



ARV3 **BUFFALO**

ARMoured RECOVERY VEHICLE FOR ALL MISSIONS

TAKING RESPONSIBILITY IN A CHANGING WORLD

 **RHEINMETALL**

MISSION

Modern armed forces face an ever-expanding array of different missions, with levels of complexity ranging from high-intensity combat to asymmetric threats during deployed operations. Main battle tanks and other armoured combat vehicles need reliable support vehicles to ensure overall operational readiness.

Developed, produced and continuously improved by Rheinmetall Landsysteme, the Armoured Recovery Vehicle3 (ARV3) Buffalo meets the full range of tactical and technical requirements. The combat-proven ARV3 Buffalo provides outstanding reliability and flexibility combined with superior performance and superb force protection.

The ultimate combat support vehicle, the versatile ARV3 Buffalo can perform a wide variety of different tasks:

- Recovering damaged vehicles in rugged terrain
- Providing support during field maintenance and repair operations
- Transporting supplies
- Building earthworks
- Clearing obstacles

SYSTEM CONCEPT

The ARV3 Buffalo combines state-of-the-art recovery equipment with tried-and-tested components from the Leopard 2 main battle tank.



The main characteristics of the ARV3 Buffalo are:

- Unchallenged off-road capability
- High towing capacity
- High-power winching performance
- Powerful lifting capability
- Excellent force protection features

REFERENCE CUSTOMERS

Rheinmetall Landsysteme initially developed and produced the ARV3 Buffalo on behalf of Germany and the Netherlands.

In the meantime, the armies of numerous other nations – including Greece, Spain, Sweden, Switzerland and Canada – rely on the ARV3 Buffalo as well.

As the prime contractor for the ARV3 Buffalo, Rheinmetall Landsysteme has also supplied recovery mission kits for use on other heavy tracked platforms such as France's Leclerc ARV and South Korea's K1 ARV.

CHASSIS AND POWER PACK

Based on the Leopard 2 chassis, the ARV3 Buffalo chassis has been enhanced for ARV-specific mission profiles. Its high-performance power pack is identical to that of the MBT Leopard 2.

In terms of mobility, the ARV3 Buffalo is comparable to the MBT Leopard 2, with an all-terrain capability that allows it to keep pace with today's highly manoeuvrable units.



MAIN WINCH SYSTEM

Because of the superior cable length the pulling force of the main winch system can be increased by enabling double or triple pull operations. For easy handling of the heavy pull equipment the ARV3 Buffalo is fitted with an auxiliary winch and rigged with a sled.

- Usable cable length 140m
- Single pull max. pulling force 343 kN constantly (35 t)
- Cable speed max. 16m/min
- Double and triple pull possible approx. to 670/1000 kN
- Auxiliary winch 13.5–15.5 kN (1.5 t)

CRANE SYSTEM

Featuring a tiltable rigid boom and hoist winch, the hydraulically driven pivoting crane assures superior lifting capacity, enabling the ARV3 Buffalo to support the latest generation of heavy-weight armoured vehicles.

- Max. hook load 30t
- Max. hook height 7.9m
- Max. range
 - in 12 o'clock 4.7 m
 - in 3 o'clock 5.9 m
- Max. pivoting range 270°
- Inclination range 0°–70°

SUPPORT AND DOZING SYSTEM

Although the support blade's primary function is to provide support and resistance during crane and winching operations, it is designed as a dozer blade. This expands the ARV3 Buffalo's range of capabilities, providing it with an advanced tool for building earthworks.

WEAPON STATION

Primarily intended for 7.62 mm or 12.7 mm-calibre weapons, the remote controlled weapon station can be customized for different weapons. In addition ARV3 Buffalo is equipped with a 76 mm smoke grenade launcher system.

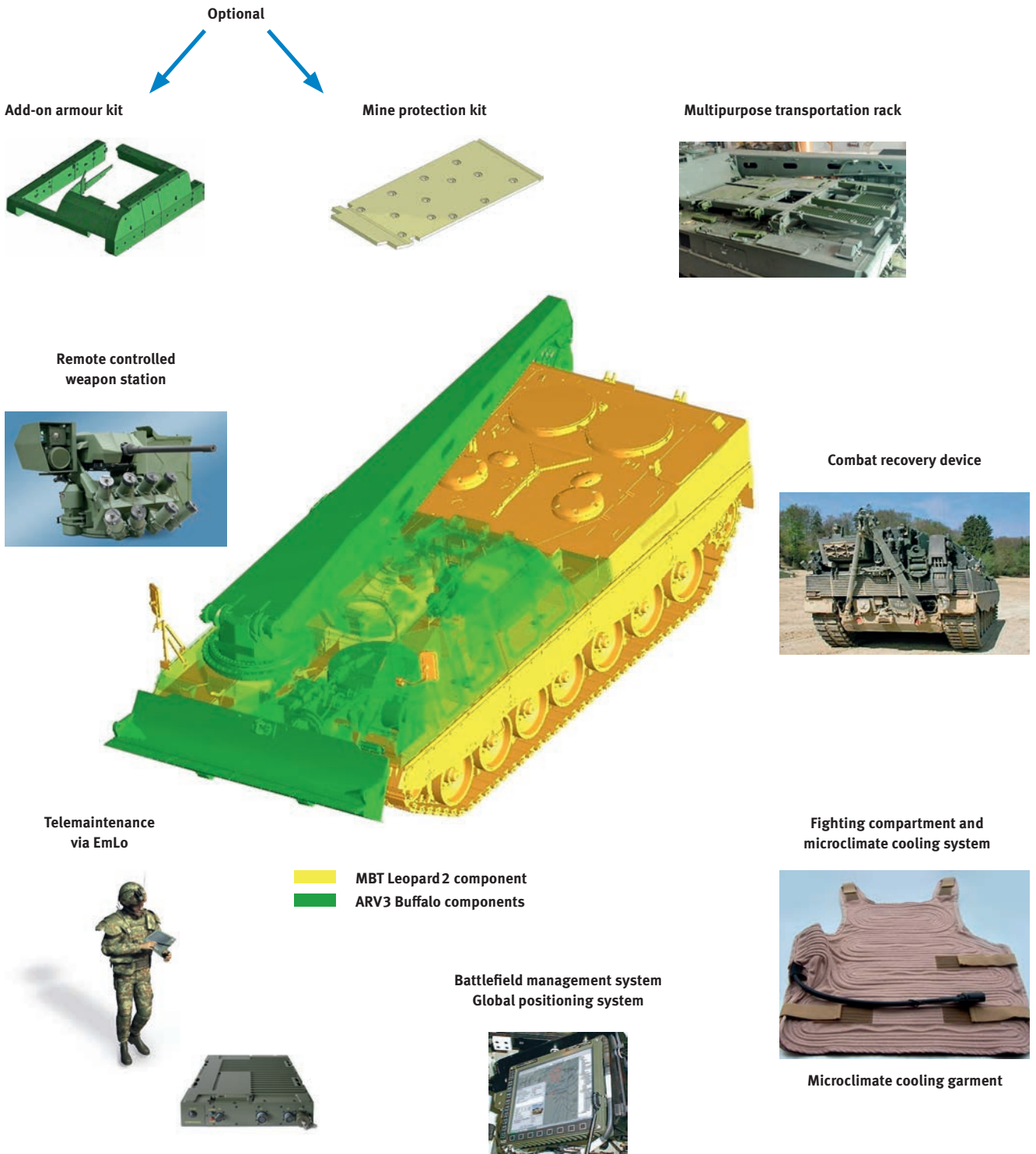
PROTECTION CONCEPT

Designed to meet the full panoply of current and future requirements, the ARV3 Buffalo's modular protection concept lets it support armoured combat vehicles directly on the modern battlefield. The vehicle provides a high level of ballistic protection, while the fighting compartment is fitted with an anti-spall liner. For operations in asymmetric threat environments, mission-specific add-on solutions are available for increasing the level of ballistic protection. Mine and IED protection upgrades are further options.



MODULARITY – ONE STEP AHEAD

The modular concept of the basic vehicle means that it can be tailored to meet the user's specific mission profile.



QUALITY MANAGEMENT

Rheinmetall Landsysteme maintains a system of integrated quality management throughout the vehicle's entire lifecycle, relying on in-house specialists in system safety, EMC and software verification. The system is certified in accordance with ISO 9001:2008 as well as AQAP 2110/2210.



TECHNICAL DATA* – ARV3 BUFFALO

Length	9,070mm
Height to top of weapon station	3,000mm
Width	3,550mm

Weights

Combat weight	56 t (MLC70)
Combat weight with AoA	64 t (MLC72)

Drive

Engine	MTU-MB873
Performance	1,100kW

Protection

Ballistic protection

Mine protection

Performance data

Maximum speed	68km/h
Gradient	60%
Side slope	30%
Ramp angle front	31°
Climbing ability	1.10m
Trench crossing ability	3.00m
Fording ability	2.25m

*Subject to change

ENTIRE ADVANCED LOGISTICS

MAINTENANCE CONCEPT

The maintenance concept of the ARV3 Buffalo matches the maintenance concept of the Leopard 2 MBT. To assure maximum synergy, the existing ILS programme for the ARV3 Buffalo focuses on commonality with the MBT.



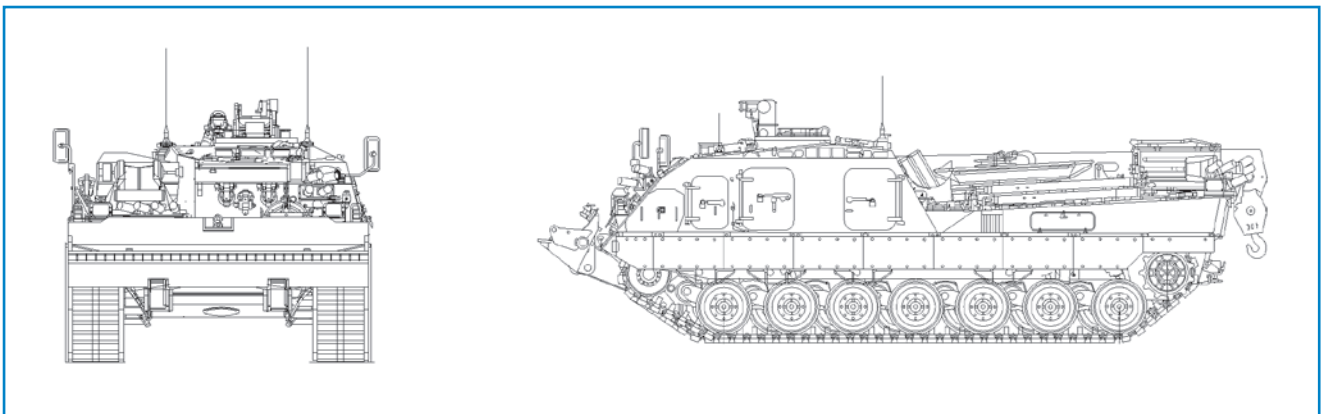
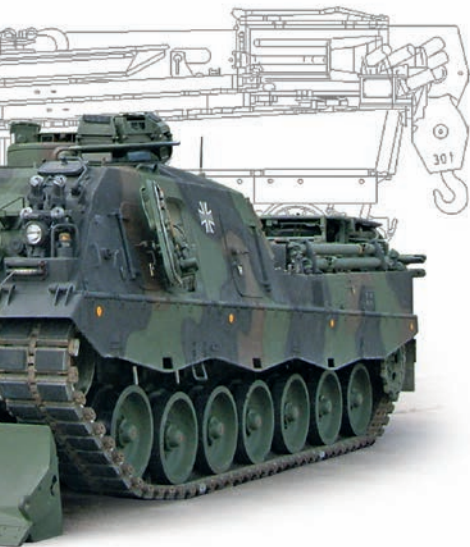
INTEGRATED LOGISTIC SUPPORT (ILS)

ILS considers ILS to be the most effective method of conducting logistic analysis in pursuit of the required supportability goals for minimum lifecycle costs. To assure maximum synergy, the existing ILS programme for the ARV3 Buffalo focuses on commonality with the MBT. This initial ILS programme can be customized for new logistic support requirements and new peacetime and wartime utilization profiles.

- The scope of ILS includes, but is not limited to, Logistic Support Analysis (LSA) in accordance with Mil-Std-1388-1A/2B
- Technical documentation in accordance with S1000D/S2000M
- Special Tools & Test Equipment (ST & TE)
- Initial Supply Support
- Training & Training Equipment (T & TE) for operators and maintainers

CONTRACTOR LOGISTIC SUPPORT (CLS)

Contractor logistics support is an integrated service that guarantees the customer defined availability for new and in-service vehicles at a fixed cost. It is available for single vehicles and weapon systems as well as for entire fleets of vehicles or defined parts of them when based at home or during deployed operations. This integrated service has already been successfully implemented in a number of different countries, including for the Fuchs/Fox NBC reconnaissance system.





MULTINATIONAL USER GROUPS

High commonality with the Leopard 2 reduces the lifecycle costs of the ARV3 Buffalo system. Multinational user groups for configuration management exist for the Leopard 2 and ARV3 Buffalo, which share the cost for upgrades and management of obsolescent items.

Design changes and improvements are harmonized in this group to keep costs low. The ARV3 Buffalo therefore benefits. Interchangeability of spare parts between user nations from NATO stocks increases operational readiness.

INTEGRATED TEST SYSTEM

The Integrated Test System (ITS) automatically monitors all operation- and mission-relevant systems and assemblies of the recovery system. The ITS provides the ARV3 Buffalo crew and repair personnel a large degree of autonomy with regard to operation monitoring and troubleshooting.

The vehicle's operational readiness is increased thanks to detection and localization of damaged assemblies by repair personnel. All messages from the ITS system can be displayed in English or the user's language.

EMLO – EMBEDDED LOGISTICS

EmLo – Embedded Logistics – enhances the operational efficiency and readiness of vehicles and weapon systems by streamlining logistics and maintenance processes.

EmLo involves comprehensive monitoring of vehicle- and weapon system-relevant logistic data, linked with a central logistic information and evaluation system: in other words, an Enterprise Resource Planning (ERP) system, e.g. from SAP. This forms the basis for various applications with regard to the vehicle crew, operational data, fleet malfunction management, logistics and telemaintenance.



To do this, data is collected and evaluated using on-board diagnostic systems. Once this data has been transmitted to the central information and evaluation system, existing logistical data can be factored into the analysis, enabling a comprehensive approach and a conclusive result.



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