AEV3**KODIAK**

THE ARMOURED ENGINEER VEHICLE OF THE BUNDESWEHR

TAKING RESPONSIBILITY IN A CHANGING WORLD

RHEINMETALL


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THE MISSION

Engineering troops of the 21st century need a robust, reliable and future-proof armoured engineer vehicle (AEV, in German “Pionierpanzer” PiPz 3) with state-of-the-art equipment, high protection and mobility in the entire operational area. As a system house, Rheinmetall Landsysteme has responded to these requirements by developing the Kodiak, the third-generation of armoured engineer vehicle.

REFERENCES

Customers in Europe and beyond use the Kodiak as the perfect tool for their combat engineers – and to their complete satisfaction. More than 40 AEV3 Kodiak are currently in use worldwide in Switzerland, Sweden, the Netherlands and Singapore. In addition to the Bundeswehr, other European and NATO partners have also expressed interest. Like Germany, Switzerland, Sweden, the Netherlands and Singapore are also reinforcing their Leopard 2 battle tank fleets with the Büffel armoured recovery vehicle (ARV3) – its weapon brother from the Leopard 2-based vehicle family, also developped, produced, and delivered by Rheinmetall.

THE SYSTEM CONCEPT

Like its predecessor – the successful AEV2 Dachs – the AEV3 Kodiak is a Rheinmetall support vehicle. The Kodiak combines modern engineering technology with the tried-and-tested components of the Leopard 2 battle tank. The AEV3 Kodiak has an articulated arm excavator in the middle of the vehicle, including further excavator tools, an adjustable dozer blade and a flexible winch system.

In addition, there is a high level of ballistic protection, also against RPG7, integrated mine protection, NBC protective ventilation, an electricity generating unit (APU), and a crew compartment with a heating and cooling system. Additional equipment, such as combat control systems as well as radio and intercom devices and other accessories are integrated according to customer specifications.

The two- or three-person crew of the Kodiak can use the system under full protection. This also applies to the replacement of excavator tools. The vehicle is the ideal tool for the engineering troop tasked with erecting or breaking obstacles on the battlefield.

In addition to its original function as the main deployment system of the armoured engineers, the Kodiak is of course also suitable for disaster relief missions. In the early summer of 2020, the Dutch armed forces deployed the Kodiak armoured engineer vehicle, together with the Büffel Bergepanzer 3 to fight forest and wildfires in the German/Dutch border area. Kodiaks have also been used several times by the current user nations in various flood and snow disasters.

In addition, the vehicle is able to provide electrical and hydraulic energy for external tools, e.g. for additional work lights, electrical welding equipment or hydraulically powered hand tools.

EXCAVATORS AND EXCAVATOR TOOLS

The system has a hydraulically operated quick coupling with hydraulic connections for various excavator tools such as universal grabs, hydraulic hammers and concrete shears. The vehicle can transport up to two additional excavator tools on the rear carrier.
The excavator tools can be replaced without leaving the protected crew compartment. The articulated arm excavator in the centre of the front of the vehicle even allows use in narrow places or in the mountains and guarantees unrestricted use of the excavator arm on both sides, with a pivot range of 160° in front of the vehicle.

WINCH SYSTEM

The double winch system was specially designed to meet the requirements of the army engineers.

With the system it is possible to quickly tear down barriers and obstacles. The versatile winch system at the front of the vehicle is equipped with two capstan winches that can be used independently of each other. They allow for maximum flexibility in use with absolute reliability. The comparatively light winch ropes can be quickly brought up to an object by a soldier without additional aids or tools, thus minimising the time spent outside the highly protected vehicle.

Both winches can be used together or independently of each other, and they can also be deployed together to recover heavy vehicles.

MBT-LEOPARD-2-CHASSIS

The well-balanced chassis with the 1,100 kW drive package on par with the Leopard 2A7V offers excellent mobility. With its great off-road capability, it can follow today's highly mobile manoeuvring units, e.g. the Leopard 2 battle tank, without restriction. By using the MLC80 chassis components, there is a potential for further additions.


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WEAPONS STATION

For self-protection, the Kodiak is equipped with a state-of-the-art 76 mm calibre smoke agent launcher and the “Natter” remote-controlled weapon station developed by Rheinmetall. The weapon station can be equipped with either an MG5 machine gun in 7.62 mm x 51 or 12.7 mm x 99 (.50 BMG) calibre, or can accommodate a 40 mm grenade machine gun.

VISUAL CONCEPT

The engineering equipment includes an angled mirror and a camera system that allows the crew to perform all tasks under protection, except for attaching the winch ropes. The camera system includes up to five video cameras. With the help of these cameras, the crew can perform tasks such as excavating earth, replacing tools, levelling, breaking and erecting barriers under the protection of the crew compartment. The crew members can view the camera images independently of each other on their respective screens.

ACTIVE AND PASSIVE PROTECTION

The newly developed protection package makes it one of the safest systems of its kind. Thanks to its high level of protection against projectiles and mines, the safety of the crew is guaranteed. An additional protection package (Add-on Armor) for the crew compartment also protects against hollow charge projectiles (e.g. RPG7).

OPTIONAL EXTRAS

Using the mine breakthrough kit, the crew can quickly convert the Kodiak into a mine breakthrough system with a mine clearance plough, signature duplicator and marking equipment.

Furthermore, the AEV3 Kodiak can be driven and deployed by remote control from a safe distance in very dangerous operations, especially when breaking minefields.

The double winch system can also be equipped with a flexible freewheel device with idle running. The protection concept and the survival capability of the crew can be further improved e.g. by additional bomb protection.

TECHNICAL DATA* - AEV3 KODIAK BASIC/ENGINEER VERSION	
Dimensions	
Length	10.20 m
Height without MG	2.60 m
Transport width	3.54 m
Weight	
Combat weight	MLC80
Drive	
Engine	MTU-MB 873
Power	1,100 kW
Protection	
Ballistic protection, Mine protection, Shrapnel protection	
Protection against IEDs and shape charges	
Performance data	
Maximum speed	60 km/h
Gradeability	60%
Cross slope capability	30%
Front ramp angle	26°
Ditch crossing capability	›2.50 m
Fording capability	2.25 m
Diving ability	4.00 m

** Subject to changes*

EXCAVATOR SYSTEM

- Shovel volume 1 m^3
- Horizontal operating range up to 9 m
- Vertical operating range up to 8.2 m
- Lifting capacity up to 3.5 t at max. range
- Hydraulic quick coupling
- Hydraulic support for various excavator tools

WINCH SYSTEM

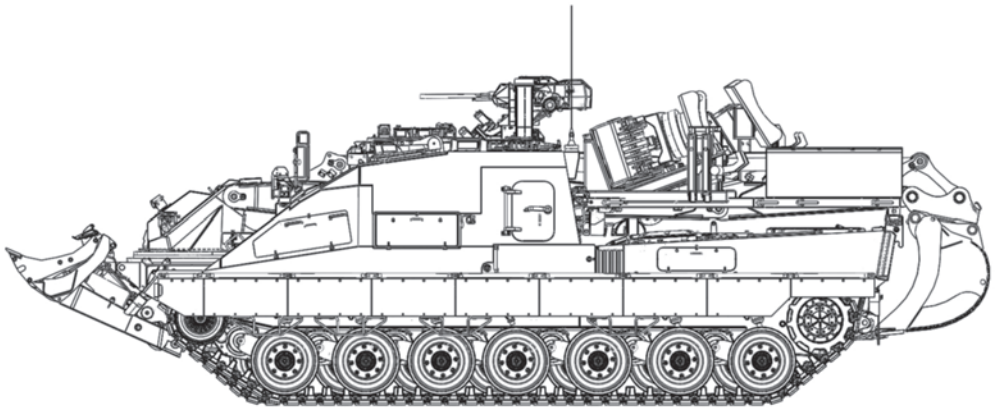
- Two 9 t winches (spill version, optionally with freewheel)
- Dynamic tractive force, single traction
  – 90 kN up to 6 m/min
  – 2.5 kN at 90 m/min
- Variable speed from 0 m/min to 90 m/min
- Constant tractive force
- Usable cable lengths 200 m
- Double quadruple hoist with up to 620 kN

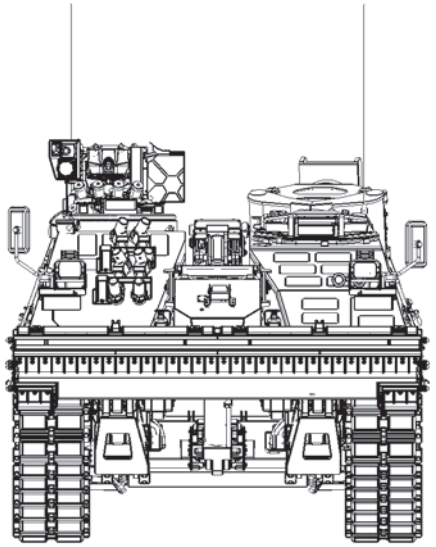
DOZER SYSTEM

- Width 3.42 m or 4.30 m with side extensions
- Two rippers (0.30 m)
- Variable cutting angle, from 24° to 79°
- Variable tilt angle +/–5°
- Vertical dozer blade extension

MINE CLEARING SYSTEM (OPTIONAL)

- Pearson mine plough in full width
- Lane marking system
- Clearing width ≥4.20 m
- Adjustable clearing depth 0 – 0.30 m
- Electromagnetic signature duplicator





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