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5TH INDUSTRY DAYS 2013
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THE POLISH PRESIDENCY OF THE VISEGRAD GROUP (V4) 10

This is the 4th Presidency of Poland in the Visegrad Group. On June 15, 2012 the Council of Ministers of the Republic of Poland adopted the programme of the Polish V4 Presidency which has been officially presented during the summit of prime ministers of the Visegrad Group held in Prague on June 22nd, 2012.

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5TH INDUSTRY DAYS 2013 CONFERENCE 16

The theme of the "Industry Days 2013" conference were the challenges facing the technical modernization of the Polish Armed Forces in the next few years.

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Best In Class Safety & STOL performance utility aircraft to support your needs.

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Pyrotechnic ambulances are used in airports in Warsaw, Gdańsk, Katowice and Rzeszów. For the airline and passenger, the presence of an ambulance means less wasted time in case of evacuation when someone leaves the luggage; and it happens several times a month.

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Project co-financed by the European Union,
Sub-measure 6.5.1 of the Innovative Economy Operation Programme.





Ladies and Gentlemen

SŁAWOMIR KUŁAKOWSKI

Born on May 31st, 1952 in Jelenia Góra. Graduated from the Faculty of Law and Administration of the Nicolaus Copernicus University (1975), Reserve Officers School (1976) and Postgraduate Studies at the General Staff Academy (1989). Reserve colonel. Held many important functions in the institutions of the Ministry of National Defence (1976-1992 and 1996-98). Between 1992-1996 served as adviser of the head of the National Security Bureau at the President of Poland Office for Economy and Defence Affairs. President of the Polish Chamber of National Defence since 2001.

Every company, especially operating in the armaments sector, is trying to cope with the dynamic changes and challenges brought by today's constant development.

One of the areas that the defense equipment manufacturers are currently focused on are new technologies allowing not only to cut costs, but also increase productivity. In a wider perspective, Polish producers create innovative solutions through research and new technologies – they introduce new products, services or even business collaboration models.

The wide range of possibilities offered by Polish manufacturers and the highest quality of their products provides customers with a full range of solutions and services tailored to the current and future needs of the dynamically growing army.

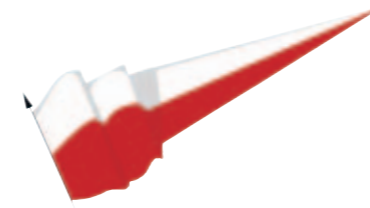
Polish defense industry products are still actively used. They meet the needs of our troops, not only in the country but also in different parts of the world where they serve. This is the best proof that the quality of equipment produced in Poland is very high.

In this edition of our Polish Chamber of National Defense Magazine, we wish to share examples of first-class solutions, characterized by excellent quality and durability.

I wish you an enjoyable read,

SŁAWOMIR KUŁAKOWSKI

President of the Polish Chamber of National



Polish Chamber of National Defence Manufacturers

On the 11th September of 1995 a constituent meeting was held, at which, a resolution to establish the chamber, initiated by the representatives of the Polish defense industry, has been adopted. A temporary management and an auditing committee has been elected by the representatives of the 67 founders, in the presence of General Henryk Mika from the Ministry of Defense and the Colonel. Sławomir Kułakowski from the National Security Bureau.

During the past 10 years, the Chamber has been initiating activities to advance the technical level and product quality for the national defense, promoted the cooperative relations, inspired projects which led to an increase in the production for the domestic and foreign markets, as well as has inspired and supported the restructuring and modernization of the Polish industry while preparing its integration with the European structures.

During that period, the organization of trainings for the representatives of the Polish industry and the facilitation of foreign contacts has been a significant element of the Chamber's activity. Besides the above, it has organized experience exchange within the areas of technical, organizational and trade solutions.

Since 1998, the Chamber has been a co-organizer of the BALT MILITARY EXPO exhibition in Gdansk, and has co-organized the "Cto i Granica" (Border and Customs) Fair in Warsaw since 2004. In 2000, the Chamber has initiated and coordinated the Polish Defense Industry Days in Lithuania, during which, the associated companies have handed over equipment worth approximately 4 million Zloty, including the Chamber's



contribution of 700.000 Zloty, to the Lithuanian part of the LITPOL-BAT battalion in 1998, the Chamber has been assigned to represent the Polish defense industry at the NATO Industrial Advisory Group (NIAG), and since December of 2000 it has actively taken part in the meetings of the Group.

In 1999, the Chamber initiated an industrial cooperation within the Visegrad Group. Two editions of the Polish and Czech defence industries were organized (1999 and 2001), I Visegrad Group Defence Industries Forum (2001) in Warsaw, II Forum (2002) in Trenczyn and III Forum (2004) in Warsaw.

In Poland, in addition to the agreement on cooperation with the Ministry of National Defence (12.08.1999), the Chamber signed cooperation agreements with the Army Workers Trade Union (1997),

"Solidarity" National Section of Defence Industry (1998), Polish-Arab Chamber of Commerce (2004), National Association of Equipment Manufacturers (1999) and the Employers' Association of Defence and Aviation Industry Enterprises (2003).

In 1999, the Chamber issued the only catalogue of the Polish defence industry. In 1996 the Chamber started issuing the BULLETIN OF THE CHAMBER. In 2003 the Chamber started publishing a bimonthly POLISH DEFENCE INDUSTRY (in English), and a quarterly ECONOMIC – DEFENCE REVIEW in 2005.

Currently, the Chamber associates 147 public and private enterprises. These include market leaders such as BUMAR Sp. z o.o., the Polskie Zakłady Lotnicze Sp. z o.o. (Polish Aviation Works), {the }Stalowa Wola S.A., MESKO S.A. and RADWAR as well as small businesses and private companies. ■

POLAND

Poland is the largest of the East European countries which joined the EU in May 2004. Poland is comparable in size to Italy or Germany (in USA larger than New Mexico) and with a population of approximately 39 million (e.g. more than California) it ranks among the most influential and remarkable countries in central and Eastern Europe. Poland is a stable democracy with a truly fascinating history, great cultural heritage and several areas of outstanding natural beauty.



PARTICIPATION IN PEACEKEEPING MISSIONS

From the initiative of the United Nations and other international organizations, activities are carried out to maintain peace and prevent armed conflicts in the world.

Poland has been participating in peacekeeping missions and operations since 1953.

Between 1953 and 2009, Polish soldiers and civilian employees of the army participated in 83 peacekeeping missions and operations, 35 of them were organized under the auspices of the United Nations. The total number of professional soldiers, compulsory military service soldiers, extended military service soldiers, and civilian employees of the army that took part in the missions and operations amounted to 90,234 thousand.

In 2009, Poland took part in 9 (continuing and new) peacekeeping missions and operations.

Of the 7,138 people delegated in 2009 to serve in peacekeeping missions, 6,606 professional soldiers, 362 – compulsory military service and extended military service soldiers and 170 – civilian employees of the army.

In addition, from 2003 to 31 October 2008, Poland was part of the International Stabilisation Force in Iraq. During this period, the Polish Military Contingent (a total of 10 shifts) amounted to 15,839 people, including 13,260 professional soldiers and 2,154 compulsory military service and extended military service soldiers and 425 civilian workers.

POPULATION IN COMPARISON

RANK (IN THE WORLD)	EUROPEAN COUNTRY	POPULATION (MLN)
1 (12)	Germany	82.1
2 (20)	France	58.9
3 (21)	Great Britain	58.7
4 (22)	Italy	57.3
5 (23)	Ukraine	50.7
6 (29)	Spain	39.6
7 (30)	Poland	38.7
8 (44)	Romania	22.4
9 (56)	Netherlands	15.7
10 (70)	Greece	10.4

SIZE IN COMPARISON

RANK (IN THE WORLD)	EUROPEAN COUNTRY	SIZE (KM²)
1 (43)	Ukraine	603700
2 (47)	France	543958
3 (50)	Spain	505992
4 (54)	Sweden	446964
5 (61)	Germany	357022
6 (63)	Finland	338145
7 (66)	Norway	323877
8 (67)	Poland	312658
9 (69)	Italy	301268
10 (76)	Great Britain	244100

MEMBERSHIP IN MAJOR INTERNATIONAL ORGANIZATIONS

- European Union
- United Nations
- Council of Baltic Sea States
- Central European Free Trade Agreement
- International Monetary Fund
- United Nations Educational, Scientific and Cultural Organization
- United Nations Children's Fund
- World Health Organization
- World Trade Organization
- Central European Initiative
- Organisation for Economic Co-operation and Development
- North Atlantic Treaty Organization

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Armed forces

The Polish Armed Forces are divided into: the Army, the Air Force, the Special Forces and the Navy. Their main task is the defense of the Polish borders against outside attacks and cooperation with NATO. The armed forces are an essential element of the national defense system, designed for the effective implementation of the security and defense policy. The Polish armed forces number nearly 100 000 troops. They have taken and are taking part in a number of foreign missions of the UN, NATO and the EU.

Legislature

In Poland the legislature is a bicameral parliament consisting of the lower house – the Sejm and the upper house – the Senat. In direct, universal and secret elections, Polish citizens elect 460 members of the Parliament and 100 senators. Both MPs and senators are elected for a four-year term.

Constitution

The Constitution of the Republic of Poland is the most important Polish legal act and the foundation of the Polish state. It guarantees the rights and freedoms of citizens, determines the relationships between the legislative, executive and judicial branches, decides on the form and way of appointing key national institutions such as the Parliament, the Senate, the President and the Council of Ministers. The Constitution has a direct influence on the form of the judicial system, local governments and state control bodies.

Society

According to data from 2011, the territory of the Republic of Poland is inhabited by 38.5 million people. In terms of population Poland occupies the 29th place in the world and the 8th in Europe. The Polish population represents 5.3% of the European population and 0.65% of the population of the world.



POLAND PEOPLE, COUNTRY, HISTORY

The Battle of Grunwald

The Battle of Grunwald is one of the greatest battles in the history of medieval Europe. It was fought on the 15th of July, 1410. The battle was a part of the great war between the forces of the Teutonic Knights, assisted by West European knights, under the command of the Grand Master Ulrich von Jungingen, and the combined Polish and Lithuanian forces, under the command of the Polish king Wladyslaw II Jagiello. The battle ended with the victory of the Polish-Lithuanian army and a crushing defeat of the Teutonic forces. The outcome of this battle had a major impact on political relations in Europe of that time. Not only did it break the power of the Teutonic Order, but also elevated Poland and the Jagiellonian dynasty to the rank of the most important ones in the continent.

The Battle of Vienna

The battle was fought at Vienna on the 12th of September, 1683 between joint Polish, Austrian and German forces under the command of king John III Sobieski, and the army of the Ottoman Empire under the leadership of Vizier Kara Mustafa. The Turkish army numbered close to 140 thousand people. It was the largest army that was mobilized in the seventeenth century. Austria has managed to gather 32 thousand soldiers. Jan III Sobieski called up about 27 thousand Crown troops, including 25 hussar regiments, and marched to the relief of Vienna. The battle ended with the defeat of the Ottomans. This battle is considered to be one of twenty ground-breaking battles in the history of the world.

The road to independence

The Treaty of Versailles that ended World War I sanctioned Polish independence – before that Poland disappeared from the map of the world for 123 years as a result of partitions. The official date of the foundation of the Second Republic of Poland is the 11th of November, 1918, when Jozef Pilsudski took over the military authority in Warsaw. As a result of his actions the German troops withdrew from the city, and the Polish state institutions that were being formed conferred to him the title of the Chief of State.

Independent Self-Governing Trade Union "Solidarity"

"Solidarity" was a national trade union formed in 1980 to defend the rights of workers. Until 1989 it was also one of the main centers of mass resistance against the rule of the Polish People's Republic. One of the leaders of the workers' strikes that led to changes in the whole Europe was Lech Walesa, who later became a Nobel Peace Prize laureate. He was elected President in a two-round general election held in November and December of 1990.

The Polish Pope

John Paul II was the first Polish pope, as well as the first non-Italian Bishop of Rome in 455 years. The election of a person from a communist country for the head of the church had a significant influence on the events in Eastern Europe and Asia in the 80s of the 20th century.

Bumar Elektronika SA got the most patents

Bumar Elektronika SA took first place in the ranking of companies that have received the most patents in 2012. During the scientific seminar entitled "Perspectives and Challenges for Patenting Businesses in Poland", which was held on March 28, 2013, in Warsaw, PAN Institute of Economic Sciences and MSN Scientific Network presented the results of their research on innovative Polish companies. The result of these studies include the ranking of companies that received the most patents between 2007 and 2012. It is the fourth edition of the ranking conducted by the Institute of Economic Sciences, the Polish Patent Office and MSN Scientific Network.

Bumar Electronics SA (former PIT) took first place in the ranking of companies that have received the most patents in 2012, with a score of 12 patents.

According to the ranking of the Institute of Economics from 2012 – Bumar Group has patented as many as 19 new technologies. This year the ranking included more companies from Bumar Group: Bumar Elektronika SA (former Radwar) (4), BZE Belma (2), and Fabryka Produkcji Specjalnej in Bolechów (1) with 7 patents registered in 2012.

The 2007-2011 ranking also included Bumar Group companies: ZM Dezamet, BZE Belma, Bumar Elektronika (former Radwar), Fabryka Broni, Maskpol.

The army wants to buy a simulator for training SW-4 helicopter pilots

The Armament Inspectorate has issued a tender for the purchase of a flight simulator for SW-4 multi-role training helicopter.

Auxiliary ground equipment is characterized by the pilot station (a replica of the rotorcraft cabin), the dynamic exercises station, the instructor station, and computer visualization system. In addition, the tenderer will be obliged to equip a classroom with computer support system. The main condition for obtaining the maximum number of points will be the price.

PZL Świdnik SW-4 helicopters are used in 41st Training Air Base in Dęblin, where they are used to train future military rotorcraft pilots.

Wheeled cannon-howitzer from HSW

HSW is building a 155mm cannon-howitzer Kryl on wheeled chassis in cooperation with Elbit from Israel. The Israelis agreed to transfer the technology and manufacture the equipment in Poland.

The contract between Huta Stalowa Wola and Elbit was signed a few weeks ago. It assumes that the prototype, trial batch and the first batch of Kryl will be constructed on the basis of components imported from

Israel. After that, all the parts to be manufactured in Poland. That is also where the assembly will take place.

Elbit was selected instead of Nexter from France mainly because the Israelis agreed to manufacture the equipment in Poland. HSW has been working on the wheeled equivalent of Krab cannon-howitzer for a few years. However, the company did not have the technology necessary to build it. That is why it was negotiating with two contractors – Elbit from Israel and Nexter from France. Elbit has long been considered a favorite in this "battle".

EC725 Caracal helicopter can be assembled in Poland

An agreement was signed in Łódź between Eurocopter, Turbomeca company that produces engines and Zakłady Lotnicze Numer 1 on the establishment of two complete assembly lines in Poland producing EC725 Caracal helicopters and Makila 2 engines that they utilize. This will all happen if Poland chooses Caracal in a tender for 70 helicopters.

According to representatives from Eurocopter, the agreement is a proof for long-term plans of the corporation towards the Polish market. The new assembly lines probably will not build all the machines that Poland requires (certainly not the ones that will be provided at first), but they will provide the necessary infrastructure for these machines, not to mention jobs and technological leap that would be introduced in plants that currently carry out the repairs of post-Soviet WZL-1 helicopters.

EC725 Caracal is a multi-purpose helicopter in the 11-ton class. It was tested in Afghanistan and now operates in Mali, able to fulfill the tasks of medical evacuation, transportation and logistics. It is able to carry up to 29 passengers and the crew. Currently they are used by armed forces in France, Brazil, Mexico, Malaysia, Indonesia and Thailand.

MiGa-29 simulator for the Air Force

Armament Inspectorate has published the information about a tender aimed at purchasing a flight simulator of MiG-29 jet fighter aircraft, operated at two air bases in the country.

The unit is to be installed in 23rd Tactical Air Base in Mińsk Mazowiecki. The set will include a simulator cabin, which is an exact replica of the cockpit of the machine, the instructor station, visualization and computer system, auxiliary equipment and spare part kits. As with other tenders, the main criterion for selecting the bidder will be the price. Applications will be accepted until May 6 this year.

In recent days, this is the second tender for the purchase of ground equipment for the Air Force pilot

training. In addition to the simulator for the MiG-29, a tender is being conducted for the acquisition of the similar device for multi-purpose SW-4 helicopter. With this type of device, costs of training are the only limit, and in addition they can be made available to the soldiers from other countries – perfect examples include Czech and Lithuanian Mi-8/17 helicopter simulators where pilots from different countries, including Poland, are trained.

Black Hawks from Mielec delivered to Colombia

American helicopter manufacturer – Sikorsky – announced the delivery of five multi-purpose transport helicopters S-70i Black Hawk International to the armed forces of Colombia.

The machines that were created in the Polish PZL Mielec plants, are the first representatives of the S-70i version in South America. Colombia is the fourth known

” According to the ranking of the Institute of Economics from 2012 – Bumar Group has patented many as 19 new technologies.

user of helicopters produced in Mielec – they were previously purchased by Saudi Arabia, Mexico and Brunei. Most likely, the contract involves more machines.

S-70i Black Hawk International helicopters are the export version of the UH-60M model. The changes include removal of onboard equipment, which would require the consent of the American administration. This allows Sikorsky to sell them without applying for permission to export. S-70i is offered to Poland in a tender for 70 military helicopters.

PZL Świdnik will modernize W-3 series helicopters

Armament Inspectorate has released documents relating to two contracts with PZL Świdnik for upgrading W-3 Sokół / Anaconda helicopters.

In the first one, which was signed at the beginning of March, plants from Świdnik will install the computer-based AIS vessel identification system in W-3WARM Anaconda rescue helicopter that belongs to the Naval Aviation Brigade for 850 thousand PLN. This will allow the crew to have a full situational awareness during maritime activities – every vessel (especially civilian) uses it to mark its position.

In accordance with the second contract, PZL Świdnik will upgrade two W-3 Sokół helicopters to W-3AE medical evacuation versions. This will cost about 4.2 million PLN and will be completed by the end of this year.

WZL-1 will equip Kamans with new GPS receivers

Armament Inspectorate has concluded a tender for equipping Kaman SH-2G Seasprite helicopters operating in the Naval Aviation Brigade.

The tender was aimed at finding a company that would equip the aforementioned vehicles with GPS MAGR2000 system. The offers were made by Wojskowe Zakłady Lotnicze in Łódź and Bydgoszcz. Finally, as a result of the electronic auction, the company from Łódź has won the tender.

In total, the Inspectorate of Armaments will pay 734.1 thousand PLN.

The agreement between the army and the bidder was signed on March 18 this year. Each machine will be retrofitted within its regular maintenance schedule – currently all Kamans that actively participate in the activities of the fleet in the Baltic Sea are in service.

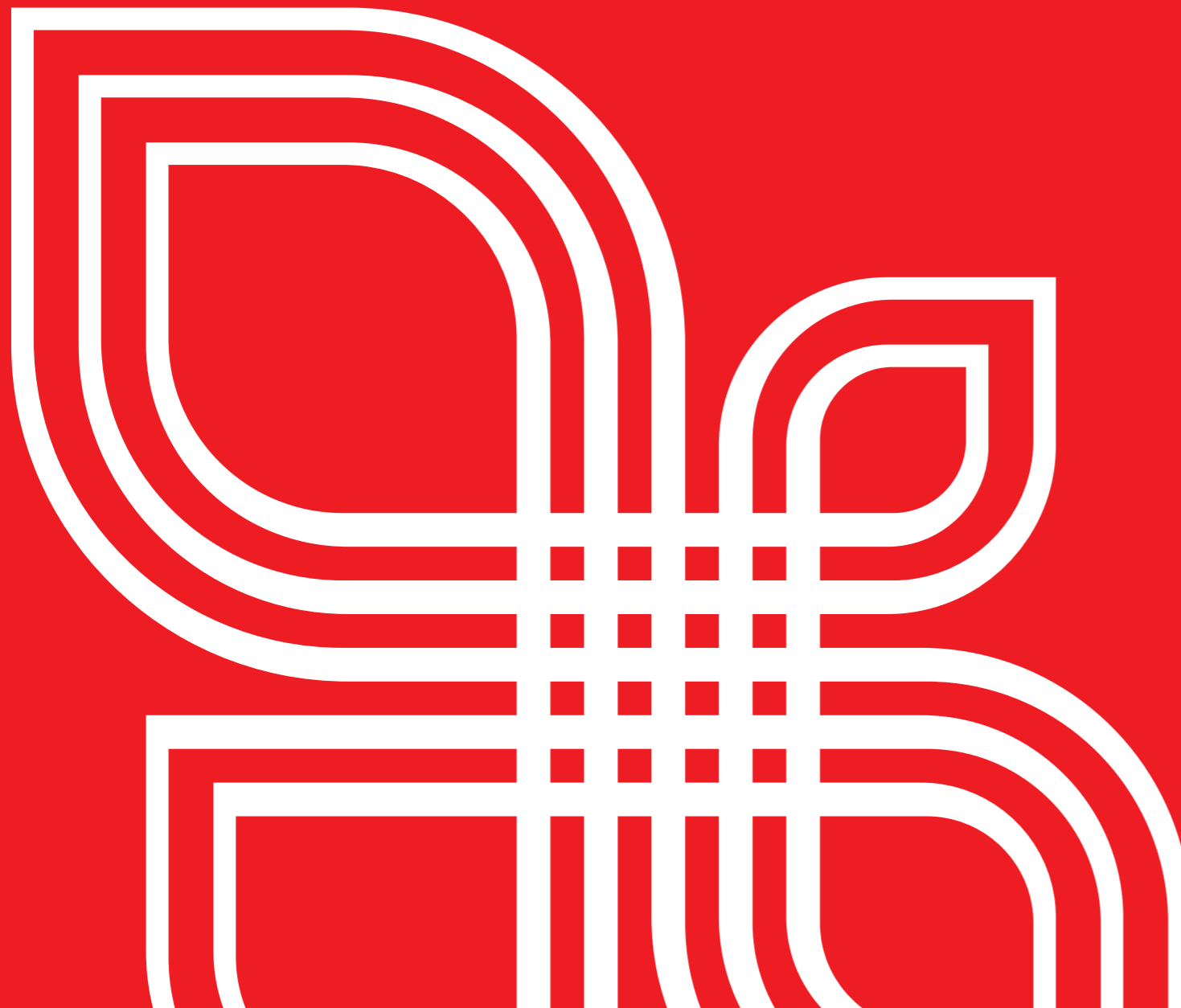
Bumar opens an office in Brussels

During the European Defence Agency (EDA) conference in Brussels, with the participation of the President of the European Union – Herman Van Rompuy – and Catherine Ashton, Krzysztof Krystowski, president of Bumar Group, announced the opening of Bumar office in Brussels.

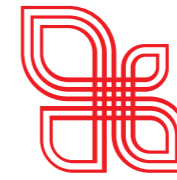
Krystowski appeared as the only speaker representing the defense industry in the new member states of the European Union, next to the president of EADES, Europe's largest defense company, and president of Air Dessault Aviation – a French aviation company.

President of Bumar called for increased participation of Polish defense companies in the European cooperation, arguing that we should take care not only for equal rights, but also a level playing field for European arms producers.

THE POLISH PRESIDENCY OF THE VISEGRAD GROUP



Visegrad 4 Integration & Cohesion



Polish Presidency of the Visegrad Group
July 2012–June 2013

The Visegrad Group (V4) is an informal, regional form of cooperation comprising four Central-European countries – Poland, Czech Republic, Slovakia and Hungary. The Visegrad states are united not only through their common neighbourhood and similar geopolitical situation, but also through their joint history, traditions, culture and values. The idea of the Group's foundation was to intensify cooperation in the field of building democratic state structures and a free-market economy, and – in the longer-term perspective – to participate in the European integration process. It was established on 15 February 1991, when Polish President Lech Wałęsa, Czechoslovakian President Václav Havel, and Hungarian Prime Minister József Antall signed a Joint Declaration in the Hungarian city of Visegrad. The document sets out the aims and conditions of cooperation. Since 2004, all V4 countries have been member states of the European Union, and the Visegrad Group is a platform for exchanging experiences and working out common positions on issues which are essential to the future of the region and the EU. Apart from European issues, V4 cooperation focuses in particular on reinforcing the stability of Central Europe, exchanging information, and promoting cultural community and cooperation in the field of culture, science, education and youth exchange.

Cooperation priorities include the development of transport infrastructure, as well as the reinforcement of energy security in the region. The V4 also offers a mechanism of cooperation with third countries in the "V4+" format. Visegrad cooperation involves a host of actors: presidents, prime ministers, ministers, parliaments, governmental institutions, NGOs, research centres, academies and cultural institutions. The only fully institutionalised form of cooperation among the V4 countries is the International Visegrad Fund (IVF). The Visegrad Groups' rotating presidency is held for a period of one year and its programme is approved by the Prime Ministers of the Visegrad Group countries. Poland is holding its V4 presidency from 1 July 2012 to 30 June 2013.

POLISH PRESIDENCY

The Polish Presidency of the Visegrad Group (V4) began on July 1st, 2012 and will conclude on June 30th, 2013. This is the 4th Presidency of Poland in the Visegrad Group. On June 15, 2012 the Council of Ministers of the Republic of Poland adopted the programme of the Polish V4 Presidency which has been officially presented during the summit of prime ministers of the Visegrad Group held in Prague on June 22nd, 2012. "Visegrad 4 for Integration and Cohesion" is the main theme of the Polish V4 chairmanship. The focus of the Presidency is above all to enhance cooperation of the V4 countries on issues most relevant to the region and the EU. In this context the priorities encompass i.a. articulation of a consistent position of V4 states in negotiations on the multiannual financial framework (MFF) 2014-2020, deepening of collaboration in the area of security and defence, reducing cross border infrastructure discontinuities of the development axes in the region, supporting the development of contacts between the societies of the V4 countries, assisting the prointegration aspirations of the Western Balkan countries as well as the development and implementation of the Eastern Partnership.

PROGRAM

Poland's Presidency of the Visegrad Group /V4/ (July 2012 – June 2013) comes at a time of serious economic and political challenges for the European Union and globally. We are seeing this difficult period occur almost a quarter of a century after our countries, owing to their solidarity and years of struggle, had torn down the Iron Curtain and overcome the political division imposed on Europe by force, in the wake of World War II. In a relatively short time, we have managed to not only bridge a significant gap in the distance separating us from the rest of Europe, but also to become responsible and active members of both the North Atlantic Alliance and the European Union. The current, multifaceted crisis – which is both



gen. Leszek Cwojdzinski,

Director of the Armaments Policy Department, Deputy National Armaments Director

financial and identity-related – confronts Europe with new challenges and the risk of renewed division of our continent. Criticism of the implemented changes is becoming more pronounced. The Visegrad states, and indeed all of Central Europe, must not remain indifferent to these risks. The global competitive success of our countries – and of Europe as a whole – hinges on the continuation of the ongoing process of reuniting our continent and deepening this unity.

The goal of the Polish Presidency of the Visegrad Group is to further strengthen the position of our countries within international forums and to consolidate the achievements of EU enlargement and the successes enjoyed by the “Central-European” Presidencies of the Council of the European Union (i.e. the Czech, Hungarian and Polish presidencies). The Visegrad Group has come to epitomise successful systemic transformation, while intra-group cooperation has been acclaimed as an important, constructive element of the European integration process. In our commitment to the unification of the Continent, we must strive to fashion the European agenda appropriately, defend achievements in the field of civil liberties and freedoms, deepen the single market, continue enlargement policy and expand neighbourhood policy. The persisting crisis hampers consensus building and



The period during which Poland presides over V4 will be crucial for placing the final pieces of the anti-crisis strategy. The major task of V4 will be to promote an ambitious EU growth agenda as an indispensable element of overcoming the sovereign debt crisis.

encourages the revival of national egoisms. The societies of the Visegrad states (the Czech Republic, Hungary, Poland and Slovakia) continue to have confidence in the integration process, despite the problems associated with the crisis, the costs of transformation, and the burdens shouldered by V4 societies in aligning with EU requirements.

As part of its contribution to the continuing integration of Europe, the Visegrad Group will support initiatives designed to enhance the cohesion and internal integration of our region. During the initial period of growth after the fall of the Iron Curtain and accession to NATO and the EU, the Visegrad states altered their socio-economic structures while comprehensively switching to new avenues of international cooperation. A natural outcome of this was the increase of hitherto artificially obstructed contacts with Western partners, often at the expense of stronger cooperation in the region. Consequently, the region experienced a certain deficit of infrastructural and regional cooperation in the economic, cultural and social spheres, a circumstance which hampers V4 growth and adversely influences our security, as seen for example in the energy sector.

FOREIGN POLICY PRIORITIES

Within the foreign policy framework, the Polish Presidency of the V4 will focus on current European affairs. It will take action to coordinate V4 positions in the run-up to European Council meetings, the Foreign Affairs Council (FAC) and the General Affairs Council (GAC). The tradition of holding V4 consultations prior to important EU meetings will be maintained and the Permanent Representations of the V4 countries to the EU in Brussels will be encouraged to work more closely together. The V4 Presidency will orientate its

activities around V4 sectoral cooperation on issues such as the future of cohesion policy, regional development policy and strategic programming.

The period during which Poland presides over V4 will be crucial for placing the final pieces of the anti-crisis strategy. The major task of V4 will be to promote an ambitious EU growth agenda as an indispensable element of overcoming the sovereign debt crisis. In particular, the V4 partners should cooperate closely to pursue the most important initiatives with the biggest growth potential, such as completion of the Single Market and building the digital market. In the context of the ongoing efforts to improve the architecture and governance of the Economic and Monetary Union the V4, as a forum that gathers both non-euro and euro area Member States, is well suited to come up with and promote solutions that are inclusive and based on the community method, so that the EMU emerges from the crisis as a stronger, more integrated and competitive actor in the global economy.

Close cooperation will also continue under Poland's Presidency in respect of coordinating the positions of V4 countries on Common Foreign and Security Policy and, where possible, presenting V4's shared positions on issues of common interest. Topics to be discussed include the representation of V4 states in the staffing of the European External Action Service (EEAS), joint actions to second V4 diplomats serving in their national foreign services to the EEAS, experience sharing, and consultations on how to improve EEAS efficiency.

One of the tasks the Polish Presidency has set itself is to deepen EU security and defence cooperation and ensure complementary relations with NATO, based on the principle of partnership. Closer V4 cooperation in developing the Common Security and Defence Policy (CSDP) serves this purpose. It would be valuable to draw up and present to selected organizations (the UN, EU, NATO, OSCE) the V4's shared positions on issues of common interest. Another objective will be to strengthen ties with Eastern partners in the field of CSDP. In this respect, the Presidency will support the implementation of initiatives directed towards Eastern partners.

It would be advisable to carry out a review of V4 defence cooperation in order to give this cooperation the right momentum. Special emphasis should be given to the preparation of the V4 Battle Group, to be on stand-by in the first semester of 2016. There will be a need for V4 consultations on NATO-Russian relations, a V4 common position on Missile Defence and on the Russian response, on NATO cooperation with Ukraine and Georgia, consultations on CFE and force deployment in the region, consultations, in the broader format of V4+ Baltic states + Romania and Bulgaria, on common security issues, and with regard to cyber security and energy security. ■



VISEGRAD BATTLE GROUP

European Union needs better defense capabilities. This is what Visegrad Group countries and leaders of France and Germany want. The cooperation will also lead to improved competitiveness of the European defense industry.

"This is a real breakthrough, for the time being in thought and preparation, but we are confident that the coming years will show that this is a breakthrough in practice. We expressed together, at the level of Heads of State and Governments, the intention to cooperate to strengthen the defense capabilities of those six countries and Europe" – Prime Minister Donald Tusk declared at a meeting of members of the V4 Group.

Ministers of defence from Poland, Hungary, Slovakia and Czech Republic signed a letter of intent for the formation of the Visegrad Battle Group, which will start its duty in 2016. Poland has already signed bilateral agreements on military cooperation with the countries of the Visegrad Group.

Two years ago it was agreed that the group will be formed in 2016 under the leadership of Poland. It has become part of the EU's rapid reaction force which, under the decision of the Council of the European Union, can be sent to the endangered regions within 15 days. At the same time it will be the first joint Polish, Czech, Slovak and Hungarian combat unit. Discussions on the establishment of the V4 battle group began in 2007. ■



THE VISEGRAD GROUP IS A COMMUNITY OF INTERESTS

The Visegrad Group can be an effective advocate of the interests of EU member states from Central Europe. What will be its biggest asset in the coming years? What are the challenges the Polish authorities in the V4 will face? Our questions will be answered by BBN chief, minister Stanisław Koziej.

Stanisław Koziej,

Head of the BBN, Secretary of State

22 years have passed since the creation of the Visegrad Group. Looking in retrospect, can you evaluate whether the group has fulfilled its objectives?

We started together – as "emigrants" from the communist bloc, wishing to return to the West. The Visegrad Group helped us with this. It has played an important role in the first post-Cold War enlargement of NATO. Today we are facing new challenges that we have to overcome together. Our relationship and common interests based on similar historical fate will help us. In recent years, Visegrad cooperation has reached a high level of intensity. This allows an increasing involvement of V4 in solving the growing problems of globalization, both at regional and European level.

The main objective was shared integration with Europe and the Atlantic area. Now that we are in the EU and NATO, what role do you think the V4 Group could play?

The Visegrad Group will support the initiatives that strengthen the cohesion of the region and contribute to its greater internal integration. This also applies to security. Over the last three years we have seen high intensity of actions and cooperation in the area of security and defense policy within the V4. The common position of the V4 countries was highlighted at a meeting of the presidents in V4 Strbske Pleso, Slovakia, before the NATO summit in Chicago, and also presented in the statement "Responsibility for a Strong NATO" adopted by the ministers of foreign affairs and defense of V4 in April 2012. It contained the expectations of the summit in Chicago, including the stress put on the importance of the transatlantic partnership, the need to maintain the Alliance's ability for collective defense, to ensure consistency in the development of the ability of NATO and the EU, a willingness to continue a dialogue based on reciprocity with Russia and the continuation of the NATO's enlargement and partnership policy.

Defense cooperation is an important element of the Polish presidency of the Visegrad Group (1 July 2012 – 30 June 2013). Poland is looking for projects that will be beneficial for the development of the Polish armed forces, and at the same time will increase the possibility of involvement of the Visegrad Group in the initiatives taken in by NATO and the European Union (Smart Defence, Pooling and Sharing).

The Visegrad Group can play a special role in building strategic subjectivity of the European Union in the field of security. What I mean is a collective action to initiate work on amending the EU security strategy.

What are the challenges the Polish authorities are currently facing within the V4? What is to be done and what are the main obstacles to further integration of the Group?

We want the Visegrad Group to be more effective advocate of the interests of the EU Member States from Central Europe, and enable the articulation of positions that are important to the region and the EU. The Visegrad Group gives us the opportunity to foster a sense of participation in European affairs and stronger emphasis on the political role of Central European cooperation in the EU. Important elements would include communication and seeking opportunities to synchronize ways to further the interests of the V4 countries, highlighting of the objective common interests, as well as broad role of cohesion of the region and the EU.

Will Poland be able to become a leader of V4 Group? Lack of success of the Eastern Partnership does not provide too many reasons for this.

If Poland aspired to become a leader, it would scare off the rest of the countries from cooperating. We show our way of thinking, and we urge others to look at the problem in the same way. This is better than the leader role. The strength of the Visegrad Group lies with its members' flexible approach to leading. We need to increase our presence in the Eastern Partnership region to support the development of civil society, democratization processes and implementation of EU standards. Countries of the region should work actively towards the development of relations with the Eastern Partnership's countries in the areas of Common Security and Defense Policy. EU's involvement in the East has a large stabilization potential.

What do you think will be the biggest asset of the Visegrad Group in the coming years?

The Visegrad Group, with its growing regional identity, despite the inherent differences between its members, became a model of successful regional cooperation. It could be considered an antidote to the emerging doubt about the idea of integration. The Visegrad Group has become the core of Central Europe as well as a reference point for other partners, including those from other continents. V4 has found a place in our consciousness in the political, social and cultural sphere, as well as in planning of business ventures. When speaking about the Visegrad Group, we are speaking about common interests, although we know that it does not mean unanimity. Strong, effective and determined Visegrad Group effectively strengthens the EU. ■

5TH INDUSTRY DAYS 2013 CONFERENCE



“*I wish the mutual exchange of views to ultimately translate into measurable benefits for all participants of the conference, not just for today, but also in the long term.*

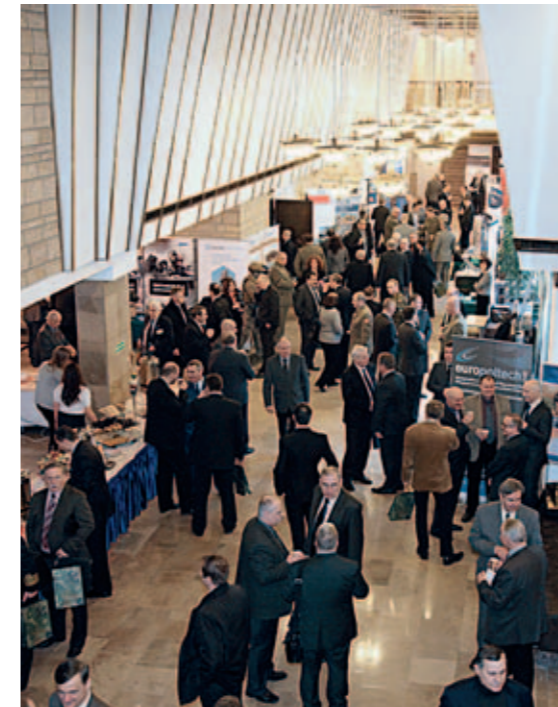
– **Waldemar Skrzypczak**,
Undersecretary of State for Arms and Modernization
of the Ministry of Defense

The theme of the "Industry Days 2013" conference were the challenges facing the technical modernization of the Polish Armed Forces in the next few years.

In his inaugural speech Deputy Minister Waldemar Skrzypczak stated that the purpose of the conference "is to improve the relationship between industry and the armed forces, to identify desirable areas of cooperation and to establish such forms of cooperation that will stimulate industry to develop in the direction desired by the Polish Armed Forces."

In his speech, Waldemar Skrzypczak said that the work on a new decision aimed at increasing the efficiency of the military equipment acquisition system is in its final phase. The modifications include giving the Undersecretary of State for Arms and Modernization the decision-making powers in relation to contracts with a value of up to 100 million PLN, simplifying the procedures for agreeing on and giving opinions on documents, the introduction of regulations to ensure the security of military equipment deliveries and new regulations governing the disbursement of budget funds.

Deputy Minister also stressed the importance of cooperation with research entities, including the National Research and Development Centre, where projects are being implemented in the field of defense and security.



"I wish the mutual exchange of views to ultimately translate into measurable benefits for all participants of the conference, not just for today, but also in the long term" – concluded Waldemar Skrzypczak.

Chief of General Staff, gen. Mieczysław Cieniuch reminded, in turn, the directions of technical modernization of the Polish Armed Forces in 2013-2022, including in particular the operational programs. According to the general, the cooperation with the Polish defense industry should be based on the effectiveness (deadlines, quality of service), innovations of the offers and the condition that the Polish Armed Forces should remain its most important customer.

At the end of his speech, Chief of General Staff presented the requested courses of action, including in particular: the concentration of R & D and production potential, active integration with European bodies, the implementation of research and development works in an international environment.

The conference, aside from representatives of the Polish arms industry, was attended by representatives of the National Security Office, Ministry of Defence, Ministry of Economy, Ministry of the Treasury and the Inspectorate of Armaments. Also present were the heads of the National Research and Development Centre and the Polish Chamber of National Defence Manufacturers. The host of this conference was the Undersecretary of State for Arms and Modernization of the Ministry of Defence – Waldemar Skrzypczak. ■



- A.** General Mieczysław Cieniuch – Chief of General Staff
- B.** Brig. Gen. Zygmunt Mierczyk – President of Military University of Technology
- C.** Div. Gen. Leszek Cwojdzirski, PhD – Director of the Department of Armament Policy of the Ministry of Defense

M28[®]

Best in Class Safety & STOL performance
utility aircraft to support your needs

Polskie Zakłady Lotnicze Sp. z o.o. – PZL Mielec
A Sikorsky Aircraft Company is the biggest
Polish aircraft manufacturer currently ex-
panding its production profile to include
aerostructures and helicopters. On March 16, 2007,
100% of the shares of Polskie Zakłady Lotnicze Sp. z o.o.
were purchased from ARP SA by United Technologies
Holdings SA (UTH), a subsidiary of United Techno-
logies Corporation (UTC). The new era was initiated not
only in the history of Mielec aviation industry but also
in history of the company itself. As a part of UTC, PZL
initiated cooperation with Sikorsky Aircraft Corpora-
tion – a world leader in helicopter production, includ-
ing the UH-60 BLACK HAWK S-76* and S-92* models.



M28 O5



M28B/PT Glass Cockpit airplane

M28® AS UNIVERSAL PLATFORM

The high performance STOL M28® family airplanes are a twin-engine high-wing cantilever monoplane of all-metal structure, with twin vertical tails and a tricycle non-retractable landing gear featuring a steerable nose wheel.

The airplane characteristics include:

- short takeoff & landing (STOL capability),
- high useful load, mission versatility,
- unpaved airstrip operating capability,
- easy access through rear cargo door, fitted with a hoist for cargo loading and relocation inside the cabin,
- high-wing arrangement for protection of engines and propellers against damage when operating from unpaved airstrips,
- easy and quick conversion of the cabin interior configuration,
- low operating cost,
- PT6A-65B engines allows best in class STOL aircraft performance and provide high safety margin of operation,
- Inverted engine configuration for efficient protection against foreign object ingestion owing to inertial separators installed inside air inlet ducts,

- Very quiet and effective 5 blades Hartzell propellers.

Depending on the equipment installed, the airplane can be operated in various mission versions:

- passenger transport (19 seats or 18 seats plus toilet),
- cargo transport (2300 kg payload),
- passenger/cargo transport mix,
- paradrop (17 seats),
- ambulance /medevac (6 stretchers, 8 seats, 2 medical attendant's seats including observers' seat)
- search and rescue SAR
- Patrol/ Reconnaissance

Aircraft reconfiguration is very quick due to universal mount standard (ANCRA Rails) M28®O5 airplane holds the many civil international certificates.

M28® B/PT: STATE OF THE ART AVIONICS FOR ALL MISSION PROFILES

M28® B/PT Glass Cockpit airplane allow to use unique platform performance to perform a flights into both: civil and military environment and is dedicated to support every missions where typical commercial transport airplane cannot be used.

M28® O5: PERFORMANCE FOR CIVIL OPERATORS

Operations from difficult areas with no advance infrastructure, unpaved runways, high mountains, coast are not problem when M28® capabilities are used. You can safely transport passengers up to 19 passengers, cargo drop para troopers or pallets in non-reachable areas wherever you need and whenever you need. In the cargo transport version, the airplane is suited for carriage of cargo boxes, loose or, when liquid, in special container inside the fuselage or in barrels. In a passenger version you can transport.

Best in class airplane performance in connection with CNS/ATM compliant night and radio/navigation equipment provides for VFR and IFR flying capability, day and night, including TAWS A and TCAS II systems required by the most of authorities for passenger transport.

M28® O5 as a basic platform airplane holds the following certificates:

- U.S.(FAA A56CE).EASA /European Aviation safety Agency)
- EASA.AO58 TCs
- Indonesian AO54.

M28® O5-SG: BEST COMPROMISE OF COST AND PERFORMANCE FOR PATROL AIRCRAFTS

M28® performance and high payload in connection with high range of operation about 1500 km and more than 6 hours flight duration make a M28® cost effective and high performance platform for every medium range patrol missions.

To realize SAR/MPA or ISR missions aircraft can be equipped in various systems:

Multifunctional Patrol Radar of Polish manufacture

- Thermovision Camera
- Direction finder system Chelton
- Crew & SAR rafts · option
- up to four operator stations
- TRON 3oS beacons (external & internal)
- Spectrolab SX- 16P Nightsun searchlight
- Flares carriage/release system – option
- Pollution IR/UV scanner – option

TECHNICAL DATA

BASIC DIMENSIONS & WEIGHT

Empty Weight, Standard Equipment Configuration	4090 ±10 kg
Maximum Takeoff & Landing Weight	7500 kg
Maximum Weight, Zero Fuel	6900 kg
Maximum Payload	2300 kg
Maximum Load in Underfuselage Pod	300 kg
Minimum Weight for Flight (depending on version)	4700 kg
Maximum Fuel Weight / Volume in Wing Tanks	1766 kg/2280 l/600 gal. USA

CHARACTERISTICS OF PERFORMANCE IN TERMS OF THE ISA WITH A MAXIMUM STARTING WEIGHT (IAS)

Max. Operating Speed, V_{MO}	355 km/h (192 KTS)
Maneuvering Speed, V_A	244 km/h (132 KTS)
Minimum Control Speed, V_{MCA}	153 km/h (82 KTS)
Stalling Speed (<TOW), V_S	123 km/h (66 KTS)
Rate-of-Climb (MTOW)	12 m/s (2160 ft/min)
Minimum Takeoff Distance	325 m (1065 ft)
Landing Distance	560 m (1836 ft)

Max. Range (fuel in the tanks winged)

at 3000 m (10000 ft) altitude, 45 min. Navigational Fuel Reserve	1450 km (785 NM)
at 3000 m (10000 ft) altitude, 18 passengers, 45 min. Navigational Fuel Reserve	1200 km (650 NM)
at 6000 m (20000 ft) altitude, 45 min. Navigational Fuel Reserve	1800 km (975 NM)

EXTERNAL DIMENSIONS

Overall Length	13,10 m (43 ft)
Overall Length (Maritime Patrol version)	13,72 m (45 ft)
Wing Span	22,06 m (72,4 ft)
Height	4,90 m (16 ft)

Cabin	
Passenger Seating Capability	18 + 1
Passenger Seat Spacing (Pitch)	0,72 m (2,36 ft)
Aisle Width	0,354 m (1,16 ft)
Length	5,26 m (17,2 ft)
Width	1,74 m (5,7 ft)
Height	1,72 m (5,7 ft)



M28 O5

M28® B/B1R

As all M28® airplanes from the family Bryza's offers the same performance and because is used for military purpose M28® B airplanes holds polish military TC and are successfully used by polish AF and NAVY in various configurations.

To realize SAR/MPA or ISR missions aircraft can be equipped in various systems:

Multifunctional Patrol Radar of Polish manufacture

- Thermovision Camera
- Direction finder system Chelton
- Crew & SAR rafts – option
- up to four operator stations
- TRON 30S beacons (external& internal)
- Flares carriage/release system – option
- Pollution IR/UV scanner – option

For NAVY configuration airplane can be equipped also in:

- Hydroacoustic I magnetometric
- submarine detection equipment
- Transmittsiondata link(s)
- RWR/ESM self protection

Intelligence Surveillance Reconnaissance/Search and Rescue co

M28 equipped in maritime patrol airplane is successfully used by a polish Border Guard and MPA/ ISR platform in various configuration are used by polish NAVY.

MILITARY OPERATIONS BENEFITS:

- Digital military VHF/UHF (HO I. II)
- High power military HF radio {ALE capable} Double mode TACAN
- IFF mod 4 transponder with mod 5 provision
- NVIS Cockpit and navigational lights
- Dual EGIS allows precise navigation in all conditions
- Special mission software and hardware provisions
- Civil equipments (TSO qualified) needed for VFR/IFR airspace for current CNS/ATM requirements
- Performance and systems requirement (RNP <0.3NM) EHS/ELS Transponder
- TCAS II/ TAWS A safety surveillance equipment
- wx radar with Turbulence detection
- 4 LCD displays with dual FMS (CDUs)
- 3 axis AFCS



PIAP SCOUT®

P IAP SCOUT® is made for special purposes involving remote performance of inspection and manipulative actions subject to the operator's intentions. It is a robot designed for quick reconnaissance of field and inspection of hard-to-accessible places (i.e. vehicles' chassis, places under seats in means of transportation, narrow rooms or ventilation ducts) as well as for remote removal and neutralisation of IEDs.

PIAP SCOUT® robot moves using a hybrid, track-wheel drive system; however if it is necessary to reduce the height and/or width of the robot, it is possible to easily remove the driving wheels. Solid structure of small dimensions and low mass, together with a dynamic drive system ensure, high manoeuvrability and speed (max 7km/h) of the robot. Mobile base is equipped with three cameras with infrared illuminators (front, rear and manipulation camera installed on the manipulator arm) and one (main camera) with LED illuminators and x 22 optical zoom.

PIAP SCOUT® can be equipped with a with a long reach manipulator, ended with a gripper, with two remotely controlled degrees of freedom (the upper arm and gripper movement) and two manual degrees of freedom.

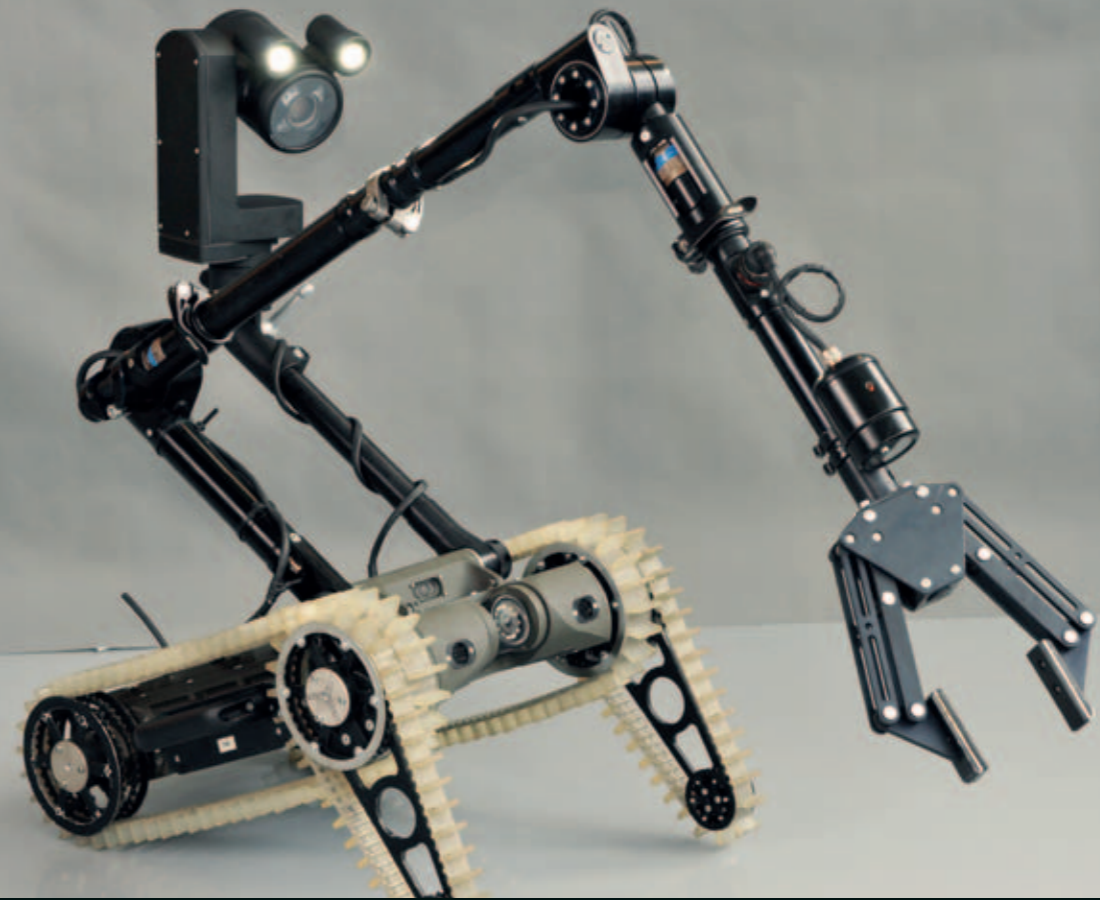
By mounting additional devices to the robot's mobile base, its scope of application is significantly broadened. It can be equipped with a recoilless disruptor, video recorder, chemical sensors, barbed-wire cutters, cable for the remote detonation of explosive charges, fibre-optic cable winder, or an X-Ray device.

The robot is powered by batteries in the form of a replaceable pack, located inside the mobile base. The frontal part of the robot's body contains two water-proof microphones. Located on the mobile base casing are sockets of additional accessories, fibre-optic cable, main camera and the manipulator arm.



MAIN FEATURES OF PIAP SCOUT® ROBOT:

- Small dimensions of the robot enable swift inspections of hard to reach areas and rooms;
- The robot's wheels are easy to remove. This allows for a reduction of the robot's overall dimensions and enables operation in spaces that are hard to reach;
- Very small weight enables transportation of the robot in a typical military backpack;
- Thanks to its specific drives, the robot efficiently travels across uneven areas and obstacles of inclination angle up to 45°;
- The robot's structure enables easy and swift replacement of any additional equipment;
- The robot is able to carry loads from 2 up to 5 kg with its manipulator;
- Both the robot and the manipulator can be controlled from the operator's station (in the form of a small and light-weight suitcase);
- Optional use of fibre-optic transmission enables the robot to operate at significant distances, even in an environment of high electromagnetic noise level;
- PIAP SCOUT® robot can be adapted to various applications:
 - special squads operations: neutralization of explosives, negotiations with terrorists, recording of operation course, taking X-ray images,
 - commercial firms services: inspection of ventilation ducts, inspection of areas exposed to chemical and biological pollution, location of defects in places difficult to access by a man. ■



GENERAL SPECIFICATION OF PIAP SCOUT®

Weight (with batteries, manipulator and main camera)	27.5 kg
Weight of control panel	12 kg
Width with wheels	535 mm
Width without wheels	400 mm
Length	590 mm
Length with front tracks	750 mm
Height	190 mm
Maximum speed	7 km/h
Capability to surmount inclines	± 45°
Maximum allowed sideways tilt	± 35°
Remote control	Radio / fibre-optic (optional)
Maximum range of radio transmission in the open area	500 m
Fibre-optic transmission	up to 300 m of fibre-optic cable with winder
Maximum span of the gripper's jaw	170 mm
Maximum load capacity of the manipulator	<ul style="list-style-type: none"> • 2 kg at full extension of the arm • 5 kg with the arm folded
Maximum reach of the manipulator	<ul style="list-style-type: none"> • 1500 mm for manipulator with telescopic extension (optional) • 1300 mm for manipulator without telescopic extension
Number of cameras in the robot's mobile base	2 cameras with IR illuminators
Number of cameras located on the manipulator	1 camera with IR illuminator
Mobile cameras (optional equipment)	1 camera placed on the pan/tilt head with 22 x optical zoom and LED illuminators



PYROTECHNIC AMBULANCE



Pyrotechnic ambulances are used in airports in Warsaw, Gdańsk, Katowice and Rzeszów. For the airline and passenger, the presence of an ambulance means less wasted time in case of evacuation when someone leaves the luggage; and it happens several times a month. Now, border guards may immediately move into action and see if the luggage constitutes a danger. In the past, they sometimes had to get special equipment from a remote base and load it to a standard car.

The vehicle has thermal and acoustic insulation. The antenna is installed on the roof, so the radio can control various devices – including the pyrotechnic robot. Part of the car carrier is designed to transport specialized equipment – such as anti-explosion suits or X-ray.

TECHNICAL CHARACTERISTICS OF THE VEHICLE

Type	PYROTECHNIC AMBULANCE	
Model	IVECO DAILY 70C17 4 x 2	
Permissible mass	7 000 kg	
Drive	4x2	
Cabin	3-person cabin	
Engine	4-cylinder diesel, straight, 16-valve	
	Max. power	170 KM
	Torque	400 Nm
	Engine capacity	2998 cm ³

TECHNICAL CHARACTERISTICS OF SPECIALIZED HOUSING

Type Container housing, made of stainless steel – frame made from sealed stainless steel profiles, welded, glued aluminum plating, insulation inside the walls. The floor is covered with non-slip carpet (non-slip anodized aluminum plate), reinforced at the back, in the space reserved for the transport of two pyrotechnic robots weighing 60 and 200 kg with 4 fixing elements for each robot. Reinforced roof with a window (skylight), can be opened to mount robot antenna for the duration of the work. Roof of the container equipped with a boarding ladder and railing, covered with non-slip floor fitted with a ladder fixing system. Container housing equipped with a window in front on the left side (in direction of travel) and door with steps and handrails for easy entry into the container in front of the container on the right. Container housing equipped with lamps illuminating the space surrounding the housing and work area around the vehicle at a distance of 1.5 m (minimum of 5 lx at a distance of 5m) switched on and off from inside the cabin of the vehicle.

Interior of the housing Separated front part of the container for a desktop to control pyrotechnic robots with rotating seat for the operator with protection from shifting during transport of the seating and desktop. Desktop post to work with a computer with a dedicated space for mounting a computer system with monitor and printer. In the middle of the back part of the container – separated space for transporting a pyrotechnic robot weighing around 200 kg with anchor points. 2 fluorescent tubes placed and attached inside the container.

SPECIALIZED HOUSING EQUIPMENT

Lift On the back wall of the container there is a hydraulic lift with a capacity of 350 kg. Elevator control is carried out through remote control or manually. The maximum slope of the lift in the down position does not exceed 30°. The loading lift is used for loading and unloading pyrotechnic robots and special equipment.



HAZARDOUS MATERIAL DISPOSAL SET

Container VERA shrapnel-resistant, vented container for transporting explosive materials and devices:

- resistance to an equivalent of 5 kg of TNT;
- loading window and ejected conveyor allow loading the object with maximum dimensions 70/50/90 cm (width / height / length) and weight of up to 50 kg;
- drives provide opening and closing of the loading window cover and ejecting and retracting of the loading conveyor;
- cable and battery power supply for the drives (provided equipment for battery charging);
- loading window cover and loading conveyor drive control – wired (25 m) and wireless (80 m);
- construction of a loading conveyor protects against accidental falling of the transported item;
- the arm enables placement of a heavy object on the loading conveyor using a hook-rope set;
- emergency manual loading window lid opening;
- OIB conformity declaration.

VERA container was produced by *Jakusz Systemy Zabezpieczeń Bankowych, Bogdan Jakusz z Kościerzyny* enterprise.

MILITARY VEHICLES TRANSPORTATION EQUIPMENT



AUTO-HIT S.A. low-loader
NS 700W

AUTO-HIT

The experience from combat operations conducted in the late twentieth century and the beginning of the present century have transformed the requirements for military vehicles.

Strategists from different countries are of the opinion that the tanks will be the primary combat means of at least until 2040. Due to new threats, they need to be equipped with additional passive and active armour, especially in versions suitable for fighting in urban areas. This will increase the – already considerable – mass of the vehicles and their external dimensions. Performance of these weapon systems is directly connected with the proper transportation measures. Therefore, for effective use of modernized warfare systems, it is necessary to ensure proper transport system, accepting vehicles with altered weight and dimensions.

The use of modern tank transporters allows for quick dislocation of heavy combat vehicles, not only at the strategic level, but also within the divisions and brigades. Moreover, they not only provide quick deployment, but also significantly reduce the amount of consumed fuel, which is the basic material deciding on the realization of combat tasks of mechanized warfare systems. It is important to remember that the tractor towing semitrailer loaded with armoured vehicle consumes 1/4 of fuel required to travel the given distance by the armoured vehicle itself.

AUTO-HIT S.A. has been producing low – loaders of different types and size for the Polish Army for many years. Currently, our offer includes semitrailers with capacity ranging from 30 to 70 tons. Due to the expected conditions and usage patterns, the semitrailers produced by our company are characterized by:

- simple design that reduces the probability of failure, and provides the ability to perform all the maintenance operations at every location. For this reason, there is no need to move the whole set (semitrailer + tractor) to specialized maintenance workshops. At the same time, upon the request or consent of the client we can introduce systems that facilitate the driver or maintenance technicians' work such as the central lubrication systems or reverse warning systems. The decision is always left to the client;

- the use of pneumatic suspension of each axle to ensure appropriate transport conditions with minimal



BASE TECHNICAL PARAMETERS OF AUTO-HIT S.A. LOW-LOADERS

Name	NS 300WRS	NS 500W	NS 500WZ	NS 600WR	NS 700W
Carrying capacity	30,000 kg	50,000 kg	52,000 kg	60,000 kg	70,000 kg
Length of the loading platform	7.9 m	10.3 m	10.7 m	10.3 m	10.3 m
Width of the loading platform	3.19 m (2.54m)	3.35 m	3.4 m	3.35 m	3.55 m
Height of the loading platform	0.96 m	0.96 m	0.96 m (0.60m)	0.96 m	0.96 m
The height of the king pin	1.25 ÷ 1.65 m	1.25 ÷ 1.65 m	1.65 m	1.25 ÷ 1.65 m	1.65 m

impact on the logistics system. Lack of requirement for additional operating materials reduces costs of preventive maintenance, for example in the event of damage, the only what has to be done is to remove the damage and inflate the system. It is not necessary to bring any special liquids. The inflation can be performed using an independent unit or tractor compressor. Moreover, if the repair is not possible, the damaged section of the suspension system can be cut off and driving can be continued. This suspension system also allows replacement of damaged tires without the need for unloading of the semitrailers;

- the use of components from renowned manufacturers who have a maintenance base in the areas of the semitrailers intended use. This ensures very high reliability, ease of access to the service and fast response to any needs of our clients. We have also developed and implemented the configuration of a service car, which we use to perform maintenance and repair work directly in the military units;
- versatility that allows the use of semitrailers for the transport of various combat vehicles, which was

obtained by using a properly configured set of attachment points. In addition, the flat load platform makes it possible to transport cargo containers and custom cargo. Thanks to the versatility of our products, the semitrailers may constitute one of the key elements of the logistics system;

- the ability to change the width of the load platform, which allows transport of even the widest vehicles, ensuring at the same time the use on winding roads, for example in mountain areas. This solution is used by the engineering units of the Polish Army ordered to perform rescue operations.
- ensuring co-operation with technical rescue systems mounted on tractors, which is obtained, for example, by installing the appropriate system of rollers for winching up ropes. The use of two tracks for the ropes facilitates the rescue operations by allowing the movement of damaged equipment while it is loaded onto the semitrailer platform. What is more, a structural solution was used that allows the damaged vehicle to be taken down from the semitrailer without having to disconnect the tractor or use another technical rescue vehicle;

- ability to customize for tractors that have different height of the fifth wheel, which was obtained by applying a mechanical change in the king pin. The solution – which is under patent protection – is an easy way to adapt the trailer to the replacement tractor. In Poland it is used to increase potential for the armoured vehicles redeployment.

In areas vulnerable to direct attacks, the semitrailers can be equipped with run-flat tyres that allow to continue to run after tires get shot.

The set consisting of a semitrailer with tractor equipped with winches and crane was awarded with the prestigious DEFENDER award at the XIV International Defence Industry Exhibition in Poland. The jury appreciated the advantages of our design that optimally combine specialization and versatility.

ABOUT THE COMPANY

AUTO-HIT S. A. has its own manufacturing facility, along with the design office, which employs experienced staff. Thanks to its resources it is able to meet the specific demands of the military and quickly develop and build up specialized superstructures for military vehicles as well as semitrailers adapted to new types of military equipment. An example of this can be semi NS500WZ that provides transportation of 155 mm self-propelled howitzer CRAB bought by the Polish

Army at the end of 2012. The semitrailer is adapted for transport a very high self-propelled howitzer as well as other vehicles of the artillery sub-division but also transport containers.

AUTO-HIT S.A. has proven potential to adapt its products to the customer's requirements when it comes to technical parameters, resource utilization of dedicated resources and a manner of completion of a contract. A dedicated model of semitrailer can be adapted to specific needs, for example through the use of elements indicated by a customer, particularly using resources available in the user's country. Based on many years of experience, the company has the potential to organize a comprehensive logistic system to support delivered semitrailers and tractors.

AUTO-HIT S.A. customizes the implementation of the contract to the customer's requirements as part of a comprehensive service. Depending on the terms of an agreement, it can provide semitrailers and tractors made or adapted in own workshop. It can also form a consortium with an entity located in the country of a customer or build vehicles directly in the establishments located in the customer's country. AUTO-HIT S.A. always provides an efficient after sales service including: basic and improved trainings for service and maintenance of delivered vehicles, the supply of spare parts and complete organization of technical logistics. ■



AUTO-HIT S.A. low-loaders:

- A. NS 300WRS B. NS 500W C. NS 500WZ D. NS 600WR



WB ELECTRONICS SA

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WB Electronics, a private company of Ożarów Mazowiecki, with entirely Polish capital, is one of the major companies of the Polish arms market.

The company, as one of the major supplier for the Armed Forces of the Republic of Poland, has been actively contributing to improving the defence capabilities of the Polish army for more than twenty years. This contribution consists in creation of new technologies as well as modernisation of military equipment.

Compared to large world corporations, WB Electronics is a small company, but with a comparable range of product offerings. WB ELECTRONICS for years has consequently been conquering new areas of electronics and IT applications in the military technology.

Proprietary solutions in new technology make it possible to develop innovative products with unique utility properties.

The offerings of WB Electronics include mainly military electronics, software as well as services associated with integration of military vehicles. The primary client of WB Electronics are the Armed Forces of the Republic of Poland. The company is also actively involved in overseas trading.

The technology offered by WB Electronics is based on long – term experience resulting from the use of the company's solutions implemented in the Polish army as well as from participation of WB Electronics in international tenders and long – term cooperation with the most demanding customers from around the world.

WB Electronics is a resilient and rapidly growing company, which undertakes new challenges in the field of development and modernization programs for security and defence.

Consistency, perseverance, commitment and the belief in continuing development makes company one of the best participants in the Polish and foreign arms markets.

The strategic directions of development of the offer of WB ELECTRONICS S.A. include:

- **C4ISR systems** – integrated command support systems and battlefield visualisation systems,
- **Software** – integration of platforms and systems
- **Military Electronics** – gun and cannon automation, communication systems, sensors, computers and terminals,
- **Integration of Military Vehicle Electronics** – in combat vehicles, command vehicles, reconnaissance vehicles, specialist vehicles as well as gun and cannon automation



WOJSKOWE ZAKŁADY MECHANICZNE S.A.

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Wojskowe Zakłady Mechaniczne was established in Siemianowice Slaskie in 1952 and since then is strongly involved in overhauls, modernization and special Production for necessity of Armed Forces.

Military Mechanical Works developed in scope of documentation and production following equipment:

- **T-72 /SKZ-T-72/ tanks field control stands**
- **Tracked vehicles SKS – G engines' field Control stands**
- **Maintenance and lubrication equipment**
- **Compressor installation**
- **Power generation**

Factory started repairs in scope of following engines: Henschel, Ikarus, Star 200, Leyland, Jelcz.

In 1996 upgrading works of the BRDM-2 armoured reconnaissance care began. As a result of this work the whole family of upgraded armoured reconnaissance vehicles was generated: from the BRDM-2M96i model through the BRDM-2B, BRDM-2A and BRDM-2M96iK "Szakal".

A number of vehicles were produced, which have been successfully exploited in the Polish Army, especially during peace keeping missions. Now the persisting construction works tend to follow upgrading of these vehicles, for the purpose of upgrading their reliability and battle possibilities.

In the year 2001, Ministry of National Defence invited Wojskowe Zakłady Mechaniczne, among other companies, to participate in a tender for the delivery of Wheeled Armoured Transporters (KTO) for the Polish Army. In this tender, WZM offered a fourth generation armoured modular vehicle AMV 8x8 designed by Finnish concern Patria, armed in combat version with HIFTIST 30mm weapon system of Italian concern OTO Melara.



THE BUMAR GROUP

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Bumar sp. z o.o. is a leading supplier and exporter of armaments and military equipment manufactured in the Polish defence industry.

For over 40 years the company has been a leader in the domestic and international market of weaponry, construction plant, mining and handling equipment. Its extensive experience, world-recognized and distinguishable brand, achievements in implementing new technologies in the Polish industry and in initiating relationships with renowned producers all over the world, professional and skilful personnel are company's main assets. Bumar has been supplying and selling its equipment and services to the Polish Army and in over 40 countries in Europe, Africa, Asia, South America and the U.S., winning many international bids.

The Bumar Group was formed in 2002 as a result of adoption of Strategy for Structural Transformation of the Defence Sector Capacity 2002-2005 by the Polish Government.

Bumar sp. z o.o. was appointed the integrator of the newly formed Bumar Group, with the responsibility for exercising owners supervision. The Bumar Group consists of 22 manufacturing companies from the Polish defence industry (PPO) specializing in munitions radars, rockets, armour and vehicles including 2 trade companies. Some of the dependent companies form capital groups. Bumar also holds shares in other companies, including foreign ones. More than 50 entities belong to the Bumar Group.

The internal structure of the Bumar Group form Bumar Electronics SA, two capital subgroups Bumar Ammunition SA and Bumar Soldier SA and the product division Bumar Land.

Market activities of the Bumar Group are concentrated around four product groups constituting the subject matter of production and service divisions respectively:

- **BUMAR AMMUNITION** – ammunitions and missiles (shooting ammunition, artillery and missiles, SPIKE, GROM, FE-NIKS missiles);
- **BUMAR SOLDIER** – the soldier and the official (individual equipment and armament of the soldiers including: pistols, guns, optoelectronic equipment, protective measures: gas masks, helmets, bullet-proof jackets);
- **BUMAR ELECTRONICS** – electronics and IT (commandment systems, radars, sensors, anticraft and anti-missiles systems);
- **BUMAR LAND** – land platforms (wheel, caterpillar platforms, military vehicles, tanks, special vehicles, technical backup vehicles, bridges).



TEL DAT

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TEL DAT is a Polish business entity, which has been dynamically operating in the defence market for sixteen years. It is the leading constructor and producer of the world's most innovative data communications solutions, which are dedicated mostly to security and national defence.

The solutions has been awarded by Buyers and Users (also from NATO). TEL DAT solutions in many cases are unique in international scale and reference to the systems of other countries. Their advantages and reliability have been confirmed by the following certificates and awards signed by NATO Communications and Information Agency / NATO C3 Agency.

The company has the all necessary capabilities to meet requirements and standards imposed to the companies participating in bid projects and research and development in the area of C4ISR systems. It comprises: research and development, production capacity and service, lessons learned drawn from the participation in NATO and USEUCOM exercises, certificates, awards and honors. These attributes locate the company closely to the top of producers of the specialized military data communication solutions.

Since the beginning of its operation the company has been involved in: research & development, designing, development and production, implementation and maintenance (including remote supervision) of specialized electronic, data communication, IT, telecommunication and alarm systems and devices dedicated mostly to security and national defence.

In this field company has collaborated with many national and international institutions which develop for security and defence. TEL DAT has provided for them with research and development, supplies, technical support of implementation and maintenance of specialized data communication systems (including mobile and stationary versions), which are implemented into the Polish Armed Forces (in accordance with required procedures).

All of above mentioned activities have been performed with the highest accuracy, faultlessly and always on time what is confirmed by awarded certificates, prizes, numerous references.



**POJAZDY SPECJALISTYCZNE
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Vehicle bearing the Szczęśniak logo have many characteristic features distinguishing them against the backdrop of the competition. Above all, they are produced using the highest quality materials and components supplied by leading global producers. The product concept, and the production system itself, is based on a patented system of modular structures, these enabling vehicle configuration freely as early as the initial design phase, with the application of existing solutions.

The firm employs over 100 highly qualified specialists in a variety of fields, guaranteeing the high standard of the products manufactured. The construction department has at its disposal modern technical solutions supporting the design and computation stage. Each new product comes into being in the form of a spatial model, allowing a thorough analysis of all sub-assemblies and far-reaching optimization of the solutions applied. This formula for action permits the active participation of the user in the design process and the creation of a structure entirely in conformity with requirements.

Zbigniew Szczęśniak Specialist Vehicles is a leader in the production of specialist vehicles in Central and Eastern Europe, having commenced operation in 1992 in Poland. Since the beginning, the firm has focused on the automotive trade and, more precisely, specialist productions for uniformed services, including the fire brigade, army and police.

The high quality products and the manner in which the enterprise is managed together provide the firm with market success, and are reflected in the numerous awards

received by Zbigniew Szczęśniak Specialist Vehicles, both domestic and international:

- **Highest Quality** – Quality International 2011
- **Title of Winner and Silver Emblem in the QI Product category**
- **Innovation Certificate, from the Polish Academy of Sciences**
- **Responsible Employer and HR Leader 2011**
- **EDURA Fair Prize 2011** – EDURA International Rescue and Fire Technology Exhibition
- **Polish Export Leader 2011**



AUTO-HIT S.A.

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Auto-Hit S.A., private company, established and operating since 1995 year. Divided into few branches, it is successfully developing and manufacturing transport equipment for civil and defence markets.

Following rules of quality systems ISO 9001 and AQAP 2110 Auto-Hit S.A. has been designing, developing and manufacturing:

- Flat bad semitrailer of 30 to 70 tons load capacity
- Specialized semitrailers of various types
- Superstructures of different applications for military vehicles
- Superstructures for tractors designed for many types of semitrailers
- Trailers of different capacity and applications

Being registered with NATO Commercial and Government Entity Code for many years, Auto-hit S.A. provides comprehensive services covering delivery of equipment or development of local production with transfer of technology, technical support, creation and implementation of accordingly tailored Logistic Support System.

As the supplier and authorised dealer of FIAT Industry products, Auto – Hit S.A. is also ready to deliver every vehicle produced by the FIAT Group securing at the same time specific customers' demands, performing adaptation of existing superstructures as well as designing, manufacturing and fitting state of the art superstructure.

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**Polish defence industry
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