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First-Time Exhibitors

Swiss Tec Strives to Break through Barriers

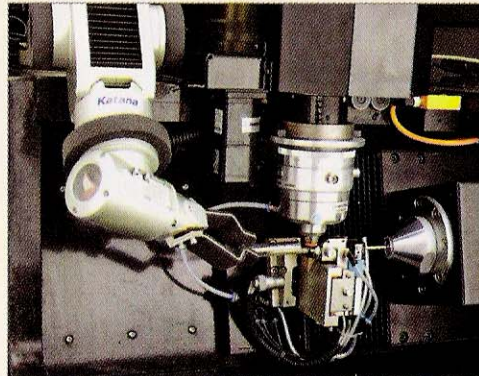
Renowned as a leader in the machining of small, complex parts, Switzerland seems to always be on the cutting edge of related technological advancements. A by-product of this national interest in micromachining, **Swiss Tec AG** (Zurich, Switzerland) was established in 2000 with the mission of developing high-precision, high-speed laser micromachining equipment that requires minimal maintenance and supervision.

During its initial few years, the company focused mainly on conducting research. But two years ago, Swiss Tec put an aggressive marketing strategy into action that introduced a branch in Asia last year and marketing and sales offices around the world this year, including **Swiss Tec LLC** (Miami, FL) to serve North American manufacturers.

The U.S. market holds the largest potential for the company, according to Armando Casanova, general manager of the Miami branch. And a portion of that potential profit could come from the medical device industry.

"In the foreseeable future, there is very large growth in this industry; this is an open secret," Casanova says. "In the cutting and drilling of microtubes, a lot of expertise is required. You really need years of practical experience, research, and development to be a major player, and this is a strength that we have."

Specializing in equipment for such micromachining operations as the cutting, drilling, and welding of microtubes, Swiss Tec's equipment can machine tubes with diameters as small as 0.0004 in. The machines are also capable of cutting widths of about 10 μm with a positioning accuracy between 2 and 8 μm ,



Swiss Tec claims that its tube- and stent-cutting system is the fastest laser cutter for micromachining in existence.

depending on the material. Medical applications include such small devices as stents, guidewires, catheters, and biopsy needles.

"We try to expand the limitations that there are as a standard," Casanova says. "We aim to break through barriers, and the barriers are in 3-D and in tubes where there are odd shapes. The repeatability and the precision [limitations] make it much tougher to get quality results."

Breaking down barriers was achieved with the release of the Micro T15 tube- and stent-cutting system, which recently captured the world cutting speed record, according to the company. The micromachining laser cutter performed at a speed of 2000 mm/min on 1.4-mm-diam nitinol tubes; the average rate is between 400 and 600 mm/min, Casanova says.

Fast cutting speeds can improve productivity in shorter time periods, thereby reducing costs. But the system also offers repeatability as well as minimal heat-affected zone and discoloration, Casanova says. In turn, quality yields can potentially eliminate the need for secondary operations such as electropolishing.

"The savings are not just with the machining, but what can subsequently be eliminated due to the quality we can produce at the faster speed," notes Casanova. "All of those following steps have a lot of human components involved, which are expensive and may be subject to error."—*Shana Leonard*

Swiss Tec LLC

www.swisstecag.com

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