

FAB S and LABS

WAFIOS: Engineered for What's Next



With the focus on ICs and the next wireless “G” in the electronics industry, WAFIOS may be a name not too well known beyond their sphere of influence. The seeds for the company were planted when Ernst Wagner started a mechanical workshop to weave thin wires in the town of Pfullingen, Germany, in 1893. By the mid-1900s, Wagner’s wire fencing machines were winning awards and as the company grew, it moved to Reutlingen, Germany, in 1909 where it welcomed Hans Ficker as an active partner. The company, then known as Wagner & Ficker Maschinenfabrik, was competing with another fencing machine company run by Otto Schmid and these two companies merged in 1914 with the new company named “WAFIOS” in tribute to Wagner, Ficker and Otto Schmid.

From these beginnings at the onset of World War I, the company has grown to become a leading global supplier of precision machinery for wire, tube and formed parts. Along the way, WAFIOS counts many firsts and advancements in fencing, coiling, spring, bending and precision parts machines. What started with wires now extends to coaxial cables, tubes and metalworking. WAFIOS has facilities in the U.S., China, Mexico, Brazil and France, in addition to a big presence in Germany. The company maintains sales agencies on every continent except for Antarctica.

The company currently supports more than 120 active machine types. The WAFIOS machine types include spring coiling and forming, wire and tube bending and forming, wire straightening and cutting, along with machines producing spiral hose, nails, fasteners, chains, chain-link and other types of fencing. These machines produce a wide variety of products including cardiac catheters, surgical coils, springs, conductor rails and suspension springs, brake lines and heat exchangers. These products go into an equally impressive range of applications, with e-mobility, electric vehicle, electronic equipment and medical technology applications figuring prominently in production efforts. The company succinctly sums this up as “thousands of applications for almost all areas of life.”

Befitting a company that has grown and evolved over the last 130 years, WAFIOS embraces innovation. The company claims about 200 active patents worldwide, with more than 120 employees worldwide (about 12 percent of the workforce) involved with research and development (R&D) activities. The company spends 18 percent of their revenue on R&D activities. The latest wave of innovation at WAFIOS aims at expanding and evolving the computerized and networking capabilities of their equipment. The company introduced its first computer numerical control (CNC) machine in 1978 and they are working toward the goal that “anyone on the shop floor can run a WAFIOS machine.”

This goal acknowledges the current challenge of hiring skilled operators to manually operate the machines. The broader realization is that computer and software-controlled equipment can provide better, more cost-effective solutions. To support these goals and this evolution, WAFIOS has an extensive collection of iQ-functions that offer process optimizations for all WAFIOS machine groups.

The company is also developing a Smart Factory 4.0 concept as part of the Industry 4.0 transformation. To support this, WAFIOS has a standardized, open system to enable complete machine networking. This system includes an OPC-UA interface to connect the machine to the existing infrastructure. In their vision, this will include machine-machine communication, communication with a higher control level or the cloud. These and other activities are how WAFIOS, with 130 years of heritage, plans to address the next 130 years of product innovation.

The WAFIOS North American headquarters is in Branford, Conn., with spare parts stock, service resources and machines available for demonstration. The Chicago-area Midwest Technical Center located in Mokena, Ill., provides additional resources as a service center, with machines available for trials and demonstration. Both facilities are structured to support application development, as well as provide customers with hands-on training programs.

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