

Media Release

Biel, Switzerland
July 2022

GF Machining Solutions redesigns the high-performance Milling machine Mikron MILL P 800 U and launches the Mikron MILL P 800 U S for higher productivity

GF Machining Solutions follows market trends and answers to customers' challenges by redesigning the established high-performance five-axis milling machine Mikron MILL P 800 U and creating the Mikron MILL P 800 U S, a compact and ready-for-automation machine that delivers intelligent productivity.

There is a clear market trend towards automation. Customers are looking for the best automation solution while thinking of a reduced footprint to increase the production per square meter. This is especially the case for competitive industries like aerospace and automotive, where the demand for aircraft and electrical vehicles continues to outstrip the supply of manufacturing. At the same time, manufacturers need to keep an eye on the production, and it is becoming increasingly important to track and improve the output of the workshop.

Based on these requirements, GF Machining Solutions has decided to redesign the well-established Mikron MILL P 800 U and to create the new high-performance milling machine Mikron MILL P 800 U S with the same performance and reliability. The access to the machine has been considerably improved by making it more accessible from the back by shortening the space between the table and the robot. The better connectivity between the machine and the robot makes the MILL P 800 U S a state-of-the-art solution with a compact layout, even with multiple machines.

The MILL P 800 U S, which can be equipped with a Heidenhain TNC 640 or a Siemens Sinumerik control, delivers a high material removal rate thanks to its symmetrical gantry design that ensures stiffness and robustness, and to the 20,000 rpm Step-Tec Spindle of 36kW and 120Nm. The main water-cooled heat sources inside the MILL P 800 U S secure a long milling process and make the machine suitable for heavy roughing and finishing.

As part of GF Machining Solutions' DNA, the MILL P 800 U S is a high dynamic milling machine (with an acceleration of 1.7g). This is made possible by its standard specification (with a rapid axis traverse of 61m/min and an axis acceleration of 10m/s²) and the support on both table sides of direct (swiveling and rotary) torque motors. These ensure precision and accuracy, even during dynamic milling, and guarantee an unattended, risk-free process 24/7 thanks to the smart machine module called Machine Spindle Protection (MSP). With the MSP, even if a crash occurs during the milling process, neither the spindle nor the machine are damaged and the milling process can restart immediately.

The combination of the performance and the compact automation layout in the MILL P 800 U S makes this new machine unique in the market. It can easily be connected to a robot and the scalability of the machine with automation is limitless because of the possibility to add a second, a third or even more machines of the same type into the robot cell. This

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allows to always keeping the best machine ergonomic and accessibility for the machine's set up or maintenance when needed.

All machines in the MILL P 800 U range are rConnect ready. This central communications platform enables manufacturers to maximize their productivity and their control over production. Live Remote Assistance (LRA), process improvement modules, predictive maintenance and machine monitoring enhance the machine uptime and add more flexibility on the shop floor. LRA allows for customer-authorized remote assistance via real-time connection of machines to GF Machining Solutions. With LRA, the manufacturer using the system or a GF Machining Solutions technician can conduct remote diagnostics and inspections.

The MILL P 800 U S will be offered to customers as part of a complete newly designed service package, which comprises full support with one supplier for the whole cell including automation. On top of that, they will receive extra support hours, quick access to experts to get the machine on track up to 12 times faster, remote support backed by the latest digital technologies and advanced diagnostics on the spindle and the robot's motions. Furthermore, customers can expect a worldwide spindle exchange service within 24 hours, as well as original parts and upgrade to the latest software, which reduces downtime significantly.



Mikron MILL P 800 U



Mikron MILL P 800 U S

The Mikron MILL P 800 U S with a more compact footprint compared to the MILL P 800 U makes it a better solution for automation needs.

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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 3,282 employees generated sales of CHF 873 million in 2021. More information can be found at www.gfms.com.

