

# MOLD TOOLS

## One-step Net-Shape production for advanced composite parts

- Steel or Aluminium tools
- from 20cm plates to 17m parts
- Custom made matched tools
- Dry Fibers (RTM) and Prepreg (SQRTM)



## Key Benefits



### The Low-Risk solution

Design & Manufacturing of more than 150 molds for RTM & SQRTM



### Cost-effective Composite

Short cycle time, simplified part machining & assy, NDT increased speed



### High yield

Total control of part thickness, fully impregnated part



### Durable

1000+ parts/mold, nearly no consumable, low energy consumption process

## Why does it work ?

- Total understanding of process steps : from preforming to demolding
- Accurate Control of closing sequence to avoid fiber movements
- Highly conductive materials ensures thermal homogeneity (alu, steel)
- High quality vacuum < 1 mbar to remove volatiles in the preform

## Technology leader Out of Autoclave



- Design with RTM and SQRTM process focus
- Reliability and repeatability is key to cost-savings
- Continuous support for process improvement
- High-quality maintenance support and trainings

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Real results.  
Trusted by industry leaders.



## Long Aluminum molds

OEMs **AIRBUS** **fidamc**

Challenge: CTE mismatch prediction

Based on part and preform definition, the 50mm tool extension of aluminum tool from 20 °C to 180°C has been predicted accurately.

Result: Part thickness tolerance : +/- 0.2mm, TRL6, MRL7

## Automatic Production

Tier 1 **SPIRIT**  
AEROSYSTEMS

Challenge: repeatability, automation, durability

Airbus A320 RTM Spoiler – Coexpair supplied the mould tools to Spirit AeroSystems' Prestwick facility for its Airbus A320 spoiler programme.

Result: MRL9



## Let's talk about your project

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## Flexible tools

OEM **arianeGROUP**

Challenge: Tools for multiple thicknesses, flexible

The design can integrate specific interfaces to ensure maximum flexibility and adaptability to manufacture plates - or parts - of various thicknesses.

Result: Thickness tolerances of +/- 0.1 mm

## Innovative processes

R&D **AERnova** **Clean Sky2** 

Challenge: innovative Demonstration

Coexpair designed and validated smart, low-cost tooling enabling RTM of a hybrid HTP leading edge demonstrator.

Result: Metal-shield co-cured with composite part TRL5/MRL6

