

## Ring Coiling Machine for the Manufacture of Rings and Wave Springs from Profiled Wire

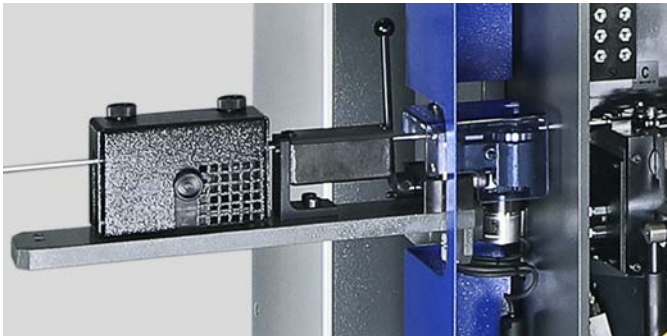


SNA 16–36

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▼ Infeed-/guide roller unit, wire cleaning device and slip control

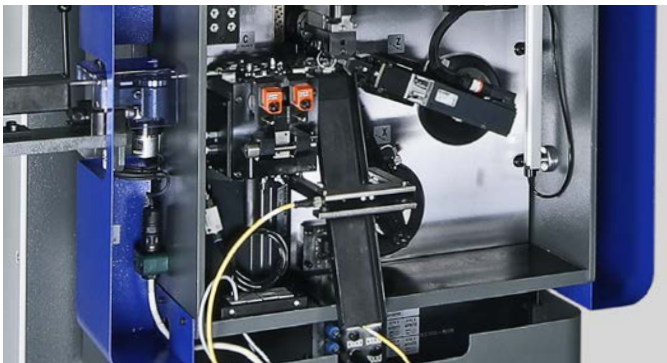
▼ Cutting unit and pitch device



## Our Accomplishments for your Benefit

- **Optimized unit costs due to an increased production output and availability ensure high efficiency**
- **Exceptional variety of parts, production of rings and wave springs of the most diverse geometries and even the smallest diameters**
  - Cutting position can be selected based on product requirements
  - Programmable height and course of waves
  - A wave shape other than the sinusoidal shape can be programmed
- **High operating convenience with a simplified and optimized set-up and an increased machine availability**
  - High-end control WPS 3.2 EasyWay
  - integrated shearing cut (SNA 16)
  - repeatability of all settings as exchangeable magazine can be changed as a whole
  - central nut for clamping rollers
  - production monitoring via laser
  - tools made of tungsten carbide
- **Innovative and modern machine design**

▼ Good ergonomics and accessibility



## Design Features

Mechanical system:

- Reliable technology of the SNA series with more than one decade of WAFIOS expertise in the production of rings and wave springs
- The shearing or shaping cut enable customized cut-offs, an adjustable cutting position based on the machine size and the possibility to influence the cutting burr
- The new machine design facilitates set-up and accessibility
- The two feed roller pairs are directly driven
- Optional CNC pitch device for the production of wave springs that feature different wave heights
- Ejection and slip control ensure an effective production
- Guide rollers can be changed by changing the entire unit. This enables a preliminary set-up outside the machine

Control System:

- Programming of ring and wave spring geometries with WPS 3.2 EasyWay
- Reduction of the coiling-in compensation (the so-called “flow-ering effect”) by means of an all-electric coiling/pitch axis and an intelligent software control

# Versatile, Powerful and Profitable – WAFIOS Electro-Mechanical Ring Coiling Machines SNA

## Most Diverse Applications in the Ring and Wave Spring Production:

The newly developed SNA 16, SNA 26 and SNA 36 are an integral range of machines for the production of rings from 7 – 320 mm outer diameter and wave springs from 7 – 250 mm.

This machine series has been designed in line with the requirements of the production of right-hand coiled wave springs and single- and/or two-turn rings, with or without crimp, made of profiled material (rectangular cross section). It features a significantly increased output while meeting highest quality criteria.

Another focus has been placed on the operation of the machines and on the optimization of set-up processes. The new WPS 3.2 EasyWay user interface and the new CNC-controlled coiling and pitch units (reversing and freely programmable) enable a quick retooling process. Together with the intelligent software integrated in the machines, the quality of parts is increased significantly (e.g. the “flowering effect” of the outer diameter is avoided by the coiling-in compensation (option)).

## Quality

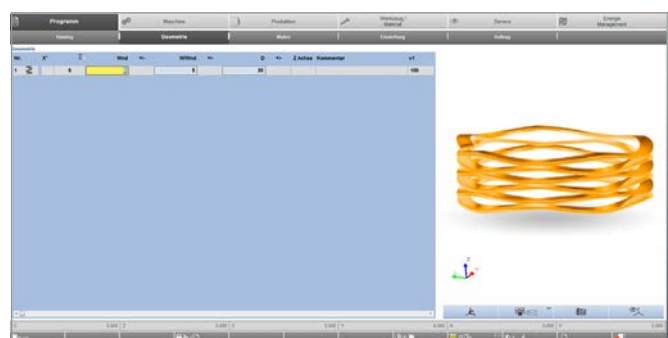
For more than 125 years, the name of WAFIOS has been synonymous with highest quality, safety standards, and technical innovations in the German machine manufacturing industry.

## 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.



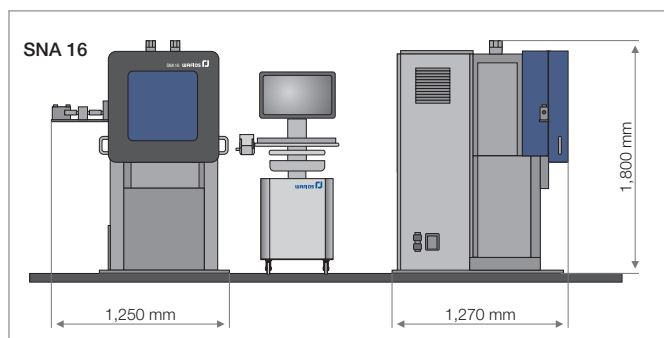
▲ Geometrical programming with WPS 3.2 EasyWay

▼ Innovative machine design



Technical Data	SNA 16	SNA 26	SNA 36
Smallest profile cross section:	0.5 × 0.2 mm	1.0 × 0.5 mm	2.5 × 0.6 mm
Largest profile cross section: (RM - N/mm <sup>2</sup> )	2.0 × 0.75 mm max. 2,000 N/mm <sup>2</sup>	4.0 × 1.5 mm max. 2,000 N/mm <sup>2</sup>	9.0 × 3.0 mm max. 2,000 N/mm <sup>2</sup>
Largest profile cross section for wave rings:	2.0 × 0.6 mm	4.0 × 1.25 mm	8.0 × 1.3 mm
Feed speed:	max. 140 m/min	max. 120 m/min	max. 100 m/min
Outer ring Ø:	ca. 7 – 50 mm	ca. 15 – 100 mm	ca. 45 – 320 mm
Outer ring Ø for wave rings:	ca. 7 – 50 mm	ca. 20 – 100 mm	ca. 50 – 300 mm
Max. output, single-turn rings:*	275 pcs/min	250 pcs/min	200 pcs/min
Cutting force of the cutting unit:	7 KN	45 KN	125 KN
Space required for machine: (l×w×h)	1,200 × 1,500 × 2,000 mm	1,300 × 1,600 × 2,100 mm	1,550 × 1,800 × 2,200 mm
Weight of the machine:	ca. 1,200 kg	ca. 2,100 kg	ca. 4,500 kg

\* Depending on infeed length of strip material



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Precision Machinery for Wire and Tube