



In areas of conflict
drive an **armored vehicle** from GSG.



ARMORED VEHICLES. GERMAN STANDARDS.



+971 (0) 50 - 3963120
info@GermanSupportGroup.com

GSG Middle East FZE,
P.O. Box 31220 Ajman Free Zone
Ajman, United Arab Emirates

www.GERMAN SUPPORT GROUP.COM

© 2011 ORANGE-MEDIA.com





WELCOME TO GSG MIDDLE EAST

As a supplier of proven high-quality products in a constantly evolving market, German Support Group prides itself on the solutions that we offer, as one might expect from a company with German origins. Our technicians and design personnel have a thorough understanding of the requirements needed for armored vehicles operating in hostile environments. We only use the most appropriate and highest quality products taking into consideration the geographical region in which the vehicle (s) will be used: This is, we believe, the root of our success. Furthermore, punctuality, efficiency and complete reliability make us a partner that you can rely upon, at anytime.

The amount of force that an armored vehicle can withstand depends upon the quality and strength of the ballistic material that is used – and equally importantly how it is handled. As an example at GSG we use ballistic grade steel that is considerably thicker than that used by most of our competitors, which along with our CAD-operated design process and our automated cutting, achieves an unparalleled precision fit. With every step of the process, we at GSG take meticulous care to maintain the maximum ballistic capacity of all the materials we use. As a result we provide our clients with measurably improved security.



PRODUCTION

Method of design

At GSG the armoring system is integrated after the production process of the base vehicle without changing its exterior appearance. The safety cell is designed in such a way that all gaps between the main body of the car and the doors are overlapped and fitted with spall-returns to prevent projectiles or splinters from entering the passenger compartment. This method of installation also offers highest possible protection to the vehicle occupants against the effects of a bomb blast from either side of the vehicle.

Opaque areas

At GSG we use only the highest quality armored steel manufactured by SSAB – Oxelosund of Sweden who are regarded as one of the world leaders in armored steel manufacture. All opaque areas including the roof are protected against the following and all lesser weapons/ammunitions at 90° impact angle in accordance with the above specifications.

Caliber 7.62 x 39 mm, FJ/PB/SCP, AK 47 (Kalashnikov), OBR-43 PS
 Caliber 5.45 x 39.5 mm AP, FJ/PB/SCP, AKS 74, OBR-74
 Caliber 5.56 x 45 mm, FJ/PB/SC, US rifle M16 A2, SS-109 / M-855
 Caliber 7.62 x 51 mm, FJ/PB/SC, (FN) "FAL" / "LAR" NATO rifle

Floor

The floor of the vehicle is designed to protect against the following hand grenades:

one M 67 (American fragmentation) hand grenade per square meter or
 one F1 (Russian fragmentation) hand grenade per square meter or
 one RGD5 (Russian fragmentation) hand grenade per square meter or
 two DM 51 (German norm-splinter) hand grenades or
 hand grenades with similar characteristics



Transparent areas

All ballistic glass used by GSG is manufactured to order by American Glass Products (AGP), who are generally accepted as being the world leader in their field. GSG will recommend to clients different thicknesses of glass dependent upon the environment within which they will be operating. All transparent areas are multi-layer and polycarbonate-coated and depending upon the thickness of the glass being used tested from (-20 to +60 degrees Celsius) to protect against the following and all lesser weapons/ammunitions at 90° impact angle in accordance with the above specifications.

Caliber 7.62 x 39 mm, FJ/PB/SCP, AK 47, OBR-43 PS

Caliber 5.45 x 39,5 mm AP, FJ/PB/SCP, AKS 74, OBR-74

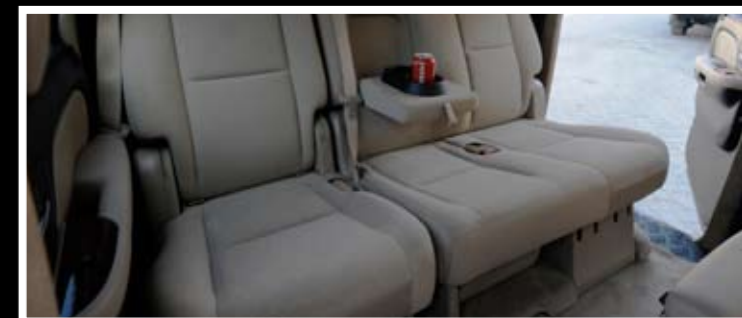
Caliber 5.56 x 45 mm, FJ/PB/SC, US rifle M16 A2, SS-109 / M-855

Caliber 7.62 x 51 mm, FJ/PB/SC, "FAL" NATO rifle

Roof

The roof of the vehicle is designed to defeat the following hand grenades:

Two DM 51 (German norm-splinter) hand grenade or similar explosive devices.



GSG – Where compromise is not an option.



TECHNOLOGY

Method of armor integration

The armoring system is integrated after the production process of the base vehicle without changing its exterior appearance.

Safety cell

The safety cell is welded and bolted into the structure of the vehicle in such a way that all gaps between the main body of the car and the doors are overlapped and fitted with spall-returns (spall-channels) to prevent projectiles or splinters from entering the monocoque. This method of construction also offers the highest possible protection to the vehicle occupants against the effects of a bomb blast from either side of the vehicle.

Roof

The roof is designed with armored steel in such a way that it cannot collapse as a result of a detonation of an explosive device on the roof.

Floor

The floor is manufactured with steel of either 4mm or two layers 4mm + 4mm.

Ballistic steel

Ballistic steel is integrated into the cavities of all pillars and the doors to seal possible gaps and to provide a solid foundation for the door hinges.

Purpose-made door hinges

The purpose-made door hinges ensure perfect fit and function. A support frame is welded into the door assembly, creating the necessary rigidity and strength to allow the door to carry the additional weight of the armor.



TECHNOLOGY

Interior design

Modified components such as dashboard, centre console, floor carpeting and roof liner are being used to finish the interior of the vehicle. All vertical armoring on the sidewalls is designed as a single piece of ballistic steel. This retains the original quality of the ballistic steel, thus ensuring there is no compromise to the characteristics of the armoring. This also stops the threat of welds weakening and turning into shrapnel during a side blast attack.

Firewall

The firewall is always regarded as the most complex part of the vehicle to armor. This is due to the shape in the front of the original vehicle and several holes for AC, wiring etc. Many companies use multiple pieces of armored steel to create a Firewall. By doing this you run the risk of the welded armor breaking off during an IED attack and becoming projectiles within the confines of the vehicle, and harming the occupants within. We at GSG reduced the number of pieces to a minimum by using a unique method of bringing the firewall and the armoring into a new shape.

Door armor

The door armor is designed as a single piece. When the door is closed the door armor plate relies on the vehicle's overlaps, thus providing highest possible protection against projectiles on door edges and against the effects of an outside blast.

The overlaps (bullet catchers) also act to support the glass in case of an explosion. This will stop the glass penetrating the inside of the vehicle and either wounding or killing the passengers inside. The windshield is also supported with an additional frame for the same reason.



TECHNOLOGY

Suspension and braking system

GSG offers as standard an upgraded suspension and braking system. This is to improve the armored vehicles performance and handling whether it is on- or off-road.

Rodgard® Run-Flat system

All five wheels are fitted with Rodgard® Run-Flat devices for controlled driving after puncture or blow out, allowing continuous driving for 30 km at 50 km/h. When traveling by vehicle in a known high-risk environment one has to anticipate unpleasant surprises. While we accept that best ballistic steel and glass reinforcement cannot remove the fear that accompanying attack – we know that it can help towards decisively reducing the effects of such a situation. Armored vehicles manufactured by GSG offer the maximum possible protection against heavy caliber weapons and explosions. Our products and the service that we offer to our clients have been shaped by practical experience in high-risk environments. Reliability, along with a technical understanding of our product, which is second to none, should, we believe make you feel secure from the outset.





SECURITY EQUIPMENT

Alarm siren [optional]

In the event of an attack an emergency siren will draw attention to the incident. It can also be used as a police siren in standard traffic situations.



Anti-theft and central door locking system [optional]

The vehicle is fitted with a remotely controlled anti-theft system with engine immobilizer and acoustic alarm. All doors are centrally lockable by remote control.

Battery protection [optional]

The batteries are located inside a specially armored box in the engine compartment to protect it against projectiles and splinters.

Engine compartment fire suppressant system [optional]

A fire suppressant cartridge is fitted in the engine compartment to extinguish a fire immediately. The system can be activated manually from a central switchboard inside the vehicle or automatically in case of fire in the engine compartment.

Exhaust insert [optional]

To protect the exhaust system from manipulation, a mesh wire insert will be fitted.

Intercom system [optional]

The intercom system enables inside/outside communication without having to open the windows or the doors. The system is powerful and clear enough that the driver will be capable of speaking to and hearing from persons located a minimum of 3 meters from either front door.



SECURITY EQUIPMENT

Protected fuel tank [optional]

The fuel tank is armored with level B6 steel to protect it against the effects of projectiles or hand grenades being detonated under the vehicle.

Protected vehicle management system [optional]

The vehicle management in the engine compartment is protected from all sides by a level B6 steel armor system. Reinforced braking and suspension system. To guarantee reliability and road safety, the suspension system is reinforced.

Reinforced braking and suspension system

To guarantee reliability and road safety, the suspension system is reinforced. The following parts will be replaced/installed during the production process.

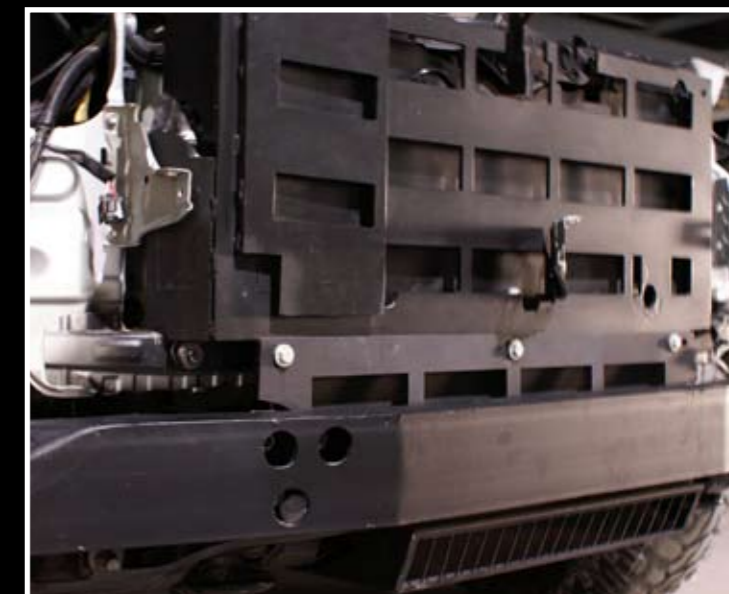
- Heavy duty shock absorbers, front and rear
- Heavy-duty springs, front and rear
- Heavy-duty tires
- High-temperature brake fluid

Tinted security windows

All rear compartment windows will be tinted dark grey during their production process. The light transparency will be LT10 unless a different tinting is chosen by the client. Samples can be provided before the glass is ordered from the manufacturer.

Radiator protection [optional]

GSG recommend that all vehicles should be fitted with covert ballistic steel radiator protection, to add extra security to the engine compartment (with air scope and additional fan).





Armoring

In order to be able to guarantee you optimal material quality and hence safety we produce all of the armor ourselves. We attach the very greatest importance to gentle treatment of the armor steel in all part-processes. Only by minimal loading during bending and cutting processes as well as by special welding techniques can the ballistic properties of the steel be retained. German Support Group – quality for your safety.



Quality management

So that a series vehicle can become a fortress many individual part processes are necessary. A vehicle passes through more than 10 stages at the German Support Group. During this we check every construction section meticulously and hence ensure constant production quality. From the first to the last one of the vehicles ordered by you.



Paint shop

As the vehicles are completely dismantled and reassembled modified components have to be repainted. In order not to lose any time with this, German Support Group has its own paint shop. There we use special hard paint in order to prepare the vehicle for its deployment over many years in extremely paint-hostile areas.



Logistics

Over land, water and through the air we look after the complete transport of your vehicles. In this case it does not matter to the German Support Group whether you are located nearby or at the other side of the world. We have had the necessary experience to transport your vehicles to any place in the world.

