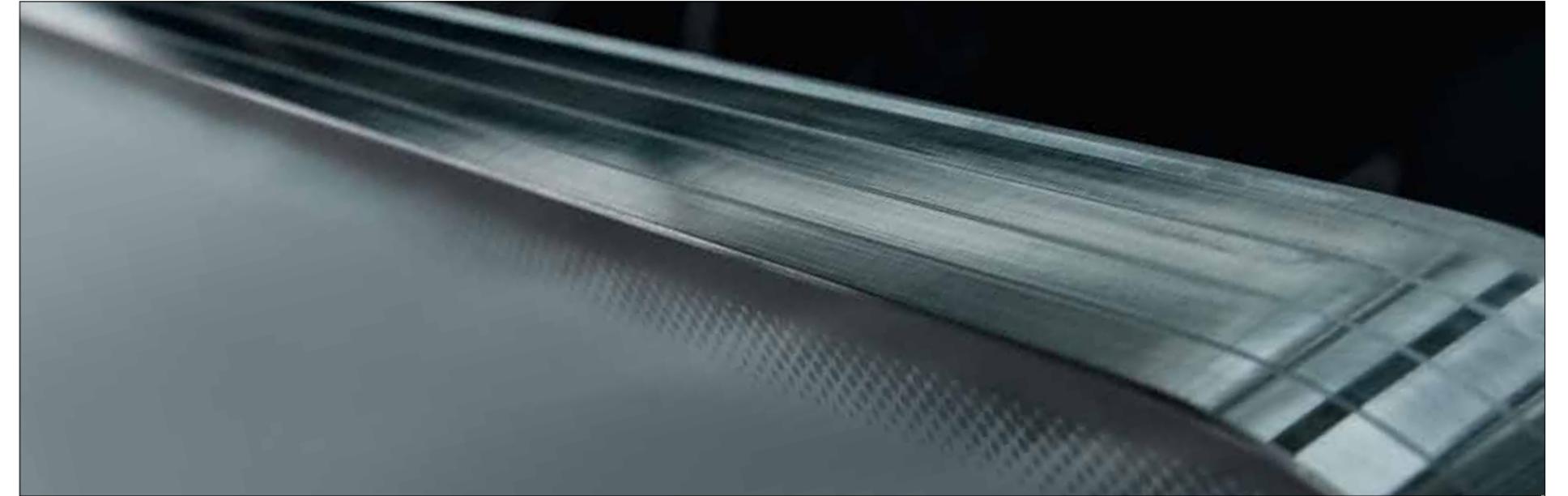
With safety ex-factory. The integrated protection system

The innovative power, perfection and fascination of Mercedes-Benz have been making history all along. The thinkers and doers of Mercedes-Benz Guard have been working with the same passion for more than 80 years to combine highest demands on mobility with maximum protection for the vehicle's occupants in regions and situations where occupants are subject to increased threats. This is based on the idea of creating a secure framework for individual freedom and development. And on the conviction that from a safe position we can make the world move forward!

The integrated protection system, part and parcel of each Guard vehicle right from the development phase, is far more than the sum of its single protective components. Embodying highest demands on quality, technology and innovation, it provides the basis for complete protection. On this basis, the control systems, brakes and driving characteristics can be optimally coordinated and presumed weak spots recognised and eliminated in advance. Special protection ex-factory is realised from the outset of vehicle development. This makes the crucial difference, because the moment of beginning will not return again later.

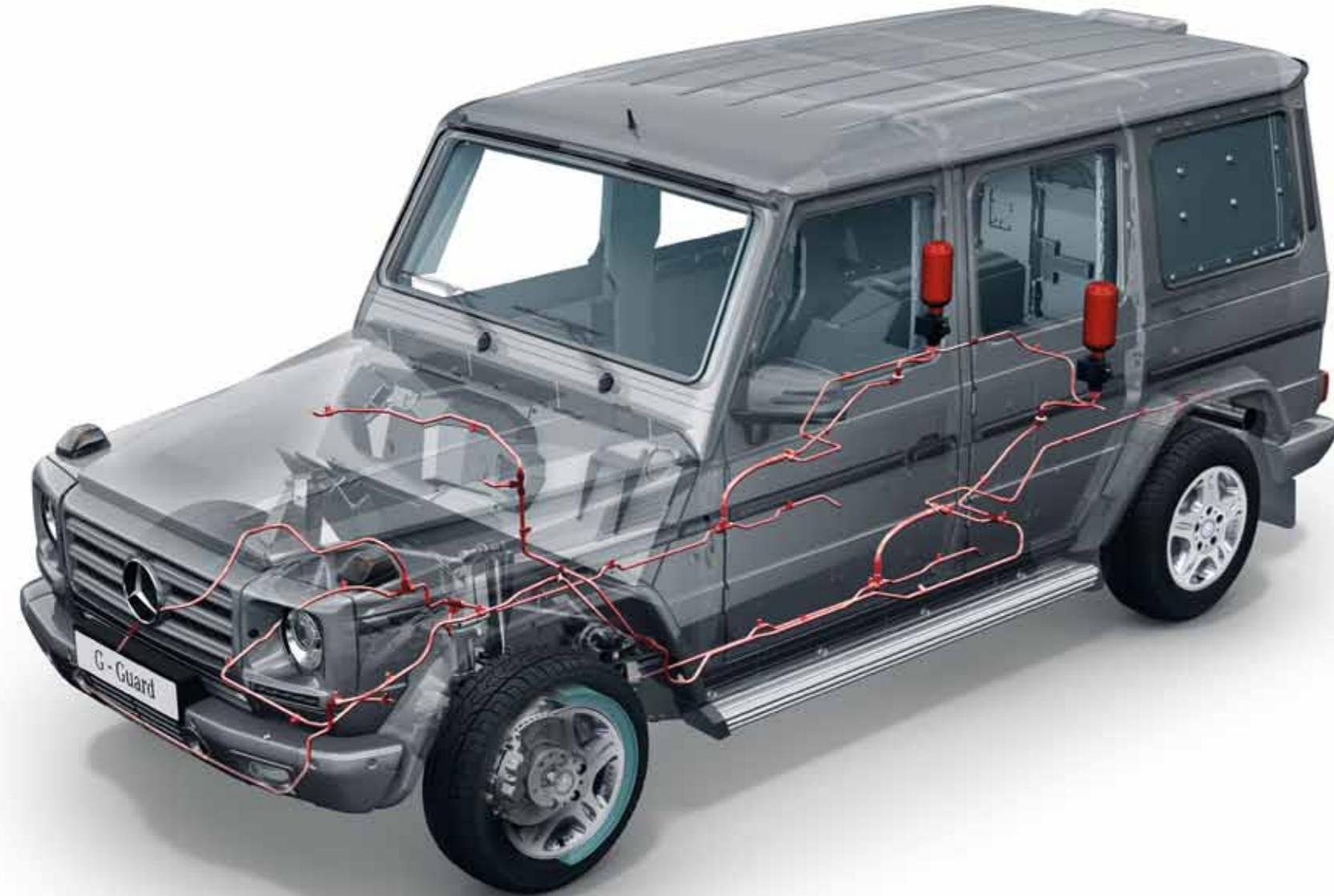


Protection and safety one layer at a time



Several layers of special glass plus an additional inner polycarbonate layer: the sandwich structure acts as fragment protection and provides penetration resistance

The integrated protection system is sophisticated down to the last detail. When it comes to a vehicle serving as a shelter, the glazing is of particular importance. The exclusive use of special glass that also meets the highest optical demands is a matter of course in the G-Guard. The know-how and special care that go into the finish is apparent when looking at the glazing: Several layers of glass and an additional inner polycarbonate layer are assembled into a special sandwich structure. This protects the interior against the penetration of projectiles and even glass fragments.



In the event of a fire, a sophisticated system transports the fire suppressant to all important spots in a matter of seconds

With built-in fire department



Because every second counts: the release button for the fire extinguishing system with strong signal effect

The protection system of the G-Guard also includes a fire extinguishing system. If there is a fire the automatic release mechanism ensures that the safe room won't catch fire in the first place. The effective fire suppressant is carried in integrated bottles from where it is distributed in a matter of seconds to the sources of fire. This protective component and an additional emergency start battery ensure independence in matters of safety even far from a developed infrastructure.

No transit at the transition either



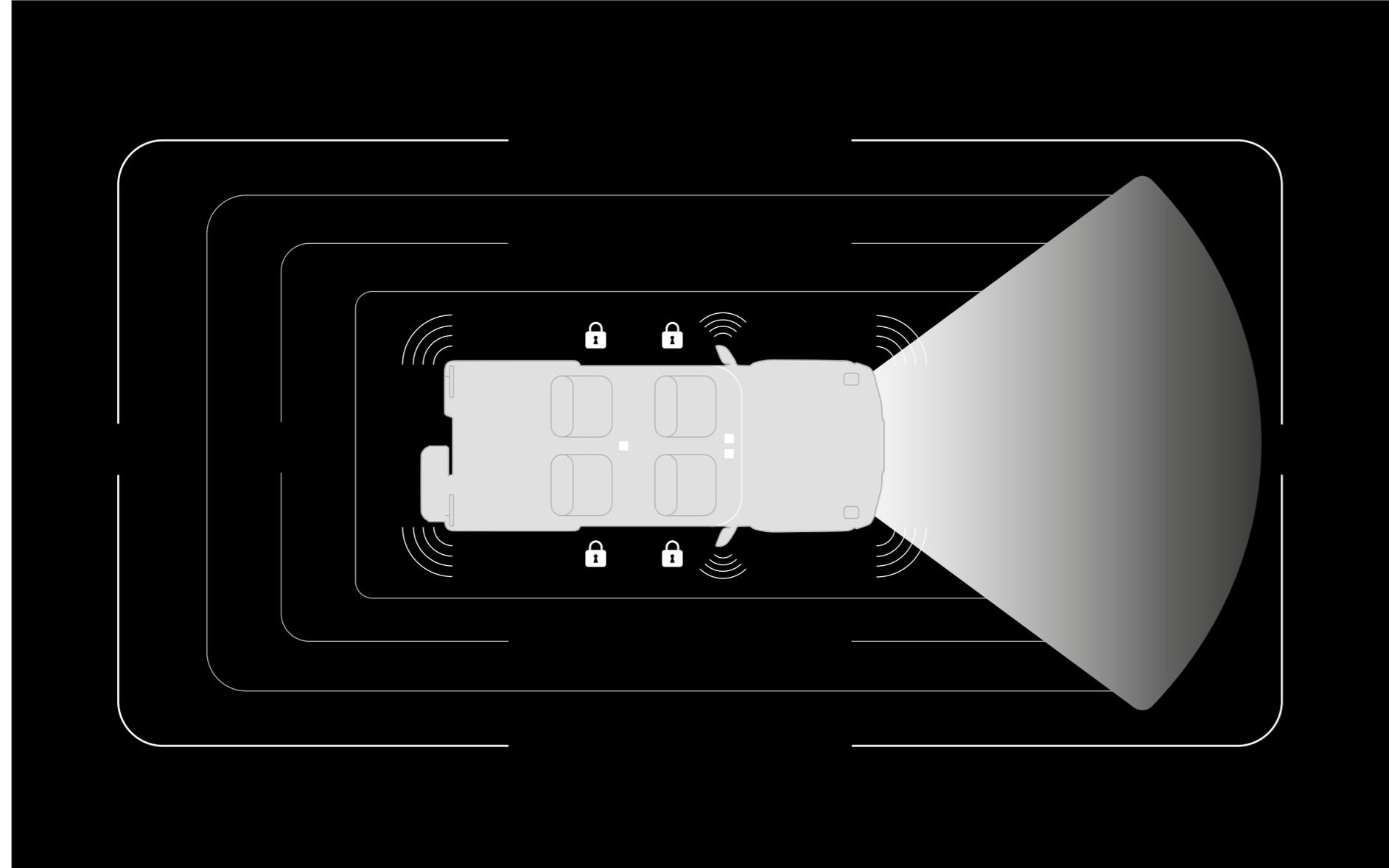
Strong at so-called weak points: where different materials come together, overlapping designs are used as a labyrinth system

The integrated protection system proves to be sophisticated in the places often considered a special challenge in special protection. They include the transitions between different materials such as metal and glass, the surroundings of the air conditioning system, the door lock and the mirror triangle. The G-Guard meets the demand for full protection with a unique solution in this area as well: highly reinforced armour made from special steel is used in overlapping designs.



Full protection even in sensitive places: sophisticated designs integrated from the start enhance the protective effect

Just as in a labyrinth a bullet would be deflected and in a real-case scenario projectiles would be prevented from penetrating the passenger compartment. Prerequisite for such a labyrinth system is the comprehensive philosophy and approach: eliminating weak point in sensitive areas that later would hardly be accessible any longer.



The safety button



Flashing exterior mirror with built-in microphone for communications



The driver's trigger for the at-risk alarm system near the steering wheel



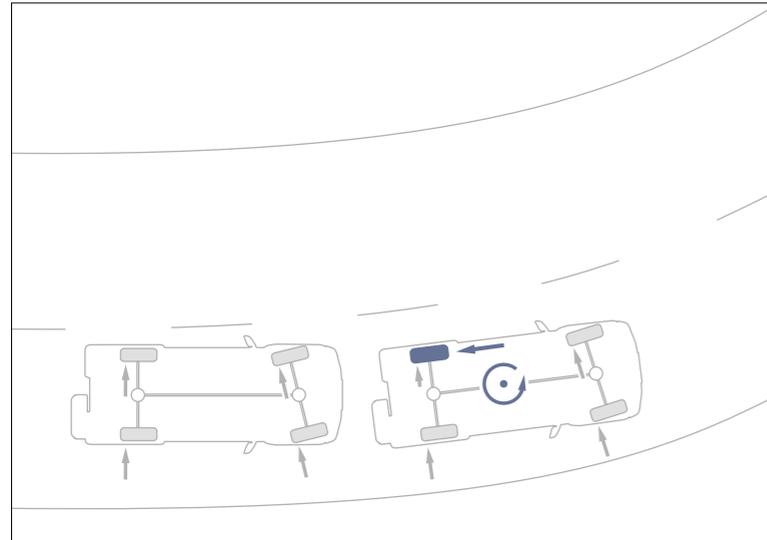
The at-risk alarm system can also be activated from the rear seats



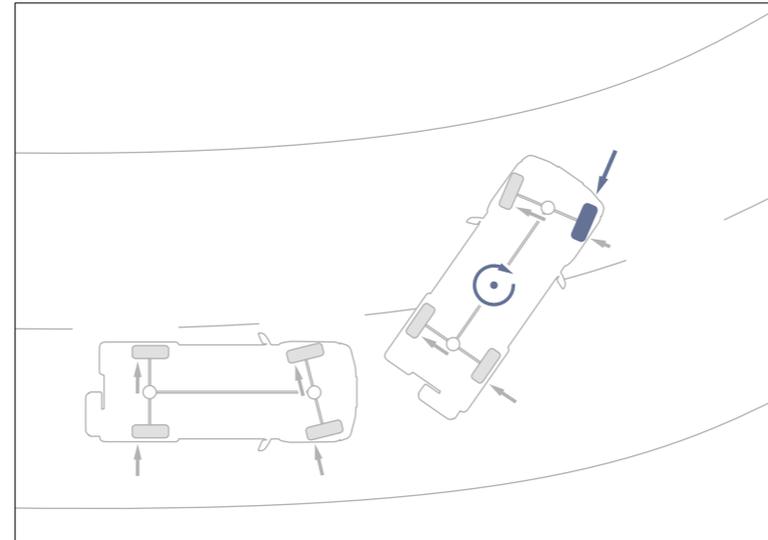
An intercom allows communicating with the outside world even during a lockdown

Sometimes dangers can be eliminated just by removing their camouflage. The at-risk alarm system is designed for just such instances. In the G-Guard it can be activated from each seat: at the push of a button all doors are locked, an acoustic signal shakes people to the core, turn indicators and headlamps start flashing. An intercom system ensures that the vehicle occupants are not cut off from the outside world in a situation such as this. This leaves potential attackers no chance of remaining undetected and in many cases they will turn and run.

Staying on course even in an emergency



ESP understeer: the adaptation of the system to the added weight ensures directional stability even in bends by braking the inside rear wheel



ESP oversteer: braking the outside front wheel commensurate with the added weight allows preventing the rear end from swerving

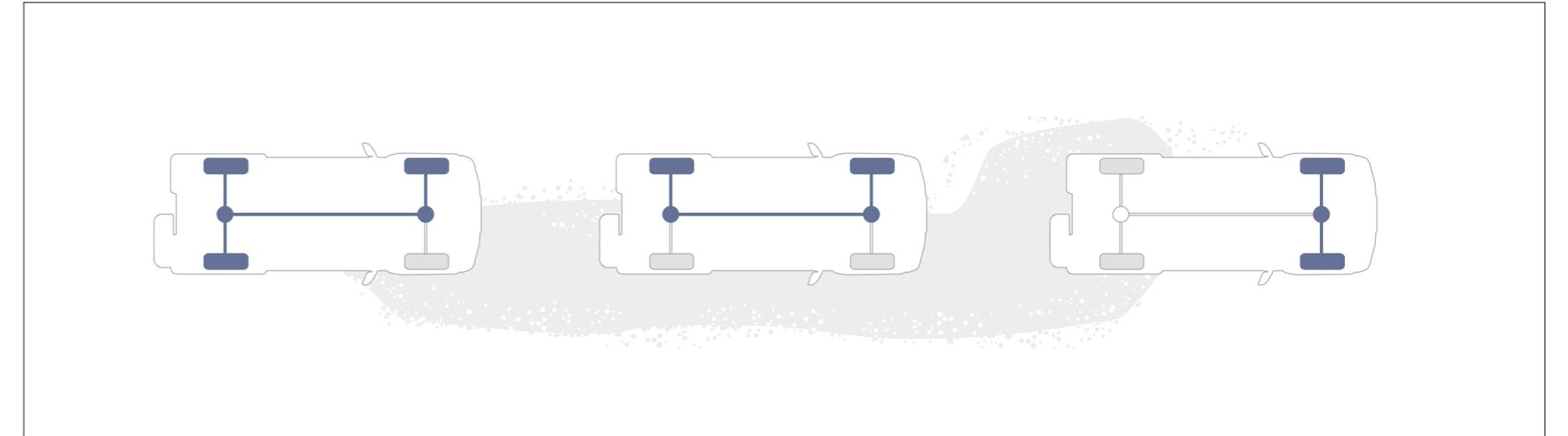
-  ESP brake intervention
-  Lateral forces acting on a wheel
-  Yaw moment with vehicle centre of gravity

In particular in unforeseen situations that require fast reactions the tuning of the electronic control systems is a major factor. In the G-Guard with integrated protection system ESP® and ABS are adapted to the added weight and the resulting handling characteristics. This improves handling and cornering even in extreme situations. Among the principles in developing a Guard vehicle is that the occupants must be able to remove themselves from danger. The specially developed run-flat system ensures that the G-Guard remains mobile for a certain distance even if the tires lose their pressure. Additional liners on the rim made from lightweight polyester elastomer allow the system to support the tire on the rim. The special built-in material is strong enough to bear the weight of the vehicle with the additional protective components.





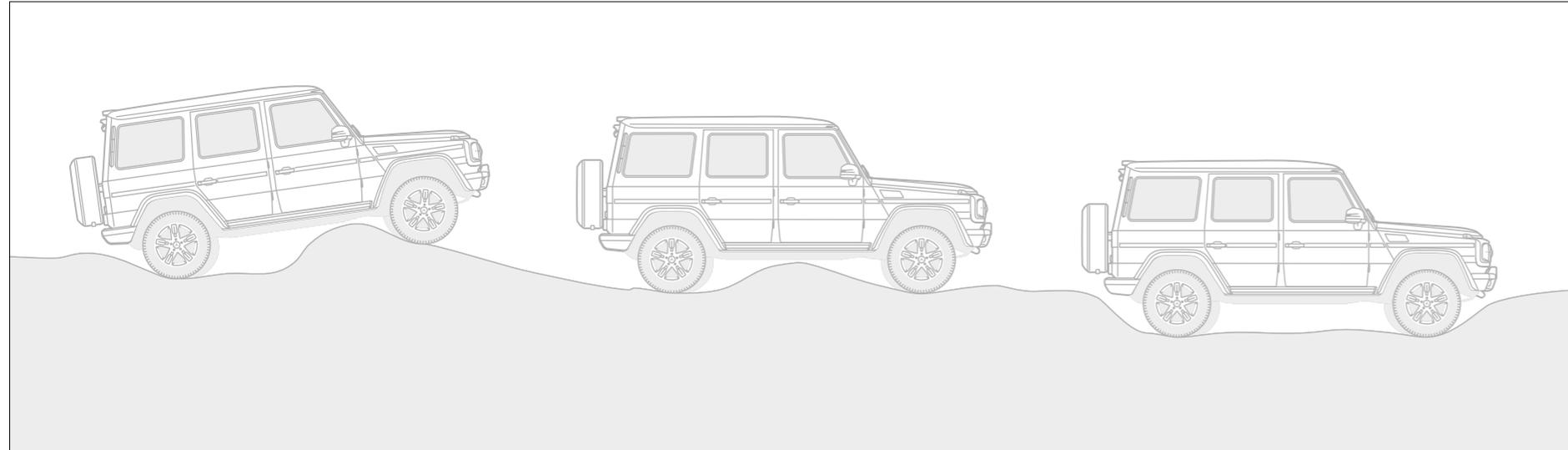
The lightness of being in extreme terrain



The 4ETS Electronic Traction System automatically transfers the drive torque to the wheels with the best traction

Despite the added weight from its special protective armour the G-Guard remains a true off-roader. Its fording depth of up to 600 millimetres, three differential locks and a reduction gear ("LOW" and "High") make it a genuine safe room for your personal safety off-road too. Its outstanding off-road performance is the result of the perfect interaction of the permanent all-wheel drive, the synchronised transfer case with on-demand reduction gear, the Electronic Traction System 4ETS and the three 100 % differential locks. Thanks to the necessary ground clearance and excellent traction the permanent all-wheel drive can unleash its full potential. Three electrically engaged 100 % differential locks ensure that the G-Guard can also free itself from rather muddled situations, even if only one wheel has traction.

Top performance with top protection

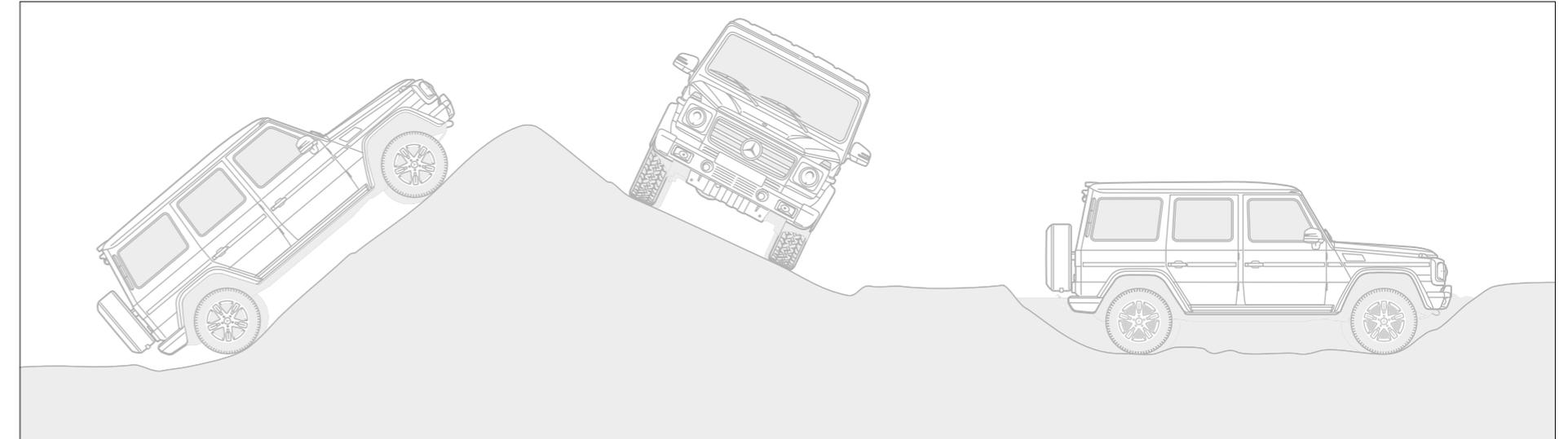


Large breakover angle

Ground clearance 23 cm

Angle of approach 36°/departure 27°

The combination of power and intelligence also characterises the G-Guard off the road. Its reliability in difficult terrain turns into a crucial safety factor especially when there is no discernible way out of a dangerous situation. That's when the G-Guard offers the option of leaving paved roads and trails without sacrificing vehicle control.



Climbing ability up to 80 %, depending on ground condition

Directionally stable on lateral slopes of up to 54 %

Maximum fording depth of 60 cm

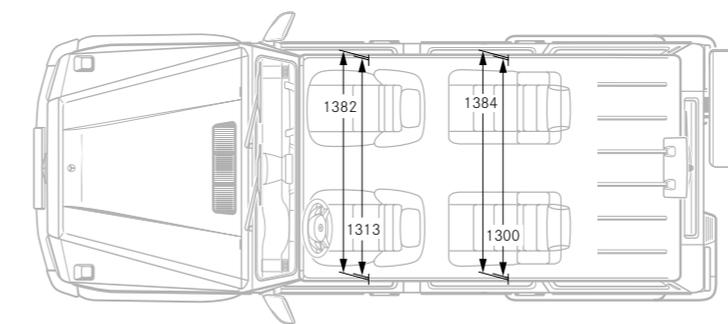
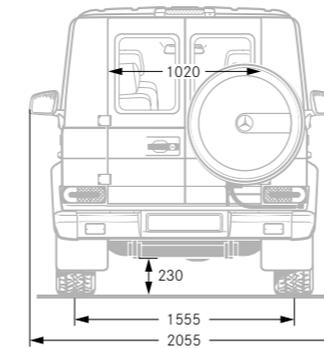
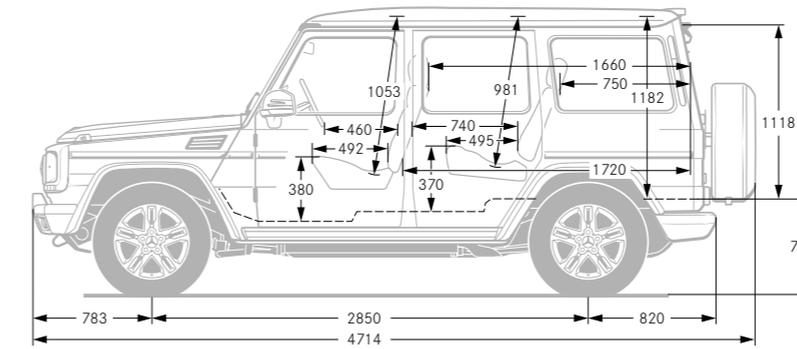
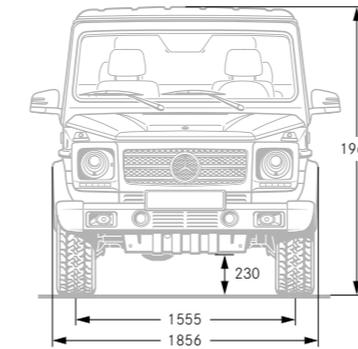
The off-road reduction gear of the transfer case provides support and improved control for difficult passages: The transmission of the engine torque can be optimised with the low-range switch at speeds below 40 km/h. This makes it possible to climb slopes with a gradient of up to 80 per cent and prevent wheels from locking on downhill stretches. Handling stability on downhill slopes and on changing terrain are among the vital prerequisites of protection and safety.

Technical data

G 500	
Resistance level	VR7 BRV 2009
No. of cylinders	V8
Total displacement in cc	5461
Rated output in kW at rpm	285/6000
Rated torque (Nm at rpm)	530/2800-4800
Fuel consumption in l/100 km (g/km) ¹	
Urban	23.9 (559)
Extra-urban	14.7 (343)
Combined	18.1 (423)
GVW in kg	4800
Kerb weight (EC, incl. driver (75 kg) + tank 90 % full) in kg	4150
Payload EC in kg	650
Acceleration from 0 to 100 km/h in sec.	10.0
Top speed in km/h	160 ²
Light-alloy wheels	7.5Jx16 ET63
Tyres	245/70 R16
Seats	4

¹ The figures shown were obtained in accordance with the prescribed measuring process (Directive 80/1268/EEC in the currently applicable version). The figures are not based on an individual vehicle and do not constitute part of the product offer; they are provided solely for purposes of comparison between the different vehicle models ² Electronically limited

Dimensions G-Guard



All measurements in millimetres. The dimensions shown are mean values and apply to standard-specification, unladen vehicles

Invisible on the outside – indispensable on the inside



The term integrated protection system already hints at its special strength. The G-Guard is full of measures and components aimed at ensuring safety that are precisely coordinated and adapted to the vehicle already during the development phase and allow a correspondingly early planning. The inconspicuousness of the protection components is another highly essential element of the sophisticated system. Perfectly concealed behind the appearance of the production vehicle the integrated protection system gives its all for your safety. And it is quite enough if we and you know what all is involved in feeling safe and protected.



Perceived safety, measurable protection ex-factory. Service worldwide

The G-Guard also offers complete security when it comes to regular maintenance and repairs after sustaining damage. Because the sophisticated protection concept naturally also means specially trained personnel, the exclusive use of genuine parts and expert local service. Prior to purchase and long after, besides our sales team our technical support people are available to answer all your questions and cater to your wishes.

This provides the assurance that with the Guard vehicle you're always in the best of hands at your authorised Mercedes-Benz dealer and additionally enjoy the privileges of VIP treatment. The development and integration of the protective components as a comprehensive system prove a strong advantage for service and maintenance long after buying the vehicle. Because care is taken during design and installation to ensure access to possible wear parts or damaged elements. This makes the complete protection last for the long term.



Everything for your personal protection. Guaranteed

In the G-Guard comprehensive protection and complete safety start at the factory. That of course includes a full manufacturer's warranty from Mercedes-Benz that equals the warranty of the production vehicles. Your authorised Mercedes-Benz dealer will be pleased to give you more information.

Return of end-of-life vehicles We will be glad to take back your G-Class for proper recycling and disposal as specified by the end-of-life vehicle directive of the European Union (EU) – but that day is a long ways off.

A network of vehicle collection depots and dismantlers has been established to make it as easy as possible for you to return your vehicle. You can leave it at any of these points free of charge and, by doing so, make an important contribution to completing the recycling process and conserving resources.

For further information about the recycling and disposal of end-of-life vehicles, and the take-back conditions, please visit www.mercedes-benz.de/altfahrzeugverwertung

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