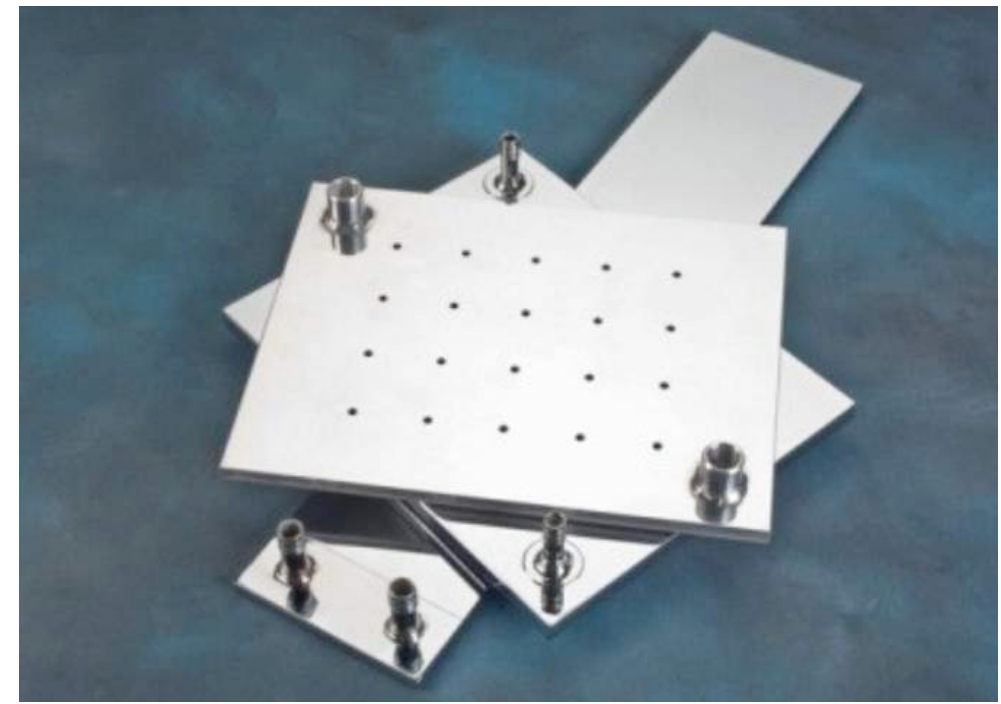


Custom Complex Heat Sinks

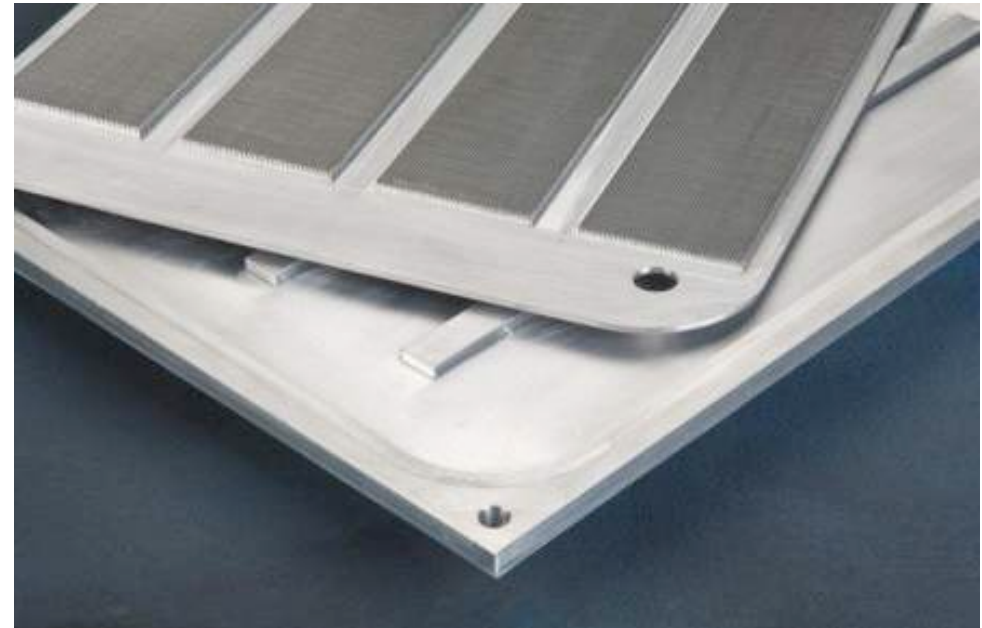


Competitive advantages

Our extensive heat transfer fin capabilities coupled with CNC, electrical discharge machining (EDM) and high and low temperature provide us exceptional flexibility in design and manufacture required to produce complex heat sinks for the most demanding applications.

The following is typical in our heat sink manufacturing operation:

- Certified Raw Material Supply
- Pre braze processing including cleaning and machining
- Brazing per AWS C3.7
- Heat treating as required
- Post braze machining
- Acceptance testing (In house pressure and helium mass spec)
- Dimensional inspection
- Typical Mil specification chemical coatings
- Assembly operations (Helicoils, PEM)



Capabilities

Materials of Construction	Inconel®	Aluminum	Copper	Stainless Steel
Heat Transfer Capacity (Typical)	Designed to meet customer requirement			
Typical Unit Size Range	- Heights from 12,7mm to 63,5mm - Lengths from 25mm to 152cm - Single or multiple layers of fin can be utilized - Widths from 25mm to 122cm			
Configuration	- Brazed construction - Heat transfer fin with 4 to 40 fins per 2,5cm - Round Crest, Flat Crest, Lanced and Offset, Wavy or Ruffled			
Part Quantities	Our efficient processes allow us to provide cost effective solutions for a single prototype or unit to production quantities in the thousands			
Lead Times	Design and manufacturing of simple designs from stock material can be completed in as little as 4 weeks. With more complex designs typically completed in industry leading timeframe			
Acceptable «Drawing & Docs» format	We are used to work with all common industry formats			
Testing Available	Environmental	Pressure Drop	Shock	Thermal Performance Vibration
QC Process & Certifications	QC Certifications AS 9100 ISO 9001	FAA Authorized Manufacturing Facility Customer Certif. - General Dynamics Land Systems - L3 Propulsion Systems - DCMA - Honeywell - Boeing - Hamilton Sundstrand		

Applications & Markets

Markets Served	• Aerospace • Defense • Electronics & Telecommunications • Fuel Cell & Power Generation • Industrial • Nuclear
Application	• Alternative Power Generation System • Electronics Cooling (Defense, Aerospace, Commercial & Industrial) • Fuel Cell Cooling • Laser Systems • Medical System • Renewable Energy (Wind)



Representative Customers Served



COBHAM

BAE SYSTEMS



NORTHROP GRUMMAN



MEGGITT

Raytheon

THALES



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