

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
- Radiologic inspection
- Ultrasonic inspection of composites
- Mechanical properties of materials
- CMM inspection

AS9100 and ISO 9001 Certified
EASA Approved
FAA Approved Repair Station
NADCAP welding approved

Materials

- Acoustic
- Acousti-Flo®
 - Feltmetal
 - Perforated Metal
 - Absorptive Foams

- Elastomeric
- Silicone
 - Fluorosilicone
 - Neoprene
 - Nitrile
 - Viton
 - Buna

- Composite
- Epoxy
 - Phenolic
 - Polyester
 - Polyimide
 - Graphite
 - Bismaleimide

- Carrier
- Fiberglass
 - Nylon
 - Nomex
 - Dacron
 - Kevlar
 - Cotton

- Metals
- Superalloys
 - Aluminum
 - Stainless Steel
 - Titanium

Aerospace Environmental Control Systems



ENGINEERED FOR LIFE

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



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Heaters

Freeze and Ice Protection

Applications

- 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

Applications

- Door heaters
- Crew rest heaters
- Galley heaters
- Space heaters
- Floor heaters
- Foot warmers

Dielectrics

- Silicone
- Neoprene
- EPDM
- Teflon
- Kapton
- Polyimides
- RTV
- Composites

Resistance Wire Heater Elements

- Copper and Bronze
- Balco
- Evanohm
- Stainless Steel

Etched Foil Heater Elements

- Copper/Nickel
- Inconel
- Monel
- Stainless Steel



Conveyance

ECS Elastomeric Hoses and Connectors

Product Capabilities

- Flexible hoses
 - SCAT, SCEET, CAT, CEET
 - AS1504, AS1544
 - MIL-H-52079, MIL-H-62028, MIL-H-62217
- Flexible duct connectors
- Specialty shapes and transitions
- Coupling covers
- Insulation and Insulation covers
- Rigid and flexible integrated parts

Composites

Product Capabilities

- Rigid ducting
- APU inlets
- Plenums
- Structural components
- Hybrid composite and aluminum
- Hybrid composite and elastomeric



Noise Control

Silencers and Acoustic Treatment

Product Capabilities

- APU inlets with noise treatment
- APU exhausts with noise treatment
- ECS silencers
- Acoustic panels
- Acoustic enclosures
- Acoustic-Flo® materials



We have the broadest set of product choices and solutions for environmental control systems.