

# Army Guide monthly



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## Contracts

### FNSS Wins the Turkish Land Forces Anti Tank Vehicles Project



The Turkish MoD Undersecretariat for Defense Industries Signs the Contract for the Anti-Tank Vehicle Project with FNSS.

Contract negotiations held with FNSS Savunma Sistemleri A.Ş. in relation to the Anti-Tank Vehicle Project, which were initiated by the Defense Industry Executive Committee's decision taken on March 9, 2016, have recently been concluded, and the project contract was officially signed on June 27, 2016, at a ceremony held in the Undersecretariat for Defense Industries.

The project will involve the integration of anti-tank missiles within the Turkish Land Forces inventory on armored vehicles equipped with anti-tank turrets developed specifically for the project. A total of 260 Anti-Tank Vehicles will be procured within the scope of the project, including both tracked and wheeled vehicles. The anti-tank guided missile system turrets will be developed with modern Fire and Command-Control capabilities. In addition to their ready-to-fire anti-tank guided missiles each turret will be equipped with a 7.62 machine gun.

FNSS plans to use the lightest member of the KAPLAN vehicle family as the platform for the tracked type vehicle of the Anti-Tank Vehicles project, while considering the PARS 4x4 as the basis for the project's wheeled type anti-tank vehicle.

In addition to having ballistic and mine protection, the amphibious tracked and wheeled Anti-Tank Vehicles will be capable of conducting joint operations with armored units, and have a modular mechanical and electronic infrastructure that enables rapid adaptation of future potential requirements.

Within the scope of this project; Design, development and prototype qualification processes will be completed in 2018; and in the following two-year period, serial production of 260 each Anti-Tank vehicles shall be completed and delivered to Turkish Land Forces.

## Exhibitions

### Otokar to introduce TULPAR-S APC at Eurosatory

Otokar, the largest privately owned company of Turkish defence industry,

participated in Eurosatory 2016 with six different armoured vehicles. Otokar introduced its new tracked armoured vehicle, TULPAR-S APC for the first time at Eurosatory, held in Paris between June 13 and 17. TULPAR-S stands out with its superior mobility, protection and amphibious capability.



Otokar, a Koc Group company and the main land systems supplier of Turkish Armed Forces, participated in Eurosatory with Otokar designed Arma 8x8, Arma 6x6, Cobra II, Cobra and Ural armoured vehicles. Otokar's new tracked armoured vehicle TULPAR-S APC was exhibited for the first time in Paris. Additionally, visitors were informed about Turkey's main battle tank Altay, developed by Otokar as prime contractor.

General Manager Serdar Gorguc said that Otokar is Turkey's most experienced defence industry company in land systems, and continued, "We are Turkey's land systems manufacturer with a wide product range that includes vehicles in various types and versions up to 60 tonnes, ranging from 4x4s and 8x8s to tracked armoured vehicles, as well as Otokar-designed turret systems. Besides being Turkey's largest land systems supplier, we also export to some 30 countries on 5 continents. We analyse the different requirements and expectations of almost 50 clients, and we swiftly create the solutions to meet these needs. As our clients become our references for new orders, we continue to include new countries among our clientele. More than 29 thousand of our vehicles are in active duty in very different geographies and risky zones around the world."

#### TULPAR-S ARMORED PERSONNEL CARRIER

TULPAR-S is the new member of the new generation light tracked vehicles family of Otokar. TULPAR-S is a 15 tons amphibious tracked vehicle platform, which was first unveiled in the Weapon Carrier Vehicle configuration during IDEF 2015, in Istanbul. It was displayed in Eurosatory 2016 in the Armoured Personnel Carrier configuration.

TULPAR-S is designed as a new generation modern, light and amphibious tracked vehicle platform. It is a multi-role platform to suit many missions where a light, agile, robust, and reliable tracked vehicle with high level of ballistic and mine protection is required. The vehicle has a 2 tons growth capacity, which allows integration of additional mission equipment, active/passive protection capabilities, mobile camouflage net, RPG net or different weapon stations.

TULPAR-S is able to operate in the worst environmental and terrain conditions and survive most common threats in the battlefield. It is able to cross deep water obstacles and swim in wavy conditions with its amphibious capabilities. TULPAR-S carries commander,

driver and eight fully geared crew members. Access to the vehicle is through a hydraulically operated ramp, with an escape door on it, located at the rear of the vehicle. Driver and Commander can access the vehicle through their hatches on the top deck.

TULPAR-S is a New Generation Light Tracked Vehicle with its modern and up to date Vehicle Electronics architecture, Control Systems, Electronically controlled Power Pack, robust Suspension System, Rubber Tracks, Modular Composite Armour, high level Mine Protection, Survivability systems such as Life Support System (composed of AC and CBRN filtration), Day and Night Sight Systems, Automatic Fire Suppression System, auxiliary systems such as APU and Pre-heating System, user friendly Human Interfaces, large room provided for Crew and Personnel, carefully designed ILS items such as accessibility, maintainability and reliability.

TULPAR-S has modular armour which allows the vehicle to be easily configured for added protection in different protection levels. TULPAR-S ballistic protection is supported with mine resistant double layer welded structure, shock absorbing floating floor, mine-blast resistant crew seats and spall liners in the crew cabin.

TULPAR-S has a 360 HP, inline, 6 cylinders diesel engine and 4 forward, 2 reverse gears transmission with torque converter. Also, it can keep mobility performance in wide range of climatic conditions with OTOKAR developed cooling pack. It can cross a vertical step of 800 mm and a trench with a maximum width of 2,6 m. The vehicle is able to negotiate slopes up to 60% and side slopes up to 30%. Suspension system which includes torsion bars with shock absorbers and optional rubber track and steel track with replaceable pads.

Exhibited at Eurosatory, TULPAR-S fire power is provided Otokar BASOK RCWS in the Armoured Personnel Carrier configuration. BASOK RCWS, is a stabilized weapon station with 7.62mm machine gun, which is designed for armoured fighting vehicles. The system is utilized with CCD day camera and a thermal camera. System is remotely controlled by the vehicle commander with a multi-functional display, control unit and handle. Turret can also be manually control in case of emergency.

BAE Systems has been awarded a contract to produce 32 BvS10 military vehicles for Austria under a government-to-government arrangement with Sweden.

With this agreement Austria will benefit from the Swedish government's selection of the BvS10 in an open international competition.

The BvS10 is a highly maneuverable armored vehicle with superior performance for operating in challenging terrain to deliver personnel or cargo in combat and disaster relief scenarios. It is designed with great flexibility to accommodate changing mission requirements and is prepared for advanced battle management and command and control solutions. The contract is for the Armored Personnel Carrier variant of the BvS10 with deliveries beginning in the second half of 2017 and concluding in 2019.

"This investment provides the Austrian Army with a very capable and robust vehicle, and enhances our global position as a leading supplier of military vehicles," said Tommy Gustafsson-Rask, managing director for BAE Systems Högglunds, which manufactures the BvS10 in Umeå, Sweden. "Further, this contract is a result of a close and unique cooperation between the Swedish and Austrian governments and BAE Systems.

The BvS10 will also play a role in Austria's mission in the European Union Mountain Training Warfare Initiative (EU MTI), and BAE Systems is fully committed to providing all required support. Austria will be hosting schools, training and support services. The EU MTI was created to enhance military effectiveness in mountainous terrains, an environment where the BvS10 excels.

The BvS10s feature enhanced crew ergonomics, greater internal volume and advanced protection, building on BAE Systems' legacy BV206 vehicles, of which more than 10,000 have been sold to more than 40 countries. The BvS10 has been deployed to Afghanistan, Central Africa, the Balkans, and the Middle East.

With the contract Austria is joining France, the Netherlands, Sweden, and the United Kingdom as operators of the BvS10.

## Contracts

### Cobra II Armoured Vehicles Contract

## Contracts

### Austria to Buy 32 BAE Systems BvS10 All-Terrain Vehicles



Otokar, the largest privately owned defence industry company in Turkey, has announced that they have received a €106.1 million order for



COBRA II tactical wheeled armoured vehicles to be used by domestic security forces in various missions. The vehicles are due to be delivered in the first quarter of 2017.

With superior levels of protection, increased internal volume and outstanding mobility, Cobra II is designed and produced by Otokar, the land defence systems house of Turkey. Otokar has received a new order of armoured vehicles amounting to €106.1 million, and increasing the number of Cobra II in Turkey’s inventory. The order includes COBRA II 4x4 tactical wheeled armoured vehicles and a variety of systems as well as maintenance and support systems. Vehicle deliveries are expected to start toward the end of the year and be completed in the first quarter of 2017.

Speaking about the order Otokar General Manager Serdar Gorguc said, “Last year we were awarded the first two orders for Cobra II that we designed at Otokar with our own intellectual property rights and specifically against increasing threats. Armed with our engineering capabilities and R&D strength, we will keep on providing state-of-the-art solutions for our users.”

**HIGHER PROTECTION AND PAYLOAD**

Designed and manufactured by Otokar against upcoming threats and to meet users’ demands, COBRA II vehicles offer superior protection and outstanding mobility with increased internal volume. COBRA II is another tactical wheeled armoured vehicle with Otokar-owned intellectual property rights, and has the same mobility features as the COBRA version, providing improved protection against ballistic, mine and IED threats. COBRA II has successfully passed the tests conducted in the terrain and climatic conditions of the region. COBRA II has a modular structure for different missions, and is also available in an amphibious version developed specifically for export markets. During recent tests in a Gulf country for hot climate conditions and amphibious properties, Cobra II logged thousands of miles and successfully passed open water wading tests.



**Defence Industry**

**AJAX Programme Completes Initial Air Portability Trials**



Oakdale, South Wales -- General Dynamics Land Systems-UK has completed initial air portability trials for the AJAX family of vehicles at the Joint Air Delivery Test and Evaluation Unit (JADTEU) at Royal Air Force (RAF) Brize Norton.

The trials, which took place at the end of May, assessed the loading of the ARES prototype platform,

which will be used to deliver and support specialist troops across the battlefield, into the cargo hold of an RAF C-17A Globemaster III and A400M Atlas aircraft. These aircraft provide the RAF with a long-range, strategic, heavy-lift capability, which enables it to project and sustain an effective force close to a potential area of operations for combat, peacekeeping or humanitarian missions worldwide.

The ARES prototype platform was driven onto real-size mock-ups of each aircraft, in order for JADTEU to develop a tie down scheme. These trials form part of the process, which, combined with additional trials, will ensure that the AJAX family of vehicles, when in-service, can be transported anywhere in the world in rapid time to support the British Army.

Chief of Materiel (Land) for the UK’s Defence Equipment and Support organisation, Lieutenant General Paul Jaques, said: “AJAX is the biggest armoured vehicle programme for a generation for the British Army. These trials mark significant progress in the programme; it is essential that these fully-digitised fighting vehicles, which will sit at the heart of the UK’s agile Strike Brigades, can be deployed at short notice worldwide to protect the UK and our interests.”

Kevin Connell, vice president of General Dynamics Land Systems-UK, said: “The AJAX programme continues to make excellent progress during this trials period, with these successful trials following quickly on the back of early live fire trials in April. Thanks to the hard work of the project partners and our supply chain, we have been able to successfully demonstrate that the AJAX family meets a key requirement for air portability.”

The range of AJAX variants will allow the British Army to conduct sustained, expeditionary, full-spectrum and network-enabled operations with a reduced logistics footprint. It can operate in combined-arms and multinational situations across a wide-range of future operating environments. The first British Army squadron will be equipped by mid-2019 to allow conversion to begin with a brigade ready to deploy from the end of 2020.



**Training And Simulators**

**ADF Weapons Simulator Contract**



Meggitt PLC (“Meggitt” or “the Group”), a leading international company specialising in high performance components and sub-systems for the aerospace, defence and energy markets announces

that Meggitt Training Systems has been awarded an \$18 million USD contract from the Australian Defence Force's Capability Acquisition and Sustainment Group. Meggitt will develop, manufacture and install 460 EF88 Steyr assault rifle simulators and 115 SL40 40mm simulated grenade launchers.

“We have supplied, operated and maintained the ADF's Weapon Training Simulation System since 1999 and this latest weapons simulator award further validates Meggitt's long-standing strategic partnership with the Australian Defence Force,” said Chris Jordan, Managing Director, Meggitt Training Systems, Australia.

Contract deliveries will take place at 18 locations throughout Australia to support Army, Navy and Air Force training requirements and are expected to begin in the fourth quarter of 2017 and continue through May 2018.



### Defence Industry

#### Tigr at Tank Days in Slovakia



The Tank Days in Laugaricio – a festival of history and military hardware enthusiasts, which has become a tradition – took place about 100 km from Bratislava in 1 and 2 June.

Dozens of private collectors of military gear bring to the show over a hundred full-scale tanks, self-propelled artillery systems, infantry fighting vehicles, armoured personnel carriers, armoured vehicles, army lorries, guns and mortars and even airplanes as well. Although the material dates back to early last century, all vehicles are in good running order.

This year's festival featured the debut of the SBM VPK-233136 Tigr (Tiger) armoured car from the Military Industrial Company (VPK). By tradition, the Tigr rode as part of the column of the vehicles participating in the show and then displayed its cross-country ability, having impressed thousands of the spectators by its ability to move fast in terrain devoid of roads altogether.

After the demonstration had been over and the vehicles had been parked at their spaces, the Tigr was scrutinized by representatives of the Slovak uniformed services attending the Tank Days show. They familiarised themselves with its equipment and then tried the vehicle on the move. During the test drive, Slovak servicemen overcame a number of natural and cultural obstacles and tried the car in various modes off road, having noted the Tigr's high average speed and smooth ride. According to the experts who tested the Tigr, they liked the vehicle very much and would not mind to have it at their disposal.



### Contracts

#### WFEL extends US Army contract with J30m upgrade deal



The five-year agreement will see WFEL procure and fit upgrade kits to 97 of its Dry Support Bridge (DSB) 40-metre systems to enable the US Army to cross gaps of 46 metres. A total of 34 systems will be upgraded in the first 12 months.

Comprising an additional bridge panel and new launching beam, the upgrade kit also includes additional items to strengthen the launch vehicle, and can be retrospectively fitted to the 40-metre system.

The upgrade kits will be built at WFEL's manufacturing site in Stockport, UK, and installed by WFEL-trained personnel in the US. The company will also deliver a comprehensive training programme to guide the US Army on operation and maintenance, as well as a spares package, including a hydraulic adapter kit to allow repairs to be carried out in the field.

The DSB was originally developed for the US Army in 1996 to provide temporary infrastructure in combat situations and in the event of natural disasters and can be deployed by a crew of eight people in less than 90 minutes.

The deal extends WFEL's relationship with the US Army, a customer for 30 years, with 108 DSBs in inventory. DSBs operated by the US Army have been used in combat and emergency scenarios in Afghanistan and Iraq.

Ian Wilson, chief executive of WFEL, said: “The US Army adopted the 46-metre Dry Support Bridge into service in 2013 and, since then, we have been working closely with them to ensure that all their DSB equipment is capable of fulfilling its maximum potential.

“The development of a DSB upgrade route, which increases the current system's gap-crossing capability by 15 per cent, at a cost of less than 10 per cent of the original purchase price, is testament to the capabilities of our engineering and manufacturing personnel.

“The simplicity of these upgrades allows the work to be carried out at the user's facility, with minimal disruption and without any system being required to be returned to WFEL.”

The DSB was designed to be capable of spanning gaps of 40 metres. It has since been modified by WFEL to increase its capability and cross gaps of 46 metres with minimal design changes. The 46-metre DSB upgrade was developed under contract with the US Army Tank Automotive Command Centre (TACOM) in Detroit.

Once the 46-metre capability was approved, all new contracts for the purchase of the DSB for the US Army were based around the improved system. A total of 96 of the original 40 metre systems had already been delivered, so it was critical the 46-metre upgrade could be retrospectively fitted to ensure all systems within the Army's inventory were equally capable.

## Letterkenny introduces new version of mine-resistant combat vehicle



CHAMBERSBURG, Pa. -- A ceremony celebrating the successful production of the latest version of the RG31, a mine-resistant ambush protected route clearance vehicle, was held on July 19 at Letterkenny Army Depot.

The rollout ceremony featured the latest variant of the RG31's configuration. Among the improvements were an engine upgrade from 275 to 300 horsepower; a transmission upgrade from 2500 to a 3000 series; an independent suspension for improved mobility; 360-degree spotlights for night visibility; and an armored gunner's hatch.

The event was hosted by Letterkenny Army Depot commander Col. Deacon Maddox and Col. Jason Craft, project manager for the Army Project Office, Assured Mobility Systems, MRAP Vehicles.

"When most people think of Letterkenny, they think of missiles," Maddox said. "What many people do not know about Letterkenny is that approximately one third of the depot's work is the route clearance vehicle, which includes the RG31..."

After congratulating the depot's workforce and reminding them of the important role they play in supporting the Soldier in the field, Maddox shared the contents of an email he had received from a father of a Soldier who recently survived a blast from an improvised explosive device.

The blast had destroyed the MRAP that the Soldier and his fire team were in, but every occupant had walked away unharmed except for one Soldier who suffered a broken nose. The Soldier's father asked in the email, "What would have happened had my son not been in an MRAP?"

"Fortunately, such a question need not be answered because Letterkenny Army Depot is one of the depots helping to provide the best equipment possible for Soldiers," Craft said. "This community, this city, and this state have done their part to ensure the Soldier receives that equipment."

James Rowan, deputy commandant, Engineer Regiment, Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri, represented the customer at the ceremony and accepted the newest variant of the RG31 from the Letterkenny Army Depot's RG31 portfolio team.

Before accepting the vehicle, Rowan said, "The Army

## Exhibitions

### Alligator 6X6 Showcased at Eurosatory 2016



STREIT Group to showcases the Alligator 646 is a new type of tactical armored vehicle at Eurosatory 2016.

Alligator 646 is a tactical armored vehicle with advanced ballistic and blast protection, ensuring crew survivability in the modern day battle field. Alligator can be used as a platoon strength troop carrier, 8 dismounts and a commander and driver and can also be configured as a command and control platform, forward observation vehicle (FOO) or in a convoy support role.

#### Specifications

- Engine Type : Cummins ISL 400, 8.9 L, 6 cylinder in-line, Turbocharged
- Transmission: Allison 3200SP (6 Speed Automatic gearbox)
- Fuel Capacity: 2 x 200 Liters
- Fuel Type : Diesel
- Dimensions: W – 2820 mm | L – 6515 mm | H – 2770 mm
- Drive Configuration : 646
- Seats : 10=8+2
- Armoring Level : STANAG 4569 Level 4

STANAG 4569 Level 4 armoring means Alligator can protect against mine strikes and IED blast and can be fitted with ceramic or composite plates for even greater protection. With the option to make Alligator amphibious and fitting the optional CBRN filtration system, Alligator is a truly multi environment vehicle.

#### Armored Enhancements

- All round situational cameras
- Driver thermal sight
- Driver and commander interchangeable periscopes
- Optional remote weapon station
- Manual or automatic smoke grenade launchers
- Hydraulic rear drop down door
- Smoke Grenade launcher
- Central Tire Inflation System (CTIS)
- Amphibious
- CNBRM



and the nation made a major investment in the MRAP fleet of vehicles. This vehicle - the medium mine protected vehicle that is built on the RG31 MRAP platform -- has already saved untold lives and will continue to do so in the future."

Rowan quoted comments made by then Secretary of Defense Robert Gates in July, 2008, "There is no failsafe measure that can prevent all loss of life and limb on this or any other battlefield. That is the brutal reality of war. But vehicles like MRAP, combined with the right tactics, techniques and procedures provide the best protection available against these attacks."

Rowan asked the assembled group of the depot's workforce, invited guests, senior military leaders, and local community and political representatives to remember the critical importance of the work they do, and that the end-user and ultimate customer is the Soldier who values and appreciates it.

The depot is scheduled to produce a total of 929 of the RG31s with a production end date of 2020.

