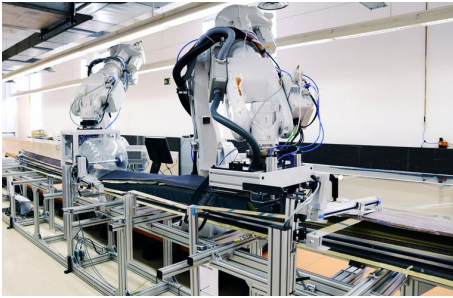


Composites Manufacturing Solutions

A+ GLIDE FORMING: A new process for stringer manufacturing



Challenge: Forming processes for carbon-fibre stringers with complex contours

Stringers are widely used (4 to 6 km) in airplane structures to provide stiffness to the panels. In wings and certain areas, stringers must follow complex contours. Current technologies have low productivity and are unable to form contoured stringers without wrinkles. There is a need for a high productivity, automated system able to make different types of straight and contoured stringers.

A+ GLIDE FORMING

The revolution on stringers

manufacturing

Applus+ has developed a new stringer manufacturing process to provide a versatile, high-productivity and low-investment forming solution that overcomes the major drawbacks of existing forming technologies.

Forming Technologies Comparison

A+ Glide Forming Benefits

Better Quality

- No wrinkles

High Flexibility

- One single machine for different stringers: , T, U
- Only a new male tool is needed to manufacture an additional stringer

Cost Saving

- OPEX: highly automated, low labor cost

- CAPEX: only one machine, very simple tools

Environmentally friendly

- Local heating: no heating tools, energy saving compared to current technologies
- Less scrap material

Contoured formed L and