Precision Laser Processing

At Medical Design & Manufacturing (MD&M) West in booth 3055, TRUMPF will highlight laser cutting, welding and marking solutions, ideal for the intricate requirements of medical device manufacturing.

In medical applications where product labeling and traceability are essential, TruMark lasers mark the surface without affecting the properties of the material, enabling autoclave sterilization at high temperatures. At MD&M West, TRUMPF will demonstrate the capabilities of the TruMark 6350 in a TruMark Station 5000. The new TruMark 6350 laser features improvements in design and performance, including increased average power with the same superior beam quality. Improved laser parameters enable increased cost-efficiency and high quality marks with a broader range of applications.

In addition to the TruMark 6350, TRUMPF lasers for precision cutting and welding will be featured in booth 3055. Designed for the intricacies of medical device applications, the TruMicro, TruFiber and TruPulse product displays and their corresponding medical samples will demonstrate the range of capabilities as well as the flexibility TRUMPF provides in laser cutting and welding.

TruMicro Series 5000 picosecond lasers vaporize almost any material so quickly that virtually no heat input can be detected. In addition to “cold” cutting, the athermal

cutting process is burr-free and achieved without purging fluids. With no mechanical or thermal load on the material, this laser is the ideal tool for processing brittle or hard materials, metal alloys including nitinol and Co-Cr, metals such as magnesium and platinum, and polymers.

With the high beam quality characteristic of TruFiber lasers, narrow weld seams and small cutting kerfs with a width of less than 100 µm are easily and consistently achieved. Like all TRUMPF products, these fiber lasers are built for the demands of an industrial environment. The precise laser pulses produced by TruPulse solid-state lasers are ideal for spot or seam welding, as well as for cutting fine contours. The newest addition to the TRUMPF laser portfolio is the low power series (<1 kW) of TruDiode lasers. These new models boast high wall-plug efficiency, excellent beam quality of 8 & 16 mm * mrad and a fiber delivered direct diode platform for ease of use. The new, low power TruDiode lasers are ideal for plastic welding and thin gauge metal welding.

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