

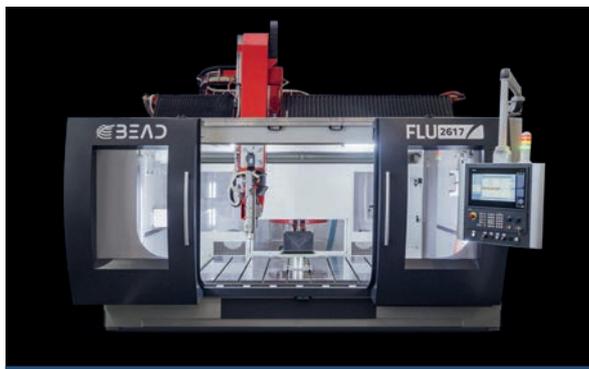
## It's good to be back!

JEC World is helping shape the global composites sector. **Composites in Manufacturing** previews some of the companies returning to showcase their latest products and innovations during the event.

**W**e begin our exhibitor round-up with BEAD, who will hold a live demo every day on the Belotti (hall 6, stand G51) during JEC World. Through the integration of a CEAD extruder for additive manufacturing in a Belotti 5-axis CNC machining centre, BEAD allows the production of parts that are sufficiently oversized to be finished to the required tolerances with times and raw materials consumption lower than traditional methods.

BEAD's solution is possible in different configurations with variable build volumes, extrusion outputs and printing orientations. One of the key features is the 45° orientation, that enables to print fully closed shapes without supports for undercuts, reducing printing time and improving interlayer adhesion, and to mediate mechanical and thermal properties of the material at needs. The extrusion temperature goes up to 400°C in order to process a wide variety of materials.

BEAD utilises composite pellets made of a thermoplastic polymer matrix and different types of fibres as reinforcement. Polymers



**Above**  
BEAD: Extraordinary extrusions

range from commodity to high performance materials. Thermoplastics can be recyclable and re-used, making the process even more sustainable.

Elsewhere, CGTech (hall 5, stand P30) will demonstrate how advanced programming strategies and simulation can lead to the production of better composite parts.

Throughout the show, CGTech will showcase its Composites focused applications, including VERICUT Composite Programming (VCP) and VERICUT Composite Simulation (VCS), as well as delivering a presentation on its SMART-TAPE project,

**Below left**  
CGTech: Simulation strategies

**Below right**  
Cygnat Texkimp: Fibre handling and converting technology

that will transform the way components are manufactured.

The company's SMART-TAPE project aims to overcome any barriers to efficiency and throughput by delivering novel multi-material (hybrid) processes, using carbon fibre-reinforced thermoplastic tapes in conjunction with low-cost metallic and polymeric substrates, for volume applications. CGTech will also exhibit version 9.2 of VERICUT software.

### Fibre handling feats

Cygnat Texkimp (hall 5, stand M72) will showcase its high-speed, large-scale part winding capability at JEC World. The company's Multi Axis Winder (MAW) will be running live on its stand, enabling visitors to see the benefits of the technology which is designed to wind large, continuous and curved parts for the aerospace industry.

Its sister technology, the 3D Winder, is based on the same principles as the MAW but is mounted onto a robot instead of a linear track to provide greater dexterity of winding geometry. This machine allows manufacturers to wind complex curved parts which otherwise would not lend themselves to filament winding.

Unlike conventional filament winding technologies where fibres are wound onto a rotating mandrel, the MAW and the 3D Winder both incorporate a static mandrel. The static mandrel offers considerable practical benefits in material handling, particularly to manufacturers of large parts that are inherently unbalanced, such as those required by the aerospace industry.

Meanwhile, DK Holdings (hall 5, stand

