# ENVIRONMENTAL CONTROL SYSTEMS





AEROSPACE • INVESTMENT CASTING • CRYOGENICS • SURFACE TREATMENT

## WE DEVELOP AND MANUFACTURE ENVIRONMENTAL CONTROL SYSTEMS

PBS focuses on continuous R&D, technological innovations and new ECS development.

### **MAIN FEATURES**

Our ECS are specifically engineered to ensure a comfortable thermal environment in a variety of aircraft, including helicopters, jet trainers, large UAVs, light combat aircraft, and regional aircraft.

- > Low electricity requirements
- > Ecological operation no coolant
- All-in-one solution combining heating, cooling, and ventilation functions
- > Low weight
- > Compact design
- > Simple maintenance

### **COMPLEX AIRCRAFT ECS SOLUTIONS**

- > Air Cycle Machines
- > Air and Thermal Management System
- > Cockpit De-icing System
- > Anti-G System Components



### WHY PBS

- With extensive experience in ECS development and production, we have accumulated a wealth of knowledge and expertise.
- > We have delivered a significant number of ECS systems.
- As a TIER 1 supplier, we maintain a high level of in-house production capability.
- > We are also a certified producer, approved by EASA.

## **PBS ECS**

We offer both off-the-shelf ECS solutions, as well as customized ECS systems, subsystems, or components.

#### **ECS FOR HELICOPTERS**



#### **ECS FOR JET TRAINERS**



ECS FOR SMALL TURBOPROP AIRCRAFT



**ECS - COMPONENTS** 



### **TECHNICAL PARAMETERS**

	ECS-M1V	ECS-K8	ECS-Y12F	ECS-L39NG
Airflow	1,500 kg/h	560 kg/h	1,000 kg/h	530 kg/h
Cooling capacity	10.8 kW	3.3 kW	7.8 kW	3.3 kW
Heating capacity	62.0 kW	16.8 kW	19.7 kW	16.8 kW
Dry weight	60.0 kg	32.0 kg	41.0 kg	30.0 kg
Max. operating altitude	6,000 m	11,000 m	7,000 m	11,000 m

## **ECS DEVICES AND COMPONENTS**

- Shut-Off, Regulation, Reduction, Safety, Non-return Valves
- > Air and Thermostat Filters
- > Turbocooling Units
- > Electronic and Pneumatic Control Systems
- > Pre-cooling Systems

- Low-pressure and High-pressure Water Separation
- > Cockpit De-icing Systems
- > Anti-G Systems Components
- > Cabin Pressure Control Systems
- > Other Separate ECS Devices

## **ABOUT US**

PBS is a globally recognized engineering brand with a history of over two hundred years.

The company specializes in the R&D and manufacturing of turbine engines, APUs, and ECS systems designed for unmanned aerial vehicles, medium helicopters, and airplanes.

PBS also develops and produces cryogenic equipment for the world's largest manufacturers of gas liquefaction systems.

PBS Foundry is one of the leading suppliers of nickel and cobalt-based superalloy castings in Europe.





#### **PBS INDIA** PRIVATE LIMITED

No. 26, Koramangala Layout, Bengaluru, Karnataka 560095, India info@pbsindia.com, www.pbsindia.com tel: +91 81 9720 6600, fax: +91 80 2553 2100



