



New Release 5002

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.

## LASER-F micro-machining

### HQ Switzerland

Posalux SA  
18, F. Oppliger  
P.O. Box 6075  
CH-2500 Biel/Bienne 6  
+41 32 344 75 00

### Germany

Posalux GmbH  
Friedrichstr. 104  
D-63263 Neu - Isenburg  
+ 49 6102 8167556

### Korea

Posalux KOREA CO LTD  
Room 503, Twin Tower B-Dong  
703-3 Gojan-Dong  
+82 31 319 5860

### Taiwan

Posalux  
1F, Hung Pei Road No. 71  
Chung-Li  
TW-Taoyuan  
+886 491 57 72 / 3



• MONO  
• TWIN  
• COMBI



[contact@posalux.com](mailto:contact@posalux.com) | [www.posalux.com](http://www.posalux.com)

# 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

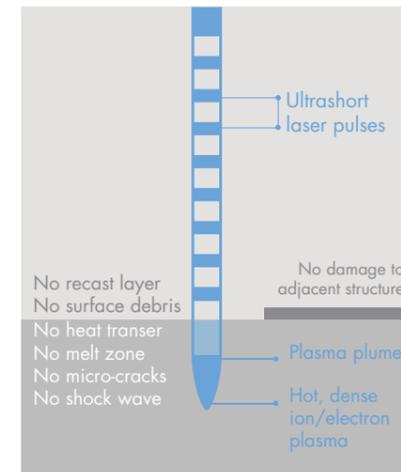
# COMBI

## 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

- 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

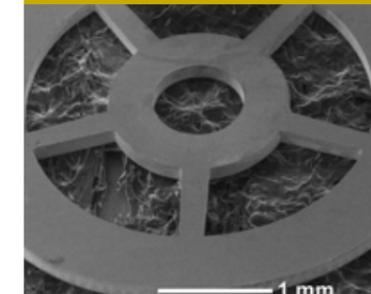


- Hole diameter down to 30 µm
- Wall thickness / hole diameter ratio up to 10
- High positioning accuracy
- Excellent flow stability in +/- 1%
- Excellent surface roughness down to 50 Nanometer (like polishing)
- Tapered holes + 20° / -15° (reverse)
- Flexibility in hole shapes machining (ellipses, square 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)

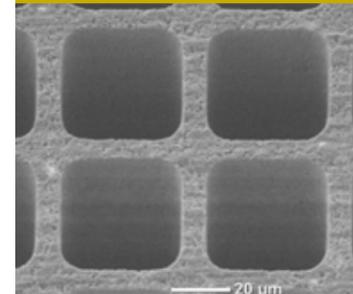
Watch plate made by FEMTO-Laser drilling, cutting and engraving



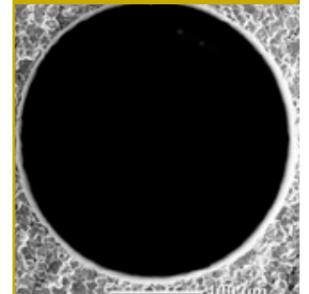
Watch gear wheel - Cutting



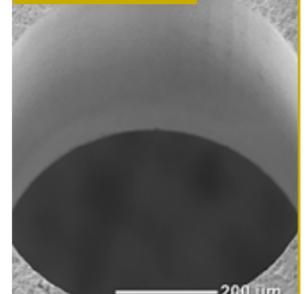
Electronic - Square hole drilling



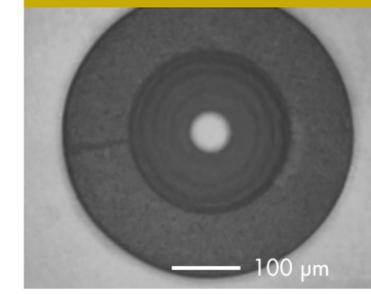
Micro hole in magnetic material



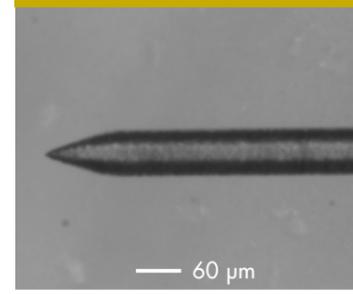
Micro hole in ceramic



Ruby - Drilling and routing



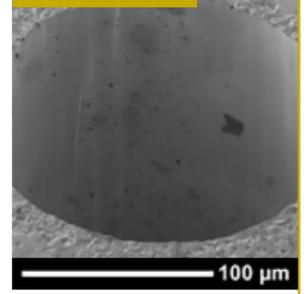
Electronic - Turning



GDI nozzle hole in hardened material



Micro hole in ruby



Micro-machining

Custom devices and support

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

