

# **RAMPF: One-Stop Solution for UAV** Composite Manufacturing

Tooling materials and engineering know-how for unparalleled speed and cost-efficiency at Xponential in Houston, TX – Booth 2020

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Wixom, USA; Burlington, Canada, May 8, 2025. The RAMPF Group is showcasing highperformance tooling materials and groundbreaking engineering solutions for the rapid and costeffective manufacture of composite parts in the UAV industry at Xponential in Houston, TX, from May 20 to 22 – Booth 2020.



# **Key Facts**

- 1. Through advanced tooling materials and innovative engineering solutions, the RAMPF Group companies accelerate composite manufacturing while significantly reducing costs.
- 2. RAMPF Group, Inc., based in Wixom, MI, USA, offers high-performance tooling boards, Close Contour Castings, and liquid resin systems with outstanding mechanical and chemical properties.
- 3. RAMPF Composite Solutions based in Burlington, Ontario, Canada, designs and manufactures advanced lightweight components, maximizing the potential of composite technology from early development and low-volume production to full-scale series manufacturing.

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## Tooling boards, Close Contour Castings, and liquid resin systems by RAMPF Group, Inc.



- RAKU<sup>®</sup> TOOL tooling boards based on epoxy exhibit outstanding mechanical properties, finest surface structures, and high dimensional stability. The boards are easy and quick to machine and compatible with all industry-standard prepregs, release agents, and paints.
- RAKU<sup>®</sup> TOOL Close Contour Castings made from polyurethane are delivered as a ready-to-machine monolithic casting, free of bonding lines and in a near-net shape. This significantly reduces both milling time and material waste.
- RAKU<sup>®</sup> structural resins enable low-temperature processing without the need for expensive equipment. These scalable materials reduce prototyping lead times and costs by up to 30 percent, while meeting FST standards including FAR 23.1193, 25.853, and 25.855.

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Engineered composite manufacturing by RAMPF Composite Solutions

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RAMPF Composite Solutions specializes in the design and manufacture of advanced lightweight composite parts for the UAV industry, including rotor blades, battery enclosures, fairings, and cowlings. The company's experts harness the full potential of composite technology across all stages – from early development and low-volume runs to full-scale production.

The groundbreaking approach combines:

- Low-cost tooling and fixtures for outstanding mechanical properties, ensuring high-quality production at reduced costs.
- High-performance structural resins for effective and fast infusion, enhancing the efficiency of the manufacturing process.
- Tailored Fiber Placement (TFP) technology for optimized structural components with maximum speed and accuracy.
- Vacuum Assisted Resin Transfer Molding (VARTM) for low-cost component production.

Experience unmatched speed and cost-efficiency in UAV composite manufacturing – Visit RAMPF at Xponential in Houston, TX, May 20 to 22 – Booth 2020!

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The RAMPF Group stands for **Chemical & Engineering Solutions** and caters to the economic and ecological needs of industry with four core competencies:

- RAMPF Machine Systems based in Wangen (Göppingen), Germany, develops and produces multi-axis positioning and moving systems, trunk machines, and basic machines based on high-precision machine beds and machine bed components made from alternative materials such as mineral casting, ultra-high performance concrete, and hard stone.
- RAMPF Production Systems based in Zimmern o. R., Germany, develops and produces production systems with integrated dispensing technology for bonding, sealing, foaming, and casting a wide variety of materials. The company also offers an encompassing range of automation solutions relating to all aspects of process engineering.
- RAMPF Composite Solutions based in Burlington, Ontario, Canada, is a holistic composites supplier to companies in the aerospace, defense, transportation, medical, and green technology industries. The company offers a complete suite of services including composite part design and engineering, and metal-to-composite conversion engineering.
- RAMPF Advanced Polymers based in Grafenberg, Germany, is a leading specialist in the development and manufacture of customized and sustainable solutions for formulating, sealing, casting, and design. The product portfolio includes sealing systems, electro and engineering casting resins, edge and filter casting resins, and adhesives based on polyurethane, epoxy, silicone, and silane-modified polymers; board and liquid materials for model and mold making based on polyurethane and epoxy; chemical solutions for the manufacture of customized recycled polyols based on polyurethane, PET, and PIR residues.

RAMPF has subsidiaries in Germany, the United States, Canada, China, Japan, and Korea.

All RAMPF companies are united under a holding company - RAMPF Holding GmbH & Co. KG - based in Grafenberg.

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