

Media Release

Schaffhausen
May 2019

GF Casting Solutions and GF Machining Solutions to showcase their unique combination of expertise at the 53rd International Paris Air Show

Bringing together a unique combination of expertise to keep aerospace original equipment manufacturers and their partners flying high above the competition, GF Machining Solutions and GF Casting Solutions will take to the world stage together at the 53rd International Paris Air Show, June 17–23, 2019, at Paris-Le Bourget Airport (France).

Visitors to the event won't want to miss the two GF Divisions' 50-square-meter exhibition space (Hall 4, Stand A78). That's the place where the global aerospace market will discover how GF Machining Solutions and GF Casting Solutions—through its GF Precicast entity—breathe life into their Paris Air Show theme, "We move your application ahead".

From manufacturing equipment and Additive Manufacturing (AM) technology to precision casting (also known as investment casting), the two GF Divisions add value to a variety of high-value aerospace components. These include helicopter diffusers and structural parts, impellers, airfoils, turbine disks, outlet guide vanes, bearing supports, hubs, and structural parts.

Impressive 3D-printed turbine rear vane

At the 53rd International Paris Air Show, GF Machining Solutions and GF Casting Solutions will present exciting evidence of their collective competence: one of the largest 3D-printed parts for an aircraft engine. This part, a turbine rear vane (TRV), was developed at GF Machining Solutions' and GF Casting Solutions' new AMotion Center in Stabio, Switzerland.

Printed in only 48 hours with a 60-micron layer thickness, the TRV was perfectly executed with a combination of technologies: GF Machining Solutions and 3D Systems' workflow-optimized DMP Factory 500 metal AM printing solution for the build; GF Machining Solutions' wire Electrical Discharge Machining (EDM) machine for separating the TRV from the build platform; 3DXpert all-in-one software; and LaserFORM[®] Ni718 metal powder. The DMP Factory 500, with its 500 x 500 x 500 mm build envelope, is the perfect metal AM printing solution for creating seamless large parts at increased quality and lower total cost.

A go-to source for AM expertise

Not surprisingly, the AMotion Center in Stabio is gaining ground as a go-to source for AM expertise covering the whole manufacturing value chain. That's because it offers consulting and training; design, engineering and development; rapid prototyping; part qualification; serial production; and ready-to-mount solutions.

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As a result, manufacturers profit from short development cycles, unlimited possibilities in terms of shape, use of a wide variety of materials; deep know-how in serial part production; and an in-house Research and Development team with proven success in three key AM technologies: laser powder bed fusion and electron beam powder bed fusion for direct manufacturing of metal components, and direct energy deposition for reworking components, producing hybrid cast and additively manufactured products, and manufacturing large parts. Moreover, the AMotion Center is among the top five organizations worldwide to hold the latest Nadcap certification.

Picture caption:

The 53rd International Paris Air Show (Hall 4, Stand A78) is the place to experience how GF Machining Solutions and GF Casting Solutions—through its GF Precicast entity—breathe life into the claim, “We move your application ahead.” This turbine rear vane (TRV), one of the largest 3D printed parts on the market, was developed at the GF Divisions’ AMotion Center in Stabio, Switzerland, and perfectly printed in just 48 hours.



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Profile of GF Casting Solutions

GF Casting Solutions is a technologically pioneering development partner and manufacturer of cast and additive components for the global automotive industry, aerospace and energy markets, off-highway vehicles as well as for industrial applications. The highly complex lightweight components are manufactured in one of four manufacturing technologies (iron sandcasting; aluminum & magnesium die-casting; precision casting; additive manufacturing) and machined up to a ready-to-mount level. In close cooperation with our customers and partners, we develop the casting innovations of the future - from the initial concept to precise implementation and reliable validation. As one of three strong divisions of Georg Fischer AG, GF Casting Solutions plays a leading role in the development and series production and connects 4600 employees at 14 sites worldwide.



Profile of GF Machining Solutions

GF Machining Solutions is the world's leading provider of machine tools, diverse technical solutions and services to manufacturers of precision molds and tooling and of tight-tolerance, precision-machined components. The key segments we serve include the aerospace, automotive, medical, energy, information and communications technology (ICT) and electronics industries. Our extensive portfolio ranges from Electrical Discharge Machining (EDM) solutions, three- and five-axis Milling machines and Spindles, 3D Laser texturing machines, Additive Manufacturing and machines for Laser micromachining to solutions for Tooling, Automation, Software and Digitalization—all backed by unrivaled Customer Services and support. GF Machining Solutions is a globally acting Division of the Georg Fischer Group (Switzerland) and maintains a presence at 50 locations worldwide. Its 3,394 employees generated sales of CHF 1,066 million in 2018. More information can be found at www.gfms.com



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