PBS MAGAZINE

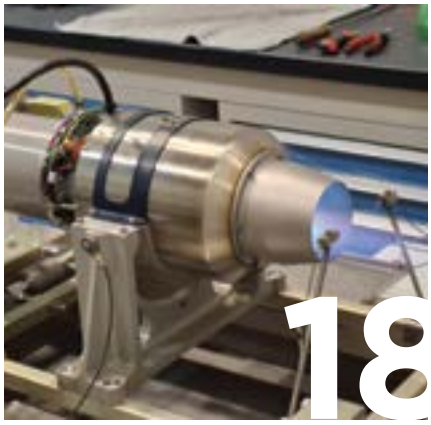
BUSINESS PRODUCTS SOCIAL NEWS

PBS GROUP

THE **NEW GENERATION** TURBOJET ENGINE PBS TJ200

PRODUCTION LAUNCH IN ROSWELL, GEORGIA

CONTINUED PARTNERSHIP WITH LOCKHEED MARTIN



3D-PRINTED EXHAUST SYSTEM FOR PBS TJ40

75+ YEARS OF SUCCESS

STRENGTHENING TIES **WITH THE CZECH GOVERNMENT**

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“PBS Group is entering a dynamic new era in its history. ”

Ing. Petr Kádner

CEO of PBS GROUP

Dear partners, customers and colleagues,

PBS Group is entering a dynamic new era in its history. The year 2025 is a turning point for us a symbol of expansion, strategic investment and strengthening our global position in high-tech aerospace technology and precision engineering.

Today, our company is not only a traditional jet engine manufacturer, but above all an innovator, bringing cutting-edge technical solutions to the defence and civil sectors.

We are proud to announce the launch of two key divisions - Technical Development and a second standalone Aerospace Manufacturing Division - at our main facility in Velká Bíteš. These steps reflect the growing demand for our products and the need to accelerate innovation, increase production capacity and ensure flexibility in meeting specific customer requirements.

Another important milestone for us is the start of production at the new plant in Roswell (Georgia, USA). This high-tech facility strengthens our position in North America and opens new opportunities in the development and production of small jet engines, particularly for unmanned aerial vehicles and advanced defence systems. It also provides a strategic platform for building long-term relationships with key partners and customers in the US market.

The launch of US manufacturing is a direct result of the vision of our owner, Mr William Didden - to be closer to our customers, to directly support US defence programmes and to ensure the long-term sustainable growth of the entire PBS Group. It is a move that underlines our ability to think strategically, adapt quickly and build a truly global technology brand.

But 2025 is also significant in terms of product innovation. We are very proud to introduce the new PBS TJ200 jet engine, which pushes the boundaries of performance and efficiency in the field of missiles and unmanned systems. This engine is the result of the cutting-edge engineering and innovation that characterise the PBS Group. The main advantage of the TJ200 is its compact size combined with an excellent thrust to frontal diameter ratio. In addition, it boasts low fuel consumption in its thrust category, which brings benefits not only in operating costs, but also in longer range and greater deployment efficiency. It is these characteristics that make the TJ200 the benchmark for modern defence technology.

Each year, PBS Group invests more than 10% of its turnover in research and development. We use cutting-edge technologies - from 3D printing to laser surface treatment to vacuum heat treatment and HIP technology. Thanks to these high-tech processes, we are able not only to improve the quality and performance of our products, but also to significantly reduce lead times and respond flexibly to customer needs.

But our mission doesn’t stop at engine manufacturing. The PBS Group is synonymous with responsible and sustainable industrialisation that is built on strong values: reliability, innovation and partnership. We believe that together with you we will continue to push the boundaries of defence and engineering, with an emphasis on technological maturity and global responsibility.

Thank you for your trust and I look forward to our future together.

TOP

PROJECTS

WE DEVELOP MULTIPLE ADVANCED PROJECTS ACROSS AEROSPACE SECTORS. ONE OF OUR LATEST ACHIEVEMENTS IS THE DEVELOPMENT OF THE NEW GENERATION TURBOJET ENGINE PBS TJ200

PBS TJ200

The PBS TJ200 turbojet engine combines compact dimensions with exceptional thrust performance, making it an ideal propulsion unit for advanced unmanned systems, guided missiles, and target drones.

PBS TJ200

Focused view of the TJ200 turbine—optimized for modern aerial systems.

ENGINEERED FOR HIGH PERFORMANCE WHERE EVERY CENTIMETER COUNTS.

PBS TJ200 is a new-generation turbojet engine designed to deliver high thrust in a compact format. With a continuous thrust of 2,280 N and a peak thrust of 2,700 N for short durations, it significantly enhances the thrust range of our engine portfolio. Compared to the PBS TJ150, it offers more than 50% additional thrust while reducing its overall diameter by 10%.

This optimal balance between power and dimensions makes the TJ200 ideal for use in applications where size, weight, and performance are all critical.

The engine is equipped with an advanced FADEC control system, a high-efficiency BLDC starter-generator, and a fuel-lubricated bearing system, ensuring maximum operational reliability with minimal maintenance requirements.

Its versatile design enables integration across a wide spectrum of platforms, including unmanned aerial vehicles, cruise missiles, and target drones. The engine's construction also offers saltwater recovery, making it suitable for deployment in naval environments.

Beyond its compact size and high thrust output, the TJ200 also achieves excellent fuel efficiency, positioning it as an effective solution for missions requiring long endurance or dynamic maneuverability. It meets the demands of both defense and commercial users who prioritize performance, reliability, and integration flexibility.

The PBS TJ200 has been developed for immediate deployment in a wide range of aerospace applications. Its introduction marks a significant milestone in compact propulsion technology and demonstrates PBS's commitment to engineering excellence and innovation in high-performance aerospace systems.

PBS TJ200

HIGH THRUST IN A COMPACT FORM

PBS TJ200 provides up to 2,700 N of thrust while reducing its overall diameter by 10% compared to previous models. This outstanding power-to-size ratio enables integration into platforms where every centimeter matters and high thrust is essential.

ADVANCED INTEGRATED TECHNOLOGIES

The engine incorporates modern FADEC digital control, a high-performance BLDC starter-generator, and a fuel-lubricated bearing system. These technologies improve efficiency, reduce system complexity, and enhance reliability during operation.

Visualization of a drone application

PBS TJ200 COMBINES HIGH THRUST, COMPACT DIMENSIONS, AND ADVANCED TECHNOLOGY, MAKING IT A TOP CHOICE FOR DEMANDING AEROSPACE AND DEFENSE APPLICATIONS.

VERSATILITY ACROSS APPLICATIONS

TJ200 is designed for a wide range of aerospace uses—including UAVs, cruise missiles, and target drones. Its compact build, resistance to saltwater, and high thrust make it suitable even for harsh environments like maritime missions.

FUEL EFFICIENCY AND OPERATIONAL READINESS

Despite its power output, the TJ200 is remarkably fuel-efficient within its thrust category. It is optimized for both long-endurance and dynamic flight profiles, supporting high-performance systems across both defense and commercial sectors.

LOCALIZA

ON APRIL 30, 2025, PBS GROUP, OWNED BY THE FAMILY OF WILL
JET ENGINE PRODUCTION AT ITS NEW U.S. FACILITY IN ROSWE
MILESTONE IN THE COMPANY'S HISTORY AND EXPANSION STR

Roswell, located in the Atlanta metropolitan area, has become the stage for a significant chapter in the history of this traditional Czech engineering brand. With this move, PBS GROUP reaffirms its long-term commitment to the American market while significantly expanding its production and innovation capabilities.

"By starting production in our new facility in Roswell, we are reinforcing our long-standing commitment to our American customers and the U.S. market. We aim to be closer, improve accessibility, increase output, and strengthen trust. Roswell has the potential to become a cornerstone of our long-term success in the U.S.," said Pavel Čechal, Vice President of Operations at PBS GROUP, during the launch ceremony.

Closer to Customers, Faster Deliveries

The decision to open a U.S. production facility was initiated directly by PBS GROUP's owner, William Didden, in response to growing demand from American partners in both the civilian and defense sectors. U.S.-based production will streamline logistics, shorten delivery times, and allow the company to meet the specific needs of local customers.

While the plant is currently in trial operation, full-scale production is expected to begin by September this year. The facility specializes in assembling and testing jet engines designed for drones, guided missiles, and other unmanned systems. Initial output is expected to be in the hundreds per year, with capacity gradually increasing to several thousand. In the second phase of development, production could reach up to 20,000 engines annually by 2026–2027.

U.S.-Based Production, Strategic Partnerships, and a Development Hub

As part of its strategy, PBS GROUP is gradually transitioning to fully localized production by sourcing components manufactured directly in the United States. To support this, the company is actively building

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IAM DIDDEN, OFFICIALLY LAUNCHED
ELL, GEORGIA. THIS MARKS A MAJOR
ATEGY.

PBS GROUP LAUNCHES A NEW ERA OF ENGINE MANUFACTURING IN THE USA

its local supply chain and technological infrastructure.
In addition to manufacturing, the Roswell facility also houses a technical and development center focused on supporting customers in developing tailored applications. This initiative aims to deepen partnerships and enhance PBS's ability to respond flexibly to client-specific needs.

Significant Investment, Rigorous Approval Process

PBS GROUP has invested $20 million in the project's first phase, with total investment expected to rise to $90 million in the second phase. The Roswell plant currently employs several dozen staff, with numbers set to grow as production ramps up and additional operations are introduced.
The entire project underwent thorough scrutiny by U.S. regulatory authorities, which assessed the technical capabilities, safety compliance, and the credibility of both PBS GROUP and its owner. These authorities confirmed full compliance with all regulatory, security, and legal requirements.
"The outcome confirms the reliability of William Didden and PBS GROUP as a trusted partner for U.S. institutions and business partners, particularly in the defense sector," added Pavel Čechal.

PBS in the USA: Nine Years of Experience

PBS GROUP has been active in the U.S. market since 2016 through its subsidiary, PBS Aerospace, based in Atlanta. The new Roswell facility is therefore not a step into the unknown, but rather a natural continuation of nearly a decade of development and successful operations in the region.

Production launch in Roswell, Georgia

HIGHLIGHTS

PBS TJ200

A compact turbojet engine delivering up to 2,700 N of thrust. Combines small size with high performance, ideal for UAVs, missiles, and maritime or target drone platforms.

PBS TJ200

NEW APU

New Generation APU

We are co-developing a next-gen auxiliary power unit focused on hybrid-electric systems, smart diagnostics, and reduced environmental impact for future aircraft platforms.

HIGHLIGHTS

SPARK40

A lightweight auxiliary power unit delivering 40 kVA of electric power. Optimized for helicopters and UAVs, it ensures reliable engine starts and stable onboard power supply.

PBS APU SPARK40

PBS TJ150

PBS TJ150

A proven turbojet engine with up to 1,500 N of thrust. Compact, efficient, and widely integrated in UAVs and target drones across both military and civil applications.

PBS delivers comprehensive support, combining technical expertise, maintenance solutions, and overhaul capabilities to ensure optimal performance, reliability, and availability of your equipment.

SUPPORT

HIGH-QUALITY SERVICE INFRASTRUCTURE AND TECHNICAL SUPPORT FOR OUR CUSTOMERS

TECHNICAL SUPPORT AND SERVICES

We deliver a comprehensive technical publication service, providing a variety of resources such as bulletins, technical documentation, manuals, and timely software updates.

These materials keep our customers up to date with the latest innovations and improvements. Our technical support ensures fast and effective troubleshooting and problem resolution.

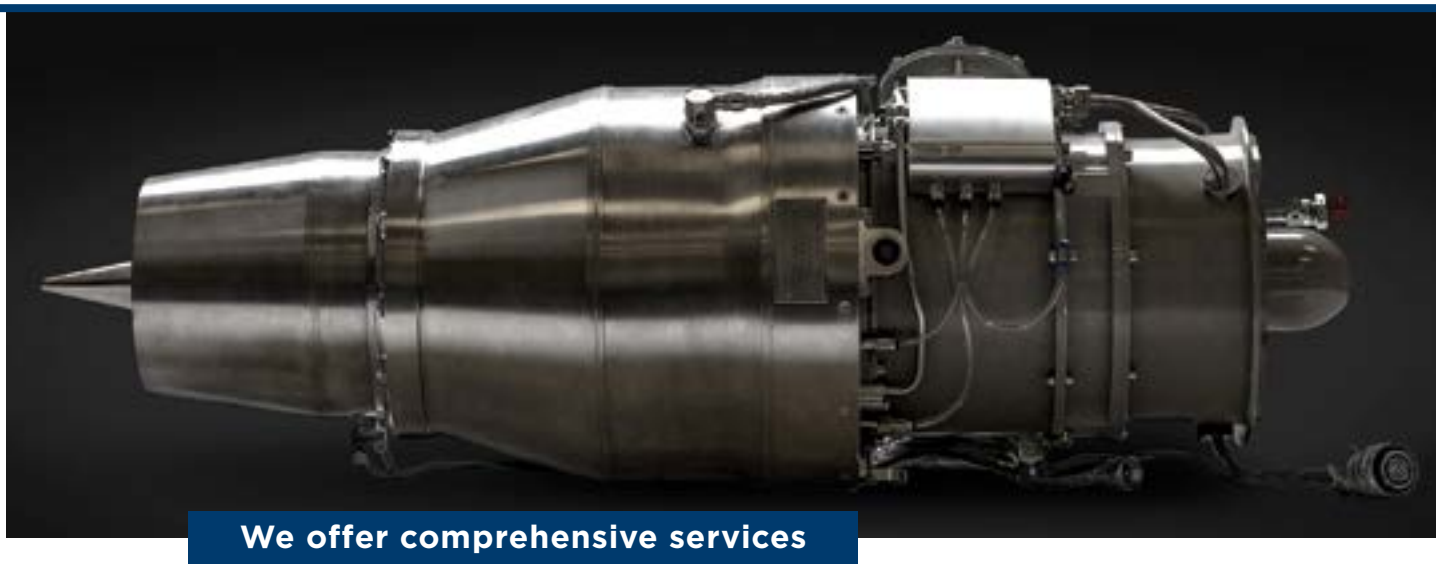
Beyond remote support, our skilled technical team is available for on-site visits, offering tailored assistance directly at the customer's location. Hands-on approach enables us to address technical issues quickly and efficiently.

We also emphasize skill development through in-depth training programs, held both at PBS facilities and on-site, equipping users and technicians with the knowledge and confidence needed for optimal equipment operation and maintenance.

COMPLETE MAINTENANCE SOLUTIONS FOR PARTS, TOOLS, AND EQUIPMENT

At PBS, we focus on maximizing operational efficiency and reducing downtime. That's why we offer comprehensive maintenance solutions for spare parts, professional tools, and equipment—ensuring we meet our customers' needs swiftly and effectively. Our well-stocked inventory enables fast responses to maintenance demands, supporting timely repairs and minimizing extended operational disruptions. Alongside our broad parts supply, we maintain a full range of maintenance tools, including both specialized and general-purpose options, to ensure precision and ease in every task. Our dedicated support team responds rapidly and proactively, delivering personalized assistance and expert guidance either remotely or through on-site visits. We are committed to keeping equipment running reliably, safeguarding business continuity without unnecessary delays.

Thorough technical solutions



We offer comprehensive services

MAINTENANCE, REPAIR, AND OVERHAUL

We offer a comprehensive portfolio of maintenance, repair, and overhaul (MRO) services specifically designed for engines, APUs, and their components. Our capabilities include complete engine and APU overhauls and repairs performed at PBS facilities, as well as on-site servicing. In addition, we provide TBO (Time Between Overhaul) extension services, available both in-house and in the field, to ensure uninterrupted and dependable equipment operation.

COOPER

F-35A Lightning II

LOCKHEED MARTIN

Continued Partnership with Lockheed Martin Advances to Second Phase

The collaboration between Czech consortium, named Czech Industry, members PBS GROUP, ONE3D, HiLASE Centre of the Czech Academy of Sciences, and Lockheed Martin, launched in May 2024, is progressing into its second phase. Focused on developing high-tech technologies for the F-35 aircraft, the project has successfully achieved critical milestones, paving the way toward integration into Lockheed Martin's global supply chain.

Following a meticulous due diligence process and U.S. Government approval in 2024, the consortium is actively developing and testing innovative solutions, including additive manufacturing, laser surface refinement, and advanced heat treatment in state-of-the-art vacuum and hypovac furnaces. These technologies aim to produce high-quality F-35 component meeting stringent standards. PBS GROUP is significantly enhancing its high-tech infrastructure, fostering innovation across the Czech industrial sector. This ongoing partnership underscores the consortium's technical prowess and strengthens its trajectory toward becoming a vital contributor to the global aerospace supply chain.

ATION

INVESTMENT IN R&D

The engineering group PBS GROUP is significantly strengthening its development and production base at its main manufacturing plant in Velká Bíteš. In April, it launched a new Technical Development Division and a second independent Aerospace Division, substantially increasing its capacity for jet engine production. Investments in these steps amount to nearly one billion CZK.

The new Technical Development Division will accelerate the development of modern manufacturing methods and innovations that the group has long applied in jet engine production. Both divisions have their own dedicated facilities, pilot production lines, and testing infrastructure, enabling independent and faster innovation outside of the already heavily utilized production lines.

PBS consistently allocates more than 10% of its annual turnover to research and development. More than 50 experts work on dozens of projects, and the group holds numerous patents and utility models. The goal is to maintain a technological edge over competitors and respond flexibly to customer needs. The Development Division will also connect activities across other company sites in Prague, Brno, and newly opened offices in the United States. This creates a strong development base with a global reach, open to new talent.

FORGING THE FUTURE:

University Partnerships Drive Aerospace Innovation

Career Days at CTU

INTERNSHIPS

Our internship program transforms university students into aerospace innovators by immersing them in real-world projects. Working alongside our experienced engineers, interns tackle technical challenges, from conceptual design to rigorous testing.
This hands-on experience complements their theoretical studies, building critical skills for their future careers. Engaged in diverse projects, they explore advanced technologies and contribute to groundbreaking solutions. By bridging academic knowledge with practical application, our program prepares students to excel in the fast-evolving aerospace industry, fostering confidence and expertise.

CTU students on a tour of PBS

PBS is committed to shaping the future of aerospace through strategic partnerships with Czech technical universities, a cornerstone of our strategy for talent development and innovation.
Our collaboration with ČVUT (CTU) drives joint research and development, focusing on cutting-edge aerospace technologies, while supporting students through mentorship and resources. Experts Tomáš Pardek and Lukáš Snopek inspired ČVUT students with a guest lecture on cryogenics, igniting passion for engineering. With TUL, we push advanced manufacturing boundaries, successfully 3D-printing hinge bodies for aerospace applications. Our deep ties with Brno University of Technology's Faculty of Mechanical Engineering include lectures, excursions, summer internships, and thesis supervision, alongside support for student clubs and extracurricular activities. New partnerships with VŠB-TUO, Tomas Bata University in Zlín, and the University of Defence further expand our impact. By sharing expertise and fostering hands-on opportunities, PBS bridges academia and industry, nurturing skilled professionals and driving breakthroughs that redefine aerospace engineering.

3D PRINTING

PBS GROUP IS ACTIVELY TESTING THE IMPLEMENTATION OF 3D PRINTING TECHNOLOGY IN THE PRODUCTION OF SELECTED NON-CRITICAL COMPONENTS USED IN JET ENGINES, AUXILIARY POWER UNITS, AND AIR SYSTEMS. ADDITIVE MANUFACTURING ENABLES FASTER PROTOTYPING, DESIGN FLEXIBILITY, QUICKER ITERATIONS, AND OPTIMIZED MATERIAL USE.

3D-printed exhaust system for PBS TJ40 turbojet engine

Assembly of a jet engine exhaust component manufactured using 3D printing. Additive technologies allow the production of geometrically complex parts with reduced weight and lead time.

TRAINING CENTRE

PBS GROUP OPERATES ITS OWN PRACTICAL TRAINING CENTRE

To ensure long-term success and uphold our tradition of technical excellence, PBS GROUP operates its own Practical Training Centre in Velká Bíteš. Established to educate the next generation of skilled professionals, the centre plays a key role in our strategy for workforce development and sustainability.

It provides students with hands-on training focused on mechanical engineering disciplines, especially those tailored to the needs of precision manufacturing and aerospace industries.

The centre works closely with our production and engineering teams to offer education aligned with real industrial challenges.

Students gain early exposure to advanced technologies such as CNC machining, CAD software, and even additive manufacturing. By the time they complete their studies, they are well familiar with PBS standards and prepared to contribute effectively to our operations.

This internal approach helps us address the shortage of qualified workers in technical fields and ensures the training reflects both current industrial demands and future trends. Dozens of students each year benefit from the chance to connect theoretical knowledge with real production experience and many continue their careers directly within PBS.

The centre represents our long-term commitment to education, innovation, and regional development. Through this initiative, PBS not only secures its future workforce but also contributes to strengthening the broader Czech engineering sector.

Awarding our students

Student operating machinery

CZECH PRECISION

Engineering Excellence Driving Global Aerospace Innovation with PBS Products

AERO L-39NG

The L-39NG training and light attack jet represents a new era of advanced and cost-effective aviation. Building on the proven reliability and legacy of the iconic L-39 Albatros, it continues the tradition of the world's most widely used trainer aircraft.
We are proud to play a part in its continued success.

AERO

AERO Vodochody AEROSPACE a.s. is the largest aircraft manufacturer in the Czech Republic and one of the oldest in the world.

PBS began contributing to its aerospace production program as early as 1969, delivering turbostarters for the AI-25W jet engines used in the L-39 Albatros trainer aircraft—marking the first PBS products in this sector.

In the years that followed, turbostarters were succeeded by the Safir 5 air generator, the predecessor of today's Safir 5K/G APU, which remains a key product of our Aircraft Division.

In 1972, we also delivered the first 11 of what would become a total of 4,500 environmental control system units for the L-39 aircraft.

50+ YEARS OF SUCCESSFUL COOPERATION

ECS components

The L-39 Albatros achieved worldwide popularity thanks to its excellent flight characteristics, user-friendly handling, and outstanding reliability. Between 1971 and 1997, nearly 2,900 aircraft were produced. We take pride in the long-standing and successful partnership between PBS and Aero Vodochody, which has endured for over 50 years. We are confident that this cooperation will continue, and that new or modernized aircraft equipped with PBS components will go on to earn further recognition and showcase the excellence of the Czech aviation industry around the globe.

Thunder wasp drone

ACC GROUP AB

This heavy-lift drone is capable of carrying the heaviest payloads in its class. With a modular design and turbine engine propulsion, it employs a patented drive system that delivers mechanical power directly to the rotors. Its primary application is in aerial firefighting, where reliability and lifting capacity are critical.

The Swedish company ACC Group AB, based in Åtvidaberg, Sweden, has been developing autonomous and remotely operated drones for many years. PBS is proud to have joined their Thunder Wasp large drone project.

At present, ACC is working on two development configurations: one designed for firefighting with a standard Bambi Bucket, and another equipped with a specialized container tank that allows the drone to collect water while hovering close to the surface.

Cutting-Edge Firefighting Capabilities

By selecting the PBS TS100 turboshaft engine for their innovative Thunder Wasp drone, the engineers at ACC Group AB have elevated aerial firefighting capabilities to a new level. This powerful engine is ideally suited for the demanding tasks the drone is built to perform. Its compact design supports a sleek and agile airframe, which is essential for maneuvering through confined spaces and navigating obstacles in active fire zones.

Despite its compact size, the TS100 delivers exceptional performance, generating an impressive 180 kW of continuous power. This enables the Thunder Wasp to maintain high effectiveness, even during operations at elevated altitudes.

This robust engine is specifically engineered to withstand the most demanding firefighting missions, offering the power and reliability needed to operate under extreme conditions. Its performance remains consistent, even in harsh environments, making it an ideal choice for the rigorous demands of aerial firefighting.

A new twin-engine version of the Thunder Wasp is currently in development, which will significantly boost its payload capacity. While the current model already supports an impressive 400 kg payload, the upcoming twin-engine variant is expected to nearly double that figure—approaching a remarkable 1,000 kg. This enhancement will further reinforce the Thunder Wasp's position as a leading solution in its category.

CURTI AEROSPACE ZEFHIR

Curti Aerospace Zefhir

The PBS TS100 turboshaft engine has been selected by Curti Aerospace, an Italian manufacturer, to power their Zefhir light helicopter.
Designed to meet the needs of both recreational and training flights, the Curti Zefhir features our turboshaft engine, equipped with FADEC control, delivering a derated power output of 141 shp (105 kW).
This partnership underscores our commitment to delivering advanced propulsion solutions that enhance performance and reliability in state-of-the-art aviation applications.

LEONARDO MIRACH 100/5

We proudly collaborate with Leonardo in enhancing the Mirach 100/5 training target. This training drone has been a key part of Leonardo's portfolio for decades and is widely used by international navies and air forces. Sixteen armed forces—including those of Belgium, Denmark, France, Germany, Greece, Italy, Spain, and the United Kingdom—have employed the Mirach 100/5 to support their training operations.

The upgraded Mirach 100/5 V2 marks the evolution of this proven platform, incorporating mid-life enhancements such as the integration of the PBS TJ150 engine, advanced avionics, and improved overall reliability. It provides highly accurate simulations of enemy aircraft and incoming missile threats during training exercises, enabling realistic radar and weapon system training for modern armed forces.

Mirach 100/5 aerial target

New UAV system developed in Indonesia

CVD INDONESIA

PBS collaborates with VLR of PT CVD (Vimana Laboratory & Research of PT Cakra Vimana Diinamycx) in Indonesia—a Research & Design Bureau specializing in scientific research, industrial applications, and defense and security systems.

Registered with the Indonesian Ministry of Justice and Human Rights, the Indonesian Ministry of Defence, and in partnership with the Indonesian Ministry of Research and Technology, VLR is engaged in conceptual design, research and development, engineering solutions, and specialized services.

Since 2018, PBS Velká Bíteš has partnered with VLR to integrate turbojet engines into their aerial vehicle research, including flying test beds and target drones for air defense training.

VLR of PT CVD selected PBS turbojet engines for their reliability, high-quality manufacturing, and costeffectiveness—qualities that make them well-suited for both professional and industrial applications.

Recently, representatives from PT CVD visited PBS to explore new avenues of cooperation. They plan to integrate additional PBS solutions into future projects, both within Indonesia and internationally, to ensure dependable outcomes in the years ahead.

TL ULTRALIGHT

The StreamTurbo aircraft, manufactured by TL Ultralight, is designed as a lightweight, turboprop, two-seat trainer. Powered by our PBS TP100 turboprop engine—renowned for its outstanding performance and reliability—the aircraft has a takeoff weight of 800 kg. The StreamTurbo is suitable not only for training military pilots but also for use in the private sector. This partnership demonstrates the successful fusion of cutting-edge aircraft design with the advanced engineering of our propulsion systems.

TL ULTRALIGHT

SubSonex

SONEX AIRCRAFT SUBSONEX

The exceptional power-to-weight ratio of up to 1,250 N (292 lbf), combined with low fuel consumption within its thrust class, high reliability, and advanced technical features, led Sonex Aircraft to select the PBS TJ100 engine for their SubSonex Personal Jet. Introduced at AirVenture 2009, the SubSonex JSX-1 prototype successfully completed its maiden flight in August 2011 after being fitted with the PBS TJ100 engine. A rigorous flight test program followed in 2012, confirming the engine's reliability. Today, numerous SubSonex aircraft are in operation across the United States.

INDIAN AIR FORCE

With over five decades of experience in aviation and defense, PBS stands as a trusted partner to the Indian Air Force's fleet of Mil Mi-8 and Mi-17 helicopters. Many helicopters in this fleet are equipped with our SAFIR 5K/G MI Auxiliary Power Units (APUs), delivering reliable performance even in extreme climatic conditions. PBS offers superior alternatives to third-party APUs, customized with enhanced tactical and technical specifications. In addition, PBS continues to focus its APU research and development efforts on producing high-performance units specifically engineered for next-generation helicopter programs.

Mi-17V-5 equipped with SAFIR 5K/G MI APU

CZECH ARM
SAFIR 5K/G

The SAFIR 5K/G MI Auxiliary Power Unit (APU), manufactured by PBS, has been successfully integrated into the Czech Army's Mi-171Sh transport helicopters, demonstrating exceptional reliability and performance over time. This integration not only enhances operational efficiency

SUPPORTING OPERATIONS ACROSS DIVERSE LANDSCAPES

Our APUs excel in extreme climatic conditions and at high altitudes, offering a crucial advantage in demanding environments such as the Peruvian Andes. We are proud to support the operation of Mi-17 helicopters in South America, equipped with our SAFIR 5K/G MI Auxiliary Power Unit (APU). With a significant fleet relying on our technology, we ensure uninterrupted APU functionality through timely spare parts deliveries and expert overhaul services. Within the European Union, we maintain a strong presence in supporting Mi-17 helicopter operations in Poland. These helicopters are fitted with the SAFIR 5K/G MIS variant of our APU. Our offering includes comprehensive services such as technical training and equipment testing for the Mi-17 V5, ensuring that customers receive exceptional support tailored to their specific operational requirements.

Helicopter Mi-17

Peruvian technicians and PBS team

Y USES MI APU

of the Mi-171Sh fleet but also serves as a strong testament to Czech engineering and excellence in military aviation support systems.
It reflects a robust partnership dedicated to upholding the highest standards in aviation technology.

PBS IN UKRAINE

Josef Soukal,
Business Manager, PBS

1. How did you, as a representative of PBS, become involved in the reconstruction efforts in Ukraine in June 2023?
My involvement was driven by our company's commitment to supporting Ukraine both economically and in its defense initiatives. The focus of our delegation was the supply of key jet engine technologies aimed at modernizing Ukraine's aviation capabilities.
We viewed this initiative not only as a meaningful contribution to regional security and stability, but also as an opportunity to expand our market presence into new territories—further strengthening PBS's position as a supplier of advanced aerospace technologies.

2. What were the key aspects of your discussions with military entities in Ukraine regarding potential opportunities for jet engines?
Our discussions centered on how PBS jet engines can be effectively integrated into Ukraine's defense systems.
We explored their application in missile and drone technologies, which could significantly improve the combat effectiveness of Ukrainian forces.
Known for their reliability and high performance, our engines were recognized as a strong fit for demanding combat conditions—opening the door for future cooperation.

3. What products or technologies did you present during meetings with the Ministry of Defence of Ukraine?
I presented our portfolio of advanced jet engines, developed to deliver outstanding performance and reliability.
These propulsion systems are well suited for both upgrading existing military aircraft and enabling the development of next-gen unmanned systems.
Our technology was received positively due to its potential to enhance aviation mobility and operational efficiency—key factors for meeting the urgent needs of the Ukrainian Air Force.

4. What security measures did you have to adhere to during your trips to Ukraine, and how did this affect your work activities?
We followed strict security protocols throughout the trip. Travel was limited to nighttime hours to reduce the risk of aerial attacks, and we relied on the AirAlert mobile app for real-time threat notifications.
These precautions, combined with pre-departure security training, allowed us to conduct meetings and presentations safely, with minimal impact on our work and communications in the field.

5. How did the negotiations with Ivchenko Progress go, and what opportunities for collaboration are emerging in the area of jet engines?
The negotiations with Ivchenko Progress were highly productive. We focused on joint opportunities in jet engine development and application.
Significantly, we have already made tangible progress in supplying our propulsion systems to a leading Ukrainian UAV manufacturer. This partnership aims to enhance the performance and capabilities of Ukrainian drones for a variety of military applications. Our successful deliveries reaffirm PBS's commitment to supporting Ukraine's defense needs and our role as a reliable partner in aerospace development.

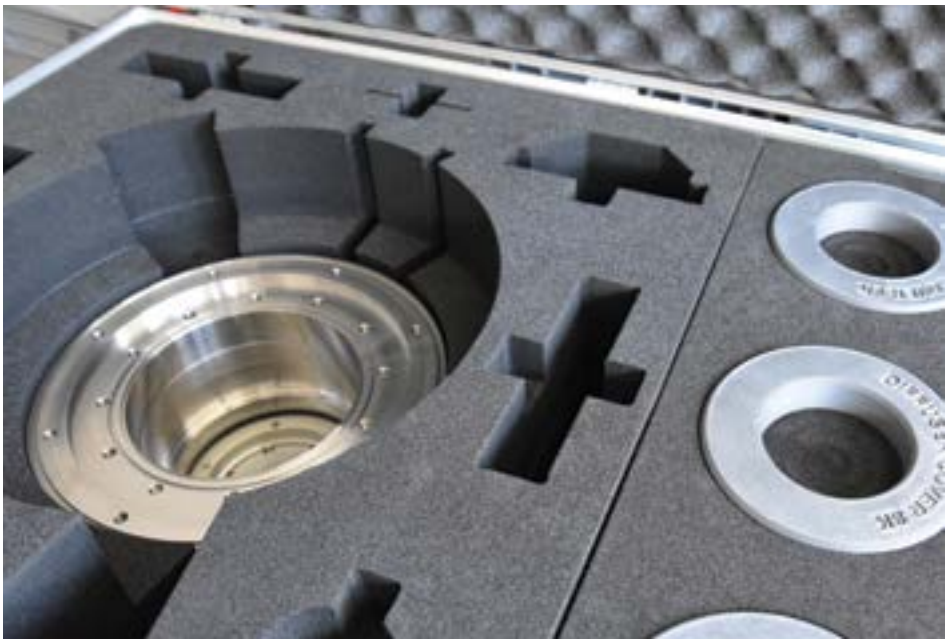
6. What did you take away from your visits to Ukraine in terms of experiences and future plans?
These visits provided valuable insights into Ukraine's immediate challenges and technological needs, particularly in the aerospace and defense sectors.
Our jet engines were very well received, and we have already begun deliveries to Ukrainian clients. These experiences will help us further tailor our solutions to specific requirements and deepen our support for Ukraine's defense capabilities.
Looking ahead, we plan to expand our activities and explore additional collaborative programs in the region.

Cryogenic compressor

CERN

PBS supplies key cryogenic components to CERN, enabling superconducting technologies at near-absolute-zero temperatures. This collaboration highlights PBS's precision engineering and its vital role in supporting cutting-edge scientific research on a global scale.

Among its advanced engineering domains, PBS has established a strong foothold in the design and production of cryogenic equipment. These highly specialized systems are essential for achieving ultra-low temperatures required in fundamental scientific research, space technology, and quantum applications.



Excellence in Cryogenics and Physics

One of the most notable collaborations is PBS's long-standing involvement with CERN, the European Organization for Nuclear Research. PBS supplies critical components for cryogenic infrastructure that supports the operation of particle accelerators, including the

With Unique Know-How, PBS Supports Cutting-Edge Science Through Cryogenic Excellence.

world-famous Large Hadron Collider. At CERN, superconducting magnets must be cooled to just a few degrees above absolute zero, around 1.9 Kelvin to function correctly. This demands absolute precision, reliability, and

Factory acceptance for CERN

technological excellence in cryogenic systems.

PBS contributes not only hardware but also unique know-how in vacuum technology, helium management, and thermodynamic stability. The partnership with CERN reflects the company's capacity to deliver solutions that meet the highest standards of international science.

This engagement is a testament to PBS's role in enabling breakthroughs at the frontiers of physics and proves that advanced Czech engineering continues to play a vital part in global high-tech initiatives.

PBS Fuels Precision at Physics Frontier

EVENTS

At PBS GROUP, there is always something happening. Across our companies and facilities, we regularly welcome visits from Czech government representatives, industry leaders, and international partners. These visits highlight our role as a trusted and innovative player in global engineering. They also reflect the strong relationships we've built and the interest our technologies continue to inspire. Our sites remain active centres of progress, collaboration, and technical excellence at the heart of European industry.

PBS Velká Bíteš

75 YEARS
ANNIVERSARY

75 YEARS

This year marks a major milestone for PBS Velká Bíteš – the 75th anniversary of our manufacturing facility. Since its founding in 1949, our plant has transformed from a regional engineering operation into a globally respected centre of innovation and production.

Over the decades, PBS has expanded its capabilities from precision casting to the development and manufacture of cutting-edge turbine engines, auxiliary power units, and environmental control systems. Today, we proudly serve customers in aerospace, power, and transportation industries around the world.

75 years of our manufacuring plant

75+ YEARS OF SUCCESS

What sets PBS apart is the vertical integration of production – we oversee every step of the process, from development and design through to final assembly and testing. This allows us to guarantee high-quality performance and flexibility that meets the specific needs of our partners.

Our 75th anniversary is not only a celebration of our past achievements but also a promise for the future. With continued investment in technology, talent, and partnerships, we are ready to write the next successful chapter of our story – rooted in tradition, driven by innovation.

STRENGTHENING TIES WITH THE CZECH GOVERNMENT

At PBS GROUP, our legacy is built not only on engineering excellence but also on strong partnerships across industries, borders, and institutions. In 2024, we deepened one of our most important partnerships: our relationship with the Czech government.

This past year brought high-level visits that underscore the state's recognition of PBS as a strategic player in the Czech industrial and technological landscape.

The most significant moment came during the International Engineering Fair (MSV) in Brno, where the Prime Minister of the Czech Republic, Petr Fiala, visited our stand on the very first day of the exhibition. He was welcomed by our Vice President of Operations, Pavel Čechal, who presented him with a model of the PBS TJ40 turbojet engine. This symbolic gesture highlighted our commitment to innovation, the role of modern aerospace technologies in Czech industry, and the strategic importance of our growing international reach. The Prime Minister's visit reaffirmed MSV's position as a key platform for shaping the future of Czech industry and PBS's vital contribution to that future.

Later, we were honored to host the Minister of Industry and Trade, Lukáš Vlček, at our headquarters in Velká Bíteš for the ribbon cutting of the new vacuum furnace. The visit came at a decisive moment, as PBS GROUP embarks on a major expansion of its production capacity.

Our Investment Casting Division is the first to receive significant funding, responding to growing global demand. Minister Vlček's visit reflects the government's support for industrial growth and its recognition of PBS as a company that brings high-value innovation and employment to the Czech economy.

Equally important was the visit of Marian Jurečka, Deputy Prime Minister

Farnborough International Airshow

Minister for Industry and Trade Lukáš Vlček

Minister of Labour and Social Affairs Marian Jurečka

and Minister of Labour and Social Affairs. Minister Jurečka began his visit with a roundtable discussion with PBS leadership, where we explored workforce development, employment priorities, and the broader challenges of our fast-changing industry. His tour included our casting division and engine testing site, where he observed live jet engine trials, experiencing firsthand the precision and complexity behind our work.

We greatly value the trust and attention of these leaders. Their visits have given us the opportunity to demonstrate our commitment to Czech innovation, our capacity for global competitiveness, and the social responsibility we bear as a major industrial employer.

PBS GROUP will continue to work closely with national institutions to promote technological excellence and sustainable industrial growth, both at home and around the world.

Prime Minister Petr Fiala

PRODUCTION PROGRAMME

PBS TJ150

AIRCRAFT ENGINES

PBS designs and manufactures a range of turbojet, turboprop, and turboshaft engines, renowned for their high-performance capabilities in both manned and unmanned aircraft systems. Multiple engine variants are specifically adapted for defense applications, including integration into missile systems. Our proven reliability is reflected in their widespread deployment across UAVs, aerial targets, microjets, and light helicopters.

ECS SYSTEMS

Our Environmental Control System (ECS) solutions are engineered to meet specific customer requirements with high efficiency.
With a significant number of PBS ECS units produced and installed to date, they are primarily deployed in medium helicopters and training aircraft, while also being adaptable for integration into light transport aircraft and business jets.

ECS-M1V

AUXILIARY POWER UNITS

As a certified manufacturer of APUs under EASA regulations, PBS specializes in customizing its products to meet specific customer requirements. PBS APUs are widely integrated into medium helicopters and training aircraft around the world, thanks to their proven reliability and consistent performance.

SAFIR 5K/G MI APU

ABB industrial robot

INVESTMENT CASTING

We are proud to introduce ourselves as one of the most modern precision casting foundries in Central Europe, with a rich heritage dating back to 1969. Our mission is to gain international visibility and provide a broad range of precision casting services for the aerospace, power engineering, construction, and other industrial sectors. Our foundry is equipped with state-of-the-art technology covering every stage of the precision casting process, from metal melting to the final product.

This technological advantage allows us to manufacture high-quality castings from a wide range of materials, including nickel and cobalt-based superalloys.
We offer comprehensive services that include casting design, solidification simulation, reverse engineering, and post-casting machining, all the way to the finished component. Our castings are distinguished by their high durability and consistently meet even the most demanding customer requirements.

Our highest specialization lies in the production of impellers for turbochargers and aircraft engines, turbine blades for gas turbines, spinner discs for glass wool production, and femoral components for the medical industry. Thanks to our innovative technologies and decades of experience, we are also a reliable partner to leading suppliers across a wide spectrum of other industrial fields.

We are flexible and fully capable of adapting to the individual needs of our customers. We also recognize that fulfilling deadlines and maintaining the required quality standards are essential to building long-term and reliable business relationships. We believe that our advanced technologies, technical expertise, and customer-oriented approach make us a strong and trustworthy partner in global manufacturing.

Vacuum furnace

VACUUM FURNACE

We are expanding our precision casting technology. Currently, we are acquiring a new vacuum furnace and a new annealing furnace. These investments will enhance our capacity and technological capabilities in precision casting.

Blackening

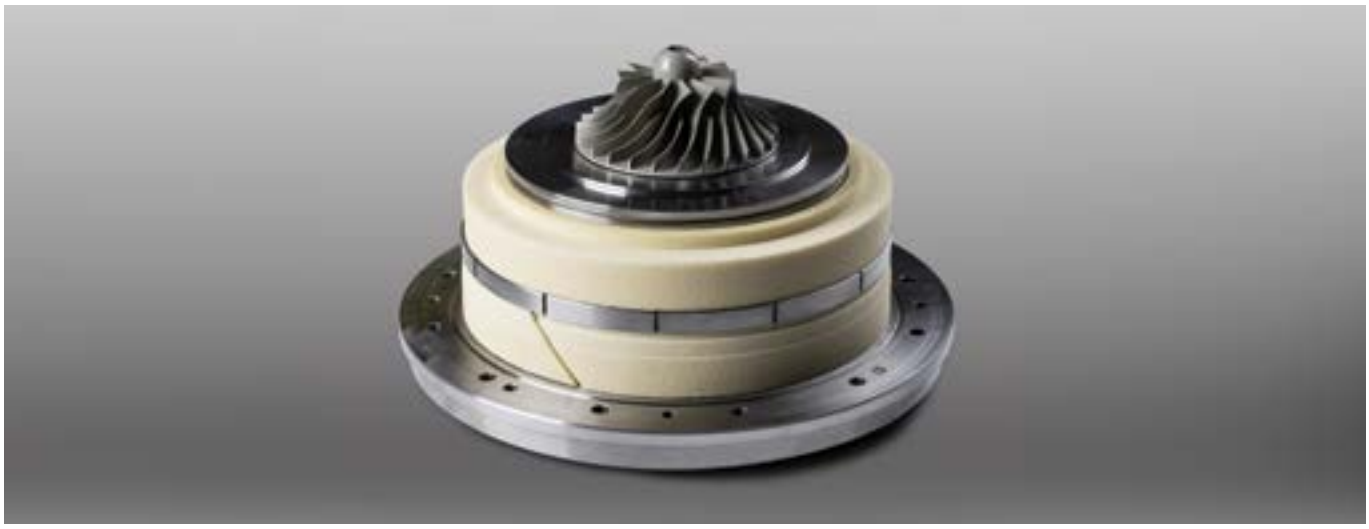
SURFACE TREATMENTS

Our electroplating plant has been providing its services to internal and external customers for more than forty years. We offer anodizing, blackening, zinc plating, tin plating, nickel plating and other surface treatments in top quality and with a responsible professional approach to every job.

CRYOGENICS

Since the late 1980s, we have specialized in the design and supply of cryogenic turbines used for the liquefaction of inert gases such as helium.

Today, we are a key provider of turboexpanders, compressors, and pumps to leading global manufacturers of cryogenic systems.



TURBOEXPANDERS

Our turboexpanders improve process efficiency by reco-vering energy in industrial applications. These devices play a vital role in the liquefaction of inert gases and contribute to reducing overall operational costs. Our advanced designs—featuring eddy current brakes—deliver exceptional performance and reliability, meeting the rigorous demands of modern industry.

Turboexpander

ESG

At PBS GROUP, social responsibility is more than a policy—it's part of who we are. We actively support local communities, invest in education and technical development, and create a safe, respectful environment for our employees. Guided by ESG principles, we are committed to ethical conduct, long-term partnerships, and building a sustainable future for the regions where we operate.

PBS company event

We support nonprofit organizations

Internal fire response team

FC PBS Velka Bites

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