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# Greek Defence News

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ISSUE: November -December 2023

VOL. 23 No 11-12



Greek Defence News

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## Greek Defence News

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## MINISTRY OF DEFENCE

➔ **Greek Defence Minister addresses Greece's policy on Defence and Security in the Eastern Mediterranean region.**

*On Tuesday 24 October 2023, the Minister of National Defence Nikos Dendias, participated in the 27th Annual Economist Roundtable with the Greek Government, in Lagonissi, covering the subject "Defence and Security in the Eastern Mediterranean region". The Roundtable was also attended by Florence Parly (former Defence Minister of France), Annegret Kramp-Karrenbauer (former Defence Minister of Germany) and Hryhoriy Nemyria (Deputy Chairman of the Foreign Affairs Committee of the Parliament of Ukraine and former deputy Prime Minister). The Roundtable was moderated by Joan Hoey (editor, The Democracy Index, & senior analyst for Greece, The Economist Group). Mr. Dendias stated in his address:*

"It is a great pleasure and honour for me to participate in the 27th annual Economist Conference, under the very timely title "Defence and Security in the Eastern Mediterranean". The very moment the International Community tries to deal with the likelihood of a new conflict, unfortunately we have two war conflicts in our wider region and, if we add Nagorno Karabakh and Yemen, we have four.

We also have a civil war in Soudan and a complete destabilization in the wider region of Sahel. As a tragic irony, today we celebrate the establishment of the United Nations Organization. It is the moment that we are distant than ever from implementing the principles and values of the United Nations Charter.

For us, for the Hellenic Republic, the defence of these principles always remains at the core of our policy. Besides, this is apparent in all three candidacies of our country, Greece, for the first time in our history, for the position of the non-permanent member of the Security Council, for the Presidency of the General Assembly and also for being a member of the Human Rights Council.

Greece condemned directly and from the first moment the Hamas terrorist attacks. Actions of indiscriminate violence that cost, beyond other things, the lives of far too many civilians and which, on our judgement, weaken the legitimate expectations of the Palestinians. Yesterday, from Israel, the Greek Prime Minister referred to the issue of the protection of the civilians, among other things. In the Eastern Mediterranean, Greece, a member of the European Union and NATO, tries to consolidate the stability and security, and to create conditions of economic growth.

The Greeks always considered the Mediterranean Sea to be a bridge, not a physical obstacle; a bridge that unites peoples, cultures, civilizations. Besides, the stabilising role of our country proves itself by the hundreds, more than 350 agreements we have concluded the last four years, with several countries across the world, with the two

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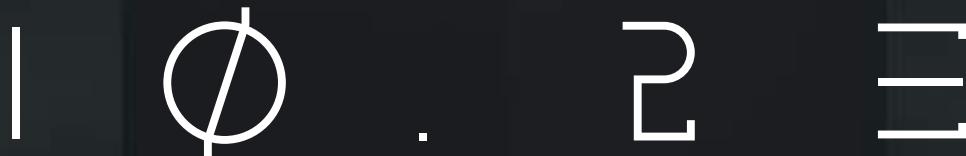


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Agreements of Mutual Defence Cooperation between Greece and the United States taking the lead. Additionally, by the Defence Agreement with France, the Defence Agreement with the United Arab Emirates, the Strategic Agreement with Saudi Arabia and the two Demarcation Agreements for the Exclusive Economic Zones with Italy and Egypt, with which we also have a strategic relation, and also with the multiple multilateral and trilateral MOUs with the Republic of Cyprus.

It is nothing new in me saying that that our cooperation provides for the participation of everyone, without exceptions, with one basic prerequisite: the complete respect to International Law, the International Law of the Sea and the United Nations Charter.

We also believe in the presence of the United States and NATO in our region; we consider that they may function as a pillar of stability. We believe that NATO is not only a Defence Alliance, but an Alliance that defends values and principles, and that the Russian invasion in Ukraine made this role of NATO evident.

Taking this opportunity, I would like to say that I welcome the decision of President Erdoğan yesterday to promote Sweden's NATO accession protocol to the Turkish National Assembly.

Ladies and gentlemen, as I told you before, in our region we face a geopolitical Gordian knot. Allow me to say that this has its reasons, which mostly refer to the five false basic assumptions that the vast majority of us made in the beginning of the 21st century.

- The first false assumption is that Democracy at last has prevailed in the planet and it will keep on expanding. On the contrary, all you need to see is what happens in countries of the Sahel.
- The second false assumption was that, as China became richer and stronger, it would also be economically more open and more democratic.
- The third false work assumption was that, despite the expansion of NATO to the East, Russia will become a member of the European security architecture, it will also assure the stability in South Caucasus, and it will remain a steady supplier of cheap energy in Europe.
- The fourth false assumption was that the Palestinian issue can be sidelined and dealt with in a long-term future, when the dividing lines of Israel and the Arab world have ceased to exist.
- The fifth false assumption, and probably the most catastrophic of the other four, is

that the model of economic growth that we followed in the 21st century can keep on going in the 21st century, without us dealing with the consequences of climate change.

So, these consequences have already appeared and the signs for the future are fateful, should we not react. In addition, after many decades and with a lot of historic nerve, revisionism questions values and conditions on which the global security architecture is based.

For the signs of the environmental crisis there is no need to say much. A few hundred kilometers north, Thessaly has suffered, as well as Italy and Slovakia. As you know, Greece has taken the presidency of 'Our Ocean Conference'; a conference of special interest for the protection of the ecosystem of the Mediterranean and the seas.

Nevertheless, these are not the only challenges. Irregular migration from the East and the South to the North and the West has intensified. The democratic governments, like the Government of the Niger under President Bazoum, are overthrown. In this geopolitical environment, the reinforcement of the cooperation between NATO and the European Union is needed more than ever.

By adopting the strategic compass, the European Union projects it will play an important geopolitical role and, by cooperating with NATO, it can assure security and stability in the Mediterranean and beyond.

However, I am obliged to say that there are problems: whereas regarding the Russian invasion, the European Union had a commendable unanimous and steady position, in the Middle East crisis it returned to its traditional polyphonic cacophony, and also in the West Balkans, it often goes back and forth.

On its side, NATO includes countries that omit imposing sanctions on Russia, or that forget to condemn the fatal attacks of Hamas against civilians.

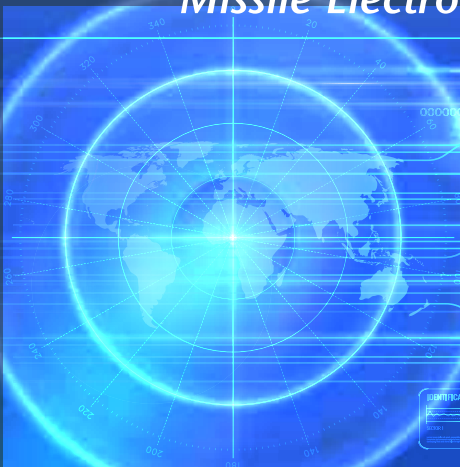
The recent situation developing in the Middle East creates extra problems in the model we have chosen for our growth. It creates more risks regarding the issues of energy supply. Greece supports and serves the differentiation of sources, suppliers and energy routes. The facilities of liquefied natural gas in Alexandroupolis, Revithoussa (plus in Volos and Korinth in the future), the TAP, the vertical pipe corridor of Greece-Bulgaria and Greece-Northern Macedonia, the East Med, the EuroAsia and EuroAfrica electric

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interfaces are projects that serve Greece's contribution in this differentiation.

In fact, a few days ago, along with my counterparts from Bulgaria and Romania, I signed a "Letter of Intent" for the expansion of NATO's fuel supply pipe towards Bulgaria and Romania, ensuring their capability of having alternative energy sources.

Ladies and gentlemen, under the current conditions of questioning the fragile geopolitical balance in our region, we, the Hellenic Republic, consider that we remain a factor of geopolitical and energy stability, in the context of our capabilities and magnitude.

We are devoted in resolving the differences, based on the principles of International Law and the Law of the Sea. We remain active in regional initiatives regarding peace, away from fabricated arguments of past centuries, threats, and concepts from the times of yore.

We acknowledge the end of the era of doctrines and old ideas, that led societies to dead ends, but we are always ready to defend our sovereignty and sovereign rights, as they result from International Law and the Law of the Sea.

## HELLENIC ARMED FORCES ARMAMENT PROGRAMS

### HELLENIC ARMY

#### ➔ Leopard 1A5 and Leopard 2A4 MBTs modernization

Hellenic Army General Staff has under consideration the configuration of the Leopard 1A5 and Leopard 2A4 MBTs to Leopard 2A7 standard.

The proposal which has been made by KMW (Krauss-Maffei Wegmann) has a dual significance at the defense and industrial levels: it includes the radical modernization of the 183 Leopard 2A4 tanks to the Leopard 2A7 standard and 190 Leopard 1A5 tanks with a new firing control system, as well as the creation of a factory in Greece.

Estimated cost, including possible installation of Rafael' APS Trophy system is in the area of 1.7 billion euro.

### HELLENIC NAVY

#### ➔ Naval Group proposes construction of the New Corvette in the Greek Shipyards

In response to a Parliamentary Opposition Question in the Greek Parliament about Naval Group proposal for the potential local construction of the new corvette, Greek Defence Minister said that he competent General Directorate of the Ministry of National Defence, in the context of bilateral discussions with the French side, is considering a proposal, which includes the possibility of the future construction of French-designed corvettes by the Greek shipyards.

He also said that exists strong long-term ties between the two countries, solidarity, solidarity and, if required, mutual defense assistance to counter any attack against sovereignty and territorial integrity, based on the rules of International Law and of the United Nations Convention. In this regard, the goal of the actions of the political leadership of the Ministry of Defense is to find out the most suitable solution for enhancing the Hellenic Navy's operational capabilities as well as to develop a strong and reliable Hellenic Defense Industry.

#### ➔ Gyro Compasses

On 16 October 2023, the Greek company ATESE awarded with a contract for the supply of twenty-nine (29) Gyro Compasses (G/P) to be used for the Hellenic Navy's Surface units and Submarines. Estimated budget is in the area of 2.500.000,00€.

### HELLENIC AIR FORCE

#### ➔ Hellenic Air Force' C-130H Hercules fleet modernization

The C-130 is a four-engine military transport aircraft, which can execute various missions. It is one of the most important US aircraft and it is in service in about 40 countries due to its resilience and reliability.

The Hellenic C-130s carry out most of the air transportation for the Hellenic Armed Forces and are also deployed in humanitarian and firefighting missions. The C-130 has been in service in the Hellenic Air Force for many years (since 1975). In 2001 the Canadian company SPAR, was selected for the Hellenic Air Force C-130 Avionics Upgrade Program worth of \$100 million over a three-year period. Hellenic C-130s belong to the 356 Squadron "Hercules", which is based in Elefsis airport (112 Combat Wing).



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They wear the four-color “Vietnam” camouflage.

#### Specifications

Crew: 5

Engine: C-130B Allison T-56-A7, C-130H Allison T-56-A-15, 4,058 hp.

Wingspan: 40.4 m

Length: 29.8 m

Maximum Speed: 621 km/hour

Service Ceiling (loaded): 7.000m or 23,000 ft

Service Ceiling (empty): 10.000m or 33,000 ft

Hellenic Air Force has suffered the last years from the lack of availability of transport aircraft. The lack of transport aircraft in Greece has been evident when an aircraft was heading towards Turkey with a team of rescuers and humanitarian aid for the victims of the earthquake that hit the central and southern regions of the country, was grounded due to technical problems.

Recent reports published in the Greek media indicate that only one or two aircraft of the nine C-130 Hercules freighters of the Hellenic Air Force is in operational condition. The situation of the fleet of Alenia C-27 Spartan turboprops is also worrying, as only three of the eight aircraft in the country would be available.

The urgent need for transport aircraft has led the Greek government to consider urgent plans immediate supply of used Lockheed Martin C-130J Super Hercules aircraft as well as procurement of new aircraft. To solve the problem as soon as possible, the Prime Minister of Greece, Kyriákos Mitsotakis, have tasked the Defence Ministry to immediately purchase second-hand aircraft while evaluating a future order for a new procurement.

Although there is still no official confirmation from the Greek Air Force, the local press speculates that the six C-130Js intended by the country will be acquired from stockpiles in Italy. The Hercules in service in Greece are the C-130B and C-130H versions, delivered to the country from 1975

onwards. C-130 manufacturer company Lockheed Martin has presented to Hellenic Airforce its proposal for the Hellenic Air Force’ C-130H Hercules fleet modernization. The State Department has approved the provision of two C-130 Hercules transport aircraft to Greece from the US military surplus. Compared to those currently serving in Greece, these are clearly of a much younger generation of shuttles.

The Greek Ministry of Defense has published the information that representatives of the Hellenic Air Force had met with a team from Embraer Defense and Security. At the meeting, the Greeks requested information about the capabilities of the C-390.

## HELLENIC DEFENCE INDUSTRY

### ➔ EODH SA

On 15 November 2023, a meeting was conducted between the Hellenic Army General Staff officers and representatives of the Greek company EODH SA. The aim the meeting was to present the company’s proposal regarding cope cages armored vehicles protection.

Cope cages, also known as slat armor, bar armor, cage armor, and standoff armor, is a special type of protection used in heavy military vehicles to mitigate the damage caused by high-explosive anti-tank (HEAT) weapons. Recently cope cages have been attracting lots of interest because they are often seen on Russian tanks participating in Ukraine’s invasion.

Cope cages, or slat armor is a type of vehicle armor designed to protect against certain types of explosive devices, particularly shaped-charge projectiles, such as rocket-propelled grenades (RPGs). It aims to disrupt the projectile’s detonation mechanism.

This kind of protection consists of a series of metal or composite slats or bars, typically arranged in a grid pattern, attached to the outside of a vehicle. The slats are positioned in such a way that they create a standoff distance between the explosive device and the main vehicle structure. The purpose of the standoff distance is to disrupt the shaped-charge mechanism of an incoming projectile. By detonating the explosive charge at a distance from the main vehicle, the effectiveness of the attack can be reduced.

➔ **MBDA France and MILTECH HELLAS SA Sign Contract for ASTER and EXOCET Launching Unit Cables Manufacturing in Greece**



© MILTECH HELLAS

On the 17th of October 2023 MBDA France and MILTECH HELLAS SA signed a contract for the manufacturing of cables for the ASTER and EXOCET launching units.

This contract is the next step in the cooperation between the two companies, after the signature of the R&D contract (MBDA – MILTECH – University of Patras) in 2022. This contract is beneficial for both MBDA France, which actively increases its footprint in Greece, in the frame of both Hellenic Industrial Participation plans and the bilateral defense agreement signed by France and Greece in September 2021, and MILTECH, which dynamically enters MBDA France's supply chain, with prospects for expanding/deepening the areas of cooperation in the coming months.

**HELLENIC COAST GUARD**

➔ **Purchase of 3 aircraft as air-surveillance control & management centers**

On 24 October 2023, the Ministry of Climate Crisis & Civil Protection released a public tender for the “Purchase of 3 aircraft as air-surveillance control & management centers”. Interested companies are invited to submit complete technical and financial offers. The tender will be contacted on 24 November 2023, at 10:00. Estimated contract value is €23.336.000,00.

**ACTIVITIES OF FOREIGN INDUSTRIES RELATED TO THE HELLENIC ARMED FORCES ARMAMENTS PROGRAMS**

➔ **Martin Baker**

On 16 November 2023, a meeting was conducted between the Hellenic Air Force General Staff officers and representatives of the UK company Martin Baker. The aim the meeting was to discuss technical aspects of its US18E ejection seat. The Hellenic Air Force (HAF) currently operates both F-16C Block 52 and F-16D Block 52 aircraft and could consider the US18E ejection seat as part of the Mid Life Upgrade (MLU) program.

Lockheed Martin selected the US18E Ejection Seat for the F-16 Block 70/72 aircraft in November 2020 to replace the legacy seat. The US18E is entirely based on the US16E that is installed in the Lockheed Martin F-35 aircraft with over 1100 seats manufactured, and 7 lives saved to date. Following qualification in 2023, the US18E will provide the following advantages over the legacy seat:

- Wider nude weight range from 103lbs to 245lbs;
- Wider accommodation range from the CAESAR multivariate Case 1 to the 95%ile – making it Gender neutral;
- Safe ejection for aircrew equipped with a Helmet Mounted Display (HMD) across the size and speed ranges;



© Martin Baker

- The Martin-Baker Electronic sequencer is fitted together with a mechanical automatic backup unit for redundancy;
- The modular seat design will reduce the need for canopy removals, significantly reducing operator maintenance hours;
- Commonality of parts, support equipment and procedures with the F-35/US16E ensuring logistic support for many decades to come;
- Martin-Baker manufactures its own CAD/PAD with shorter lead times than operators currently experience for the legacy seat.

## ➔ Pearson Engineering

On 16 November 2023, a meeting was conducted between the Hellenic Army General Staff officers and the representatives in Greece Nemos Strategy of the UK company Pearson Engineering. The aim the meeting was the presentation of its mine clearance vehicles.



© Pearson Engineering

Pearson Engineering Mine Clearance platforms and tools provide Armed Forces and other organisations with scalable solutions for mine clearance, explosive ordnance disposal and the defeat of improvised explosive devices. They can also be used to create mobility challenges for adversaries.

Proven around the world, these products are designed specifically to meet the needs of different operational contexts from large area clearance to support logistics and peace keeping operations through to clearance in complex terrain.

**NATO**

## ➔ NATO strengthens situational awareness with next generation of command-and-control aircraft In-Depth Coverage

NATO has selected its next generation command and control aircraft as the Alliance's existing Airborne Warning and Control (AWACS) fleet nears retirement. Production of the six new Boeing's E-7A Wedgetail aircraft is set to begin in the coming years, with the first aircraft expected to be ready for operational duty by 2031. A consortium of Allies gave their approval to the project, one of NATO's biggest-ever capability purchases, this month.



© NATO

"Surveillance and control aircraft are crucial for NATO's collective defence and I welcome Allies' commitment to investing in high-end capabilities," said NATO Secretary General Jens Stoltenberg. "By pooling resources, Allies can buy and operate major assets collectively that would be too expensive for individual countries to purchase. This investment in state-of-the-art technology shows the strength of transatlantic defence cooperation as we continue to adapt to a more unstable world".

The E-7 Wedgetail is an advanced early warning and control aircraft that provides situational awareness and command and control functions. Equipped with a powerful radar, the aircraft can detect hostile aircraft, missiles and ships at great distances and can direct NATO fighter jets to their targets. The United States, the United Kingdom and Türkiye also either fly the Wedgetail or plan to operate it. It is based on a militarised version of the 737 jetliner. NATO has operated a fleet of E-3A Airborne Warning and Control (AWACS) aircraft since the 1980s. Based at Geilenkirchen airbase in Germany, the AWACS have flown in every major NATO operation, including the fight against ISIS as well as on NATO's eastern flank following Russia's invasion of Ukraine. The E-7 is expected to have its main base at Geilenkirchen and could operate from several forward locations across Europe. The Wedgetail will be part of the Alliance's future surveillance and control project which will field NATO's next generation of surveillance systems from the mid-2030s.

**CYPRUS**

## ➔ Cyprus-Egypt defence cooperation

The Minister of Defence of Cyprus, Michalis Giorgallas, and the Egyptian Defence Attaché, Staff Colonel Pilot Mohamed Yousif Abdelmaged stressed their will to further strengthen the



© MOD Cyprus

strategic defence cooperation between the two countries, during a reception on October 6, on the occasion of the Egyptian Armed Forces Day and the 50th anniversary of the 6th of October Victory.

## BULGARIA

### ➔ Bulgarian Armed Forces Modernization

The Bulgarian Armed Forces has planned to acquire new weapons systems in the upcoming years. Most notably, the Bulgarian Air Force will receive 16 F-16V Block 70 fighter aircraft to replace its aging fleet of MiG-29 and Su-25 combat aircraft. On 1st September 2023, the State Department has made a determination approving a possible Foreign Military Sale to the Government of the Republic of Bulgaria of Stryker Vehicles and related equipment for an estimated cost of \$1.5 billion. The Defense Security Cooperation Agency delivered the required certification notifying Congress of this possible sale. The Government of the Republic of Bulgaria has requested to buy one hundred eighty-three (183) Stryker Family of Vehicles. The proposed sale would consist of: ninety (90) XM1296 Infantry Carrier Vehicles – Dragoon (ICVD); seventeen (17) M1126 Infantry Carrier Vehicles (ICV); nine (9) M1132 Engineer Squad Vehicles (ESV); thirty-three (33) M1130 Command Vehicles (CV); twenty-four (24) M1133 Medical Evacuation Vehicles (MEV); ten (10) M1135 Nuclear, Biological, Chemical Reconnaissance Vehicles (NBCRV); five (5) Heavy Expanded Mobility Tactical Truck (HEMTT) Light Equipment Transports (LET); five (5) Modular Catastrophic Recovery Systems (MCRS); two (2) M1120A4 HEMTT Load Handling Systems; five (5) M984A4 Wrecker HEMTTs; and one hundred seven (107) M240 Coaxial 7.62mm machine guns.

On April 2022, the State Department has made a determination approving a possible Foreign Military Sale to the Government of Bulgaria of F-16

C/D Block 70 Aircraft and related equipment for an estimated cost of \$1.673 billion. The Defense Security Cooperation Agency delivered the required certification notifying Congress of this possible sale.

The Government of Bulgaria has requested to buy four (4) F-16 C Block 70 aircraft; four (4) F-16 D Block 70 aircraft; eleven (11) F100-GE-129D engines (8 installed, 3 spares); eleven (11) Improved Programmable Display Generators (iPDG) (8 installed, 3 spares); eleven (11) AN/APG-83 Active Electronically Scanned Array (AESA) Scalable Agile Beam Radars (SABR) (8 installed, 3 spares); eleven (11) Modular Mission Computers (MMC) 7000AH (8 installed, 3 spares); eleven (11) LN-260 or equivalent Embedded Global Positioning System (GPS) Inertial Navigation Systems (INS) (EGI) with Selective Availability Anti-Spoofing Module (SAASM) and Precise Positioning Service (PPS) (8 installed, 3 spares); nineteen (19) Advanced Medium Range Air-to-Air Missile (AMRAAM) AIM-120C-7/C-8 or equivalent missiles; two (2) AMRAAM Guidance Sections; forty-eight (48) LAU-129A launchers (40 installed, 8 spares); twenty-eight (28) GBU-39/B Small Diameter Bombs (SDBs); two (2) SDB Guided Test Vehicles (GTVs); eleven (11) M61A1 Vulcan Cannons (8 installed, 3 spares); four (4) AN/AAQ-33 Sniper Advanced Targeting Pods (ATPs); twelve (12) Multifunctional Information Distribution System with Joint Tactical Radio Systems (MIDS-JTRS) (aircraft terminals and ground station terminals) (10 installed, 2 spares); twenty (20) AIM-9X Block II missiles; eight (8) AIM-9X Block II Captive Air Training Missiles (CATMs); four (4) AIM-9X Block II Tactical Guidance Units; four (4) AIM-9X Block II CATM Guidance Units; twenty-four (24) FMU-139 or FMU-152 fuze systems; twelve (12) KMU-572 Joint Direct Attack Munition (JDAM) Tail Kits for 500LB GBU-38 or Laser JDAM GBU-54; twelve (12) MXU-650 Air Foil Groups (AFGs) for Enhanced Paveway II EGBU-49; twelve (12) MAU-210 Enhanced Computer Control Groups (ECCGs) for EPII EGBU-49; twenty-four (24) MK-82 or BLU-111 or equivalent Bomb Bodies; six (6) MK-82 Inert Bombs; and two (2) GBU-39 SDB I Practice Bombs. Also included are AN/ARC-238 radios; AN/APX-126 or equivalent Advanced Identification Friend or Foe (AIFF) with Combined Interrogator Transponders (CIT); Joint Helmet Mounted Cueing System II (JHMCS II) or Scorpion Hybrid Optical-based Inertial Tacker (HOBIT) helmet mounted displays; AN/ALQ-254 Viper Shield or equivalent Electronic Warfare (EW) systems; AN/ALE-47 Countermeasure Dispenser Systems (CMDS), KY-58M Cryptographic Devices, KIV-78 Cryptographic Devices, and Simple Key Loaders (SKLs); Joint Mission Planning Systems (JMPS) or equivalent;

AIM-120 Captive Air Training Missiles (CATM); PGU-28 High Explosive Incendiary (HEI) ammunition; PGU-27 training rounds (non HEI); ARD-446 impulse cartridges; ARD-863 impulse cartridges; BBU-36/B impulse cartridges; BBU-35/B impulse cartridges; MK-124 smoke flares; MJU-7/B flare cartridges L463 or MJU-53 or equivalent; Common Munitions Built-in-Test (BIT) Reprogramming Equipment (CMBRE); ADU 890 adapter for CMBRE; ADU-891 adapter for CMBRE; Night Vision Devices (NVD); NVD Spare Image Intensifier Tubes; Remote Operated Video Enhanced Receiver (ROVER) 6i units; Tactical Network ROVER Kit; DSU-38 laser sensors for GBU-54; Cartridge Actuated Device/Propellant Actuated Devices (CADs/PADs); GBU-39 tactical training rounds; BRU-57 bomb racks; BRU-61 bomb racks; MAU-12 bomb racks and TER-9A triple ejection racks; other chaff and flare, ammunition, and pylons; launcher adaptors and weapons interfaces; fuel tanks and attached hardware; travel pods; aircraft and weapons integration, test, and support equipment; electronic warfare database and mission data file development; precision measurement and calibration laboratory equipment; secure communications; cryptographic equipment; precision navigation equipment; aircraft and personnel support and test equipment; spare and repair parts; repair and return services; maps, publications, and technical documentation; studies and surveys; classified/unclassified software and software support; personnel training and training equipment; facilities and facility management, design and/or construction services; U.S. Government and contractor engineering, technical and logistics support services; and other related elements of logistical and program support.

On Friday 4th August 2023, in Varna, the Bulgarian shipbuilder MTG Dolphin Shipyard PLC launched the first of the two new 2,300-ton corvettes / multi-purpose modular patrol vessels (MMPV) 90 for the Bulgarian Navy, under the management of the German shipbuilder NVL Group (formerly known as Lürssen Defence) which is the prime contractor of the project and with the involvement of numerous Bulgarian suppliers.

## TURKIYE

### ➔ **EDGE Signs Agreement with Roketsan to Explore Partnerships in Smart Weapon Development**



#### © **Roketsan -EDGE Signs Agreement with Roketsan to Explore Partnerships in Smart Weapon Development**

On 17 November 2023, EDGE, one of the world's leading advanced technology and defence groups, and Roketsan, a leading Turkish company which designs, develops, and manufactures rockets, missiles, guided munitions, and weapon systems, signed an agreement today to explore potential partnerships in the smart weapons domain. Under the agreement, signed at Dubai Airshow 2023, the two companies will work together to explore opportunities in the joint development of new and advanced smart weapon technologies.

Hamad Al Marar, President of EDGE Group's Missiles & Weapons cluster, said: "We are proud to be working with Roketsan and explore mutually beneficial opportunities to develop advanced technologies. In addition, we will also work closely to identify any opportunities to enhance existing solutions. As our agreement with Roketsan matures, we look forward to accelerating our product portfolios through a combined, focused effort, and furthering our relationship as leading developers and manufacturers of smart weapon solutions."

The potential strategic partnerships include opportunities in the joint development of guided artillery, missiles, torpedoes, and associated subsystems.

Cenk Onen, Vice President of Roketsan, said: "First of all I should state that as Roketsan, we are proud to be working with EDGE, UAE's leading advanced technology and defence group. The joint efforts of ROKETSAN and EDGE are expected to explore opportunities in the joint development of new and advanced smart weapon technologies. The agreement signed between ROKETSAN and EDGE at Dubai Airshow 2023 is a profound step towards strengthening the partnership between us."

The agreement with Roketsan is the latest bilateral engagement between EDGE and Türkiye's defence industry. In October 2023, EDGE signed a strategic cooperation agreement with SAHA Istanbul, a respected association representing more than 1,000 Turkish defence companies, aimed at facilitating deeper cooperation between the UAE and Türkiye. EDGE also announced that it is inaugurating a dedicated office in the UAE named MALATH, which will act as a catalyst for new business engagement between EDGE and SAHA companies, marking a new chapter in UAE-Türkiye cooperation in the advanced technology and defence sectors. Attendees of the Dubai Airshow can visit EDGE and its portfolio of companies at indoor stand 520 and outdoor stand S49 at Dubai World Central.

## ROMANIA

### ➔ Romania: F-35 acquisition plans

Romania plans to acquire "the first two squadrons from the United States of America through the Foreign Military Sales 32 aircraft. The purchase, whose value is estimated at \$6.5 billion, will be based upon a government-to-government-type" contract, the Romanian ministry said.

"The endowment program is designed to be completed in two stages. At the end of these, the Romanian Air Force will count three F-35 squadrons," the ministry's press office told Defense News in a Sept. 28 statement. "Documents for the first stage of the program were sent for the parliament's approval."

Romania's planned contract is to also cover the delivery of 35 engines, initial logistics support, training services for pilots and technical staff, simulators, weapons, as well as ammunition. The Romanian ministry said it expects to receive the first jets in 2030.

## ALBANIA

### ➔ Peleshi at the Ministerial of Defense in Brussels: EU and NATO with

The latest developments in the North of Kosovo took a special attention at the meeting of Defense Ministers of the NATO countries, which was held at the NATO headquarters in Brussels.



© Albanian MOD

As part of this meeting, Minister Niko Peleshi expressed the commitment of our country to the implementation of the decisions taken at the Vilnius Summit on the development of regional plans and the new structure of the forces, as well as emphasized the importance of the realization of defense plans, to guarantee the Alliance from possible threats. In implementation of the new model of NATO forces, the new structure of the Armed Forces has been approved, and we will contribute to the implementation of the plans by adapting our practices and making available critical infrastructure such as the Kuçova Base, the Port of Porto Romano and the construction of Corridor VIII.

According to Minister Peleshi: "Albania has a clear political will and will continue to support with a comprehensive approach, measures to strengthen deterrence and defense, further increasing the contribution to operations and missions such as in Kosovo, Bosnia and Herzegovina, Iraq, in NATO's Enhanced Vigilance in Bulgaria, Romania and the Mediterranean Sea."

Focusing on the situation in the Western Balkans, Minister Peleshi during his speech strongly condemned the terrorist attack in the North of Kosovo, as an attempt to destabilize the region. Moreover, he added, Belgrade's reaction by heroizing the attackers of September 24th in Banjska as well as the sending of troops and military capacities close to the borders of Kosovo are unacceptable events, therefore the EU in particular must take a firm attitude to such acts and to speak openly to the Serbian government. Minister Peleshi stressed that NATO and the EU should do more for the Balkans. The language and messages conveyed by the entire Western community must be clear and balanced, even in light of recent dynamics.

Mr. Peleshi emphasized that our country fully supports KFOR mandate and is intensively engaged with the allies to prevent an escalation of the situation, contributing at the same time to the facilitation of the Pristina-Belgrade dialogue.

## Delivery of the second Beechcraft King Air 350 aircraft to the Hellenic Air Force

On 16 November 2023, was officially handed over to the Hellenic Air Force the second Beechcraft King Air 350 aircraft. The official ceremony was attended by the Chief of Staff of the Air Support Command, Air Vice Marshal Konstantinos Kleniatis, the Commander of the 112 Combat Wing, Brigadier Vasilios Tosios, representatives of Aerodata AG as well as flying and technical personnel of the 112 Combat Wing, which is trained on the said aircraft.

The Beechcraft King Air 350 is a twin-turboprop aircraft and is used for air transport of patients. The Hellenic Air Force operates two Beechcraft King Air 350C since 2021, donated by Stavros Niarchos Foundation Cultural Center, aiming to enhance the capacity and efficiency of the air transport of the to the National Emergency Aid Centre. The aircraft have the ability of transporting two patients and are equipped with a special mechanism for lifting the stretchers. In addition, the aircraft include incubator transport infrastructure for the transfer of hatchlings.

With updates to the airframe, avionics and interior, the Beechcraft® King Air® 360 turboprop

represents the latest upgrade to one of the sky's most iconic aircraft. Additional features and benefits include an enhanced digital pressurization system, Onboard Maintenance System updates, a full regime autothrottle system, six new interior schemes and CoolView® windows. The latest iteration in the best-selling King Air® family of aircraft is designed for comfort and built for adventure.

Cabin improvements bring increased comfort and elegance to the King Air® 360 turboprop. Most notable is a lower cabin altitude resulting from higher cabin pressure. The latest model also features contemporary design cues found in luxury SUVs, plus reshaped cabinetry, resculpted sidewalls with pinhole lighting, upgraded seat design, illuminated cupholders and low-profile air/light adjusters.

The Beechcraft King Air 350 belong to 356 Tactical Transport Squadron «Hercules», located at Elefsina Air Base.

### Specifications

- Crew: 2
- Manufacturer: Beechcraft
- Engines: PT6A-60A
- Wingspan: 17,6 m
- Length: 14,3 m
- Service Ceiling: 11000 m or 35.000 ft
- Maximum Speed: 487 km/ hour

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THE PRESIDENT OF THE ARAB REPUBLIC OF EGYPT,  
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At Elmon we produce our own Body Armor, Ballistic Plates, Helmets and CBRN suits.

## Line of Production

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Body Armor

Ballistic Vests

Ballistic Plates

Ballistic Protection

Ballistic Helmets

Soft Armor

CBRN Protection



**10.23** Plate Carrier



**ACHILLEAS** Tactical Full Cover



**FAST** Ballistic Helmet



**BALLISTIC PLATE** Level IV Stand Alone



**ACHILLEAS** Tactical with Molle

## Main topics

- Aerial Firefighting
- Firefighting aircrafts and helicopters
- Wildland Fire Management
- Management and command of fire operations in urban buildings
- Firefighting simulation & Training
- Liquid fire extinguisher and Firefighting foams
- Early Warning Firefighting System
- UAV to improve situational awareness in Fire Fighting
- Firefighting drones
- Firefighting Vehicles
- Off-road forest firefighting vehicles
- Self-Contained Breathing Apparatus
- Firefighter Protective Clothing
- Torch that stretches light across dark, hazardous environments



# 2024 Athens International Firefighting Conference

13-14 March 2024, War Museum, Athens, Greece

Organized by



**Greek Defence News**



## SECOND C-27J FOR SLOVENIA

The Purchase Contract comes under the G2G agreement between Italy and Slovenia to strengthen bilateral cooperation between the two countries.

Leonardo and the Air Armaments and Airworthiness Directorate of the Secretariat General of Defence / National Armaments Directorate signed a Purchase Contract to supply the Slovenian Defence Ministry with a second C-27J Spartan aircraft and related logistics and training services.

The contract follows the Italy-Slovenia Government-to-Government agreement (G2G) signed on 17 November 2021, aiming to strengthen bilateral cooperation between the two countries.

Dario Marfè, Senior Vice President of Commercial, CSS&T & Proprietary Programs Business of Leonardo's Aircraft Division, said: 'Deployed in the most challenging geographic, environmental and operating contexts, Leonardo's C-27J Spartan is an aircraft capable of performing various types of defence and civil protection missions. Extensive experience with air forces worldwide makes it the ideal aircraft for military transport missions, paratrooper and materials airdrops, 'last mile' tactical troop support, special forces operations, medical battlefield evacuation, humanitarian assistance and natural disaster response.'

The C-27J Spartan Next Generation features new avionics in a glass cockpit with five multi-functional colour screens, a radar system for tactical transport missions and advanced communication systems. The system architecture ensures interoperability with other transport aircraft. It is easy to integrate with in-flight refuelling, self-protection, secure communications, and ballistic protection systems to operate in high-threat environments, transporting materials, light vehicles and personnel wherever needed.

With multiple roll-on/roll-off mission kits and easily installable and transportable roll-on/roll-off mission systems, the C-27J can be quickly transformed into the configuration required for the current mission. The new Fire Fighter configuration, also previously purchased under the intergovernmental agreements between Italy and Slovenia, features the second-generation palletised MAFFS II (Modular Airborne Fire Fighting System) from United Aeronautical Corporation, world leader in advanced aerial fire-fighting application systems.



© Leonardo



## Minister of Defence Michalis Giorgallas visit in London

On 21 November 2023, to MOD Main Building in London, UK Defence Secretary Grant Shapps welcomed Minister of Defence of the Republic of Cyprus Michalis Giorgallas ahead of a bilateral meeting.

Republic of Cyprus is a close ally, partner, and friend of the UK. Together we are committed to ensuring security and stability in the Mediterranean UK Defence Minister said.



© UK MOD

## Greeting of the Minister of Defence Michalis Giorgallas on the occasion ICAO and JRCC Workshop



It is with great pleasure that I welcome you to Cyprus and to the ICAO EUR Search and Rescue Workshop and the Search and Rescue Exercise.

Allow me to express my satisfaction in seeing such a significant and enthusiastic participation, which underscores the high importance of this event.

Firstly, let me take this opportunity to convey our thanks to ICAO and to our JRCC for organizing this workshop.

We greatly appreciate the role of ICAO in providing a safe global aviation environment. The two Ministries, the Ministry of Defense and the Ministry of Transport act as the Search and Rescue coordinators of the Republic of Cyprus. We have made every possible effort to constantly upgrade our Search and Rescue System as we are fully aware of our role in the Eastern Mediterranean region. A reliable Search and Rescue System provides a safer and more secure environment for both aviation and maritime activities.

The staff of our JRCC Larnaca and ICAO office in Paris have prepared an ambitious and challenging agenda for this two-day workshop which also includes a Search and Rescue Exercise. For this

reason, I am confident that by the end of this event, we will have accomplished another step towards the important mission of the Search and Rescue System which is in distress to save human lives. A crucial success factor for SAR operations is the establishment of efficient and effective multi-national cooperation. The organization of workshops and exercises like this one can serve as valuable tools in achieving higher levels of such cooperation.

Today, your presence here and the participation of representatives from more than 34 countries, highlights the importance of such cooperation and stress the need for the development of those mechanisms and procedures that will facilitate our collaboration in the field. Assisting anyone in distress as first responders within the NICOSIA FIR, which defines the boundaries of our Search and Rescue area of responsibility, holds significant importance for the Republic of Cyprus. Within the scope of this mission, Search and Rescue (SAR) forces frequently offer capabilities for the initial response to both natural and man-made disasters, incidents, or crises. Search and Rescue operations are a perfect example of civilian-military cooperation. For this purpose, the Ministry of Defense assigns military personnel, primarily from the Navy and Air Force to our Joint Rescue Coordination Center (JRCC). This is done with the objective of ensuring the effective and adequate fulfillment of the center's demanding mission. As it was previously mentioned, regional cooperation between Cyprus and all neighboring countries is of great importance.

Given the significant rise in migration flows towards our island, our cooperation has become increasingly crucial. It is not an exaggeration to state that we encounter Search and Rescue (SAR) events nearly on a daily basis, ranging in urgency levels for individuals in distress. This is the reason why cultivating common understanding and sharing knowledge is of utmost importance. I extend my best wishes to all of you for a successful Search and Rescue workshop and hope you have a memorable stay on our island.

## Imagine Having a Robotic Teammate

### Elbit Systems' Expert Reveals: Next-Gen Robotics with Social Skills for Hybrid Task Teams

The concept might seem unsettling but prepare yourself for the situation in which task teams will no longer be composed of humans only. In the foreseeable future, robots may play a significant role as members in hybrid (humans & robots) teams, performing mutual tasks. While it is still too early to determine if machines will completely dominate human tasks, the current innovations indicate a wave of advanced AI technologies that are reshaping the way we collaborate. It's an exciting yet uncertain time as humanity may be on the verge of a critical transformation.

In this developing/changing environment, some remarkable innovations stem from Elbit Systems' robotics branch's tireless efforts. Eli, R&D Programs Manager at the CTO Office of Elbit Systems' C4I and Cyber division, sheds light on one of the pivotal features on which he and his colleagues have been focusing recently.

"Robots have already become integral members of various army units worldwide over the past couple of decades," he explains. "Our challenge is to gain relevant social skills needed for a mission robot, to naturally and fluently interact with human teams, using non-verbal and verbal communication, to improve collaboration when performing mutual tasks, in dynamic environments."

"In simpler terms, his team has been tirelessly working on a ground robotic platform that soldiers can interact with naturally, as if they were talking to their human fellow teammates. Eli stated, "We also need to deliver adaptive autonomy – adjusting the robot's operational autonomy level to the relevant user(s) and its way to control the task, leveraging advanced situational perception and context-awareness, using explainable, trustworthy AI models."

### Taking Robotics to the Next Level

Until recently, incorporating a robot into a task team meant having a team member with specialized skills to operate a unique device with a joystick or other control methods. However, Elbit's R&D team are now pursuing a new idea – abandoning the need for a dedicated controlling device and relying solely on natural communication means (speech, gestures). This way, every soldier in the team can interact with the robotic platform. "Our goal was to enable soldiers to talk to the robot naturally, have it understand their needs and responds swiftly and efficiently," Eli adds.





© Elbit Systems

The advanced robotic technology not only comprehends spoken language but also operates based on social codes and etiquette. “Making it seamlessly blend in as an organic team member is crucial,” he emphasizes. However, one question that naturally arises is – how do you teach a robot to grasp human body-language, hierarchy, and manners?

This ambitious and multidisciplinary R&D program requires a harmonious union of scientific prowess and the fascinating world of social science. To ensure the robot comprehends human language, including non-verbal gestures and behaviors, several social science experts have joined the R&D team.

“Having these experts on board enables us to build the infrastructure that facilitates natural communication between autonomous platforms and human task teams,” Eli elaborates. “This helps the robot gain soldiers’ trust and confidence, and operate in a more human-like manner, optimizing their mission-based relationship.”

The development teams had to tap into another challenge of using Large Language Models (LLM) in an offline environment. These algorithms, featuring extensive human-machine dialogue data, require a constant internet connection which isn’t available during outdoor operations. But fear not, as Elbit Systems’ team has found a solution to this predicament. “We’ve ensured that the data our robot requires to function effectively is readily available even offline. That’s what sets our technologies apart,” he explains.

### **Non Human-Like Robots are better mates**

When we envision service robots for task teams, many of us would naturally picture human-like

androids. Surprisingly, research shows that this may not be the best approach. According to Eli, “When soldiers see a humanoid robot on their team, they tend to expect it to have full human abilities, which isn’t the case. So, non-humanoid platforms could be more effective in such tasks, allowing soldiers to better recognize and use their unique strengths. The future of such robotics might lie in embracing diverse forms rather than just mimicking humans”.

In his view, the future of service robots revolves around machines that completely steer away from human-like look. To illustrate this, he draws a comparison between how we treat an iRobot machine versus how we treat a human cleaning aid. “To unleash the full potential of these solutions,” he emphasizes, “human team members must always bear in mind that they are dealing with a robot, even if it can communicate in their language and behave accordingly.”

While certain companies strive to integrate humanoid robots into our daily lives, the scenario shifts drastically when it concerns outdoor tasks. “I firmly believe that we are on the brink of a transformation in this field. In fact, this transformation has already commenced, and there’s no turning back,” asserts Eli. “Our task has always been to ensure that our products added value to our customers and are the best in the market.”



## Sweden orders MBDA's CAMM air defence missile



MBDA is pleased to announce it has signed a contract in Sweden to deliver Common Anti-air Modular Missiles (CAMMs) for the Swedish Armed Forces.

The contract – signed between MBDA and the Swedish Defence Materiel Administration FMV (Swedish: Försvarets materielverk) – will see MBDA supply CAMM for the Royal Swedish Navy's five Visby Class Corvettes, which will deploy them from MBDA's Sea Ceptor naval air defence system.

Sea Ceptor is a latest generation naval air defence system, providing robust self- and local area- air defence against simultaneous attacks, including saturation attacks, across the full 360° threat axis. With a wide target set from supersonic anti-ship missiles to attack helicopters and un-crewed air vehicles, the system has been designed to counter advanced threats.

Eric Beranger, CEO of MBDA, said: "CAMM will provide Sweden and the Royal Swedish Navy with a formidable air defence capability that gives the country a strong new contribution to NATO together with other allied Sea Ceptor users like the Royal Navy from the United Kingdom. We're proud also to be continuing our long history of partnership with Sweden and Swedish industry, including Saab."

MBDA has a long history of partnership with Sweden. This is exemplified within the MBDA-led Meteor missile program where Sweden is a strategic and valued partner nation. Sweden's SAAB is also a member of the joint partnership with MBDA on the TAURUS cruise missile. Co-operation with Sweden also includes AKERON MP.

Sweden joins a growing list of militaries worldwide that have chosen to rely on the CAMM family for latest generation naval and ground-based air defence, including major recent orders from Poland, as well as the UK, Italy, Canada, Brazil, and more.

MBDA is a unique multi-national European group, a world-leader in the field of complex weapon systems, playing a key role in keeping nations safe. Created in the spirit of international co-operation, MBDA and its 14,000+ employees work together to support the national sovereignty of France, Germany, Italy, Spain and the UK, and their allies worldwide. As an accelerator for innovation, MBDA is the only European group capable of designing and manufacturing complex weapons to meet the full range of current and future operational requirements of the three-armed forces (land, sea and air). Airbus (37.5%), BAE Systems (37.5%) and Leonardo (25%) jointly own MBDA.

© photo credit: MBDA







## TDW to significantly ramp up PARM production

MBDA subsidiary TDW GmbH has been awarded a contract to produce and deliver 2,600 PARM to the German Armed Forces. TDW and the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support signed the contract on 14 November 2023, marking the beginning of the procurement.

“TDW provides core competences in the field of anti-access/area-denial systems and warheads. With the procurement, PARM is in the process of returning to serial production, making it the most available, most powerful roadside counter-mobility system on the market” stated Thomas Gottschild, Managing Director MBDA Germany.

“The order intake marks a first milestone of the ramp up of our production capacities. PARM strengthens TDW’s market position as a leading warhead

company in Europe. We are convinced that PARM will help Germany, as well as other nations, develop and expand their area denial capabilities” commented Andreas Seitz, Managing Director of TDW. PARM is a fully automated anti-tank effector that can defeat modern Main Battle Tanks. Its warhead, fuzing mechanism and sensor kit meet the technical and operational demands of today. A single soldier is able to carry PARM and the system requires little training and is combat proven. Through its modular design, PARM can easily be adapted with different sensors and a remote control.

TDW Gesellschaft für verteidigungstechnische Wirksysteme mbH, a wholly owned subsidiary of MBDA Germany, is the leading warhead company in Europe. TDW is experienced in the design and manufacture of warheads and warhead systems including the associated fuzes and safe & arm devices. The available key technologies include insensitive explosive charges with outstanding safety under extreme mechanical and thermal threats which provide nonetheless ultimate destructive performance. Novel technologies are also target adaptive warheads and “intelligent” high shock resistant detonation triggering fuzing systems.

## Dassault Aviation at Dubai Airshow



Dassault Aviation was particularly honored to be taking part in the Dubai Airshow, from November 13 to 17, in the year which celebrates the 50th anniversary of our company's partnership with the United Arab Emirates. Since 1973 and the Mirage 5, Dassault Aviation has been a partner of the United Arab Emirates Armed Forces, which currently operates a fleet of Mirage 2000-9s and ordered 80 Rafales in December 2021.

Dassault Aviation static display featured a Rafale C combat aircraft and a Rafale F4 simulator. The Rafale took part in the flying display every day, presented by the French Air and Space Force, which operates a Rafale detachment deployed at the UAE base of Al Dhafra.

A Falcon 2000LXS business aircraft and a full-scale model of the Falcon 10X cabin was also on display in the static park. The Falcon 2000LXS, with a range of 4,000 nautical miles (7,400 km), is the most efficient and versatile twin-engine aircraft in its class. After successfully evolving into six different versions, today the aircraft numbers nearly 700 deliveries since it was launched. The Falcon 10X, which was presented in 2021, will offer a range of 7,500 nautical miles (13,890 km), enabling it to fly non-stop from the Gulf to any destination in Asia, Australia/New Zealand or the U.S. West Coast.

Its cabin will be even more spacious than some new regional jets. Many Falcon aircraft are operated in the Middle East where the reliability, comfort and flexibility of our business aircraft are much appreciated. Dubai is one of the key points in the Falcon support network. A new maintenance center, managed by our subsidiary ExecuJet MRO Services, opened last summer at the new Al Maktoum airport (DWC), replacing the former facilities located at Dubai international airport (DXB).

With over 10,000 military and civil aircraft (including 2,500 Falcons) delivered in more than 90 countries over the last century, Dassault Aviation has built up expertise recognized worldwide in the design, development, sale and support of all types of aircraft, ranging from the Rafale fighter to the high-end Falcon family of business jets, military drones and space systems. In 2022, Dassault Aviation reported revenues of €6.9 billion. The company has 12,700 employees.

## Croatia, Delivery of the 3<sup>rd</sup> Rafale

The first three guardians of the Croatian sky are owned by the Republic of Croatia, right before the Day of Remembrance of the Victims of Vukovar and Škabrnja, said PPV and Minister Anušić

The handover of the third multipurpose Rafale fighter plane, i.e. the transfer of ownership between the Republic of France and the Republic of Croatia, took place on Friday, November 17, 2023 in France, making Croatia the richer for the first Rafale single-seater. It is the third of 12 Rafale planes, a multi-purpose fighter plane of the 4.5+ generation of the French manufacturer Dassault Aviation, which the Republic of Croatia acquires from the Republic of France for the needs of the Croatian Air Force. So far, Croatia has taken over two two-seater planes.

"This is a big day, first of all for the pilots of the Croatian Air Force and our aviation technicians, and then for the entire Croatian people.

The first three guardians of the Croatian sky are owned by the Republic of Croatia, and this is precisely on the eve of a day that calls us to common national pride and dignity: on the eve of the Day of Remembrance of the Victims of Vukovar and Škabrnja. This is a strong message to the generations to come, and thanks to the knowledge, sacrifice and wisdom of Croatian veterans, we continue to build a modern and powerful defense system," said Deputy Prime Minister and Minister of Defense Ivan Anušić, pointing out that this is one of the indicators of the successful delivery of Rafale to Croatia.

We remind you that the handover of the first Rafale aircraft took place on 2 October 2023, at the French air force base Mont-de-Marsan in France, and the handover of all 12 Rafale aircraft is scheduled for

the following dynamics: at the end of 2023 – four planes, during 2024 – four planes and at the beginning of 2025 – four planes. The gradual delivery of all Rafale aircraft and accompanying equipment to the Republic of Croatia is expected during 2024 and the beginning of 2025.

By introducing the Rafale multi-purpose fighter jet into operational use, the Republic of Croatia maintains its sovereignty in the national airspace, becomes a possible regional guarantor of the airspace security of the countries in the region and sets new standards in equipment.

Also, the current capabilities and potential of the combat component of the Croatian Air Force will be preserved and significantly increased, the overall combat power of the Croatian Army will be significantly increased, but also the long-standing tradition of combat aviation in the Republic of Croatia will be preserved.



The third multi-purpose fighter plane, the first single-seater, Rafale, owned by the Republic of Croatia | Photo: HRZ



**Israel Aerospace Industries salutes the IDF on the successful interception of a long-range ballistic missile by the "Arrow" missile defense system**

Israel Aerospace Industries (IAI) salutes the IDF on the successful interception of a long-range ballistic missile by the "Arrow" missile defense system. The "Arrow" is an advanced air defense system created and designed to intercept ballistic missiles outside of the Earth's atmosphere. The system is developed in collaboration between Israel's "Homa" Directorate within the Ministry of Defense, the U.S. Missile Defense Agency (MDA), and IAI with the involvement of security industries in both Israel and the United States. CEO and President of the IAI, Boaz Levy, said, "The Arrow system, a system developed by IAI in close cooperation with the Ministry of Defense, the U.S. Missile Defense Agency, and the Israeli Air Force, demonstrated today that Israel possesses the most advanced technology for defense against ballistic missiles at various ranges. The "Arrow" missile defense system is a critical component of Israel's multi-layered defense system. IAI's Engineers work closely with the Ministry of Defense and the IDF in full cooperation and support of this system."



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**KRAKEN AND L3HARRIS COLLABORATE FOR USSV INNOVATION**

Kraken Technology Group is pleased to announce an official collaboration with L3Harris Technologies (NYSE: LHX) to advance the integration of control systems within the K40 MANTA prototype. This is a pivotal step in the technical evolution of Kraken's K40 MANTA platform, setting the foundation for the development of enhanced autonomous capabilities and ultimately, full autonomy. The K40 is an uncrewed surface-subsurface (USSV) platform that utilises foils for rapid surface transit before submerging for clandestine manoeuvring. This high-performance vessel requires well-established, cutting-edge control systems and L3Harris possesses the necessary components and expertise required for seamless integration into the K40 MANTA.

These integrated systems will enable the remote control of the uncrewed platform for engineering testing, foil development, powertrain calibration and demonstration before enhancement in later developmental stages.



## IAI and the Space Agency of the Republic of Azerbaijan - Azercosmos, Announce Groundbreaking Agreement on Azersky-2 program

Israel Aerospace Industries (IAI), a world-leading aerospace and defense company and Azercosmos, a pioneering force of Azerbaijan in the space industry, are announcing a cooperation agreement for the sale of two of IAI's cutting-edge multi spectral electro optical satellites, better than 0.5 meter native resolution with a long life span and high imaging performance.

This landmark deal represents a significant step forward in space technology and cooperation between the two companies. Under the terms of the agreement IAI will provide Azercosmos with two satellites within Azersky -2 program, technology and knowledge for the construction and the operation of the satellites. The transaction is expected to bring about exciting developments in the field of satellites technology, opening up new opportunities for both companies to explore. The agreement includes a long term business partnership between IAI and Azercosmos, reflected in the establishment of innovation, entrepreneurship, academic and study ecosystem in the field of space in Azerbaijan over the years. IAI and Azercosmos are committed to a successful implementation of the Azersky-2 program and are looking forward to mutually beneficial cooperation in future space programs.



© IAI

IAI President and CEO, Boaz Levy - "For IAI, the sky is not a limit but merely the starting point for our systems capabilities. Our commitment to innovation and exploration motivates us to partner with the foremost experts in the global space community, as we ambitiously shape the future of space observation together. We are proud to have made significant contributions to this cooperation for Azerbaijan, and we are sure that this collaboration will propel us to new heights."

Azercosmos Chairman of the Board, Samaddin Asadov - "This project is unique for both Azercosmos and Israel Aerospace Industries and will undoubtedly contribute to the development of space cooperation between our countries. I consider our cooperation to be an important step in the development of human capital and space technologies in the country."



# Delivery of the first Gowind® corvette for the United Arab Emirates Navy

The delivery ceremony for the first Gowind® corvette, Bani Yas, ordered by the United Arab Emirates to Naval Group took place on 21 October 2023 in Lorient in the presence of an official delegation from the United Arab Emirates headed by His Highness Sheikh Saeed bin Hamdan al Nahyan, Commander of the UAE Navy.

Bani Yas corvette is the first of the two Gowind® corvettes ordered by the United Arab Emirates to Naval Group in 2019 and built in Lorient, France. Bani Yas corvette was launched in December 2021, left Lorient on 23 October 2023 and is due to arrive in the United Arab Emirates in early December. The second corvette, Al Emarat, launched on 13 May 2022 at Naval Group's Lorient site, will soon be starting her sea trials.

“This day marks a symbolic milestone: the delivery of Bani Yas Gowind® Combat corvette, first unit of this program. Bani Yas and Al Emarat Gowind® Combat corvettes are made to be the best answer to the UAE Naval Forces operational requirements. This program symbolizes our joint commitment to deliver the best and is for sure the first step in a strong cooperation and longterm strategic partnership with the UAE.” said Pierre Eric Pommellet, CEO of Naval Group.

Bani Yas class corvettes benefit from the modular design of the Gowind® family and will enable the UAE Navy to meet current and future challenges with the most advanced technologies. As part of Naval Group's service solutions to meet all the needs of modern navies, the UAE Navy's crew is trained in the operational use of the vessels.

The commercial success of the Gowind® corvette is significant, with 12 units already selected by various navies and most of the ships locally built through technology transfer and partnerships with the local industry.

Gowind® is Naval Group's response to 21st century security and defence challenges. It is a corvette-size multi-mission Surface Combatant offering capabilities in all areas. It is designed to perform the full spectrum of naval defence operations and maritime security roles, with the highest level of performance.

Sturdy, strongly equipped, highly manoeuvrable, Gowind® integrates, through Naval Group's SETIS® Combat Management System (CMS) and innovative structural solutions, the latest generation sensors and weapons. Designed to be used against air, surface or underwater threats from the initial steps of the engineering process, Gowind® is multipurpose by design. Gowind® is a sea proven, enduring, stealth and highly survivable platform offering:

- high performance warfare capabilities integrated through the SETIS® CMS and an efficient and innovative Panoramic Sensors and Intelligence Module (PSIM) ;
- automated systems for user-friendly operations by an optimized crew ;
- large and smart deployable assets (heavy helicopter, UAVs, RHIBs) ;
- growth potential driven by customer requirement and innovation.

© Naval Group

## Technical features

**overall length: 102 m**

**overall beam: 16 m**

**displacement: 2,800 t**



## Launching of the first phase of the European Patrol Corvette project with signature of Modular and Multirole Patrol Corvette contract



© NAVAL GROUP

On the 24th October 2023, with a ceremony held at OCCAR premises in Rome, OCCAR (Organisation for Joint Armament Cooperation) has signed with a Consortium, coordinated by Naviris and gathering together Fincantieri (Italy), Naval Group (France), Navantia (Spain) and other beneficiaries from Greece, Denmark and Norway (\*) all the Modular and Multirole Patrol Corvette (MMPC) contractual documents for the implementation of the first phase of the European Patrol Corvette (EPC) project.

The overall value of this first phase is 87 M€ and is strongly supported by the European Commission (EC) through the European Defence Fund (EDF). Indeed, 60 M€ will be funded by the EC in the form of "grants" while the remaining 27 M€ will be funded by the Member States (Italy, France, Spain, Denmark, Greece and Norway) who decided to support the project. OCCAR will manage the full scope of the project, acting as Granting Authority,

on mandate of the EC, and Contracting Authority, on mandate of the above-mentioned Member States.

On the same day, the Delegates of the companies signed a consortium agreement, whose objective is to rule the execution of the project, maximizing synergies and collaboration among European shipbuilding industries.

With a duration of 24 months, this MMPC first contract aims to provide the initial design of a next generation class of naval vessel, the European Patrol Corvette (EPC), launched in the context of a PESCO project (1). The EPC will include at first two main versions: the Long Range Multipurpose and the Full Combat Multipurpose, both maximizing innovations, synergies and cross-fertilization among three main European shipbuilding architects and manufacturers Naval Group, Fincantieri, Navantia, linked with the operational needs of the different Navies.

The EPC programme represents a step forward in the European defence cooperation. It will strongly contribute to the European sovereignty in the second line vessels domain, by strengthening the European industry, increasing efficiency and lowering delays to go from the military need to the delivery to Navies. By developing together, a new and disruptive class of corvettes, the four companies aim to ensure and foster a European sovereignty based on European "in-

house" skills and know-how. This contract signature highlights the capabilities of the nations, through the management by OCCAR, to work efficiently together and to pool the know-how of their prominent naval industries, for supporting the European navies. It also shows how important and effective can be the EDF, to support the European Member States in the development of defence capabilities made in Europe.

Based on innovative and disruptive technologies, the new class will illustrate a group of smart, innovative, affordable, sustainable, interoperable and flexible vessels designed to meet a wide range of missions in a continuously evolving context. Depending on the requirements specified by each Navy, the ships will be able to carry out a wide range of missions in operational contexts as diverse as surveillance on the high seas with a high degree of autonomy, or law enforcement and sovereignty affirmation missions closer to the coast, adapted to the different Navies needs.

## C-390 MILLENNIUM: The new generation transport aircraft presented to the Hellenic Airforce

### Unbeatable Combination

The C-390 MILLENNIUM is the new generation military multi-mission aircraft that brings unrivaled mobility, high productivity and operation flexibility at low operational costs on a single and unique modern platform.

The C-390 is capable of transporting and launching cargo and troops and performing a wide array of missions including medical evacuation, search and rescue, humanitarian search and rescue, aerial refueling (fighters and helicopters), aerial firefighting and humanitarian assistance.

### Truly multi-mission aircraft

Multi-mission capability to perform more with a single aircraft. This provides air forces with optimal fleet performance generated by a cost-effective combination of high availability and productivity.

### Dual certification approach from beginning

The C-390 MILLENNIUM is undergoing a full military certification process built over a dual certification approach from beginning. This hybrid process combines the efforts of both civil and military airworthiness authorities. This approach ensures the aircraft can safely accomplish all its military missions. The C-390 MILLENNIUM basic platform is being developed and certified by the Brazilian Civil airworthiness authority in accordance with FAA 14 CFR Part 25 standards. The military certification complements the civil certification with military standards, specifications, and criteria in order to cover the military mission accomplishment, military items and systems.

### Advanced cargo handling system

The advanced Cargo Handling System (CHS) provides high flexibility and productivity levels,

merging a modern solution for software-controlled cargo locking with proven cargo handling mechanical solutions. The CHS is designed to be easily and quickly reconfigured for different missions without the need for special tools. The cargo floor can be changed from flat to a roller configuration with the flip-over capability.

### Robustness & flexibility

The cargo floor, an integral part of the C-390 main structure, is designed with the strength to transport heavy-tracked and wheeled vehicles of up to 26,000 kg (57,320 lb). An optimized tie-down grid of rings with 10,000 lb and 25,000 lb of restraint in any direction ensures quick configurations changes and great cargo load flexibility. The CHS features all the necessary accessories to facilitate cargo loading, restraining, and offloading, such as tie-down rings, roller trays, cargo guidance and restraint systems. It is fully compatible with the existing military airlift equipment, such as type V platforms, 463L pallets, A-22 CDS bundles and ground support loaders.

### Aerial refuelling high & low speed

The KC-390 is capable of refuelling both fixed and rotary wing aircraft, operating at speeds from 120 KCAS to 300 KCAS and at altitudes from 2,000 ft to 32,000 ft. The KC-390 MILLENNIUM on-ground refuelling capability can be used to refuel vehicles or forward operating bases.

### Air drop effectiveness & precision

The C-390 MILLENNIUM aerial delivery system provides remote and automatic release of cargo in flight at low and high altitudes. The C-390 MILLENNIUM is capable of: LVAD (Low Velocity Aerial Delivery) type-V platforms (single and multiple) up to 41,887 lb; Aerial delivery of CDS (Container Delivery System) up to 22 skid boards; Low Altitude Parachute Extraction (LAPES) up to 22,046 lb.

### Search & Rescue. The true first responder.

During Search & Rescue missions, every minute counts to save lives. The C-390 MILLENNIUM turbo fan engines provide unmatched speed compared with other aircraft. The C-390 MILLENNIUM can be equipped with a complete set of equipment to

support Search & Rescue missions: Removable Electro-Optical/Infrared pod (EO/IR); Four spotter





positions; Lateral litters and/or crew seats; Removable internal fuel tanks to expand range or time on station.

### **Aeromedical evacuation**

The C-390 MILLENNIUM provides support for ground operations or disaster relief missions transporting wounded survivors or casualties. The C-390 MILLENNIUM can be configured to carry up to 74 litters (STANAG 2040) and 8 additional members, including medical attendants and necessary life supporting equipment.

### **Aerial firefighting**

When equipped with a roll-on-roll-off firefighting system, the C-390 MILLENNIUM is an important aerial resource for firefighters in battling wildfires, dropping water or fire retardants. The C-390 MILLENNIUM fly-by-wire provides outstanding maneuverability at low speed and low altitude to fly over wildfire areas, increasing the mission efficiency.

### **Self-protection suite**

The C-390 MILLENNIUM can be equipped with a complete self-protection suite (SPS) to increase survivability levels. Detection & Countermeasures with 360° coverage: Radar Warning Receiver (RWR), Laser Warning System (LWS), Missile Approach Warning System (MAWS), Chaff & Flare, Directional Infrared Counter Measures (DIRCM). Electro Optics/Infrared Pod; Ballistic Protection (Armor 7.62 mm and 0.50 inch); Enhanced Vision System (EVS); HALO Oxygen Rack.

### **Survivability**

Basic characteristics of C-390 MILLENNIUM design also increase the aircraft survivability level. Key Points: High Speed similar to a fast jet: Mach 0.8; High Altitude: 36,000 ft; Fuel Tanks Inertization: OBIGGS; Redundancy and segregation for critical systems; Night Vision Compatibility; Tactical Radar.

### **Rapid reconfiguration**

Reducing time on the ground and in the air will improve mission success and help saving lives. The C-390 MILLENNIUM can be reconfigured for all missions in 3 hours.

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## thyssenkrupp Marine Systems celebrates start of production for the world's most modern conventional submarines

- German and Norwegian Defence Ministers witness production start of the 212CD programme in Kiel
- 212CD submarines the most advanced conventional submarines worldwide
- German-Norwegian cooperation a pioneering example of European cooperation in the naval industry

thyssenkrupp Marine Systems, world leader in the construction of conventional submarines, today started production in Kiel of the world's most advanced conventional submarines. These boats belong to the Type 212CD for a joint programme with the Norwegian and German navies. The order, placed in July 2021, was the largest in the history of thyssenkrupp Marine Systems to date.

The ceremony to mark the start of construction of the first submarine for the Royal Norwegian Navy took place in the presence of Boris Pistorius, Federal Minister of Defence, and Bjørn Arild Gram, Minister of Defence of Norway, at the production facilities recently opened at the Kiel shipyard. With the newly built shipbuilding hall, thyssenkrupp

Marine Systems is setting global standards in modern submarine construction.

Oliver Burkhard, CEO of thyssenkrupp Marine Systems, emphasized: "Maritime security is gaining importance worldwide and especially in Europe. The 212CD programme is a first decisive milestone for the establishment of state-of-the-art NATO standards in the underwater domain. With the start of construction of the first Norwegian submarine today, we have given the go-ahead and a strong signal for European cooperation. This is where partners meet as equals and jointly develop the most advanced submarines for the challenges of the future."

With the 212CD programme, the navies of two Northern European nations will for the first time use identical submarines in their fleets and benefit from interoperability and shared resources. The order comprises the delivery of two submarines to the German Navy and four to the Royal

Norwegian Navy. Delivery of the first submarine for the Royal

Norwegian Navy is expected for 2029, while delivery of the two boats for the German Navy is scheduled for 2032 and 2034.

Miguel López, CEO of thyssenkrupp AG, said: "The production complex that has been built here in Kiel in just two years is one of the most modern shipbuilding halls in the world. This investment strengthens the Kiel site, thyssenkrupp Marine as a whole, and makes an important contribution to maritime security in turbulent geopolitical times."

The six Type 212CD submarines go beyond the 212A as an entirely new generation. With enhanced situational awareness capabilities, expanded networkability with allied units and a reduced signature, the new submarines not only place new demands on production due to their imposing size, but also require state-of-the-art production lines for the fitting-out with high-tech systems.

In preparation for the order, thyssenkrupp had already initiated investments of around €250 million in 2019. The shipbuilding hall opened at today's ceremony will serve as a new, state-of-the-art production facility at the Kiel shipyard site, where the submarines of the future will be built.

### Technical data of 212CD submarine:

- Displacement (surfaced): ~ 2,500 m<sup>3</sup>
- Length: ~ 74 m
- Beam: ~ 10 m
- Height: ~ 13 m



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## Next-generation simulation solution wins backing from European Commission

- Rheinmetall is leading FEDERATES, a consortium of 32 companies from 14 EU member nations
- The EU has selected FEDERATES for €30 million in funding
- International consortium is to implement a prototype distributed synthetic training solution

Coordinated and led by Rheinmetall, the FEDERATES consortium, which stands for Federated Ecosystem of European Simulation Assets for Training and Decision Support, has been selected by the European Union for €30 million in funding. The European Commission has picked the consortium to implement a prototype service-oriented innovative solution for distributed synthetic training and decision support.

The “distributed synthetic simulation environment” draws on a multitude of different simulation resources which, though spatially separate, are linked in a common network infrastructure. The objective here is to enable joint utilization of the resources of EU member states in a networked digital ecosystem, comparable to NATO’s Modelling and Simulation as a Service (MSaaS) architecture.

For the nations of the EU, distributed simulation and training are important prerequisites for preparing and qualifying their troops as thoroughly as possible

for today’s complex military operations with increasingly sophisticated systems and equipment.

The consortium intends to integrate and jointly use existing resources of member states such as simulators and training systems as well as advanced technologies like artificial intelligence, cloud technologies and virtual reality in simulated environments for ground, sea, air, space and cyberspace operations.

FEDERATES will support the joint procurement and bundling of simulation resources as well as the formation of a new marketplace for corresponding services. This will result in improved availability and shorter construction times, culminating in lower costs, greater access to training and faster development of future solutions.

Comprising 32 companies from 14 EU member states and Norway, FEDERATES stands for robust, comprehensive European cooperation. It encompasses small and medium-sized businesses as well as large corporations, research facilities and universities. FEDERATES relies on their complementary areas of expertise and experience in simulation and training systems as well as integration and cooperation with military users. In its role as coordinator, Rheinmetall Electronics of Germany will support the FEDERATES project as part of a core team, consisting of Thales (France), Leonardo (Italy), Indra Sistemas (Spain) and HM EI (Hungary). It will foster adherence to the technical and contractual obligations between the European Commission and all participating parties.





## **BAE Systems to develop custom microelectronics for next-generation radar, electronic warfare, and communication applications**

The Office of Naval Research (ONR) has awarded BAE Systems' FAST Labs research and development organization a \$5 million contract for the COALESCE (Common-architecture Amplifier for Low-cost, Efficient, SWaP-Constrained Environments) program. In this effort, BAE Systems' FAST Labs, will develop advanced Gallium Nitride (GaN)-based monolithic microwave integrated circuit (MMIC) and module electronics. The program's objective is to develop the world's highest efficiency high power amplifier module in its frequency band. The radiofrequency (RF) modules will then transition to small form factor U.S. Navy payloads, enabling longer range and greater effectiveness in active electronic warfare applications.

"The COALESCE program closes the gap between commercial electronics and customized electronics to meet the Department of Defense's space and power requirements and enable next-generation solutions," said Ben McMahon, technology development manager at BAE Systems' FAST Labs. "Together with the Office of Naval Research, we will deliver these electronic solutions to increase survivability for our warfighters."

BAE Systems will provide capabilities above and beyond what can be found commercially, and its solution is designed specifically for harsh DoD operating environments. The technology's high power and ultra-small form factor will enable next-generation radar, electronic warfare, and communication applications.

MMICs and modules for the program will be fabricated at BAE Systems' Microelectronics Center Foundry in Nashua, New Hampshire. The FAST Labs organization in Merrimack, New Hampshire will work to ensure the technology is relevant across multiple DoD branches, applications, and businesses.

## **UK Ministry of Defence invests £20m in small arms ammunition**

The UK Ministry of Defence (MOD) has placed a new £20 million order with BAE Systems for the supply of additional small arms munitions over the next two years.

The 5.56mm and 7.62mm rounds will be produced at Radway Green, the Company's state of the art manufacturing facility which offers some of the most advanced ammunition production capabilities in the world. The announcement follows the signing of a £410 million order for the supply of vital battlefield munitions to the MOD in September when it exercised an option to increase a £280 million supply order announced in July.

"We are proud to support the UK MOD as a strategic partner for munitions supply. The significant orders we have secured throughout the year has seen our teams increasing production rates, investing in people and new facilities and maximising shift patterns to meet this enhanced demand", said Glynn Plant, Managing Director of Munitions at BAE Systems.

"In an increasingly contested world, it is crucial that our forces are equipped to meet the threats of the future. Through contracts like these, with the best of some of our homegrown industry, we are continuing to ensure that we replenish and equip our forces, supporting jobs right across the UK", said Grant Shapps, UK Secretary of State for Defence.

## The SHERPA APC Police showcased by the Brigade for Research and Intervention (BRI) at Milipol Paris 2023



The intensity of the threats faced by the police forces and internal security is constantly increasing. These risks are becoming more numerous and diverse, including kinetic projectiles, drones, improvised explosives, incendiary projectiles, and even heavy weapons used by well-equipped and aggressive organizations in various regions of the world. SHERPA APC Police used by the Brigade for Research and Intervention (BRI) showcased at Milipol Event. Arqus offers versatile and modular vehicles in its Defense and Security ranges capable of responding to or adapting to any mission.

Among the emblematic vehicles in this range, the SHERPA APC in its Police configuration will be showcased at the Milipol exhibition from November 14 to 17, 2023. Considered as a reference in the armoured 4x4 segment for many years, the SHERPA family has been tested in various terrains and within numerous international armies, including in France, as part of NATO missions, the Middle East, Asia, and Latin America. It is evident that the SHERPA has already proven its worth in diverse contexts, especially where law enforcement and security are national priorities. In the configuration presented at Milipol 2023, the SHERPA APC Police boasts a capacity for up to 10 soldiers, enhanced protection, and very high mobility performance. This SHERPA APC has been deployed, notably within the police units of the Brigade for Research and Intervention (BRI), during the recent riots in France. In a different configuration, the SHERPA assault ladder can be equipped with a ladder reaching up to 8.5 meters using its autonomous ramp. For example, this vehicle was used by the GIGN (National Gendarmerie Intervention Group) during the January 2015 attacks.

During the latest phase of the pursuit initiated after the attack on the Charlie Hebdo headquarters a few days earlier, this vehicle helped dislodge the Kouachi brothers from the printing press in Dammartin-en Goël after several hours of confrontation. Moreover, the SHERPA is capable, thanks to its ladder, of boarding an Airbus A380 in the event of a hostage situation. This ladder is equipped with an advanced protection system, allowing intervention personnel to be as secure as possible. In the context of future sports events which are coming in France and considering the Vigipirate context as well as the increased risk of attacks, the demand for armoured troop transport vehicles (APC) is increasingly significant. The Arqus range offers numerous configurations for such vehicles with protection levels adapted to all interventions.

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