

Universal Bending and Coiling Machine for the Production of Spiral Springs and Bent Parts made of Strip Material

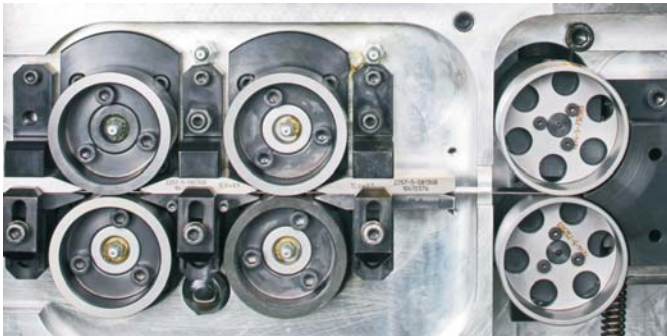


SPM 2F

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▼ Newly designed advance feed of strip material and slip control (Option)

▼ Bending slides with tool support



Our Accomplishments for your Benefit

- Highest output with optimized unit costs
- Reduction of total cost of ownership
- Highest quality standards

Design Features

Machine Structure

- Standard equipment with 5 CNC axes (roller feed / unclamping of rollers / 3 bending slides)
- Vertical machine structure
- Welded body and switch cabinet
- Infeed via two smooth roller pairs with control for advance feed of strip material, contact pressure and height adjustment (option)
- Bending unit accessible from the front
- Slide attached to front plate
- Innovative, ergonomic machine design
- Upgradeable to 17 CNC axes max.
- Hand-held operating device for axis movements, override, motors
- Detection of end of strip material by sensor
- CNC die cutter for greater range of parts (option)
- Tools with cassette-guiding system can be used for the production of bent parts

Control System

- New version of the reliable control software WAFIOS WPS 3.2 EasyCam
- Clear and simple menu navigation for convenient operation via touch screen (option)
- Programming of production sequences by means of electronic cams
- Axis movements can be “electronically merged”

▼ Tool room with cassette-guiding system, die cutter and slip control



Quality, Reliability and Efficiency – WAFIOS Universal Bending & Coiling Machine SPM 2F

New Definition of Productivity

The standard machine SPM 2F can be upgraded for the production of spiral springs with sequential bends using the coiling technique, or for the production of bent parts using tools with a cassette-guiding system. It manufactures mostly semi-finished products from strip material. Round wire may be processed as well after thorough examination.

As an option, the roller feed unit may be equipped with a program-controlled height axis. Therefore, the strip material can be lead tangentially from the edge of the strip material guides to the coiling unit during the coiling process.

The coiling unit of the machine has two programmable axes for the number of spring body coils as well as for the displacement of the coiling mandrel in axial direction. When producing bent parts, the coiling unit may be replaced with up to two slides from the back, for retracting stationary bending mandrels and/or ejecting finished parts.

The up to eight bending slides are mounted in the shape of a star around the core of the machine on the front plate. They can be arranged in arc-shaped grooves at any angle on the front plate. Due to the program-controlled movements, holding and support movements as well as cutting processes can be carried out with form-giving tools.

Quality

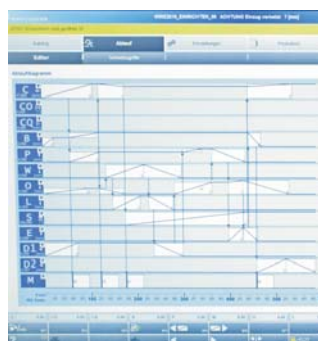
For more than 120 years, the name of WAFIOS has been synonymous with highest quality, safety standards, and technical innovations in the German machine manufacturing industry.

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.



▲ Operating software WPS 3.2 EasyCam, enhancement for sequence programming with electronic cams

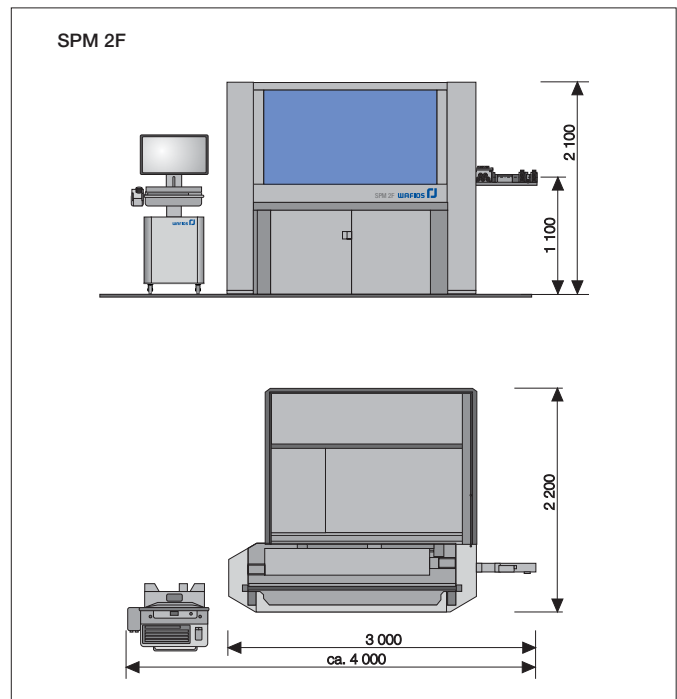


▲ Ejection control with laser



▲ Straightener with Strip material guide and end-of-strip-material control

Technical Data	SPM 2F
Spring strip: Max. cross section A_{\max} Max. strip material height h_{\max} Max. strip material thickness t_{\max}	6.5 mm ² 20.0 mm 1.5 mm
Tensile strength max.	1,800 N/mm ²
CNC axes max.	17
Feed axis speed	max. 80 m/min.
Output max.	125 St./min
Dimensions l x w x h mm	3,000 x 2,200 x 2,100
Weight	appr. 4,500 kg
Energy	appr. 9.5 kW



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