



Micro Machining Technologies

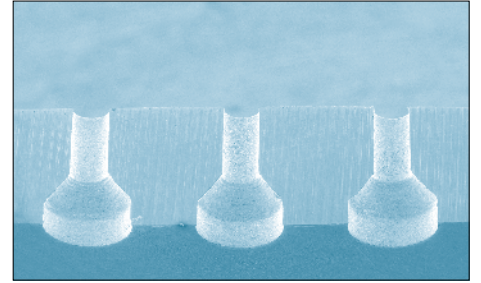
Posalux is a leader in industrialization of micro-machining mass production equipments.
The last μ -EDM developments allow short cycle time, repeatability and stability on any conductive material without alteration.

Micro machining:

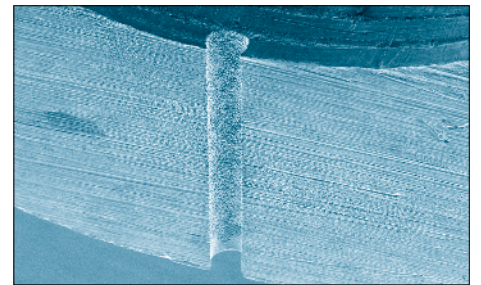
- From 50 μm to 1.8 mm (0.002 to 0.07 inch)
- On any conductive material
- Without burr and material deposit
- Limited white layer deposit without material alteration
- No micro-crack
- Excellent surface texture

Mass production:

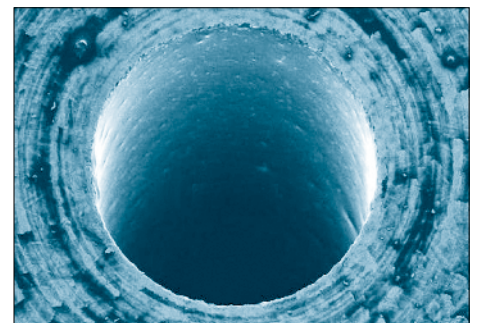
- High productivity
- Process stability
- High positioning accuracy
- Easy machine maintainability
- Worldwide customer support



Micro-machining of complex shapes



\varnothing 80 μm hole on 1 mm depth



Micro-hole in hardened steel



Technologies

Since 1943 and through its success in the watch, electronics and automotive industries, Posalux has acquired and continues to develop extensive know-how in micro-mechanics.



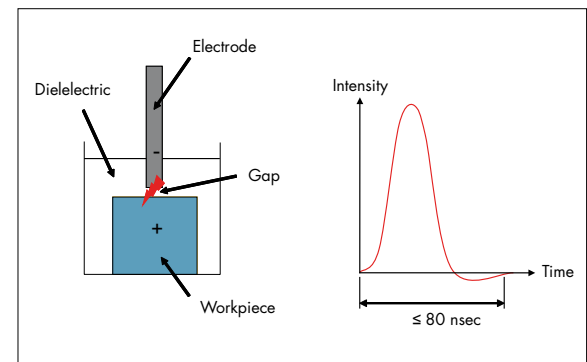
Electrode guiding system

Electrode guiding system

The integrated advanced electrode guiding system precisely feeds the smallest electrode available on the market.

μ -EDM

Based on the electro erosion principle, the integrated SARIX μ -EDM technology allows machining with high quality and efficiency, meeting the needs of mass production scenarios.



μ -EDM = Micro Electrical Discharge Machining

Quality measurements

Our customer oriented organization uses in-house control devices:

140 bar (2000 psi) flow check system to characterize:

- Repeatability per head
- Stability on four heads

Optical measurement machine to control:

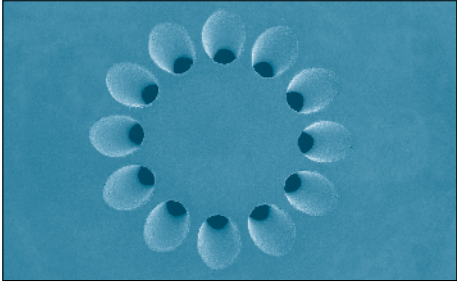
- Hole diameter, shape and position
- Down to 80 μ m



Optical measurement machine

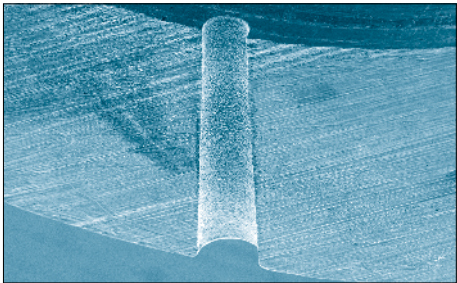
Markets

Posalux has acquired successful experience in the diesel and gasoline automotive injection market, helping its customers to meet the current and future strength emissions regulations. The μ -EDM process performances meet the diesel and gasoline direct injection requirements.



Gasoline direct injection

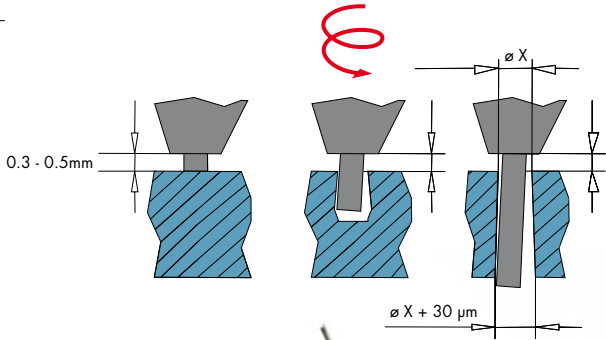
Machining the injection conical holes with our reverse taper system allows a better spray repartition and efficiency in the combustion chamber.



Tapered (conical) hole using mechanical setups

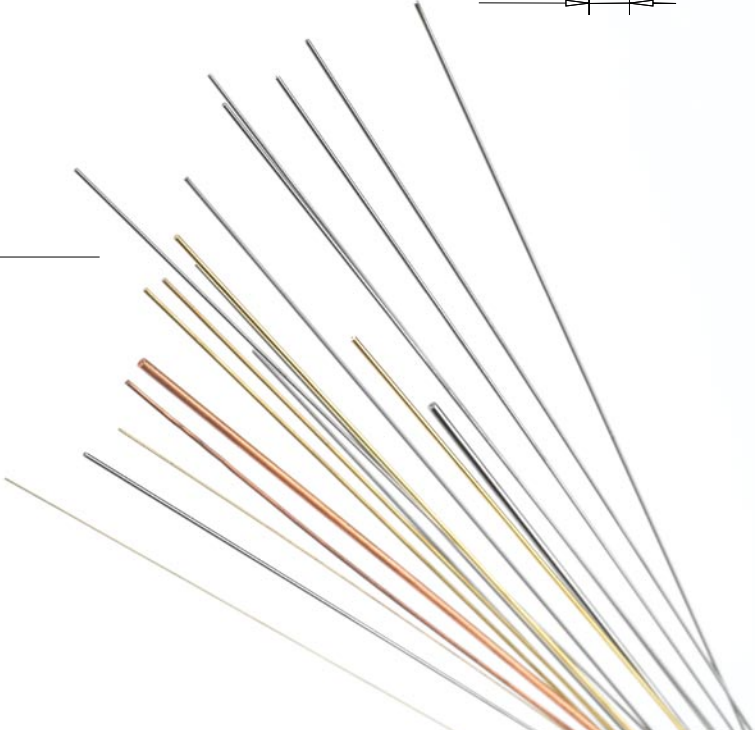
The Posalux technology achieves:

- Ambitious emissions and fuel consumption reductions
- Flow stability and repeatability
- Automotive OEMs quality requirements



Posalux also provides solutions to micro-machine:

- Carbide
- Titanium
- Platinum
- Conductive ceramics
- Shape memory alloys



Products

The Microfor technology, has been developed to provide industrial solutions for your individual needs.

Based on advanced scientific development:

- Specific μ -EDM technology
- Machining without mechanical force
- Rotation of the guiding system during machining
- User friendly multi-axes CNC

Depending on your needs, we design, manufacture, or integrate specific devices and solutions:

- Automatic loading / unloading
- Clamping devices
- Software
- Technology support (μ -EDM parameters)
- User interface options
- Also available with conventional high speed drilling spindles



4 spindles for an efficient productivity



Design of complete production solutions

From batch to mass production



Microfor FP1: 1 spindle



Microfor HP4: 4 spindles



Posalux is located in Biel-Bienne, a major Swiss city, not only renowned as the Mecca for watchmaking, but also one of the most important advanced technology centers.



A professional staff is committed to product development, production and customer services: your guarantee of highest quality.



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