

HIGH PERFORMANCE LIQUID TO AIR HEAT EXCHANGERS



High Performance Large Heat Exchangers

- **Scalable to Size:** Designed to meet the unique demands of aerospace operations, these exchangers can be tailored to fit your specific size and performance requirements.
- **Optimized for Portability:** Lightweight yet robust, our exchangers integrate seamlessly into aircraft ground support equipment, enhancing operational flexibility.
- **Unmatched Heat Transfer:** Manages thermal loads of up to 250 kW with a minimum 95% efficiency, ensuring reliable performance in the most demanding conditions.
- **Eco-Friendly and Efficient:** Supports environmentally responsible refrigerants, and its high energy efficiency reduces the overall power consumption of support systems.

Metal Foam Heat Exchangers

- **Patent-Pending Design:** High-performance, lightweight metal foam heat exchangers engineered for scalability and adaptability in various layered or dimensional configurations.
- **Open-Cell Structure:** The unique foam structure promotes superior airflow and heat dissipation, significantly reducing thermal resistance.
- **Ultra-Lightweight:** Combines strength and performance with a focus on weight reduction, perfect for aerospace applications.
- **Compact and Efficient:** Ideal for space-constrained environments, delivering high thermal performance in a smaller footprint.
- **Eco-Friendly Solutions:** Compatible with sustainable refrigerants, supporting energy-efficient and environmentally conscious operations.

Revolutionizing Thermal Management

Made in the USA since 1967, ERG has been leading the way with innovative solutions designed to maximize efficiency, minimize weight, and meet the growing demands of the aerospace industry for over 50 years.

- **Exceptional Efficiency:** Advanced thermal management technology ensures peak performance with reduced energy usage.
- **Durable and Reliable:** Engineered for extreme environments, guaranteeing long-lasting operation.
- **Customizable Solutions:** Tailored designs meet the unique needs of the aerospace industry.
- **Aerospace applications:** Ground Support Equipment, Rotorcraft & Fixed-Wing Aircraft, Space & Defense

About Duocel®

Duocel® is an open-celled rigid foam with solid ligaments and optimized properties for your design.

Base Material



Aluminum



Copper

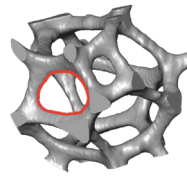


Carbon



Silicon Carbide

Pore Size

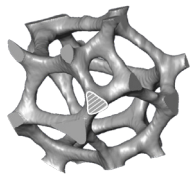


100 PPI
(~0.01")



5 PPI
(~0.20")

Ligament cross-section



Relative Density



3%



6-8%

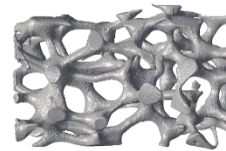


10-12%



15%

Compression



Uncompressed



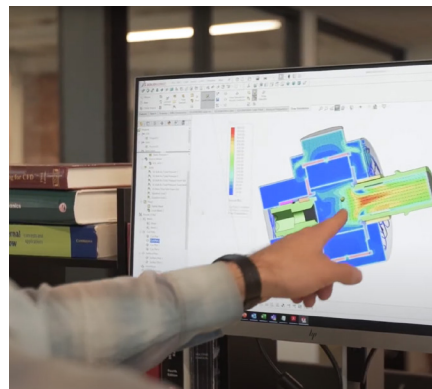
Compressed

ERG Engineering

With over 50 years of expertise designing and manufacturing ECS systems and components, we tailor ECS solutions to your design specifications for maximum performance.

Design Optimization

- Turn-Key Systems Solutions
- Aftermarket Upgrades
- Weight-Relief Configurations
- Installation Expertise
- OEM Interface Experts
- Thermal Transfer, Mechanical & Electrical Engineering Support
- Custom Design Capability



Testing

- DO160 Testing Capability
- Shock and Vibration
- Proof and Burst Pressure Testing
- In-House Thermal Chamber
- Fluid Dynamics Analysis & Testing
- In-House Stress and Fatigue Analysis

Customer Advantage

Speed & Flexibility

We know our customers. Whether legacy or new development, ERG is staffed with a team of experts, uniquely qualified to provide fast and highly efficient thermal management system solutions.

On-Site Support

ERG has an extensive customer service, system simulation, and support team with decades of engineering, assembly, installation, integration, and troubleshooting expertise.



**Ready to Transform Your
Thermal Management Systems?**

(510) 658-9785 | sales@ergaerospace.com | ergaerospace.com



ERG
materials & aerospace