

## CNC Spring and Wire Forming Systems for the Production of all Types of Springs

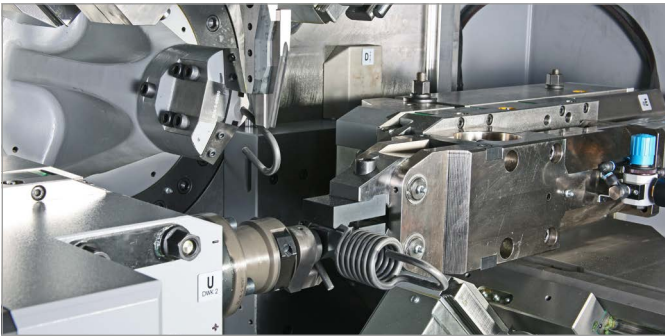


FMU 40+  
to  
FMU 100+

# FMU 40+ to FMU 80+

▼ Maximum flexibility thanks to a wide variety of tooling options

▼ New WPS 3.2 EasyWay with a simplified input of geometries for an easy programming of torsion springs



## Our Accomplishments for your Benefit

### ■ The „Plus“ for your production: The FMU machines of the latest generation for more performance and operating convenience

- New elements, such as the simulation of operating sequences and the enhanced geometry-based programming process, support the operator in setting up the machine.
- The 3-year license for *iQspring+* is included in the machines' standard equipment. It enables the simulation of the production process, automatic collision control and performance optimization.
- The new control platform represents a secure, future-oriented concept as a basis for smart solutions.
- The design of the FMU+ machine offers the greatest product diversity and a performance increase of up to 10% compared to the previous machine

### ■ Very high flexibility

- Variety of configurations for sliders, rotary units and other options - Different tool designs for coiling, winding and bending - Applications for the production of spring loops
- Production of a wide range of parts due to modular machine concept
- Quick retooling thanks to innovative tool solutions and individual arrangement of sliders and rotary units
- Ideal solution for small and medium-sized batches

### ■ High quality standards ensure zero-defect production

- Optical measuring systems are available (camera and laser)
- Advanced monitoring and control technology
- Evaluation of measured data by feedback from control system

## Design Features

### Machine structure:

- High-precision rotary feed unit
- Rotating wire guide for individually programmable cutting and wire-guiding direction
- Force-locked cutting unit attachment
- Full HD multi-touch monitor (at least 21.5") for a better overview and gesture-based control
- Reuse of some of the tools from previous models possible

### Coiling device:

- Standard equipment with 2-axes spring and wire forming device for coiling spring bodies
- 3-axes spring and wire forming device (option):
  - Possibility of eccentric displacement for coiling and winding spring bodies and carrying out bending operations
  - Coiling device is displaceable in longitudinal wire direction for carrying out highly complex bending operations and the possibility of working backwards

### CNC Linear unit (FMU 40+/50+):

- Increased output due to fewer subsequent operations
- Greater range of parts and higher output is possible

# Versatile, Powerful and Reliable - WAFIOS FMU Spring and Wire Forming Systems

## Masters of Flexibility and Productivity

Designed for the production of torsion, extension and extended loop springs as well as bent parts, the WAFIOS FMU+ series opens up a host of new options for the spring industry.

The tool carriers can be freely moved in different dimensions to unlock completely new design concepts for the production of parts, including simple or even highly complicated torsion springs and bent parts, double torsion springs with inner or outer spring bodies and extended loop springs even with tight spring indices.

The machines are characterized by quick set-up times thanks to the speed and ease with which the parts can be changed and the corresponding tool settings can be adjusted.

Additional equipment like laser sensors and optical measuring systems for quality assurance and production monitoring can also be integrated. It is also possible to upgrade the machine with multiple-station bending systems, pick-and-place transport systems and WAFIOS Teleservice for remote software support and diagnostic support.

## Quality

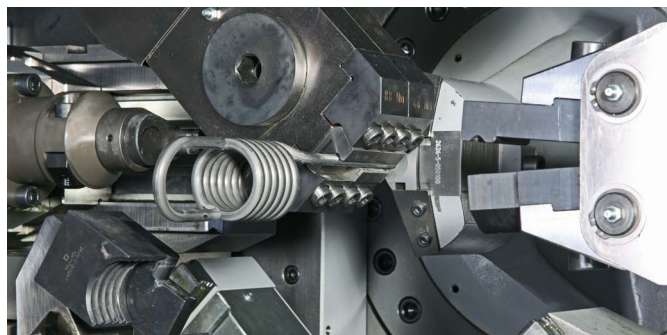
For more than 130 years, the name of WAFIOS has been synonymous with highest quality, safety standards, and technical innovations in the German machine manufacturing industry.

## 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.



■ Force-locked cutting unit attachment

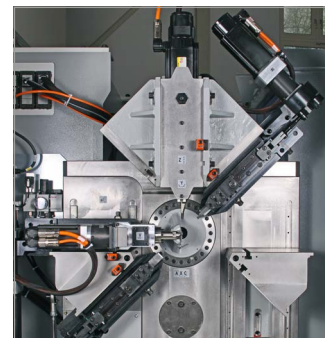
▼ FMU 40+ (Standard)



▼ FMU 40+ with protective roll-up door on the side (option)

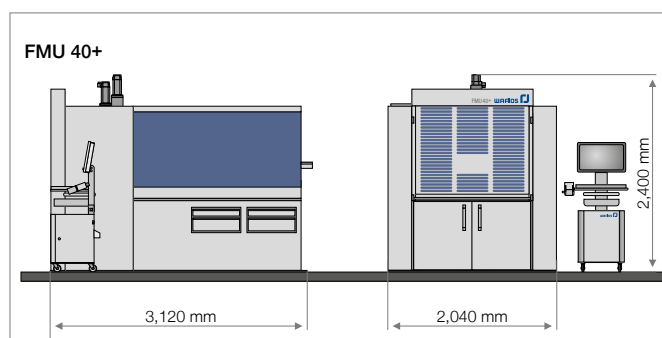


▲ Optical measuring system



▲ 2-Axis spring and wire forming device FMU 25

Technical Data	FMU 40+	FMU 50+	FMU 65+	FMU 80+	FMU 100+
Wire Ø: [mm] (according to DIN EN 10270)	1.8 – 4.0	1.8 – 5.0	2.8 – 6.5	2.8 – 8.0	4,0 – 10,0
Feed rate: [m/min]	max. 80	max. 80	max. 70	max. 70	max. 65
Bend-back clearance: [mm]	max. 200	max. 200	max. 320	max. 320	max. 320
Travel, vertical: [mm]	+55 / –175	+55 / –175	+55 / –175	+55 / –175	+55 / –175
Travel, horizontal table (option): [mm]	±70	±70	±100	±100	±100
Travel, axial table (option): [mm]	260	260	340	340	–
Travel, linear unit: [mm]	750	750	–	–	–
Travel, slider: [mm]	130	130	200	200	200
Dimensions: (l × w × h) [mm]	3,400 × 2,050 × 2,500	3,400 × 2,050 × 2,500	4,200 × 2,150 × 2,900	4,200 × 2,150 × 2,900	4,200 × 2,300 × 3,100
Weight without pay-off unit: [kg]	ca. 5,900	ca. 6,000	ca. 6,200	ca. 6,300	ca. 6,500
Upgradable to max. no. of CNC axes	24	24	24	24	24



## WAFIOS AG

Silberburgstraße 5  
72764 Reutlingen, Germany  
Phone +49 7121 146-0  
Fax +49 7121 146-250  
sales@wafios.de  
www.wafios.com

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