



AIRCRAFT COMPONENTS AND PARTS MANUFACTURING



The PBS brand is built on 200 years of history
and a global reputation for high quality
engineering and production

AIRCRAFT COMPONENTS AND PARTS MANUFACTURING BY PBS

PBS Velka Bites is a member of PBS GROUP – stable, high quality and innovative engineering company that has been active in the field of high precision engineering for over 200 years.

PBS Velka Bites offers its technological capacities, namely machining, milling, heat treatment, coating, and welding in unmatched quality as well as investment casting, surface treatment, non-destructive testing, and other services related to the production of aircraft parts.

MACHINING



Service description	Dmax	Lmax
5-axis machining	300 mm	300 mm
5-axis milling	600 mm	400 mm
Centerless grinding	20 mm	100 mm
Cylindrical grinding (outer)	300 mm	500 mm
Cylindrical grinding (inner)	300 mm	300 mm
3D laser cutting & drilling	300 mm	300 mm

Service description	X	Y	Z
3-axis machining & drilling	600 mm	400 mm	400 mm
Flat grinding	600 mm	200 mm	200 mm
Electrical discharge machining	300 mm	300 mm	300 mm

GEAR GRINDING



Service description	Dmax	Bmax	Module	Gearing incl. angle
External involute gearing	320 mm	70 mm	max. 6 mm	0°
Internal involute gearing	300 mm	70 mm	max. 6 mm	0°
Involute gearing milling	150 mm	100 mm	max. 2 mm	±45°
Involute gearing elongation	60 mm	—	max. 2 mm	0°
Gear grinding	260 mm	400 mm	—	—

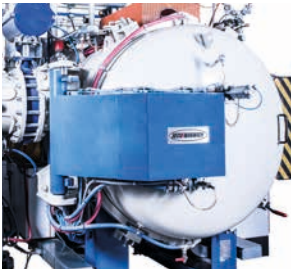
SURFACE TREATMENT



Aluminium alloys	X	Y	Z
Hard anodizing	1,850 mm	850 mm	550 mm
Hard black anodizing	1,850 mm	850 mm	550 mm
Natural anodizing	1,850 mm	850 mm	550 mm
Natural black anodizing	1,850 mm	850 mm	550 mm
Anodizing in chromic acid	1,850 mm	850 mm	550 mm

Cooper, steel, brass	X	Y	Z
Nickel coating	1,850 mm	850 mm	550 mm
Tin coating	1,850 mm	850 mm	550 mm
Zinc coating	1,850 mm	850 mm	550 mm
Blackening	1,850 mm	850 mm	550 mm
Ceramic core leaching	X	Y	Z
Casting dimensions	500 mm	500 mm	380 mm

OTHER SERVICES



Service description	Dmax	Pitch	
Screw-thread rolling	18 mm	1.5 mm	
	Dmax	Pivot Ø	Rotor weight
Balancing	350 mm	60 mm	max. 15 kg
	X	Y	Z
Heat treatment and soldering	600 mm	600 mm	400 mm
Turbine blades coating (X=Ø)	400 mm	400 mm	—

Service description	
TIG manual welding	Sheet metal up to 1 mm thickness from various metals including stainless steel and Hasteloy X.
Resistance spot welding	
Resistance seam welding	depending on diameter and material
3D laser cutting & drilling	

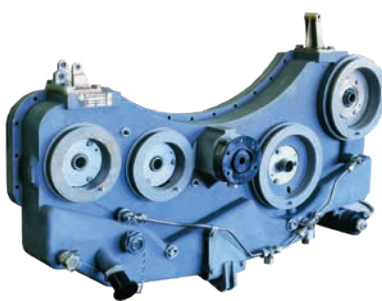
OVERVIEW OF TECHNOLOGICAL CAPABILITIES

- › CNC machining, milling, and drilling
 - › Parts grinding and coating
 - › Gears grinding and grooving
 - › Electrical discharge machining
 - › 3D laser cutting and drilling
 - › Annealing in vacuum furnace
- › TIG and resistance welding
 - › Rotor balancing
 - › Reverse engineering
 - › Rapid prototyping
 - › Non-destructive testing
 - › Surface treatment

STARTER-GENERATORS



AIRCRAFT GEARBOXES



SINGLE & TWO-CHANNEL IGNITIONS



VALVES & FILTERS



OTHER AIRCRAFT PARTS & COMPONENTS

- › Air Generator
 - › Air-flow Limiters
 - › Ejectors
 - › Electronic Control Systems
 - › Fans
 - › Fuel Pumps
 - › Heat Exchangers
 - › High Pressure Water Separators
 - › Low Pressure Water Separators
- › Oil Tanks
 - › Overpressure Regulators
 - › Pneumatic Control Systems
 - › Precoolers
 - › Speed Sensors
 - › Temperature Selectors
 - › Thermostats with Filters
 - › Turbocoolers
 - › Air Filters
- › Fuel Filters
 - › Inlet Filters
 - › Control Valves
 - › Reduction Valves
 - › Release Valves
 - › Safety Valves
 - › Shut-off Valves
 - › Single-way Valves
 - › Slide Valves

Licences and Certificates



› Approval to design, manufacture and maintain turbine systems and equipment **EASA – DOA, POA, MOA**



› Certificates for manufacturing and maintaining the military aerospace products **MAA 056** and **MAA 076** from the Ministry of Defence and Armed Forces of the Czech Republic



› Certificate of Conformity with the quality system and with the requirements of **ČSN EN ISO 9001:2015** and **ČOS 051622** (AQAP 2110) from the Defence Standardisation, Codification, and Government Quality Assurance Authority

› **NADCAP** for non-destructive testing (PT, RT) and chemical processes

› Certificates: **AS 9100, ISO 9001, ISO 14001**



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