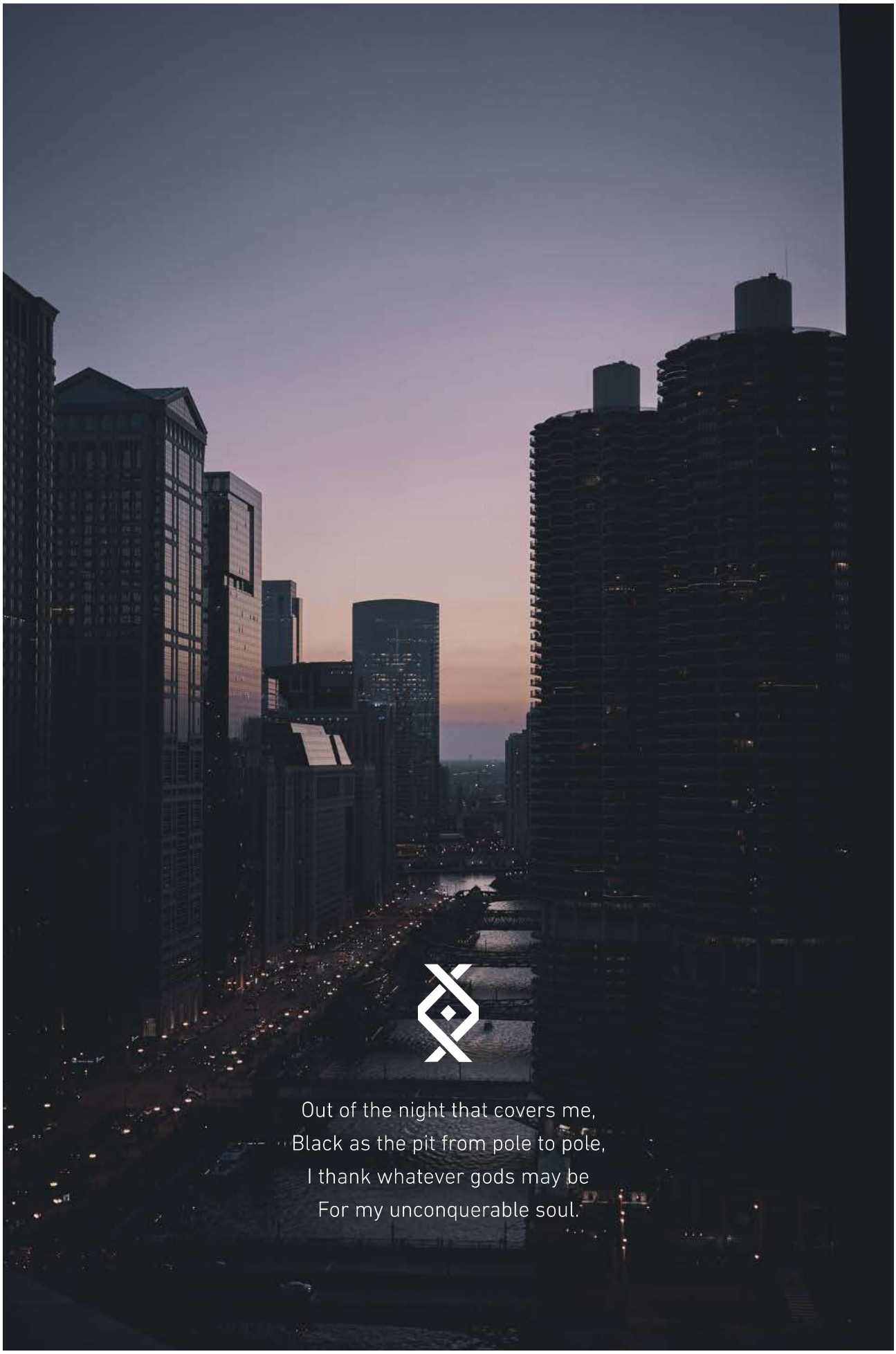


Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.

WILLIAM ERNEST HENLEY | 1849-1903




# INVICTO

by brabus|automotive

INVICTO is a high-tech armouring concept and means development at OEM level, use of innovative technologies and high-end production processes. Furthermore, brabus|automotive takes the evidence by extensive validation and certification of the complete product and not only of its parts.

brabus|automotive proudly presents INVICTO armouring at level VR6 Plus ERV based on Mercedes-Benz G-Class 463 A (G500 or G63) and starts with the three lines PURE, LUXURY and MISSION.

INVICTO. State-of-the-art armouring. Certified.




# INVICTO

## THE UNCONQUERABLE SOUL

Protecting the highest value in life: your invaluable life

## THE PROTECTION BRAND INVICTO

*The unconquerable soul* – this idea is the base of the armouring concept. A consequent state of the art armouring product. A world premiere, launched in 2020.

The innovative INVICTO Shelter Cell bases on a self-contained, self-supporting, bolted structural cell. The moulded components used consist mainly of hot formed armour steel plates and composites. Moreover, 3D printed protection elements are being used as an innovative world premiere.

## EXPERTO CREDITE

INVICTO is an armoured vehicle with blast protection at the level of a luxury state limousine, fully certified by the accredited German "Beschussamt".

# SECURITY




3D printed protection elements

Complete glazing made of bulletproof glass

Fabric structures, fibre structures, ceramic and metallic composites

Hot formed armour steel plates including bullet resistant supply ducts

Chassis adaptation (springs, torsion bars, shock absorbers, axle components)

Reinforced high-performance brakes (front and rear axle)

20" heavy duty wheels with increased load capacity and runflat system

## THE INVICTO SHELTER CELL

Self-contained, self-supporting, bolted structural cell

Development from the inside to the outside

Zero joint design

Building the body around

The protection and not the vehicle is in the focus, that is the concept of a stable, self-supporting safety cell. Unlike to retrofitting concepts, which are armoured retroactively, the components of the protection systems are not welded into the chassis structure of the vehicle individually along the shell contour. Rather, the engineers from brabus|automotive developed a self-supporting protective cell, the INVICTO Shelter Cell, which is inserted into the shell chassis in a disassembled state and then reassembled. Together with the additional elements, e.g. armoured doors, the bulletproof glazing, the front wall and the tailgate, a self-contained cell with an effective protection is created.




EXPERTO CREDITE

## TRUST THE ONE, WHO APPROVED IT

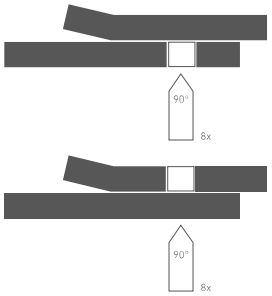
The tests cover - with several thousand shots being fired - the projectile testing of all material pairings used, screw connections, connection points and seams of two components, bends or points where the armour and chassis are connected, from several angles and with projectile speeds which are well beyond the standard speed of the calibre being protected against. In addition to this, numerous explosion attempts of individual assemblies are carried out within an entry frame.

# VALIDATION

Extensive validation of the entire vehicle to OEM standard, instead of just testing the materials used. Further long-term testing of durability, fatigue strength and driving dynamics. Therefore, every INVICTO vehicle is branded with our EXPERTO CREDITE badge as a sign of protection excellence.

**TEST EXAMPLE 1**

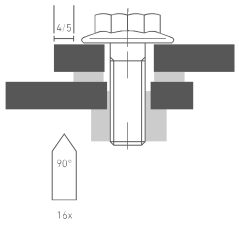
Validation of welded joints
Plug welding on strike face
Plug welding on protection side




Size: 500 mm x 500 mm
Thickness: ≈ 4,40 mm
Number of shots A: 8 hits on hole welding
Number of shots B: 8 hits on welded joints
Shot angle A: 90°
Shot angle B: 90°

**TEST EXAMPLE 2**

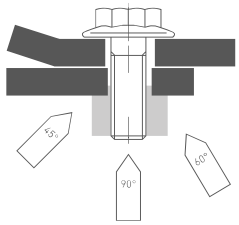
Validation of screw connection with spacer ring
Testing sheet overlap




Size: 500 mm x 500 mm
Thickness: ≈ 4,40 mm
Number of shots: 16
Shot angle: 90°
Shots: all in the range of 740 m/s

**TEST EXAMPLE 3**

Validation variant screw connection with threaded bush




Size: 500 mm x 500 mm
Thickness: ≈ 4,40 mm
Number of shots A: 8 / Shot angle A: 90°
Number of shots B: 8 / Shot angle B: 90°
Number of shots C: 8 / Shot angle C: 60°
Number of shots D: 8 / Shot angle D: 45°




























## BULLETPROOF IN A THOUSAND WAYS

Selection of shot test samples: Several thousand shots were being fired on all material pairings used, screw connections, connection points and seams of two components, bends or points where the armour and chassis are connected, from several angles and increasing projectile speeds.

# CERTIFICATION

## Fully certified armoured vehicle with blast protection at the level of a luxury state limousine

Our INVICTO top level protection is a ballistic and explosion resistant vehicle referring to VPAM test guidelines to BRV 2009 and ERV 2010. We cover an explosion certification for the whole vehicle.

**CERTIFICATION**

### EXPLOSION CERTIFICATION FOR ROOF, FLOOR AND SIDE

Ballistic and explosion resistant vehicle referring to VPAM test guidelines BRV 2009 and ERV 2010

| SIDE | FLOOR | ROOF |
|---|---|---|
| Blast with 15 kg TNT<br>Distance 4 m, height 1 m | 1 x HG 85<br>**OPTIONS**<br>Reinforced floor 2 x HG 85<br>Fuel tank protection against fire (safe seal)<br>Mine protection for the fuel tank (2 x HG 85) | 2 x DM 51 |

**PROTECTION LEVEL**

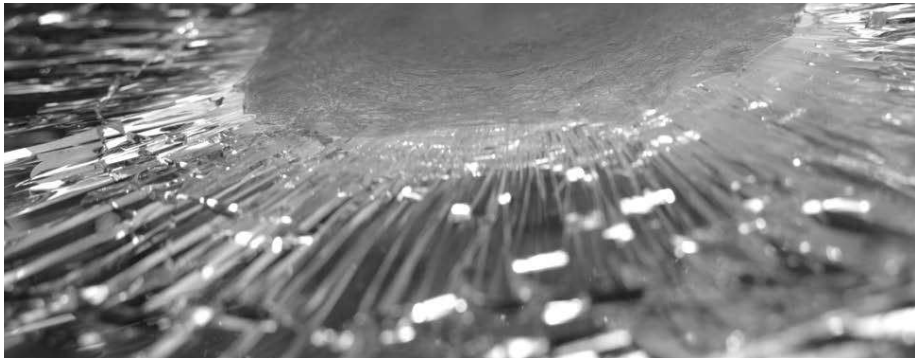
### PROTECTION LEVEL VR6 PLUS ERV

| TEST STAGE VPAM | APPLICATION * | WEAPON | CARTRIDGE | AMMUNITION | TEST CONDITIONS |
|---|---|---|---|---|---|
| 6 | PM 6 BSW 6<br>VR 6 HVN 6 | | | Calibre: 7.62 x 39<br>Type: FMJ/PB/FeC<br>Mass (g): 8,00 ± 0,1<br>Hardness (HRC): Core 3,60<br>Manufacturer/Type: M 43 | Shot distance (m): 10 + 0,5<br>Projectile speed (m/s): 720 ± 10<br>Projectile energy (joule): 2074 |

* for VPAM-PM 2007, VPAM BRV 2009, VPAM BSW 2006, VPAM HVN 2009



Projectiles being fired by a shelling device guarantee compliance with the required standards



All over bulletproof glazing made of a glass and polycarbonate sandwich construction



All windows are exposed to several shots

### FIELD-TESTED BULLETPROOF

The completed and protected INVICTO vehicle was put through a comprehensive shot and blast testing and then certified by an accredited german ballistic authority regarding ballistic projectiles and blasts. The G-Class INVICTO is available from a resistance class of VR6 or above. The addition "Plus ERV" is a result of the blast protection and this is definitely at the level of a luxury state limousine. Several thousand shots are fired as part of the certification. In addition to this, numerous explosion attempts of individual assemblies are carried out within an entry frame. With the successful certification according to the resistance class aimed for, VR6 Plus ERV, the INVICTO Shelter Cell also demonstrated its effectiveness in the realistic tests under the harshest of conditions. Its modular structure also offers the option of adapting the protective effect to much higher requirements, up to resistance class VR9.


mission
luxury