



Manz is responding to the new law on the traceability of implants with its combined expertise in laser, image processing and automation technology

- **High-tech engineering company expands its medical technology expertise**
- **Integrated machine concept avoids interface problems between individual process steps**
- **Clear identification of implants is the basis of the recently passed Implant Registry Establishment Act and FDA approval for the US market.**

Reutlingen, November 26, 2019 The German high-tech engineering company Manz AG uses its laser expertise for a new and cutting-edge application in medical technology. As part of a customer order, Manz developed a machine concept for the fully automated laser engraving of implants for the forgery-proof and unambiguous identification of artificial knee or hip joints. Areas of application are both implant sliding pairs made of low-abrasion ceramics and metals, which are selected depending on the patient's age, their bone structure, lifestyle and profession.

In Germany, manufacturers of such artificial joints will have to register their products in the so-called Implant Register Germany. The law was passed by the Bundestag at the end of September 2019. The aim of the Register is to provide transparency of the durability and quality of implants, to provide faster help in case of complications and to monitor the quality of care in clinics.

Integrated machine concept for complete traceability

Manz has integrated several process steps and camera-based monitoring into the new system for fully automated laser engraving of products for the medical industry. Like this, interface problems between the individual production steps will be avoided, and it also ensures complete traceability of any incorrect markings that may occur.



"This documentation of process steps is the basis for FDA approval, medical technology companies cannot gain access to the US market without it," explains Timo Dengler, Vice President Sales in Manz's Electronics segment.

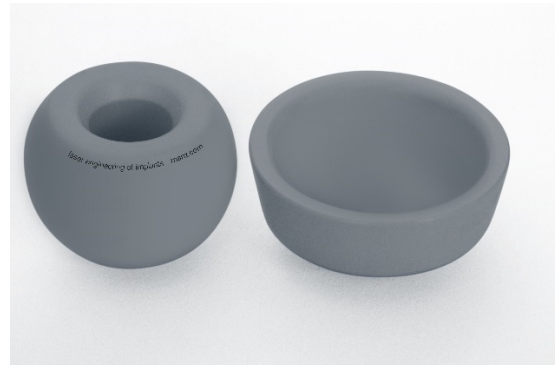
Manz relies on specially optimized technologies for laser engraving

Manz can also score points in the medical technology sector with its international presence and ability to successfully handle large projects across different continents. For decades Manz's customers rely on the expertise in fully automated assembly and manufacturing systems for a wide range of applications. In a specific case, an OCR-OCV camera module (Optical Character Recognition or Optical Character Verification) for optical character recognition and validation ensures, for example, the quality of the lasered markings. In case of a product recall, this module promises traceability and thus the authenticity of an implant. An intelligent gripper changing system enables implant manufacturers to process flexible batch sizes without set-up times - with a total of up to 600 possible product variants. This can also be used, for example, to realize a batch size of one.

The Manz system can be configured for cycle times between 12 and 40 seconds. Laser sources from different manufacturers can be used in order to significantly reduce the validation time for the user. And in order to close automation gaps in the production of a medical technology manufacturer, Manz offers a solution based on self-propelled transport systems (automatic guided vehicles) to connect to the process steps following laser engraving. All production data is recorded in a database without interruption.



Images:



Forgery-proof and unambiguous marking, for example of artificial knee or hip joints, using fully automated laser engraving.

What is the new Implant Register Germany? Federal Health Minister Jens Spahn explains:

<https://www.bundesgesundheitsministerium.de/implantateregister-errichtungsgesetz.html>



Company profile:

Manz AG – passion for efficiency

Founded in 1987, Manz AG is a global high-tech equipment manufacturing company. Its business activities cover the areas of Solar, Electronics, Energy Storage, Contract Manufacturing, and Service.

With many years of expertise in automation, laser processing, vision and metrology, wet chemistry, and roll-to-roll processes, the company offers manufacturers and their suppliers innovative production solutions in the areas of photovoltaics, electronics, and lithium-ion battery technology. The company's product portfolio includes both customer-specific developments and standardized single machines and modules, which can be linked to create complete custom systems. Manz AG offers high-quality, needs-based solutions that can be integrated early into customer projects to contribute significantly to customer success.

The company, listed on the stock exchange in Germany since 2006, develops and produces its products in Germany, Slovakia, Hungary, Italy, China and Taiwan. It also has distribution and service branches in the USA and India. Manz AG currently employs roughly 1,600 workers worldwide, around half of whom work in the Asia region, which is key to the company's target industries. Manz Group revenue in the 2018 financial year totaled around 297 million euros.

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