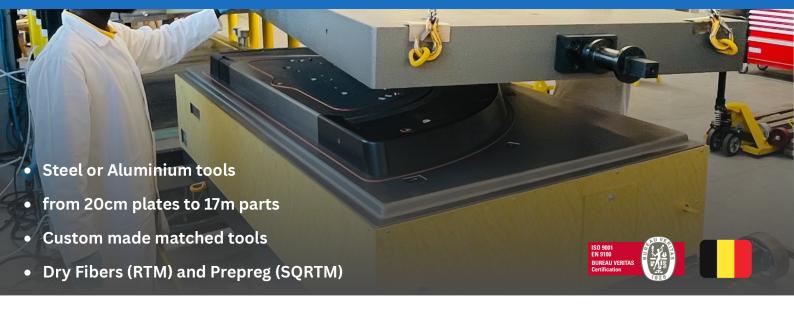
# **MOLD TOOLS**

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



### 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</li>

### **Technology leader Out of Autoclave**



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

## **MOLD TOOLS**

### Real results. Trusted by industry leaders.



### Long Aluminum molds 🕸



**OEMs** 

**AIRBUS** 



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

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 (6) (8)





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 🗟 🍥 🕏











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 TRL5/MRL6

