

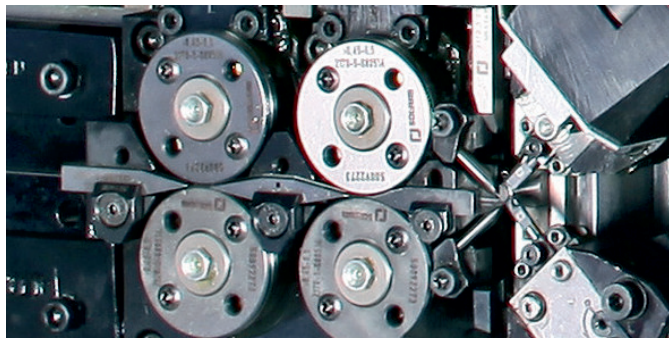
CNC Spring Coiling Machine with Multi-Cut System and PTP Coiling Finger for the Production of Compression Springs



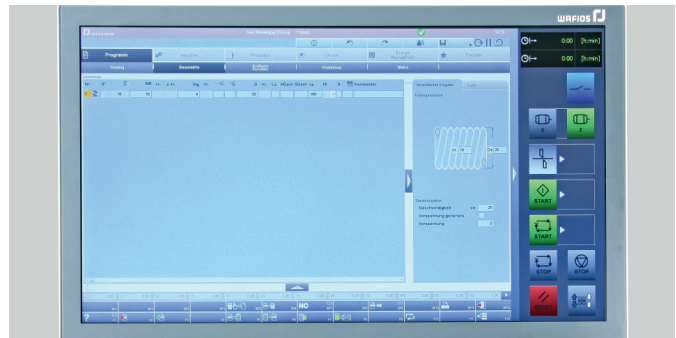
FUL 16+

FUL 16+

▼ 2 Pairs of feed rollers (option)



▼ WAFIOS Programming System WPS 3.2 EasyWay



Our Accomplishments for your Benefit

- **High output rate, high flexibility**
 - Fast machine concept due to high infeed speed, increased acceleration values of axes and very short cutting times
 - Most different cut varieties available
 - High variety of extra options
- **Future-oriented machine concept**
 - Latest drive and control technology
 - Modular machine concept, innovative tool solutions
- **Comfortable programming system WPS 3.2 EasyWay increases machine availability**
 - Programming of geometry for simplified spring data input
 - Manual adjustment additional to spring programme storable
- **High quality standards ensure a zero error production**
 - Visual measuring of the product with subsequent regulation
 - Sorting possibility by fast sorting guides
 - **iQcontrol** for „in-process“ measuring and regulation
 - Further process monitoring systems e.g. slip control and colour mark detection

- PTP coiling finger for initial tension control (option)
- Coiling pin holder with additional fine adjustment
- Increased output due to new "optimized 2" cut

Programming

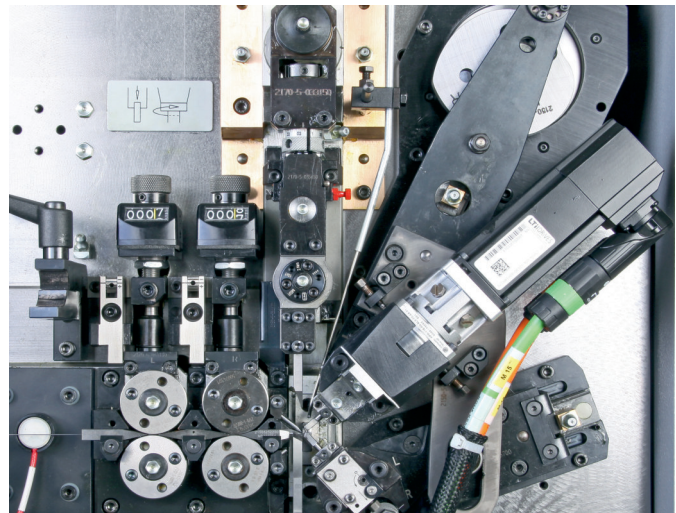
- Convenient operation via touch screen and gesture-based control
- Camera measuring system for measuring and regulating the spring length and the outer spring diameter (option)
- Sorting chute for fast, reliable spring classification
- Sensors also available for unmanned process monitoring
- Graphical spring correction

Konstruktionsmerkmale

Structure of machine

- Standard machine with 7 CNC axes (8 CNC axes max.)
- Direct drive on infeed, form axis, and cut for improved accuracy and production rate
- Powerful infeed with 1 pair of feed rollers (optionally 2 pairs)
- Servomotor-driven mandrel height adjustment and mandrel displacement
- Vertical pitch and parallel pitch
- Robust cutting unit with rotary and straight cut

▼ Tool area with PTP-Finger



Modularity, Precision, and Efficiency - WAFIOS FUL 16+ Spring Coiling Machine

Flexibility at its Peak

Designed for producing high-precision compression springs within the small wire diameter range, the WAFIOS FUL 16+ represents the efficient alternative for producing all standard compression springs.

Fast, easy cut type changes using the multi-cut system give users more flexibility and operating convenience.

Set new standards of quality with the new PTP coiling finger.

Shorter set-up times thanks to fast, precise tool settings made with comprehensive CNC control technology.

The machine's smaller footprint means it takes up less space compared with other machines in this operating range, allowing it to be handled more easily and enabling its integration into existing production lines, for instance, without any difficulty.

Excellent accessibility from all sides ensures easier maintenance and machine handling, and in a new feature, the entire slide together with the drive unit can be moved easily when the coiling direction is changed from right to left.



▲ Conical spring produced without PTP coiling finger



▲ Conical spring produced with PTP coiling finger

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

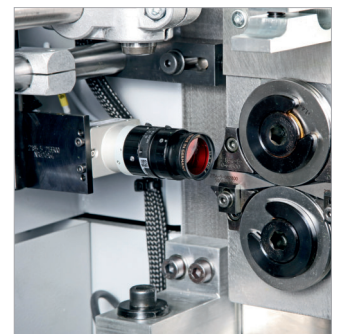
Strict quality controls, state-of-the-art production systems, and many years of experience guarantee that your investment is safe in our hands. Our global service network ensures high availability of WAFIOS machinery.

Cost efficiency

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

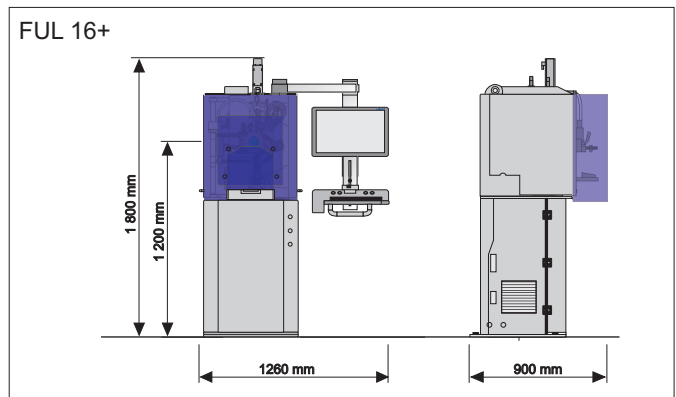


▲ WAFIOS Programming System WPS 3.2 EasyWay with WWS and iQcontrol



▲ WAFIOS Vision System (WVS)

Technical Data	FUL 16+
Wire diameter: (With one pairs of feed rollers)	0.12 - 0.6 (Wm > 6) RM 2,600 N/mm ²
Wire diameter: (With two pairs of feed rollers)	0.12 - 0.8 (Wm > 4) RM 2,300 N/mm ²
Outer spring diameter: (max.)	20 mm
Feed speed: (max.)	260 m/min.
Output:	1 500 Springs/min.
Dimensions: w x d x h mm	900 x 900 x 1,700
Weight:	700 kg



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Precision Machinery for Wire and Tube