

PRESS RELEASE

První brněnska strojírna Velka Bites, a.s. (PBS) – an established aviation manufacturer – has entered the Indian market with propulsion units for unmanned aircraft.

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PBS was presenting its entrance to the Indian market for unmanned aircraft during the Aero India 2019 trade fair in Bangalore. PBS is a renowned Czech export company, which supplies its turbine propulsion units to more than 40 countries around the world. Among the company's flagship products are UAV turbojet engines as well as auxiliary power units and environmental control systems for various types of aeroplanes and helicopters.

PBS is ready to meet the Indian import rules and is currently defining the necessary steps leading to the development of trade with the Republic of India.

In 2018, PBS launched two new types of jet engine onto the market in the thrust category of 900 and 1,500 Newtons. The company thus expanded its line of jet engines to 5 types in the category from 200 to 1,500 Newtons of thrust. It is entering the Indian market of unmanned applications with this unified line of jet engines, and an extended selection of turboprop and turboshaft propulsion units.

"This is not our first experience on the Indian market," the Director of the Aerospace Technology Division, Mr. Roman Kolka, says about the current business successes. "In India, there are currently 151 Mi-17 helicopters flying with a Safir 5K/G MI auxiliary power unit (APU), which starts the main engines of the helicopter and supplies electrical power for its pre-flight preparation."

"We would also like to expand our successful cooperation with the suppliers of various types of unmanned aircraft which, similarly to other notable world markets, are experiencing a noticeable rise. We have been active in aviation for over 50 years. Worldwide, we have supplied more than 1,000 jet engines and more than 4,000 APUs. We, therefore, have vast experience with our own turbine technology and also with installation into various types of aircraft. With our entrance onto the Indian market, we would like to support the Indian manufacturers of aviation applications with our know-how," adds Mr Kolka.



The PBS TJ150 engine

At the Aero India fair, PBS was mainly presenting its selection of jet engines. Visitors to the PBS stand was able to acquaint themselves with the PBS TJ150 and PBS TJ40 engines specifically.

Both of these propulsion units excel with their excellent thrust-to-weight ratio with respect to the outer diameter of the engine. Other advantages include a compact design, an integrated starter generator, reliability when starting up the engine in harsh climatic conditions with the added possibility of starting in flight at high speeds and high altitudes.

PBS develops, manufactures, and tests more than 90% of its products in-house, and that includes castings from its own precision casting division, which will also be presented at the AERO India fair.

The main parameters of the newest jet engine, the PBS TJ150

Maximum thrust	1,500 N
Maximum speed	0.9 M
Outer diameter of the engine	272 mm
Engine weight	19.6 kg
Maximum altitude	10,000 m
Electrical power output	600 W / 28 V
Ambient temperature range	-50 °C to +45 °C
Fuel	JET A-1
An integrated electronic control system	

PBS products – Aerospace Technology Division

- **jet engines** PBS TJ23U, PBS TJ40, PBS TJ80, PBS TJ100 and PBS TJ150 in the power category of a maximum thrust between 200 – 1,500 N intended mainly as the propulsion unit of various types of UAV aircraft.
- **turboprop and turboshaft turbine aircraft engines** with a power output of 180 kW for the propulsion of unmanned vehicles, small aircraft and helicopters.
- **auxiliary power units (APU)** generating compressed air for starting the main engines and for supplying electrical power for aircraft and helicopters
- **environmental control systems** for heating, cooling and ventilation of the cabin and cargo areas of aeroplanes and helicopters
- **precision castings, precision machining, surface treatments**
- **cryogenic products**

PBS in numbers

- sales of more than 52 million Euro (2018)
- more than 700 employees (2018)
- 6 branches worldwide (2018)

[Prvni brnenska strojirna Velka Bites, a.s.](#) engages in the development, production and testing of high-rpm turbine machines for the aviation, power engineering and transportation industries. It is also a leading European foundry for precision casting, and a supplier of galvanic surface treatments and high-precision machining. It offers top-quality products and services with high reliability, with the added value of taking the needs and specifics of its individual customers into account.

PBS Velka Bites is part of PBS GROUP, which governs one of the longest standing engineering brands on the world market – Prvni brnenska strojirna. It has been a synonym for innovation and quality for more than 200 years. This group also incorporates:

[PBS ENERGO, a.s.](#) – the development, production, supply and service of industrial steam turbines and gas expansion turbines

[PBS BRNO, a.s.](#) – a comprehensive supplier of power engineering equipment with a focus on industrial boilers

[PBS AEROSPACE, a.s.](#) – business activities in the aviation industry, mainly on the American market

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