

New Definition of Productivity ...**... WAFIOS Presents with the Universal Spiral Spring Machine SPM 2 a New Approach to the Production of Spiral Springs Made of Strip Material**

Many new designs originate from practical customer inquiries which cannot be answered with pre-existing machines. It goes without saying, of course, that also manufacturers of wire and strip material processing machines are expected to find ever more economical solutions for their customers.

The result is a machine which is able to coil semi-finished strip material into all kinds of spiral springs. The cross section of the spring material of up to 6.5 mm² enables also the production of larger springs.

Spiral springs are mainly used in the automotive industry, e.g. for the motor management, the interior of cars and vehicle instruments. Moreover, they serve as mechanical energy storage device in toys, for example, or in drive and oscillating elements of mechanical clocks.

A program-controlled displacement of the roller feed is possible via the height axis. Thereby, the strip material can be guided tangentially from the edge where the strip material exits towards the coiling axis. The result is a considerable increase in output.

Due to the intelligent star-shaped arrangement of slides, all kinds of spiral springs can be produced on the SPM 2. Besides these universal application possibilities, short tooling times allow an economical production of small batch sizes.

The formerly used horizontal machine structure has been replaced by a vertical structure. Thereby, several improvements were made. A better access of the tool room considerably facilitates operators the change of tools at the front plate and results in an increased availability of the production unit due to the shorter tooling times.

The SPM 2 also convinces with the new WAFIOS programming software WPS 3.2 EasyCam. Besides established and familiar features, the software does now have an expanded programming of production sequences by means of electronic cams. Thus, axes can be moved electronically "into each other". The self-explanatory user interface and user guidance facilitates programming for experienced WPS programmers as well as for beginners. The standard version of the machine includes a touch-screen panel which has proven to be useful in day-to-day production.

The robust machine design enables highest outputs without any loss of quality. The star-shaped arrangement of bending slides around the coiling unit enables a flexible response to different production requirements. With an output of up to 100 pieces a minute, the new WAFIOS SPM 2 spiral spring machine outshines all previously reached outputs in the production of springs made of strip material.

Considering customer requirements, WAFIOS has designed a machine which meets not only criteria like highest outputs and quality standards but also low investment costs. Right from the beginning, the development focused on total cost of ownership by means of target costing calculations.



Fig. 1 WAFIOS SPM 2 Spiral spring machine



Fig. 2 Star-shaped arrangement of bending slides