

Press Release
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PBS GROUP Jet Engines Unlock New Possibilities for Air Defence

PBS GROUP, a leading global manufacturer of jet engines for drones, cruise missiles, and other unmanned applications, is seeing the growing importance of unmanned systems in air defence. The company continuously monitors industry developments and adapts its product portfolio to meet evolving customer requirements—most notably increasing demands for speed, range, and precision. PBS sees a clear trend toward a future of defence built on a combination of mass-deployed and high-performance unmanned systems.

PBS GROUP supported discussions on current developments in the field, which took place on March 17–18 as part of the Czech UAS Industry Day, organized by FlyinDiamonds with the support of the Vzlet association, as well as the Dronyx 2026 conference, where the company served as the general partner

Modern battlefields and defence strategies worldwide are increasingly shaped by unmanned systems with diverse propulsion types and applications. According to PBS GROUP, key trends include the saturation of air defence systems with large numbers of low-cost drones, alongside growing demand for jet-powered unmanned platforms capable of achieving high speeds, extended range, and executing significantly more sophisticated missions.

“Jet engines like ours open entirely new possibilities in terms of speed, range, and operational flexibility for drones. While electric propulsion dominates low-cost, mass-deployed systems, jet-powered applications represent the future of targeted defence solutions,” says Petr Kadner, CEO of PBS GROUP.

As a result, jet engines are gaining importance in defence applications. UCAS (Unmanned Combat Aerial Systems), new categories of return-capable attack drones, and advanced unmanned platforms designed for deep strategic operations behind enemy lines are also coming to the forefront.

The significance of drones and unmanned applications has been fundamentally reshaped by the war in Ukraine, as well as conflicts in the Middle East. PBS GROUP engines are among those contributing to Ukraine’s defence capabilities. What was once considered a supplementary technology has now become a key element of both modern defence and offensive operations.

Many countries are now intensively addressing how to strengthen air defence against new types of unmanned threats, while nations in Asia and the Middle East are making substantial investments in unmanned technologies. It is clear that the future of defence will not rely on a single type of system, but on a well-balanced combination of mass-produced electric platforms, high-performance jet-powered systems, and effective counter-UAS defence.

Demand Outpaces Supply

In response to this global demand, PBS GROUP is significantly expanding its production capacity. Over a three-year period, the company is increasing its jet engine production capacity by 800 percent. It is investing heavily in the expansion of its main facility in Velka Bites, while also launching serial production in Roswell, Georgia, USA. This year alone, nearly CZK 1 billion is being invested into the Velka Bites site to further scale production and strengthen aerospace engine development.

“Demand for jet-powered applications currently exceeds supply, and it is clear that this trend will persist even after current conflicts end. On the contrary, we can expect continued large-scale rearmament and long-term growth in the importance of unmanned technologies in defence,” adds Petr Kadner.

PBS GROUP is one of the few manufacturers in Europe offering top-tier performance, proven quality, and long-standing expertise in this segment. The company is also actively involved in shaping the future of European air combat systems.

Advantages of PBS Engines

PBS GROUP engines are used in unmanned systems, cruise missiles, and other advanced applications. The portfolio includes the TJ40, TJ80, TJ100, TJ150, and most recently the TJ200, introduced last June at the Paris Air Show. This latest engine represents a new performance category with strong potential for demanding defence and commercial applications. It is also resistant to seawater, making it suitable for naval deployment.

A key competitive advantage of PBS GROUP lies in more than two decades of experience in the development, production, and deployment of jet engines in international projects. The company's engines stand out for their compact design, high thrust, rapid start capability, flexible lubrication systems, and reliable operation at high altitudes. A new fuel injection technology also enables engine starts at altitudes of up to 6,000 meters.

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PBS GROUP, a manufacturer of aerospace technologies, is synonymous with innovation in high-precision engineering. The company is a renowned producer of jet engines. With its main production facility in Velka Bites and expanding manufacturing capacities in the United States and India, PBS GROUP has become a significant global player in both defence and civil aviation technologies. The company is long-term engaged in developing advanced aerospace solutions supporting NATO and allied defence projects, as well as civil aviation.

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