

posalux[®]
SWISS MADE 



• MONO
: TWIN
: COMBI

Innovative FEMTO-LASER drilling, cutting and engraving technology for ma



MONO

MONO FEMTO-LASER

- Mass or lab production, one head FEMTO-Laser machine
- Linear axis system allowing high dynamic and accurate motions
- Machine class 1 (I), FEMTO-LASER class 4 (IV)
- Siemens 840 D sl, safety integrated CNC
- Machine at +/- 1°C, operated in over-pressure

TWIN

TWIN FEMTO-LASER

- Mass production with twin stages
- Linear axis system allowing high dynamic and accurate motions
- High rate utilization for FEMTO-Laser
- Machine class 1 (I), FEMTO-LASER class 4 (IV)
- Siemens 840 D sl, safety integrated CNC
- Machine at +/- 1°C, operated in over-pressure



COMBI

TWIN FEMTO-LASER AND HD-MILLING

- Two operations in One: Laser & HD-milling
- Mass production with FEMTO-Laser combined with HD-milling machining
- Linear axis system allowing high dynamic and accurate motions
- Deburring station and automatic tool loader
- High rate utilization for FEMTO-Laser, accurate milling machining for hard material
- Machine class 1 (I), FEMTO-LASER class 4 (IV)
- Siemens 840 D sl, safety integrated CNC
- Machine at +/- 1°C, operated in over-pressure

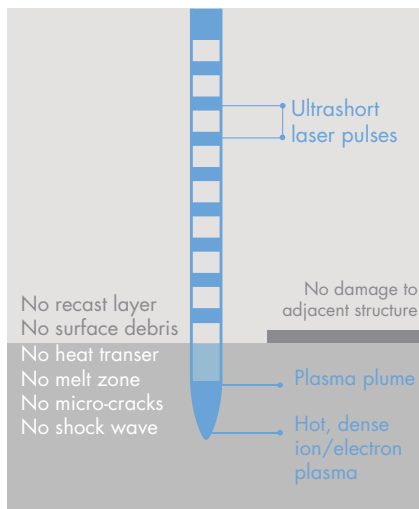
Based on our profound experience in automotive applications
Posalux provides solutions for all high-end micro-machining needs

Mass production

Technology

- Heat affected zone avoided due to cold ablation
- No deposits, no recasts
- Machining of a wide range of materials like steel, brass, ruby, ceramic or peek
- Cutting function (ablation) available
- Depending on application: no needs of amount process

- Femto source down to 200 fs
- Various harmonics available (wave length): nIR, green, UV
- 5 axis galvohead precession head
- Vision system, beam attenuator, shutter, beam analyser, power recorder



- Hole diameter down to 30 μm
- Wall thickness / hole diameter ratio up to 10
- High positioning accuracy
- Excellent flow stability in +/- 1%
- Excellent surface roughness down to 50 Nanometer (like polishing)
- Tapered holes + 20° / -15° (reverse)
- Flexibility in hole shapes machining (ellipses, square etc.)
- High productivity: less than 1,4 s / hole
- 6 holes application diameter 180 μm , thickness 300 μm : workpiece cycle time: 12 s (TWIN configuration)

Quality and expertise

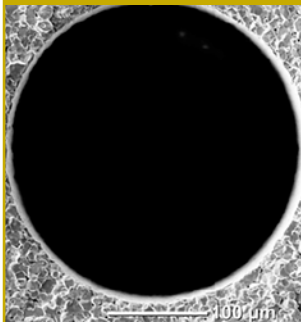
- Accurate flow to characterize repeatability and stability
- Surface roughness measurement
- Optical and fiber non-destructive measurements to control hole diameter, shape and position
- Scanning Electron Microscope (SEM)
- Study and trials on demand

Watch plate made by FEMTO-Laser drilling, cutting and engraving

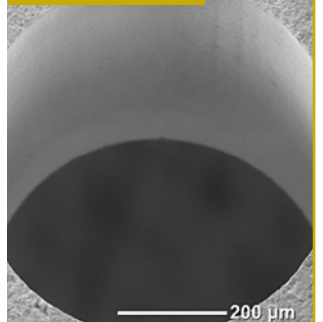


- Automatic loading/unloading custom solutions
- Camera for positioning
- Focal length measurement
- Dust extraction

Micro hole in magnetic material



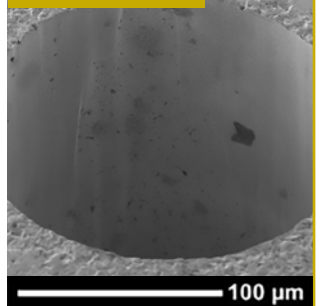
Micro hole in ceramic



GDI nozzle hole in hardened material

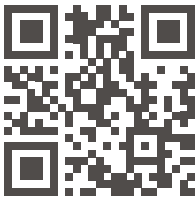


Micro hole in ruby



Micro-machining

Custom devices and support



Release 5001

LASER-F

micro-machining

Founded in 1943, Posalux is a leading manufacturer of micro-technology machines intended for mass production. From our headquarters in Biel, Switzerland, we engineer and produce world-renowned system solutions.

Our clients are distinguished companies leading the automotive, electronic, watch, and medical industries. Thanks to our global network of Posalux branches and agents, we are able to provide reliable services and support to our customers worldwide.

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