Review for Defence and Security Industry

4/2024 I online I www.msline.cz

The Media Platform of the Defence and Security Industry Association of the Czech Republic

AOBP

STARKOM – A NEW DEVICE FOR EFFECTIVE JAMMING AND ELECTRONIC WARFARE

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Dear readers,

The fourth issue of Review for defence and security industry is coming out at the dusk of a new year. At the time when even Europe is at war. Relatively heavy regional conflicts are unfolding almost everywhere around the globe and the same globe is experiencing unprecedented climate changes, that leads to floods, fires, hurricanes, earthquakes, etc. that we as a human kind have to react to.

Our magazine as well is going through unusual times since the AOBP CR member base has grown rapidly to almost 200 companies. On the basis of that the interest in being presented expanded as well, especially for the new members. We can see that there was a major growth in numbers of companies focused on cybersecurity, crisis management or security consulting, just from the content of Review and that's just another reason why this issue contains of 124 pages.

Publishing house of MS Line and editorial team of Review are beyond grateful, that the president of Czech Republic Petr Pavel honoured us with interview that is now opening our last issue of the year, as well as many other significant figures from security and defence community.

Right here it would be a shame not to mention, that the 14th issue of Security & Defence Technologies Catalogue 2025–2026 is now being released in bright new "coat", for more information visit page 122.

With the end of the year as well in the name of our editorial group and publishing house I would like to give a few thank you to the member companies of AOBP CR, representative Editorial Board, representatives of the Ministry of Foreign Affairs of the CR, MoD of the CR, MoI of the CR, MoIT of the CR, MoJ of the CR, MoF of the CR and to their executive branches for their support of our work and for active participation in the making of our production.

Great deal of thanks goes undoubtedly to the Presidium and the Council of the Directors of the AOBP CR, Management of state material reserves, Brno Trade Fairs, the management of FFF and to many others for excellent cooperation in the year of 2024.

We are honoured, that our publishing house and editorial team could, even by a small bit, contribute to the success of Czech defence and security industry in the form of promotion and support in our home country but also beyond the borders for almost thirty years by now. If you give us the opportunity, we will keep standing by your side, as we always had. In the year 2025 we wish you steady health, peaceful family life and, of course – work achievements.

Dipl. Eng. Miloš Soukup
Editor-in-Chief

FROM THE CONTENT

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Print: Magnus II s. r. o. • Key number: MK ČR E 19352, ISSN 2336-3460 • Not for sale • Cover page: VVÚ Brno, s. p.

INTERVIEW WITH THE PRESIDENT OF THE CZECH REPUBLIC

The Review for the defence and security industry celebrated its 25th anniversary in 2024, marking a quarter of a century of existence, similar to the Czech Republic's membership in NATO. Army General Petr Pavel was a member of the representative editorial board of the Review magazines for many years. Currently, the head of the Presidential Military Office, Major General Ing. Radek Hasala, is a member of this board. Even in this hectic end-of-year period, the President found a moment to give us an interview.

Mr. President, we are curious to know how your almost lifelong experience in the armed forces at various levels, including the highest in NATO, and eventually as the Commander-in-Chief of the Armed Forces of the Czech Republic, has influenced your current presidential position. As a soldier, there was no higher position you could reach.

My long military career brought me order, discipline, respect, and a sense of belonging to the values of the Czech Republic. I gained valuable experiences in both national and international security policy, defence, and diplomacy. My involvement in foreign military missions, operations, and NATO structures showed me how to address crisis and complex security situations with a professional sense of perspective. From 2015 to 2018, I served as Chairman of NATO's Military Committee, leading this complex organizational structure. I always strived for effective communication and negotiations with the individual members of the alliance, which, I must admit, was not always easy, as many members defended and prioritized their national interests. I am therefore very pleased that we are respected members of the alliance, and our professional soldiers have built trust through their abilities and commitment. We are seen as a reliable and capable partner. This is very important for the Czech Republic, as it creates a positive perception of our country in defence and security across the Euro-Atlantic area. This year, we celebrated the 25th anniversary of our accession to the alliance, and for the first time in NATO's 75-year history, the Military Committee Conference (MCC) was held in our country. This is a great achievement and reflects our cohesion and engagement.

Mr. President, you were elected to the highest office in the Czech Republic at a time when there is a real war conflict after many decades, moreover among Slavs. This is also a time when other dangerous conflicts for world peace are escalating, and when our planet is punishing us with floods, hurricanes, tornadoes, and extreme global warming, among other challenges. How do you perceive and evaluate this situation from your perspective?

The security situation is getting worse, with conflicts in Europe, the Middle East, and the Sahel deepening, and there are even signs of a new conflict between China and Taiwan with impacts on global security and the economy.

We are witnessing even greater escalations, and the global security situation is becoming more complicated. We must take defence and our defence capability extremely seriously, as conflicts are far more real now than ever before in the past. Security is our priority, and cooperation between citizens and institutions is necessary. It is important to realize the values on which our state is founded and which are worth defending, because armies win battles, but societies win wars. Climate crises and natural disasters are not only affecting the Czech Republic, but they threaten the whole world. Therefore, we must unite, rely on our own resources and capabilities, and, above all, stay together as we saw, for example, during this year's floods. The dedication, willingness, and solidarity to help were admirable. It is true that nothing in today's world is easy, and overcoming obstacles is our path. Therefore, I believe that international institutions like the UN, EU, and OSCE should be reformed to reflect the changes in the current very turbulent environment. Countries, regions, and continents that are not yet adequately represented in these organizations should have the opportunity to contribute to joint geopolitical direction, because crises and conflicts, which are more interconnected today than ever, cannot be solved in isolation. Cooperation and solidarity are key to success.

Your life has largely unfolded in a world of military order, organization, and adherence to what is ordered, or even what you ordered yourself. How have you been able to adapt to the other issues stemming from democracy, where everyone speaks to everyone and everything, where everyone criticizes everyone and everything, and where everyone thinks they can speak about everything, which is further amplified by social networks?

I dedicated my military career to serving my country, and it is clear that the military environment is different from the civilian one. As a soldier, I operated within clearly defined responsibilities, decision-making powers, and respect. Everything had its order, purpose, and meaning. After completing my military career, I did not remain indifferent to what the future of the Czech Republic would look like, and how it would be for us and future generations. I decided I wanted to continue serving my country as I had all my life. Order and peace are what we need. Everyone has the right to express their opinions in our democratic system, but excessive and unjustified

criticism can be destructive and chaotic. A good example is the flood crisis this autumn. Most citizens relied on traditional media, which, unlike social networks, provided real, truthful, and reliable information, which significantly strengthened our cohesion. However, it was striking to see people going the opposite direction, spreading lies and half-truths, unnecessarily weakening our society. It is important to maintain balance, seek compromises, and always act with respect. This is our path, where order, peace, cohesion, and mutual support and respect are values on which our society is built.

Mr. President, how do you currently perceive the government's (financial) support for security forces such as the Police, Prison Service, and Customs Administration of the Czech Republic in ensuring the internal security of the state? Is it sufficient?

We are witnessing how quickly the international security situation can dramatically change and affect the lives of entire societies. We must therefore strengthen national security primarily with our own forces, which requires a well-functioning and stable economy capable of supporting the security forces. Investments must be long-term and economically sustainable, and they must be seen across the political spectrum not only as strengthening power but also as a tool for strategic stability, maintaining internal order, and ensuring state security. Although expenditures are increasing, the financial resources available for new technologies, modernization, and development projects are still insufficient, as new crises and threats continue to emerge. When security forces are better equipped, they will be better prepared. However, we must not overlook the financial strengthening of personnel, as the individual units are aging and facing high turnover rates, resulting in a shortage of staff. The lack of personnel can negatively impact and reduce the ability to effectively address threats and complex geopolitical challenges. Human resources are key to success, so professional personnel must be well-trained, financially rewarded, and motivated.

Throughout your career, you have encountered both successes and failures, problems, and sometimes even the shortcomings of the Czech defence and security industry. After your long experience, how do you perceive and evaluate the capabilities and potential of our industry in this field today?

In recent years, we have witnessed rapid technological development and changes in the

security environment. Cyber threats, hybrid wars, and global conflicts force us to reconsider our strategies and approaches. It is crucial that we collaborate at the international level and share innovative methods and knowledge. The current situation is clear evidence that in unity, mutual support, preparedness, and solidarity, there is strength that will provide strategic guarantees for our national security and long-term economic prosperity. From this perspective, supporting the domestic defence industry is key; what can be purchased domestically should be purchased domestically. Many Czech companies are among the leading producers of technologies and products for national security and defence, capable of producing what cannot be made elsewhere. The Czech defence industry has great potential, based on a strong historical foundation, and represents the cornerstone of the state's security structure, and thus a key component of our defence capability. Global developments in defence and security industries show that self-sufficiency in domestic production allows for effective state preparedness for crisis situations.

Mr. President, our final question concerns your future plans. What would you like to convey to the Czech defence and security industry and our readers from the professional portfolio, and what would you like to change or contribute to the satisfaction of the older and middle generations and the prosperity and prospects of the emerging generation of the Czech nation?

For the Czech Republic, I want to be a good president. I would like our society to be strong, educated, economically stable, with a developed infrastructure and industry. I would like us to be proud not only of the Czech defence and security industry, which is innovative and capable of adapting to new challenges, but also of the whole society that stands together, helps in times of need, is tolerant, and supports all generations. The responsible approach of all citizens is the foundation of prosperity, freedom, and security for future generations.

Mr. President, thank you not only for the interview but also for your many years of support of our media activities.

Interview by Miloš Soukup

Photo by: Office of the President of the Republic and Ondřej Charvát

EXCLUSIVELY WITH KRISTÝNA HELM

"Banks must change their approach: defence industry is strategic, not toxic."

Dr. Kristýna Helm, Vice President and Deputy Executive Director of AOBP

The Czech defence and security industry is on the rise, strengthening its position in global markets. Nevertheless, it continues to face challenges in accessing financing and banking services. Kristýna Helm, Vice President of the Czech Defence and Security Industry Association (AOBP), explains in this interview why it is crucial to change the perception of the defence sector, what current trends are shaping the Czech defence industry, and what steps the AOBP is taking to support its members.

Let's start by reflecting on 2024. What kind of year was it for the Czech defence industry?

It was a very successful yet extremely challenging year. The challenging part primarily involved the ongoing pressure on production capacities and the speed of deliveries, not only to Ukraine. Many Czech companies increased production and responded to the growing demand with maximum effort. However, issues with access to banking services persisted.

2024 also brought numerous significant and successful acquisitions. The traditional small-calibre ammunition manufacturer Sellier & Bellot returned to Czech ownership by becoming part of the COLT CZ Group. Towards the end of the year, Czechoslovak Group achieved the largest acquisition in the modern history of the Czech defence and security industry, acquiring the American ammunition manufacturer Kinetic for $2.2 billion. This acquisition made CSG the largest producer of small-calibre ammunition in the Western world.

What did this mean for the Defence and Security Industry Association (AOBP)?

Our membership base expanded by 34 new companies during the year, surpassing 200 members. To put it into perspective, this is double the number of members we had seven years ago. We have also responded to this growth by strengthening our team and redistributing responsibilities to better address the diverse needs of our members.

Throughout the year, we participated in organising several international events and exhibitions. We worked intensively on raising awareness of opportunities for involvement in the European Defence Fund and NATO activities, such as NIAG, STO, and the new accelerator DIANA. Additionally, we addressed several pressing issues that trouble the Czech defence industry.

Such as?

One of the most important topics was access to banking services for the defence industry. We dedicated significant efforts to this matter throughout the year, engaging in numerous discussions within the Czech Republic, particularly through cooperation with the Ministry of Defence and the Czech Export Bank. Progress was also made at the European level, where this issue initially arose due to the interpretation of ESG taxonomy. Given my extensive focus and involvement in this topic, I was invited to speak on behalf of the European defence industry at the ‚EU Defence Industrial Investment Forum' held on 27 November 2024 in Brussels.

What was the purpose of this event?

The main goal was to bring all key stakeholders to the table for the first time in this format. These stakeholders included representatives from the financial sector, European

Interview for the World of Finance Prima CNN program about the Czech defence industry

governments, the defence industry, and European institutions—essentially everyone affected by this issue who must collaborate to find a solution quickly.

My contribution was prepared in collaboration with the European Commission and the European Defence Agency, emphasizing the importance of speaking openly about the current situation, as I was the only defence industry representative on the panel. The event, held at the Madou Plaza Tower in Brussels, was attended by 250 participants—half in person and half online. The names of the speakers were not disclosed beforehand due to the reluctance of banking sector representatives to associate publicly with the defence industry. I only learned who would join me in the discussion upon arriving at the event.

Who joined you on the panel?

I participated in a discussion with representatives of the European Investment Bank (EIB), Sweden's SEB bank, the Nordic Investment Bank (NIB), and Tikehau Capital. Their attitudes towards the defence industry were quite varied.

The EIB is a critical player as it sets a precedent for other European investment banks, such as the NIB. While the EIB has been historically restrictive, it is beginning to loosen its policies. It has established a dedicated department for the defence sector and is gradually starting to invest in dual-use technologies. However, it still prohibits investments directly into the defence sector if it involves weapons or explosives or if the primary customer is a state entity like the military or police.

This seems contradictory, given that Europe is pursuing numerous initiatives to support Ukraine and the defence industry.

Exactly. We have the European Defence Fund, the newly established European Defence Industrial Strategy (EDIS), the European Defence Industrial Programme (EDIP), and the Defence Equity Fund. Yet, the EIB still imposes restrictions on purely defence-related technologies.

This paradoxical situation has been ongoing for over five years. When I speak about this publicly, the audience typically splits into two groups—half nods in agreement because they understand the issue, while the other half looks at me as if I'm making it up. For those who have never heard about it, it is hard to believe that something so absurd could be true, especially in the context of the war in Ukraine. I recall a meeting of NATO's Science and Technology Organization (STO) two years ago when I raised this issue. During the break, an American colleague asked if I could explain it to him again. He couldn't comprehend how something like this could happen. He added that such a situation would never occur in the United States.

What was your main message at the European Defence Industrial Investment Forum?

I needed to explain to the participants, particularly those from the financial sector, why the defence industry should not be seen as risky or toxic capital and why it holds a unique position, distinct from a ‚normal' industrial sector. By its very nature, the defence industry holds a special position—we manufacture weapons and explosives, which are not ordinary goods. We are one of the most heavily regulated sectors, both in terms of production and trade. Our customers are governments, and we often cannot publicly disclose which governments we collaborate with, let alone include such information in reports to banks. These contracts are often classified.

The defence industry is a strategic sector—if a state of war or a wartime economy were to arise, it would be prioritised. Everything regarding budget, resource allocation, and workforce would primarily go to our sector. We do not need to explain sustainability in the same way as other sectors because we are key to maintaining sustainability on the European continent. Without security, there is no sustainability.

Do Czech companies face similar banking challenges?

Unfortunately, yes, and significantly so. A survey conducted last year revealed that the situation is worsening. Large companies face challenges but are reluctant to speak about them publicly due to the potential negative impact on their stock prices and market position. These companies usually manage to find a cooperating financial institution eventually, but the process consumes a lot of time, resources and energy.

Small and medium-sized enterprises (SMEs) are in much worse position—some banks even refuse to open a basic business account for them if their business activities involve anything related to military material. There are also issues with loans, pre-financing, and investments. In extreme cases, banks had denied transactions for the sale of military

EU Defence Industrial Investment Forum in Brussels

equipment with all the necessary licences, even when the end-user was Ukraine. This is a serious issue, and banks must start acting responsibly as partners, not adversaries. After all, we are talking about the defence capability of the European continent.

You mentioned that AOBP's membership base is growing rapidly. Can you characterise what types of companies are joining AOBP?

The spectrum is quite diverse, but if I were to highlight one interesting trend, it would be the number of companies that traditionally supply solutions to the civilian market and are now seeing potential in the defence industry. However, getting started is often very challenging for these companies—they struggle to navigate our complex and closed ecosystem. They frequently come with the same questions when seeking consultations.

What do they ask?

They often ask whether their solutions are truly applicable to specific customers, such as the armed forces. They inquire about how they can offer their solutions, who to communicate with, and which markets to focus on. One of the biggest challenges is understanding how the acquisition process works, how to connect with strategic partners, or how to obtain feedback from potential customers during the development phase.

In recent years, many new opportunities have opened within the European Union and NATO, with numerous new initiatives, incubators, and funds being established. It is very difficult for companies to navigate this landscape and determine where it is worth investing their time and energy.

That's quite a wide range of questions. Can they get help?

Absolutely. Within our capacity at AOBP, we strive to provide individual consultations to these companies and connect them with relevant contacts. However, the truth is that over the years, as I've worked with companies in the defence, dual-use, or civilian solution sectors, I've been repeatedly answering the same questions. This led me to reflect on the need to have all this information in one place.

As a result, I developed an international training programme, *Understanding Defence—a Business Perspective*, in collaboration with the University of Economics in Prague and their Executive Academy.

That sounds interesting. Is this course intended for professionals?

Yes, primarily. It is designed for professionals working in defence and security or for those who wish to enter this complex sector. The course is fully online, conducted in English, and not tied to any specific type of study at the University of Economics in Prague (VŠE). Anyone interested in this topic can enrol.

The course offers participants access to pre-recorded, well-prepared videos that go straight to the heart of the issues. It is highly practical—participants work on preparing a case study based on a real-world scenario, which they can immediately apply in their practice. In addition to my contributions, the course features experienced experts from the international field who provide supplementary online lectures and are available for consultations.

The pilot session in 2024 was attended by 25 participants from 14 countries representing both large and small companies, government bodies, and international organisations. The feedback was very positive. Starting in 2025, the course will run commercially twice a year. Through this collaboration, AOBP has become a partner of VŠE within the Facility Learning Network, and employees of AOBP member companies can receive a 20% discount on the course fee.

What else can AOBP members look forward to in 2025?

We are co-organising many important events. Several industrial days will take place, aiming to showcase Czech defence industry companies to major players in the sector and integrate them into global supply chains. In collaboration with the Ministry of Defence, the Ministry of Industry and Trade, and the Ministry of Foreign Affairs, we will again organise a series of international exhibitions and business missions.

The IDET, ISET, and PYROS fairs will take place in Brno, where we expect numerous foreign delegations. Additionally, our members can continue to benefit from AOBP's educational projects offering soft and management skills, language courses and IT specialised programmes. These courses go through the national funding and therefore are free for employees of AOBP members.

We also strongly encourage our members to promote their activities on our media platform, *Review for the Defence and Security Industry*. This Czech-English quarterly strengthens communication between government representatives and the defence industry and serves as an excellent source of up-to-date professional information.

Last, but not least, we are preparing a new multifunctional AOBP website that will be launched in 2025. It will provide members and visitors with user-friendly environment ensuring better access to the wide range of AOBP activities.

Miloš Soukup thanked for the interesting and, in this case, extremely topical interview.

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With new threats and changes in the security environment, the Armed Forces must deal with increasing demands. This applies not only to command and control or armaments and equipment modernization but also to qualitative changes in the area of logistics. Therefore, we asked the Director of the Logistics Division of the Ministry of Defence of the Czech Republic, Major General Robert Bielený, Ph.D., MSS for an interview to outline the role of logistics in the Czech Armed Forces for our readers and share interesting topics and new trends in this field.

General, since finishing your studies at the Military Academy in Brno in 1991, you have served in many posts in the Czech Armed Forces, international military missions, and NATO. Can you share with our readers which of these postings bring back the most and the least pleasant memories and which benefited you most?

Since 1991, I have indeed held many posts in the Czech Armed Forces – both command and, much to my benefit, staff assignments. The most valuable experience for me was the position of battalion commander and also the position of the Chief of the Engineer Corps of the Czech Armed Forces on the strategic level of the General Staff. I do not have any bad memories regarding other positions I held in the Czech Republic, abroad, or in NATO. All the positions I have occupied had a positive impact on my professional growth and expertise.

It was the position of the standalone battalion commander, statutory commander, in which I gained a lot of practical skills. Management and acquisition of property and personal responsibility for the careers, leadership, and professional growth of my subordinates, these were the main skills I had to develop. As soon as I picked it up after a few months, I started to enjoy such a responsible post.

As the Chief of the Engineer Corps of the Czech Armed Forces, I was responsible for the long-term development of the Engineer Corps in all fields, not only from the materiel point of view. Anyway, back then I already had a significant scope of knowledge gained especially while serving on foreign operations and in NATO. That was a great advantage. I have always followed the principles I learnt from my predecessors. I have never tried to bite off more than I could chew. The point is to set a few priorities and focus on them. Nothing will change in

a year and ten things cannot be changed in three years. This is a principle I would recommend every leader to follow. If you bite off too much, you might choke.

The current position of the Director Logistics Division of the Czech Armed Forces is an honour it and fulfils me professionally. I like solving conundrums and I try to learn from my subordinates as much as I can and, at the same time, offer them solutions which they, being logisticians, simply cannot see. I am happy to see when they get excited about such solutions. I think it is very rewarding for both sides.

Can you briefly characterize the Logistics Division of the Ministry of Defence, its main tasks and responsibilities?

Logisticians are specialists who are "invisible" and sometimes it seems that they are overlooked if everything combat units need is taken care of. However, it has been proved, both in the past and in the present, that lost battles and wars speak volumes about the importance of logistics for the outcome of the warfighting. It is therefore necessary to build a robust logistic system, especially for future operations, which will perform tasks based on professional services staffed by professionally and linguistically skilled, motivated, and stabilized logistic personnel in appropriate strength and with ranks corresponding to their education and scope of expert tasks they perform. To ensure sustainable development of capabilities and to maintain the level of commitments within NATO, the most important step is to implement the tasks from the strategy of the development of logistics in day-to-day life. The rearmament of the Armed Forces is a challenge, especially the acquisitions of modern military equipment since the Armed Forces broadly use sophisticated technologies and therefore, in comparison with the past, cannot strive to manage the whole life cycle including overhauls. Regarding newly acquired equipment; it is necessary to ensure higher levels of maintenance via service contracts with commercial suppliers including the provision of these services and material resources in crises. Hand in hand with the planned reaching of operational capabilities goes the training of personnel so that they are able to provide basic levels of maintenance. This requires appropriate knowledge of technical English. It is also necessary to build a high-quality system of professional development and training.

What is the role of the Logistics Agency? Can you outline its main tasks?

The mission of the Logistics Agency is to generate and maintain stocks of property in support of selected forces and assets of the Czech Armed Forces and participate in the setting of a functional system of operation, maintenance, and repair of military materiel for strategic and important projects resulting from the modernization of the MoD. It therefore ensures day-to-day rear operations of the Armed Forces which includes a broad range of activities, from basic equipment such as uniforms, weapons, ammunition, or provision of special materiel for Allied and international operations.

Logistic work is also about the planning and acquisitions of small to large materiel which we have to take over, register, store, and later distribute. Military logisticians manage government property within the MoD, hand out materiel to all units and installations, take over surplus property, and dispose it or sell it outside of the MoD. This kind of work requires an unimaginable amount of paperwork related to property management procedures and the acquisition or disposal of property. Every individual item must go through this process, and it does not matter whether it is a screw, cartridge, or an armoured vehicle.

All this is possible thanks to the invaluable endeavour of the people working in the Logistics Agency. That is why it brings together experts from various fields such as technology, ammunition, armaments services, metrology, and expert technical supervision. Further, they work petroleum, oil and lubricant services, personal equipment, provisioning and lodging services. We work with experts on fire prevention and environmental protection, air service, military transportation, and occupational health and safety as well. Each specialization brings unique know-how, which together creates a comprehensive support network. Thanks to the dedication and professionalism of all members of the Logistics Agency, the Armed Forces can fulfil their tasks and be prepared for all challenges, whether on the home front or on deployed operations.

Apart from that, it ensures the support, planning, and coordination of military transport and movements in the Czech Republic or abroad, which is checked 24/7/365 by a standing control centre which tracks all ground and air movements.

Thanks to the currently forming Host Nation Support Battalion in Rakovník and its capabilities, we can provide the HNS. The battalion is now able to provide a Convoy Support Centre in the territory of the Czech Republic and abroad for NATO, EU, and UN forces, or a Staging Area and other kinds of logistic support, which was proved in this year's exercise Strong Pegasus in cooperation with the German Armed Forces at the airport in Bochoř.

The Logistics Agency is comprehensive, flexible, and ready to handle any task related to the support of the Armed Forces in peace, crisis, or war.

Our editorial staff regularly participates in the CIHELNA event in the town of Králíky, where the Czech Armed Forces always present both a dynamic and a static display, including a Gripen flypast. For the past two years, you were in charge of the Czech Armed Forces' outreach in this event. Can you elaborate on that?

CIHELNA is one of the largest public events of the Czech Armed Forces. We have participated in it since 1993 and I am proud that we uphold this tradition. However, CIHELNA is not merely an event dedicated to the present-day Armed Forces. It is an opportunity to commemorate our military past which shaped the Armed Forces since its birth. This year, we will celebrate the event's 25th anniversary and I am truly glad that the Czech Armed Forces are a part of it. I believe we will uphold this tradition in the years to come.

The Czech Armed Forces is a regular participant of the event which joins together fans of military history, equipment and arms. This year, we have introduced a new dynamic display prepared by the Logistics Agency, the Regional Military Transport Centres and the Host Nation Support Battalion Rakovník. The display includes an assault on a Movement Control Team convoy. The abovementioned transportation units play a key role in the movement of both our Armed Forces and that of our Allied partners. The display illustrated their ability to provide a safe movement of convoys which is a key capability in real life operations.

This year was also the first time we introduced to the visitors a display named "Czech Armed Forces tanks then and now" which introduced historical and current tanks T-34, T-54, T-72 and Leopard 2A4. But the military presented more than just that. For the very first time, CIHELNA introduced the Titus 6x6 wheeled armoured mobility vehicle, Tatra 815-7 PRAM with a 120mm mortar and other wheeled and tracked equipment, as well as the JAS-39 Gripen aircraft, as mentioned. The event is planned a year in advance and its smooth course is the result of significant effort and coordination by all participating units.

It is also important to point out the legacy of the CIHELNA event. The Czech Armed Forces have participated in this event since 1993 when it took place under the name Bouda near the Bouda artillery fortification. I highly appreciate that we honour the legacy, showing respect to our military history and the region of Králíky characterized by many fortifications. This project not only strengthens the cooperation between the Armed Forces, the integrated rescue system services, the town of Králíky, and the Pardubice region, but also connects current generations with our heroic past embodied by this region.

You have served as the Director of the Logistics Division of the Ministry of Defence of the Czech Republic for the past two years. What changes have you noticed in the field of logistics during this time?

The first thing that comes to mind is the increased tempo of modernization, as the management was able to secure more resources. When I took office, I set three priorities to my subordinates in terms of equipment – buses, low-loaders and trucks.

In the past two years, we managed to finalize several modernization projects which will enable the Czech Armed Forces to be an increasingly capable and reliable partner to the Alliance's collective defence. The most significant projects include the renewal of old equipment and property, such as the series 7 of the Tatra 815 vehicle which progressively replaces the older series of Tatra 815 with a 6x6 and 8x8 configuration and average length of service 34 years. Other priority projects include the replacement of the UAZ with Land Rover Toyota Hilux vehicles. Another

project seeks to rearm of units with new types of small arms. The new mobile POKA 5 field kitchen which meets the current sanitary norms and uses the most modern technology for the preparation of food was successfully developed and fielded. The kitchen is designed for combat units in all types of situations and weather. New Individual Meals Ready to Eat (IMRE) have also been prepared. Based on authorisation of the Czech Government, cooperation was established between the Czech Armed Forces, the State Material Reserves Administration and the Integrated Emergency System for the procurement of IMRE for the Czech Armed Forces, the IES and Czech citizens.

I would also like to mention a significant increase of flexibility and response time. We always strive to accelerate the acquisition of materiel and equipment to be able to meet the increasing requirements of the Armed Forces. Such progress would not be possible without a close cooperation with both the Czech defence industry and international partners within NATO.

To sum it up, we have achieved progress in the past two years which reflects in an increased effectiveness of logistics, be it in everyday activity or in crisis management. We focus our effort on meeting the requirements of a modern Armed Forces and providing support to both our forces and Allies within multinational operations.

In the current warfare, logistic support plays a key and often decisive role. Can you briefly describe how the modernization of equipment and armament changed the field of logistics?

Logistics is vital for the Armed Forces and anyone who says otherwise is an outsider. Effective logistic support is the cornerstone of success of any military operation. Poor logistics can negatively impact the course and result of an operation and can also lead to failure to deter the adversary. We have seen it during the conflict in Ukraine, where logistic shortfalls have often influenced the capability of forces to perform their tasks and react to the rapidly evolving situation in the battlefield. It is therefore vital that logistics is continuously updated and modernised, which allows the Armed Forces to react flexibly and effectively to any challenge.

The acquisition of new advanced technology requires a higher specialisation of logistic processes which provide not only transportation and storing, but also planned maintenance, repair and provision of equipment in the field. Modern equipment often requires specific spares and facilities, which in turn necessitates extensive infrastructure and well-equipped maintenance facilities. We focus on this issue in the long-term horizon and invest actively into the development of logistical systems and infrastructure to ensure that our forces have the necessary provisions at their disposal, be it at home or abroad. That is why we planned the building of new storage capacities for personal equipment such as the storage hall in Olomouc-Bystrovany, central depot of lubricants in Jaroměř and other modern ammunition facilities.

Practically speaking, there are several examples of modernised equipment which is currently being introduced or will be introduced. One of the most significant examples is the fielding of the H1 helicopter which replaces the current Mi-35/24V helicopters and significantly improves operational capabilities.

Another important project is the acquisition of twenty-four F-35 aircraft which are to arrive between 2029 and 2035. This step will significantly increase the Czech Republic's defence capability.

Within the modernization of the Land Forces, we are preparing for the delivery of 246 infantry fighting vehicles CV90 in several variants until 2030. The modernised vehicles will provide a higher levels of force protection and mobility.

These modernization projects are the result of the efforts of Logistics Division and Logistics Agency who work together with other stakeholders to ensure that all processes from acquisition to logistic support and servicing are effective and in accordance with our strategic objectives.

General, logistics is a very broad and diverse field. How would you evaluate your cooperation with the Czech defence and

security industry, and can you give us some examples?

In logistics, we always aim to link the Armed Forces' requirements with corresponding defence industry capacities, which brings strategic benefits for the economy.

One of the main goals of the cooperation is to support Czech production potential, which is a logical step. In the field of personal equipment and armaments for example, we cooperate with Czech manufacturers which allows us to provide high-quality accessible equipment not only in peacetime but also in potential crisis. The Czech industry also participated in the manufacturing of uniforms, boots, ballistic protection or the development of new generation weapons and ammunition which meet current and future NATO standards as well as the requirements of our service personnel.

Another significant segment is the maintenance and modernization of combat and transport equipment. Czech technical organisations have long-standing experience with maintenance and modernization of armoured vehicles and other equipment. Thanks to this, we are able to operate some of it at a higher effectiveness which helps support capabilities of the domestic industry and shortens lead times.

We also cooperate with Czech state enterprises on innovation and development of new technologies, such as communication technology in which Czech companies develop modern solutions integrated into our operational capacities, such as the TITUS vehicle. These technologies are vital not only for our defence but also for better interoperability within NATO.

Such cooperation strengthens our security and increases our independence of foreign suppliers, which is absolutely key for any country. Czech Armed Forces can therefore rely on the Czech industry for reliable resources of equipment and servicing.

By the way of conclusion, can you tell me something about the missions and cooperation within the North Atlantic Alliance of which we have been a member for the past 25 years?

Thank you for the question. The role and tasks of the Czech Armed Forces within NATO are especially crucial this year, when we celebrate 25 years of our membership. Our participation in NATO is a symbol of a strong partnership in collective defence, sharing of resources and knowledge, as well as of a lasting commitment to shared values such as security, stability and peace in Europe and in the world.

This is shown in several critical fields. The Czech Armed Forces regularly deploy its service members for international operations, supporting security and stability, especially in NATO's Eastern Flank. We provide professional academic training, training and logistic support for Czech and Allied units. One of the examples is the above-mentioned Host Nation Support Battalion which plays a key role in the Host Nation Support – providing support to Allied forces transiting the Czech Republic and staying in its territory for several hours before continuing to the front of NATO's Eastern Flank. The battalion is a key element in providing movement and billeting for Allied forces and their transit across the Czech territory. This includes specifically the provision of basic necessities such as food, drinking water, rest and parking spaces for military equipment, minor maintenance, if necessary, and fuel.

We share with our NATO partners new technologies and processes, which allows us to be well prepared for current but also future threats. Thanks to these tasks and cooperation, we are an integral part of complex defence offered by the Alliance to its members. The Czech Armed Forces contribute on day-to-day basis both to the defence of the Czech Republic and to NATO's collective security.

by Miloš Soukup
Photos by the Czech Armed Forces

ABNER a. s.: A LEADER IN STAINLESS STEEL PRODUCTS WITH TRADITION AND VISION

Based in Moravská Třebová, ABNER a. s. has been a prominent player in the stainless steel products industry since 1993. The company has established itself as a reliable supplier for the gastronomy and maritime industries. Its portfolio expanded significantly with the acquisition of the traditional brand Toner, renowned for its quality cutlery and with a history dating back to 1883. This merger, which took place in January 2024, has opened up new opportunities for Abner and strengthened its position in the market.

Focus on Quality and Innovation

ABNER a. s. primarily focuses on equipment for the gastronomy sector, producing a wide range of products including stainless steel furniture, transport trolleys, and serving counters. Their transport systems feature both active and passive tray systems, ensuring safe and efficient food handling within food service operations, hospitals, and care homes. The company is certified to the EN ISO 9001 standard, underscoring its commitment to quality.

A significant part of **ABNER a. s. 's** portfolio is its custom manufacturing for the maritime industry. The company supplies products to renowned shipbuilders such as Meyer Werft GmbH and Almaco Group, who value the high quality, durability, and reliability of ABNER's stainless steel products, designed to withstand the demanding conditions at sea.

Expansion Plans Abroad

In 2025, **ABNER a. s.** is set to embark on an extensive expansion into new markets, primarily targeting Poland, Hungary, the United Kingdom, and potentially Switzerland. In these countries, ABNER aims to establish itself as a leading supplier of stainless steel products, focusing on the gastronomy, shipbuilding, and modern urban furniture sectors – a segment where the company sees significant growth potential. This expansion will also include a new production line dedicated to luxury and aesthetically appealing urban furniture, bringing modern and elegant solutions to urban spaces.

Future Vision

ABNER a. s. aims for steady growth in the stainless steel sector, with a goal of increasing annual revenue by 15 %. Achieving this target would see the company triple its current size by 2035, in line with its other production division, which manufactures CO_2 and N_2 pressure cartridges used as propellants in fire extinguishers. In this area, **ABNER a. s.** ranks among the world's largest and most prominent players. This long-term plan reflects the company's stability and progressive vision,

positioning it as a leader not only in the Czech market but also internationally.

With a commitment to quality, innovation, and development, **ABNER a. s.** looks forward to a future filled with new challenges and opportunities. The company plans to continue building on its extensive experience, while also investing in modern technologies and expanding into new markets, serving as an inspiration to other Czech industrial enterprises.

Jaroslav Míka

DEVELOPMENT OF THE AIR FORCES OF THE ARMY OF THE CZECH REPUBLIC

The Air Force represents the combat power of our Army, whose primary operational domain is airspace. Today, however, the effects and environments between the components are intertwined. Where a decade ago there were defined lines of authority between the Air Force, ground forces, and other components, today those imaginary walls are gradually blurring. The goal of developing not only the Air Force, but the entire Army, the Armed Forces, and indeed the nation as a whole, must be to achieve synchronization of operations across domains to achieve the necessary effect to meet strategic objectives. At present, updates of the concepts of development of individual types of forces are being created in connection with the strategic documents Concept of the Construction of the Army of the Czech Republic 2035 (KVAČR 2035) and Vision of the Future Warfare of the Czech Armed Forces after 2040. While the KVAČR 2035 is more tied to economic parameters, the current construction of NATO capabilities and already contracted investments. The Vision for Future Warfare defines the long-term direction and trends in building the capabilities of the SAF. It is obvious not only for the Army, but also for NATO, that without the integration of individual domains in a multi-domain operation, the development of capabilities isolated to individual troop types and specific platforms will be an unnecessary waste of resources and effort. The purpose of this article is to inform the reader about the development of our Air Force capabilities, so after an initial framing of the development of the Air Force as a whole, let's focus in that direction one Air Force domain at a time.

Tactical Air Force

The modernization of the Tactical Air Force of the Czech Armed Forces is crucial to ensure the security of the country and the fulfilment of defence commitments within NATO. The main pillars of this process are the newly acquired F-35A aircraft and the ongoing modernisation programmes of the existing JAS-39 Gripen and L-159 ALCA aircraft. In order to support the operation of all tactical air force platforms, a parallel build-up of fixed infrastructure at the air bases is also underway.

The 5th generation platforms are capable of conducting a wide range of missions including air combat, reconnaissance or strike against ground targets using stealth technologies and advanced sensors. The contract for the acquisition of 24 F-35A fighter aircraft was signed earlier this year, with the first aircraft expected to be in service with Czech pilots as early as 2029. The scale of the steps required to implement it in the Czech Armed Forces environment makes this acquisition far superior to any project to date. In fact, it is a comprehensive introduction of the entire weapon system with an overlap far beyond the VzS. A dedicated integrated team is working on this complex task. In addition to a major boost to combat capability, the F-35A also represents a significant enhancement of tactical air interoperability within NATO.

In the bridge period to the full introduction of the F-35, the tactical air force will rely on the proven JAS-39 Gripen, which is expected to operate until 2035. A contract with the Government of the Kingdom of Sweden is being prepared which, in addition to extending the existing contract, also provides for the installation of improved avionics systems, radar modifications or the implementation of new armament to maintain the operational relevance of this fleet.

The L-159 ALCA aircraft are another element of the tactical air force's modernization. These aircraft represent an important part of the training programme of Czech pilots. Therefore, modifications to the advanced on-board

equipment are necessary to maintain operational capability in the coming period.

Helicopter aviation

The Mi-171Š helicopters are currently being modernised by LOM PRAHA s. p. The modernisation concerns the replacement of obsolete communication and instrumentation equipment of the helicopters with the addition of other equipment necessary to meet the requirements for the deployment of these helicopters in NATO operations, which include, for example, IFF 5. Among the overall modernisation of the helicopter air force, the replacement of Mi-35/24V attack helicopters with H-1 system helicopters can be considered, which has been underway since 2023. These include AH-1Z (Viper) attack helicopters and UH-1Y (Venom) multirole helicopters. With the successful introduction of these helicopters in combination with the upgraded Mi-171 helicopters, the Helicopter Air Force is moving forward significantly and becoming a full NATO member in terms of the use of helicopters in operations.

The next modernization step of the ACR is the replacement of the remaining Russian-made helicopters to ensure long-term service and spare parts supply so that all helicopter aviation equipment can be fully exploited beyond the horizon of 2055.

Transport aviation

The Transport Air Force is stationed at the Kbel base. It consists of transport aircraft and helicopters. The modernization of the transport aircraft started with the replacement of Russian An-26s with Spanish C-295s, which will be upgraded in the future with self-protection systems (SPS, IFF 5) to meet all the standards necessary for deployment in crisis areas. The transport aircraft development plan also includes the upgrade of the A-319 aircraft, which must replace obsolete components to ensure operational capability beyond the 2035 horizon. Currently, the AAF is in the phase of planned procurement of modern multi-purpose medium transport aircraft that will expand the capabilities of the transport air force (transport tasks of large cargo, medical airlift, firefighting, VIP transport and in-flight refuelling) and small transport aircraft that will perform tasks related to the transport of constitutional officials. Further upgrades of the

L-410s are not considered due to their age, but the acquisition of new L-410NGs to provide short-range passenger transport is not excluded.

The Kbel base also operates Mi-17, Mi-8 and W-3A helicopters. No further upgrades are planned for these helicopters in the future. In view of this intention, the operation of these helicopters will be gradually phased out in the coming years. The planned relocation of the upgraded Mi-171Š helicopters from the helicopter airbase in Namesti nad Oslavou to Kbel will ensure the fulfilment of the specified tasks of the 24th Airborne Division in future years. In view of the fact that it is the intention of the Czech Armed Forces to end its dependence on Russian provenance equipment in the future, the most suitable helicopters will be selected in the near future to meet the requirements for the tasks currently performed and required in the future. This purchase will secure the requirements for modern transport helicopters.

Ground-based air defence

The armed conflicts of the present day show that ground-based air defence plays a key role in the defence of national airspace and also provides protection for ground troops in their combat activities.

The most significant modern project of modernisation of the Czech Air Defence means is the acquisition of the anti-aircraft missile complex, which represents the basic pillar for the defence of the Czech Republic's airspace and its critical infrastructure such as industrial centres, power plants or water sources. The acquisition will significantly increase the capability of ground-based air defence.

Based on the results of the market research and feasibility study, the SPYDER system from the Israeli company Rafael was recommended as the most suitable system. In 2021, a contract was signed under which the Army will procure four systems (anti-aircraft batteries), each of which will include a radar, a command and control system, four launchers and a recharging vehicle. SPYDER is scheduled for delivery to the Army in 2026, which will also begin the process of decommissioning the existing obsolete 2K12 KUB

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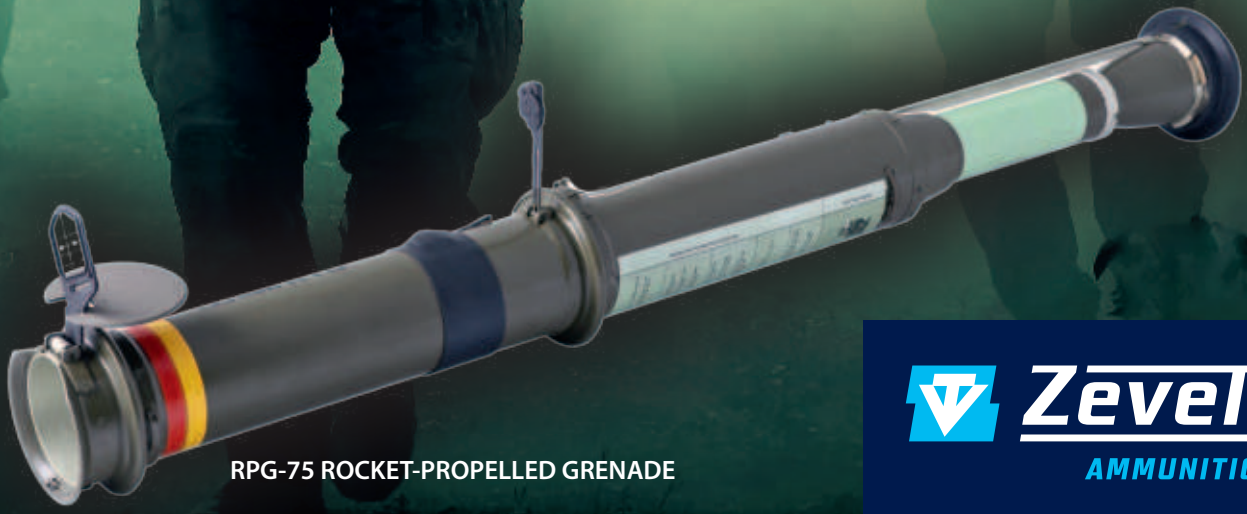
SIGNALLING MEANS

SPECIAL IMPACT EXPLOSIVES

OFFENSIVE AND DEFENSIVE GRENADES – HG



RPG-75 ROCKET-PROPELLED GRENADE

Zeveta
AMMUNITION

anti-aircraft system with a retirement date of the end of 2027.

Another major planned modernisation project of the ground-based air defence is the acquisition of the MARS 4x4 (Multi-role Armored System) combat vehicle with a fully integrated RBS-70NG anti-aircraft complex. This new-generation portable system was introduced to the AFK in 2020-2021 and has a number of advantages over the previous generation, the biggest advantage being the ability to fire the target in automatic mode, making the guidance more accurate than when it is performed manually by an operator. Manual guidance of the missile to the target is also possible.

The MARS 4x4 vehicle (manufacturer SVOS Přelouč) provides significant tactical advantages, including high mobility of the system, which guarantees maintaining a high operational tempo. In addition, the vehicle is complemented by a command and control system and a remotely operated weapon station RBS–70NG. The integrated RBS-70NG system can operate even while moving (firing only from a short stop) and, in addition, it can be easily removed from the vehicle and used as a portable device (MANPADS), which provides an operational advantage, for example, when the system needs to be placed on the roof of a building.

In the future, the Czech Armed Forces will focus on increasing the capacity of the PVO to cover the territory of the country evenly. C-RAM and C-UAS capabilities will be further developed. Attention will also be paid to capabilities to provide protection against ballistic and hypersonic threats.

It is clear that even ground-based air defence will be forced to keep up with technological trends, with the human factor being replaced by artificial intelligence in some areas. Making an instant decision, analysis or evaluation will in some cases be beyond human capabilities.

Air Traffic Control and Air Navigation Service

Air Traffic Control and Air Navigation Services form one of the fundamental pillars of mission assurance and training of the Air Force. They ensure the provision of air traffic control services on a 24/7 basis, and also participate in the performance of tasks in the NATO Integrated Air and Missile Defence System (NATINAMDS) and the National Air Defence Reinforcement System of the Czech Republic (NaPoSy PVO ČR). For these reasons, the modernisation of the systems necessary for air traffic control is being carried out in accordance with the Concept of the Czech Air Force, with requirements to ensure interoperability with the national provider of air navi-

gation services, Air Navigation Services of the Czech Republic, s.p. and also in accordance with the Single European Sky ATM Research (SES/SESAR).

The major modernisation project is the replacement of the existing military air traffic services system with military air traffic control stations and the integration of other elements and services into one system. The new system will meet national, EU and NATO requirements in line with new technological trends, including the integration of a new generation of passive tracking systems. A major modernisation project in 2024 is the acquisition of the TACAN tactical navigation system for the AČR H-1 platform helicopters and allied aircraft equipped with this system, as well as the planned reconstruction of the International Civil Aviation Organization CAT I (ICAO CAT I) airport lighting system at the Kbely military airport.

Forward air traffic controllers (JTAC– Joint Terminal Attack Controller)

The integration of Close Air Support (CAS), indirect fires and airspace control over the battlefield is a key element of modern warfare. Developments in Close Air Support are very dynamic and emphasize the implementation of the latest technologies in the JTAC equipment modernization and digitization program. Therefore, the current acquisition process focuses on means of acquiring and designating targets operating in the larger electromagnetic spectrum. In the area of communications assets, emphasis is placed not only on providing classified voice communications but also the use of data communications through tactical datalinks. The digitisation of CAS processes, the implementation of new equipment and software, also referred to as DACAS (Digitally Aided CAS), is fully in line with the concept of digitisation of the battlefield.

Radiotechnical military and ASACS

The modernisation of the radio-technical troops and the Air Surveillance and Control System (ASACS) has been going on continuously since the Czech Republic joined the North Atlantic Alliance. This is mainly due to the fact that this type of troops started to perform 24/7 tasks in the NATO Integrated Air and Missile Defence System (NATINAMDS) and the National Air Defence Reinforcement System of the Czech Republic (NaPoSy PVO ČR). This includes the development of the Recognised Air Picture (RAP), which is distributed to the alliance partners, the management of forces and assets that are allocated for the protection and defence of the Czech airspace, as well as the alliance airspace, which means the use of e.g. Czech Air Force aircraft on the territory of other countries.

A major modernization project is the acquisition of ELM-2084 MMR 3D radars (MADR – Mobile Air Defence Radar), whose implementation in the Czech Armed Forces has been underway since 2022 and will be completed this year. With the acquisition of this technology, the ACR has acquired the ability to detect low-flying small-scale targets such as UAVs or drones, including the ability to detect rocket, mortar and artillery munitions at low and medium altitudes.

In the future, it is envisaged to increase capabilities in the area of ballistic missile, cruise missile and hypersonic missile detection to ensure early warning and effective use of firepower. An equally important project is the development of a classified and jam-resistant ground-to-air-ground (GAG) link for the Air Force, including achieving full compatibility with allied command and control systems by implementing Tactical Datalinks (TDL) such as Link-16 and JREAP-C. As the security environment evolves, it is essential to continue to modernize both the radiotechnical force and the ASACS system to achieve mobility, which is critical to the contemporary and future operational environment.

It is clear from these modernisation programmes and capability development that even in the military aviation we are still catching up with NATO standards. This current state of affairs is a reflection of the underfunding of the ACR over the last 20 years at least. The near future will gradually lead us to match the pace of the alliance. It is clear that the Army will undergo a transformation in the form of complete westernization in the next decade. It will require not only a lot of resources but also effort, a synchronized comprehensive induction of individual capabilities with interconnected domains in the national and alliance context.

Author: Jaroslav Míka
Photo: Mod CR, ACR and Battalion, David Karafa

HIAB 2222 ATF-2 hydraulic loader crane on a flatrack

HYDRAULIC LOADER CRANES HIAB

CRANES DESIGNED FOR THE DEMANDING TASKS OF THE CZECH ARMED FORCES

Hydraulic loader cranes from the supplier Hiab have become a natural choice for the armed forces of countries worldwide, characterized by high demands on their capabilities, performance, reliability and service network. We also talk about demands for the possibility of transportation by aircraft, work in specific climatic conditions, difficult terrain or the possibility of specialized installations.

The manufacturer Hiab offers a wide range of products for the logistical needs of the armed forces, which represent complete certainty that the requirements for material handling will be met in full. HIAB loader cranes are designed for continuous work in difficult climatic and terrain conditions. All of them undergo a rigorous series of laboratory and field tests and are proven in extreme operating conditions around the world.

Hiab representative in the Czech Republic

For more than 20 years, the company CONTSYSTEM, an authorized Hiab's sales, installation and service representative in the Czech Republic, has been supplying special load handling equipment to the Armies of the Czech Republic and Slovak Republic.

The HIAB crane product line consists of both, a number of special models developed exclusively for the armed forces and basic models that meet the full range of requirements for performing demanding tasks, while offering a flexible customization program according to the specific needs of the armies and integrated rescue system.

HIAB cranes developed specifically for the military sector have a number of specifications and advantages associated with their use:

- The use of modular components provides an advantage in the speed of parts delivery and thus maintenance
- The cranes are developed according to the latest European standards EN 12999 and EN 13001
- Control systems manufactured according to military, environmental specifications and climatic requirements
- Anti-corrosion surface treatment according to military specifications
- Integrated crane adaptation: mounting on ships, armored vehicles, etc.
- Possibility of transporting individual crane types by aircraft

ContSystem SIMPLE HANDLING HIAB

Low-built cranes

Low-built cranes are compact loader cranes with a folding column, specially developed for recovery vehicles and other applications, where there is the requirement for the crane, when folded, to fit into the height of the vehicle cabin profile. The vehicles can thus be transported by cargo aircraft, railway wagons and meet the specific needs of armies. The tactical advantage is that the crane does not limit the firing range of the weapon station located on the cabin.

A representative of this category of cranes is the **HIAB 2222 ATF** in a three-, two- or one-extension version, with a transport height of 1408 mm, which can be retrofitted with the CTC function (crane tip control) and the Automatic crane folding and unfolding function.

Another group of low-built air transportable cranes are models specially developed for handling ammunition, rocket pods and miscellaneous cargo. These include the **HIAB 099, 111, 133, 144 models** with various lifting capacities from 75 to 149 kNm in the fixed mast version.

HIAB 133 ATD-2 hydraulic loader crane has a maximum outreach of 5.2 m and a capacity of 2,500 kg. The height of the folded crane in the transport position is 1,350 mm.

HIAB 2222 ATF-2 hydraulic loader crane has a capacity of 2,860 kg at a maximum outreach of 7 m. In the case of three extensions, the crane capacity is 2,200 kg at a maximum outreach of 8.4 m.

HIAB 2222 ATF-2 hydraulic loader crane has a capacity of 2,860 kg at a maximum outreach of 7 m. In the case of three extensions, the crane capacity is 2,200 kg at a maximum outreach of 8.4 m.

HIAB S-HIPRO 130-2 hydraulic loader crane is a special one for recovery armored vehicles, which has a capacity of 1,800 kg at a maximum outreach of 6.6 m. It is equipped with the CTC function and Automatic crane unfolding and folding.

Standard crane types tailored to the required reach and load capacity

To fulfill a variety of tasks in military logistics, **CONTSYSTEM** offers a wide range of standard HIAB crane types with different capacities, different control systems and all offering many opportunities for customization. Each crane is configured to meet specific needs and operational requirements and can be retrofitted with winches, JIBs and other accessories.

HIAB X-HIPRO 192 E-2 hydraulic loader crane

HIAB T-HIDUO 029 B-4 hydraulic loader crane

HIAB crane safety systems are an intelligent operating system that can be supplied in three different configurations, each with an increasing number of advanced and productive functions. The electronics is completely protected from the elements. HIAB crane hydraulic valves are characterized by excellent reliability even in the most difficult conditions and demonstrate strength, precision, minimal heat generation and excellent dynamic properties when handling numerous simultaneous operations. HIAB remote control units allow the crane operator to always work from the best position. This leads to better efficiency, increased safety, simplicity and comfort. The indisputable advantage of remote control is also, for example, the possibility of controlling up to 24 proportional functions simultaneously and greater operating accuracy due to the multiple speed of the controller.

www.contsystem.cz/en

CZECH FAMILY COMPANY KOUTNÝ CELEBRATES 30 YEARS ON THE MARKET

Our production company Koutný will celebrate thirty years on the market thist year. At all times, we strive to deliver quality products, not only to Czech customers. Last year we received the ISO 14001:2015 certification, we also have the ISO 9001:2009 and AQAP 2110 quality certificates. In production, we partially use sustainable materials, such as recycled polyester, RWS wool (responsible wool standard) and organic cotton. In 2023, our company installed photovoltaic panels on all its buildings. Thanks to this sustainable path, our company is much closer to implementing ESG, setting decarbonization targets and circularity.

In order to facilitate collaboration with other entities, we have joined the CLUTEX cluster. We are one of the most reliable suppliers of field and walking uniforms, special response clothing, coveralls, vests, suits, jackets, trousers and many other products. We try to meet the high demands of customers on material and technological processing of products. We take a personal approach to each order, i.e. deliver on time and in the required quality.

We sew ceremonial and modern walking uniforms that are resistant to creasing, but at the same time pleasant to the touch, which requires the use of quality materials from Italy, France and Spain. The list of our customers includes Police of the Czech Republic, Forest Service of the Czech Republic, Fire Brigades of the Czech Republic, Prison Service of the Czech Republic, Customs Administration of the Czech Republic, Czech Army, Dutch Army, Austrian Army, the Prague Castle Guard, Customs Administration of the Netherlands, Prague Airport, Czech Airlines, etc. We also produce classic menswear. We sell men's ready-to-wear and made-to measure suits through our own stores in the Czech Republic.

PROFESSIONAL PATCHES

NAME TAGS / MILITARY RANKS / BADGES

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PK 4 Kaga

AGAHELP: SPECIALISED EQUIPMENT FOR MILITARY AND RESCUE OPERATIONS

AGADOS, with more than 30 years of experience in the trailer industry, presents a new portfolio of specialised trailers and equipment under the AGAHELP brand. These are trailers designed primarily for military and humanitarian use, which the company has been manufacturing since 2014. At present, these products are an important part of the equipment not only of the Czech Army, but also of other NATO member countries.

One of the most important products of this brand is the PK4 mobile field kitchen, which was launched in 2017 and won the Golden IDET 2017 and IDEB Prix 2018 awards. The mobile field kitchens were developed in response to a long-standing shortage of modern equipment of this type in the Czech Army, where the last product had been in service for more than 60 years. The first models introduced by AGADOS were a great success both at domestic and foreign markets. This interest prompted the company to further develop its product line, which now includes various types and sizes of field kitchens, adapted to the specific requirements of customers in the field of military logistics and crisis management.

The kitchens provide a fully functional solution for field food preparation with high mobility and ease of use in any environment. The kitchen's lightweight construction and modular design allows it to operate in difficult terrain. All modules are made of stainless steel, meet modern hygiene standards and are optimised for military use.

The AGAHELP brand portfolio also includes an amphibious off-road trailer, equipment for illuminating the operating area in field conditions, a water treatment plant and a drinking water tank that can be used for more than just natural disasters. Since 2023, AGADOS

aga help

has also been producing off-road trailers for mobile diesel generators. The latest addition to this range is a refrigerating and freezing trailer, first presented to the public at the International Defence Engineering Fair IDEB in Bratislava, designed for a safe transport of food even in extreme conditions.

AGAHELP products are the result of many years of development and intensive cooperation with military and humanitarian organisations. AGADOS focuses on the production of equipment that contributes to efficient and safe logistics in the field. The high mobility, robust design and modularity of the products ensure their use in a wide range of conditions, from military operations to crisis situations and humanitarian missions.

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BEYOND LIMITS

The real engine of innovation is the desire to push past boundaries, change established standards for the better, and escape the bonds that serve to limit us. CZ is a firm believer in this philosophy and this is what led to development of the new CZ BREN 3 rifle.

Out of respect for the ancestors

When BREN is spoken, the word "legend" comes to mind. It is a well-known fact that one of the most famous machine guns in the world was based on an original Czechoslovak design and manufactured under license. After all, the very name of the British legend consists of the first letters of its place of origin and the location of this timeless firearm's subsequent production – BRno and ENfield.

This model, the ZB 26 machine gun, was the result of the unique creativity of our design school. It was such a successful concept that its more famous sibling is still in service with the British Army, and many other units around the world, since its introduction many decades ago. It continued to serve well beyond the turn of the millennium in some units, in fact, for an incredible 70 years or so. Its popularity was due to a timeless design, excellent combat qualities and impressive variability. Since all of these qualities are shared by the original BREN and the current line of select-fire rifles from CZ, we decided to build on the success of the First Republic design school and remain in line with the name.

Going our own way

Mnoho zbrojovek po dlouhá léta volila jakFor many years, a large amount of gun manufacturers has opted for a shortcut in the form of a simple modification of one of the two existing rifle platforms. However, this was never the case with CZ. We have relied on our own means many times in the past, albeit at the cost of more demanding development measures. Instead of a shortcut, we chose a more thorny, often untrodden, path. The result was, and is, original designs that in many cases not only followed, but directly set, trends in their respective categories for many decades to follow. One example is the legendary CZ 75 pistol, which truly laid the foundation for the shape of the modern semi-automatic pistol and became the second most copied pistol in the world.

For development of the CZ BREN family, we worked together with experts from the armed forces. We believe that designing a firearm to fully suit its end user, with minimal need for subsequent modifications, is an important piece of the puzzle when designing such a product.

In doing so, we avoided the compromises that have caused firearm users concern in the past. There was no longer a need to choose between reliability and accuracy. Durability is not achieved with higher weight. Comfort and ergonomics are no longer mutually exclusive with practicality.

The CZ BREN family

As the first generation of the CZ BREN family, the CZ 805 BREN offered its users a modern 21st century firearm and became the standard service rifle of the Czech Army. The experience that CZ gained during its development and production was then combined with feedback from the armed forces, including elite units. As a result, its successor, the CZ BREN 2, was created. The proof that we managed to more than successfully build on the qualities of its predecessor is not only the introduction of the CZ BREN 2, but the Czech army choosing it as their standard select-fire rifle. The qualities of this rifle are also appreciated by members of the elite French anti-terrorist unit GIGN. The CZ BREN 2 has become very popular among soldiers involved in the conflict in Ukraine as well. And that's not all. CZ BRENs are in service in Hungary, Mexico, Ghana, Kenya, Portugal, and many other countries around the world as well. It's easy to see that it set a high bar.

CZ BREN 3

The new CZ BREN 3 improves upon the features of its predecessor with an emphasis on maximizing tactical performance. A real asset to missions. Anywhere and under any conditions.

Over a hundred different modifications have been made to the rifle, many of which may not be obvious at first glance, but all have a profound effect on its reliability, accuracy and durability. We have created a firearm that will break through established boundaries and become synonymous with today's 21st century soldier. Lightweight, reliable, durable, accurate, comfortable, and with supreme modularity. Let's take a closer look at the new CZ BREN.

Comfort above all

The perfect interplay of all parts of the shooter's body is key to maximizing the firearm's potential. In order for such interplay to work, the ergonomics of the firearm must become one with the shooter. The CZ BREN 3 builds on its predecessor to give the shooter the maximum possible freedom in how he grips his firearm. A new feature of the CZ BREN 3 is an extended forend, which many users have requested. Of course, comfortable operation of the gas selector remains, although the tube has been modified. Extraction of gases can be adjusted by hand, according to the current need or in case of heating, e.g. by a fired cartridge case. You can choose between the standard setting, an increased take-up for shooting in difficult conditions, and a lower amount for shooting with a suppressor. The one-piece duralumin forend is attached to the rifle in several places to ensure maximum strength and durability.

One of the things we decided to keep with this new firearm is the layout of controls, which is based on the AR-15 platform. These are mainly the ambidextrous magazine release and the bolt catch/release lever. We believe that users who will be switching to the CZ BREN 3 from this platform will be able to use their existing "muscle memory" in its operation, i.e. motor skills they have acquired over time. Of course, we have improved the ergonomics of the aforementioned controls, and in the case of the bolt catch/release, there is also a lever in the front of the trigger guard that allows easy and extremely fast operation during tactical reloading.

The charging handle has undergone more significant changes. It remains stationary and in the same place as with the previous version, allowing for a wide variation of grips. The charging handle can also be used as a so-called forward assist in the event of a slide failure. Like all other controls on the rifle, it is swappable from side to side. In addition, each user can choose to have a fixed handle on one side of the firearm and a folding handle on the other side, or a folding lever can be placed on both sides of the firearm. The shooter is therefore provided with ambidextrous control, together with a reduced possibility of the handle getting caught on gear. Absolute modularity.

However, we are not only thinking of left-handed users, but also of taller users. The stock is now about 2.5 cm longer than on the previous model and offers four positions, instead of the original three. There is also an interchangeable cheekpiece for increased comfort when aiming.

We have also modified the attachment point of the stock, in order to make it more durable in the harsh conditions found on today's battlefield. It is no longer necessary to remove the stock from the rifle for field stripping.

Operation of the trigger undoubtedly contributes to shooting comfort. CZ is known around the world for its excellent triggers in both short and long guns. And it doesn't matter whether it's a service or sport firearm.

Trigger pull is only 25 N, which, combined with extremely smooth travel and a short reset, allows for highly accurate and fast shooting.

Durability, Durability, Durability

Although the CZ BREN 2 has proven itself on a wide range of modern battlefields, from the scorching desert, to freezing mountain terrain, to muddy trenches reminiscent of the harsh conditions of World War I, we are constantly working on further improvements. Our goal is to offer the 21st century soldier an even more durable and reliable firearm.

The CZ BREN 3 receiver is made of tough, yet lightweight, 7075 T6 duralumin. This material is time-tested, and is even very popular in the demanding aerospace industry, where it is used to produce components for the Gripen and space shuttles, for example.

In addition, we have added steel reinforcements in selected places of the CZ BREN 3's upper receiver, which further increases the rifle's durability.

Advanced protection against corrosion is provided by a durable nitriding finish, which we call BoBox. In the case of duralumin components, we rely on the time-tested hard anodizing.

To make sure everything works as it should, we put the rifle through a series of rigorous tests. These tests are designed to simulate real-world combat conditions and verify proper functioning of the rifle in the most demanding conditions. We subjected the gun to deep freezing and heat, bathed it in salt water, dragged it through sand and mud, flung it through the air and fired tons of rounds, in order to thoroughly test everything. It passed all with flying colors.

Reliable and accurate

It's not easy to create a perfect balance of reliability and accuracy. At CZ, we are always pushing the boundaries in this area. As a result, CZ BREN 3 has undergone several significant changes compared to its predecessor.

The bolt features two ejectors. Our goal was to eliminate problems related to the reliable ejection of the spent cartridge cases, especially in extremely adverse environmental conditions or when the rifle is extremely dirty.

But that's not the only change. The bolt of the CZ BREN 3 features a newly modified anti-recoil safety, which aims to eliminate the risk of partial recoil of an already locked bolt, which every automatic firearm is prone to some extent. Its design is now simpler and more effective.

The basic principle of the CZ BREN 3 function remains unchanged. Locking is provided by a rotary bolt with six lugs, which ensure that the bolt is firmly locked in before each shot is fired. The higher number of lugs, the better the distribution of forces acting on the bolt during firing, and therefore, a longer service life.

The automatic function of the gun is taken care of by the extraction of combustion gases, which are transmitted to the bolt by a short-stroke piston. The so-called "short stroke gas piston" system is currently the most popular system for automatic long guns.

The piston is separate from the bolt assembly. This not only allows it to travel on a very short path, but also reduces the amount of mass that cycles inside the gun. The result is reduced recoil, while maintaining high functional reliability. In addition, unlike the direct gas solution, no excessive gas blows out of the ejection port and into the shooter's face. This advantage is particularly important when using the CZ BREN 3 with a suppressor. To ensure maximum functional reliability, we have also increased the space for gas expansion.

Of course, CZ BREN 3 users can also rely on our extremely accurate and durable cold hammer forged barrels. This forging method is able to perfectly shape the bore, ensuring high accuracy and a long service life, which is further enhanced by a hard chrome-lining. The profile of the barrel is now heavier than the previous model. Thanks to these factors, users can rely on flawless high performance.

The start of a new era

At CZ, we believe that we have managed to break through the boundaries that have limited progress. All the above-mentioned modifications and innovations are the result of years of experience in the development of military firearms and the unique creativity of our designers.

The CZ BREN 2 is highly valued for its reliability and durability, even when subjected to the toughest combat conditions. We are proud that the CZ BREN 3 builds on the highly respected qualities of its predecessor and further improves on the foundation laid by the original BREN machine gun. The CZ BREN 3 is a timeless select-fire rifle for today's 21st century battlefield and sets a new bar for its category.

Author: Jakub Ondrušek
Photo: Česká zbrojovka a.s.

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RECONSTRUCTION OF UKRAINE: CZECH ASSISTANCE AS A MODEL OF EFFECTIVE COOPERATION

Since taking office in January 2023, the Governmental Envoy for the Reconstruction of Ukraine, Tomáš Kopečný, has faced numerous challenges, the most fundamental of which was: How can Czech entities effectively support Ukraine while it continues to endure one of the worst aggressions in modern history? In less than two years, significant progress has been made in creating an effective system of support and coordination, not only among government institutions but also with non-governmental organizations, business associations, and other stakeholders. The goal was clear: to ensure that „the right hand knows what the left hand is doing," and in many areas, this has been successfully achieved.

At the beginning of 2023, it was necessary to build a bridge between various sectors involved in assisting Ukraine. The first step was to gather all relevant parties around one table. The governmental envoy introduced regular coordination meetings where stakeholders could share information. Coordination between these diverse groups was crucial to ensuring that aid was effective and directed where it was most needed. Today, nearly two years later, it is evident that this system is functioning well, providing the Czech Republic with stable and efficient communication channels for humanitarian aid, development cooperation, and information exchange between the government and the private sector, particularly in export support and collaboration with the non-profit sector.

Responding to Attacks on Ukraine's Energy Sector

One of the first and most challenging tasks faced by the international community at the turn of 2022 and 2023 was responding to the devastating Russian attacks on Ukraine's energy sector. Given the scale of these attacks, Ukraine's energy infrastructure was severely damaged in key locations, leading to significant electricity and heating outages. The Czech government, like other Western allies, responded swiftly by sending surplus materials from state reserves to address the most urgent needs. However, ensuring the long-term and sustainable recovery of Ukraine's energy infrastructure required a more comprehensive solution.

In 2024, the situation continues to deteriorate. Russia persistently attacks Ukraine, primarily with missiles and drones, further endangering and destroying critical infrastructure. However, the international community has managed to unite and create systems that respond to Ukraine's needs. International coordination occurs at the G7+ level (an energy coordination group of G7 states and key Ukraine-supporting nations, including international organizations, of which the Czech Republic is a member). Today, international organizations such as the UN, EBRD, and USAID lead the way in supplying cogeneration units, gas turbines, and other energy components. These activities also present opportunities for Czech companies, which have successfully participated in international tenders, providing Ukraine with essential technologies.

Sectoral Cooperation and International Projects

Czech support for Ukraine extends beyond the energy sector. Assistance is also directed towards other areas of civilian infrastructure,

such as water treatment and healthcare, while transport infrastructure and modular housing for internally displaced persons are also considered priorities. In these areas, Czech companies collaborate with Ukrainian partners and coordinate with other states and international organizations. For example, trilateral projects between the Czech Republic, Ukraine, and Taiwan have been particularly successful, especially in supplying medical equipment to Ukrainian hospitals, including those in the heavily affected eastern regions. Additionally, cooperation with Taiwan has facilitated the delivery of cogeneration units and mobile water treatment plants. This collaboration highlights the importance and mutual benefits of linking states with a shared interest in Ukraine's stabilization and recovery.

In October 2024, the Czech Republic also applied to join the European Union's Ukraine Facility program. This initiative mitigates investment risks in Ukraine, addressing the difficulties commercial entities face in securing financing due to war-related uncertainties and an unstable security and political environment. The EU has allocated approximately 8 billion euros for loan guarantees and an additional 1.3 billion euros for blending (a combination of loan guarantees and grants) for the period 2024-2027. These funds are available to international institutions (such as the European Investment Bank) and national development banks of EU member states.

This program represents unprecedented EU support for Ukraine, and the Czech Republic is one of the few EU countries that will access these funds through a national institution – the National Development Bank. This initiative is crucial not only for Ukraine's reconstruction but also for Czech companies, which can participate in projects financed through this program.

A Distinct Czech Approach to Ukraine's Reconstruction

The Czech approach to Ukraine's reconstruction follows the "Front-line Recovery" principle, focusing on assisting regions in close proximity to the front line. This support not only provides strategic backing for Ukraine's

armed forces but primarily helps civilians most affected by Russia's war of aggression. The Czech Republic works mainly with the Dnipropetrovsk region, for which it holds a symbolic patronage, and also supports the Kharkiv region, where Czech companies, in collaboration with international donors and organizations, primarily supply decentralized energy units. Establishing direct connections with municipalities and understanding their specific needs is a key added value that the Czech Republic brings to international assistance efforts for Ukraine.

Support for Czech Businesses and Organizations in Ukraine

The Czech Republic is strongly committed to supporting Czech entrepreneurs and companies that can offer solutions to Ukraine's needs. During his tenure, governmental envoy Kopečný has visited Ukraine more than eight times, including six trips with business delegations and one with a delegation of critical infrastructure protection experts. These missions, featuring business forums in cities such as Lviv, Kyiv, Dnipro, and Kryvyi Rih, provided Czech companies with opportunities to present themselves to Ukrainian partners and explore business prospects. In 2024, almost every month saw either a sector-focused business mission to Ukraine or an inbound mission of Ukrainian representatives and entrepreneurs to the Czech Republic.

Beyond economic cooperation, the governmental envoy has also been involved in organizing cultural events, such as the "Czech Dreams" artistic festival in Lviv in September 2024, held in collaboration with the Brno-based organization "Brno – City of Music." The festival showcased Czech painters, musicians, and visual artists, and visitors could also enjoy Czech beer and traditional cuisine. This event was not only a cultural experience but also an opportunity to strengthen ties between the Czech Republic and Ukraine during these challenging times. Due to security concerns, all performances and events were held under strict safety measures, including a cimbalion band performance in a bunker beneath a Lviv hospital during an active air raid alert.

One of the latest initiatives launched by the governmental envoy is an internship program for Czech and Ukrainian students in the Czech Republic. Started in the fall of 2024, this program allows students to participate in reconstruction projects in Ukraine, either by assisting non-profit organizations or engaging in business opportunities. This program not only provides young people with valuable professional experience but also strengthens collaboration between the two countries in human resources development.

Thanks to these activities and the strong coordination among Czech stakeholders, a system has been created that not only responds to Ukraine's immediate needs but also lays the groundwork for the long-term stability and reconstruction of the war-torn country. The Czech Republic's commitment to Ukraine's recovery serves as an example of effective and sustained assistance that yields tangible results and meaningful impacts.

Author: Zdeněk Pepřený


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Modular mobile bunkers and safety elements for line of defence warfare.

In the third quarter of 2024, IBIPC delivered the Checkpoint security element from the Bunkers and Shelters product line to the Ministry of Defence of the Czech Republic. This project is a result of the cooperation agreement between IBIPC and the MoD, focused mainly on research and development of new safety elements. The core of the Bunkers is a mobile modular Universal Building Segment, which works as an "open architecture", allows variable layout and assembly according to the requirements of the end user. After attaching the lids and the armoured doors made of ARMOX 500T steel from Protect Parts with bulletproof borosilicate layered 200mm SVOS glass, the IBIPC safety element is ready for service as an observation post at the military shooting range in Boletice.

Additional variants are available. Such as Basic Infantry Bunker, Extended Infantry Bunker for squad with embrasures, Operational Ammunition Storage, Civil Protection Shelters or Medical Bunker, as well as a series of six spatially larger Bunkers designed for use at the tactical level, equipped with either basic ventilation or sophisticated CBRNE filter systems. Everything is designed to the needs of the client and quickly assembled on site.

The surface of the Bunkers and Shelters are specially treated to withstand highly demanding mechanical and chemical requirements. The products also provide excellent resistance to underground water as well as high resistance to various climate conditions, abrasion, compression and other negative influences. Additional surface treatment is applied to inner walls of the bunker to increase the safety of the elements. This diminishes the chance of forming any small flying concrete fragments in case of a possible hit of the element.

Variant of the CHECKPOINT safety element from the Bunkers and Shelters series at the tactical-operational level.

The assembly of elements from individual series Safety Barriers, Ballistic walls, Restraint systems or Object Resistance allow their use as a first-line protection and to slow down and repel the adversary's attack, or as a defensive mobile military fortifications to protect live forces from drone attacks, infantry fire weapons up to 14.5 mm calibre, shrapnel from artillery ammunition of up to 155 mm calibre, direct attacks by 107mm rockets, 120mm mortars grenades, explosions in the vicinity objects up to 50 kg TNT, hand grenades and conducting defensive combat on the line of defence.

IBIPC protective elements are assigned with NATO STOCK NUMBERs and are made of patented Ultra High Performance Fibre Reinforced Concrete that has been successfully tested by the Military Research Institute for ballistic, blast and shrapnel resistance of high values according to NATO STANAG 2082-2016, Ed. 2 standards during an intensive nearly 10-year research and development period.

The company INSTITUTE OF BLAST & IMPACT PROOF CONCRETE is a catalogized manufacturer for NSPA – NATO Support and Procurement Agency with an assigned NCAGE – NATO Commercial and Government Entity Code 8286G. It is a full member of the Defence Association Security Industry Association of the Czech Republic, Security Bunkers Alliance and has created a joint venture with Trusted Alliance.

www.ibipc.com

NEW GENERATION OF TATRA FORCE SERIES FOR ARMY AND FIREFIGHTER DEPLOYMENT

This period is crucial and groundbreaking for the Tatra Trucks manufacturer. Last year and this year, Tatra Trucks unveiled the latest generations of the Tatra Force and Tatra Phoenix model series. The first of them is intended primarily for military use and deployment by rescue services, while the second represents a pillar of civilian production. Both bring significant shifts into the future in terms of technology, but also in the areas of electronics, safety and performance.

Compared to previous models, the new third generation of the Tatra Force series represents a transition from relatively technologically simple vehicles to a highly versatile and unified series of heavy vehicles with top electronic equipment, variability of use and designs suitable for both military and rescue applications. Last year, special models for firefighters were introduced, which are already in production. This year, a military version was also introduced for the first time at the Eurosatory 2024 trade fair in Paris, the various designs of which will be available next year.

The most visible element is the newly designed cabins, both in two-door and four-door versions with a number of above-standard safety features, an improved interior or a digitalized dashboard and modern electronics. The chassis are equipped with interchangeable elements for mounting and tilting the cabin and other elements so that it is possible to quickly and easily replace the standard cabin with an armoured one even in field conditions. The chassis has a proven Tatra concept, configuration of 4×4, 6×6 and 8×8 will be offered as standard, and multi-axle versions will also be available.

The new Tatra Force vehicles offer the option of alternative engine mounting under the front part of the cabin above the front axle, or under the rear part of the cabin behind the front axle. It will be possible to place both Tatra air-cooled V8 and V12 engines, as well as Cummins and Caterpillar engines, under the cabins. The engines will be connected to Tatra F-shift transmission with improved electronic shifting, as well as automated and automatic ZF or Allison transmissions.

The new Tatra Force series vehicles will gradually become the backbone of the vehicle fleets of the Czech Armed Forces and the Czech Fire and Rescue Service and a number of users abroad. They will therefore help ensure our security, but also save lives and material values, both in the defense of Czechia and partners, as well as in natural disasters and emergencies, as older Tatra vehicles did and do.

Author: Daniel Potocký

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Our partners value us primarily due to the high quality of our products, constant innovation and reliability.

That is why we cooperate with global aerospace manufacturers on key strategic projects, such as the development of components for the 5th generation F-35 fighter jet.

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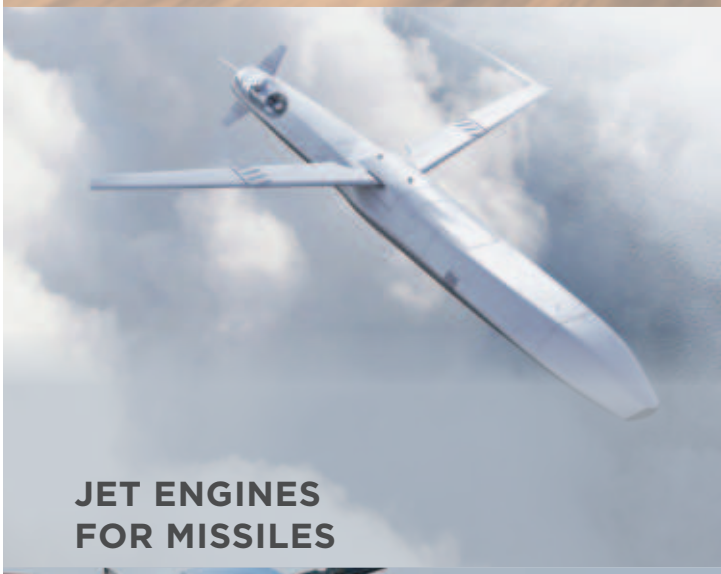
JET ENGINES FOR UNMANNED VEHICLES



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PBS TJ150: ADVANCED POWER UNIT FROM PBS GROUP FOR UNMANNED APPLICATIONS

The PBS TJ150 is designed for a wide range of applications in the field of unmanned aerial systems, training targets and drones. Developed from over 50 years of experience in the aerospace industry, the engine meets the requirements of even the most demanding customers through a combination of high thrust, reliability and light weight.

Key features

The PBS TJ150 offers an exceptional weight to thrust ratio, which is essential for high-performance unmanned systems. The maximum thrust of 1,500 N, while maintaining the same outer diameter and weight as its predecessor PBS TJ100, represents a 20% increase in performance. Its compact design and low fuel consumption make the PBS TJ150 an ideal choice for long-range applications where every gram is critical.

An integrated starter-generator with up to 2,250 W ensures not only reliable starting but also power to the on-board electronics. Another advantage is the pyrotechnic ignition option, which allows it to start quickly within seconds, even at higher speeds in flight. This technology makes the PBS TJ150 engine a suitable solution for defense systems, reaching a maximum speed of up to 0.9 M at altitudes of up to 10,000 meters.

The engine is equipped with an advanced FADEC (Full Authority Digital Engine Control) system that provides fully automated engine management for maximum efficiency and reliability. This system allows precise control and monitoring of all key parameters, greatly facilitating the integration of the engine into various applications such as unmanned aerial vehicles, target practice or drones.

Durability and applications

The PBS TJ150 is designed to cope with the most demanding conditions. The engine can be fitted with a separate oil system and has a high resistance to salt water, allowing it to be reused after landing on the water surface. These features of the PBS TJ150 engine have found application, for example, in Leonardo's upgraded Mirach 100/5 V2 target trainer. Using the PBS TJ150P engine (fuel lubricated version) and new advanced avionics, this target simulates enemy aircraft and missiles even better, allowing for more effective training in realistic scenarios.

Tradition and innovation

The PBS TJ150 builds on the proven technical foundation of the PBS TJ100, which has long held a reputation as one of the most reliable engines in its performance category. However, thanks to advanced technology and optimized design, the PBS TJ150 outperforms its predecessor and sets a new standard in small jet engines.

Certified quality

PBS GROUP, as a certified manufacturer, has a number of Czech, European and international certifications that confirm the high level of quality of production processes and final products. Thanks to these certifications and many years of experience, the company is able to supply engines such as the PBS TJ150 to global markets and adapt their characteristics to the individual needs of customers.

With its combination of performance, compact design and wide customization options, the PBS TJ150 is finding its way into the field of modern unmanned systems. Its durability, reliability and flexibility make it a strategic choice to ensure success in the challenging conditions of the defense and security industry.

STARKOM communication jammer

STARKOM – A NEW DEVICE

FOR EFFECTIVE JAMMING AND ELECTRONIC WARFARE, DELIVERED TO THE ARMY OF THE CZECH REPUBLIC BY THE MILITARY RESEARCH INSTITUTE, STATE ENTERPRISE.

Electronic warfare (EW) is considered one of the key military capabilities, which has been demonstrated during the current conflict in Ukraine. The main objective of EW is to make command and control difficult, if not impossible, by jamming the communications systems of the enemy with the subsequent disorganisation of his forces and weapon systems. The more the military depends on electronic communication systems, electronic guidance systems, navigation systems, etc., the more vulnerable it is to effective means of electronic warfare. In the Czech Republic, the development of the means and systems of electronic warfare has been supported for a long time, but a more significant expansion can be seen after the 1990s. One of the main domains of the Military Research Institute (VVÚ) are the areas of passive radio and radar signals reconnaissance and jamming, and related conceptual designs and implementation of sensor systems and means of electromagnetic warfare.

Between 2022 and 2024, the Military Research Institute delivered 8 new mobile jammers in cooperation with major companies of the Czech defence industry. These are capable of jamming the enemy radio communication, his command-and-control systems, air communication, mobile phone communication, global positioning satellite signal (GNSS), and control and data transmission signals from unmanned aerial vehicles (UAV) and unmanned ground vehicles (UGV).

The Military Research Institute, as the main contractor for the Ministry of Defence of the Czech Republic, produced this jammer which successfully passed demanding army verification tests. Together with the subsequently manufactured pieces, it was handed over to the 53rd Reconnaissance and Electronic Warfare Regiment of the Army of the Czech Republic. During the production and delivery of the STARKOM jammers, the following subcontracting companies were decisively involved: URC Systems, spol. s r. o., which

The representatives of VVÚ and AČR receiving the Gold IDET 2023 award

provided reconnaissance-jamming technologies and relevant highly sophisticated application software, and TATRA TRUCKS a. s. and TATRA DEFENCE VEHICLE a. s. delivering TATRA series armoured vehicles with hardened body and basic equipment.

A significant contribution of the Institute was in the design of mechanical and electrical constructions, as well as their actual implementation and build-up. Another equally important part is the creation of application software for the overall sophisticated central diagnostic and control system in the jammer (CDCS) and the production and implementation of its electronic components. Through the extensive work of the Institute´s engineers and technicians in the design, production, construction and testing stages, VVÚ gained additional capabilities and created its own environment for the product manufacturing for the Army of the Czech Republic (AČR). The Military Research Institute, but also URC Systems, including professional cooperation with JISR Institute, a. s., have many years of experience in the field of electronic warfare based on long-term cooperation with the users in the Army of the Czech Republic. The aforementioned companies implemented the concept of a highly sophisticated radio communication jamming system on a user-specified platform.

STARKOM is a highly mobile tactical communication jammer mounted on a TATRA T-815-7T3RC1 8x8 chassis with all steerable axles and with ballistic-mine resistance. It is designed to conduct electronic warfare in the electromagnetic spectrum of radio communications for combat support and protection of the ground and air force units of the Army of the Czech Republic. It contains technologies for performing the tasks of electronic monitoring, electronic attack and electronic protection in the range of communication bands, even while moving.

The importance of the STARKOM jammer is that it limits the use of electromagnetic spectrum by the enemy communication means, including advanced frequency-agile radio systems. In addition, the jammer is equipped with power amplifiers that cover

The LPDA directional broadband antenna

Discone omnidirectional broadband antenna

Graphical user interface of the CDCS

Operator workstation during installation

the entire frequency range of voice and data radio communications. The jammer not only performs the function of active jamming, but is also equipped with radio receivers with the functions of monitoring and surveillance of the entire frequency spectrum of radio communications. It also acts as a passive radio sensor whose output can be used to create an overall picture of the battlefield. For this purpose, the jammer is equipped with technical analysis tools of radio signals. In this comprehensive view of its capabilities, the STARKOM jammer contributes significantly to effective jamming and efficient conduct of electronic warfare.

The STARKOM communication jammer was first presented to the general public at the International Defence and Security Technologies Fair IDET 2023. In assessing the exhibits, the STARKOM jammer was awarded the prestigious Gold IDET 2023 award within the exhibits of the Army of the Czech Republic.

The implementation of the STARKOM contract was determined by the strict requirements of the user, which predominantly included the requirement to operate and control all mechanisms both from the vehicle cabin and from operator workstations in the vehicle body. It meant that the antennas in the VHF/USW band, i.e. the directional broadband logarithmic-periodic antenna (LPDA) and the omnidirectional discone antenna, had to be remotely electromechanically folded and unfolded, as well as placed in the transport position. Both antennas designed by the Military Research Institute fully met these requirements.

The status control and management of the jammer components is provided by the CDCS, which monitors and evaluates all important parameters of STARKOM. It provides, among other things, e.g. anti-collision protection when handling moving mechanisms, including the LPDA antenna and the discone antenna, and enables control of the relevant actuators and manipulators.

The following pictures show the graphical user interface of the CDCS and the operator workstation during final installation and activation in the vehicle.

VVÚ develops COMINT and ELINT reconnaissance systems in the frequency band from 1 MHz up to 40 GHz, using modern technologies in the design and implementation of electronic blocks. The implementation of prototypes of radar signal direction finders in the band from 30 MHz to 1600 MHz (RAPAMEP) detecting ground radars and in the bands from 1 GHz to 18 GHz and from 32 GHz to 38.5 GHz (SRTP) to detect targets of both ground radars, including battlefield radars, as well as airborne radars and signals from UAVs and other sources working with continuous and pulsed modulations of signals, as well as a portable full-circle radio direction finder in the band from 20 MHz to 2500 MHz (DFMANPACK) and a transportable receiver of radio signals in band from 20 MHz to 6000 MHz are worth mentioning. A significant role in this development is also played by the ability, in addition to the technical designs, to carry out their own implementation.

The units of the user, the 532nd EW Battalion, participated in foreign missions in the Baltics in cooperation with other Alliance units, where they provided the electronic warfare element. The Military Research Institute provides service support for these EW devices to units deployed within the Czech Republic, but also to units participating in foreign missions.

Authors: Ing. Jaroslav Skála, CSc.,
Ing. Petr Navrátil, CSc.
Photo: VVÚ, s. p.

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CTU DEVELOPS COLLABORATION WITH PARTNERS IN ASIA

The year 2024 has been a break-through year for CTU in terms of establishing strategic partnerships with leading companies and research centres in Asia. CTU will collaborate with Taiwan on the development and manufacturing of chips and semiconductors and the first international research centre will open at CTU. The best technical university in the Czech Republic will also partner with South Korea on various projects, including the expansion of the Dukovany NPP.

South Korea has won the tender to build new nuclear units at Dukovany. Doosan Škoda Power and Škoda JS – two companies visited by a Korean delegation led by President Yoon Suk Yeol in the autumn – will be involved in the production of turbines and components for nuclear reactors. CTU will collaborate with South Korea on the expansion of Dukovany and it is also the primary institution that educates experts in nuclear power engineering.

"The Faculty of Nuclear Sciences and Physical Engineering CTU has been producing top experts in the field. No wonder that Dana Drábová, the chair of the State Office for Nuclear Safety for the last 25 years, is a CTU alumna," says Rector Vojtěch Petráček adding that CTU is the only university in the world that operates its own fusion reactor and two fission reactors.

In autumn 2024, Vice-Rector Zbyněk Škvor signed a Memorandum of Cooperation on behalf of CTU with South Korean companies operating in the field of batteries and renewable sources, machine tools and robotics. Researchers at CTU have been working on the development of robots that can be used by fire fighters and rescuers during crises in places that are difficult to access and to monitor large industrial installations.

"Developing international cooperation with top centres of education and research institutes as well as successful companies is in line with CTU's long-term strategy," concludes Vice-Rector Škvor. At the same time, the research and development conducted at CTU contributes to better safety in many areas.

PROJECT SYMASYS

A consortium of eleven key partners from six countries is applying for funding from the EDF-2024-LS-RA-SMERO-NT programme. The SYMASYS project, titled "Synergistic Effects of Hybrid Material Systems for Protection Against Explosions and Ballistic Threats," aims to advance technologies for vehicle protection against explosive and ballistic loads, as well as personal ballistic protection. The project's key innovation lies in the use of advanced AI-based design and optimisation methods, coupled with novel material combinations, including ceramics, hybrid FRP composites, and specialised layers for thermal energy dissipation. This approach not only reduces the weight of protective systems but also ensures a high level of protection under extreme loading conditions, including thermal stress.

The project proposal is covered by three members of the AOBP are Research Institute of Building Materials, SVS FEM s. r. o., and the Military Technical Institute, in collaboration with European partners such as Ghent University and Politecnico di Milano. Together, these partnerships bring complementary expertise in materials science, experimental mechanics, advanced modelling, and AI technologies, accelerating the development of defence innovations.

The SYMASYS project facilitates the design of protective systems through AI-supported tools, streamlining the development process and introducing new, previously unexplored possibilities for the defence industry. Practical applications include hybrid armours for vehicle ballistic and blast protection, optimised through new material combinations, as well as advanced hybrid personal protective equipment. All innovations are developed with a strong emphasis on environmentally friendly practices. The project also explores zero-waste manufacturing and recyclability, aiming to minimise environmental impact.

In conclusion, SYMASYS has the potential to enhance the autonomy of the European defence sector and establish its position as a technological leader by delivering high-performance protective systems with a focus on sustainability. By addressing both technological and environmental objectives, the project sets a new standard for innovative protection approaches within European defence.

PEI / Genesis s. r. o. – TAILOR-MADE CONNECTIVITY

PEI / Genesis s. r. o. became a member of DSIA (AOBP) in 2024, although the company has been active in the Czech business landscape since 1993. Until 2023, our primary focus was on the design, production, and delivery of high-density cabling solutions for central offices, FTTX networks, and data centres requiring high-capacity transmissions. Since 2000, we have held a license from HUBER+SUHNER for the production of optical cable assemblies, offering comprehensive application solutions to meet the growing demands of data transmission. Under the technological ownership of Cinch, the manufacturing facility in Louny has further specialized in Ethernet interconnect cables with customer-specific modifications, serving both data and harsh environment industries as well as defense applications.

At the forefront of optical technologies, we can provide branded WDM solutions and all-optical switches POLATIS with software-controlled switching. These switches enable up to 331,776 optical connections within a 6U chassis. POLATIS can be deployed to optimise data centres, connect scientific laboratories with unique measurement systems, or link supercomputers to quantum computers. Globally, the technology is primarily used for securing networks, while in the Czech Republic, it has already been successfully implemented in academic networks.

Following the 2023 acquisition, our company became part of the global enterprise PEI-Genesis, one of the largest distributors of connectors for leading brands such as Amphenol, ITT Cannon, Fibreco, LEMO, Cinch, Eaton-SOURIAU, and others. Our sustained global growth is driven by exceptional inventory levels across multiple continents, rapid delivery capabilities (licensed connector assembly), and the expertise and technical support provided by our engineers.

We are proud that PEI-Genesis has chosen the Czech Republic as its European central warehouse. Soon, deliveries will be made directly from our facilities in Louny. Simultaneously, we are working to expand the production of optical and Ethernet interconnect cables. We warmly invite you to visit us at our offices in Prague or Louny.

JISR INSTITUTE, a. s.

JISR Institute, a. s. is a Czech company specializing in comprehensive solutions in Joint Intelligence, Surveillance, Reconnaissance (JISR), Electromagnetic Warfare (EW), and Counter-Unmanned Aircraft Systems (C-UAS) for anti-drone protection. Our mission is to deliver advanced technologies that enhance real-time information gathering, analysis, and decision-making processes in defense and security.

As a leading developer of multi-domain C4 systems, we focus on creating solutions that interconnect and optimize various assets. This enhance communication, coordination, and cooperation within National Forces and NATO Coalition Forces, and enabling rapid, effective responses to battlefield dynamics.

One of our flagship products is the EW Command and Control system, "C4EW." Fully CESMO-ready and compliant with NATO standards, providing seamless data sharing and interoperability across multinational forces. This advanced command-and-control platform enables efficient collaboration within NATO frameworks, making it an ideal solution for coalition operations. Its performance relies on additional solutions that enable interconnection with JREAP and CESMO.

Beyond technology, JISR Institute plays an active role in advancing Electromagnetic Warfare standards. As members of multiple NATO working groups, we contribute to the evolution of EW strategies and stay ahead of emerging threats, ensuring our solutions remain at the forefront of capability.

Recognizing the rising threat of drones, our portfolio includes C-UAS solutions that detect and neutralize unauthorized drones, enhancing protection for critical infrastructure and military assets. By integrating of complex C-UAS solution.

Through our commitment to NATO standards, cutting-edge technology, and involvement in EW development, JISR Institute stands as a trusted partner for defense forces. Our solutions are adaptable and designed to meet the needs of modern operations, supporting national and coalition forces in tackling evolving security challenges.

ELDIS PARDUBICE THRIVES, ESPECIALLY IN INDIA

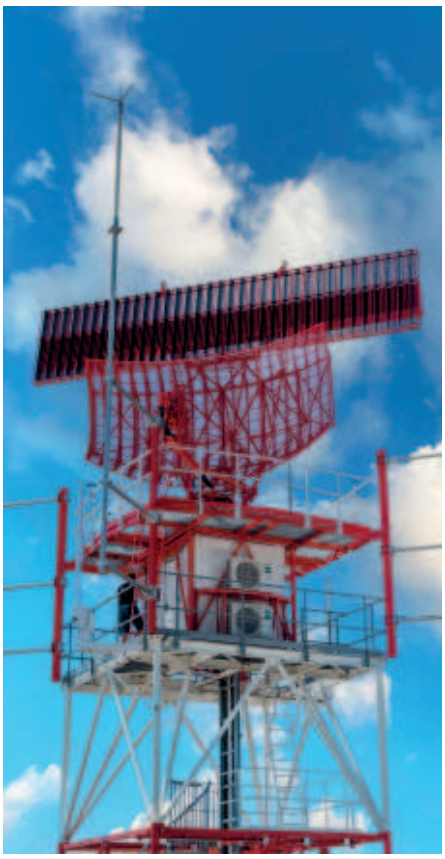
ELDIS Pardubice, s.r.o., is a purely Czech company founded in 1991 in Pardubice by former employees of the Institute for Radio Technology Research, which was part of the renowned Tesla Pardubice. Since its inception, ELDIS has specialized in the development and production of radar technology and air traffic control systems, establishing itself as a leading Czech producer of active radar systems. The company's products are used by clients in more than 25 countries worldwide, including the Czech Republic, serving both civilian air traffic control organizations and military entities. Since 2017, ELDIS Pardubice has been a part of the CSG industrial technology group, within its CSG Aerospace division.

Without a doubt, ELDIS Pardubice's most successful market has been India, where the company has achieved longstanding success. The Pardubice manufacturer is currently working on a delivery of 20 radars, comprising 11 combined and 9 secondary radars. This order from Indian civil air traffic control is part of India's Vision 2040 program, aimed at significant expansion of the country's aviation sector. The order is expected to be completed by 2026.

In addition to providing radars for civil air traffic control, ELDIS is working on an order for 11 combined radars for the Indian Navy, in cooperation with its local partner, the Indian company Mahindra Telephonics. ELDIS also won a tender for a precision approach radar to be installed at Bangalore Airport in southern India.

Upon completing all the contracted installations, almost 60 ELDIS Pardubice radars will be operational across India – a remarkable achievement and clear proof of the quality and adaptability of the Pardubice-based manufacturer. As of today, ELDIS radars cover 99 % of Indian airspace.

Beyond India, ELDIS Pardubice has also gained valuable references in Slovakia, Poland, Morocco, Turkey, and Norway.



KONOS – UNIQUE DISPATCHING SOLUTION

TTC TELECOMMUNICATIONS is a leading manufacturer and supplier of specialized systems in the field of critical infrastructure. It focuses on network solutions based on DWDM and MPLS technologies, KONOS dispatching systems, and systems for signal and reading transmission in energy industries and other sectors of industry.

It is absolutely essential that critical infrastructure operators ensure secure and reliable communication in all situations. The KONOS dispatching system is designed to meet the complex requirements of critical communication centres, and by combining advanced telephone functions and radio integration, it provides a robust solution for effective communication management.

KONOS enables seamless voice communication between users across various networks – from fixed-line and mobile, through corporate telephone networks and public networks, to the radio networks of various producers (including analogue, digital, and trunk). The dispatcher can manage communication across these platforms through specialized gateways, with communication based on IP protocols. The system provides multiple conference rooms for independent communication between participants.

The KONOS dispatching system has proven itself in the modernization and consolidation of voice communication in critical infrastructure, and in the emergency services, its key merits being flexibility and versatility – it allows customers to integrate all voice (and possibly other) communication into a single system. KONOS is also able to cooperate with any type of communication infrastructure, including the oldest. Thanks to the openness of the system, KONOS can be fully adapted to the specific needs of each and every customer and the demanding requirements of their communication strategy.

www.ttc-telekomunikace.cz

3DEES INDUSTRIES: PIONEER IN 3D DIGITAL MANUFACTURING FOR THE DEFENSE INDUSTRY

In a world where industrial production is becoming increasingly digitalized, 3Dees Industries represents a key partner for defense manufacturers seeking to leverage the potential of 3D printing and precise 3D scanning. With over 20 years of experience in additive technology, 3Dees offers comprehensive solutions for companies aiming to implement and fully integrate cutting-edge technologies into their production processes.

Consulting in Additive Technology Implementation

3Dees assists companies in selecting and implementing technologies that maximize efficiency. In addition to installation and technical support, 3Dees experts provide detailed cost-benefit analyses, helping companies make informed decisions. Whether it involves purchasing 3D printers, scanners, or software, the company also offers financing assistance, making entry into the world of 3D manufacturing more accessible for businesses.

Installation, Service, and Training

Beyond delivering top-quality hardware, 3Dees ensures that companies can utilize these technologies effectively and without downtime by providing training and service support. Their offerings include industrial 3D printers and metrological scanners, which stand out for their high precision and ease of use.

3D Printing and Scanning Services

For companies requiring flexible solutions, 3Dees offers custom 3D printing and 3D scanning services. This service covers everything from part measurement to final printing, enabling customers to test concepts, verify product accuracy and quality, or carry out rapid prototyping.

3Dees Industries has offices not only in Prague, Brno, and Ostrava but also in Kyiv and Košice, enabling international collaboration and the swift deployment of technology or custom production across Central and Eastern Europe.

3Dees
MANUFACTURE
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MODERNIZATION OF COMMUNICATION SYSTEMS FOR DISPATCH CENTERS

The Communication Integration System by KOMCENTRA s. r. o. represents a solution for the integration of analog and digital communication systems, specifically designed for dispatch centers. This system unifies all communication tools into one platform and offers intuitive control through a touchscreen application. Thanks to its modular architecture, the system can be easily expanded and tailored to the specific needs of individual users, while fully supporting flexible configuration of the customer's existing technologies.

The solution combines hardware and software developed directly by KOMCENTRA. Depending on the required communication systems, the appropriate technical equipment is supplied, enabling the full use of all integrated communication tools. By interconnecting these tools, additional functions can be utilized, such as monitoring all telephone lines or continuous listening to multiple radio terminals from any workplace.

This year, KOMCENTRA introduced a new generation of components for this system. The modernization affected all peripherals used by dispatchers, focusing on improving the user experience. A key innovation is the Acoustic Unit NG (AKU NG), which plays a crucial role in integrating local communication terminals and connecting additional system peripherals. Furthermore, the Control Audio Panel was upgraded, serving not only for radio communication but also for system control and configuration of selected functions via the touch display. The Touch NG application was also updated, allowing for efficient management of communications at dispatch centers.

The new generation of components utilises the latest technologies in both software and hardware, all developed in-house. This enables the company to respond flexibly to current challenges, such as ensuring maximum cybersecurity or the shortage of electronic components. Moreover, the system is scalable, allowing it to easily adapt to future technological demands and the expansion of existing capacities.

Author: KOMCENTRA s. r. o.

AURA CODIFICATION AGENCY SUCCESSFULLY ENTERS INTO FOREIGN CONTRACTS

AURA Codification Agency operates mainly on the domestic market and in Slovakia, but also indirectly in other countries using the MC CATALOGUE information system for codification support, developed and implemented by this Brno-based company.

AURA Codification Agency

The codification agency forms an integral part of the company's portfolio. The developers at AURA use the practical experience of their colleagues, the codifiers, in the development of the MC CATALOGUE codification tool so that it fully meets the real needs of its users, the National Codification Bureaus. This also contributes significantly to the popularity of MC CATALOGUE, which is currently used in more than 20 countries around the world.

Throughout the twenty years of its existence, the AURA Codification Agency has been the most requested agency in the Czech Republic for activities related to the cataloguing of products supplied to the armed forces. Its services have been used by almost 400 Czech companies, including the largest giants of our defence industry supplying the armed forces with equipment, weapons and combat technology. In recent years, the agency has also been involved in major foreign contracts, such as the delivery of American Venom and Viper helicopters to the Czech Armed Forces.

Codification services from A to Z

AURA Codification Agency provides its customers with the first step in the codification process, which is an accurate search for information on whether a product has already been codified – the so-called screening. For the processing of the draft product codification data, it uses WEB-KAT, the codification software of the Czech Ministry of Defence, which is based on MC CATALOGUE. It handles requests for the processing of codification data from abroad, in other words, it handles

the international data exchange together with the National Codification Bureau of the Czech Republic (whose role is fulfilled by the Defence Standardisation, Codification and Government Quality Assurance Authority). With the Property Section of the Ministry of Defence, the agency will certainly appreciate future cooperation in the processing of reliable and accurate basic property information by individual contractors. Last but not least, the agency processes requests for the assignment of a manufacturer/supplier cataloguing code – NCAGE.

AURA, more than a codification agency

AURA is the largest Czech exporter of information systems for military logistics. In the NATO Codification System (NCS), its MC CATALOGUE has become the most widely used in the world. Of course, these qualities explicitly predestine the company to be at the forefront of certified codification agencies and to provide its customers with other related services in addition to the codification itself:

- training and methodological support in the field of property cataloguing and NCS,
- support in foreign codification,
- consultancy and preparation of commercial and technical documentation (CTD), teaching aids with support of the S1000D standard,
- cooperation in the field of technical translations,
- cooperation in the development of multimedia spare parts catalogues and an eLibrary for technical documentation with secure distribution.

Preparation of new codifiers

In addition to the development of MC CATALOGUE, its implementation in specific conditions of the countries involved in the NCS, or participation in the establishment of National Codification Bureaus, AURA pays particular attention to the training of new professionals, whether in the positions of managers, logisticians or codifiers of the products supplied to the armed forces.

This topic was already the subject of the founding meeting of the "MC CATALOGUE User Group" in Brno in 2006 and continues to the present day, when AURA is preparing the 7th edition of the "NCS College". These international codification courses are organised every two years by the University of Defence in Brno, in cooperation with the National Codification Bureau of the Czech Republic. Of course, with the all-round support of AURA. It is almost unbelievable that in the past six editions this college has trained more than 170 new codification experts from all over the world. The training of new codifiers is proving to be a hot topic not only in this country, but also abroad, e.g. in the Netherlands, Sweden, Norway, or in the Arab countries that are newly implementing the NCS. And no wonder. The codifier really has a lot to do, constantly acquiring new information, keeping up with new technologies and being responsible for the accuracy and credibility of the codification data.

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It is obvious that the existence and operation of the AURA Codification Agency is essential for this company. The link between theory and immediate reaction when applied to practice in the codification of mainly military material gives immediate feedback into the development and innovation of the MC CATALOGUE codification software and other codification applications. It also reinforces customer confidence in a company that deals with the whole complexity of the NATO Codification System and has something to say in its further development.

Text: Antonín Svěrák
Schema and photo: AURA archive

TELINK PRESENTED ANTI-DRONE PROTECTION AND CZECH SOFTWARE AT FUTURE FORCES

TELINK, a leading importer and distributor of drones and accessories, a company with many years of tradition in the field of introducing professional drone pilots into practice, presented its visions in the field of critical infrastructure protection, automated perimeter protection, and integrated rescue system support at the Future Forces exhibition in Letňany, Prague, at the end of October.

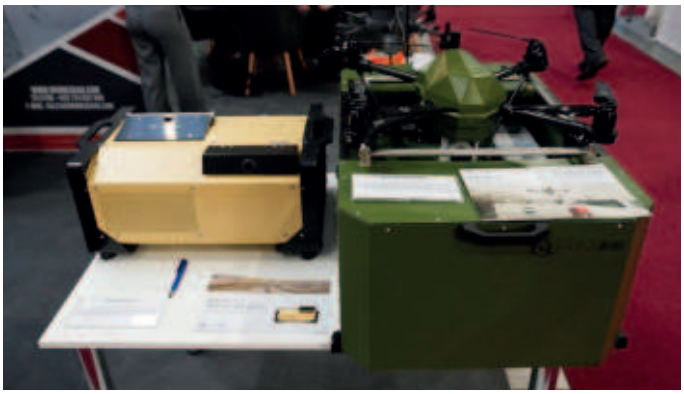
The importance of drones in the area of perimeter protection, active with the help of integrated rescue system components or in military operations, is constantly growing. At the Future Forces exhibition, the Czech company TELINK presented several unique solutions of drones, sensors or anti-drone systems for the needs of state forces and for the protection of critical infrastructure of state and private companies.

TELINK introduced the Czech version of the Dock 2 control software, designed for the protection of objects of exceptional importance, such as nuclear power plants or other critical infrastructure objects. The operator sees not only the drone's flight path in real time, but also remotely monitors events in the controlled area. He can also monitor the docking station, which is equipped with an internal and external camera. An interesting fact, but also a necessity from the point of view of cybersecurity, is that Czech software is prepared for planning automated missions and controlling the drone, which is operated exclusively in offline mode, which is extremely important for critical infrastructure objects.

At the Future Forces trade fair, TELINK also presented the possibilities of connecting multiple anti-drone protection systems using integration software from the German company Securiton. Thanks to this, a platform for comprehensive perimeter protection is ready for businesses, which integrates a wide range of sensors, effectors, and even robots.

Some of the most commonly integrated anti-drone systems were also presented, especially the successfully tested Danish system MyDefence. It was tested at the Drone Shield 2024 military exercise. There, all variants were tested, specific solutions for soldiers, vehicles and fixed positions.

Another major topic was the use of drones for the needs of the state IZS (integrated rescue system) units. TELINK presented special sensors at the fair, for example for measuring radioactivity, equipment for taking water samples, a magnetometer or a ground-penetrating



radar. This allows mapping of underground layers and can be used in fields such as archaeology or construction. Ground-penetrating radar and magnetometer are sensors that are also irreplaceable for eliminating the consequences of war conflicts.

In addition, the stand featured a solution offered together with partner company Elistair from France. It was a winch station compatible with 40 different drones. Thanks to a 100-meter-long cable, drones can be in the air for several hours. The device is designed for longer-term observation; in civilian use, this solution is used, for example, at mass social events or when extinguishing fires.

The Khronos system is a similar device, it is a drone with a winch, but adapted to operate on a military vehicle. The crew thus conducts reconnaissance while driving at speeds of up to 30 km and can safely move forward.

Another interesting exhibit at the Prague fair was the Flycart 30 transport drone equipped with technology for extinguishing forest fires in mountainous environments. TELINK was recently a direct participant in a firefighter exercise, which tested the drone's ability to transport the necessary equipment to high hills. Firefighters or a helicopter would normally have to deliver it there. The Flycart 30 carried gasoline pumps, swimming pools and hoses intended for the construction of a cascade that transports water in difficult-to-reach terrain.

SWORDFISH

Company with specific focus and mission

SWORDFISH Ltd. is a long-standing and traditional member of the Czech Defence and Security Industry Association (AOBP), offering service and consultancy. Its main activity is logistical support and transportation of goods for both Czech and international companies in the defence and security industry, dealing mainly with military and dual-use materials. We first informed our readers about the company in 2016, in an interview with both company partners, Dipl. Eng. Dušan Jamný, a former naval officer with Czechoslovak Ocean Shipping, and Dipl. Eng. Jaroslav Pecháček, CSc., Colonel (ret.), who until recently served as Vice President of the AOBP. It is also worth mentioning another significant participant in the company's foundation, Dipl. Eng. Jaroslav Tvrdý, who not only gave his name but also dedicated his professional activity to the company's early development. Unfortunately, he is no longer with us, but his colleagues are deeply grateful for his contribution to SWORDFISH Ltd. Currently, the company has been successfully operating for more than five years with the involvement of Dipl. Eng. Jaroslav Pecháček Junior, the son of the company's founder. He is a graduate of the Faculty of International Relations at the University of Economics in Prague, with rich experience from leadership positions in global corporations such as Adidas and the American company Specialized. Notably, since 2023, he has followed in his father's footsteps as Vice President of the AOBP. Today, we've therefore asked for an interview with both Jaroslav Pecháček Sr. and Junior.

We cannot begin without asking a question that will introduce your company to our readers: what is the essence of your existence and operations?

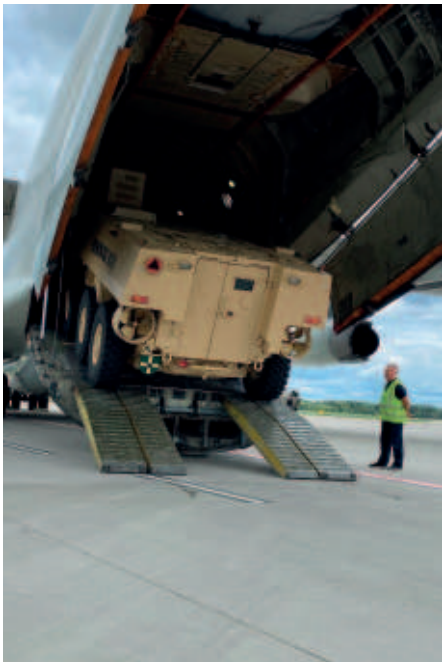
SWORDFISH Ltd. is part of a group of interrelated companies, CZECHOSLOVAK OCEAN SHIPPING GROUP (COSG), which has been operating in the transport market for over 25 years. It was Dušan Jamný, with his experience, who laid the foundations for logistics business and created a structure of companies that efficiently cooperate as one functional entity.

Although all companies in the group follow trends in innovation and modernisation, we continue to focus primarily on the international transport of goods. Whether it's container, maritime, rail, or combined transport, or, in recent years, the growing field of air transport across the globe. Within the group, we transport both standard and oversized goods for export and import, charter ships and aircraft as per customer needs, and arrange transport for entire investment projects.

Additionally, we handle packaging, handling, temporary storage, cargo transshipment, customs clearance, transit permits, and much more. It is therefore unnecessary to mention that the transportation of special and military materials under licenses, often requiring transit through foreign territories of neighbouring countries, is a domain of SWORDFISH Ltd., thanks to its narrow specialisation and the team of the most experienced experts in the transport market.

What does all of this represent for your company in the current time of conflict?

You're right that in the present time, with ongoing conflicts around the world and even near our borders, this logistical support is a particularly important mission for SWORDFISH Ltd. Alongside the necessary and requested increase in production by the Czech defence industry, the role of reliable and timely delivery of their products to the designated locations is essential. Our logistics operations are carried out at the headquarters in Prague's Vinohrady, with branches in Moravia and Slovakia. Additionally, through agency cooperation, we are closely connected with key European ports in Poland, Germany, Slovenia, and others, which are geographically and strategically most advantageous for us.



Since the last assessment, the entire COSG group has doubled its number of employees and achieved up to three times the annual turnover. To give a closer idea, this means handling over 22,000 TEU (equivalent to 20-foot containers) annually. The company is a member of BIMCO (Baltic and International Maritime Council) and holds an ISO 9001:2009 Quality Management System Certificate for the aforementioned services.

It's important to note the personal involvement of Jaroslav Sr. in addressing numerous legislative issues faced by companies that are AOBP members. For instance, the free movement of goods and services within the EU member states is regulated by legislation in each member state, which significantly restricts our access, particularly to European maritime ports. What can you say about this?

As part of our active work within the AOBP, we have achieved recognition of transit issues faced by Central European states at the EU Commission level. Within the EU, there is transit legislation in the form of Directive No. 43/2009, designed to unite us all as one economic entity, even though sometimes neighbouring countries act less as neighbours and more as competitors.

When it's impossible to find an open transit route for our special cargo, we are left with air transport as the only option. I can say that, according to the needs of SWORDFISH Ltd., we have also built a strong air freight division and effective customs declaration services that offer our partners superior services.

Of course, success in this industry requires holding all the necessary certificates, permits, and "armament licenses for transportation," which I can guarantee to some extent due to my original education.

Is it all just about logistics in the defence and security industry?

Definitely not. While the main activity of SWORDFISH Ltd. is logistics support for companies trading mainly in military materials, it is also active in other sectors, participating in international exhibitions, conferences, and business delegations. For instance, we set up a broker's office for the COSG Group in Santiago, Chile, following our twenty-year logistics activity in Antarctica. As a logistics company, we participated in the construction of the Czech polar base in Antarctica, and the scientific station of Masaryk University in Brno, named after Johann Gregor Mendel.

In reality, all research activity in Antarctica, including life, supply, and safety, is heavily dependent on logistics, so Antarctica is more of a hobby for us, tied to our work and business.

We are also continuing the legacy of Czechoslovak Ocean Shipping. Within the group, we train new sailors and yachtsmen, usually in week-long courses in Poděbrady, with practical exams taking place on our yacht or catamaran in Zadar, Croatia.

Thank you, and now I will turn to you, Jaroslav Junior. Not only are you following in your father's footsteps within the company and the AOBP, but you're also taking on and addressing the current challenges of commercial companies with "strategic orders," which were once rare. What makes these orders so unique?

What makes these orders unique is usually handling volumes of over 100 containers at once, requiring preparedness in terms of administration, logistics, and capacity, all at the right time, often involving a combination of sea, rail, and road transport. It's not uncommon for us to handle multiple such orders simultaneously, which can sometimes stretch our personal and capacity limits. But our team is used to such situations, regardless of holidays, days off, or even limited family time.

Since I'm already asking you questions, I can't help but ask about your current activities and visions as Vice President of AOBP Czech Republic for Strategic Planning.

SWORDFISH Ltd. has been a member of AOBP since its inception in 2009. I began my activity in AOBP upon joining the company in 2019,

where I had a great opportunity to learn alongside my father in a new environment, utilise my previous international experience, and begin representing the interests of AOBP.

As Vice President, new opportunities open up for me to influence, in the best possible sense, the operations of AOBP for the benefit of the Czech industry. Thanks to my everyday activities in international transport and close contact with a large number of member companies across various sectors, we have up-to-date information on their needs, not just in terms of military goods. The connection between purely defence companies and "civilian" ones is a growing trend that allows for the transfer of newly developed dual technologies into special production, followed by market offering. Such connections are also made in the Board of Directors, the advisory body of the AOBP Presidency, and expert sections made up of member companies. One of these sections is the Comprehensive Border and Critical Infrastructure Protection section, where I serve as chair. Our aim is to effectively present Czech products and services as part of joint solutions. This is very important for Czech economic diplomacy, particularly at trade fairs or business missions.

Another area where I see opportunities for the Czech defence industry is the current tense international environment, where new challenges and threats emerge dynamically. Therefore, it's important to maintain contact and keep up to date with participation in international events and joint programmes, such as those supporting Ukraine's current recovery and future reconstruction. There are also great opportunities arising from the required increase in defence capabilities of EU countries within NATO, using support from the European Defence Fund (EDF). Defence budgets are growing, and the Czech defence industry must take advantage of this moment. However, in many cases, this will only be possible through successful collaboration with foreign partners and organisations.

I apologise, our space for the interview is rather limited, and so there are many other topics, which we will offer our readers as information and revisit next year. What are these topics?

Another visible sign is Jaroslav Junior's representation in various delegations for the Czech Republic's defence industry or in his role leading business foreign missions. He is also the initiator of "contracted transports" for state-owned enterprises of Czech ministries or foreign embassies in the Czech Republic. Another significant contribution is his involvement with numerous humanitarian and charitable organisations, represented by passionate thinkers who need their material help delivered close to war conflict zones. This includes, for example, medical first aid supplies, ensuring immediate needs in crisis areas.

Returning to the involvement of both Jaroslavs in this sector of business, the similarity is clear, not only in the name but mainly in their active development of the company's activities, as well as in public support for the Czech defence industry. The advantage of this connection for all parties is the provision of company logistics support via SWORDFISH Ltd. in synergy with active participation in the public interests of AOBP members.

In this brief story of the father and son at SWORDFISH Ltd., we can see the successful transmission of entrepreneurial experience, with the continued "family business" being developed through logistics cooperation.

It is clear that without the proper preparation for implementing transport projects by the most experienced people in the field, and the brave and friendly relationships between owners and their customers, none of this could have been achieved at SWORDFISH Ltd.

In the environment in which father and son operate, I was struck by one of their observations: "It's worth noting that in this complex period, the attitude of the entire public, including the younger generation, is changing from a previously clear pacifist stance to an understanding and support of Czech defence policy and the need to assist our allies."

In conclusion, it's appropriate to wish partners Dušan and Jaroslav Sr., along with all the other collaborators, including Dipl. Eng. Jaroslav Pecháček Junior, continued success in their work at SWORDFISH Ltd. Today, they all feel not only a great sense of pride but also know that the energy invested contributes to the sustainable development of not only SWORDFISH Ltd. but also the entire COSG group, ultimately benefiting the AOBP member companies and the Czech industry.

The interview was conducted by Eva Soukupová
Photo: SWORDFISH

Security & Defence Technologies Catalogue

2025–2026

Apliacation SDTC (Security and Defence Technologies Catalogue) intends to introduce the best Czech companies and Czech branches from the defence and security sector. You can search for your potential business partner by alphabetically list or field of activity via sectors.

Czech defence and security industry has a long tradition and it is known for its unique structure, quality products, and excellent innovation potential. Czech products of the defence and security industry are among the world´s best and the main reference is customer satisfaction around the world. Our country depends very strongly on the export opportunities that are very competitive and successful at the foreign market. Most of the companies supply their products and service to the Army, Police, Fire Rescue Brigade, Prison Service of the Czech Republic or abroad.

Security and Defence Technologies Catalogue is published/printed as a hardcover book also. The deputies of Ministry of Defence of the Czech Republic use this publication and aplication to introduce Czech companies by their business meeting to help mutual cooperation around the world. It helps to introduces Czech firms by the ambasssy deputies of Ministry of Foreign Affairs around the world also.

Security and Defence Technologies Catalogue should help to promote business and export successes and make, media-wise, a significant contribution to ensuring the defence and security of the Czech Republic and our foreign partners.

ICYBEAR – INTERNATIONAL CYBERSECURITY PROVIDER AS A SERVICE

IcyBear, a distinctive Czech cybersecurity solution, delivers comprehensive digital asset protection for SMEs, individual users, and households. It focuses on safeguarding endpoint devices, including smartphones, tablets, laptops, and PCs, as well as protecting valuable information assets – ranging from banking data, know-how, and personal information to sensitive business details about suppliers and clients. Additionally, IcyBear assists organizations in meeting contractual and regulatory compliance requirements.

Utilizing advanced algorithms and artificial intelligence, IcyBear can detect and prevent cyber threats in real-time, significantly boosting the security of data and devices. With encrypted sensitive data and an emphasis on user privacy, the company ensures that personal and corporate information remains secure. IcyBear also offers 24/7 monitoring and support, with a team of experts standing by to respond immediately to any potential security breach and resolve threats through back-tracking detection methods.

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Collaborating with leading technology companies from the USA, Israel, and the EU – many of which are recognized in the Gartner Magic Quadrant and awarded for excellence in cybersecurity – ensures that IcyBear delivers high-quality, globally recognized solutions. Furthermore, IcyBear is featured in the Czech Strategic Technologies (CST) catalogue, an initiative created under the Czech Senate and Chamber of Deputies to promote technologically advanced Czech companies worldwide.

ICYBEAR
CYBER SECURITY

PUBLISHER'S PLAN 2025 – REVIEW FOR DEFENCE AND SECURITY INDUSTRY & IDET NEWS

Review 1/2025
- Modernisation of the Czech Armed Forces and involvement of the Czech industry, interviews
- Deadline: 24th February
- Dispatch: 28th March 2025

Review 2/2025
- IDET, ISET, Pyros, General Assembly of AOBP Czech Republic, company invitations to trade fairs IDET, ISET, PYROS (to be released approximately 14 days before the trade fair)
- Deadline: 11th April 2025
- Dispatch: 19th May 2025

Review 3/2025
- NATO Days, IDEB 2025, interviews
- Deadline: 15th August 2025
- Dispatch: 18th September 2025

Review 4/2025
- Annual meeting of the representative editorial board, awards for 2024, interviews
- Deadline: 14th November 2025
- Dispatch: 23rd December 2025

IDET NEWS 19/2025
- Deadline: 22nd April 2025
- Dispatch: 26th May 2025

LIFE CYCLE MANAGEMENT AND THE QUALITY OF THE ISL DATABASE

In my previously published article in this periodical, I mentioned the importance of Life Cycle Management (LCM) of military equipment as a key task of the Ministry of Defence and the Czech Armed Forces. This issue encompasses various perspectives, primarily those of the manufacturer and the user.

Life Cycle Costing

The manufacturer monitors the market, customer interest and competitors, while innovating the product in line with modern trends and user requirements. Innovations usually bring technological improvements that increase the product's utility value. The user, on the other hand, emphasises the maximum utilisation of equipment and its reliability, the ability to plan operational costs, including the prediction of fuel consumption, spare parts, their storage, and the ability to schedule maintenance and repairs. This cost summary is used to verify the anticipated total costs (Life Cycle Costing – LCC) of the equipment.

For standard commercial equipment, the user relies on general operational data, addressing deviations through standard maintenance procedures or warranty claims. However, special and military equipment requires a specific approach: manufacturers often lack data on reliability and failure rates that would reflect different operating conditions. This lack of realistic data leads manufacturers to use mathematical models to calculate, in simplified terms, the ‚probable failure rate' of key structural components or technological systems. Based on this data, manufacturers define the equipment's maintenance requirements and necessary service actions.

Information System of Logistics

The Ministry of Defence and the Czech Armed Forces utilise the Information System of Logistics (ISL) to manage and evaluate the operation and maintenance of equipment. This system contains an extensive database and covers all organisational levels related to the operation and maintenance of equipment. It enables not only the collection of necessary data but also its long-term storage and aggregation, which is essential for analysing equipment reliability and failure rates.

In the future, the implemented methodology and software support for LCM monitoring of the selected equipment should be able to receive and subsequently process the recorded key operational data and information on the maintenance performed, and analyse everything in the required context. However, no information system on its own can fully replace human capacity and automatically ensure the completeness and accuracy of all necessary data on the use of the equipment and its maintenance. Continuous

attention must be given to the process of collecting operational data and recording it into the information system. Oversight activities will still be required in the future, particularly with the application of the NGVA (NATO Generic Vehicle Architecture) framework.

In order to eliminate human error in the recording of operational and maintenance data, a technological link between ISL and selected aircraft has been successfully developed and validated in the past. Similar interfaces can be introduced for other types of equipment acquired and operated.

***

Today, the Ministry of Defence and the Czech Armed Forces have a wide network of ISL users and a robust database containing continuous, long-term operational data on equipment usage, along with related information on maintenance and spare parts consumption. This database forms an essential foundation for implementing any methodology for life cycle monitoring and cost analysis of selected equipment.

Text: Jaroslav Řeha
Schema and photo: AURA archive

WHEN THE NEXT CRISIS BREAKS OUT:

What is changing in crisis management and economic measures for crisis situations?

The modern Czech crisis management system has a quarter of a century of existence behind it. It was created by the adoption of comprehensive crisis legislation in 2000, which was created mainly in response to the extensive floods of 1997. The originally quite pronounced "flood" character of these laws – we could not fully imagine any other threat for a long time – has been gradually erased, but the emphasis on physical and material threats and on the vulnerability of physical and material assets remains. Gradually, legal standards for cyber security have been created, but it remains independent, as well as regulations for sectoral emergencies, and in particular, it has not yet been possible to unify procedures, capacities and tools for national defence on the one hand and for all other crises on the other. This is proving to be one of the biggest and most useless problems of the Czech system today.

The security environment has changed drastically compared to the turn of the century. Turbulence is already a constant backdrop, and next to it, we are immersed in complex crises associated with Ukraine, the Middle East, the growing anti-system movement, the mass emergence of disinformation and conspiracies, extremism, mismanaged migration, and slowly but noticeably forwarding climate change. War has become part of our horizon. Floods in the Czech Republic and elsewhere in Europe are just the icing on the cake, one of the many elements on the map of current threats.

The Crisis Management System (hereinafter also referred to as the CM), the related System of Economic Measures for Crisis Situations (hereinafter referred to as HOPKS), the Critical Infrastructure Protection System and the Cyber Security Rules – all of this will undergo a fundamental change in the coming months. The Czech Republic is obliged to incorporate two European directives into its laws – the first is the CER (Critical Entities Resilience) directive, the second is the NIS2 (Network and Information Security) directive, both from 2022. Due to these directives, the Crisis Act, the Cyber Security Act is being amended and a completely new law on the resilience of critical infrastructure entities is being created.

However, the current changes did not start there – already in 2023, the crisis laws were modified due to the fresh experience of the war in Ukraine, and these changes apply from 1 January 2024.

The amendment to the Crisis Act No. 240/2000 responds to the possibility of concurrence of

military and civilian crisis states, and especially to a much faster escalation of the external threat to the Czech Republic. For this reason, the government is newly entitled (after the previous transition to the state of emergency) to order the use of economic measures for crisis states in preparation for a state of nation threat – i.e. not only when this state and subsequent state of war are declared.

However, the old problem remains, which was once again illuminated by the Sources 2024 exercise: a lot of disproportions in powers, where two lines will work side by side when requesting in-kind resources. One is the line of crisis management, from central administrative authorities through regions and municipalities with extended powers (ORP) and the other is military, from the Operations Command through the Territorial Command to the Regional Military Headquarters (KVV). It turns out that especially the military line operating in the state defence regime is sometimes not fully aware that the available forces and resources will be divided and allocated for tasks for the benefit of the survival of the population, support for the IRS and armed security forces, and in the future also for the providers of basic CI services. The current division of crisis states into military and non-military is functional in an either/or regime – but in conditions of a complex crisis and accumulation of threats, it will not be so simple. The army expects to issue a delivery order and receive the equipment registered through the ORP – it may be surprised that the same equipment has already been allocated by the regional authority to deal with another threat through the HOPKS information system. In any case, it will be necessary to provide a lot of civilian resources for the army both in mobilization and without it, because the army simply does not possess enough of its own (e.g. accommodation, catering and other technical capacities). And it will still have to share some of these resources compared to its plans under Act No. 222/1999.

Another change that is already in effect is the measure of Act No. 241/2000 on HOPKS, according to which the government approves the Plan for the Creation and Maintenance of State Material Reserves to Ensure the Security of the Czech Republic. What is it about? The State Material Reserves Administration (SSHR) is creating a plan for their acquisition for a period of two years. It will request input from central administrative authorities, submit it to the government, but it is discussed before it by the Committee for Civil Emergency Planning, and it often ends up there, its legal weight was very problematic. This will change significantly because this plan will be discussed and approved directly by the government. In 2025, the plan for 2026-2027 will be discussed and approved.

It is also important in terms of overall coordination. In principle, the reserve plan is always in deficit – and only once has the government of Prime Minister Petr Nečas allocated an additional CZK 0.5 billion to actually cover the planned expenditures. The missing funds are always between 1 and 2 billion at most, so no big money. In addition, these are funds intended for the acquisition of state property, not subsidies to other entities. When a crisis situation suddenly breaks out, the political representation immediately starts asking where the resources are ready – and that is why there were exactly 10 thousand disposable masks in the state reserves at the beginning of covid. As a result of negligence on the part of the relevant ministries, a process had to occur in an extreme emergency, in which the acquisition of tens of millions of protective equipment items cost a high billion CZK. Another story is that the subsequent demands of authorities of all types for supplies for the future have been frighteningly exorbitant – and soon these stocks will again be disposed off ecologically at considerable cost. Therefore, it is good if the plan is approved by the government.

Speaking of the State Material Reserves Administration, Act No. 97/1993 on the scope of SSHR is also regulated from 2024. Some ministries have also dealt with the preparation for crisis situations in a slightly peculiar way, refusing to be responsible and competent for the entire sector, but only for their own components, the organizations they themselves establish. From this year, this will be prevented by a provision according to which the SSHR methodically manages and unifies the procedures of regional authorities and central administrative authorities in the preparation of HOPKS. This will confirm the unique competence of the Administration in relation to ministries and in real life. The State Material Reserves Administration must be appreciated, among other things, for providing all other central administrative authorities, regions and municipalities with extended powers with training for their officials and specialists from its budget.

The law newly allows for a reservation system, i.e. the acquisition of state material reserves, where the protectors continue to have the commodities at their disposal. SSHR may also carry out quality and quantity controls. Protectors take care of these assets, of course usually well, but more than in the past, care must be taken to ensure the immediate applicability of materials and equipment.

Now let's take a closer look at the process and impacts of transposing European directives – here especially CER, let's leave digital NIS2 aside. The new wording of the regulations, i.e. both the Crisis Act and the Act on the Resilience of CI Entities, is not yet known, because the current version of the protocol of objections and amendments to the Act on Critical Infrastructure in the inter-ministerial comment procedure has 900 pages. So we are not very close to the final form. If it is achieved in the 1st or 2nd quarter of 2025, it can be considered a great success. There is also a risk of a complete halt of the legislative process due to the elections in the autumn of 2025. To be fair, the situation is similar or worse in a large number of EU Member States.

A number of changes are expected in the wording of the Crisis Act. One of the most sensitive and hotly debated topics is the transfer of competence for the preparation of crisis plans, where the transfer from the FRS of the regions to the regional authorities was in play. But it seems that this will not happen. Another introduces the power of the government, which will be entitled to decide on the extension of the range of eligible entities to which state reserves can be provided free of charge during the state of emergency.

From the point of view of economic measures, it can be expected that the HOPKS Act will most likely include an extension of the

range of entities that can be supported by this system – i.e. critical infrastructure entities. This can happen on the one hand by the crisis management authorities within their sphere of competence securing and planning the necessary supplies for the benefit of providers of basic services. CI entities will be obliged to inform the relevant ministry about the need to secure the basic service – which is the very core of the law – and which they themselves are unable to provide by other means. Ministries and other central administrative authorities will evaluate the need for in-kind funds through the HOPKS system for the provision of basic services (by CI entities) in their sector or sub-sector. And these missing material funds will then be included in the system to be purchased in the state material reserves.

Thus, the conditions are expanding where the state will be able to release emergency stocks and material reserves for the benefit of both new critical infrastructure entities and the armed forces, armed security and rescue forces, in response to the need not to wait for the declaration of crisis states under all circumstances.

In the new regulation, SSHR will hopefully be able to submit proposals to the government directly, and not through a member of the government, which is the Minister of Industry and Trade. In the coming period, emphasis will certainly be placed on building and acquiring own stocks at all levels – from state bodies, territorial self-governing units, security forces, CI entities, to companies and households.

A completely new tool will be a reservation system for commercial entities operating on the market. The first field for the application of the reservation system is healthcare, where this fundamental innovation has already proven to be necessary, namely the occasional occurrence of a deficiency of some medicines. A trial operation is currently underway focused on the reservation of selected antibiotics at distributors. They have good storage conditions, the problem of replacement in expiration periods is completely eliminated, the commodity is always available "fresh". It is ideal to always use existing distribution chains – so that the medicines are not brought by firefighters. The project is implemented in close cooperation between SSHR and the Ministry of Health. A lot of progress has also been made in addressing the shortage of medicinal products in the normal regime: measures of a general nature have been prepared even without a state of crisis, limiting or prohibiting distribution abroad, inclusion and release from reserve stocks, and the ministry has even obtained distribution authorization. These measures fit well into the package of so-called EU Medical Countermeasures, or health countermeasures that respond to health-related threats at the European level.

Another institute that is much talked about and which has a direct overlap with the functioning of the defence industry is the preservation of production capabilities. It is a tool by which the state can ensure both in the system of emergency economy and in the system of economic mobilization the production and technological capacity for the creation of necessary or mobilization supplies. So far, however, more is being considered than implemented.

An example is the study conducted on the complete production of small caliber ammunition in the Czech Republic. It mapped in detail what is really needed for it, along several lines from raw materials to machinery to other technological equipment. Companies that produce this ammunition, as well as the division of the Military Technical Institute in Slavičín, participated in it. A pilot project is being prepared to verify how an all-domestic production (from a certain point without any foreign input) would be provided and what needs to be ensured, acquired, set up – and how much it will cost to ensure it.

The future priority is the unification and greater centralization of procurement in the HOPKS environment. This is related to the preparation of a completely new HOPKS information system, which will replace the existing and already old tools Argis, Krizkom, Krizdata and others, because they have become obsolete and can no longer be developed. The new system will be modular, owned by and with the full disposition of the state, so development and service can be done in parts, by different contractors – and at the same time there will be no dependence on a single supplier.

In the future, it is and will be even more true that state material reserves are determined only as the last deployable capacity: only after all resources available on the market and in national economy have been used, and when resources within the emergency economy, and organic stocks held by crisis management bodies and the national security system components are consumed. The role of own stocks will also grow in the conditions of population protection and the functioning of legal entities, companies, households, and individuals. The analysis showed that nowhere in Europe there is a legal obligation to keep prescribed stocks for own survival, so this is probably not the way to go in our country either, but at least Germany and Switzerland show that individual preparedness based on recommendations is taken seriously even in our neighborhood.

NATO's methodology for calculating the allocation of 2% of GDP for defence spending is likely to come as an unpleasant surprise. Although the Czech government expects to apply increased expenditure on the creation of state material reserves to this amount, it is very unlikely to succeed. This type of expense is not accepted into the count.

The process of restructuring raw materials in material reserves will need to be completed. You can't build a fighter jet or a modern tank out of them, but, under certain circumstances, you can produce ammunition up to 30 mm caliber, maybe up to 155 mm. And that's important for the country.

There are also plans to increase the volume of food commodities in material reserves – including a more efficient variant of live cattle herds compared to meat in freezers. However, the conditions for protectors are not attractive, they have almost no profit of it, which is why relevant businessmen and companies do not widely claim this patriotic role.

Among the needs is the expansion of storage capacity for petroleum products. Sooner or

later, oil reserves themselves will increase from 90 to 100 days of average consumption. Hand in hand with this, the role of the state in providing alternative sources of electricity is being intensively considered – it will probably not build a backup power plant, but large battery storage facilities are much more realistic.

Meanwhile, the ration card has become a reality. The basic tool for regulatory measures after the collapse of the regular market for certain basic commodities (food, fuel) already exists in the Czech toolbox, including security paper, printing services and a methodology for working with it even without computers and the Internet.

Despite the rolling developments, we must not forget that the threat of epidemics and pandemics is with us forever. Personal protective equipment and medical devices will continue to be purchased and replaced, but it will be more modest than at the end of the covid crisis. But also not quite minimal.

As we have already mentioned in the Act on the Resilience of CI Entities and as the example of Ukraine shows, the Ministry of Industry and Trade will have to include and purchase large replacement electricity components for lines and substations, necessary to maintain the functionality of transmission and distribution systems, in the material reserves.

The future is also bright for regulatory measures. Although they remain a tool of last resort, when there is really no other way, their preparation is more intensive than in the past. They can be fully applied to supply the population with food, fuel, pharmaceuticals, and in a specific sectoral regulation to supply electricity, gas, heat and drinking water.

Only existing and new laws were mentioned. Other conceptual and strategic documents are also important. One of them is the Concept of Population Protection until 2025 with a view to 2030, which will be evaluated in 2026 and it is already clear today that a number of tasks will be fulfilled only partially. However, the ambitions of this concept were higher than in the past, which is why conflicting and controversial situations arose. The 2023 Defence Strategy emphasizes a government-wide and whole-of-society approach. So the defence sector is beginning to realize that it will not just grab the available resources. The result has so far been stronger cooperation in the plan of the Operational Preparation of the State Territory, where the MoD's requirements for the civilian sector are consulted and modified in detail together with ministries and other central administrative authorities. The same applies to providing Host Nation Support – it is no longer just a task for soldiers.

A complete detail, which testifies to streamlining within the system, is the fact that the regional emergency medical services will become holders of SSHR cards for fuel collection in a crisis situation - so far it has only been the Fire Rescue Service of the regions and the Police of the Czech Republic.

So far, we have only described changes in the national framework and capacities. The European Union's capabilities, such as the RescEU mechanism, are also evolving. It is building massive, shared rescue capacities. These are, for example, supplies to deal with major fires caused by climate change, and this has been taken seriously since this phenomenon has definitively left the zone of Greece, Spain and Portugal. For example, aircraft are in Sweden and Italy, and medium helicopters may be added in the Czech Republic in the near future. From planes and helicopters, the range is growing – for example, ventilators, which were also used in our country, are held by Romania. The Czech Republic has already joined CBRN detection and monitoring. It will continue to provide a large Emergency Medical Team specializing in burns. The Health Emergency Preparedness and Response Agency (HERA) is responsible for coordination, and these activities are not formal at all. Interconnected stocks of medical devices and medicines are being created – a bit complicated, the WHO and NATO are also marginally involved.

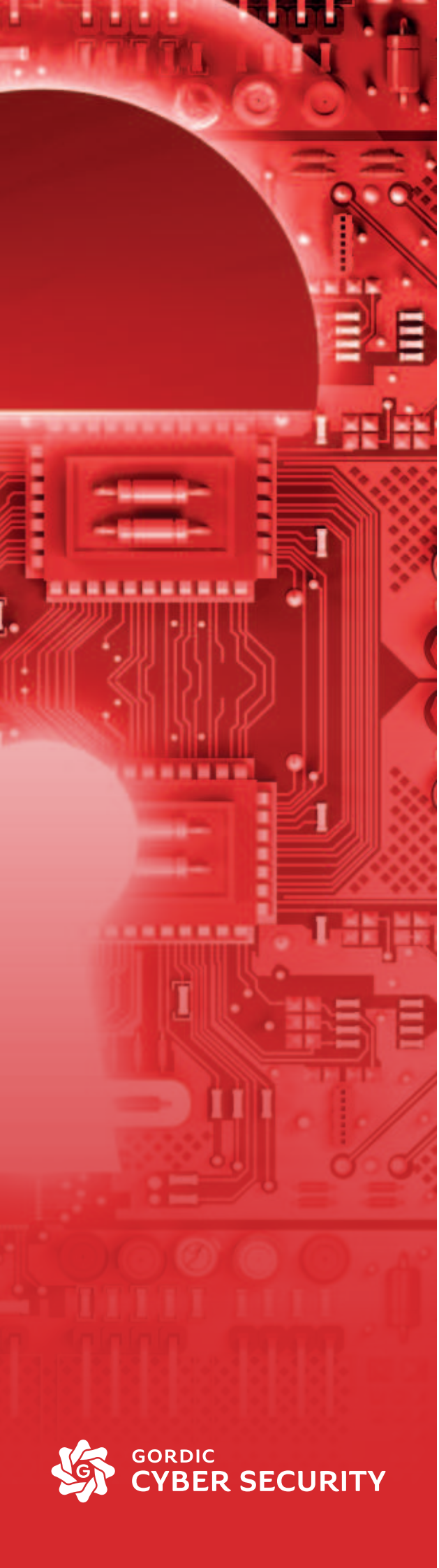
The picture of the development of the CM, HOPKS and the management of emergencies also includes a specific government agenda, reflected in the meetings of the State Security Council (BRS). In 2024, it was affected by

a shooter's attack at the Charles University in Prague, after which the BRS set 33 measures and tasks in January 2024. In February, the BIVOJ project was discussed – the design and architecture of a unified communication platform for public administration, increasing cyber security. If cybercrime is growing significantly proportionally, the response came in the form of the establishment of the National Headquarters Against Terrorism, Extremism and Cybercrime of the Police of the Czech Republic.

In the area of civil emergency preparedness (CNP), which is the de facto external format of the Czech population protection and crisis management system, the Czech Republic has set its national goals for CNP and NATO resilience, namely four: 1) maintaining the basic functions of the state, 2) resilient energy sources, 3) managing uncontrolled population movement, and 4) NATO civilian situation reports for 7 NATO resilience areas.

The floods in September 2024 showed that the system of crisis management and economic measures for crisis situations works. Especially if there is no completely undesirable interference on the part of some politicians who, even out of ignorance, circumvent all the set procedures. What's next? Practice, check, plan, build capacity, and practice again. Right now, there is a good time to go into conflict with reality and unpleasant revelations. In principle, there is money, so is the political will, and thanks to the general, not very optimistic mood, it is not a problem to break illusions and demolish Potemkin villages. There are not many of them left, which is good. But we haven't built much more solid yet, being still far from well prepared.

Author: Libor Stejskal, Prague Security Conference, member of AOBP



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GORDIC OBTAINS CERTIFICATION FOR THE HIGHEST LEVEL OF SECURITY FOR COMMERCIAL CLOUD

The Czech creator and provider of information systems, Gordic, has become the first Czech company to obtain certification for the highest level of security for commercial cloud BU3. This certification, awarded as part of the Cloud Computing Catalogue managed by the Ministry of the Interior of the Czech Republic, confirms that the company's cloud services meet the strictest security and data protection criteria. Furthermore, Gordic is the only company offering a complete portfolio of information systems at this security level.

Cloud Services with BU3 Certification

The Cloud Computing Catalogue allows organisations, particularly in the public sector, to use verified and secure cloud technologies. Being listed in the BU3 category means that the cloud services meet the highest security standards required in the Czech Republic.

Gordic's cloud services listed in the catalogue are based on the GINIS integration platform, which is already used by more than 6,000 Czech public administration organisations. GINIS offers a wide range of services, including a document management system that enables comprehensive management of documents from receipt, processing, and storage, to archiving; a system for accounting and financial resource management; and a system for human resources management and development.

One of the key advantages of Gordic's cloud services is their integration with the global cloud platform, Microsoft Azure, which provides a robust and scalable environment for the secure operation of these systems, allowing Gordic to offer highly secure and reliable cloud services to customers.

The Complexity of BU3 Certification

Obtaining BU3 security certification requires meeting complex requirements outlined in the decree on certain requirements for registration in the cloud computing catalogue No. 316/2021 Coll. It involves passing rigorous technical audits and tests, such as regular vulnerability scans and penetration tests, as well as providing technical documentation covering security and operational procedures for certified technologies, including their configuration, backup, and continuity and recovery plans. A critical part of the certification process also involves an independent audit focusing on the security and integrity of processes, aimed at confirming that the organisational structure and procedures are set up to ensure maximum data protection. Communication with the National Cyber and Information Security Agency (NÚKIB) and other institutions is also essential in the certification process.

"Obtaining the BU3 certification proves that Gordic's services meet the strictest security and data protection requirements," said **Jan Pokorný**, Head of the Cloud Computing Department at Gordic. *"This is a crucial milestone for us, opening up new opportunities for our customers, particularly in public administration."*

The Importance of BU3 for Public Administration

Organisations in the public sector often operate critical state infrastructure and need the highest level of security guarantees. In addition, they are bound by legislation that imposes strict rules for data management and protection. *"For our public sector customers, it is essential that they can now use cloud services with the highest possible level of security. Thanks to our solutions, they can manage their processes more efficiently and ensure transparent and secure operations for their agendas,"* added **Jan Pokorný**.

Security certifications play a significant role in the digitisation of public administration. As demands for the electronic processing of documents grow, the need for secure cloud solutions is becoming ever more pressing. The GINIS platform, thanks to its scale and robustness, enables organisations to manage not only documents but also complex financial, personnel, and other critical processes in an environment that meets even the strictest legislative requirements.

The Future of Cloud Services in the Czech Republic

With the growing demand for secure cloud solutions, it can be expected that other Czech companies will seek security certifications in the Cloud Computing Catalogue. However, Gordic has set a high standard – as the first company in the Czech Republic, it offers a complete portfolio of cloud services in this high-security category, which could be a decisive factor for public sector organisations when choosing a cloud service provider.

"Our goal is to provide innovative and secure services that help our customers operate efficiently. Obtaining the BU3 certification takes us one step further in our journey to becoming a trusted partner for both public administration and the private sector," concluded **Jan Pokorný**.

With BU3 certification, Gordic plays a key role in the area of secure cloud solutions, which could have a significant impact on the further development of digital infrastructure not only in the Czech Republic but also in the broader European context.

www.gordic.cz

COLORLAK – QUALITY FOR DEMANDING CONDITIONS

Colorlak, a leading Czech manufacturer of coatings, focuses on industrial surface treatments and has a long-standing partnership with the military sector. Its specialized coating systems for military equipment are not only innovative but also meet the strictest standards and quality requirements. Key products include the ARMY U2500NG and ARMY U2056 coating systems, which have been certified by the Military Research Institute in Brno under the standards ČOS 801001, STANAG 4360, AEP-64, and AEP-65.

These coating systems are specifically designed for military vehicles, weapons, and materials, including tanks, combat vehicles, trucks, containers, aircraft, and helicopters. They combine anti-corrosion protection with a camouflage effect in the infrared spectrum, which is essential for safeguarding equipment in various combat conditions.

The ARMY U2500NG system utilizes a special polyurethane topcoat that is resistant to mechanical and atmospheric wear, ensuring long-lasting durability. The system includes a two-component epoxy anti-corrosion primer and an ultra-matte polyurethane varnish that enhances the camouflage effect in the infrared spectrum.

The ARMY U2056 system is similar but offers greater flexibility in color customization. Customers can select specific shades according to NATO requirements or their own preferences. This system provides high resistance to weather and mechanical damage, ensuring that equipment remains protected even in challenging conditions.

The ARMY coating systems are designed to minimize maintenance needs, reducing the overall lifecycle costs of military equipment. Their resistance to corrosive and mechanical influences ensures that equipment remains operational for extended periods.

Colorlak is also committed to environmental sustainability. The company holds ISO 9001 and ISO 14001 certifications, ensuring that its manufacturing processes comply with stringent quality and environmental protection standards. The Responsible Care award further confirms Colorlak's dedication to responsible practices in the chemical industry.

www.colorlak.com

ROBOTIZATION OF A LINE FOR THE DEFENCE INDUSTRY

The Czech company DEL is a leader in the field of automation, robotics and engineering. Its wide range of products and services includes the manufacture of electrical equipment, switchboards and control panels. DEL also supplies photovoltaic power plants and smart solutions for electromobility. A member of the DEL group is also the Slovak power electronics manufacturer NES Nová Dubnica.

Our products are exported all over the world. We supply the automotive, light and heavy industry, as well as the energy, engineering and defence industries.

Robotization of the forging press

Recently, DEL overhauled a hydraulic forging press for the production of artillery ammunition blanks. The aim of the project was to implement fully unattended robotics into the existing solution, significantly increasing productivity and improving repeatability of production from a quality perspective.

The press has been completely modernised. All hydraulic cylinders have been repaired and the wiring has been completely replaced. In addition, a new hydraulic drive and an electronic press control system that is in line with current trends were added. As part of the modernization, an infeed depalletization and outfeed palletization and two programmable induction heaters were installed. Two robots were used for fast and precise handling between the infeed depalletising, heating and press on one side and the press, heating and conveyor on the other side. For the correct operation of the forging technology, a program-controlled system of blowing and lubrication was used, and an arm was integrated that cleans and lubricates the functional surfaces of the tool according to set parameters.

The new line control system allows you to easily and quickly change production to a different type of product according to a pre-tested recipe. By modernizing the entire line, an increase in labour productivity and repeatability of quality parameters in tens of percent was achieved.

DEL is therefore the right partner for the robotization, automation or digitalization of your production processes. Our portfolio is truly broad. Working with us will not only help you to discover new technologies, but also to streamline your production processes and thus save you time and money. Just get in touch with us.

www.del.cz

SECURITY BODY SCANNER R&S QPS201

Millimetre-wave scanners can be used to detect all sorts of small items that are otherwise easily hidden. The R&S QPS201 (Quick Personnel Security) and more recently developed R&S QPS Walk2000 scanners from Rohde & Schwarz provide an example.

These systems comprise a static transceiver array, embedded in a large panel, that is equipped with many individual emitters and receivers distributed across the surface area. The panel can be plain or any colour, or digitally printed, and the person to be scanned needs to stand in front for just a few seconds. The transceiver array performs the scan quickly and there are no moving parts.

During the scan, the transceivers emit millimetre waves and collect the reflected signals. The received signals are then subjected to extensive conditioning and analysis using high performance digital signal processors with embedded edge AI.

Privacy protected

Besides the highly effective, fast and automated screening that systems like these now make possible, a further major advantage of millimetre-wave scanning is that no images of the person are captured or constructed as the result of a scan. All data exists only in the digital domain and are discarded as the scan result gets displayed.

If the system detects an anomalous pattern in the captured waves, signal processing calculates its whereabouts and pinpoints the location on an avatar. Security staff can then perform a targeted manual check, guided by this illustration.

https://www.rohde-schwarz.com/security-scanner

R&S®QPS quick personnel security scanner
Rohde & Schwarz

WE KNOW WHAT YOU NEED TO MOVE SAFELY IN THE VERTICAL WORLD.

Traditional Czech manufacturer SINGING ROCK has more than 30 years of experience in the production of climbing equipment and personal protective equipment (PPE) for working at heights. The wide range of products from carabiners and harnesses to helmets, ice axes and ropes meet the most demanding standards and requirements for your maximum safety and comfort.

Sophisticated training centres

In addition to the necessary equipment for working at heights, you can also turn to SINGING ROCK for professional training at POLYGON training centres, where trainers will familiarise you with the correct use of PPE and help you develop your skills for working at heights.

Training at POLYGON training centres is popular, not only among individuals but also among companies, thanks to the individual approach, top-quality equipment and the strong emphasis on the practical part.

During their training, workers at height experience simulations of a variety of outdoor and indoor activities, all under the supervision of experienced trainers who regularly upgrade their qualifications and have extensive experience in the field of work at height.

In addition to training, you can contact their experts for advice on health and safety issues. Other services include carrying out the mandatory annual periodic PPE inspection, for which you can also be trained. The team of trainers consists of leading experts with a broad background in the world of OHS for work at heights, as well as in confined spaces. This will offer you a comprehensive solution tailored to your needs, whether you need to do more for safety or occupational health.

Tens of thousands of workers at height have successfully passed through POLYGON training centres and SINGING ROCK training programmes. Will you be one of the next?

singing rock®

NTT DATA BUSINESS SOLUTIONS, A LEADING SAP CONSULTING COMPANY, HAS STRENGTHENED ITS CONNECTION WITH NTT DATA, OPENING A NEW CHAPTER AS ONE NTT DATA.

The synergy between NTT DATA Business Solutions, one of the most important SAP consulting companies in the global market, and NTT DATA, a global leader in technology and infrastructure services, will ultimately benefit all customers and partners, who will gain access to a broader portfolio of services, solutions and know-how, whether they are looking to innovate, digitalize, optimize their processes or transform their business so that it is future-proof and prospers in the long term.

NTT DATA works with customers across industries, not only in the Czech Republic but also globally. NTT DATA has a particularly strong position in the Czech Republic in the public sector, utilities, manufacturing and defence industries. At the global level, the Group's customers include 75 % of the companies included in the prestigious Fortune Global 100.

NTT DATA is represented in more than 50 countries worldwide and the services provided include management consulting, technology consulting specializing in SAP systems, data management and analysis, support in the implementation of advanced technologies, application development and management, infrastructure services, IT security and connectivity solutions.

The Czech top executives of the organization continue to be Martin Koníček, who heads NTT DATA Business Solutions, and Zuzana Kocmaníková, who heads NTT DATA Czech Republic. ONE NTT DATA's Czech team consists of more than 500 employees and the company's offices are located in Prague, Brno and Ostrava.

Globally, NTT DATA is among the top 10 IT service providers and its team of more than 190,000 IT experts and consultants whose expertise and experience will be even more accessible to Czech customers.

Author: Lucie Sýkorová, Marketing Manager NTT DATA Business Solutions

CYBERSECURITY AND DATA PROTECTION FOR COMPANIES

In today's digital age, cybersecurity is a key element for protecting company data and ensuring business continuity. Companies face increasingly sophisticated cyber threats that can have a devastating impact on their operations and reputation.

One of the fundamental steps to protect oneself in cyberspace is the use of data and communication encryption.

Talkey offers encryption applications for data security and secure electronic communication. With the Talkey application, you can encrypt data both on disk and in online storage. For corporate use, there is the Talkey Server solution with centralized user management and permissions, data backup, release management, integration with existing Active Directory, and other advanced features.

If you operate your own information system, manage data, and its exchange between users, Talkey Engine is designed for you. It is designed for integration into third-party applications and information systems. Simple connection of your system to Talkey Engine via API interface allows you to elevate the security of your content to the level recommended by the National Cyber and Information Security Agency (NÚKIB) in their standards.

The algorithms implemented by Talkey meet all the requirements set by NÚKIB. Talkey is also certified by the National Security Authority.

Talkey is also a holder of a certification from the National Security Authority (NBÚ).

Ensuring cybersecurity is a continuous process that requires constant attention and adaptation to new threats. Companies that invest in security measures can better protect their data and maintain the trust of their customers.

www.talkey.com
We protect your digital security

DATA ANALYSIS AND THE USE OF AI IN DECISION-MAKING

In the current operational environment, information dominance represents a critical element of success. For three decades, Tovek has been developing and **delivering advanced solutions to European armed forces**, intelligence services, and security agencies to achieve this dominance. Our platform, proven in real-world operations, enables commanders and analysts to instantly connect and analyze data from all available sources – from classified documents to **SIGINT** and **OSINT**.

The Tovek platform allows for **searching and analysis** across all types of data – texts, images, videos, and audio files – all from a single interface. It provides timely, reliable, and accurate information to **support command and control**, regardless of the format of the source data. The powerful AI technology automatically analyzes texts in over 30 languages, including Russian, Arabic, and Chinese. It identifies key objects in images and video materials, while advanced algorithms recognize entities such as people, organizations, military equipment, and their interrelationships.

A key advantage of the platform is its ability to fuse intelligence from various sources while fully respecting security policies and access rights. The system connects information from documents, databases, and systems such as HCL Notes, MS Exchange, and SharePoint with your proprietary systems in real time. Analysts can visualize connections between individuals, organizations, and financial flows in a unified environment, create operation timelines, and map data with geolocation information.

For an even more comprehensive situational overview, **API connectors** can link your internal data with information from our data partners, providing access to media monitoring, social networks, the dark web, and data breaches.

The platform significantly shortens the decision-making cycle and minimizes the risk of overlooking critical information. For SIGINT analyses, we offer advanced processing of voice recordings with instant content analysis. By integrating with your tactical and operational documents, we create a unified information environment accessible across command levels.

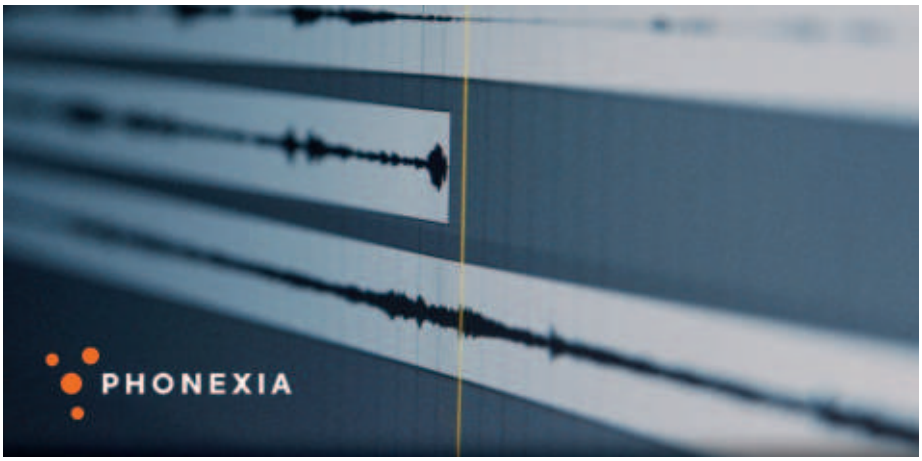
www.tovek.com

TOVEK

PHONEXIA ENABLES FAST SPEAKER IDENTIFICATION AND SPEECH TRANSCRIPTION

Phonexia is a Czech software company specializing in developing state-of-the-art voice biometrics and speech recognition technologies since 2006.

Thanks to its close cooperation with the world's leading researchers (including experts from Brno University of Technology), Phonexia's innovations apply the latest breakthroughs in machine learning, neural networks, and signal processing.



Read more at ***www.phonexia.com/product/speech-platform***

Phonexia Speech Platform is easy-to-integrate software for Military, Intelligence, and Law Enforcement Agencies, offering a wide range of highly accurate, easy-to-use technologies for voice biometrics and speech processing:

- Speaker identification from just a few seconds of speech (in any language)
- Gender recognition
- Recognition of 140 spoken languages
- Speech transcription in more than 60 languages
- Speech detection in audio
- Emotion recognition
- Speaker segmentation based on voice biometrics
- Audio quality estimation

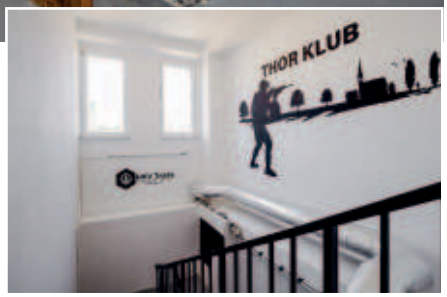
Phonexia Speech Platform is designed with an emphasis on working with sensitive data. It enables easy integration into complex systems using APIs and on-premises software installation at the customer's site.

www.phonexia.com

NEW TRAINING CENTRE THOR CLUB IN KLADNO

This year saw the completion of the first stage of the construction of the new training center in Kladno, where the company Thor Tac. T. C. participates.

The training center is intended to serve not only the armed forces and units of the integrated rescue system (IZS), but also the commercial sector. The first phase includes the opening of two shooting ranges, which represent a modern and technologically advanced approach to training. The classic pistol shooting range allows shooting not only forward, but also to the sides, and the interactive shooting range with a projection screen is equipped with technology enabling the simulation of various situations to which the shooters can react in real time with live ammunition. In the next stages, we plan to build indoor shooting ranges at 50 and 100 meters, a space for fighting in buildings (the so-called killing house), an abseiling wall with the possibility of shooting into a room, and a shooting simulator from a moving vehicle.



These elements will provide IZS components and armed units with the opportunity to train in conditions that simulate real scenarios as closely as possible. The new center will be a significant benefit not only for the commercial sector, but also for the security preparedness of the armed forces.

A SIGNIFICANT ADVANCEMENT IN THE DEVELOPMENT OF UNMANNED TECHNOLOGIES AND AI: TRAINING FUTURE SPECIALISTS FOR THE DEFENCE AND SECURITY SECTOR

The world of unmanned technologies, automation, and artificial intelligence is evolving at an unstoppable pace, placing new demands on modern security and defence structures. Not only the military but also the police, customs administration, and firefighters require capabilities that enable the strategic and effective use of drones—from rescue operations to comprehensive security monitoring. DronPro, a leading Czech drone expert, has prepared specific educational courses for those who want to stay ahead in this rapidly developing field.

Our training offerings include specializations tailored to the needs of demanding sectors where the deployment and effective use of drones are crucial:

1. Drone Pilot – FPV Drone Specialist: This course is ideal for those who need absolute control over the drone during operations in challenging conditions. FPV (First Person View) technology allows precise maneuvering even in confined or inaccessible spaces, which is essential, for example, for police or firefighters during search and rescue missions or terrain mapping. The training includes complete assembly, maintenance, and enhancement of the drone's maneuvering capabilities.

2. Drone Pilot – Automated Systems Specialist: Unmanned technologies are increasingly utilizing autonomous functions, enabling their deployment for logistics and monitoring purposes. This course covers the use of drones for parcel delivery, detailed monitoring, or photogrammetry, which can be crucial for perimeter control, detecting environmental changes, or data collection in crisis areas.

DronPro's educational programs provide professionals with the tools to fully leverage the potential of unmanned technologies for security and defense purposes, emphasizing practicality and adapting training for demanding conditions.

THE NEW UNMANNED HELICOPTER – SKYSPOTTER 152: A REVOLUTION IN AUTONOMOUS AERIAL SYSTEMS

Modelarna LIAZ spol. s r. o. presents its new fully autonomous helicopter SKYSPOTTER 152. This innovative unmanned machine handles even the most complex tasks using advanced sensor configurations and represents a true revolution in unmanned aerial systems.

SKYSPOTTER 152 is a versatile platform with a payload capacity of up to 50 kg and a flight time of up to 4 hours. The on-board 2kW generator powers a wide range of sensors, from radars to electronic warfare equipment. The system comes complete with crew training, technical documentation and essential spares.

Civil applications

SKYSPOTTER offers a wide range of options for the civil sector:

- monitoring of power lines, pipelines and critical infrastructure;
- precision agriculture;
- 2D and 3D mapping;
- geological surveys of underground deposits.

Rescue and emergency applications

In rescue and emergency situations, SKYSPOTTER is invaluable:

- monitoring of natural and industrial disasters (radiation, chemical hazards);
- prevention and monitoring of forest fires and their extinguishing;
- search and rescue missions or delivery of medical supplies using the SKYBOX container (50 kg).

Defence and security applications

SKYSPOTTER offers key features for defence and security:

- intelligence, surveillance, border protection with radar and EO/IR sensors;
- electronic warfare: surveillance and jamming of communications (GNSS, COM);
- monitoring of chemical, biological and radiation hazards;
- telecommunication links (COM bridge) to cover operational areas.

About Modelarna LIAZ spol. s r. o.

Modelarna LIAZ spol. s r. o., a Czech private company, is the developer and manufacturer of the SKYSPOTTER unmanned helicopter. Modelarna LIAZ spol. s r. o. was established after privatisation in 1996. It was transformed into a high-tech production of special parts and tools for the aerospace, automotive and energy industries. The roots of LIAZ date back to 1907 in the engineering and automotive industry.

SKYSPOTTER is manufactured and supplied from parts predominantly produced in-house.

Author: Radim Lakomý

SOKOL PARACHUTE SIMULATORS

SOKOL Parachute Simulators, from its initial version to its latest version have been developed for multi-stage training of parachute-jumpers from beginners to expert paratroopers, Special Forces and amphibian troops.

The newest generation of SOKOL parachute training simulators is the SOKOL 4 generation. This version provides significant enhancements versus previous generation SOKOL systems. However, previous generation SOKOL systems can also be upgraded to the latest version, with varying effort depending upon the SOKOL version to be upgraded.

The purpose of the SOKOL parachute simulation system is to provide a most realistic environment for all phases of parachute jump training. It allows instructors to build and tailor their own scenarios for meeting the requirements for different levels of the training phases. A variety of large 3D databases and 3D models offer a variety of different terrains to serve as the basis for planning and executing the training missions. Apart from the data bases being delivered with the SOKOL simulation systems, the customer and/or end user is able to import geo-specific data base materials, e.g. from MAXAR, for time critical mission rehearsal operations.

RESCUE UNIT OF THE FIRE RESCUE SERVICE AND ITS INVOLVEMENT IN LOGISTIC SUPPORT DURING THE DEVASTATING FLOODS IN SEPTEMBER 2024

The extensive floods that swept through several regions across the Czech Republic in the September tested the pre-established synergy of the Rescue Unit of the Fire Rescue Service (Rescue Unit) with the Logistics Support Department, and consequently with the employees of the warehouse departments. Thanks to the professional approach and quick deployment, the material was always delivered to the site, usually within a few hours of receiving the request.

The spectrum of transport vehicles of the Rescue Unit contributed to this which effectively largely complemented the existing equipment of the logistics workplaces. Such an operational and rapid deployment was made possible by the merger of the warehouses of the Storage and Repair Facility of the Fire Rescue Service of the Czech Republic (SOZ FRS CR) and the Rescue Unit. The merger was made on the basis of organisational changes at the Fire Rescue Service of the Czech Republic (FRS CR) and the order of the Director General of the FRS CR No. 44/2023 of 8 November 2023.

As of 1 February 2024, ten warehouses of the SOZ FRS CR were transferred to the jurisdiction of the Rescue Unit. At the beginning of this year, a new Logistics Support Department was established in the Integrated Rescue System (IRS) division of Rescue Unit, which currently also includes ten detached workplaces. These are situated in the locations Drahanovice, Hluboká nad Vltavou, Jihlava, Kamenice, Kroučová, Skuteč, Velvary, Vizovice, Vlastislav and Zbiroh.

Storage and care of the central reserves of the FRS CR

In connection with the above changes, the Rescue Unit also expanded its activities to include storage and care of the central reserves of the FRS CR. These are materials primarily intended for logistical support during rescue, liquidation and recovery operations and for the tasks related to the population protection. We must not forget the performance of emergency tasks pursuant to Section 3 of Act No. 320/2015 Coll., on the Fire Rescue Service of the Czech Republic and on amendments to certain acts, as amended, on the territory of the Czech Republic.

The material of the central reserves of the FRS CR includes:

- emergency survival resources (accommodation, clothing, hygiene, food),
- personal protective equipment (masks, filters, suits, etc.),

- protective equipment and disinfectants,
- means for emergency response (flood barriers, fillers, double-chamber sand bags, sludge pumps, etc.).

Use of central reserves

In the case of a request for the use of central reserves in dealing with emergencies, the request is submitted to the National Operational and Information Centre of the Ministry of the Interior – Directorate General of the FRS CR, through the Regional Operational and Information Centre of the relevant regional fire brigade.

The material of the central reserves can also be used in organisational management, if necessary, which means activities related to maintaining and improving the professional and physical competence of firefighters (education and training), maintenance of firefighting equipment and other fire protection means, as well as other activities of fire protection units. Organisational management also includes exercises, instructional and methodical activities or other forms of training and training of members of the FRS CR and members or employees of volunteer fire units, members of integrated rescue system (IRS) services or members of associations active in the field of fire protection. This also includes competitions in fire sports disciplines, disciplines or exercises with elements of firefighting, climbing, diving and rescue activities or work on water surfaces. In addition, events open to the public, serving for preventive, educational and promotional activities in the field of fire protection, firefighting and civil protection or other events for the public enabling demonstration of the activities and capabilities of the FRS CR.

Activities during floods in September 2024

Due to the provision of material from the central reserves of FRS CR and the reserves of the Administration of State Material Reserves (SSHR), ten detached workplaces were strategically involved in the liquidation of the consequences of floods across the regions of the Czech Republic.

The administration of the workplaces is currently occupied by nearly 40 officers and civilian employees who have been involved in both the logistics and material and technical requirements of the National Operational and Information Centre since the floods first began (Friday 13 September 2024). These were requirements that were raised based on the meetings of the flood commissions, the emergency staffs and, consequently, by the managing officers.

During the days and nights, the employees prepared all the material that was used in the preventive phase to mitigate the disaster and then to deal with the consequences of the floods as efficiently as possible. **Whether managers, storekeepers or drivers, they all took on the role of those who not only dispensed and loaded the required materials, but also, in many cases, transported them to the flood-affected areas during the busy three weeks.** The construction, installation or proper functioning of social facilities (toilets and washrooms) in places where the infrastructure was severely disrupted was no exception.

Logistics Support Department in practice

During this year's floods, which affected mainly the regions in the north-east of the Czech Republic, an immense amount of material, in the order of hundreds of thousands of pieces, was taken out of storage. The work of the members and the employees of the Logistics Support Department began already during the preventive measures. In the initial phase, it was primarily the loan of flood barriers, fillers and double-chamber bags, which stopped at the number 250,000.

To mitigate the effects of the floods, the range of loan requests then began to gradually increase. Over 600 sleeping bags including field beds, blankets and beds were distributed to evacuation centres. Thousands of dehumidifiers, hundreds of heaters and pumps, and dozens of electric generators, among others, were then stockpiled for recovery work.

However, this process of lending and distribution, led by the Logistics Support Department, does not end with the unloading of the materials needed to deal with the consequences of the floods. As the material from the central reserves of the FRS CR and SSHR is primarily used for rescue, recovery and reconstruction work during emergencies, it is necessary to ensure its return after its actual use. This will be followed by a long-term process of maintenance, repair and revision, as well as its return to use or, conversely, its disposal.

Conclusion

As the above shows, the merger of the warehouses of the SOZ FRS CR under Rescue Unit was clearly a step in the right direction. The floods, which tested the newly set up system, showed a much faster and more operational approach both in preventive measures and in mitigating their consequences. In the future, this organisational change will significantly facilitate the performance of tasks related to dealing with emergencies associated with the population protection.

Author: Col. Eng. Ivo Adámek,
Deputy Head of the Rescue Unit
Photo: Fire Rescue Service

INTRODUCING THE VHM-24 VENTILATED MASK: "COMPLETE PROTECTION FOR EVERYONE!"

Are you looking for reliable protection against chemical, biological, radiological, and nuclear (CBRN) threats? The new VHM-24 ventilated mask offers a modern solution designed to keep the entire family safe – adults and children alike.

What Makes the VHM-24 Exceptional?

The VHM-24 is a hooded-style mask with an integrated hood that covers the entire head and neck. This design ensures maximum protection while offering exceptional comfort for extended wear. Additionally, the mask features a powerful ventilation unit that makes breathing effortless and prevents the visor from fogging. Whether you're facing hazardous substances or preparing for emergencies, the VHM-24 will not let you down.

Protection for the Youngest Members of Your Family

One of the standout features of the VHM-24 is its special version designed for children. Effective CBRN protection for younger family members has been missing from the market for far too long, which inspired us to create this product. The children's version of the VHM-24 is tailored to meet the needs of even the smallest users—it's easy to put on and, thanks to the ventilation unit, remains comfortable during extended use.

Comfort and Safety First

- Complete CBRN Protection: Shields against chemical agents, biological threats, radioactive particles, and toxic gases.
- High-Performance Ventilation System: With an optional airflow rate of up to 130 l/min, it ensures comfort even during high activity levels or prolonged use.
- Universal Fit: The hood design easily adapts to various head shapes and sizes.
- High Durability: Made from materials designed to withstand extreme conditions.

Discover the next generation of protection with the VHM-24 ventilated mask. Your safety is our priority!

TECHNOLOGICAL ADVANCEMENTS HELP PROTECT HEALTH MORE EFFECTIVELY

Products from the Czech family company AVEC CHEM protect the health and lives of armed forces and first responders worldwide. Thanks to the automation and robotization of production processes, the company has been able to significantly increase its operational capacity in recent years.

AVEC CHEM, a family business from Eastern Bohemia, started producing personal protective filters for gas masks thirty years ago in a small facility with a few employees and an annual production of just tens of thousands of protective filters. Thanks to substantial investments in automation and robotization, the company can now produce several million filters a year. The company fully utilizes the staggering technological progress and employs artificial intelligence, 3D printing, laser technologies, programmable robots, and complex robotic workstations custom-designed for the production of personal protective equipment. "Our goal has always been to provide comprehensive protection against CBRN threats," says Michal Filipi, the company's managing director and son of the founder. "With the use of robots, we can now not only meet the continually increasing demand for personal protective filters but also focus on further research and development and expanding our product portfolio," adds Michal Filipi. Thus, AVEC CHEM can offer not only a complete range of filters against toxic industrial chemicals and CBRN substances but also permeable protective suits, tactical and industrial half-masks, face pieces, and collective filters for military vehicles and shelters.

Research and innovation, along with the necessary investments in them, are essential for protecting those who risk their lives and health to save others, whether they are soldiers, firefighters, healthcare workers, or police officers anywhere in the world. "In today's turbulent times full of challenges, it is necessary to continually remind of the importance and significance of personal protection," adds Michal Filipi, the managing director of AVEC CHEM.

ORITEST IS A SPECIALIST IN CBRN DEFENSE AND ENVIRONMENTAL PROTECTION

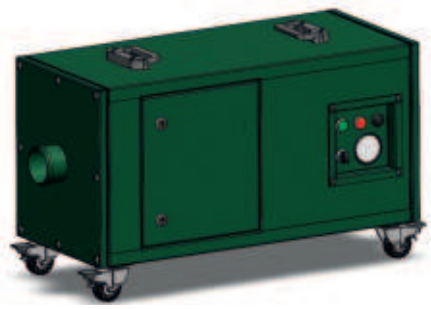
Based on the two decades experience of Oritest's reliable Product Range of Detection Tubes and Papers, Oritest Group, is now extending its activities as a manufacturer to provide innovative and complete CBRN Solutions with a strong focus on supplying the whole range of CBRN Detection and Protection Equipment.

Furthermore we strongly focus to provide the Users with complete CBRN Integration Solutions; like completely equipped Mobile Labs, CBRN Reconnaissance Systems as well as Toxic Waste Recycling Management Treatment and we offer our Customers complete Evaluation, Testing and Training programs at accredited Competence Centres using our extremely experienced, highly skilled Experts, Specialists and Scientists.

Our Team has more than 25 year experience in dealing with CBRN and Environmental Protection Aspects, both in the Military and Civil Area. We hold more than 80 Patents, exporting our products in more than 50 Countries worldwide.

VZDUCHOTECHNIK: MANUFACTURER OF CBRN FILTERS AND FILTER-VENTILATION UNITS

The company Vzduchotechnik based in Chrastava, a manufacturer of CBRN filters and filter-ventilation units, is taking further steps in the field of innovation and certification in connection with the war in Ukraine and their understanding of the necessary military self-sufficiency of Europe. Therefore, it has decided to secure attest for its flagship solution – CBRN filter COLPRO 150/200, which is used in stationary large-capacity shelters of civil and army defence. The result is obtaining confirmation of the filter's compliance with AEP-54 (Ed. B, Ver. 1, 2014), NATO standard for collective protection in the CBRN environment. *"The demand of foreign armies for our products also played a big role in our decision to obtain the attest, because although it was not yet well known, we are one of the few producers of these filters and filter-ventilation technology in Europe, and our experience with the production of these specific solutions dates back to 50 years of the last century"*, says the managing partner of Vzduchotechnik, Jiří Svoboda. *"The company will continue to follow the trend of innovation and relevant certifications. We can see what enormous financial resources are being put into the reconstruction of shelters in Poland or civil protection, the same applies to the Baltics and Scandinavia, where we are already active. We are surprised that while abroad the protection of the population is one of the great priorities of the state and threats of Russia are thus taken seriously, in the Czech Republic there is only limited activity in this segment"*, he adds. The company also cooperates with the defence industry, when it developed a new CBRN-filter-ventilation unit Firbach 50 (picture below), just based on the suggestions of potential customers, for both combat and non-combat vehicles. The solution will be available in March 2025 and has already the first interested parties from the Czech Republic, Canada and the Middle East. *"A big support for our business is also our group Security Bunkers Alliance, of which we are founders, because it allows us to deliver complex solutions anywhere in the world"*, concludes Svoboda.



DRÄGER: YOUR RELIABLE PARTNER IN SAFETY AND HEALTH PROTECTION

Dräger stands for quality and innovation in safety and medical technologies. For over 130 years, we have been committed to protecting and saving lives—whether in industry, the public sector, or emergency services.

Our Safety Technology Division offers a wide range of products designed to make work in challenging situations easier while ensuring maximum safety. These include:

Dräger PARAT® Escape Hoods – Designed for quick and safe evacuation from areas with hazardous gases or smoke. Their intuitive design ensures anyone can use them within seconds.

Dräger X-pid® 9500 and Dräger X-node Detection Devices – Mobile technologies for analyzing hazardous substances directly in the field, significantly reducing decision-making time in critical situations.

Alcohol and Drug Detection Devices, including the modern Dräger DrugTest 5000 – Reliable tools for monitoring and prevention, widely used across various sectors.

Dräger CPS 7900 Chemical Protective Suits – State-of-the-art protection for work in high-risk environments involving toxic substances, ensuring maximum user safety.

Our products are designed with a focus on ease of use, durability, and reliability. These key features ensure they perform even under the most demanding conditions.

We believe that modern technologies, combined with our decades of experience, contribute to increased safety not only in everyday life but also in extraordinary situations.

For more information about our products and services, visit www.draeger.cz.

Dräger
Technology for Life

MALINA – SAFETY: INNOVATIVE RESPIRATORY PROTECTION FOR DEMANDING CONDITIONS

MALINA – Safety s. r. o., the manufacturer of CleanAIR® protective systems, stands among the top companies in respiratory protection. Since 1993, the company has focused on the development and manufacture of devices that meet strict safety standards while ensuring user comfort. Utilizing in-house research and development resources, MALINA emphasizes the highest quality. Its products are manufactured in the Czech Republic in compliance with ISO 9001 and AQAP 2110, which guarantees maximum control over processes and final product reliability.

Broad Range of Applications

CleanAIR® products are designed to meet the specific needs of diverse sectors, including manufacturing, chemical and pharmaceutical industries, healthcare, civil protection, and defense. Noteworthy projects include a military filtration and ventilation unit developed for the Czech Armed Forces and the MediCAER set, which provided reliable infection protection for healthcare workers during the COVID-19 pandemic.

Protection and Innovation for the Defense Sector

Development for the defense industry includes innovative, customized solutions, as demonstrated by special orders for armed forces. Thanks to its expert team, the company offers flexible, high-level technical solutions that prove effective in extreme conditions and meet the most stringent standards.

Future Direction

With over thirty years of experience in respiratory protection, MALINA – Safety s. r. o. continues to focus on further development and investment in new, innovative solutions. CleanAIR® products are recognized as reliable respiratory protection tools in highly demanding conditions in both industry and security sectors. The company remains committed to developing new technologies and approaches that provide safe and effective solutions for users in challenging work environments.

ATHEX TECHNOLOGY: INNOVATION AND RELIABILITY IN EXTREME CONDITIONS

We are ATHEX Technology, specialists in developing cutting-edge technological solutions for industry, healthcare, and defense.

Our innovations guarantee high reliability, flexibility, and performance in the most demanding conditions.

MOBILOT
SBORKA - ROZBORKA MIMO LIMIT

MOBILOT –
The Modular System of the Future

One of our greatest achievements is the MOBILOT modular system, which features a patented octagonal joint. Thanks to its quick assembly and disassembly, it is ideal for mobile hospitals, military bases, and temporary workspaces. Its durability and ease of handling make it a perfect solution for scenarios where fast infrastructure deployment is crucial.

LAMA – Mobile Medical Station

LAMA, our innovative mobile medical station, is made from materials like stainless steel and antistatic Polymer/Polymax PTEG, meeting strict hygiene and safety standards. It is compact, easily transportable, and perfect for military and humanitarian missions where quick and reliable medical assistance is critical.

Innovations for a Better World

We are achieving success on an international level through partnerships with key players in civil protection, energy, and logistics. Our durable and eco-friendly solutions are essential for both crisis situations and everyday use. We are committed to sustainability, focusing on products like the UNIMOB mobile unit and advanced monitoring systems, thoroughly tested for deployment in extreme conditions. Our mission is to protect lives and secure critical infrastructure worldwide.

www.athex.cz

GRANT DETECTION s. r. o. SUCCESSFULLY EXPANDS ITS ACTIVITIES

Grant Detection s. r. o. is successfully expanding its activities in the field of detection technologies across the European market. Our innovative heartbeat detector, MMD01, has become the preferred choice for security forces in several countries due to its unique features.

In addition to our existing clients, including the German Bundespolizei, Bavarian Border Police, Frontex Agency, Czech Police, and Prison Service, we have recently gained new clients such as the Spanish National Police, Austrian Border Police, and French Border Police. The MMD01 detector was presented to the French Prime Minister and Italian Minister of the Interior at the Saint-Ludovic border crossing, as well as to the German Minister of the Interior during border control operations by the German police.

The MMD01 detector has attracted exceptional interest from armed forces across

Europe, including the Netherlands, Lithuania, Romania, Bulgaria, Hungary, and Italy, as well as in the Middle East.

Benefits of the MMD01 Detector Compared to Outdated Heartbeat Detection Technologies:

- **Fast and Mobile Vehicle Inspections:**
  The MMD01 can scan a vehicle in just one minute. Inspections can be conducted not only at stationary checkpoints but also anywhere inland, significantly improving efficiency and reducing queues at borders.
- **Simplicity and Compact Design:**
  With its fully compact design, the MMD01 requires no additional accessories, and its operation is extremely user-friendly – three buttons, one result.
- **Market-Leading Reliability:**
  According to independent comparative tests by our customers and studies conducted by the University of Hungary, the MMD01 is currently the most reliable heartbeat detector on the market.

For more information, visit our website at **www.grantdetection.com**, where you can also find a demonstration video showcasing the MMD01 detector in action.

U&C UAS LLC

U&C UAS LLC was established with the aim to diversify and expand existing production, especially for the needs of the Ukrainian Armed Forces, with ambitions to enter third-country markets. In addition to expanding its production and innovation center, U&C UAS LLC aims to tailor its current portfolio of unmanned aerial vehicles according to the standards of EU and NATO member states. U&C UAS LLC has obtained the NATO Commercial and Government Entity (NCAGE) code, registered in NATO codification system with a number 8400G.

Stork LR is a hardware and software system, an autonomous remote controlled aerial vehicle for solving aerial reconnaissance tasks, adjusting artillery fire, guiding barrage munitions, patrolling, mapping the area with the ability to transmit operational information in real time mode.

Endurance of up to 4 hours and the range of the control channel of up to 75 km within line of sight significantly expands the capabilities of the complex and allows operators to work from locations far from the front line. The use of MESH network technology allows the simultaneous use of several UAVs with one ground control station and the use of the complex as a signal repeater and barrage munitions gunner.

The complex is maximally adopted for operation in the conditions of electronic warfare, has a jamming-resistant satellite navigation signal receiver with CRPA technology.

If the level of electronic warfare impact exceeds the CRPA countermeasures of the receiver, the autopilot software algorithms come into play, which automatically recognize the loss of positioning signals or attempts to create a false navigation field, and then automatically switch to the inertial navigation system.

The digital control channel has encryption protection and algorithms for automatic and manual frequency switching in a band that exceeds the capabilities of most known electronic warfare equipment.

The UAV's payload is built in a modular design that allows quick changes of them in a field.

Author and photo: U&C UAS LLC

esc Defence s. r. o.

Activities

Main areas:
- Unmanned aerial and terrestrial systems
- Smart ammunition

Experienced in areas of:
- Integrated Modular Avionics,
- Counter-Unmanned Aerial systems,
- Guidance, Navigation & Control systems,
- Secure & Resilient Communication,
- Computational units & data management.

Research & Development:
- HW/FW/SW customer based applications & designs
- Analogue & digital data processing & data validation

esc Defence (ESC) is a leader in the field of on-board avionics in the Czech Republic and is one of the leading SMEs in innovative R&D projects with a focus on aerial & space applications, and smart ammunition. ESC is experienced in the areas of HW/SW/FW designs in terms of avionics, onboard computational units, autonomous & fault-tolerant software, counter-unmanned aerial systems, and GNC systems. ESC offers services in the field of HW&SW solutions in customizable UAS ISR applications, system modeling, machine learning in target detection, recognition, and tracking, custom-based neural network designs, SWIL&HWIL simulations as well as a target UAS and drone defence services to eliminate potential threats. ESC has unique experience with EU defence funds (EDFs) due to its three successful participations in different consortiums leaded by KNDS/NEXTER and Cedrat Technologies with such a contributors as MBDA, Escibano, TECHNOBIT, BITTIUM, Nammo, ONERA, Pipistrel etc. Obtained experience is applied in all business lines of ESC.

esc Defence s. r. o. is a part of esc Aerospace company and as such it focuses also on SATCOM products for an optical datalink communication, hyper spectral cameras, satellite payload chains modeling, space qualified onboard control systems, full design of space qualified payloads and a consultancy to satellite design, its implementation, testing and preparations for a rocket launch.

Company profile

esc Defence s.r.o. (ESC) is part of a group, located in the Czech Republic, Germany, USA, and Asia. ESC has recently conducted demonstrations of C-UAS drone detection system on several US and German Airports. ESC maintains commercial contacts in many countries worldwide.

Section prepared by Lauren Cook

FOCUSED ON SECURITY

28–31/5/2025

VÝSTAVIŠTĚ BRNO

BRNO EXHIBITION CENTRE
CZECH REPUBLIC

ISET

MEZINÁRODNÍ VELETRH
BEZPEČNOSTNÍ TECHNIKY A SLUŽEB

INTERNATIONAL
SECURITY TECHNOLOGY AND SERVICES FAIR

Více informací zde:
More information here:

www.iset.cz

PYROS

MEZINÁRODNÍ VELETRH
POŽÁRNÍ TECHNIKY A SLUŽEB

INTERNATIONAL
FIRE FIGHTING EQUIPMENT AND SERVICES FAIR

Více informací zde:
More information here:

www.pyros.cz

CONCURRENTLY HELD WITH:

IDET

GENERAL PARTNERS OF THE FAIR

DSIA

BRNO

Central European Exhibition Centre

BVV Veletrhy Brno

BRNO EXHIBITION CENTRE AS A SPACE FOR INNOVATION AND SHARING OF EXPERIENCE ACROSS INDUSTRIAL SECTORS

The Brno Exhibition Centre is an icon of the Czech exhibition industry with a rich tradition and an ambition to develop continuously. In an interview, Mr. Jan Kubata, CEO of Trade Fairs Brno, will present the exhibition centre's immediate future and the key topics of the upcoming IDET fair. An insight into the development of international cooperation and innovative concepts that are to make the venue a centre for new opportunities and technological trends will also be provided.

What is your vision for the development of the Brno Exhibition Centre in the coming going forward? What can we anticipate?

The Brno Exhibition Centre is an iconic venue with more than 90 years of tradition in organizing trade fairs and exhibitions. Of course, we preserve this legacy and make effort to support it, but at the same time, we want to develop the venue into a modern facility, in order to meet today's demands and expectations. We therefore plan to focus on two key areas – improvement of the existing infrastructure and expanding services for exhibitors and visitors. We want to create an exhibition space that is not only attractive and functional, but also environmentally friendly. This involves a gradual reduction in the energy consumption of the site. We plan to introduce step-by-step technological and logistical innovations. These will include, for example, increasing the digitalization of entrances or a more efficient management of parking spaces. We also plan to raise the standard of our services, whether it be catering, relax zones, or better wayfinding signage systems on site.

What new or innovative forms of trade shows would you like to focus on in the future?

I see the future in linking the classic exhibition part with conference programs and networking activities. Trade fairs are no longer just about presenting products. They are spaces where people meet, share knowledge, and establish new business opportunities. We want to create an environment where participants can see innovations directly on the exhibition grounds, but also actively participate in lectures, workshops and panel discussions that will provide them with practical information and inspiration.

You are also building a concept of "living laboratory" at the exhibition centre. How will this approach contribute to the attractiveness of trade fairs for exhibitors and visitors?

It is a long-term project that enables companies to demonstrate, directly at the exhibition centre, how their products and services work under normal operating conditions. Our venue is ideal for this purpose because it has the nature of a public space, yet still being a protected environment with its own rules and specific legislative conditions, allowing for the testing of prototypes and new products. A great added value is the creation of a space for interaction and feedback. Visitors can experience any technology first-hand, ask questions to professionals and share their experiences. This format encourages innovation and makes trade shows more interesting because it is built on hands-on experiences; it is a trend we want to focus on in the future.

What importance do you assign to the strengthening of international cooperation and what goals do you have in this regard for the upcoming period?

Building foreign relations is vital for us because it contributes significantly to expanding the outreach and prestige of our trade shows. In today's economy, it is important to connect companies, institutions and experts from different countries, which allows us to create not only business opportunities but also a platform for knowledge sharing across markets. Thanks to this, Trade Fairs Brno can act as a bridge between Czech industry and its foreign counterparts. Our aim is to continue to deepen strategic partnerships with international associations and organizations, attracting even more foreign exhibitors and visitors.

We cooperate closely with the CzechTrade agency and other pro-export organizations, which actively and successfully help us with this.

One of the key events on the expo calendar is IDET, which is scheduled to take place from 28 to 30 May 2025. How important is it for the Czech defence industry?

IDET is one of the most important events of its kind in Europe and plays a crucial role in supporting the Czech defence industry.

It serves as a key platform for the presentation of the latest security technologies, thereby strengthening the competitiveness of Czech companies on the global market. The fair allows manufacturers and suppliers to directly present their products and solutions not only to domestic partners but also to foreign delegations, which opens the door to new export opportunities. IDET also provides a unique space for dialogue between industry, government, and the armed forces, which is crucial for further development and innovation in this strategic sector.

Important partners include Ministry of Defence of the Czech Republic and the Association of Defence and Security Industry. What is their role in the preparation of the expo?

We highly appreciate the support we get from these two partners. They have a significant influence on the final shape of IDET and cooperation with them is crucial for the success of the whole event. Thanks to their involvement, IDET works as a great platform for presenting the latest innovations, knowledge sharing, and developing international cooperation in the defence and security sector. The Ministry of Defence and the Czech Army are also the largest exhibitors. This year their exhibition will focus on the 80th anniversary of the end of the Second World War. We also cooperate with both institutions in inviting foreign delegations, whose participation is essential for the fair to be a success. In addition, the Association of Defence and Security Industry cooperates in the preparation of the specialist program and supports the creation of space for strategic talks and business meetings.

What topics will the fair focus on?

We are planning to expand on several key topics that reflect recent developments in the defence industry. One of the new areas will be space defence, which will focus on the use of space technology in defence and security. This segment will present solutions that are increasingly important for modern defence strategies. Another important part will be a startup zone, which will provide a space for start-ups bringing in new ideas and innovations. Cybersecurity, which is essential for protecting critical infrastructure and defence systems, will also be in the spotlight. Another key theme will be 3D technologies in in the defence industry, revolutionizing production and development. I believe that these topics will contribute to an even greater attractiveness of the upcoming edition for the professional public and exhibitors.

In what does the strength of the concurrent holding with PYROS and ISET lie?

Thanks to the combination of IDET, PYROS and ISET fairs, the complete integrated rescue system will be presented. The strength of the connection lies primarily in the synergy of the individual events, which complement each other and strengthen their attractiveness for all participants. Experts thus have the opportunity to see in one place technologies that cover everything from prevention and protection to emergency response. For exhibitors, this also means the opportunity to reach a wider target group and establish contacts across the security and defence sectors. The concept also encourages the sharing of experience between sectors and creates space for interdisciplinary cooperation, which is crucial in today's era of complex security challenges. Thanks to the involvement of all components, we are also able to implement a program with practical demonstrations of technology in the IDET ARENA field polygon.

Author: MS Line editorial team
Photo: Tino Kratochvíl

HOLÍK INTERNATIONAL: 30 YEARS OF SUCCESS AND INNOVATION ON A GLOBAL SCALE

Holík International: A Proud Czech Company Celebrates 30 Years of Success

This summer, Holík International – a purely Czech company – celebrated 30 successful years with its closest business and supply partners, as well as its dedicated employees.

Over the years, Holík has established a global network of partners and founded its own subsidiaries in the United States – Holik America – and in Europe's largest neighboring market, Germany, under Holik GmbH.

Today, our partners in nearly 80 countries support the HOLIK brand, promoting it to professionals in firefighting, defense, and law enforcement sectors.

During the anniversary gala, a significant announcement was made: the acquisition of the Austrian firefighter gear manufacturer seamTex®, now part of the HOLIK group.

Responding to Global Challenges with Innovation and Preparedness

In response to the current geopolitical and security landscape, Holík International relies on a well-prepared team of product developers, stable in-house production capacities, and a commercial team that promotes Holík products to NATO military forces across Europe. Modern military units recognize the necessity of advanced equipment to ensure readiness for combat scenarios, creating opportunities in the defense segment, where HOLIK actively collaborates with global partners.

Innovating for the Military Environment

Military forces demand cutting-edge technologies, including smart textiles and specialized N.I.R. (Near-Infrared Reflective) fabric treatments, designed to protect personnel on the frontlines and in defensive positions. Holík has proactively responded to these demands by developing the latest models of combat and softshell gloves. These gloves feature materials that enable the operation of screens and displays on modern communication devices.

Our current clients include the armies of the Czech Republic, Slovakia, Germany (Bundeswehr), Austria, Slovenia, Lithuania, the Netherlands, Norway, and Poland.

www.holik-internaional.cz

REDO s.r.o.

Our company REDO s.r.o. has been manufacturing military accessories for more than 30 years. We have been on the market since 1992. We are a family company, whose founder is Mr. Ing. Zdeněk Císař. We are mainly engaged in the production of backpacks, bags, cases and accessories for the army and police forces. In recent years, we have been expanding our product range to include equipment for emergency service providers. We supply mainly to EU countries. We are a supplier to the Czech, German, Austrian and Dutch army. We supply thousands of products to the German army annually under several concurrent public contracts. The Austrian army is also an important client for us, where our company has been supplying since 2004. REDO is also a supplier on the domestic market, both to the Czech Armed Forces and to the Police of the Czech Republic, where it responds to the requirements of special army and police units in its development. Last but not least, the company's portfolio also includes development and supplies for various units of the rapid rescue service, firefighters and other services. For these groups, there are separate product lines that are specifically designed for the tasks of securing health and property.

We meet the requirements relating to ISO 14001, ISO 9001 and AQUAP 2110 certification. We strive to responsibly manufacture quality products that can be used by military, police forces and emergency service providers with confidence in the field. Our success in practice is not the result of an individual, but a team effort of all our employees, family and loved ones.

A LOOK BACK AT FUTURE FORCES FORUM 2024

In mid-October, the 15th edition of the international project FUTURE FORCES FORUM (FFF) took place in Prague, focusing on trends and technologies in defence and security. As usual, the event included international exhibition, expert forum, a number of bilateral meetings and official sessions of NATO working groups. The high participation of foreign and domestic delegates and the interest of exhibitors confirmed the importance and status of the FFF project, which has become the most important event of this year in the Czech Republic.

The programme, attended by five hundred official delegates, was opened by the President of the Czech Republic Petr Pavel together with the Minister of Foreign Affairs Jan Lipavsky, the Chief of the General Staff of the Czech Armed Forces Lieutenant General Karel Rehka, the former NATO Supreme Allied Commander Transformation General Philippe Lavigne, and the President of AOBP Jiří Hynek. In total, the Future Forces Exhibition & Forum 2024 event welcomed over 8,500 participants from more than 70 countries. In six exhibition halls, 340 exhibitors from 34 countries presented the latest technologies and solutions, including security and armed forces with capability demonstrations and presentations of the latest established equipment. There were also several world and many domestic premieres. The thematic sections included the traditional Cyber Pavilion including the Cyber Stage, Live Hacking Zone and Cyber Escape Room, C2 Pavilion and the successful Innovation Pavilion, which featured 21 startups, universities or innovation centres. National pavilions were organised by Denmark, France, India, Hungary, Slovakia and Ukraine.

Over 45 conferences, workshops, seminars, panel discussions and competitions were held as part of the professional programme. More than 280 speakers took turns on the podiums, which were listened to by almost two thousand delegates in the auditorium. The main themes focused on multi-domain operations, future conflicts and operational environments; training of aircrew and drone operators; command and control systems; security challenges and innovations in CBRN and medical services; use and security of space technologies; cyber security and defence; internal security and national resilience – crisis management and integrated forces cooperation; use of new technologies and support for innovation; civil security and lessons learned from Ukraine – cooperation between the state, security forces and local governments; specialized police conference – issues of countering active attackers; and technologies for use in the fight against crime, organised crime and terrorism.

Based on the success of the 2024 exhibition & forum, the organisers have already started preparing further events and activities, which will culminate in the 16th Future Forces Exhibition & Forum from 21 to 23 October 2026 in Prague.

Author: Adam Drnek, executive director FFF
Foto: FFF

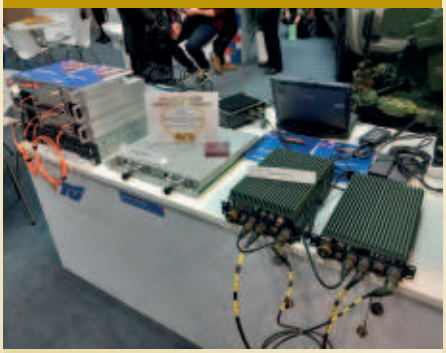
AWARDS FOR EXHIBITORS IN THE INNOVATION CATEGORY FFF 2024

Out of 20 candidates, the following were awarded:

KARBOX
for the EWA exhibit

An innovative technology for producing drinking water from air moisture with a wide range of applications, and the portability of the technology for both the defence and civilian industries (dual-use). The product is patented – patented technology in the Czech Republic, USA, and Australia, with the patent holder being the Czech Technical University (ČVUT) in Prague.

State enterprise **VTÚL and PVO** s. p. for the
Data Dioda and Security Filtr exhibits



These innovative technologies enable the secure sharing of classified and unclassified information within a single system, along with the ability to transfer data from a lower classification network to a higher classification network.

SYANS SAS
for the **AGENA-M** exhibit

This innovative modular system allows training on several types of combat aircraft through simple component exchange. The system also allows for integration with augmented reality.

VRGINEERS for the
GENERIC CLASSROOM TRAINER exhibit

An innovative system for low-cost UAV production with autonomous or controlled flight. The combination of innovative lightweight materials and 3D printing technology enables mass production even in field conditions.

3DLabPrint for the **3DLP UAV Production System** exhibit

An innovative system that allows sharing of real-time location independently of GPS. It has dual-use capabilities for both military and security forces, as well as fire and rescue services. It contributes to the safety of intervention teams during emergency situations and combat operations.

The expert committee for FFF 2024 – INNOVATION consisted of:

Chairman: Prof. Ing. Radoslav Sovják, Ph.D., LL.M.
Members: Arm. Gen. Ing. Pavel Štefka, M.Sc.
Gen. Maj. Ing. Petr Ošlejšek, Ph.D.
Brig. Gen. Doc. Ing. František Vojkovský, CS.c.
Lt. Col. Ing. Miloš Soukup

AKM GROUP-CZ OPENED ITS OWN CUSTOMS TERMINAL

The Czech company AKM Group-CZ has announced the completion of a planned program for the development of its own logistics infrastructure, within the framework of which it has opened its own Customs Terminal in the Czech Republic. AKM Group-CZ now provides storage and transshipment services for cargo, weapons and ammunition of all calibers under customs control in the EU.

In addition to storage services, AKM Group--CZ is engaged in the production, supply and sale of military and dual-use goods. AKM GROUP-CZ has more than 150 items of goods, many of which are in stock.

Today AKM GROUP-CZ co-operates with partners in more than 27 countries of the world. The company has joint production facilities in co-operation with partners in Turkey and Europe, where large-calibre machine guns, automatic grenade launchers and filling mortar shells with explosives are produced.

At the end of August AKM GROUP-CZ opened its 4th representative office – Representative Office in Eastern Europe. The representative office plans to work on localisation and creation of joint production of short-range SAMs, weapons, ammunition and UAVs. AKM GROUP-CZ is also working on launching joint projects for testing new types of weapons and ammunition in combat conditions.

Another striking example of AKM GROUP--CZ's high efficiency and reliability was demonstrated against the backdrop of the challenges posed by floods in Europe and a hurricane in USA.

Despite the natural disasters, thanks to well-organised work, a professional team and a stable logistics chain, AKM GROUP-CZ managed to deliver the cargo across an ocean, two seas and across Europe in just 24 days. This is an unprecedentedly short period of time for defence transportation over such a long distance. Usually, for such orders from America via Europe, suppliers claim a lead time of at least 45 days.

AKM GROUP-CZ, a. s. has been operating on the defence industry market for 23 years.

AKM GROUP-CZ, a. s. is an accredited partner of the Defence and Security Industry Association of the Czech Republic. AKM GROUP--CZ, a. s. is also an official NATO supplier and provides defence supplies to the Alliance countries. The company has an official NATO code: NCAGE Code: 334DG.

INFLATECH: A BREAKTHROUGH YEAR AND EVOLUTIONARY LEAP

The year 2024 has been a breakthrough for INFLATECH, filled with key innovations and a comprehensive reorganization that has further solidified its position as a world leader in military decoys. By strengthening our ISO certification and executing a broad restructuring, the company has increased its lead at the top, leaving other players far behind. Continuous progress and innovation are the driving forces behind our success. One of our latest advancements is the ability to deliver active electronic components that deceive passive radar systems and replicate radio frequency communications. Our technology can now simulate the operation of acquisition antennas and radars, covering both Western and Eastern military systems.

Key highlights include Western air defense systems such as SPYDER, IRIS-T, HIMARS, and Patriot, while for training purposes, we also offer solutions like the S-300. This year, we have significantly expanded our development teams with top experts, including military pilots, tactical instructors, spectrum specialists, and analysts.

Our focus on international collaboration is another key factor in our success, we have achieved remarkable results and successes in operational environments. This global approach allows us to expand our technology and know-how, ensuring that our solutions meet the needs of diverse military forces.

These efforts have led to demonstrable success in combat, making our solutions an integral part of modern military operations. Our "combat-proven solutions" brand has become synonymous with reliability and efficiency.

INFLATECH's offerings extend beyond ground systems – we also supply decoys for aircraft, helicopters, and other platforms. We embrace challenges, shorten delivery times, protect equipment and lives, and enhance tactical and strategic capabilities through innovation and international partnerships.

Author and photo: Vojtech Fresser, CEO

UNEX UGV: A REVOLUTION IN FIELD ROBOTICS

The UNEX UGV unmanned multipurpose robotic platform brings a new dimension to mission solutions in extreme environments. This Czech-Ukrainian innovation sets a new standard for vehicles that can handle not only land but also water – without any preparation.

Superb features and design

The UNEX UGV features a special design that provides unrivalled mobility in the most challenging terrain. The platform excels on muddy, heterogeneous surfaces and even on ice. With its optimal weight distribution on the tyres, it won't even cause a tank mine to detonate. Recently, at the FFF fair, the UNEX UGV impressed the audience by the fineness of its movements as it ran over a coffee cup and a plate leaving them completely intact. This demonstration underlines not only the precise design but also the advanced technology of the platform.

Modularity and multifunctionality

The UNEX UGV is designed as a modular platform that can be easily adapted to suit various demands. It is available in battery or diesel powered versions, which means it can be deployed in extreme climatic conditions. This versatility makes the UNEX UGV the ideal choice for a wide range of operations:

- **Combat missions**
- **Reconnaissance and monitoring**
- **Guarding and searching**
- **Rescue operations**
- **Logistic support**

Czech-Ukrainian cooperation and European production

UNEX UGV is the result of Czech-Ukrainian cooperation and its production is based in the European Union countries. The field trials of the diesel-powered vehicle were conducted under the guidance of Ukraine's special military units, who tested it in real combat operations. These trials have confirmed the vehicle's ability to withstand extreme loads and to perform tasks in the most demanding conditions.

Further development and testing

At the beginning of 2025, the vehicle is to undergo further tests at the Technical Research Institute in Vyškov. These tests will focus on the technical specifications and electrical equipment of the platform. Upon completion, we are planning a public event where the vehicle will showcase its unique capabilities in practice for both military and civilian applications.

Outlook for the future

UNEX UGV is currently produced in the European Union countries. However, we are planning to relocate its production to the Czech

Republic immediately after the completion of the testing at VTU. This step will allow us to improve our response to demand and to support local industry.

Come and see for yourself

If you need more information or wish to receive invitations to our events, please contact us via our website:

www.ugvmachinery.com.

UNEX UGV – Your solution for all areas of deployment.

Main areas of use:

- Infantry fire support
- Search and rescue operations
- Evacuation
- Freight transport and logistics
- Demining
- Fire protection
- Border security
- The 10-km-wide control radius ensures multi-purpose use in the most challenging terrain.

Main technical data

Navigation and control
- Radio signal 10 km, GSM and satellite navigation without restrictions
- Thermal imaging camera, daytime camera, navigation cameras
- Autopilot

Performance characteristics
- Drive, battery or diesel
- Inclination angle 40 °
- Tilt angle 30 °
- Clearance height 600 mm
- Obstacle up to 1 m

Dimensions
- Length 3 810 × width 2 500 × height 1 900
- Effective load up to 1 500 kg
- Dry weight 2 200 kg
- Max speed 20 km/h
- Up to 4 hours of battery use
- Battery recharge from 0 to 100 percent – 4 hours
- Motor 2 units, 32.7 kW each

UNEX UGV "Battle-tested"
UNEX UGV "Follow me function"

Main features of UNEX UGV:

protected navigation and remote control system
- Resistance to electronic warfare systems
- Safe radio control system with automatic frequency shift system
- Built-in encryption for radio and video
- Signal retransmission
- User-friendly control panel
- Programmable autopilot, capable of programmed Follow Me missions

Modularity and multifunctionality
- Unbeatable terrain and amphibious abilities allow the vehicle to perform tasks in any type of terrain
- The ability to install specialised modules extends the application areas of this vehicle, making it a versatile tool

High passability, manoeuvrability and durability
- Unique patented pneumatic circulation suspension ensures smooth and even movement
- Ultra-low pressure tyres allow you to overcome any type of terrain and obstacles

Modular solutions available
- Evacuation module
- Combat module
- Demining module
- Electronic warfare module

Benefits and capabilities
- Can operate in all terrains, run over fallen trees, rocks, swamps and watercourses
- Ability to overcome an obstacle of up to 1 m
- It can swim continuously
- The only vehicle that can move from water to ice
- Operates in conditions from -20 to + 40 °C
- The platform can be easily transported on the roads by means of a towed trailer
- Can tow a trailer based on the special purpose of the operation

MILITARY TECHNICAL INSTITUTE AT FFF 2024

The Ministry of Defence and the Czech Armed Forces (AČR) have strong support in the areas of research, development, and manufacturing. Research institutes, state-owned enterprises, and other entities are currently presenting an incredible number of projects and final implementations of world-class standard. Our magazine regularly informs about this and also aims to recognise the best ones. Among the best is undoubtedly the Military Technical Institute, which was awarded the Golden FFF at the recent trade fair for two outstanding exhibits. We will now introduce them to you.

Data Diode

What exactly is it? For our readers, we can say that data diodes are security devices that allow the smooth and controlled transfer of information from a network with a lower classification level to a network with a higher classification level. Similarly, these devices can be used between differently secured zones or for safely isolating input sensors.

The diode is available in two variants:

- A simple device for transmitting UDP datagrams and data streams;
- A device with software for transferring and managing transmitted data (file mirror), including directory structure. This device can be connected in a cascade, allowing an increase in transfer speed and also providing redundancy for the diodes in case one of them fails. The file mirror can be enhanced with a special feedback system, 3S (Smart Security Separator), which ensures seamless and fully automated file transfer, while maintaining the system's certifiability.

Data Diode 3D-1000 in 19" Rack Version

The Data Diode 3D-1000.4 in a 19" Rack version with a 3S feedback channel.

The 3D-1000.4 software can be customized. If necessary, a check of the data being transmitted back can be carried out manually using a USB flash drive or automatically. using a dedicated security gateway, 3S (Smart Security Separator). The basic hardware configuration consists of a cascade of data diodes, ensuring redundancy of the system's core. Other parts of the device include two TASAG servers for data transfer, data reception, and process management.

The transfer capacity is 2 Gb/s, with throughput available on demand. It includes a graphical user interface that simplifies monitoring file transfers and displaying statistical data. The data diode can be monitored via SNMP protocol or email.

Security Filter

What is a security filter? It is a filter that allows the transmission of messages from a system with a higher classification level to a system with a lower classification level (RED → BLACK) and vice versa (BLACK → RED). The BLACK and RED sides do not necessarily imply different classification levels according to Act No. 412/2005 Coll., on the Protection of Classified Information and on Security Clearance, as amended. It may also refer to information systems with the same classification level that need to be separated to prevent the undesired exchange of unauthorised information or to protect the integrity of the systems. In this case, the RED side refers to the interface of the information system with which the security filter is certified.

The security filter uses a special data „grid," which, together with other measures, ensures a secure connection between systems by exchanging only precisely defined messages with authorised content. If the system evaluates that the data do not meet the set parameters, the data is discarded and the transfer does not take place.

The hardware of the security filter (SF) is customised according to the customer's requirements. The following can be defined:

- Dimensions
- Power supply voltage
- Number of data interfaces and their type
- Standards that the SF device must comply with (e.g., MIL-STD)
- To summarise, the security filter ensures secure two-way communication between systems with different classification levels. It is a product with a wide range of possible customisations, in terms of the required performance and the type of information being transmitted. The manufacturer supplies versions suitable for installation in vehicles, mobile transport platforms, containers, and stationary setups.

Security Filter II

Prepared by Ing. Miloš Soukup

STV GROUP IS BUILDING CAPACITY. ACQUIRED A KEY COMPANY FROM SLOVAKIA

At the end of 2024, a defence company STV GROUP, an increasingly important player in Central Europe, announced ambitious plans for the upcoming period. These include increasing production capacities for the increasingly in-demand 155mm and 122mm ammunition, as well as strengthening the heavy military vehicle sector, which it plans to achieve through the recent acquisition of MATADOR Industries in Slovakia.

"We have been working on capacity expansion continuously since 2021, and some projects have been accelerated due to higher demand. This year, we will launch another automated line for filling large-calibre ammunition, which will increase our capacity by another 100,000 pieces per year, followed by another identical line next year," described Pavel Beran, who works as Director of Special Projects at STV GROUP, at the end of the year.

According to Mr. Beran, it is now essential to increase production capacity faster than before. The growing demand for ammunition is now also reflected in the ammunition initiative in connection with the war in Ukraine. He added, however, that the smooth running of deliveries is complicated by a shortage of some components, as well as the local lack of places for test firing.

In order to provide a complete range of large-calibre ammunition, including for the Czech Republic's mobilization needs, the company is also building up production of powders and fuzes. Mr. Beran emphasized that, as the ongoing war in the East shows, in the event of a real conflict, the self-sufficiency of the state in production is a major strategic advantage. Besides that, STV GROUP is similarly increasing its capacity for small-calibre ammunition.

In the past year, STV GROUP has also entered the Slovak market, taking over a major player in the defence industry, MATADOR Industries, to further develop its military vehicle production. In doing so, the company is following up on a long tradition of repairing heavy military equipment. "We want to focus primarily on what we can do, i.e., products and services in the defence industry," Mr. Beran concluded, adding that, among other things, the good economic results allow to continue to look for further investment opportunities.

www.stvgroup.cz

TOYOTA CHAMOIS WITH 12,7 mm WEAPON STATION

Photo: GLOMEX Military Supplies

By acquiring a passenger and utility pickup truck Toyota Hilux into the arsenal, the Army of the Czech Republic has acquired a versatile vehicle suitable for further modifications and adaptations to meet the specific requirements of troops. Just recently an evolutionary modification of the Toyota Chamois was introduced to the Czech Armed Forces, which enables the vehicle to traverse even the toughest terrain. This vehicle has a chassis raised by 50 mm, larger wheels with size 315×70R17 tyres, flared mudguards and a chassis protected by aluminium plates. The vehicle is also equipped with a blackout and night vision system complying with NATO standards.

The result of the cooperation between GLOMEX Military Supplies (supplier of Toyota Hilux vehicles for the Czech Armed Forces) and the Military Technical Institute, s. p., is another modification – Toyota Chamois – equipped with the remote-controlled weapon station ZS-M in 12.7 mm calibre. The station is, equipped with M2HB-QCB machine gun with shock absorption and motorized tensioning, lafeted in a weapon manipulator with stabilization. The ammunition supply of the machine gun is handled by a large-capacity box with a flexible belt guide. For targeting, the station is equipped with a sensor container that includes an overview TV camera with optical zoom, two targeting TV cameras, an identification camera, a laser rangefinder and a laser marker. The weapon station is attached to the chassis hull by a frame structure containing the mechanical interface and power supply system for the station. The gunner sits in the rear middle seat inside the cabin behind the control console unit with joysticks and an integrated display. Firing can be carried out in a variety of modes, including "auto-tracking", at ground and small air targets, mostly in steady-state mode, with a probable margin of error of about 1 to 1.5 MOA.

Review for the Defence and Security Industry
Media platform of the Defence and Security Industry Association of the Czech Republic

Issue 4/2024 now available

Review

IDET NEWS
Official media partner of the IDET exhibition for the Czech Republic, media partner of the Defence and Security Industry Association of the Czech Republic (AOBP ČR)

Published in conjunction with the IDET, ISET, and PYROS 2025 exhibitions

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FROM ACTIVE PIONEERS OF PASSIVE SYSTEMS TO A GLOBAL MARKET LEADER

It all started with The Three Musketeers. Three enterprising engineers who could not bear the thought that the original and unique technology of passive radar would cease to be developed in the Czech lands. Their legacy has now been developed for 30 years by 400 employees in ERA, a company, manufacturing products, which are part of the Czech family silver.

Going back in time

It is the mid-1990s, Pardubice, CR. Tesla, one of the largest electrical engineering companies in the country, has gone bankrupt in a wild privatization after the communist regime collapsed. Its former employees pick up the flag of radar technology development and production and continue working in several successor private companies. However, the most interesting know-how – the knowledge of passive surveillance systems – was transferred to ERA by its three founding fathers. Thanks to them passive radiolocation has survived and is conquering the world: systems by ERA operate in ATC/ATM field at 160 locations in 70 countries on 5 continents. ERA's share of the world market exceeds fifty percent."

The technology of passive radiolocation, in today's European professional terminology called multilateration, was developed in former Czechoslovakia in the 60s. The actual systems, which include Kopáč, Ramona and the legendary Tamara, were produced in Pardubice by Tesla and first used by the Czechoslovak Army. The newly founded company came up with the 4th and 5th generations of the Vera system, now sold worldwide as VERA-NG.

Small, powerful, cost-effective system assisting ATM

However, the term passive radar is slightly misleading – passive trackers are not radars in the classical sense of the word because they do not transmit anything. On the contrary, they are silent, they do not send any signals into the ether and are thus invisible from the radiotechnical point of view. Passive or else multilateration systems calculate the position of targets based on a mathematical calculation of the different arrival of signals in the network in the space of deployed stations (so called TDOA principle – Time Difference of Arrival). They do not need to transmit a beam and receive its reflection back like radar.

Such stations create a net and can be much smaller, maintenance-free, powered by wind or the sun, and located in seclude, remote and difficult-to-reach locations. There is no need for painting, lubrication, or cooling, they can fit anywhere when installed, and the transport is easy. That means the cost-performance value ratio is great. Are you interested? Yes! All it took was one "little thing" – convincing customers that it works. Convincing the business community in the West that a small post-communist country had invented something they did not have. And eventually that was achieved.

Air safety is improving. Also thanks to ERA

Nowadays, multilateration systems are part of the technological equipment for ensuring safety at 70 airports worldwide, including 20 of

the 50 largest airports in terms of passenger numbers. The systems determine the identification, position and trajectory of aircraft or vehicles, thus preventing collisions both in the air and on the ground, and they increase airport throughput, enabling more frequent departures and arrivals. They are also able to track the path of aircraft between destinations and, by pinpointing the position of the plane, more aircraft can fit above each other in the various levels of the flight corridors – which in turn alleviates airspace congestion.

ERA systems track half of all flights that take place around the world every day. Thanks to them, passengers' journeys around the world are safer and more flexible; their movement can be monitored during their stay on board, both on the ground and in the air, literally from gate to gate. It is no exaggeration to say that currently we are experiencing a great renaissance of passive surveillance systems, and that they have a promising future ahead of them.

Author: Lenka Reichová
Photo: ERA

Protect Parts

protective solutions

Company Profile

Protect Parts, s.r.o., is a purely Czech company with the ambition to become a leader in the trade in steel products (plates or semi-finished products) intended for the military and special production, ensuring the required level of ballistic protection of the final products.

To fulfill these ambitions and goals, the Protect Parts closely cooperates with the key armour European manufacturers, as well as with the authorized research & testing institutes focused on research and testing of armor materials. Due to the nature of our activities, the company possesses authorization for military goods and dual-use material trading.

Company Product Portfolio

– Plates intended for production of military equipment, facilities and infrastructure
– Plates intended for production of special parts and parts of infrastructure for other security forces (i.e. shooting ranges, special training facilities), but also for the civil sector (banks, etc.)
– Semi-finished products and complete assemblies (cut, edged, twisted parts & workpieces) for the above-mentioned projects, made according to the obtained customers drawings

Type Of Activity

– Purchase & sale of plates with a focus on various types of armor from the world's major manufacturers
– Fabrication of semi-finished products (cut, edged and twisted parts & workpieces) according to the obtained drawings
– Cooperation with authorized research & testing institutes
– Expert consulting in the phase of prototyping as well as in the phase of serial production

Territorial Focus

In addition to the Czech Republic, also customers from Central & Eastern European countries (both, EU and Non-EU members).

Armored metal plates

The ballistic-resistant plates are the strong items of our product portfolio. They can be used in the military and civilian sectors.

Our Options

In stock armor plates from the world's leading producers

Production of semi-finished parts
– parts for the military and the civilian sector

Production possibilities
– cut parts – laser / 3D plasma
– edged & twisted parts
– drilled, milled & grinded parts

Delivery of complete sets

protectparts.cz/en

ARMOX

SSAB

ARMOX 370
ARMOX 440
ARMOX 500
ARMOX 600

RAMOR

SSAB

RAMOR 450
RAMOR 500
RAMOR 550
RAMOR 600

DIFENDER

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DIFENDER 400
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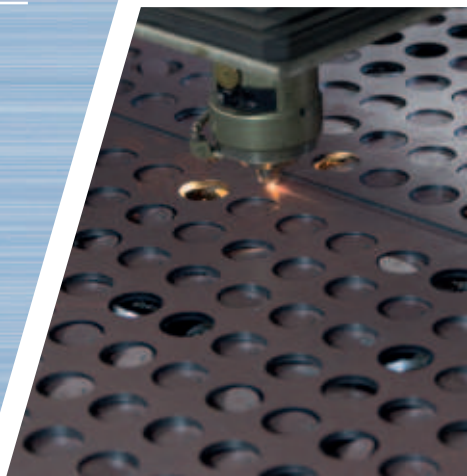

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Ruggedized Next-Gen Gigabit Router

Secure, high-performance router for mobile networks, optimized for data, voice, and video.

LMCP-7H

Light Mobile Computing Platform

A multifunctional computing device combining server that through virtualization can act as a router, file server, a remote desktop server and much more, all at once, providing a comprehensive solution for managing and distributing data in a military environment.

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