

LLT

APPLIKATION



Laser-based manufacturing of medical tubes

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LLT Applikation GmbH

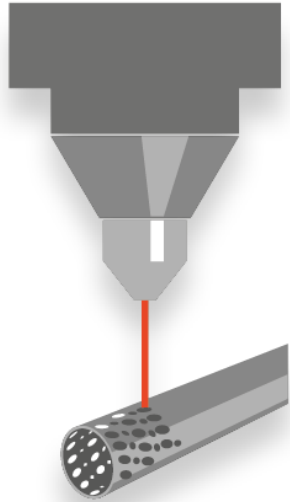
Company

- Founded in 1997
- Experts for laser micromachining
 - with Fiber laser
 - with Femtosecond Laser
- Job shop and machines for laser micromachining
- 20 years experience with tube processing
- First self-developed tube machine in 2008

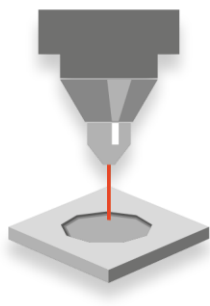
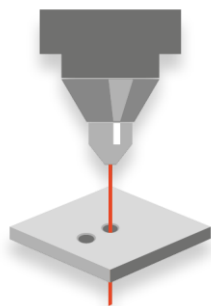
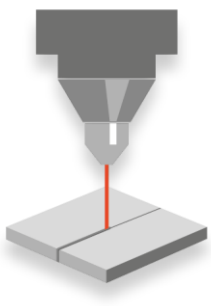
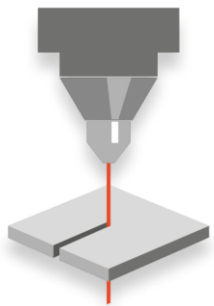


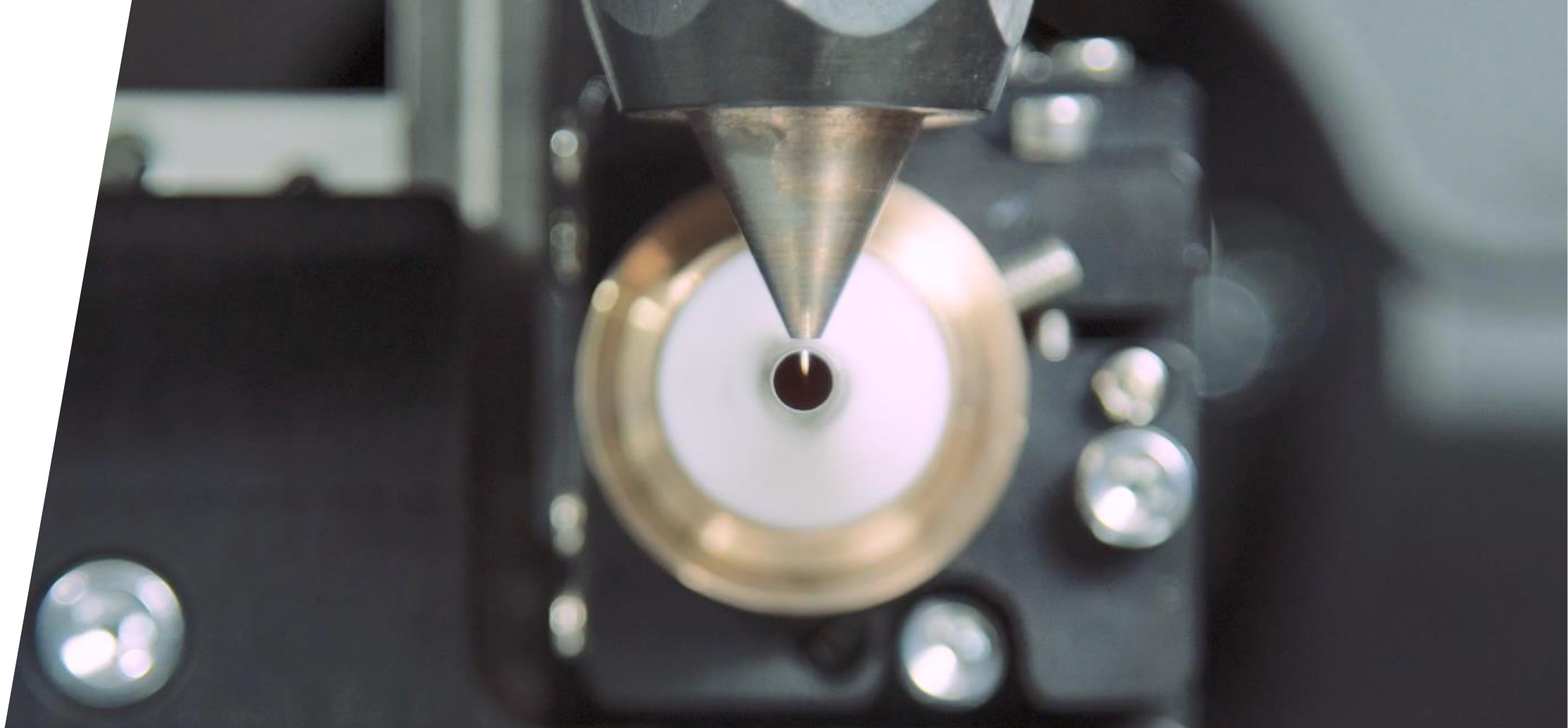
Applications

- Tubing



- Cutting
- Welding
- Drilling
- Ablating

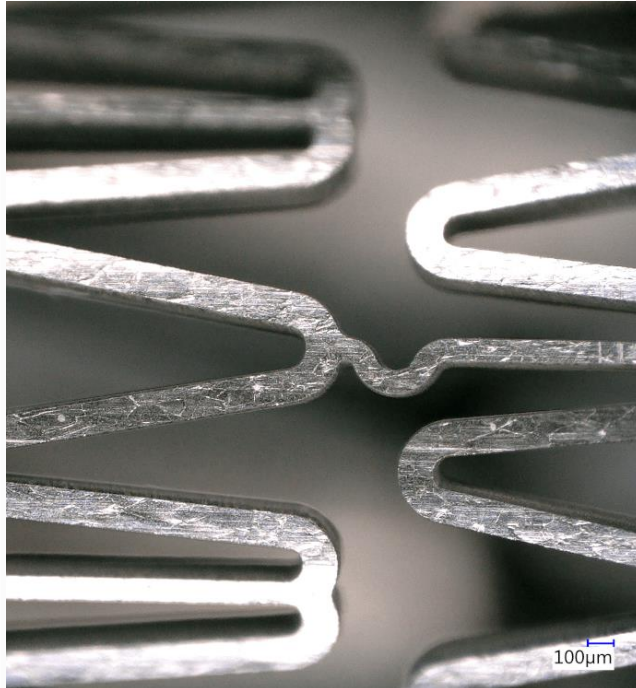




Tube Processing with Femtosecond Laser

Application example – Stent

Laser tubing



Product: Medical stent

Material: Stainless steel

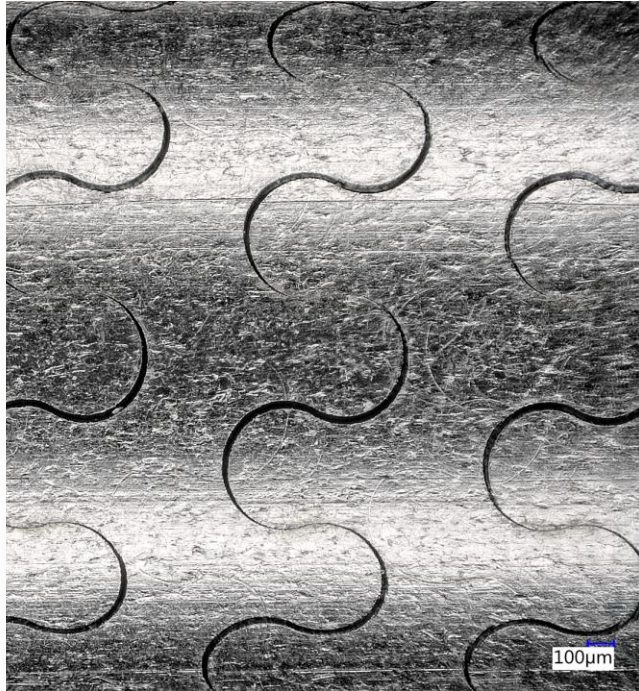
Material thickness: 120 µm

- Accuracy of few micrometer
- Cutting contours $\leq 30 \mu\text{m}$
- Cutting kerfs $< 10 \mu\text{m}$
- Processable tube diameter $\geq 0,2 \text{ mm}$
- No damage of tube interior
- Reduced post-treatment
- Large range of materials
- Improvement of process stability

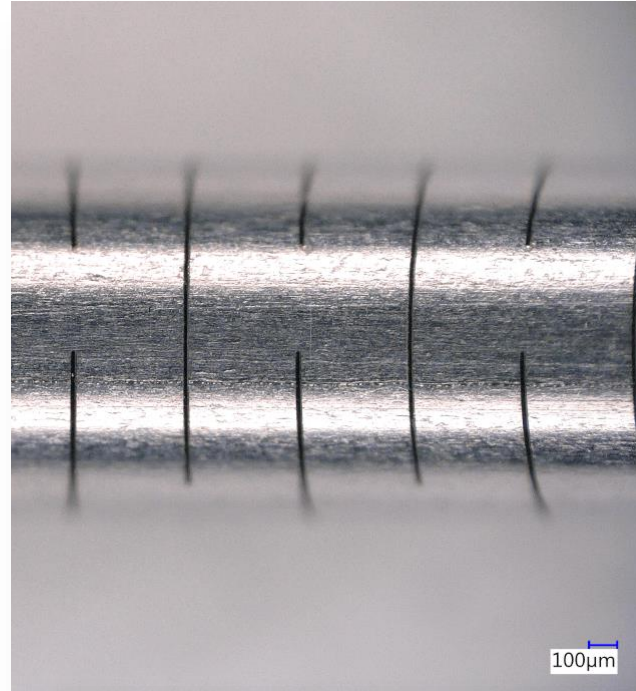


Application examples

Laser tubing



Product: Flexible cannula
Material: Stainless steel
Material thickness: 200 µm



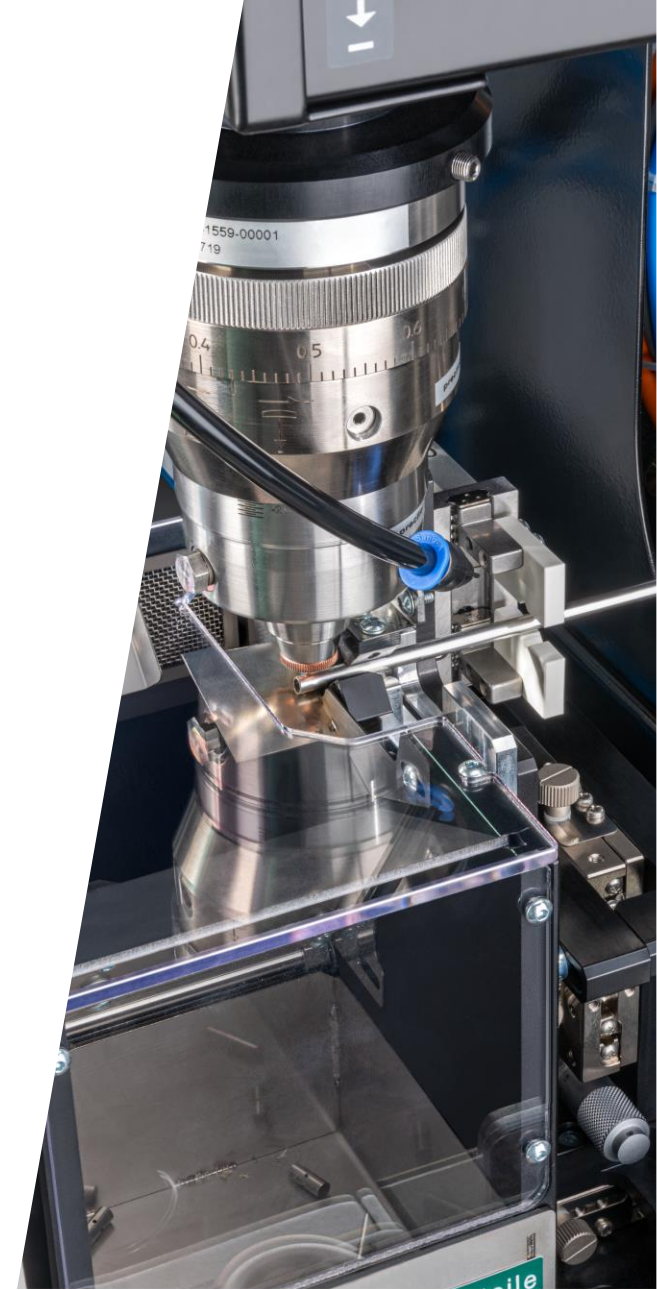
Product: Hypotube
Material: Nitinol
Material thickness: 100 µm





LLT.tube

LLT.tube – The stent cutter



PRECISION TO PERFECTION

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