

# Licences and Certificates



## ENVIRONMENTAL CONTROL SYSTEMS



→ Approval to design, manufacture and maintain turbine machines 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

→ Certificate of Conformity with the quality system and with the requirements of **ČSN EN ISO 9001:2009** and **ČOS 051622 (AQAP 2110)** from the Defence Standardisation, Codification, and Government Quality Assurance Authority

→ Civil certificates from **ARMAK** and **CAAC**

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

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



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

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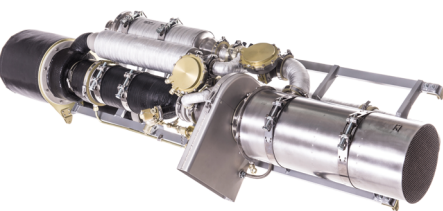


# ENVIRONMENTAL CONTROL SYSTEM BY PBS

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

The key sector for PBS Velka Bites is aerospace engineering: in-house development, production, testing and certification of small turbojet, turboprop and turboshaft engines, Auxiliary Power Units (APU) and Environmental Control Systems (ECS) proven in thousands of aeroplanes, helicopters and UAVs all over the world.

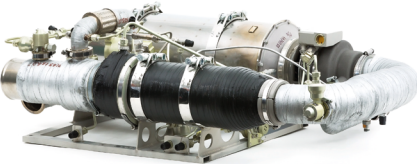
The PBS manufacturing program also includes precision casting, precision machining, surface treatment and cryogenics.



ECS-M1V



ECS-K8



ECS-Y12F



ECS-L39, L159, L39NG

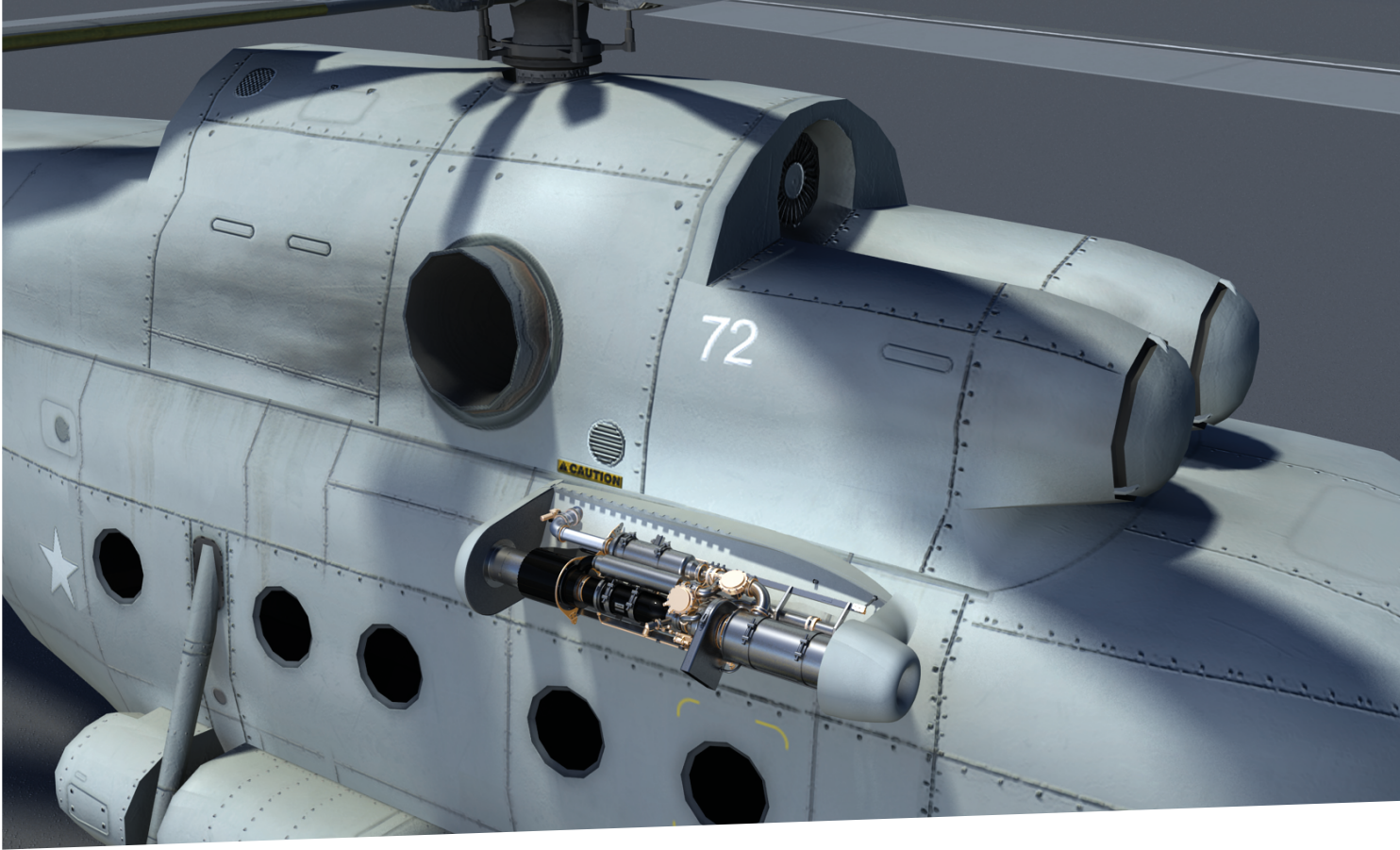
## PBS ECS Basic Parameters

ECS MODEL	Basic parameters				
	Cooling capacity	Heating capacity	Air flow rate	Weight	Max. operating altitude
Units	kW	kW	kg/h	kg	m
ECS-M1V	10.8	62.0	1,500	60	6,000
ECS-Y12F	7.8	19.7	1,000	41	7,000
ECS-K8	3.3	16.8	540	32	11,000
ECS – L39NG	3.3	16.8	530	30	11,000

### Main features

ECS is designed to maintain a comfortable thermal environment in the cockpit and passenger cabin of aircraft and helicopters.

- Low weight
 → Compact design
 → Simple maintenance
- Low electricity requirements
 → Ecological operation – no refrigerant
 → Heating, cooling and ventilation “all-in-one”



### ECS-M1V

The system is designed for air-conditioning and ventilation of Mi-8/17/171 series helicopters, with the option of modifications for other applications.

WHY PBS?
 

→ More than 7,000 Environmental Control Systems sold
 → In-house development, production, assembly and testing
 → More than 50 years in aerospace production
 → Turbine products certified producer



PBS ECS application on MI-171A2 helicopter



PBS ECS application on L-159 and L-39NG aircraft