

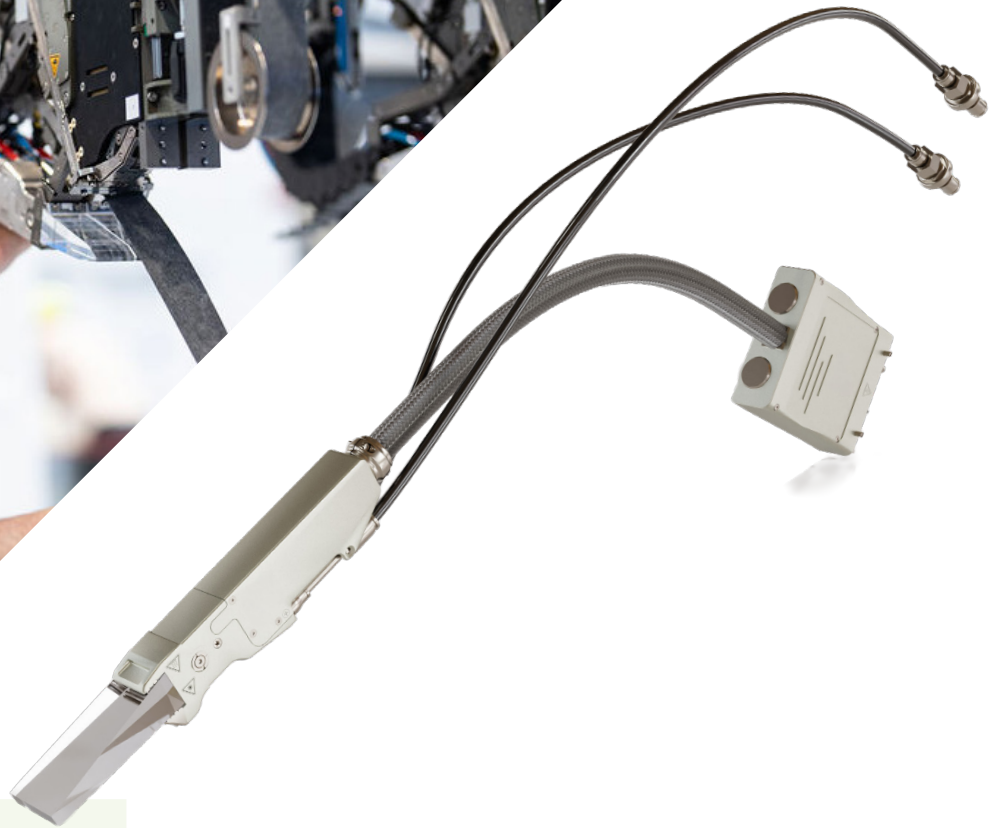
NobleLight®

hummm3® Multi-Tow Heating Systems

High-rate deposition for faster composite production



Courtesy of the NCC



Multi-tow heating

Scaleable heating widths

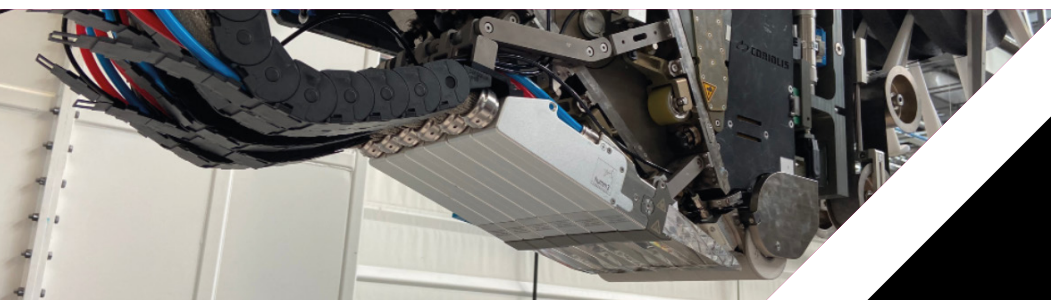
Fibre steering capability

Higher rates of deposition

Multi-material compatibility

What is hummm3?

Excelitas® hummm3 technology is a modular broadband pulsed heating system that enables high-speed processing of pre-preg, dry fibre, and thermoplastic materials with independent tow control, supporting higher deposition rates in automated composite production.




excelitas®

hum3® Multi-Tow Heating Systems

Overview

High-rate AFP enables scalable, high-precision carbon fiber production for next-generation lightweight structures, especially in aerospace where higher deposition rates can enable increased throughput.

hum3 Enterprise is a scalable AFP solution enabling higher deposition rates with independent multi-tow heating for precise, tow-by-tow heat during high-rate layup.

Application Areas

High-rate AFP is widely used where large, complex, high-performance composite structures are required:

Aerospace

- Aircraft wings, fuselages
- Space structures (fairings, tanks)



Automotive

- Structural chassis components for high-performance or EV platforms



Defense & Marine

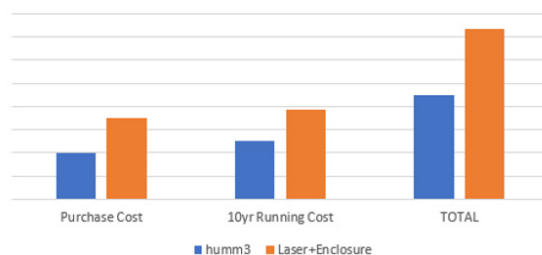
- Lightweight armor, naval structures



Benefits over laser heating

hum3, a broadband pulsed light system, lowers total cost of ownership by removing the need for laser safety enclosures altogether. Modular components combine into a single integrated solution, enabling cost-effective heating beyond 20 tows. Laser multi-tow systems require a dedicated laser, power supply, cooling, and optics per tow, increasing cost and complexity.

Cost comparison - hum3 Enterprise 6x1" head vs 6x2kW laser with enclosure



Courtesy of Coriolis Composites and the NCC



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