

Rotor Ice Protection System

Without an ice protection system, helicopters must be grounded during known icy conditions. The Rotor Ice Protection System provides the deicing functions for the main rotor and tail rotor of the helicopter. The RIPS provides blade deicing based on flight crew commands, outside temperature (OAT) and liquid water content (LWC).



Benefits

- Full Range of Design, Development, and Qualification, Expertise
- Single Point of Contact
- From Sensors to Sub-System Integration
- Dual Redundant RIPS Controllers, S/W Certified To DO-178B, Level B
- Controller receives input of LWC and OAT
- High Power, Dual Channel Junction Box
- Main Rotor Distributor (MRD) Delivers Deicing Energy
- Algorithms Sequence Power Between Several Rotor Blade Heating Elements
- Dual Ice & Snow Detectors Supplied By Penny & Giles

[Other Rotorcraft Control Products](#)

Blade Fold Control Modules

Hydraulic Logic Modules

Fire Extinguisher Logic Modules

Windshield Anti-Ice Controllers

Engine Anti-Ice Controllers

Utility Management Systems

Mast Torque Measuring Systems

Data Concentrators

Curtiss-Wright Controls Integrated Sensing

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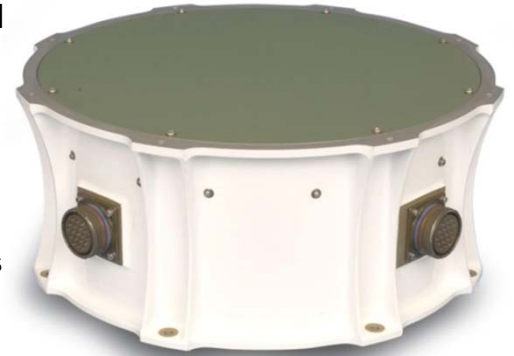
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Main Rotor Distributor

The Main Rotor Distributor (MRD) is designed to control the high power electrical loads resented by the heating elements attached to the Main Rotor Blades, based on the control signals provided by the RIPS Controller.

- Controls and sequences three-phase power to sixteen separate three-phase heating elements which are equally distributed on four Main Rotor Blades
- Mounts to the Main Rotor and interfaces to the RIPS Controller



Controllers

The RIPS Controller provides control signals to the Main Rotor and Tail Rotor ice protection equipment based on the information received from the Main and Tail Rotors, as well as from the aircraft systems.

- Uses various control and sensor inputs to establish deicing profiles
- Interfaces with multiple aircraft and system components



Junction Box

The Junction Box is designed to connect the aircraft power to the Main and Tail Rotor ice protection elements as directed by the RIPS Controller.

- Monitors the input/output voltages and currents reporting these parameters to the RIPS Controller.
- Drives heating elements mounted on the Main Rotor and Tail Rotor Blades
- Monitor functions consist of voltage, current, and state measurements

