



AEROWORKS

INNOVATIVE AEROSPACE PRODUCTS

Company Presentation

Introduction

Aeroworks is a manufacturer and developer of high-quality aircraft components. Quality products are designed and manufactured both as standard and to OEM requirements. Optimized for a wide range of applications in the aviation and related industries.

- Founded on 18 August 2000
- Product portfolio:
 - Aircraft Interior Hardware: Latches, Retainers and Stowing devices
 - Aircraft Interior Composites: Interior panels and Seat parts
 - Built-to-print machining and assembly products
- AS9100 / ISO9001 Quality system & ISO 14001 Environmental certified
- NADCAP certified (Heat treatment)
- EASA 21G approval (Aeroworks Europe)





Aeroworks Design and Production Facilities

Aeroworks (Asia) Ltd.

- Metal hardware

Aeroworks Composites (Asia) Ltd.

- Seats
- Interior panels

Aeroworks Laos Ltd.

- Metal hardware

Aeroworks Europe BV

- Sales & Finance
- Design & Development
- Engineering
- Testing

>750 people workforce worldwide

Key management positions in Asia are held by European staff



Aeroworks Headquarters

Aeroworks Europe BV

- Sales
- Finance
- Marketing
- Engineering
- Research & Development
- Tool making capabilities
- Prototyping
- Small batches
- Quick TAT
- Testing

Test Laboratory

- Fire property testing
- Qualification structural composite panel testing
- Hardware qualification testing





Aeroworks Europe

- Aeroworks Europe acts also as the **developing-, tooling- and prototyping** department for Aeroworks Europe- and Asia
- Research and Development located at the same office, enables efficient Engineering and quick turnaround, from sketch to prototype





Aeroworks Europe

- Research & Development
- Additive manufacturing (3D printing)
- Spigot manufacturing and assembly
- Thermoforming
- Hydroforming
- Tool making
- Prototyping
- Small batches
- Testing





Test Laboratory

Fire Property Testing

- Flammability per CS/FAR25.853, App. F, Part I (12 or 60 sec. vertical, horizontal, 45° or 60°)
- Smoke Emission/Density per FAR/CS 25.853, App. F, Part V
- Toxicity per ABD 0031 (Airbus) or BSS 7239 (Boeing)
- Heat Release (OSU) per CS/FAR25.853, App. F, Part IV



Qualification Structural Composite Panel Testing

- Flatwise Tensile Strength ASTM C297/C297M
- Short Beam Flexure ASTM C393/C393M
- Peel or Stripping Strength of Adhesive Bonds ASTM D903
- Long Beam Flexure ASTM D7249 or D7249M
- Climbing Drum Peel ASTM D1781/DIN EN 2243-3

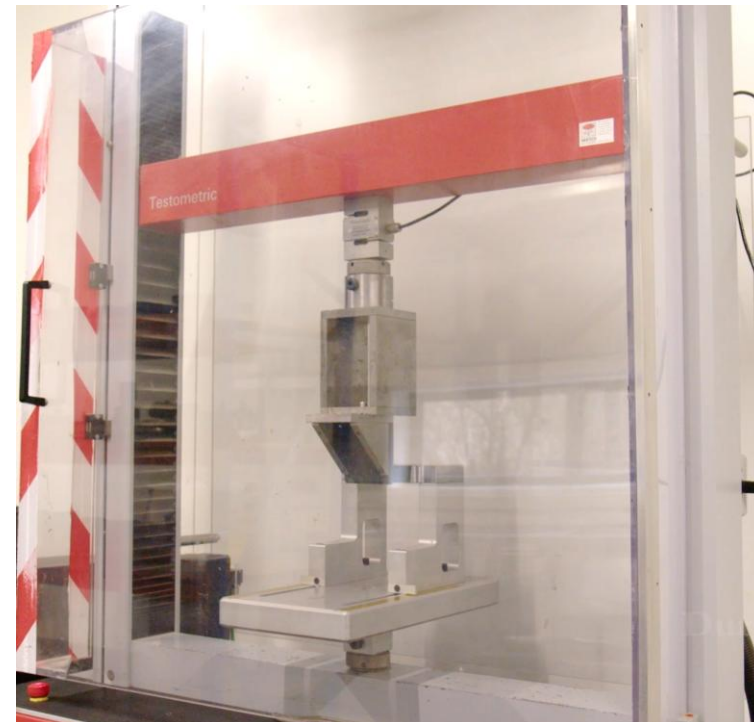
AS9100 Certified and CAA-NL recognized



Test Laboratory

Hardware Qualification Testing

- Tests performed per RTCA/DO-160
- Standard endurance/cycle testing, 100.000 cycles (standard) or requested per customer
- Static load testing per requested loads from Customer



AS9100 Certified and CAA-NL recognized



Interior Hardware Facilities

Aeroworks Thailand

- 1 facility of 3,875 m² workspace
- 290 people workforce



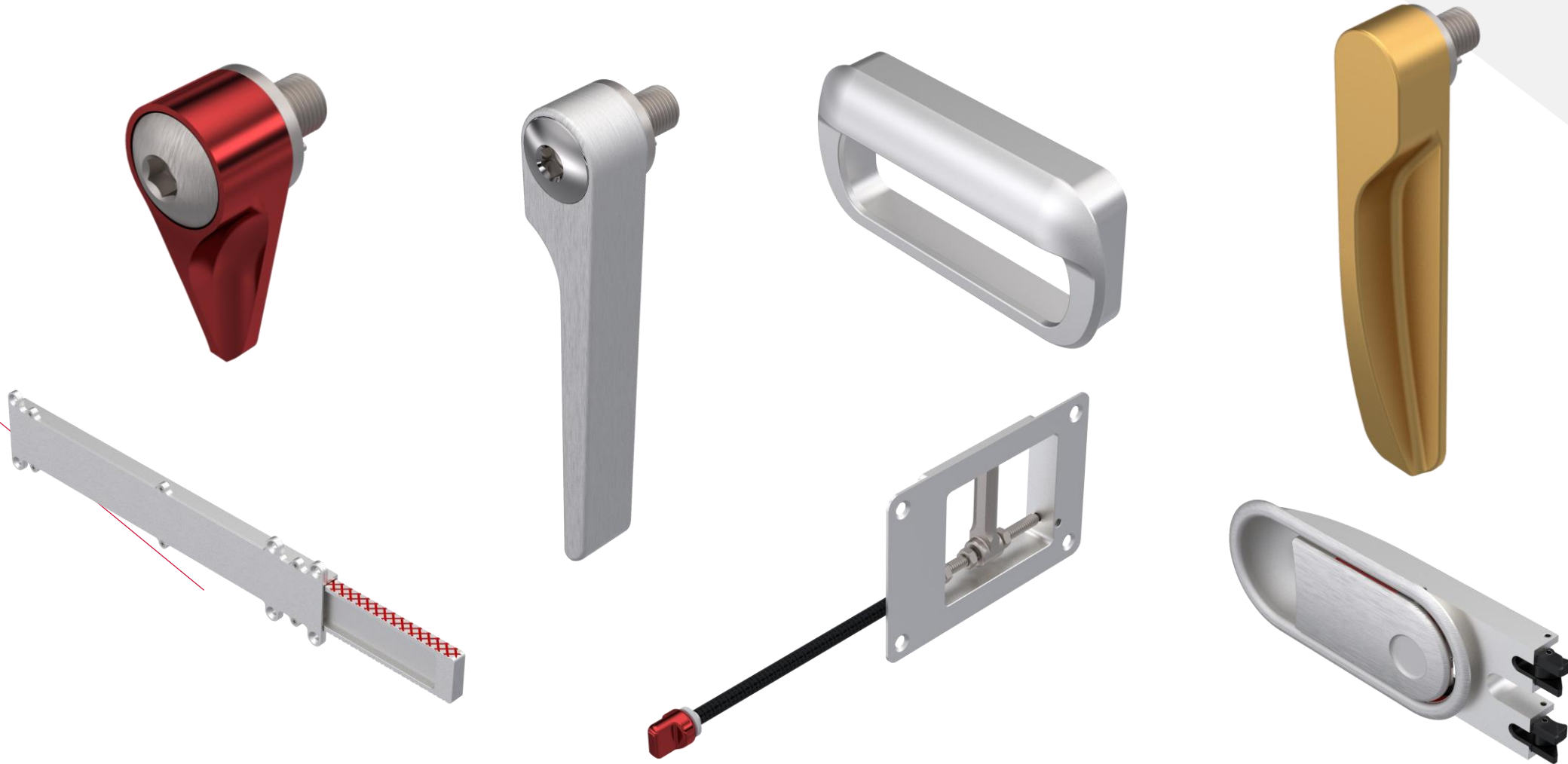
Aeroworks PDR Laos

- 2 facilities combined workspace of 4,230 m²
- 140 people workforce
- Free import-export agreement with China





Galley Interior Hardware Portfolio





Lavatory Interior Hardware Portfolio





Cabin Interface Hardware Portfolio





Interior Hardware Equipment

Equipment

- >100 CNC Milling Machines
 - 3-axis milling machines
 - 4-axis milling machines
 - 5-axis milling machine
 - Horizontal milling machines
- >30 CNC Lathes
 - Conventional Lathe
 - Dual spindle (Turning/Milling)
- 2 CNC router
- 2x Sheet Metal Laser Cutter

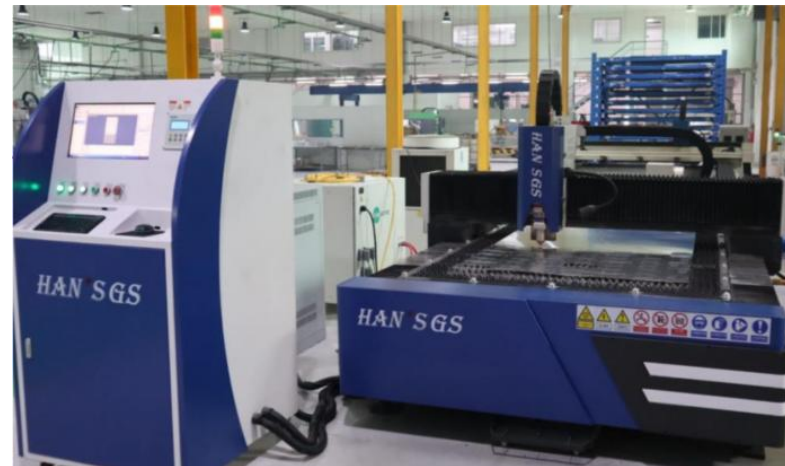
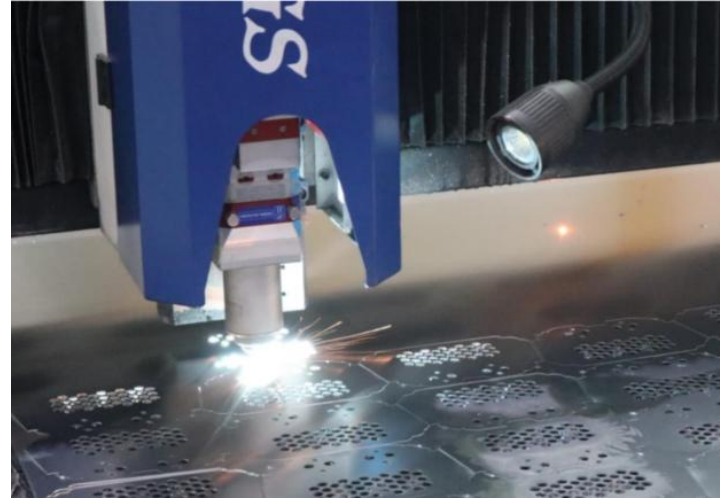




Sheet metal Equipment

Equipment

- Laser
 - 1x 1kW Laser (XY: 2,000 x 4,000)
 - 1x 6kW Laser (XY: 1,500 x 3,000)
- Press
 - 1x Multi Axis Brake press (40 ton)
 - 3x Brake Press (30/40 ton)
 - 2x H Frame press (60/100 ton)
 - 2x Eccentric press (40/60 ton)
 - 1x Rubber pad press (1,200 ton)
 - 1x C Frame press (40 ton)





Interior Hardware Finishes & Capabilities



Finishes

- Surface grinding; manual & automated
- Shot peening
- Automated Heat Treatment (NADCAP)
- Polish / Brush finish
- Chromating and Passivating
- Anodizing (Type II Class 1 and Class 2)
- Wet paint, Powder coat, Plasti-coat, Dry film lube

Capabilities

- Metal working
- In-house R&D
- Engineering
- Prototyping
- Testing
- Measuring
- Assembling





Interior Composites Facilities

Aeroworks Composites Thailand

- Composites (Asia) Cabin & Seating
 - 1 facility of 7,700 m² workspace
 - 290 people workforce





Interior Composites Portfolio





Interior Composites Equipment

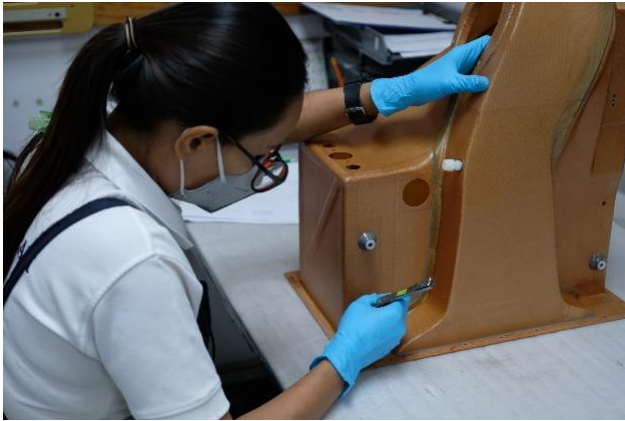
Equipment

- 17x CNC Milling Machines
 - 8x 3-axis milling machines
 - 9x 5-axis milling machine
- 5x CNC Prepreg cutter
- 30x Press (small & large)
- 6x Vacuum curing oven





Interior Composites Finishes & Capabilities



Capabilities

- Design of lightweight products
- Manual Lay up
- Compression Molding
- Out of Autoclave Curing
- Molded honeycomb sandwich panels
- Thermoforming
- Bonding and Assembly
- Painting (Primer and / or Class A surface finish)
- Static load testing
- In house tool manufacturing (Steel, Aluminum, PU Foam)





In house tool manufacturing

Manufacturing of molds & jigs in house

- Shorter lead times
- Better control over design and quality
- Reduced breakdown for repairs and maintenance of tooling



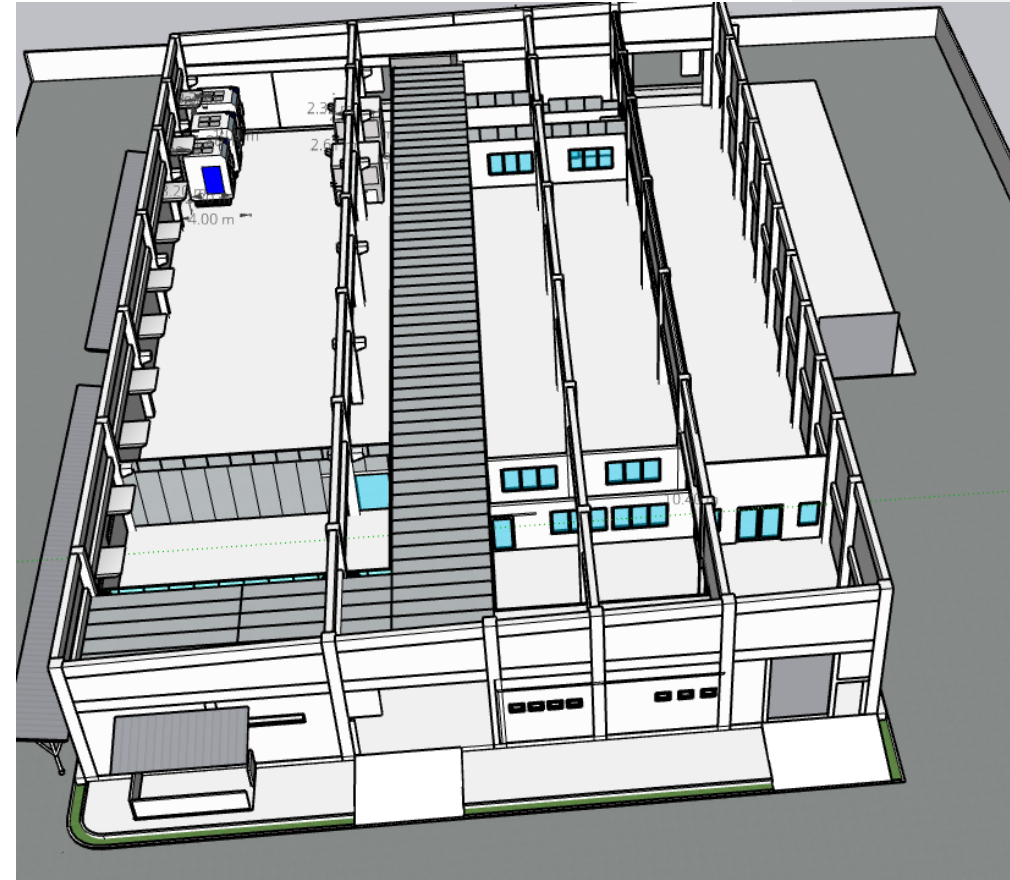
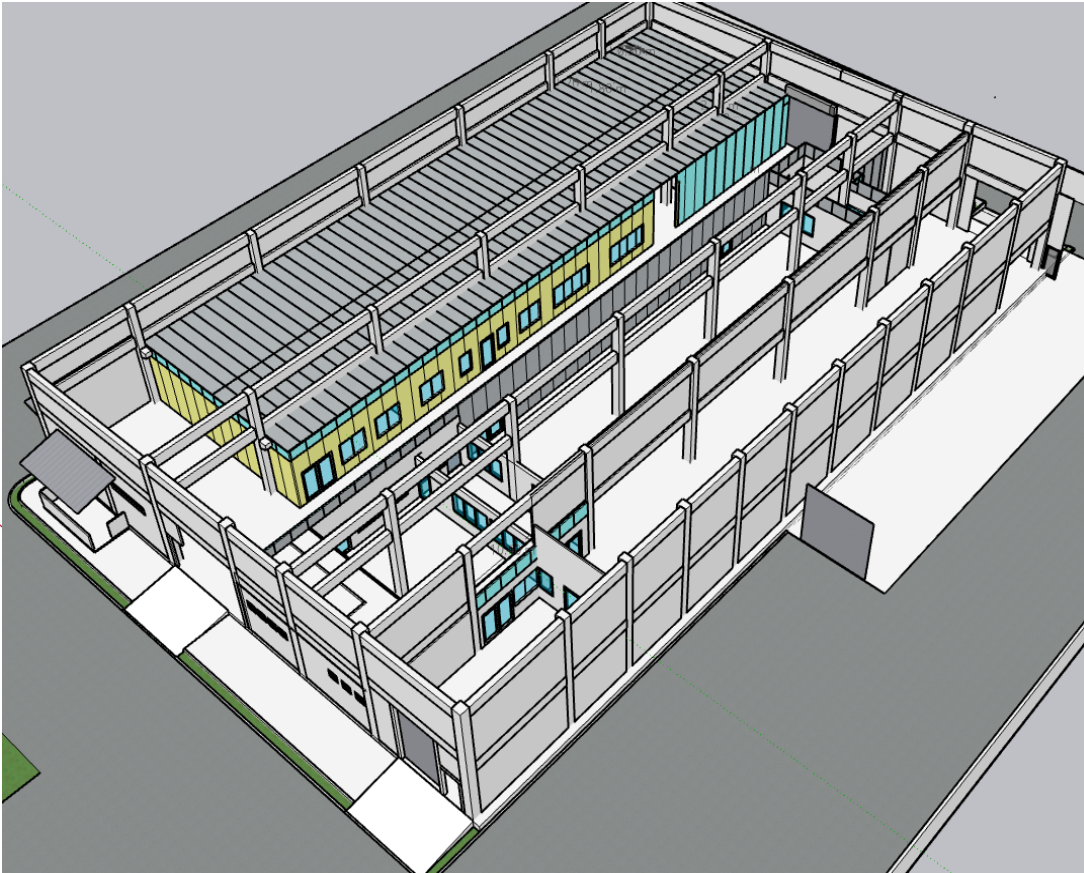


Aeroworks Future Expansion

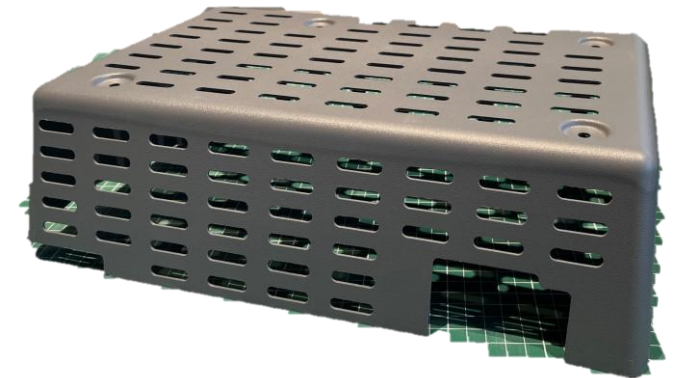
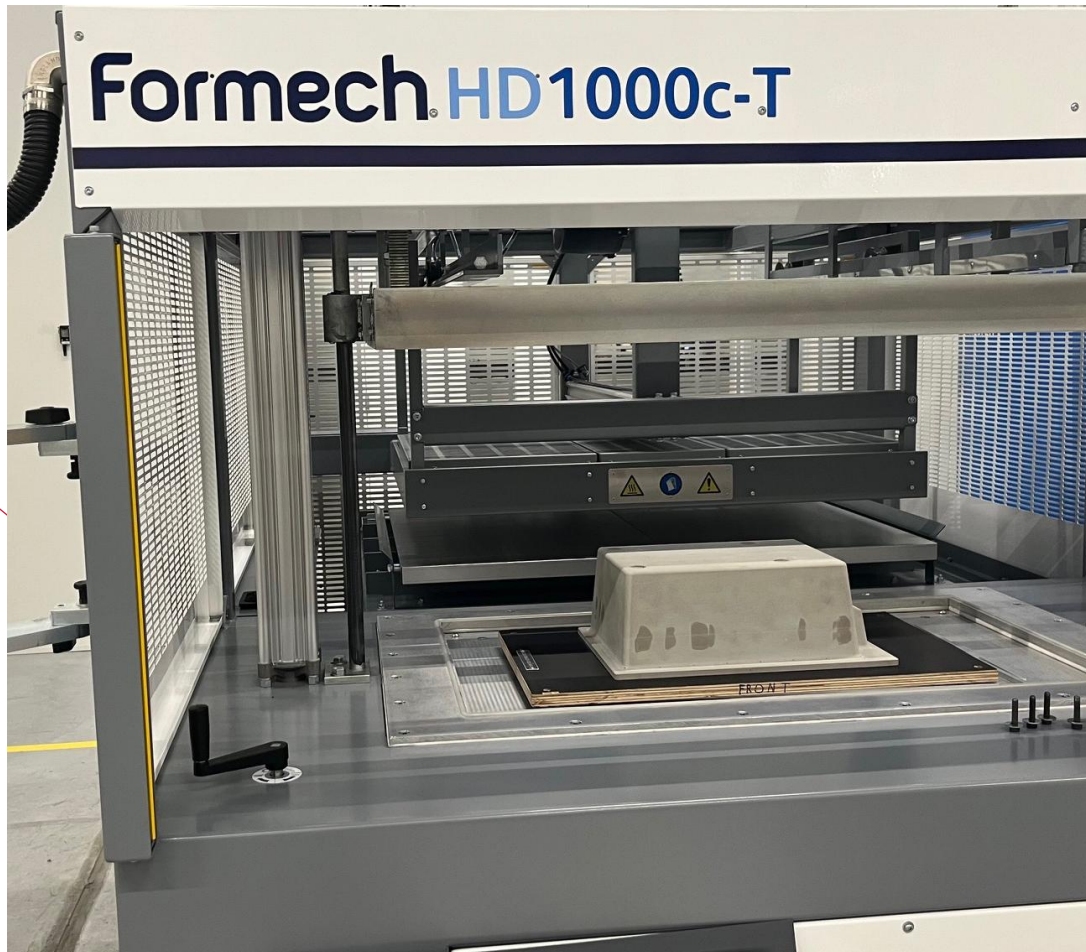
- Expansion on vacuum forming capabilities.
- Currently only available from Aeroworks Europe.
- Remodeling of previous composites facility started. 2,400 m² floor space
- First machine (950 x 560 x 500 mm) with double heater installed in Europe
- Potential product groups:
 - Meal tray tables
 - Seat shrouds
 - Ducting
 - Housing
- Parts supplied as assemblies, complemented with metal components and buy parts.



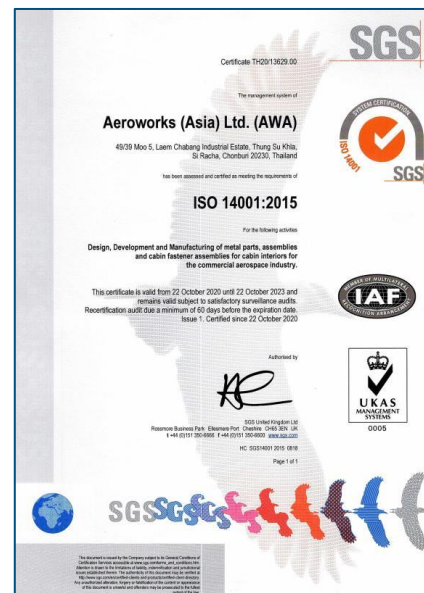
Factory lay out



Thermoforming part



Quality





Aeroworks Milestones and History

2025

Consolidation & Expansion of Aeroworks Composites facilities
Expansion of thermoforming activities in the Netherlands. Start of Thermoforming in Thailand



2020

New company headquarters with additional capacity to support prototypes and small series



2016

2nd facility in Laos opened. Expansion in Thailand



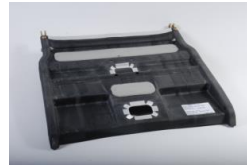
2013

AS9100 certification for all Asian facilities



2006

Establishment of Aeroworks Composites



2000

Aeroworks founding



Aeroworks supplies to aircraft interior manufacturers. Our products can be found on a wide range of aircraft types such as:

A380 / B747, A350 / B787, A340 / B777, A330_{neo}, A320_{neo} / B737_{max}, SSJ-100, A220 / C-series, E-jet / E2, ATR



Carbon footprint



Aeroworks Europe
139 MWh produced in
2023
→ annual reduction of
47 t CO₂e



Aeroworks (Asia)
~900 MWh per year
→ Potential annual
reduction of
580 t CO₂e

Live since 5 October 2024



Aeroworks Composites (Asia)
~1,500 MWh per year
→ Potential annual reduction
of 960 t CO₂e

Live since April 2025

**Aeroworks commits to reduce Scope 1+2 emissions
42% by 2030 from a 2022 base year.**



Product and Service focus



Source: Safran Cabin Inc.



Source: Airbus Group



Source: Airbus Group



Source: Fokker Techniek B.V.

Customers





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Aeroworks



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