New AgieCharmilles CUT AM 500 supports 3D printing as a fast way of separating 3D-printed metal parts from the build plate while preserving part integrity

Wire-cutting Electrical Discharge Machining (EDM) is a mature technology, but GF Machining Solutions continues to push the limits of EDM and the unique new AgieCharmilles CUT AM 500 horizontal, fast wire EDM solution proves it. This fast, precise and Automation-ready machine is dedicated to metal Additive Manufacturing (AM), making it easy to separate additively manufactured metal parts from the build plate while maintaining geometrical accuracy and ensuring assembly readiness.

The universal AgieCharmilles CUT AM 500—based on GF Machining Solutions’ more than 65 years of legendary EDM expertise—makes a significant contribution to the AM process: It is a fast, precise, affordable and Automation-ready alternative to using standard EDM or a bandsaw to separate additively manufactured parts from the build plate. The CUT AM 500 is the perfect complement to GF Machining Solutions’ and 3D Systems’ scalable, workflow-optimized DMP Factory 500, DMP Flex 350 and DMP Factory 350 3D metal printing solutions.

The CUT AM 500 resolves a number of quality barriers encountered by manufacturers who use a bandsaw to separate the workpiece from the build plate. These barriers include geometrical inaccuracy, loss of workpiece material (kerf) and damage to the part. The CUT AM 500 maintains the integrity of the part by avoiding part contamination and damage, an advantage that is particularly crucial in risk-averse sectors such as aerospace and medtech.

A robust process
Accommodating parts up to 510 x 510 x 510 mm (including the base plate) and up to 500 kg in weight, the CUT AM 500 uses 0.2 mm diameter wire to separate additively manufactured parts from the build platform at a maximum cutting speed of 300 mm²/m. It delivers ±0.1 mm accuracy and surface roughness of less than 6 µm. This solution brings together horizontal wire orientation, an integrated basket to catch separated parts and a rotary axis to create a robust process supporting the part, easy part handling, prevention of damage to the part, and full Automation readiness.

Fast separation process, low running costs
The CUT AM 500’s fast wire technology in combination with the machine’s generator ensures the fastest EDM process—at least three times faster than standard EDM—and the most reliable separation of additively manufactured parts with specific support structures. Low
running costs are enabled by the machine’s fast wire technology and double wire spool concept.

**Automation ready**
The layout of the CUT AM 500 is designed to accommodate integration of a clamping system for easier clamping and referencing. As AM becomes a mass production manufacturing technology, automated AM processes will be needed. GF Machining Solutions, with its System 3R unit specializing in Tooling, Automation and Software, has the in-house expertise to drive manufacturers’ success in AM.

Hall 27, Stand B26 at EMO Hannover 2019 is the place to discover the CUT AM 500, a solution wholly aligned with GF Machining Solutions’ exhibition theme, “Connected to your needs.”

**More information:**

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Picture caption:
GF Machining Solutions’ AgieCharmilles CUT AM 500 brings speed, low running costs, part integrity and Automation readiness to the separation of 3D printed metal parts.

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](http://www.gfms.com)