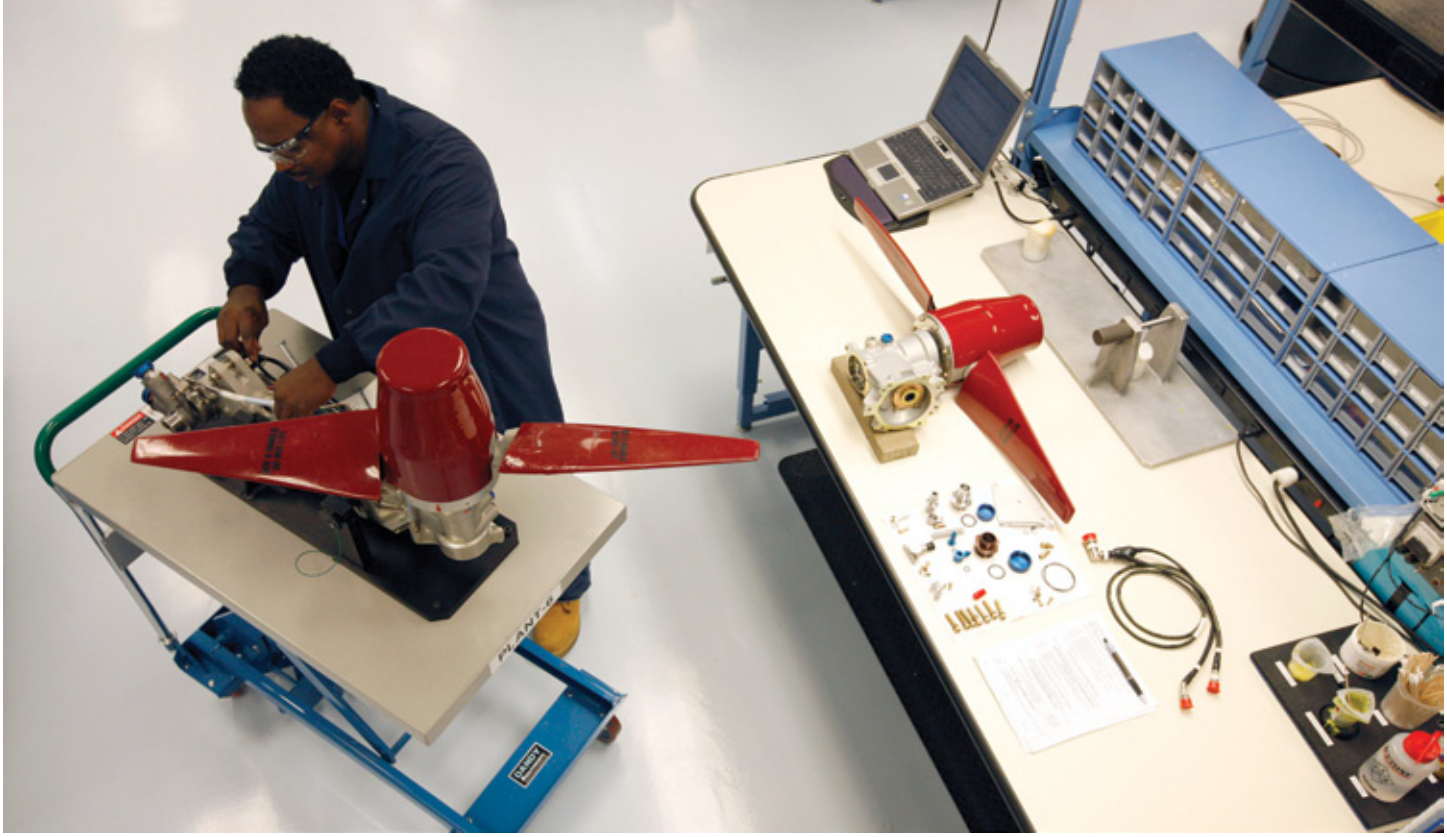


Electric Systems

The Electric Systems business is a leading provider of electrical power generation, distribution and control for commercial, regional, business and military aircraft.

Our focus on innovative physical and functional integration provides significant customer benefits including a lower cost to implement and operate as well as improved passenger safety and comfort.

In addition to aerospace products, the business supplies automotive and industrial industries with power generation and rotating electrical components.

Key products include:

- Main and emergency power generation
- Intelligent power modules
- Power conversion and motor control
- Power distribution
- Aircraft utilities management

In addition to our advanced product offerings, our airplane power systems integration facility (APSIF) and the common automated system integration lab (CASIL) are two of the most advanced airplane systems testing facilities of their type in the aerospace industry.

UTC Aerospace Systems

Integrated Drive Generator

Integrated Drive Generators (IDG) provide an elegant solution for supplying constant frequency AC electrical power to the aircraft, which simplifies the design of the complete electrical system. The IDG makes use of a highly reliable continuously variable transmission - the constant speed drive - which converts the variable input speed provided by an aircraft's engine into a constant output speed for the IDG's integral AC generator. This integration of drive and generator provides a proven and reliable solution for constant frequency electrical power.

Variable Frequency Generator

Variable Frequency Generators (VFG) provide simplified power generation solutions for aircraft designs that incorporate variable frequency electrical systems. The VFG essentially eliminates the need for a constant speed drive, as the generator is allowed to rotate at a variable speed. Through the use of power electronics and conversion equipment, this type of electrical power can be used to power a variety of aircraft electrical loads.

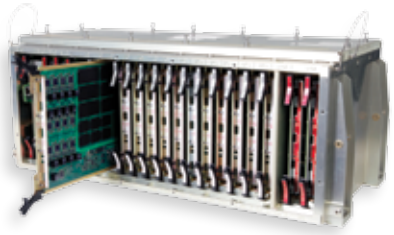
Power, Control and Conversion Systems

The Electric Systems business offers a wide variety of optimized analog and digital devices that control, regulate and convert power as necessary. These products include rectifiers, inverters, frequency converters, and motor controllers. System features include aircraft and system digital communications, self-testing and ease of expansion reconfigurability.

Additionally, motor controller technology can be applied to a wide variety of aircraft applications, including electric engine start, hydraulic pump control, air management systems, and flight control actuation.

Power Distribution and Management Systems

Primary power distribution systems (PPDS) and secondary power distribution systems (SPDS) enable seamless control and protection of all electrically powered devices, such as avionics, fans, pumps, heaters and lights. Power distribution systems incorporate the use of solid state power controllers (SSPCs), which increase the reliability of the aircraft by eliminating lower reliability components. Unlike centralized electric power distribution systems, distribution units that contain SSPCs can be distributed throughout the aircraft and remotely controlled, allowing them to be strategically located to minimize total aircraft wiring.



Ram Air Turbine

The Ram Air Turbine (RAT) is at the heart of an aircraft's emergency power system. In extremely rare instances when airplanes lose power, the RAT deploys from the airplane's wing or fuselage and rotates to extract sufficient power from the airstream to control and land the aircraft. We design and manufacture hydraulic, electric and hybrid RATs. Technology enhancements include use of a self-governing device that limits turbine speed and minimizes the size of the RAT. Key customer benefits include greatly enhanced safety of flight. In fact, our RAT systems are responsible for saving approximately 1,700 lives in 16 documented events.

MORE TECHNOLOGIES.
MORE UNITED.

UTC Aerospace Systems

For more information, please visit our website:
www.utcaerospacesystems.com

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