



## ANTI-ICE VALVES

# THE PERFORMANCE FOR SAFER FLIGHTS

## A wide range of types to meet your needs

Collins Aerospace has a long heritage of supplying anti-ice valves, which prevent the build-up of ice in the engine cowl and flight control surfaces. Our technical solutions include motorized, pneumatically and electro-pneumatically actuated movement of valves.

A stainless steel body and graphite seals enable core valve components to operate bleed up to 450° C (842° F). In addition, the inconel body and seals can bleed up to 650° C (1,200° F).

We offer a wide range of functional architectures for the design of anti-ice valves.

Our Butterfly valves regulate hot air around the engine bleed system and can shut off when overheating. These valves can be motorized or pneumatically actuated. The in-line poppet valves can be pneumatically

or electro-pneumatically actuated. They are designed for the intake and release of air/pressure within the cylinder.

Our multi-functional valves can operate in three separate ways and have multiple purposes, including: shut-off, pressure regulation, engine start bleed and anti-ice.

We also offer full system integration with our valves by providing:

- System modeling and simulation
- Vibration under temperature and pressure operative conditions
- Performance testing at system level under full operative conditions
- More than 50 years of actuation experience

By using a production strategy based on Lean principles, we can provide you with low-cost solutions and high on-time delivery performance. Our proprietary solutions, in-house testing capabilities and Lean piece-flow production layout enable us to offer a large product portfolio to meet your requirements.

## KEY FEATURES & BENEFITS

- Different functional architectures: butterfly valves, in-line poppet valves, multi-functional valves
- Different functions: shut-off, pressure regulation, anti-ice, engine start bleed
- High temperature
- High reliability
- Cost reduction activities on all products
- R & D on additive manufacturing to reduce weight
- Compact design
- Easy installation
- Prompt MRO support



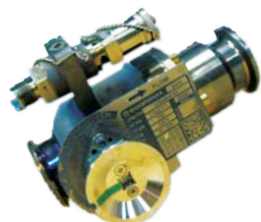
PW4000



A330



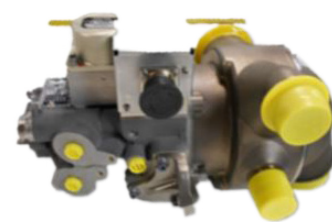
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A320Neo



MRJ/E2



T700

Over  
**25 million**  
flight hours



Anti-ice valve test rig



**OTHER ACTUATION SYSTEMS CAPABILITIES**

**Primary - fixed wing**

- Elevator
- Aileron
- Rudder
- Spoiler
- Flaperon

**Primary - rotocraft**

- Main rotor actuator
- Tail rotor actuator

**THSA/HSTA**

- Trimmable horizontal stabilizer actuator

**Nacelle actuation**

- Thrust reverser actuation system
- Power door opening system

**High lift**

- Power drive unit
- Wing tip brake
- Flap and slat actuators
- Transmission shafts
- Gearbox

**Composites**

- Transmission shafts
- Fuel pipes
- Fuel and hydraulic isolators
- Tie rods and struts

**Utility actuation**

- Weapon bay door drive system
- Wing fold/rotate
- Refuel probe actuator
- Canopy actuator

**Missile actuation**

- Control actuation system
- Thrust vector actuator

**Aftermarket**

- 24/7/365 customer support



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