

Airtech And Caracol Announce Their Partnership To Grow The LFAM Market With Dahltram® Resins And HERON AM Technology



HUNTINGTON BEACH, CA – March 06, 2024: Airtech Advanced Materials Group announces its strategic partnership with Caracol, marking a significant milestone in advancing additive manufacturing capabilities for large-scale industrial applications.

Caracol, established in 2017 with a mission to redefine the boundaries of additive manufacturing, has engineered the HERON AM platform. This modular, polymer, and composite pellet extrusion robotic 3D printer is meticulously designed for large-scale industrial applications. Caracol's integration of hardware, software, and automation delivers a turnkey solution that optimizes flexibility, process control, and performance. Airtech has qualified its Dahltram® Resins for integration with Caracol's HERON AM Large-Format Additive Manufacturing platforms globally. This accomplishment will support Caracol in its efforts to offer Airtech's Dahltram® resins to their customers globally.

"We are excited to collaborate with Caracol to bring our Dahltram® resins to their HERON AM platforms," said Gregory Hays, Director of Additive Manufacturing at Airtech Advanced Materials Group. "This partnership signifies our commitment to driving innovation in additive manufacturing and providing our customers with cutting-edge solutions that meet their evolving needs."

Dahltram® resins, renowned for their exceptional performance and reliability, have undergone extensive testing and validation for compatibility with HERON AMTM platforms. Airtech's

Dahltram® resin range is uniquely suitable for multiple print platforms and offers unparalleled production flexibility with end-use material approvals. Rigorous thermal cycle testing, pressure leak testing, laser surface scanning and contact material testing have generated data that supports more than 500 autoclave cycles without degrading the Dahltram® tooling resins.

“Working with a partner like Airtech on advanced materials is a key step for us in enabling customers to have an end-to-end manufacturing process that guarantees reliability, quality, and efficiency,” says Violetta Nespolo, Chief Marketing & Strategy Officer at Caracol. “Our end goal is always delivering the highest quality standards and results on our clients’ applications, and we believe that we can drive this only by collaborating with the best partners across the value chain.”

The launch of Dahltram® T-100GF marked Airtech's entry into recycled-grade thermoplastic polymer resins for pellet-fed, large-scale 3D printing. These innovative resins are leading the way in recycled materials and have made a significant impact, particularly in sustainability initiatives. Notably, Dahltram® I-350CF played a pivotal role in the EmpowerAX project, recognized as the winner of the 2024 JEC Innovation Award for Aerospace Processes.

By qualifying Dahltram® Resins for integration with Caracol's HERON AM Large-Format Additive Manufacturing platforms, both companies are empowering manufacturers to achieve their production goals efficiently and sustainably.

A product of this collaboration will be showcased at JEC World 2024, where a 3D printed composite tool will be on display at the Airtech booth #G41 (Hall 5). Additionally, live 3D printing demos on the HERON AM platform using Dahltram® Resins will be available at the Caracol booth #L116 (Hall 5).

For more information about Airtech Advanced Materials Group and Dahltram® Resins, visit Airtech3d.com. For details about Caracol and HERON AM platforms, visit Caracol-am.com.



Airtech Advanced Materials Group is the largest privately-owned manufacturer of vacuum bagging and composite tooling materials for prepreg/autoclave, resin infusion, and wet lay-up processes up to 799°F (426°C). Established in 1973, Airtech is a family-owned and operated business, committed to preserving its core values and leading industry innovations for over 50 years. Airtech serves a diverse range of sectors, including aerospace, wind energy, solar, marine, automotive, and general composites. The company's latest advancements in large-scale additive manufacturing, advanced Dahltram® tooling, and multi-purpose thermoplastic resins demonstrate Airtech's commitment to innovation and sustainable practices. The Airtech Advanced Materials Group encompasses Airtech International Inc. in the USA (Huntington Beach, CA; Chino, CA; Springfield, TN), Airtech Europe Sarl (Differdange, Luxembourg), Airtech Advanced Materials UK (Chadderton, England), Airtech Asia (Tianjin, China), and Airtech India (Goa, India). Airtech's global footprint provides access to resources and markets worldwide, while the company maintains a strong commitment to a community-focused approach in each region it operates.

Caracol was founded in 2017 in Milan, Italy, with the vision of pushing the limits of additive manufacturing in terms of scale, efficiency, and sustainability. The company accomplished this by developing an integrated technological platform, including both hardware and software, to produce advanced large-scale components. Through the integration of a patented extrusion head, the development of a dedicated software, and the use of robotic arms as movement support, Caracol offers an additive manufacturing technology for advanced components for customers in industries such as aerospace, marine, energy, design, and architecture. Heron AM manufactures parts such as jigs and molds for aircraft components, finished parts for yacht and boat superstructures, or revolutionary projects to initiate virtuous circular economy processes for the energy or design sectors. Today the company has opened the largest LFAM production center in Europe, a new production facility in Austin (TX), USA opened in August 2023, and has a core team of over 60 international professionals with highly specialized competences, in areas such as mechanical engineering, automation, computational design, design for additive, and advanced manufacturing processes.