THE FUTURE OF MEDICAL MANUFACTURING

LASER SOLUTIONS FOR THE MEDICAL DEVICE TECHNOLOGY
Laser Solutions for Medical Device Manufacturing – When Precision Matters Most
Customer Benefits

- World-leading high-precision cutting system for medical implants and instruments (stents, endoscopes, tubes etc.)
- Camera and/or stereo microscope for exact monitoring
- Automatic tube loader for dry and wet cutting (optional)
- Versatile 2+2 option for off-axis cutting
- Various ultra-precise tube guiding systems
- Integrates StarFiber and StarFemto FX laser

Customer Benefits

- Market-leading high-precision tube cutting system
- Small footprint
- Highest productivity
- Available with StarFiber 180 and 320 FC
- User-friendly HMI for validated production processes
- Automatic tube loader for dry and wet cutting (optional)
Modular laser workstation family for customized applications:
- MPS Compact with small footprint;
- MPS Flexible;
- MPS Rotary with rotary table;
- MPS Advanced with spacious working chamber

- High-precision welding, cutting, drilling and structuring
- Various motion systems with up to ±0.1 µm accuracy
- Latest CNC technology
- Integrates USP, fiber, rod and diode laser sources

- Manual welding laser with CNC control
- For semi-automated processing
- Motion and laser control fully integrated for complete process control
- IQ/OQ for FDA documentation according to GMP
- Available with fiber laser as an option

- The standard system of manual laser welding
- Dynamic foot switch for ultimate weld control
- IPM for reliable processes
- MicroWeld for finest welds
- IQ/OQ for FDA documentation according to GMP

- Marking of metals and polymers
- Compact desktop design
- Very easy handling
- Ideally suited for small and midsize parts, flat and concave
- Enhances flexibility through integrated software-controlled z-axis and rotary module

- Desktop laser welding system for high-precision workpieces
- Small footprint
- Highly compact 3-4 axis system

- Laser system for high-precision drilling of blind holes in medical needles
- Up to 5 needles per second
- Highly precise optical components which are fixed to a granite plate
Laser Solutions - Flexibility in Laser Integration

ULTRASHORT PULSE LASERS
StarFemto FX - StarPico
- High-precision processing of biodegradable materials like polymers and magnesium alloys, Nitinol and brittle materials
- Cutting of finest strut widths
- Selective layer ablation
- No heat affected zone
- No burr or dross
- Minimized postprocessing and higher yield

FIBER LASERS
StarFiber - LFS - PowerLine F
- Fiber laser sources for welding, cutting, drilling and structuring
- Available as laser with supply cabinet and OEM version
- Excellent productivity through high repetition rate
- Super clean cut surface with sharp cutting edges in thick material
- Less burr and taper
- Narrow weld seams with smoothest surface
- Superior flexibility with galvo and fixed optics

PULSED LASERS
StarPulse
- Smooth weld seams through flexible pulse shaping
- Power control with Double Closed Loop
- Up to 20 KW pulse peak power for high quality welding of highly reflective materials
- Accurately controlled minimal pulse peak powers down to 10 W allows precise welding of finest components

DIODE LASERS
Compact Evolution
- High-precision welding of plastic materials
- Broad wavelength spectrum from 630-2200 nm for a wide range of materials
- Wide variety of processing heads e.g. galvo scanners, with optional process monitoring for reliable process control
- Different focus shapes which allow innovation process solutions
We have been developing laser solutions for medical device manufacturing for more than three decades now.

In our application labs we work with a whole range of laser systems, latest fiber and ultrashort pulse laser technology. Especially for the medical device industry. Several hundred new applications are evaluated each year.

We invest heavily in faithful and long-lasting partnerships with our customers and leading research institutes. ROFIN is a global operating company with production, sales and service sites all over the world. An essential precondition to support distributed manufacturing concepts, for instance research and product design in the USA and large scale production in Asian countries.