

A New Addition to the Successful FMU+ Series

The FMU 100+, for wire thicknesses up to 10 mm, will make its debut at wire & Tube Düsseldorf

The FMU+ series from WAFIOS is world-renowned for its flexible production technology for torsion, extension and extended loop springs. The new FMU 100+ is capable of bending, winding and coiling wires with a diameter of 10 mm, while the optional integrated Kuka robot facilitates component handling. The machine will make its debut at wire & Tube Düsseldorf.

The FMU 100+ can be used to produce springs and bent parts for all kinds of industries, from agriculture and white goods to mechanical/plant engineering and the automotive sector. The torsion spring machine is part of the well-known FMU+ series (from 0.2 to 10 mm). In response to high demand, it is expanding the product line for customized production in the upper working range .

The FMU 100+ allows for precise bending of high-strength spring steel wire in a diameter range of 4.1 mm to 10 mm. The versatility of this winding, coiling and bending machine is evident even in the basic version, which has nine highly dynamic, energy-efficient CNC axes. The modular machine setup allows for an expanded configuration with up to 24 CNC axes, thus fulfilling even the most demanding of production requirements. Almost any type of spring can be produced thanks to the wide range of available options.

3D bending technology for new applications

The FMU 100+ is particularly well suited to manufacturing torsion springs, extension springs and bent parts. It can, for example, be used to produce spring tines for agricultural equipment. The 3D CNC bending technology of the FMU 100+ makes it easy to manufacture different workpiece geometries without having to change tools. Thanks to the innovative tool solutions developed by our experts, the machine can be used to produce highly sophisticated geometries or special components. Furthermore, users are also able to use tools from other FMU+ models on the FMU 100+.

The clearly structured input screen on the multi-touch monitor allows users to input geometry data, assign tools and carry out a feasibility check prior to starting production. It reduces the setup time for new programs.

Optimized spring production with intelligent simulation

The *iQspring+* program saves material and prevents collisions at the same time. A digital twin can be used to check and optimize the sequence before production starts. This means that collisions can be detected in the simulation – without breaking any tools or damaging the machine axes. In the event of a collision, the software automatically identifies alternative sequences and then outputs the maximum number of pieces for each variant. This allows the setup work for complex parts to be carried out quickly, and also reduces the amount of material required for setting up the process. The software automatically optimizes unnecessary axis travels on the basis of the simulation, thus increasing the output rate during operation.

The energy efficiency system allows individual drives to be switched off if necessary. This means that, if assemblies such as rotary units are not required, the user can park them safely on the machine to save space.

Enhanced safety with the FMU+ series: all servo motors are designed as “safe axes”. When protective devices are open, the machine retains the position of all axes even after being powered down. The reduced speed allows the operator to set up the program and process sequences during safe operation.

EasyRobot allows easy pick-and-place processes

EasyRobot is integrated into the machine control for even easier component handling, with the component program and the robot program being merged together. Integration into the WAFIOS programming system WPS 3.2 EasyWay eliminates the separate and extremely time-consuming setup process for the robot and means that operators do not require specific programming knowledge or training. All pick-and-place processes are implemented in one application to save time, and the robot axes can be moved conveniently using the machine’s hand-held operating device. In addition to the ready-to-operate robot, the EasyRobot scope of delivery also encompasses all of the equipment, including the base, energy supply, collision protection and parallel gripper. The CE-compliant design ensures safe production operation.

Live at wire & Tube Düsseldorf

The FMU 100+ all-rounder will be showcased at wire Düsseldorf together with the fully integrated EasyRobot from April 15 to 19, 2024. Come and visit us at stands F22 and F40 in hall 10. You will also find WAFIOS AG at Tube in hall 5, stand A21/A22.

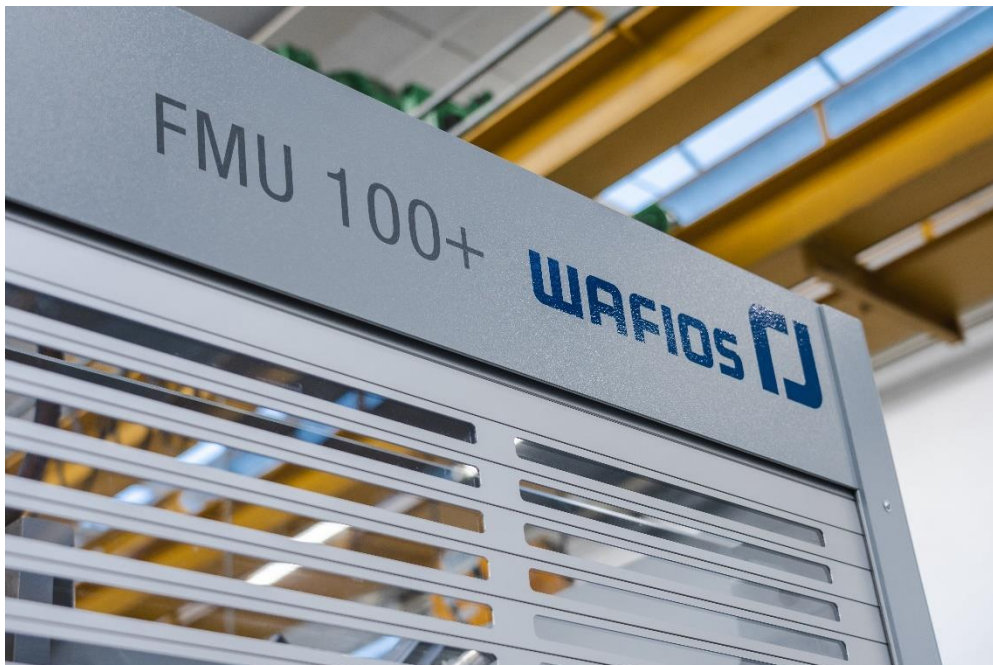


Fig. 1. The FMU 100+ will make its debut at wire Düsseldorf. Image: WAFIOS

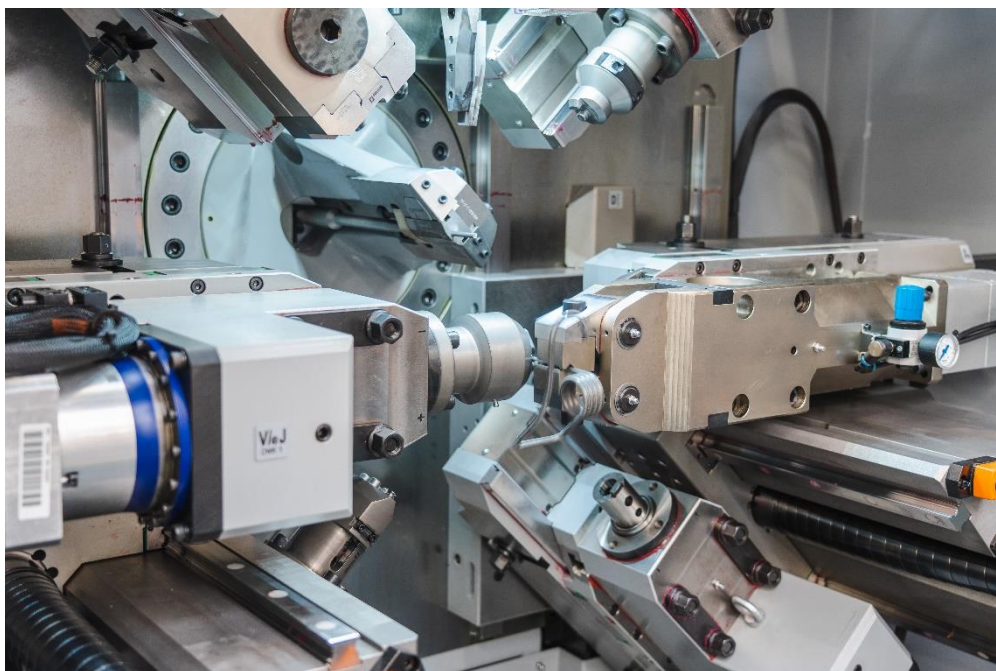


Fig. 2. Precise bending of spring steel wire with a thickness of 4.1 mm to 10 mm.
Image: WAFIOS



Fig. 3. The FMU 100+ is particularly well suited to manufacturing torsion springs,
extension springs and bent parts. Image: WAFIOS