

CNC Spring and Wire Forming System, Type FMU E
For the Production of Hairpins, I-Pins and
Stator Connection Assemblies from Flat Material

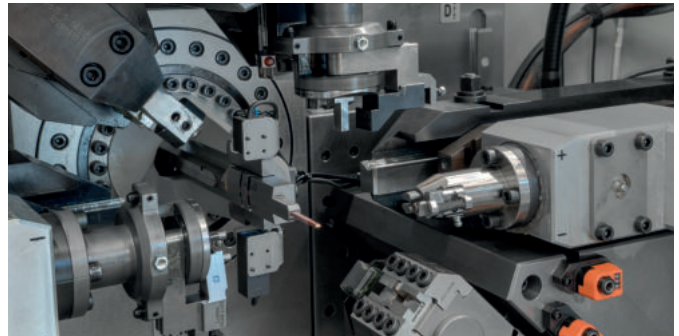
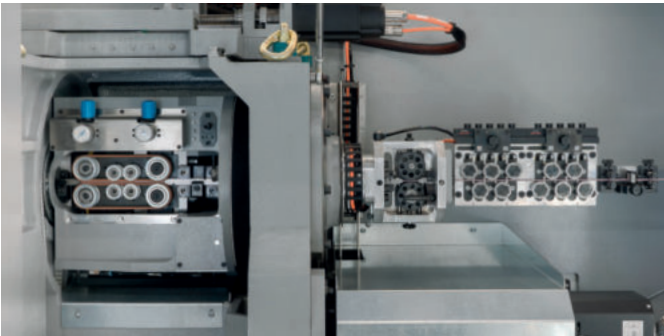


FMU E

FMU E

▼ Newly developed feed unit:
Belt feed, length measuring device and
roller straightening unit for profiled material

▼ Bending tools Type 10 and Type 5 particularly for flat material



Our Accomplishments for your Benefit

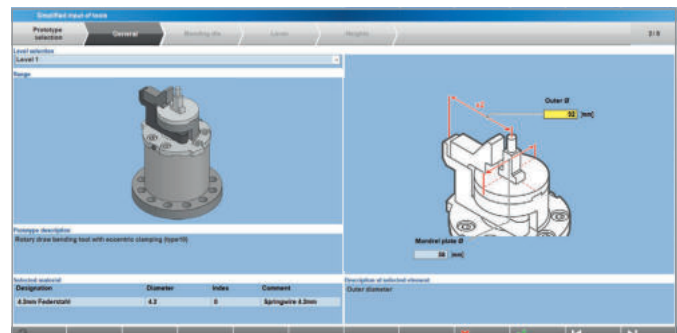
- The new FMU E series represents a unique machine concept for the production of hairpins and stator connection assemblies. It complements the successful FMU series in the electromobility sector.
- The WAFIOS tool system for hairpins combines active rotary-draw bending with the agility of conventional wire bending tools. It prevents the material from slipping and increases the quality of complicated geometries.
- The newly developed feed unit prevents deformations of the profiled material and enables - together with the tool system - the positioning of end legs.
- Our programming system WPS 3.2 EasyWay offers easy, geometrical programming and a clearly arranged overview of the materials and tools used.
- The FMU E series can be complemented by insulation stripping, burr-optimized cutting and chamfering modules.

Design Features

- The new tool design has been developed for the specific requirements of the e-mobility industry. It allows the production of complicated geometries while ensuring highest quality.
- The integrated length measuring device monitors the infeed length and guarantees dimensionally stable geometries
- The roller straightening unit enables the processing of flat material over the entire operating range without the need to change straightening rollers
- The pay-off unit for wire spools (SPT 2) ensures the smooth unwinding of material without that the material gets damaged, even when processing insulated materials

Operation

- Full HD multi-touch monitor (at least 21.5") for a better overview and gesture-based control
- User-friendly and quick set-up with hand-held operating device and touchscreen
- Reduced set-up times due to ergonomic access to all tool positions as well as simple and fast programming of tools, material parameters and bending programs with the WPS 3.2 EasyWay



► The guided input of tool data facilitates the set-up of bending tools

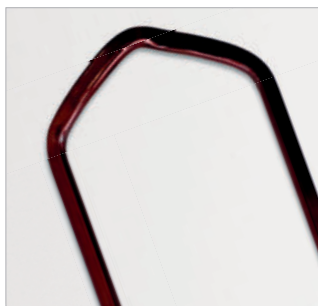
Powerful, Flexible, and Efficient – A New Kind of CNC Spring and Wire Forming System

Comprehensive support: From the design to large series production

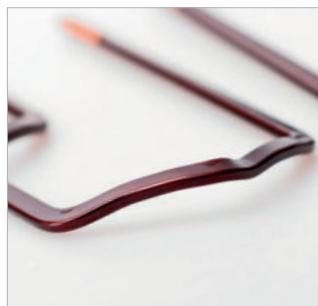
Besides the FMU E series for small series production, WAFIOS offers an indexed machinery system for the production of large series. The contract manufacture of hairpins as well as support in the construction and design of bent parts complete the range of services offered.



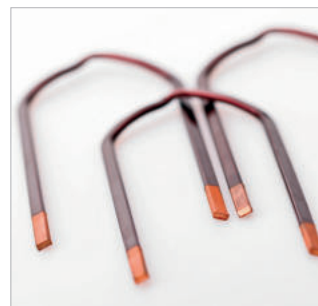
An integrated fiber laser enables clean surfaces and a good welding result.



The rotary wire advance feed is a unique development that guarantees 100% position control of the workpieces' leg positions.



The WAFIOS **Hairpin Tool System** allows the production of complex geometries and a surface-protecting handling of the insulated copper wire/flat material.



The in-process measurement and control of several geometry points enables a production free from errors.

Quality

For more than 125 years, the name of WAFIOS has been synonymous with highest quality, safety standards, and technical innovations in the German machine manufacturing industry.

Reliability

Strict quality controls, state-of-the-art production systems, and many years of experience guarantee that your investment is safe in our hands. Our global service network ensures high availability of WAFIOS machinery.

Cost efficiency

High production output and a long service life will save money and shorten the amortization time of your investment.

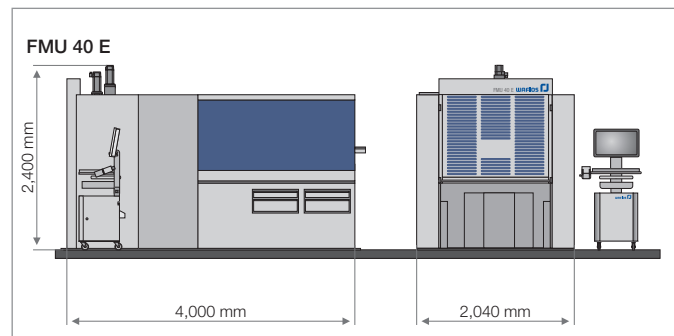
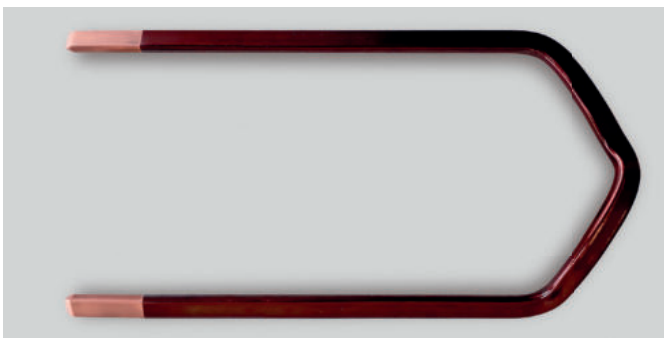
▼ User-friendly WAFIOS Programming System WPS 3.2 EasyWay including the programming of geometries and the visualization of bent parts



Technical Data
Tensile strength:
Cross section:
Thickness:
Width:
Bend-back clearance:
Stroke of vertical table:
Stroke of horizontal table:
Stroke of slide:
Dimensions: (w x h x l)
Weight without pay-off unit:
Upgradable to max. CNC axes

FMU 32 E
max. 400 N/mm ²
max. 20.25 mm ²
max. 4.5 mm
max. 8.0 mm
max. 250 mm
+70 mm / -120 mm
± 90 mm
95 mm
1,600 × 2,250 × 2,300 mm
ca. 3,600 kg
max. 24 axes

FMU 40 E
max. 400 N/mm ²
max. 30.25 mm ²
max. 5.5 mm
max. 10.0 mm
max. 450 mm
+55 mm / -175 mm
± 70 mm
130 mm
2,040 × 2,400 × 3,120 mm
ca. 5,900 kg
max. 24 axes



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Precision Machinery for Wire and Tube