

posalux<sup>®</sup>  
SWISS MADE 



• FP1

# Hightech micro-drilling technology for mass production

## FP1



### DESIGNED FOR MASS PRODUCTION

- Mass production one spindle milling machine
- Dedicated to a milling process in hard materials up to 67 HRC / 900 HV
- High productivity
- Vibration reduced process due to innovative spindle design
- Dry machining technology
- Suction system for extracting waste chips
- Cutting force optimized
- Designed for production's cell integration
- Siemens 840 D

### MICRO MACHINING CHARACTERISTICS

- 5 axis CNC machine for drilling and milling process

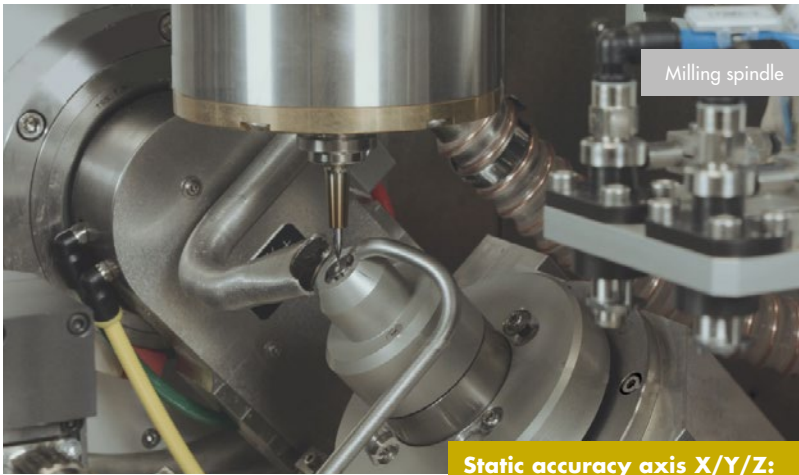
#### Axis strokes:

- Axis X: 300 mm
- Axis Y: 300 mm
- Axis Z: 70 mm
- Axis B: 0..90°
- Axis C: 0..360°

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

## Milling spindle

- Air bearing spindle
- Rotation up to 60'000 rpm (optional 100'000 rpm)
- Increased tool life (up to 5'000 holes)
- Oil free and grease free operation
- Tool holder HSK E25 balance quality G 0.1

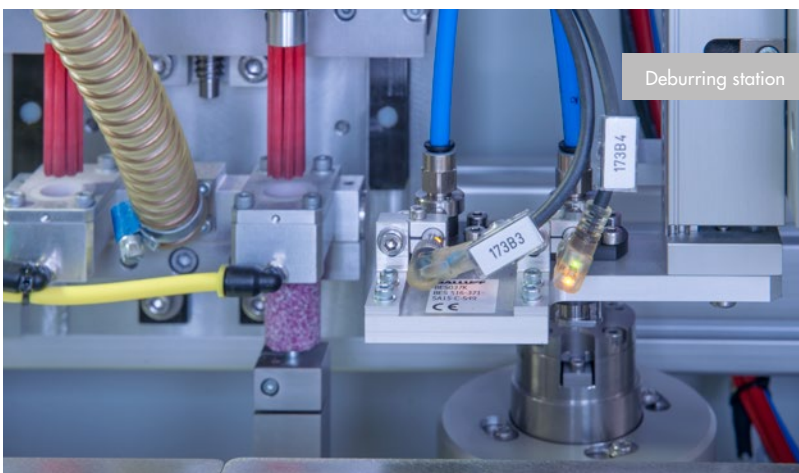


### Static accuracy axis X/Y/Z:

- P=1µm
- P<sub>s</sub>= 0.6µm

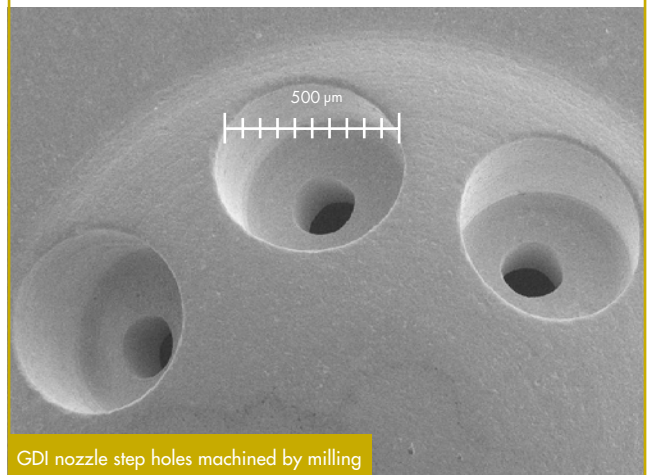
### Static accuracy axis B/C:

- P +/- 0.04 deg
- P<sub>s</sub> +/- 0.02 deg



## Micro-machining

- Milling Ø 0.1-2 mm (typical for step hole 0.3-0.9 mm)
- High positioning accuracy
  - Accuracy for milling X/Y/Z +/- 20 µm
  - Accuracy for drilling X/Y/Z +/- 10 µm
- High productivity
  - Milling time per hole < 0.8 s
  - Cycle time per workpiece (8 holes) < 11 s (e.g. for step holes milling in 1.4112 , 64 HRC, dia. 500 µm, thickness 0.3 mm)
  - Depth control +/- 10 µm
  - Zero touch detection



- Automatic loading/unloading specific solutions
- Tools holder with 12 tools
- Tool break control
- Tool Ø and length control
- Cooling by cold air nozzle
- Optional lubrication by microjet (mixture air-oil)
- Integrated deburring station

Quality and innovation

Custom devices  
and support



Release 3001

# MILLING

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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