Electronic Spring Coiling Machine for the Production of Compression Springs

Series FSE
Design Features

Machine Structure
- Clear machine structure
- State-of-the-art machine drive with 6 - 8 CNC axes
- Powerful wire feed
- Rigid 2-finger coiling unit for minimum production tolerances
- Robust cutting unit for straight cut and torsion cut
- High production output
- Simple maintenance and repairs
- PTP Coiling finger for FSE 15, 93 and 143

Short Tool Change and Setup Time
- Easy tool access
- Fast changeover from left- to right-handed coils
- Intuitive machine controls with touch screen control panel

Software
- User-friendly and easy-to-learn operating software
- Simplified spring input for shortest setup times
- SPC evaluation enables verification of a zero reject rate in production
- Capacitative spring length measuring device
- Optional measuring camera
Quality, Reliability and Efficiency –
WAFIOS FSE Spring Coiling Machines

Redefining Productivity
Designed for the production of compression springs, the WAFIOS FSE range offers a cost-optimized solution for manufacturing all standard types of compression springs, and has so far provided a reliable and tried-and-tested service to hundreds of satisfied customers all around the world.

The reliability of the machines ensures smooth and trouble-free production – not only because any standstill time is reduced to a minimum, but also thanks to the high repetition accuracy which delivers perfect production results time after time.

With easy setup and straightforward handling, tool change and setup time is minimized and machine availability is increased to its full potential.

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>FSE 15</th>
<th>FSE 93</th>
<th>FSE 143</th>
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<tbody>
<tr>
<td>Wire dia.</td>
<td>0.12 - 0.6 mm</td>
<td>5.1 - 12.0 mm</td>
<td>6.1 - 16.0 mm</td>
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<tr>
<td>Spring dia. (max.)</td>
<td>20 mm</td>
<td>220 mm</td>
<td>240 mm</td>
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<tr>
<td>Feed speed (max.)</td>
<td>150 m/min.</td>
<td>80 m/min.</td>
<td>70 m/min.</td>
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<tr>
<td>Springs, units/min. (max.)</td>
<td>750</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Rings, pcs/min. (max.)</td>
<td>800</td>
<td>---</td>
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<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l x w x h mm</td>
<td>900 x 900 x 1,700</td>
<td>3,400 x 3,200 x 2,700</td>
<td>3,200 x 3,500 x 2,700</td>
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<tr>
<td>Weight</td>
<td>ca. 700 kg</td>
<td>ca.13,000 kg</td>
<td>ca.18,000 kg</td>
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<tr>
<td>Rm [N/mm²]</td>
<td>2,600 N/mm²</td>
<td>Ø 10 mm 2,200 N/mm²</td>
<td>Ø 14 mm 1,800 N/mm²</td>
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<tr>
<td></td>
<td>Ø 12 mm 1,800 N/mm²</td>
<td>Ø 16 mm 1,400 N/mm²</td>
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