



BOXER

Protection | Payload | Performance | Modularity



Troops in theatre deserve the best

Perfect solution for a successful mission

The diverse spectrum of challenges within the concept of the Three-Block-War of high-intense combat actions, peace keeping missions and humanitarian relief operations demands a versatile military vehicle. Within the major threat situations of today's world, it must also provide superior capabilities in classical face-to-face situations. BOXER, with its unique modularity, offers the highest flexibility to fulfil this wide spectrum of diverse mission requirements with survivability and the highest reliability and growth potential – today and in the future.

BOXER is a truly modular vehicle providing multiple functions for its users, several communication interfaces for participation in network enabled warfare and diverse mission relevant capabilities. The flexibility of its modularity allows BOXER to be easily adapted to meet diverse mission requirements, in rapidly changing circumstances and global environments. BOXER has impressive integral growth potential so that future emerging military roles and changing requirements can be met, without degrading the vehicle's capabilities such as mobility.



Key features of BOXER are:

- **Protection** – Survivability without compromise.
- **Payload** – Integrated growth potential.
- **Performance** – Mobility and reliability under extreme conditions.
- **Modularity** – The mission changes, so does BOXER.

Successful deployments into theatre like Afghanistan have proven the vehicles capabilities.

The concept and the design of BOXER have been tested, qualified and proven by Official Services, according to the requirements of four nations. Shortly after delivery of the first vehicles, BOXER was deployed into theatre and has proven its capabilities and reliability under harsh environments, in dangerous situations and difficult operations. It has also proven and demonstrated its performance in further trials and manoeuvres in Australia, Qatar, Norway and Lithuania.

The thorough development resulted in a first batch of 272 BOXER vehicles for Germany starting in 2009 and 200 BOXER vehicles for the Netherlands. Based on the positive experience, Germany ordered a second batch of 131 vehicles, followed by Lithuania ordering a total of 91 vehicles. Therefore, 696 vehicles in 14 different versions of BOXER are have already been contracted up to now and more are about to come.



Protection

Survivability without compromise

The major priority in the design of BOXER is to provide the highest level of protection for both vehicle occupants and vehicle systems as well. The modular design of the multi-layer floor concept and the safety cell provide a unique overmatch behaviour that minimises the “catastrophic kill” risk from mine and IED attacks. The underlying protection philosophy of BOXER provides a multi-hit capability as well as sufficient residual mobility and functionality (e.g. communication, self-defence) after attacks. BOXER provides low acoustic, infrared and radar signatures, alongside a collective NBC overpressure system already in a standard configuration.



Payload

Integrated growth potential

The payload capacity of BOXER allows for additional growth potential in the future. Even integrating today’s mission equipment and a weapon station does not compromise the vehicle’s mobility and protection. The growth potential allows for system upgrades or additional armour to cope with evolving requirements during the lifetime and to meet future military roles without degrading the mobility performance.

Typical combat weights range from 31.5 t up to 38.5 t, allowing for impressive future growth.



- **Proven protection against ballistic threats**

- Highest protection level in its class against heavy machine guns, automatic medium calibre machine cannons, bomblets, artillery fragments.
- Crew compartment completely covered by a spill liner.
- Optional active and passive protection systems against e.g. RPG7.

- **Integrated state-of-the-art protection against mines/IED**

- Resistant against all kinds of AP and AT mines under wheel and chassis.
- Crew and automotive parts protected against IEDs with heavy blast at short distance on side and rear.
- Optional protection kits against IEDs, EFPs or mines with EFP and heavy fragments (e.g. TRMP6/7).

- **Modular mounting of versatile protection systems**

- Standard mountings and patterns to fix alternative protection elements and meet customer specific requirements.
- Passive armour (including ceramics), reactive armour and active systems can easily be mounted/demounted.
- Easy adaptation to different threat scenarios and integration of future technologies.

- **Unique capacity – maximum interior**

- 14 m³ protected volume (17.5 m³ with higher roof).
- 13.5t payload without compromising mobility and protection.

- **Ready for the future**

- Sufficient growth potential in terms of weight and electrical power.
- A modular approach allows easy upgrading even at subsystem level.
- Upgrade of Drive or Mission Module only, without affecting the complete vehicle.

- **Remarkable payload allows for customer tailored solutions**

- Demanding equipment, armament and even specific variants can be integrated.
- Customer tailored solutions focusing on Mission Module only without necessarily affecting the common Drive Module.

Performance

Excellent mobility and reliability under all conditions

BOXER is able to follow a modern Main Battle Tank cross-country. The mobility requirements were qualified and proven in-service at the vehicle's combat weight (with the highest level of protection) and under the most extreme environmental conditions. Rapid strategic mobility in a combat-ready configuration is ensured by the capability of being deployed by road, train, sea or air. By separating the Drive and Mission Module, even more flexibility is being provided.



- **Best of two – tracked and wheeled**
 - Mobility performance of tracked vehicles off-road, and wheeled vehicles on-road.
 - Independent suspension for each wheel.
 - Steering mechanisms in protected positions above the wheels.
 - Permanent 8x8-drive with 4 axle differentials (2 inter-axle differentials and 2 standard differentials).
 - Central tyre inflation system.
 - Combat wheels with integrated run-flat system.
 - 27" tyres.
 - Superior residual mobility.
- **High performance power pack**
 - Powerful V8 multi-fuel engine with an output of up to 600 kW.
 - Highest performance and mobility both in heavy terrain and at maximum weight.

Modularity

The mission changes – so does BOXER

The unique concept of interchangeable Mission Modules on a common Drive Module forms an ideal basis for introducing diverse national requirements and allows easy exchange of Mission Modules. BOXER's modular design ensures the flexibility required to create a complete family of vehicles on a common basis and offers advantages with respect to new designs, development, testing, production, logistics and growth potential.

Several variants for three nations have already been developed and qualified. Customer tailored Mission Modules are easily achievable without designing a complete vehicle.



- **Modular principle**
 - Exchange of Mission Modules in theatre within < 30 minutes ("click+drive").
 - Pooling concept for different Mission Modules provides flexibility in procurement and deployment.
 - Easy removal of Mission Module provides for additional transportability, flexibility and enhanced maintainability.
- **Easy to maintain**
 - Modularity on system and subsystem level.
 - Exchange of power pack within < 20 minutes under field conditions.
 - Operating the power pack outside the vehicle for maintenance.
 - Eased access to all automotive parts from above – avoiding special facilities.
 - Minimized down-time due to dedicated Line Replacement Units.
 - Retain flexibility – while Drive Module is maintained, use of Mission Module with another Drive Module.

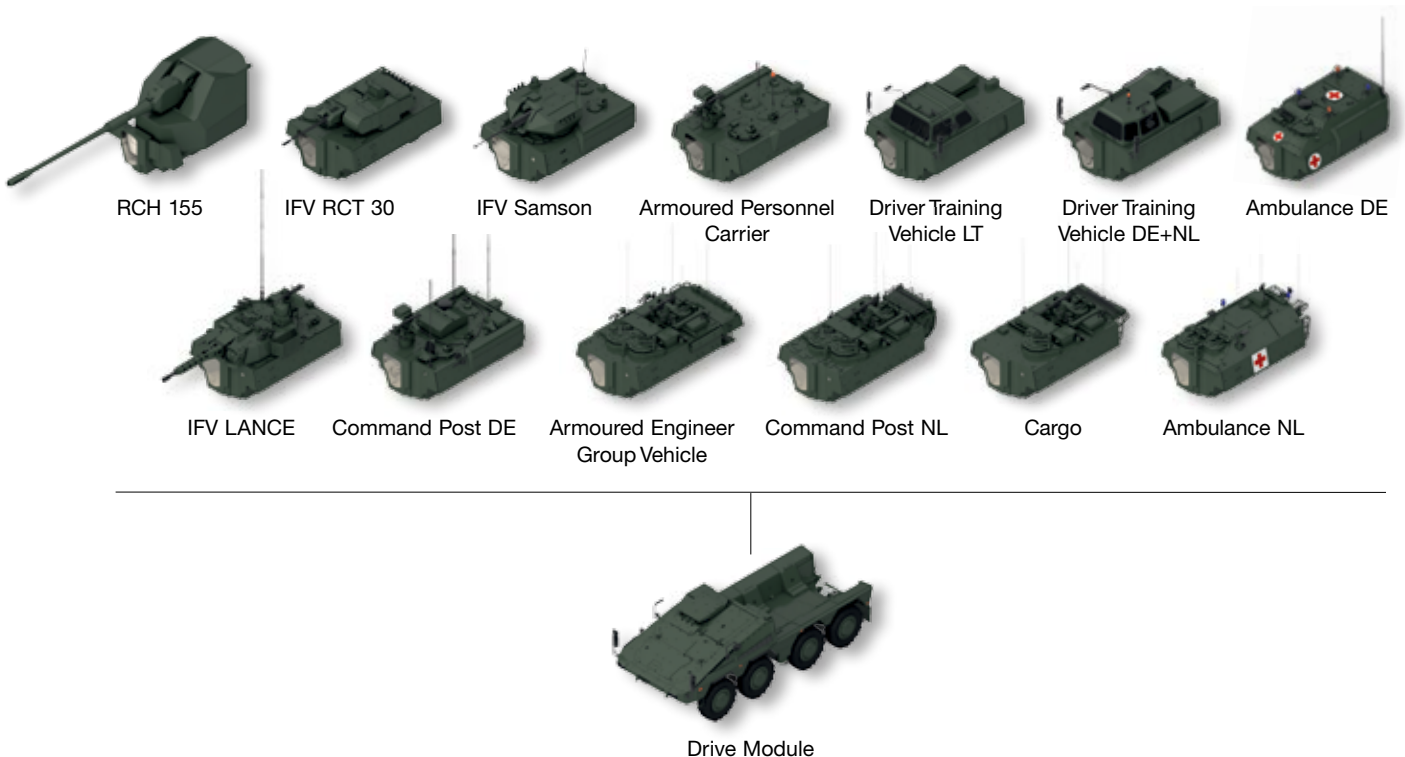
Operational experience with superior accomplishments

Proven vehicle in continuous series production

Extensive in-service actions during various missions, trials and homeland operations underline the maturity of BOXER. The deployment of vehicles into theatre and equipping several brigades in three nations results in a wealth of experience.

- **Superior reliability according to users.**
- **Extensive operational availability of BOXER.**
- **Reduced life cycle costs due to increasing number of users.**

BOXER is produced in series production for the German Army, the Royal Netherlands Army and the Lithuanian Armed Forces. Official feasibility studies for further variants, according to customer's requests, are continuously conducted. Enhancements based on the feedback of the users for the Mission and Drive Module are ongoing. Multiple assembly lines at Krauss-Maffei Wegmann and Rheinmetall MAN Military Vehicles in Germany and the Netherlands provide flexibility and sufficient production capacity. This ensures highest output rates as well as necessary know-how for establishing further production lines.







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