Engineering Capabilities

ITT provides broad and complete engineering analysis, design and test capabilities to support our electric heaters, conveyance and noise control product lines.

Our engineering staff is built on a heritage of innovation in order to deliver enduring custom solutions to the global aerospace industry.

Engineering Design and Analysis
- Complex CAD modeling (Catia V5 and Solidworks)
- Acoustic silencer analysis, design and development
- Thermal analysis
- Pressure drop and flow analysis
- Air and material heater design

Advanced Manufacturing Techniques
- Pattern making
- Heated circuit etching
- Complex shaped composite layup methods
- Honeycomb bonded structures
- Composite-elastomeric-metal hybrid assemblies
- Innovative insulation operations
- Advanced sheet-metal assembly
- Welding (fusion and resistance)

Testing Capabilities
- Spectrum analysis and acoustics
- Acoustic attenuation and insertion loss
- Pressure drop
- Electrical and impedance
- Environmental
- Thermal
- Pneumatic and hydraulic pressure
- Radiology inspection
- Ultrasonic inspection of composites
- Mechanical properties of materials
- CMM inspection

AS9100(c) and ISO9000:2008 registered and certified FAA and EASA approved repair stations EPK738K NADCAP welding approved

Materials
- Acoustic
  - Acousti-Flor
  - Feltmetal
  - Perforated Metal
  - Absorptive Foams
- Elastomeric
  - Silicone
  - Fluorosilicone
  - Neoprene
  - Nitrile
  - Viton
  - Buna
- Composite
  - Epoxies
  - Phenolics
  - Polyesters
  - Graphite
  - Bismaleimide
- Carrier
  - Fiberglass
  - Nylon
  - Nomex
  - Dacron
  - Kevlar
  - Cotton

Metals
- Superalloys
- Aluminum
- Stainless Steel
- Titanium

Aerospace Environmental Control Systems

ITT Aerospace Controls
28150 Industry Drive
Valencia, CA 91355
USA
Phone: 661-295-4000
Fax: 661-294-1750
Email: sales.aerospace@itt.com
www.ittusa.com
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### Materials

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**Aerospace Environmental Control Systems**
Heaters Conveyance Noise Control

Environmental Control Systems

Freeze and Ice Protection
- Waste and water freeze protection
- Valve heaters, in-line heaters
- Tank heaters, wrap heaters
- Ram air inlet ice protection
- Wing and tail ice protection
- Propeller de-icing
- Drain masts

Air and Surface Heaters
- Door heaters
- Crew rest heaters
- Galley heaters
- Space heaters
- Floor heaters
- Foot warmers

Applications
- Airbus A300
- Boeing 737, 747, 757, 767, 777, 787
- Bombardier CSeries
- Comac C919
- Embraer ERJ 135, 145, 170, 175, 190, 195
- Sukhoi Superjet 100
- Dehavilland DHC-7/8
- Bombardier Lear 40, 45, 60, Challenger
- Dassault 7X, 8X, 9X, 2000, 3000
- Gulfstream 280, 2000, 3000, 5000, 6000
- Military C17, C130, C17, C18
- Military C5, C17, F-18, V-22

Dielectrics
- Silicone
- Neoprene
- EPOXY
- Teflon
- Kapton
- Polyimides
- RTV
- Composites

Resistance Wire Heater Elements
- Copper and Bronze
- Inconel
- Stainless Steel

Etched Foil Heater Elements
- Copper/Nickel
- Inconel
- Monel
- Stainless Steel

Programs
- Airbus A320, A330, A340, A350, A380
- Boeing 737, 747, 757, 767, 777, 787
- Bombardier CSeries, Q400
- Embraer ERJ 135, 145, 170, 175, 190, 195
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Noise Control

Silencers and Acoustic Treatment
- APU inlets with noise treatment
- APU exhausts with noise treatment
- ECS silencers
- Acoustic panels
- Acoustic enclosures
- Acoustic-foil materials

APU Programs
- Boeing 787
- Bombardier CSeries, Q400-8, Lear 85
- Comac ARJ 21
- Embraer Legacy 450, Legacy 500
- Bombardier Global 7000/8000
- Gulfstream G500, G600
- Honda HondaJet

ECS Programs
- Airbus A320, A330, A340, A350, A380
- Boeing 737, 747, 757, 767, 777, 787
- Bombardier CSeries, Q400
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We have the world’s broadest set of product choices for aircraft environmental control systems.

ECS Elastomeric Hoses and Connectors

Product Capabilities
- Flexible hoses
- SCAT, SCEET, CAT, CEET
- Flexible duct connectors
- Specialty shapes and transitions
- Coupling covers
- Insulation and insulation covers
- Rigid and flexible integrated parts

Programs
- Airbus A320, A330, A340, A350, A380
- Boeing 737, 747, 757, 767, 777, 787
- Bombardier CSeries, Q400
- Embraer ERJ 135, 145, 170, 175, 190, 195, 190E2, 195E2
- Bombardier Global 7000/8000
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APU inlets with noise treatment
- APU exhausts with noise treatment
- ECS silencers
- Acoustic panels
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- Acoustic-foil materials

ECS Programs
- Space Station
- Hawker 800, 4000
- Cirrus Cirrus Jet
- Embraer Legacy 450, Legacy 500
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Programs
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- Bombardier CSeries
- Comac C919
- Embraer ERJ 135, 145, 170, 175, 190, 195
- Sukhoi Superjet 100
- Dassault Falcon/10
- Gulfstream 280, 400, 500, 550, 600, 650
- Military CS, C17, F-18, V-22

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- DeHavilland DHC-7/8
- Bombardier Lear 40, 45, 60, Challenger
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- Mitsubishi MRJ
- Bombardier Challenger 605
- Beechcraft King Air, Baron, Bonanza
- Embraer Legacy 450, Legacy 500
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