NOR·RAL

Servicing the Aerospace & Aviation industry since 1971

Composite Solutions

Precision Machining

Tooling

Trainers & Repairs

About Us

- Since 1971, Nor-Ral has specialized in composite and precision machined parts and tooling for the aerospace, aviation, and industrial industries
- Support a variety of clients with their unique needs by blending “large business” capabilities and expertise with the flexibility and responsiveness of a small business
- Committed to providing cost-effective solutions through cutting edge technology, superior processes, and relentless innovation

Our Customers

GENERAL DYNAMICS

LOCKHEED MARTIN

HEXCEL®

Gulfstream
A GENERAL DYNAMICS COMPANY

MEGGiTT

PPG Aerospace

GKN

BELL

Certifications & Affiliations

FAA – Part 145 Certified Aviation Repair Station No. 3NRR976C

Lockheed Certified parts license for C-130 B-H & F-16

Approved Special Processor for:

Gulfstream

LOCKHEED MARTIN

BELL

Composite Solutions

- Prepreg, VARTM, & wet-lay
- Autoclave or oven cure
- Honeycomb & core structures
- Secondary bonding
- Press molding
- 5-axis CNC trim/drill
- Assembly
- Paint/finish

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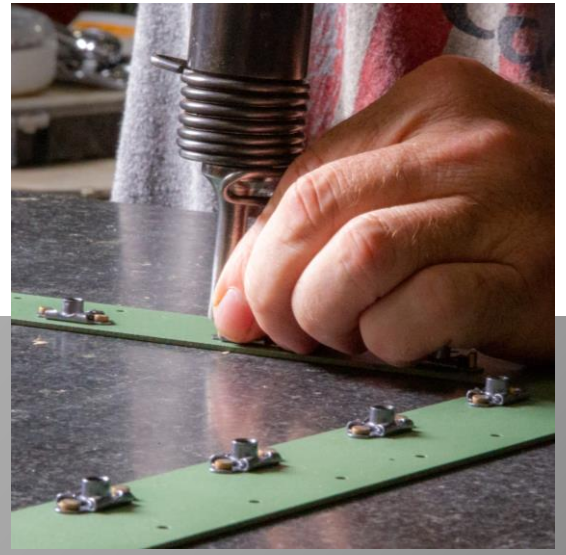
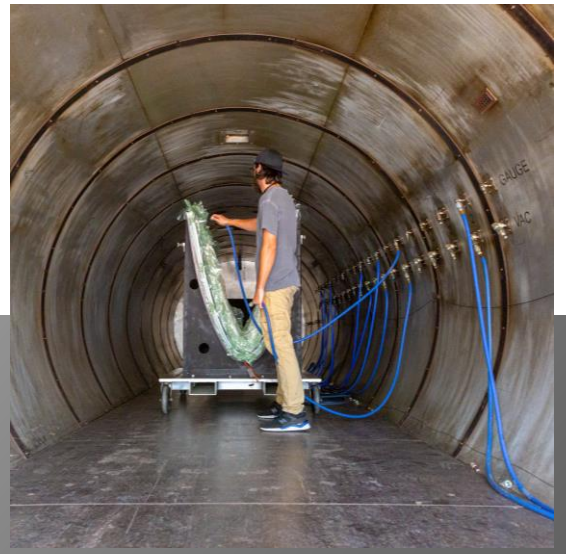
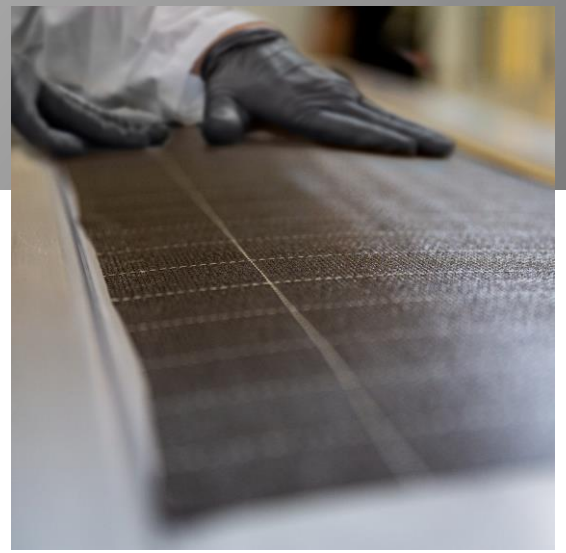
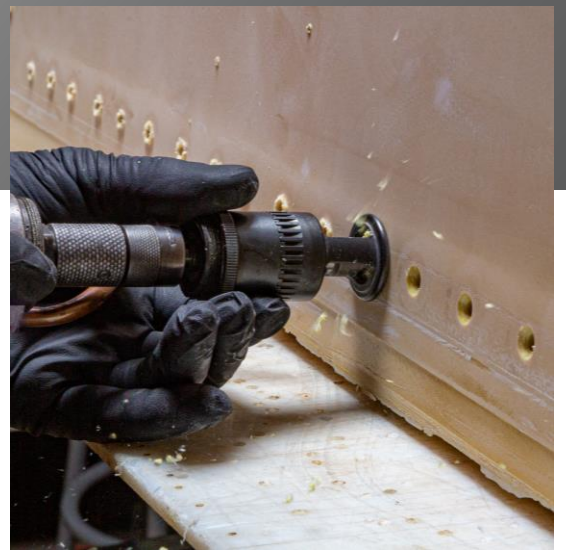


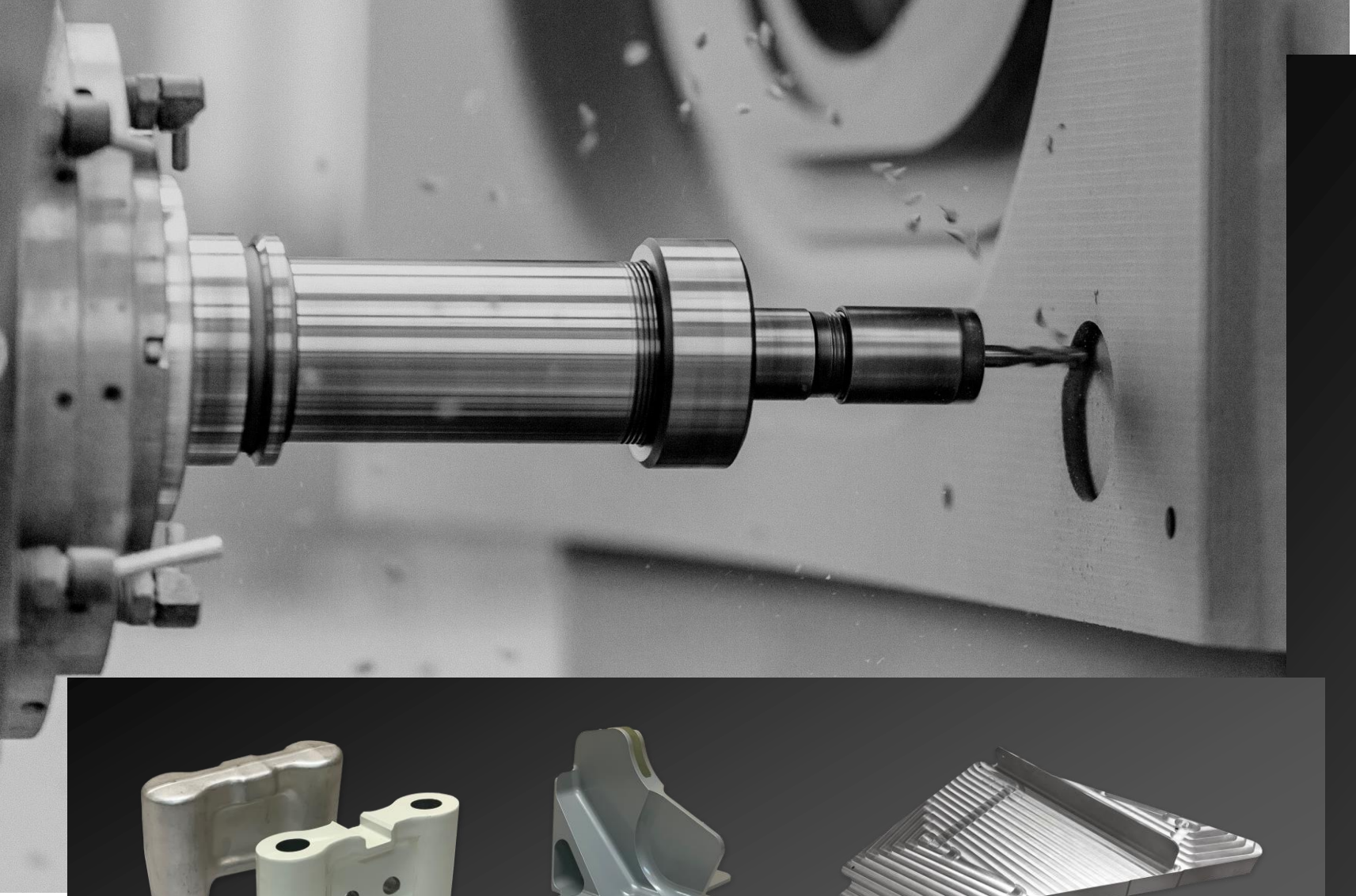


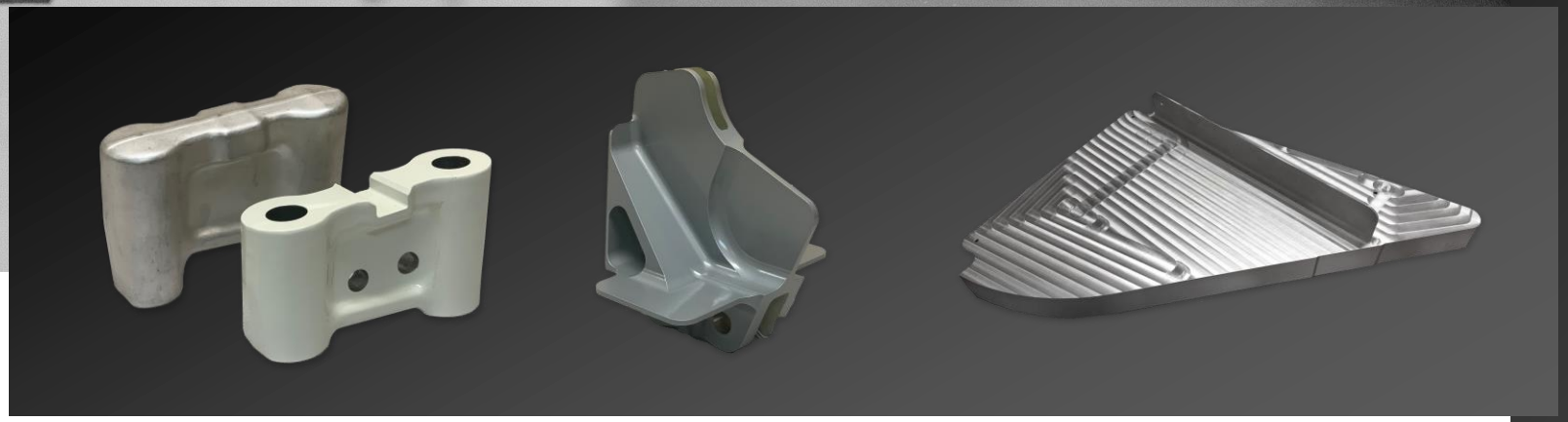




Precision Machining

- Complex parts, castings, forgings, tools, models, & molds
- Materials - composites, aluminum, steel, titanium, invar, plastic, foam & core
- 3-axis machining centers - work envelopes up to 100" X 64" x32"
- 4- & 5-axis machining centers - work envelopes up to 264" X 192" X 72"





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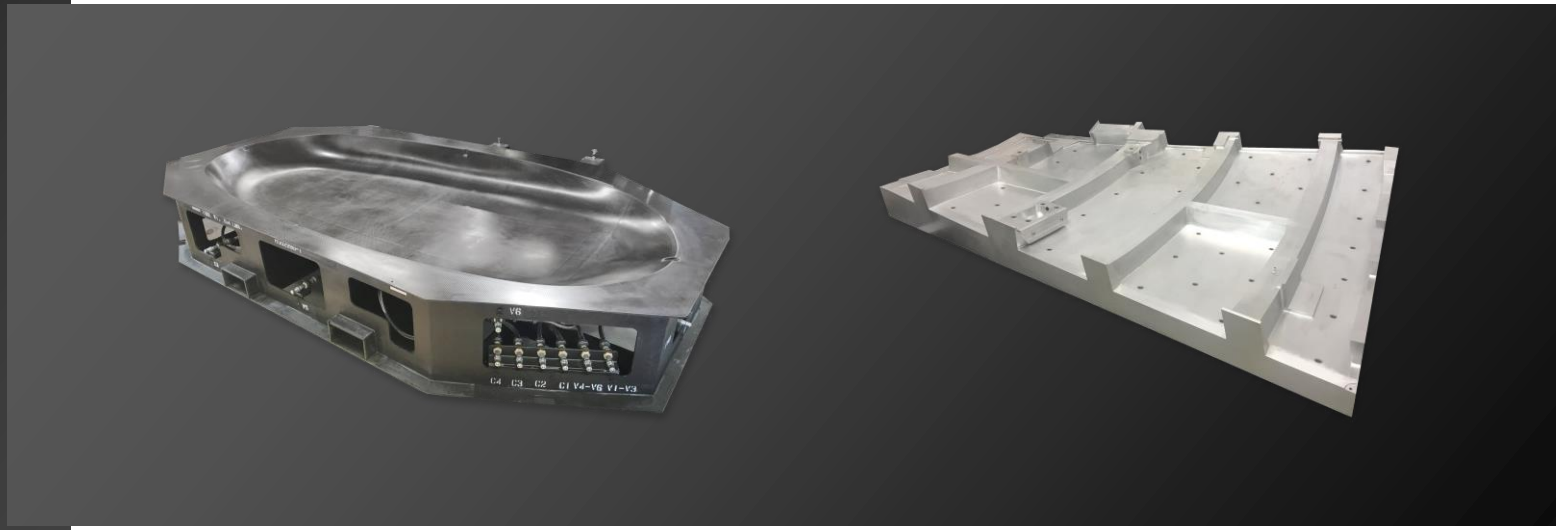
Tooling

- Master models, molds, fixtures, jigs, cauls & dies
- Materials – steel aluminum, invar, carbon, fiberglass & various tooling boards
- In-house tool engineering, custom tailored to fit specific customer processes & needs



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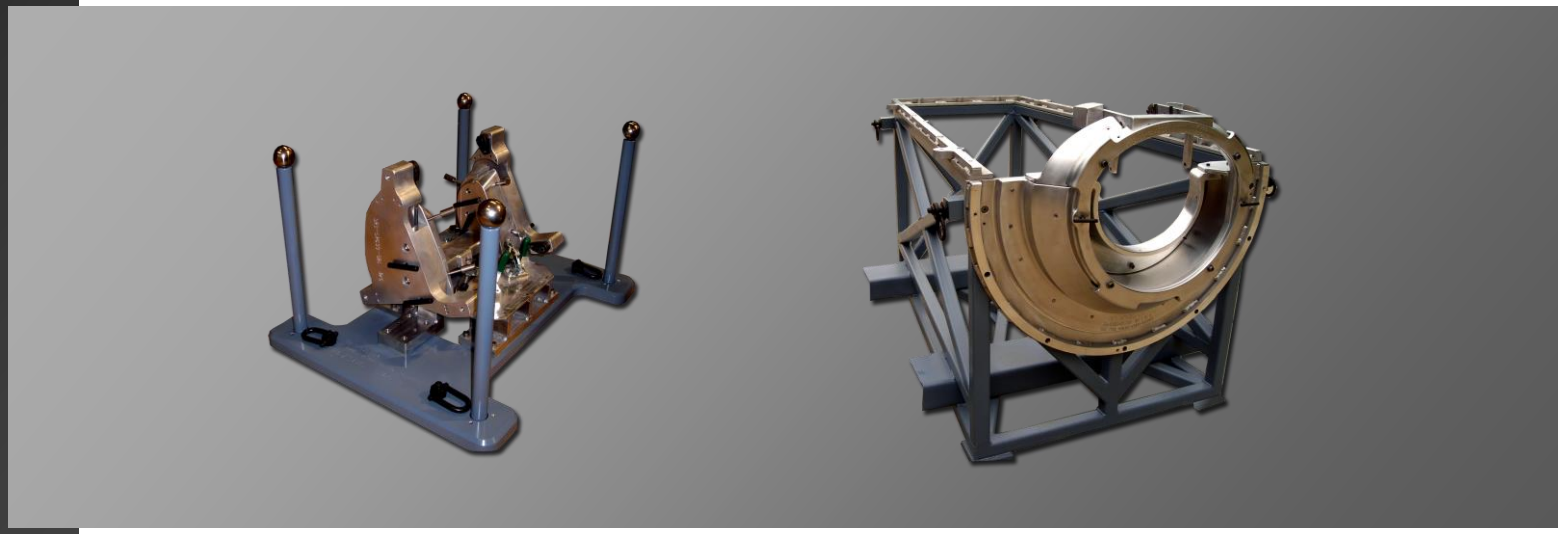
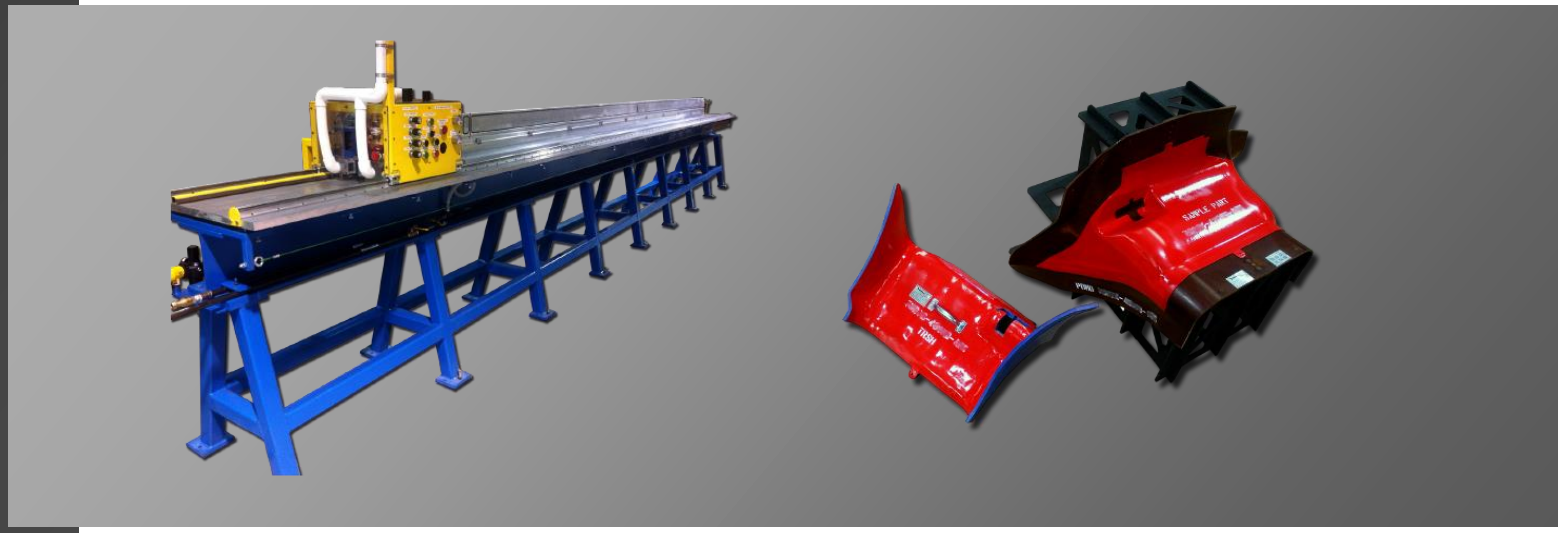
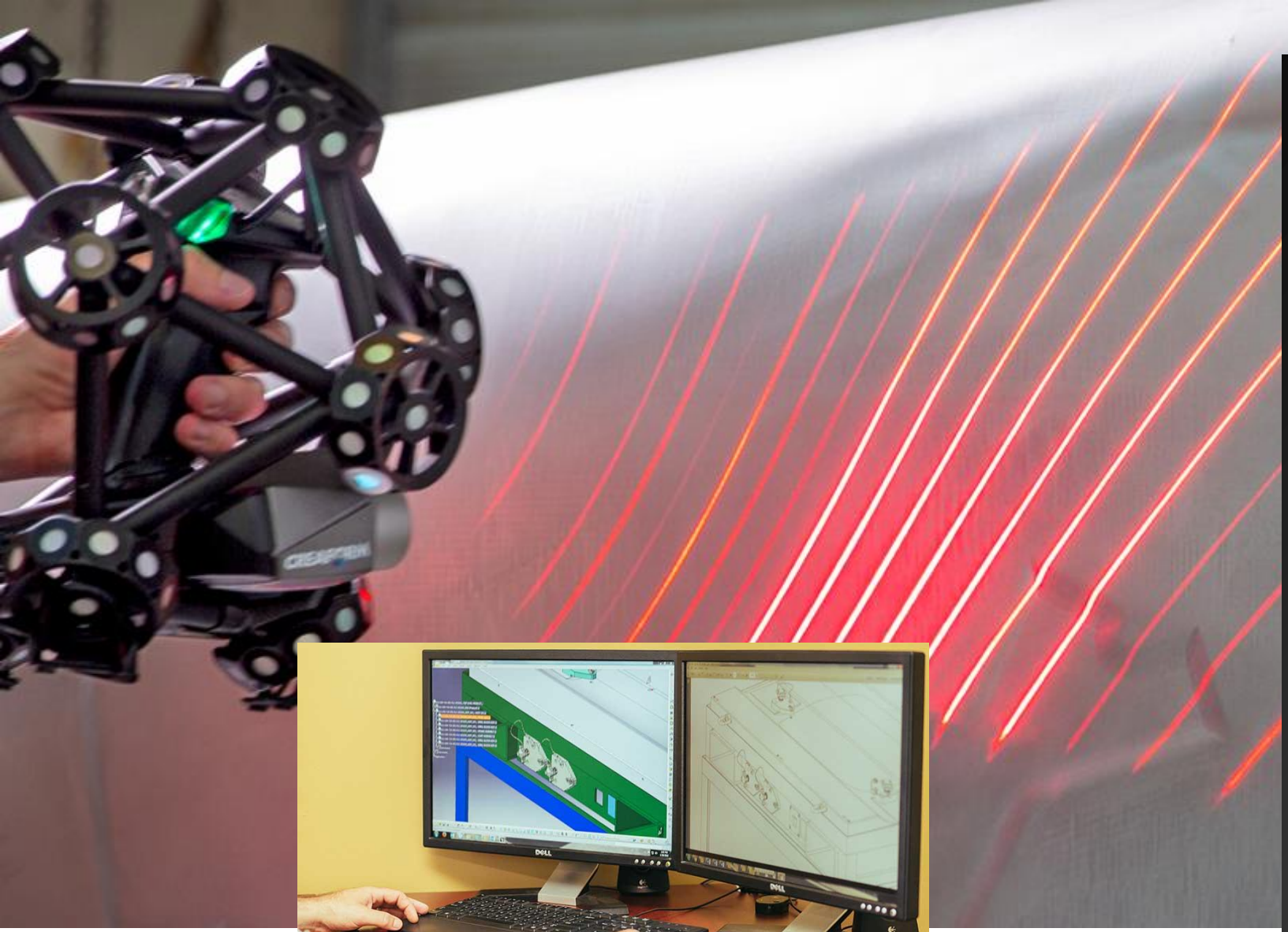
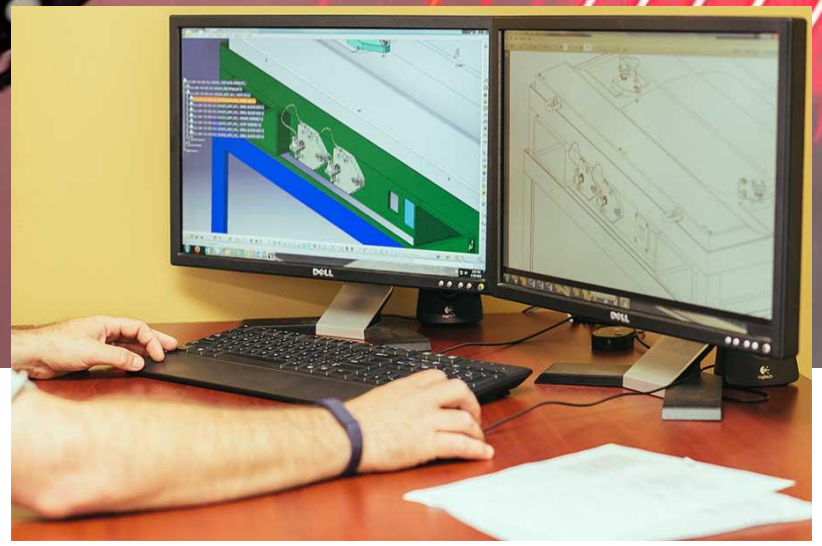




Maintenance Trainers & FAA Repair Station

- Composite skins & assemblies
- Metallic components & sub-structures
- FAA part 145 repair station with limited airframe rating



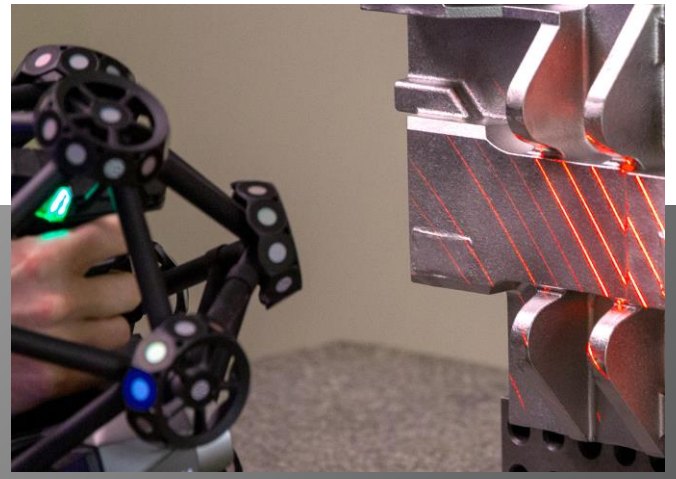


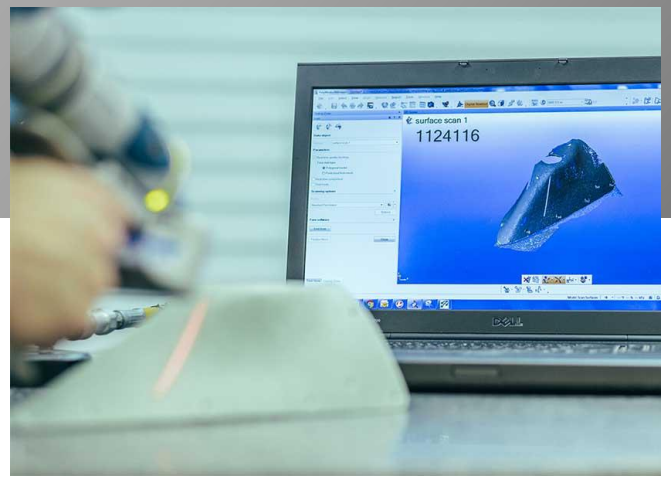
Engineering

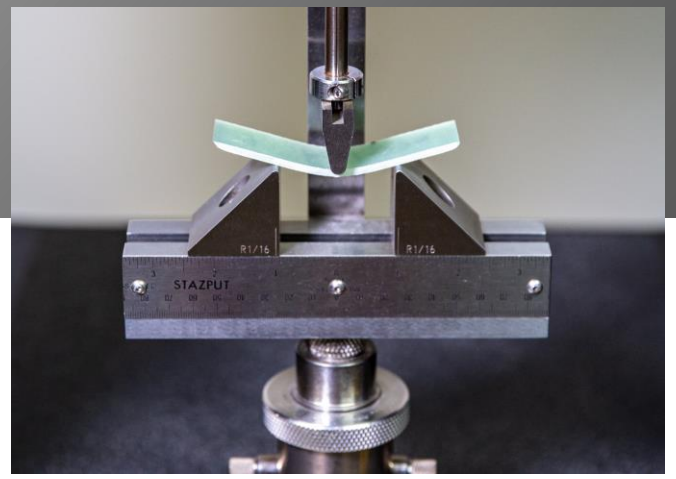
- CATIA V5, Cimatron & SolidWorks
- Tool engineering
- Manufacturing & process engineering
- Reverse engineering

Quality

- AS9100D certified & NADCAP accredited
- CMM inspections
- 3D scanning
- Mechanical materials testing
- NDT

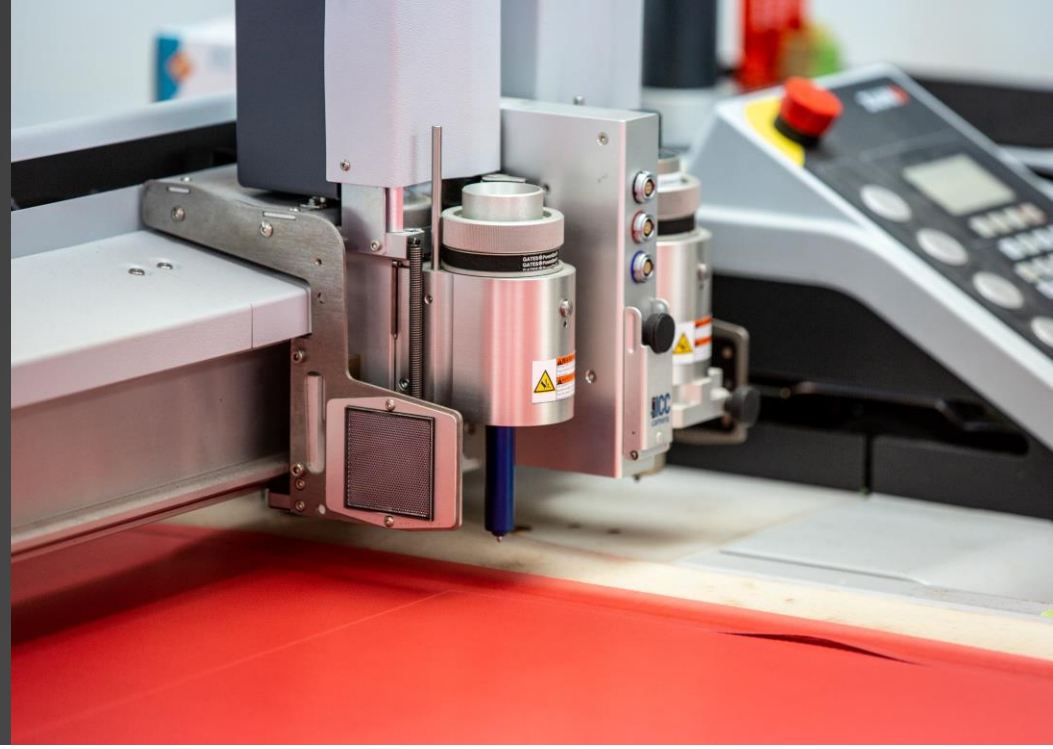






Facilities

From our 50,000 square foot facility 45 minutes north of Atlanta, GA, we support our production with world class manufacturing operations that utilize the following in house software and equipment:



Composites Fabrication

- ISO Class 5 Clean Room
- Autoclave – 8.5’ x 35’
- Autoclave - 5’ x 12.5’
- Oven – 8’ x 12.5’ x 7’
- Zund ply cutter
- Paint Booth – 14’ x 20’
- Walk-in freezers and cooler for material staging and storage

Precision Machining

5-Axis Machining

- Northwood – 264” x 192” x 72”
- SNK – 167” x 114” x 56”
- Komo – 144" x 60" x 53"
- CIS – 120” x 60” x 36”
- Kitamura – 32” x 29” x 20”

4-Axis Machining

- Haas EC-1600ZT – 64” x 50” x 40”

3-Axis Machining

- Kitamura – 100” x 64” x 32”
- Haas VF-7/40 – 84” x 32” x 30”

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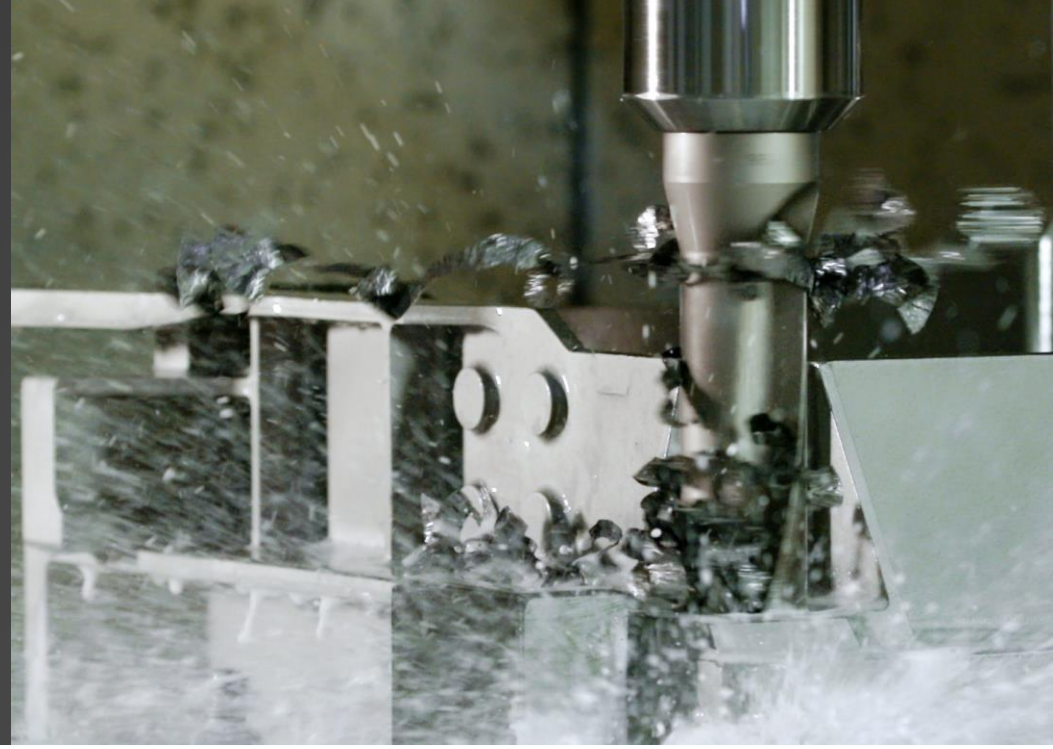

Engineering

- CATIA V5
- SolidWorks
- Cimatron
- MasterCAM

Quality

- FARO Platinum Arm
- FARO Edge Arm + Laser Scanner
- FARO Laser Tracker
- Creaform HandyPROBE + MetraSCAN
- Instron Universal Testing Machine

NOR·RAL

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