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.

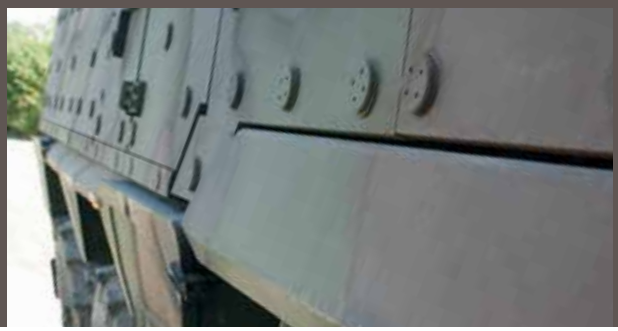
The concept and the design of BOXER have been tested, qualified and proven by Official Services, according to the requirements of four nations. Shortly after delivery of the first vehicles, BOXER was deployed into theatre and has proven its capabilities and reliability under harsh environments, in dangerous 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.



- **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 spall 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 inte gration of future technologies.

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.

- **Unique capacity – maximum interior**
  - 14 m³ protected volume (17.5 m³ with higher roof).
  - 13.5 t 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 ter rain 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

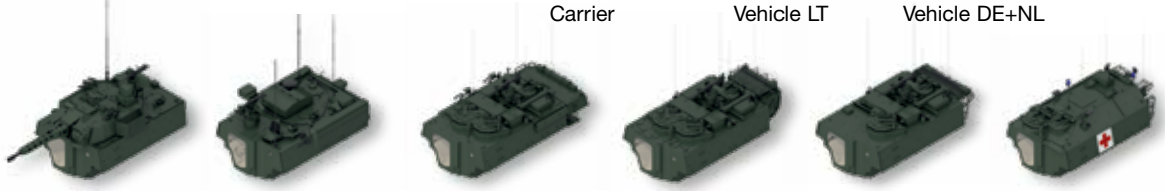
Proven vehicle in continuous series production

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.

RCH 155 | IFV RCT 30 | IFV Samson | Armoured Personnel Carrier | Driver Training Vehicle LT | Driver Training Vehicle DE+NL | Ambulance DE



IFV LANCE | Command Post DE | Armoured Engineer Group Vehicle | Command Post NL | Cargo | Ambulance NL

Drive Module

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
Tel. +49 89 892130-0 · Fax +49 89 892130-17
mail: info@artec-muc.de · www.artec-boxer.com

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Krauss-Maffei Wegmann and
Rheinmetall MAN Military Vehicles.

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RHEINMETALL DEFENCE

Armoured Personnel Carrier

The mission changes – so does BOXER

BOXER Armoured Personnel Carrier (APC), with its diverse capabilities and growth potential, is the leading armoured 8x8 combat vehicle for future emerging military roles and missions of the infantry.

The highest level of mobility and protection are the prerequisites for enforcement in high-intensity conflicts and ensure flexibility to future military requirements and scenarios.

Equipped with the latest C4I architecture, the vehicle can be fully integrated with existing BMS. BOXER APC supports leading edge communication systems including the IdZ (infantry soldier of the future). This supplies the crew with navigational and tactical information in modern battlefield scenarios to ensure real time information.

BOXER APC can transport up to 8 dismounts, besides driver, commander and gunner.

Customizable stowage options and a modular seat configuration with sufficient space to hold a fully equipped infantry squad in the highly protected Mission Module allowing for increased survivability, interoperability and resilience of the crew.

In addition to high flexibility and mobility, the combat proven BOXER APC provides its crew with extraordinary survivability and superior protection against mines (AT, AP), IEDs, highest ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading).

BOXER

Armoured Personnel Carrier

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (hull roof)	2.38 m
Ground clearance	0.50 m
Protected volume	14 m³

Characteristics	
Crew	3 + 8 (driver, commander, gunner, up to 8 dismounts)
Air conditioning and NBC-protection system	
Fire extinguishing (engine) and suppression system (Mission Module)	
Up to 5 hatches for „show of force“	
Speech/data network from every seat to BMS	
Rear view camera	

Exemplary Options
Remote Controlled Weapon Station with Smoke-Grenade Launcher and Anti-Tank Guided Missile
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System
ECM/Jammer
Crew seats with airbags

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
Tel. +49 89 892130-0 · Fax +49 89 892130-17
mail: info@artec-muc.de · www.artec-boxer.com

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RHEINMETALL DEFENCE

Ambulance

The mission changes – so does BOXER

BOXER Ambulance (AMB) provides the basis for preclinical treatment as the first link in the medical emergency rescue chain with maximum protection and optimal mobility for modern battlefield scenarios.

Protected medical support on today's battlefields gains importance as the special status of ambulance vehicles can no longer be taken for granted.

A variant focusing on transport and a variant focusing on transport and treatment of the wounded are available.

BOXER AMB vehicles are designed with a higher roof of the Mission Module and thereby provide:

- headroom of 1.85 m,
- 17.5 m^3 protected volume,
- enough space and possibilities to treat casualties.

For the interior layout, several designs are possible. Flexible stretcher and seat arrangements are a standard feature and can be changed quickly and with no tools necessary.

BOXER AMB variants provide a wide range of flexibility regarding the number of casualties and their level of injuries. Thanks to its extensive medical equipment, it is possible to provide the right treatment most circumstances.

In the different layouts for BOXER AMB, the protection has not been compromised. The protection of the vehicle is similar to all other variants and provides the same level of protection. Therefore BOXER AMB is currently one of the best protected 8x8 ambulance vehicles available.

BOXER

Ambulance

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (hull roof)	2.93 m
Ground clearance	0.50 m
Protected volume	17.5 m^3

Characteristics	
Crew	3 (1 driver, 1 commander/doctor, 1 medical assistant)
Headroom	1.85 m
Capacity	7 seated casualties or 3 stretcher casualties or 2 stretcher and 3 seated casualties or 1 stretcher casualty for intensive treatment
Air conditioning and NBC-protection systems	
Fire extinguishing (engine) and suppression system (Mission Module)	
Intensive medical treatment and combat first responder equipment	
Rear view camera	

Exemplary Options
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System
ECM/Jammer
Thermal imaging device or Remote Controlled Weapon Station for self defence
Laser Warning System
Optronic sight system for commander to avoid opening of hatch

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ARTEC GmbH
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mail: info@artec-muc.de · www.artec-boxer.com

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RHEINMETALL DEFENCE

Command Post

The mission changes – so does BOXER

Modern military forces are facing an increasing and more diverse battlefield and need to react quickly to the rapidly changing levels of threat engagements.

BOXER Command Post (CP) is highly mobile and fully protected, offering the necessary work stations and C4I capabilities simultaneously.

BOXER CP delivers an outstanding level of mobility and superior survivability, while providing a fully adaptable C4I environment to enable the crew to cope successfully with today's complex battlefield scenarios.

BOXER has the digital backbone for standardized and Generic Vehicle Architecture (GVA), allowing for easy integration of communication systems, radios, battle management systems and other equipment. A wide range of on-board radio transmitters ensures secure communication and data exchange.

Flexible seating arrangements, racks and shelves allow for customization of BOXER CP to suit specific operational requirements and can be changed quickly and with no tools necessary. So far three different configurations of BOXER CP are available.

In addition to high flexibility and mobility, the combat proven BOXER CP provides its crew with extraordinary survivability and superior protection against mines (AT, AP), IEDs, highest ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading).

BOXER

Command Post

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (hull roof)	2.38 m
Ground clearance	0.50 m
Protected volume	14 m³

Characteristics	
Crew	3 + 2 (driver, commander, military commander, 2 staff)
Hatches	up to 3 hatches
Fire extinguishing (engine) and suppression system (Mission Module)	
Air conditioning and NBC-protection system	
Rear view camera	

Exemplary Options
Remote Controlled Weapon Station with Smoke-Grenade Launcher and Anti-Tank Guided Missile
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System
ECM/Jammer
Optronic sighting system for commander
Multifunctional 40” display also for briefing at the rear of the vehicle

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
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RHEINMETALL DEFENCE

Armoured Engineer Group Vehicle

The mission changes – so does BOXER

BOXER Armoured Engineer Group Vehicle (AEGV) is a troop and engineer group equipment carrier that enables the crew to execute tactical military and civil missions across the full spectrum of operations.

The crew is able to operate under armour and field a variety of special tools and engineer equipment necessary to accomplish their assigned missions.

The Mission Module of the AEGV is equipped with 6 seats for dismounts, the commander and gunner. Extensive stowage capacity for full battle gear and soldier equipment is available. In addition, there is further stowage capacity for ammunition, engineering material and special tools on the roof and the rear of the vehicle. With a seating layout for 8 dismounts the vehicle can also be used as an APC.

BOXER AEGV can be deployed as a support vehicle together with other units or dispatched on individual assignments such as route or mine clearance, obstacle breaching, and demolition operations. The vehicle's versatility also features the following:

- Troop carrier (infantry and engineer group) with associated special equipment,
- transport of ammunition and engineer material,
- carrier platform for turret and tactical systems.

In addition to high flexibility and mobility, the combat proven BOXER AEGV provides its crew with extraordinary survivability and superior protection against mines (AT, AP), IEDs, highest ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading).

BOXER

Armoured Engineer Group Vehicle

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (hull roof)	2.38 m
Ground clearance	0.50 m
Protected volume	14 m³

Characteristics	
Crew	3 + 6 (driver, commander, gunner, up to 6 dismounts)
Special stowage	Class V stowage section for ammunition and explosives
Air conditioning and NBC protection system	
Fire extinguishing (engine) and suppression system (Mission Module)	
Rear View Camera	

Exemplary Options
Remote Controlled Weapon Station with Smoke-Grenade Launcher and Anti-Tank Guided Missile
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System
ECM/Jammer
Optronic sighting system for commander
Seating layout for 7 or 8 dismounts

some pictures from John van den Boorgaart

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
Tel. +49 89 892130-0 · Fax +49 89 892130-17
mail: info@artec-muc.de · www.artec-boxer.com

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RHEINMETALL DEFENCE

Infantry Fighting Vehicle Samson

The mission changes – so does BOXER

The Infantry Fighting Vehicle (IFV) variant of BOXER with the Remote Weapon Station Samson MK II Samson represents a modern wheeled Infantry Fighting Vehicle. Combining BOXER's inherent high level of protection, the unique mobility and the latest weapon technology BOXER IFV Samson represents the necessary capacities to face current and future requirements.

The protection of the turret is adaptable for a wide range of missions and to face different threats, as is BOXER.

BOXER IFV Samson enables forces to effectively close the fire loop with varying degrees of firepower, from 7.62 mm on the coaxial machine gun, through 25 mm to 40 mm main gun (western and eastern versions, including air burst capabilities) and up to Anti- Tank Guided Missiles (ATGM).

The turret provides a hunter-killer capability during day and night. Sufficient firepower is provided by a flexible weapons suite with the M242 25 mm gun, the MK44 30 mm gun or the 2A42 30 mm gun.

BOXER IFV Samson can transport up to 8 soldiers, besides the driver, commander and gunner.

In addition to is underlying performance, BOXER IFV Samson provides its crew with extraordinary survivability and protection against mines (AT, AT), IEDs, corresponding ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading) in addition to its superior firepower.

BOXER

Infantry Fighting Vehicle Samson

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (turret roof)	3.47 m
Ground clearance	0.50 m
Protected volume	14 m³

Characteristics	
Crew	3 + 8 (driver, commander, gunner, up to 8 dismounts)
Main armament	MK44 30 mm gun (can be upgraded to 40 mm) (under- armour manual ammunition reloading system, Air Burst Munition (ABM) capable)
Elevation	-20° up to +70°
Azimuth	n x 360°
Rate of fire	up to 200 rounds/minute also with ABM
Ammunition	30 mm x 173 mm (upgrade to 40 mm possible)
Secondary armament	7.62 mm machine gun
Air conditioning and NBC-protection systems	
Fire extinguishing (engine) and suppression system (Mission Module)	

Exemplary Options
Anti-Tank Guided Missile Launcher
40 mm Automatic Grenade Launcher
40 mm Smoke Grenade Launcher
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System (incl. support functions e.g. Automatic Target Recognition and Target Tracking)
Identification Friend or Foe
ECM/Jammer
Laser Warning System

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
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RHEINMETALL DEFENCE

Infantry Fighting Vehicle RCT 30

The mission changes – so does BOXER

The Infantry Fighting Vehicle (IFV) variant of BOXER with the remote controlled turret RCT 30 represents one of the most modern wheeled IFV's. It combines BOXER's inherent high level of protection, the unique mobility and the latest remote controlled turret technology. This IFV variant represents state-of-the-art capabilities to face current and future challenges.

BOXER IFV RCT 30 is equipped with the same turret as being operated by the German Army in the tracked IFV PUMA. It is operated by a crew of 3 and can carry up to 8 dismounts.

The turret provides a hunter-killer capability, which is fairly unique in a medium calibre turret. Due to its optical and optotronic view means, 360°-observation, -spotting and even -identifying targets at long distances is possible. The stabilized automatic cannon allows for the pinpoint defeat of moving objects even while driving over rough terrain.

Sufficient firepower is provided by a flexible weapons suite:

- Stabilized 30 mm MK-2 machine cannon with air burst capability (also suitable for other types and calibres),
- 7.62 mm x 51 mm coaxial machine gun,
- integrated fully digital stabilized fire control system supporting all integrated armament,
- best protection of the crew (reload under armour), best overview (closed and open hatch operations).

In addition to is underlying performance, BOXER IFV RCT 30 provides its crew with extraordinary survivability and protection against mines (AT, AT), IEDs, corresponding ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading) in addition to its superior firepower.

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Infantry Fighting Vehicle RCT 30

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (turret roof)	3.51 m
Ground clearance	0.5 m
Protected volume	14 m³

Characteristics	
Crew	3 + 8 (driver, commander, gunner, up to 8 dismounts)
Main armament	Stabilized MK30-2/ABM (Air Burst Munition, 35 mm possible)
Elevation	-10° up to +45°
Azimuth	n x 360°
Max. effective range	up to 3,000 m
Rate of fire	up to 200 rounds per minute
Ammunition	30 mm x 173 mm (dual feed automatic)
Secondary armament	7.62 mm x 51 mm MG3 coaxial machine gun
Air conditioning and NBC-protection systems	
Fire extinguishing (engine) and suppression system (Mission Module)	

Exemplary Options
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System (incl. support functions e.g. Automatic Target Recognition and Target Tracking)
Identification Friend or Foe
ECM/Jammer
Laser Warning System
Anti-Tank Guided Missile Launcher SPIKE LR or Javelin
Additional Remote Controlled Weapon Station

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ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
Tel. +49 89 892130-0 · Fax +49 89 892130-17
mail: info@artec-muc.de · www.artec-boxer.com

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RHEINMETALL DEFENCE

Infantry Fighting Vehicle LANCE

The mission changes – so does BOXER

The Infantry Fighting Vehicle (IFV) variant of BOXER with the manned LANCE turret represents one of the most modern wheeled IFV's currently on the market. BOXER's superior level of protection, excellent all-terrain mobility and the latest modular turret technology enables it to fight, survive and win on the battlefields of today and tomorrow.

BOXER IFV LANCE, armed with a medium calibre machine canon, is in tune with BOXER's modular design philosophy of Drive Module, Mission Module and turret system for maximum versatility and performance.

It ensures maximum operational flexibility and adaptable capabilities for current requirements and future upgrades in evolving threat environments.

BOXER IFV LANCE is operated by a crew of 3 and is capable to carry up to 8 dismounts, depending on the Mission Module configuration. There are also a variety of different options and configurations for the turret system, offering hunter-killer/killer-killer capability. The Commander's Remote Control Weapon Station offers:

- Stabilized 30 mm MK-2 machine cannon with air burst capability (also suitable for other types and calibres),
- 7.62 mm x 51 mm coaxial machine gun,
- integrated fully digital stabilized fire control system supporting integrated armament,
- best protection of the crew (completely in Mission Module), best overview (closed and open hatch operations).

In addition to is underlying performance, BOXER IFV LANCE provides its crew with extraordinary survivability and protection against mines (AT, AT), IEDs, corresponding ballistic threats (incl. artillery fragments), NBC threats and detection (radar, noise, solar loading) in addition to its superior firepower.

BOXER

Infantry Fighting Vehicle LANCE

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (turret roof)	3.24 m
Ground clearance	0.5 m
Protected volume	16 m³

Characteristics	
Crew	3 + 8 (driver, commander, gunner, up to 8 dismounts)
Main armament	Stabilized MK30-2/ABM (Air Burst Munition, 35 mm possible)
Elevation	-10° up to +45°
Azimuth	n x 360°
Max. effective range	up to 3,000 m
Rate of fire	up to 200 rounds per minute
Ammunition	30 mm x 173 mm (dual feed automatic)
Secondary armament	7.62 mm x 51 mm coaxial machine gun
Air conditioning and NBC-protection systems	
Fire extinguishing (engine) and suppression system (Mission Module)	

Exemplary Options
Modular protection kits (ballistic, bomblets, IEDs, mine)
Active Protection System
360° Situational Awareness System (incl. support functions e.g. Automatic Target Recognition and Target Tracking)
Identification Friend or Foe
ECM/Jammer
Laser Warning System
Anti-Tank Guided Missile Launcher SPIKE LR
Additional Remote Controlled Weapon Station

ARTEC

ARTEC GmbH
Krauss-Maffei-Strasse 11 · 80997 Munich · Germany
Tel. +49 89 892130-0 · Fax +49 89 892130-17
mail: info@artec-muc.de · www.artec-boxer.com

ARTEC GmbH is a joint venture of Krauss-Maffei Wegmann and Rheinmetall MAN Military Vehicles.

KMW KRAUSS-MAFFEI WEGMANN

RHEINMETALL DEFENCE

Remote Controlled Howitzer 155 mm

The mission changes – so does BOXER

BOXER Remote Controlled Howitzer 155 mm (RCH 155) combines long range intense firepower and the fully automated Artillery Gun Module with the protection and mobility of the combat-proven wheeled armoured vehicle BOXER.

BOXER RCH 155 can fire up to 8 rounds per minute to a range of up to 40 km with standard ammunition is achievable with BOXER RCH 155. An increased range of up to 56 km is possible with Very Long range Artillery Projectiles (VLAP). To integrate the 155 mm L52 Artillery gun, BOXER makes use of its growth potential of up to 38.5 t.

The Artillery Gun Module of BOXER RCH 155 is unmanned and provides automated navigation and fire control, features fully automated gun laying and projectile loading. The vehicle does not need to be equipped with hydraulic supports for firing. This leads to the reduced crew of 2 (driver, commander) and provides a major advantage in terms of fast relocation during operation – shoot and scoot – with a minimal crew size.

BOXER RCH 155 provides outstanding tactical and strategic mobility for efficient actions. Its high precision and accuracy make it ready for modern ammunition. The combat load can be up to 40 rounds and the projectiles and crew are protected to the same level.

The survivability of the vehicle and its crew has been a key characteristic and therefore given highest priority. The Gun Module can turn endlessly and be positioned n x 360° which leads to an area coverage of 5,026 km² (9,852 km² with VLAP).

BOXER

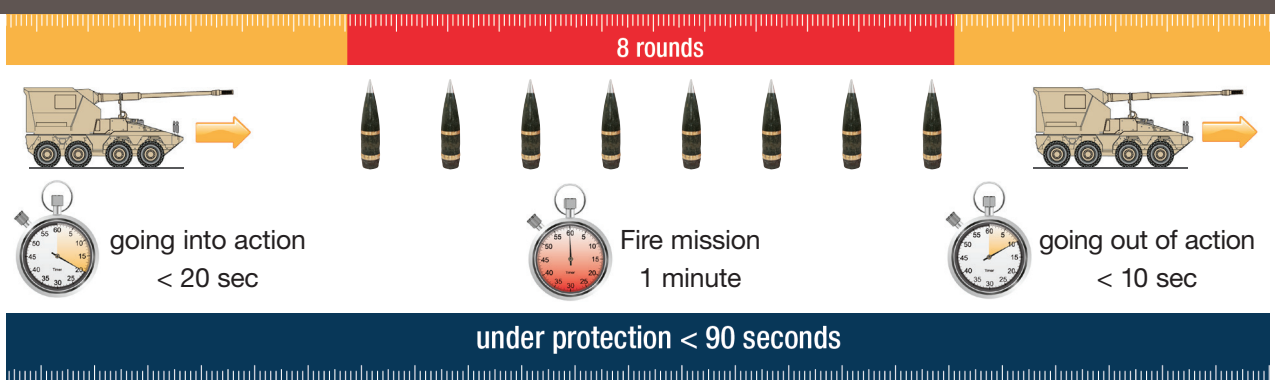
Remote Controlled Howitzer 155 mm

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	10.5 m
Width	2.99 m
Height (hull roof)	3.94 m
Ground clearance	0.50 m

Characteristics	
Crew	2 (driver, commander)
Rate of fire	up to 8 rounds per minute
Calibre	155 mm, L52 barrel (JBMOU compatible)
Elevation	-2.5° up to + 65°
Azimuth	360° with up to 6 modular charges
Effective range	40 km with base bleed, 56 km with VLAP
Ammo magazin capacity of 30 fused rounds and 140 modular charges	
Inductive fuse setting during loading process	
Loading possible in all elevation and azimuth positions	
“Shoot and scoot” and “Multiple Round Simultaneous Impact” (MRSI)	
Air conditioning and NBC-protection systems	
Fire extinguishing (engine)	

Exemplary Options
Remote Controlled Weapon Station with Multi-Purpose Grenade Launcher



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RHEINMETALL DEFENCE

Driver Training Vehicle

The mission changes – so does BOXER

BOXER Driver Training Vehicle (DTV) provides realistic training for drivers of all BOXER variants and it permits the highest level of quality and safety of driver training. BOXER DTV consists of a standard Drive Module and the Driver Training Mission Module. Weight and ride behaviour completely match the characteristics of the Armoured Personnel Carrier.

Occupant protection is a feature in BOXER DTV which protects the crew sitting in the driver training cabin. In the event of a roll-over accident, the seats in the driver training cabin are quickly retracted into the Mission Module in a controlled manner.

BOXER DTV can carry a crew of 4 besides the driver. The instructor and one crew member (e.g. the driving test examiner) are seated in an elevated position in the glass enclosed driver's training cabin to ensure the best possible view. Two other crew members are accommodated in the rear of the Mission Module.

The instructor can monitor the trainee driver via a duplicated control and display unit and override gear selection, brake or accelerator pedal of the driver's station. Steering override is available as well as an option.

The electrical cabin equipment, such as windscreen wiper/washer, windscreen heating, seat heating, etc. are operated via a digital control unit. The large glazed cabin, the mirror and camera systems ensure the instructor a sufficient field of view, including the immediate surroundings of the vehicle.

An additional air conditioner provides cooling for the cabin crew at high ambient temperatures.

BOXER

Driver Training Vehicle

Product data

Key figures	
Maximum speed	> 100 km/h
Engine capacity (ISO)	up to 600 kW
Engine type	MTU V8 199TE20/21
Range	> 1,000 km
Electrical system	24 V DC, up to 540 A
Max. gross vehicle weight	up to 38.5 t
Max. straight gradient	60%
Max. slope gradient	30%
Trench crossing	2.0 m
Step climbing ability	0.8 m
Turning radius	7.5 m (skid steering)
Length	7.93 m
Width	2.99 m
Height (cabin roof)	3.30 m
Ground clearance	0.50 m

Characteristics	
Crew	5 (driver, instructor, examiner or crew member, 2 trainees)
Fire extinguishing (engine)	
Rollover protection	
Override gear selector/brake pedal/accelerator pedal	
Additional air conditioning also for the cabin	
Intercom system (driver, instructor, examiner)	

Exemplary Options
Steering override
Intercom system for entire crew
Further cameras
Modified Optronic sight system (of BOXER Ambulance) for commander

some pictures from John van den Boorgaart

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