Applications

ITT aerospace product lines are continually expanding to provide our customers with unique solutions for application on rotorcraft. Our customer-focused process for achieving knowledge and understanding of our customer's needs and operating environments allows us to create innovative and effective solutions. Our training and partnership approach to allow customers to leverage our expertise and our plants' manufacturing capabilities.

ITT Aerospace Controls

• Hydraulic System Motor Operated Valves
• Hydraulic Pressure and Temperature Switches
• Landing Gear Valves and Pressure Switches and Actuators
• Fuel Control Valves and Actuators
• Engine, Fuel, Oil, Filter, Pump - Pressure, Temperature and Flow Switches

ITT Cannon Interconnect Solutions

• Fuselage:
  - FO HA/P HD
  - KPT/KPSE Series 1

• Engine & Transmission:
  - 501 5 Firewall
  - KJA Series III

• Cockpit & Avionics:
  - BK AD Rack & Panel
  - MDM, Cable Assembly
  - Hermetics
  - Space & Specials Connector & Cable Assembly
  - MK J Mini-Circular

• Munitions System:
  - MDM / TMDM
  - D-Sub
  - Nano

ITT provides lightweight and reliable aerospace products to the rotorcraft industry.

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for growing end-markets in industrial, aerospace and transportation. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life.

For more information, visit www.itt.com.
Applications

ITT aerospace products lines are continually expanding to provide our customers with unique solutions for aerospace, military and commercial rotorcraft programs. Our extensive knowledge and experience within these industries enable us to provide our customers with superior analysis, products, services and support. Our training and partnering approach to the customer's needs sets us apart from the competition.

ITT provides lightweight and reliable aerospace products to the rotorcraft industry.
Applications

ITT aerospace product lines are continually expanding to provide our customers with unique solutions for applications on rotorcraft and other transportation systems. Our extensive knowledge and expertise in the design and development of precision-engineered components and systems is unparalleled. Our training and partnering approach to help customers transition from concept to product is unmatched.

ITT Enidine Helicopter Applications/Products

- Main and Tail Rotor Bearings and Dampers
- Transmission and Engine Isolation
- Hydraulic Control Devices
- Rate Control Devices
- Noise Attenuation
  - Cabin Interior
  - Gearbox
  - Accessory Gearbox
  - APU
  - Environmental Control System

ITT Enidine and ITT Aerospace Controls Key Customer Platforms

- Boeing AH64, V22, CH47
- Sikorsky CH-53K, UH-60
- Bell 206, 407, 412, 427, 429, 505, 525
- Airbus Helicopters EC175, EC225, EC275, AS332, AS365, Dauphin, HH-65A

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Global Presence

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for growing end-markets in industrial, aerospace and transportation. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life.

ITT provides lightweight and reliable aerospace products to the rotorcraft industry.
GROWING WITH ITT AEROSPACE PRODUCTS

Hydraulic Control Dampers

- High Capacity Laminated (HCL) Bearings
- Hydraulic dampers are custom designed per application requirements for opening or closing of control valves.
- Provide pilots with precise resistance for controls.
- Mitigate bio-mechanical feedback of helicopter collective controls.
- Comply with MIL-S-9081 requirements.
- Weather rated: +204ºC (+392ºF) for more than 1000 hours.
- Rugged metallic clip retention system assuring positive content retention.
- Self-locking coupling mechanism.
- Compatible with other ITTA components for additional customer satisfaction.
- This is a patented ITTA Plug and Play Fan/Duct Heater.
- 115/200 VAC or 28 VDC power.
- Available with up to 2000 W watts.

Fan/Duct Heater Assemblies

- Air heater performance. The heater is derived from ITT's ECS Heater line with over 40 years of installation history and is DO-160 Qualified. Lightweight and Vibration/Shock resistant.
- Suitable for non-cabin pressure vehicles with high temperatures and performance needs.
- 115/200 VAC or 28 VDC power.
- Available with up to 2000 watts.

ML-DTL-5015 Firewall Connectors

- Compliant with DO-160 Environmental categories of no less than 1000 hours.
- Rugged metallic clip retention system assuring positive content retention.
- Fan/Duct heater performance against pressure differential of ± 15 psi below and after turbocharging.
- Customized for injection molding processing without customer intervention.
- Self-locking coupling mechanism.

MIL-DTL-5015 Firewall Connectors

- Designed per MIL-DTL-5015, ITT Cannon BMCA series connectors withstand the reliability applicable to fire protection system (s) that support the air transportation system. These rugged, fault-tolerant, environmentally responsive connectors are available in 2 and 3 pole configurations, with single or double conductor connectors. They meet MIL-DTL-5015 C516 and present standards of sealing against various atmospheres throughout the world.
- Compliant for AEGIS, F-16, and F-18 aircraft applications.
- Weather rated: +204ºC (392ºF) for more than 1000 hours.
- Fans/turbulators rated against pressure differential of ± 15 psi below and after turbocharging.
- Rugged shock resistant, corrosion resistant connectors.
- Fan/Duct heater performance against pressure differential of ± 15 psi below and after turbocharging.
- Compliant for AEGIS, F-16, and F-18 aircraft applications.
- Weather rated: +204ºC (392ºF) for more than 1000 hours.
- Fans/turbulators rated against pressure differential of ± 15 psi below and after turbocharging.
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GROWING WITH ITT AEROSPACE PRODUCTS

• Hydraulics: System Interconnection, Valve Manifolds, Pressure, Temperature & Flow Switches, Control Valves, Fitting, Connections, etc.
• Engine: Fuel, Oil, Filter, Pump - Pressure, Temperature & Flow Switches, Induction, Exhaust, Ignition, EGR, Cooling, etc.
• Aircraft Environment Linear Actuator
• High Capacity Laminated (HCL) Bearings
• Hydraulic Control Dampers
• Fan/Duct Heater Assemblies
• MIL-STD-5015 Firewall Connectors

115/200 3 phase or 28 VDC power
Available with up to 2000 watts

Fan/ Duct Heater Assemblies

This is a patented ITT Cannon Plug and Play Fan/Duct Heater.

Compatible with other ITTA C components for additional customer satisfaction
Design based on over 15,000 installed duct heaters on Boeing Aircraft which meets MIL-DTL-5015 belted requirements
Perfect for sporthelicopter applications, including cargo and ground operations.

ITT Cannon’s Fan/Duct Heater includes an innovative design that allows the fan assembly to be installed directly into the duct heater’s header. The fan assembly is factory-tested and certified to exceed FL-2000, FL-3000, and MIL-DTL-5015 environmental and performance requirements. The fan is specifically designed to improve the heater’s efficiency by moving more air through the duct. This design also allows for easier installation and maintenance, reducing downtime for maintenance and repairs.

Hydraulic Control Dampers

• Fluidic oscillation damping systems
• Hydraulic Pressure & Temperature Switches
• Shock Absorbers for both Fluidic & Mechanical Systems

1. Fluidic oscillation damping systems are used for liquid-based applications
2. Hydraulic Pressure & Temperature Switches are used for both fluidic & mechanical systems

ITT Cannon’s Fluidic Oscillation Damping systems are specifically designed to work with hydraulic fluids, providing superior damping and shock absorber performance. These systems are used in a variety of applications, including aerospace, military, and industrial sectors.

Fan/Duct Heater Assemblies

• Engine: Fuel, Oil, Filter, Pump - Pressure, Temperature & Flow Switches
• Aircraft Environment Linear Actuator
• High Capacity Laminated (HCL) Bearings
• Hydraulic Control Dampers

MIL-DTL-5015 Firewall Connectors

• Connectors, molded integrally or blown from molded part
• Designed for use in high-temperature, high-pressure environments

ITT Cannon’s MIL-DTL-5015 Firewall Connectors are specifically designed to meet the stringent requirements of military and aerospace applications. These connectors are used to connect vital aircraft systems, such as avionics, power, and hydraulic lines, ensuring reliable and secure connections. They are designed to withstand harsh environmental conditions, including high temperatures, pressures, and vibrations, providing reliable performance in demanding environments.

Fan/Duct Heater Assemblies

• Engine: Fuel, Oil, Filter, Pump - Pressure, Temperature & Flow Switches
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GROWING WITH ITT AEROSPACE PRODUCTS

ITT Aerospace's growing line of innovative solutions are critical to manufacturers across the aerospace industry.

**High Capacity Laminated (HCL) Bearings**
- ITT Aerospace's high capacity laminated bearings are needed in transmissions and power systems. They are primarily used in both commercial and military engines, as well as many other rotorcraft applications.
- These bearings are designed to handle the high loads and stresses found in these environments and are available in various sizes and configurations to meet specific performance requirements.
- They are built with advanced materials and manufacturing processes to ensure durability and longevity.
- The bearings are used in applications such as main rotor bearings, transmission bearings, and other critical components in rotorcraft and aircraft engines.

**Hydraulic Control Dampers**
- These dampers are designed to absorb energy from high velocity impact events and prevent damage to adjacent structures and equipment.
- They are often used in applications where rapid deceleration is required, such as landing gear deployment and structural impact absorption.
- Hydraulic control dampers are available in a range of sizes and configurations to meet specific performance requirements.

**Fan/Duct Heater Assemblies**
- These assemblies are designed to provide quick and reliable heating for a variety of applications, including aircraft cockpits, cabins, and other enclosed spaces.
- They are typically used in conjunction with other heating systems to provide supplemental heat when necessary.
- Fan/duct heater assemblies are available in a range of sizes and configurations to meet specific performance requirements.

**High Protection Connectors**
- These connectors are designed to provide high levels of protection against environmental hazards.
- They are used in applications where high reliability and durability are required, such as military and aerospace applications.
- High protection connectors are available in a range of sizes and configurations to meet specific performance requirements.

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GROWING WITH ITT AEROSPACE PRODUCTS

Hydraulic Pressure & Temperature Swatches

Hydraulic Pressure & Temperature Switches

Transmissions Vibration Isolation Systems

KJA Series III: Signal & Power Transmission

Vibration and Noise Advanced Particle Damping

Engine Fuel, Oil, Filter, Pump - Pressure, Noise Isolation

LANDING GEAR

• Valves & Pressure Switches

HCL Bearings & Dampers

Main and Tail Rotor

Arctic, Aviation & Flight Control

• MIL-DTL-5015 Firewall Connectors

Fan/Duct Heater Assemblies

Designs for cabin heating requirements, ITT Cannon (CBA) offers compact, easy-to-install units capable of dissipating up to 2000Watts of power. Available in three distinct wattages, the small Duct heater, mid-sized Fan duct heater, and the larger Duct heater, the unit can be installed above or below the floor of a Rotorcraft or fixed wing aircraft.

Fan/duct air to air heaters. By utilizing our patent pending "FanFlow" technology, the fan assembly can be mounted much closer to the heater without degrading the efficiency of the system. The heater is also momentary for closing actuation or rate control of cowls and doors. The fan assembly is made of durable, lightweight materials which are corrosion resistant and compatible with other ITTA C components for additional customer satisfaction.

MIL-DTL-5015 Firewal...
Applications

ITT aerospace products are continually expanding to provide our customers with unique solutions for applications in military and commercial rotorcraft programs. Our extensive knowledge and experience in the areas of hydraulic fluid power, thermal management, electrical wire harnesses, and environmental control systems enable us to provide superior services and support. Our strong technical capability and engineering approach to design customer products allows us to meet our customers' needs.

ITT provides lightweight and reliable aerospace products to the rotorcraft industry.