

# Army Guide monthly



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## Defence Industry

### BAE Systems' CV90 increases lethality by testing SPIKE LR anti-tank guided missile



BAE Systems successfully fires an integrated, long-range anti-tank guided missile from the CV90 Infantry Fighting Vehicle during difficult arctic test conditions to defeat a target at more than 2,000 meters.

BAE Systems has successfully fired an integrated, long-range anti-tank guided missile from the CV90 Infantry Fighting Vehicle in a recent series of tests.

This advancement further diversifies the CV90's operational capabilities on the battlefield by enabling indirect fire at long distances or at air targets, boosting the vehicle's lethality while increasing crew safety.

The testing, which took place in difficult arctic conditions, used a Rafael Advanced Defense Systems' Spike-LR (long range) missile mounted on a BAE Systems Högglunds' CV90 to defeat a target at more than 2,000 metres. The exercise marks the first time an integrated version of an anti-tank guided missile has been launched from the CV90. It also demonstrates the platform's versatility to perform a wide range of missions, and shows the CV90 can easily adapt to new technologies for meeting current and future customer needs.

"This integrated anti-tank capability confirms that the CV90 is a true benchmark when it comes to expanding a family of multi-mission armoured fighting vehicles," said Dan Lindell, CV90 platform director at BAE Systems Högglunds. "This new capability can alter the battlefield dynamic and is yet another example of how the CV90's already superior mobility and survivability allows the warfighter to pack an even heavier punch in any terrain or weather conditions, and at any time on any battlefield."

The December testing took place in northern Sweden in below freezing temperatures with heavy snowfall and low visibility.

"We fully appreciate Rafael and their Spike team for working with us to demonstrate this important capability and look forward to continuing our collaboration to provide present and future customers with this powerful addition to the CV90's lethality suite," Lindell said.

The long-range missile testing is yet another recent example of improved lethality on the CV90. BAE Systems is currently executing a Swedish government contract to provide a mortar variant of the CV90 called Mjölner that adds greater mobility to close indirect fire

support.

More than 1,200 CV90s of numerous variants are in service with Denmark, Estonia, Finland, Norway, Sweden, Switzerland and the Netherlands. The vehicle has a combat-proven track record and is designed to accommodate future growth to meet evolving missions.



## Defence Industry

### TEMPORARY COMPANY GROUPING EBMR MEETS ITS DELIVERY OBJECTIVES FOR 2019



On 24 December 2019, the temporary company grouping EBMR (Multi-Role Armoured Vehicles) received the inspection report for the 92nd VBMR-GRIFFON from the quality department of the French Defence Procurement Agency (DGA/SQ).

The group team consisting of Nexter, Arquus and Thales thus meets its delivery objectives for 2019, in accordance with the initial order of April 2017 and the military programming law 2019-2025.

At the beginning of July 2019, a first batch of six vehicles was handed over to the French army by the DGA in the presence of Madame Florence Parly, the French Army minister.

The production of the 92 GRIFFON vehicles was completed and certified within 6 months, representing true industrial performance and showing the continuing commitment of the grouping to the armed forces.

The Nexter, Arquus and Thales teams have mobilized with DGA teams to deliver the development, qualification and production commitments of the GRIFFON. They are working together to design a vehicle with a high level of protection, optimum ergonomics, high mobility, an effective weapons system, the latest generation communications, and equipped with new functions (sensors, electronics, algorithms) for collaborative combat.

Overall, the SCORPION program plans for the temporary company grouping to deliver 1872 GRIFFON vehicles to the French army; of these, 936 vehicles will be presented between now and 2025, with all the associated logistical support resources. 128 GRIFFON vehicles are expected to be delivered in 2020.

**ROLE OF EACH MEMBER OF THE TEMPORARY COMPANY GROUPING IN THE GRIFFON PROGRAM:**

Arquus designs and produces the complete GRIFFON driveline, which is all the parts and units providing vehicle mobility. This driveline, which redefines the mobility standards for armored troop transport vehicles,

provides the latest generation off-road performance, enabling it to travel alongside the other vehicles in the SCORPION program in all conditions. Arqus also designs and supplies the GRIFFON's remotely operated self-defence systems, using common parts from the SCORPION program. These remotely operated turrets use the most modern technologies: Full HD digital imaging, direct sharing of tactical situations in augmented reality on the marksman's screen, and extended connectivity with vetronics putting the turret in the center of collaborative combat.



Arqus provides logistics for all the replacement parts and units for the Griffon vehicles in the Scorpion program, through its logistics platform at Fourchambault.

Nexter acts as an agent in the context of the EBMR grouping. Nexter is in charge of the development and production of the structure of the vehicles, including the armoured body, ballistic and CBRN protection solutions, and interior layout. Thanks to the high-precision machining and robotized welding operations, the mechanically welded structure of the GRIFFON's aluminium body provides the best protection performance for servicemen. Nexter is responsible for assembling the vehicles and integrating all the systems and equipment supplied by the members of the grouping.

Thales brings to the vehicles all the technologies for using data and information for collaborative platform engagement. This includes on-board common vetronics, based on computers and providing the link between the navigation, protection, observation and communication systems. It facilitates the management and fusion of all the data from the vehicle. The CONTACT software radio supports networking for the forces, by providing real time communication capacities. These systems, connected to the information system and limiting combatant exposure to potential threats, aim to provide a decisive advantage to units by extending their intelligence and operation capacity.



## Contracts

### Rheinmetall books €110 million-contract to extend the service life of the Marder infantry fighting vehicle for the Bundeswehr

The Bundeswehr has contracted with Rheinmetall to carry out new measures for extending the service life of the Marder infantry fighting vehicle. In order to maintain the operational readiness of this tracked vehicle, the drivetrain of 71 Marder 1A5 vehicles will be replaced. During the 2020-2023 timeframe, Rheinmetall will be supplying the

German military with a total of 78 conversion kits as well as vehicle tool kits and special tools, logistical support, an initial store of spare parts, and training and instruction. The order is worth around



€110 million, including value added tax. The service life extension will maintain and expand the capabilities of the Marder, which the Bundeswehr first fielded in 1971.

As a first step in replacing the drivetrain, a new powerpack will be installed in all of the vehicles, which will boost the Marder's engine output from 600 to over 750 HP. The new powerpack will significantly enhance the tried-and-tested vehicle's responsiveness. Here, the Bundeswehr has opted for a highly advanced, forward-looking new solution proposed by well-known German manufacturers.

Under a comprehensive development contract, the Marder fleet has already undergone significant modernization. For example, the new MELS multirole lightweight antitank guided missile system has recently been integrated into various versions of the Marder infantry fighting vehicle, while a new driver vision system, a thermal imaging aiming device and a fire detection and extinguisher system have also been ordered. Series contracts have already been awarded for parts of this service life extension, with performance upgrades now reaching the troops.

First and foremost, these service life extension measures are designed to eliminate known obsolescent elements in the Marder. Here, individual measures can be supplied as modular conversion kits and – as part of planned maintenance operations, for example – integrated in order to assure ready availability of the vehicles.

Awarded to Rheinmetall in December 2019, this Bundeswehr order has the potential to lead to more service life extension measures both at home and abroad. Besides Germany, the armed forces of Chile, Indonesia and Jordan all use the Marder infantry fighting vehicle.

As a system developer and supplier, Rheinmetall has immense expertise and experience with the Marder. The weapons system first rolled off the assembly lines of the predecessor of the company now known as Rheinmetall Landsysteme GmbH in Kassel. Extremely reliable and battle tested, the Marder is set to serve as an important asset of Germany's mechanized infantry units for several more years, even though the Bundeswehr is currently taking delivery of the last of 350 Puma infantry fighting vehicles intended to replace it.

