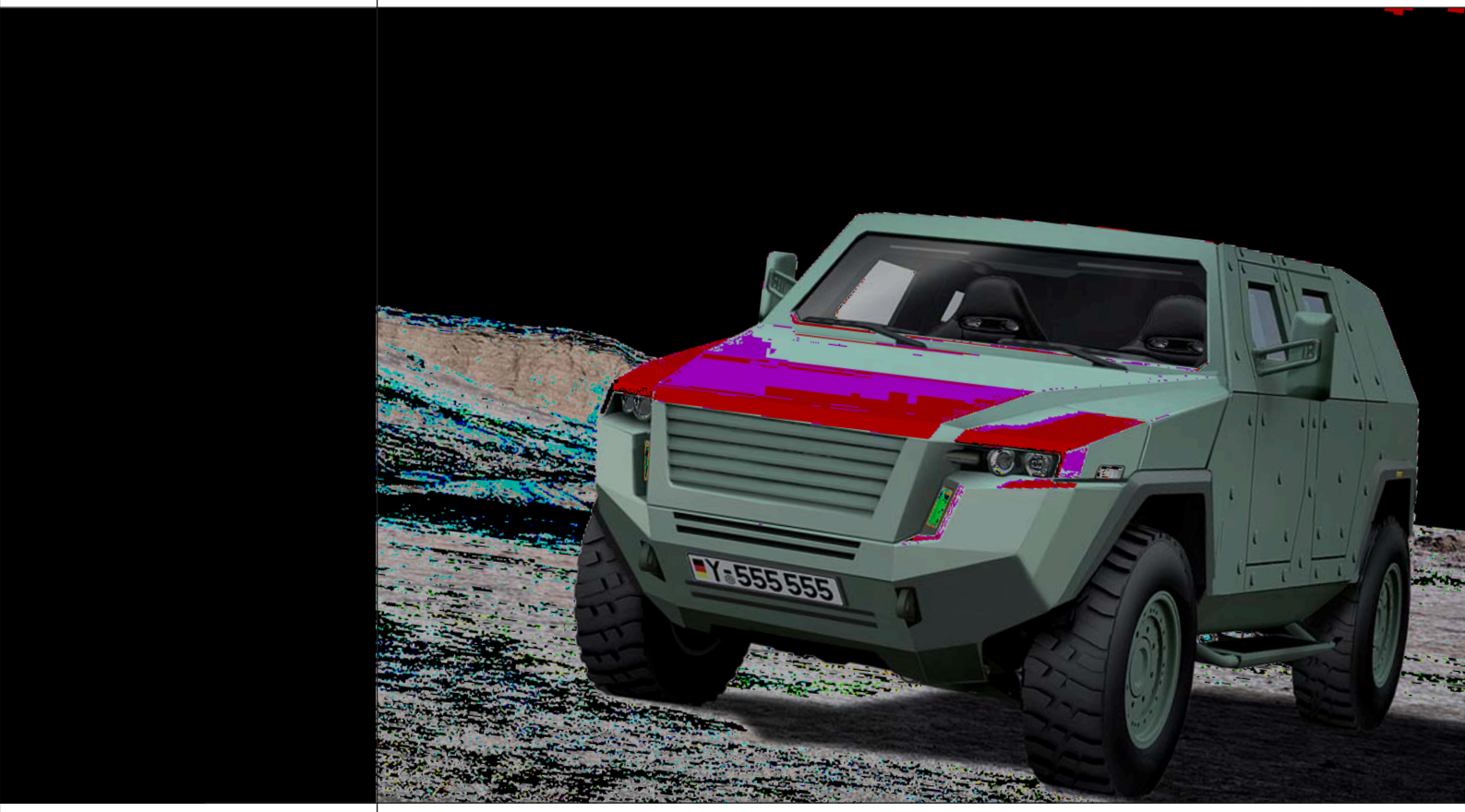


AMPV – Armoured Multi-Purpose Vehicle

A New Synthesis of Mobility and Protection
for Command-Control and Operational Military Vehicles

KMW
KRAUSS-MAFFEI WEGMANN

RHEINMETALL
DEFENCE

Protection – New Definition for an Old Need

Today's operational reality is characterised by two vital, but diametrically opposed developments. More and more often, international armed forces under alliance command are taking responsibility for peace keeping or peace enforcing missions.

At the same time, the troops are in an asymmetrical fight against a seemingly irrational opponent whose strategy deliberately aims at inflicting maximum casualties and whose hit and run tactics, IEDs, mines and suicide bombs are intended to do just that.

These developments have led to rethinking conventional battle concepts in which the protection of friendly forces has taken on a new priority. In routine daily operations – patrols or at checkpoints – high mobility is not a substitute for protection. So future vehicle types must also be designed to provide protection against mines and IEDs without sacrificing high mobility.

The technical dilemma is how to combine a high level of protection, which always increases weight, with high ground mobility and air transportability, which require the lightest possible design. To solve this problem, the AMPV's design makes use of long years of experience in military vehicle produc-







tion combined with the latest innovations in composite materials to develop armour that overmatches the threat. Germany is a world leader in this technology.

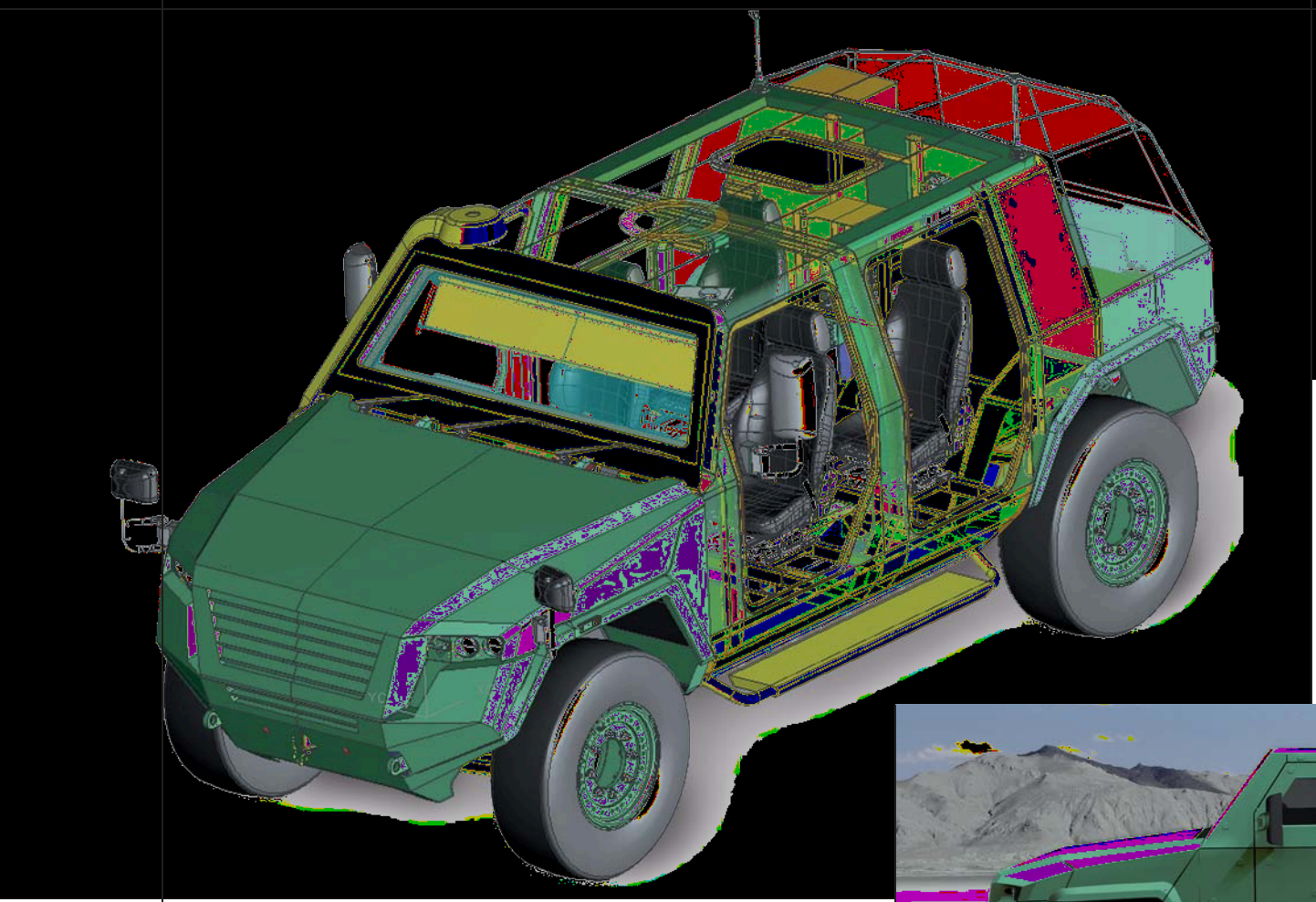
The planned replacement of soft skinned wheeled vehicles for the armed forces – such as the German Army's planned acquisition of the GFF (Armoured Command-Control and Operations Vehicle) – means that operational risks must be countered by an optimal mix of mobility and protection.





Armoured Multi-Purpose Vehicle (AMPV)

The new concept for protected class 1 and 2 command and operations vehicles from Krauss-Maffei Wegmann and Rheinmetall Defence





Krauss-Maffei Wegmann and Rheinmetall Defence have teamed to develop the AMPV (Armoured Multi-Purpose Vehicle), a new family of vehicles which represent an overall concept for protected class 1 and 2 command and operational vehicles thus filling an important need for the forces. Modularity and growth potential of the AMPV family ensure operational flexibility and long service life as well as a previously unrivaled level of national participation and exportability. The AMPV thus combines all customer requirements to a degree unmatched in older vehicles.

Designed for German Bundeswehr requirements, the AMPV family:

- combines the expertise of both German companies' long cooperation with the Bundeswehr and exploits the many years of experience in the development of armoured vehicles such as PUMA and BOXER, FUCHS/FOX and FENNEK, DINGO and YAK, MUNGO and SERVAL
- employs a single logistic concept for the whole vehicle family to cover a wide range of missions and complex customer requirements
- meets the toughest operational requirements for mobility and ruggedness
- achieves a level of protection that exceeds the current requirements for GFF 1 and 2
- has flexibly integrated systems and is upgradeable for future requirements and long service life.

The AMPV family consists of two vehicle series: the smaller, highly manoeuvrable, AMPV 1 makes an ideal liaison vehicle. Beyond the AMPV 2 series has a higher level



of protection and increased payload capacity. However, the whole family is based on a single manufacturing concept and employs the same technologies.

Both series have the following vehicle types: **Patrol vehicle** – with an unprotected rear load platform and **Equipment carrier** – which has a completely enclosed armoured cargo area.

A special patrol version of the AMPV 1 that can be carried by a CH53 transport helicopter is planned.



AMPV Development – driven by Protection and Mobility



Armoured Vehicle Body
Level of protection adaptable to threat environment

Modern armoured glass
High level of protection with a wide angle of view

Adaptable Add-On Armour Modules
Quick response to new threats

Reinforced Underbody and Wheel Wells
Improved protection against mines and IEDs

Combat Tyres with Run Flat Capability
Enables rapid evacuation of danger zones

The AMPV family of vehicles is based on KMW and Rheinmetall's many years of experience in design and manufacture of military vehicles.

The vehicle frame is a self-supporting armoured steel housing with a ballistic liner. The rugged lower body and reinforced cell structure are optimised to defeat mines and IEDs. Additional add-on armour modules ensure the desired level of protection for any version of the vehicle.

The AMPV family takes advantage of long experience in its specially developed, robust military suspension and drive train. The individually suspended wheels and long suspension travel were adapted from the Boxer programme and ensure high ground clearance. In critical situations, the special combat wheels with run flat tyres allow the quick evacuation out of danger zones.

A 200 Kw high torque 3.2 litre diesel engine, full time all-wheel drive, an automatic transmission and automatic limited slip differentials guarantee outstanding performance and reduced driver stress under any conditions.

The AMPV 1 and AMPV 2 are very compact and differ only slightly in height, length and wheel base.

All vehicles in the family utilise identical components in the relevant logistic areas. Identical layout of interior spaces ensures ease of operation and simplifies training and logistic support of the whole vehicle family.

