

Media Release

Biel, Switzerland
July 2023

GF Machining Solutions launches new CUT F series

With the perfect balance of precision and productivity in mind, GF Machining Solutions launches the first model of its new CUT F series of wire-cutting electrical discharge (EDM) machines.

Stemming from over 100 years of EDM experience, the company's new AgieCharmilles CUT F 350/600 is designed for ease of use and flexibility thanks to many of the company's most innovative technologies. These include the Uniqua control, ISPS and iWire functions and RFID Smart Wire system along with design enhancements for thermal stabilization and fine laser correction for better precision.

The CUT F 350/600's intuitive Uniqua human/machine interface (HMI) delivers optimal functionality and ergonomics with a 19" vertical touchscreen, full keyboard and mouse. For the utmost compatibility, Uniqua supports legacy file types from various EDM manufacturers, and with offline and at-the-machine programming, ISO-based functionality and object-oriented programming, Uniqua provides a powerful graphic tool with integrated CAM that also ensures compatibility with major CAD/CAM programs.

The iWire function, a true innovation for the industry, of the CUT F 600 automatically identifies and adapts wire speed to changing erosion height conditions during the wire-cutting EDM process. This capability eliminates wire breakage while reducing overall wire consumption per job, in some instances by as much as 29%. The iWire function works in tandem with the company's Intelligent Spark Protection System (ISPS).

SparkTrack can recognize exactly where the sparks of wire-cutting EDM are happening during the process. Additionally, it can measure and identify the position of each spark along the length of an EDM's wire. Knowing the exact location of the spark allows the system to optimize the cutting height, which automatically adapts the wire feed speed accordingly. Such capability reduces the chances of wire breakage during unattended operations when machining parts with steps and other features that vary the erosion height – the length of the actual surface areas where the wire is eroding/cutting. Also available with the CUT F series machines is the SMART wire technology. This system reads wire characteristics through RFID chip on the spool as well as other traceability-related data.

For increased machine pitch accuracy, precision, reliability and overall process stability, the CUT F machines feature several enhanced design elements, one of which is thermal stabilization of axis optical encoders. The other design change is the incorporation of higher-grade ball screws that improve both positioning accuracy and lifetime.

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The CUT F series is a flexible tool that takes advantage of its high positioning accuracy and performant generator with Spark Track options.



High surface quality on medical instruments can be achieved thanks to the dedicated process programming of the CUT F.

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The ISPS feature helps to avoid wire breakage when machining parts with varying heights.

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Profile of GF Machining Solutions

GF Machining Solutions is one of the world's leading providers of complete solutions for precision components and tools manufacturers and the mold-making industry. The portfolio includes milling, EDM, laser texturing, laser micromachining, and additive manufacturing machines. Additionally, the division offers spindles, automation, tooling, and digitalized solutions backed by unrivaled customer services and support. With its solutions, the division advances energy-efficient and clean manufacturing. GF Machining Solutions is a globally acting Division of the Georg Fischer Group (Switzerland) and maintains a presence at 50 locations worldwide. Its 3,398 employees generated sales of CHF 948 million in 2022. More information can be found at www.gfms.com.

