CNC Spring Coiling Machines with Multi-Cut System, 3D-Former and PTP Coiling Finger for the Production of Tension / Torsion Springs and Compression Spring Bodies

Series
FUL 25-75
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FUL 25-75

Design Features

Machine Structure
- High-precision feed with two to four pairs of feed rollers
- Increased feed speed of up to 150 m/min
- Programmable CNC mandrel displacement and mandrel height adjustment
- Programmable parallel and vertical pitch
- Maximum upgrade level: 12 CNC axes

Cutting System
- Multi-cut system for straight / rotary / torsion and flying cut
- Simple design of mechanical systems for quick changeover of cutting type in the space of just a few minutes
- Individually programmable cutting speed

Coiling Device
- Rigid shape device with a 2-axes system and simple mechanical design for quick changeover from left to right-handed coiling
- 2 additional optional CNC axes for user-friendly and simple changeover from left- to right-handed coiling at the push of a button

PTP Coiling Finger
- Individually programmable positioning of the coiling finger enables the adjustment of the different initial-tension conditions during the spring production cycle
- PTP coiling fingers available for the upper and lower slide

3D-Former
- For the production of torsion springs with additional bends at tangential legs
- Conversion of FUL line into high-speed torsion spring coiler

Programming
- User-friendly programming of complicated spring geometries and CNC processes thanks to the tried and tested WPS 3 programming system
- Simple, program-assisted tool configuration

Quality control
- Camera measuring system for measurement and control of the spring length and the outer spring diameter
- Servo-controlled three-way sorting chute for fast and reliable classification of springs
- Sensor systems also available for unmanned monitoring
Universal, Powerful and Profitable – WAFIOS FUL Series of Spring Coiling Machines

**Redefining Productivity**

Designed for the production of accurate, low-tolerance tension and compression spring bodies with highest output rates thanks to groundbreaking new design features.

Fast and easy changeover of cutting types with the aid of the new multi-cut system from WAFIOS. Offers users even greater flexibility and user-friendliness.

The new PTP coiling finger helps to define new quality standards. Universal production possibilities with the 3D-former - also for the production of different torsion spring types.

Shorter setup times thanks to fast and accurate tool adjustments are made possible by the comprehensive CNC control technology.

**Quality**

For more than 100 years the name WAFIOS has stood for the highest in terms of quality expectations, safety standards and technical innovation in German manufacturing systems engineering.

**Reliability**

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

**Efficiency**

High production output and a long service life will save money and shorten the amortization time of your investment.
<table>
<thead>
<tr>
<th>Technical Data</th>
<th>FUL 25</th>
<th>FUL 35</th>
<th>FUL 75</th>
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</thead>
<tbody>
<tr>
<td>Feed roller pairs</td>
<td>2</td>
<td>2</td>
<td>3 or 4*</td>
</tr>
<tr>
<td>Wire dia. (RM 2,000 N/mm²)</td>
<td>0.35 -1.6 (Wm &gt; 4)</td>
<td>0.7 - 3.0 (Wm &gt; 4)</td>
<td>2.1 - 7.0 (Wm &gt; 5)</td>
</tr>
<tr>
<td>Wire dia. 3D-former</td>
<td>0.35 -1.3 (Wm &gt; 6)</td>
<td>0.7 - 2.5 (Wm &gt; 6)</td>
<td>2.1 - 5.5 (Wm &gt; 6)</td>
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<tr>
<td>Outer spring diameter</td>
<td>max. 30 mm</td>
<td>max. 45 mm</td>
<td>max. 110 mm</td>
</tr>
<tr>
<td>Feed speed</td>
<td>max. 150 m/min.</td>
<td>max. 150 m/min.</td>
<td>max. 120 m/min.</td>
</tr>
<tr>
<td>Non-cylindric (shaped) spring diameter difference</td>
<td>max. 15 mm</td>
<td>max. 25 mm</td>
<td>max. 45 mm</td>
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<tr>
<td>Max. output</td>
<td>600 Springs/min.</td>
<td>500 Springs/min.</td>
<td>250 Springs/min.</td>
</tr>
<tr>
<td></td>
<td>1,000 Rings/min.</td>
<td>800 Rings/min.</td>
<td>500 Rings/min.</td>
</tr>
<tr>
<td>Dimensions w x d x h mm</td>
<td>1,400x1,950x1,850</td>
<td>1,630x2,200x2,100</td>
<td>2,450x3,200x2,400</td>
</tr>
<tr>
<td>Weight</td>
<td>ca. 1,200 kg</td>
<td>ca. 1,800 kg</td>
<td>ca. 7,900 kg</td>
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</table>

*Option

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Precision Machinery for Wire and Tube

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