Senger News & Focus

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Remmele Machines Small Parts in a Big Way

Puts Emphasis on Precision Lasering of Microscopic Parts

Since 1949, Remmele Engineering has set the standard for excellence in precision machining and automation. The Micro Machining Division, located in Big Lake, Minnesota, manufactures complex, difficult-to-produce items for the medical, aerospace, telecommunications and other high technology companies. The Micro Machining Division offers unparalleled production of sub-millimeter components, incorporating developed and qualified SPC-capable processes.

At Remmele, engineering excellence is their passion. In their spotless 60,000 square foot plant, they're continually pushing the technology envelope to produce ever smaller and more complex components. They do it in a streamlined production environment, which is a key benefit to their customers who often face cost pressures as they vie for a competitive advantage in a world where technology changes by the minute and market windows shrink with alarming speed.

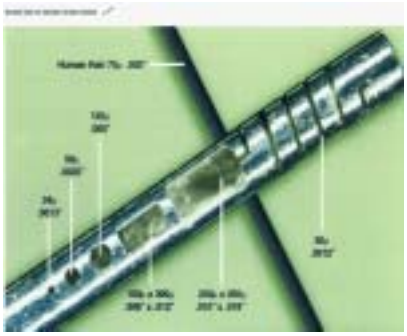
Challenging Projects – Innovative Solutions

Years of know-how and experience, coupled with a continuous investment in people, technology and equipment have made Remmele uniquely positioned to handle complex, difficult-to-produce items. One method of producing these types of parts is the Micro Machining Laser System which can manufacture sub-millimeter, ultra-precision components. Though utilized by all industries, the medical industry in particular has used the laser technology at Remmele to manufacture critical medical parts for neurovascular and cardiovascular applications. Most of the laser work performed at Remmele has been in the prototype and development stage for new devices, as the equipment is well suited for this type of work. Remmele is constantly adding new machines with new capabilities such as the Citizen M-212 and the Citizen 220 which are Swiss machining centers and have a 10-axis capability. As a result of continual upgrading and improving, today many devices are being designed that five years ago were considered too difficult to manufacture.

A Closer Look at Laser Work

Look closely at the picture below. At the very top, you will see the actual size of the piece, which, in the larger image, has been greatly magnified so that the detail of the part can easily be seen. This is the type of work that has given Remmele their unbeatable reputation for producing microscopic parts.

This piece was made using the Micro Machining Laser System. The system can be utilized on many types of materials, such as tantalum, stainless steel, titanium, platinum and nickel/titanium. The laser system incorporates a vision system, real time camera and magnifying lens, which is used to view and measure the accuracy of the work. A mechanical positioning system in the X-, Y-, Z- & U (rotary)-Axes locate the work relative to the focused energy.



The laser can create a variety of ultra fine features in both tubing and flat stock. One of the unique features of this laser system is the ability to avoid backside damage in the very fine tubing applications. Almost any pattern can be cut through wall sections from 0.001" (0.025mm) to 0.020" (0.5mm), to tolerances approaching 0.0002" (0.005mm), without affecting the opposite I.D. surface.

To Learn More

If you would like to learn more about Remmele and their Laser Machining services, contact Senger and Associates, Inc. at (651) 633-6040 or at www.senger-assoc.com.