

Title:

Micromanufacturing Opportunities Grow

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Summary:

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Keywords:

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Article Body:

The demand and application of micron and sub-micron manufacturing requirements is growing, which offers unique challenges and immense opportunities to a wide group of tool shops and production parts manufacturers in the United States. The term micromachining loosely refers to part details and holes smaller than the human hair that are measured only in microns-or one thousandth of a millimeter.

This focus on micromachining has captured the imagination of nearly every industrial segment. According to several market studies, micromanufacturing was a \$3.9 billion industry in 2001. The market is expected to reach \$9.6 billion by 2006.

Technical and application engineers at Makino, a global provider of advanced machining technology, say that such industries as biomedical, medical appliance, personal electronics, fluid transfer, optics and fiber optics, RF electronics, communications, military, aerospace products, and the automotive world are focused on micromanufacturing. They all see the potential in new and exciting consumer and industrial products emerging daily.

These smaller, lighter parts with higher degrees of functionality have set new demands on original equipment manufacturers to reevaluate the design and concepts of various machining systems and technologies. You may have already experienced a number of emerging uses in micromachined parts in your computer, heart monitor or pacemaker, automobile, cell phone, and many more applications.

The capability to produce parts with such high accuracy and surface quality on a

variety of newer materials, including metal alloys and ceramic, is in very high demand. Unique new machines can produce holes as tiny as 0.00078 inches in diameter, 100 times smaller than many previous machining operations.

The application of micromanufacturing represents a "business reality" to machine manufacturers and suppliers. Learning to apply these high-tech designs, concepts and machine tools will permit U.S. manufacturers to offer a broader understanding and service capability to combat foreign manufacturing competition.