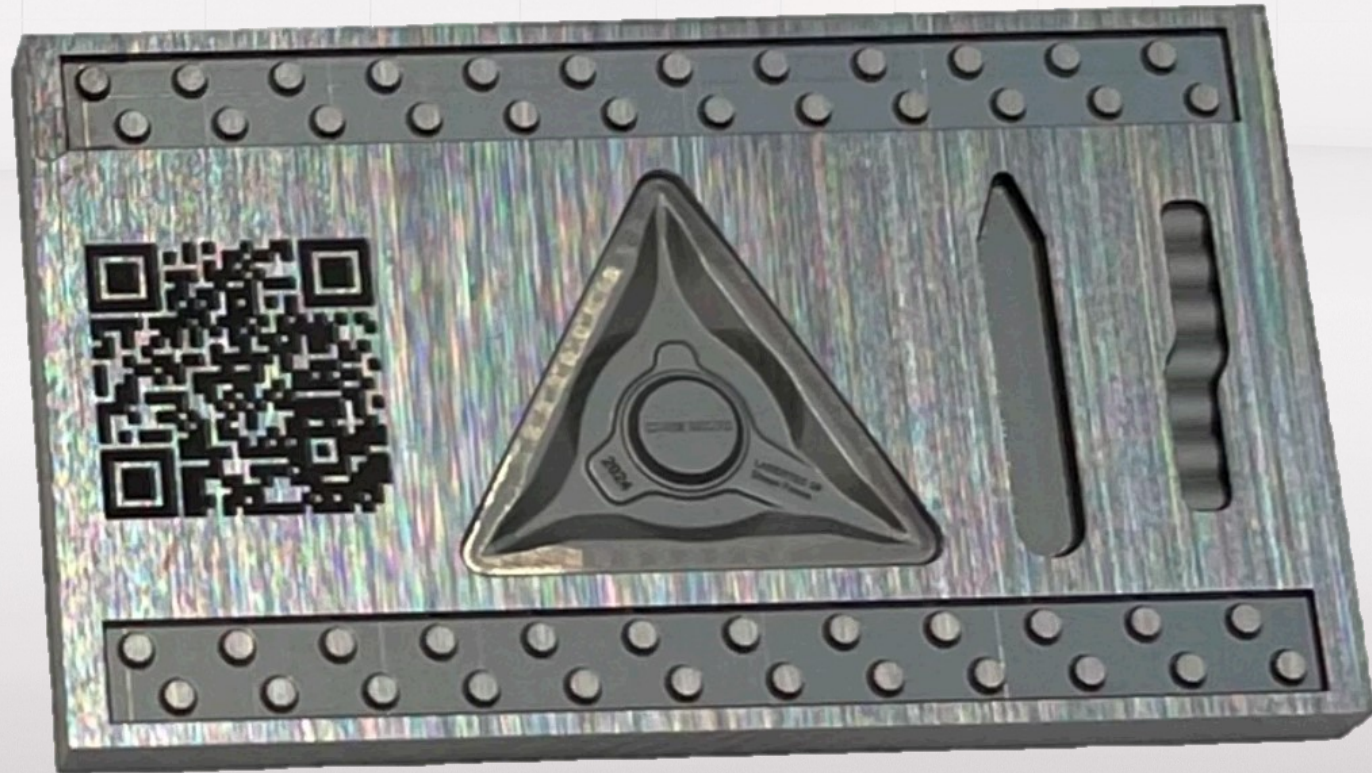
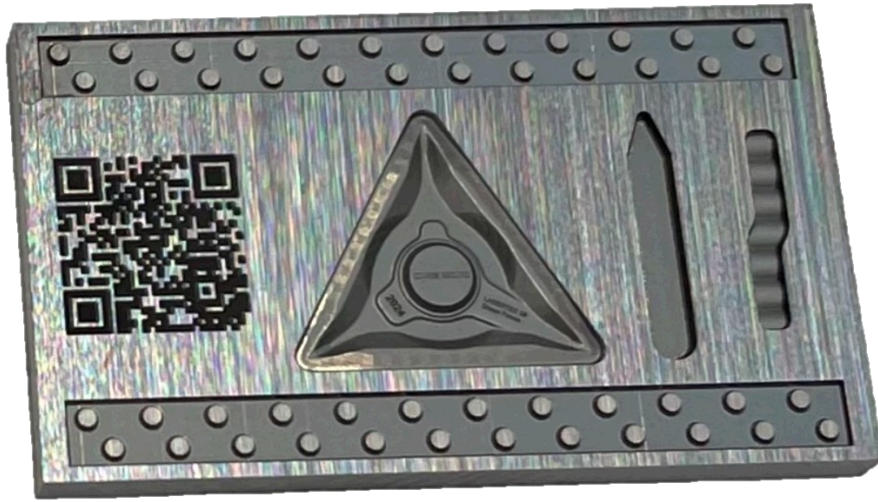


LASERTEC 50 Shape Femto - THE NEXT GENERATION OF 3D-LASER ABLATION



DMG MORI



HIGHLIGHT APPLICATION OH 2024

TECHNOLOGY: LASERTEC Shape Femto

Industry: Die & Mold

Material: CF-H40s (Tungsten Carbide)

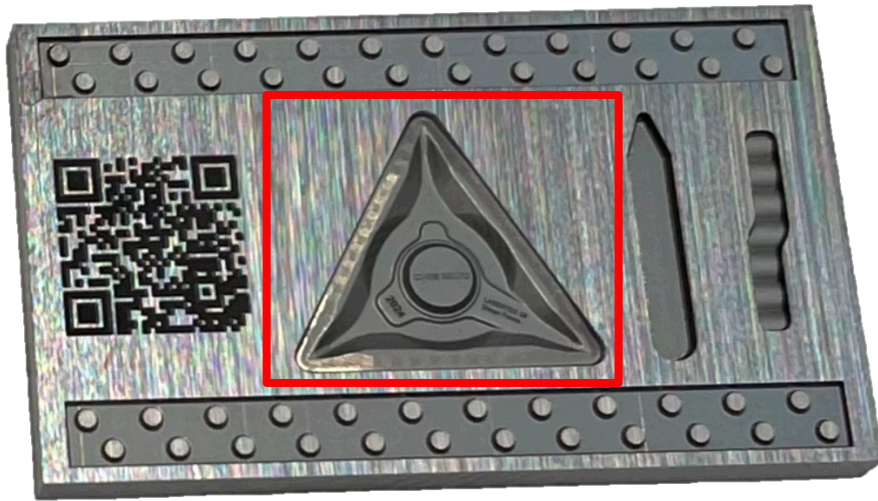
Dimension: 15 x 25 x 2 mm

Cycle Time: 1h 45 min



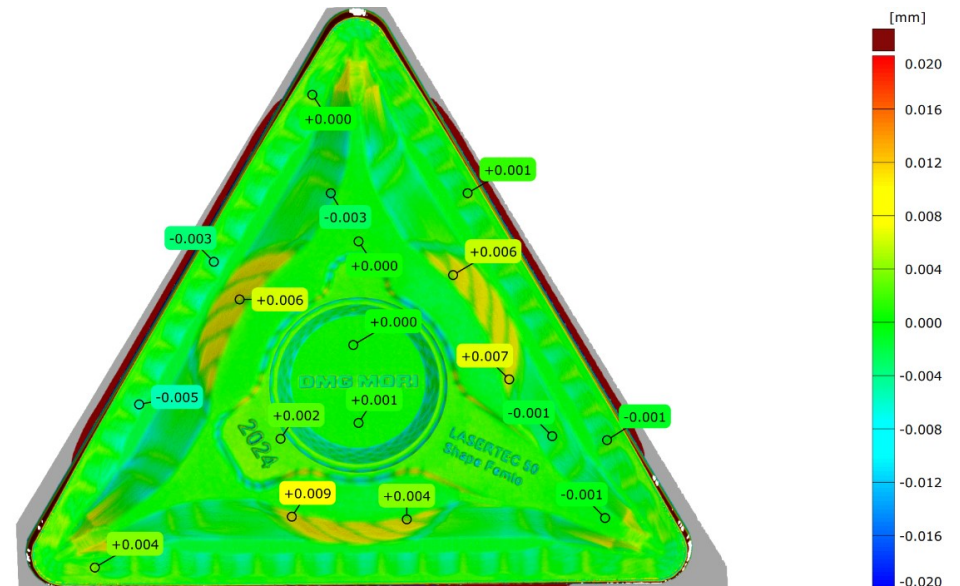
BENEFITS:

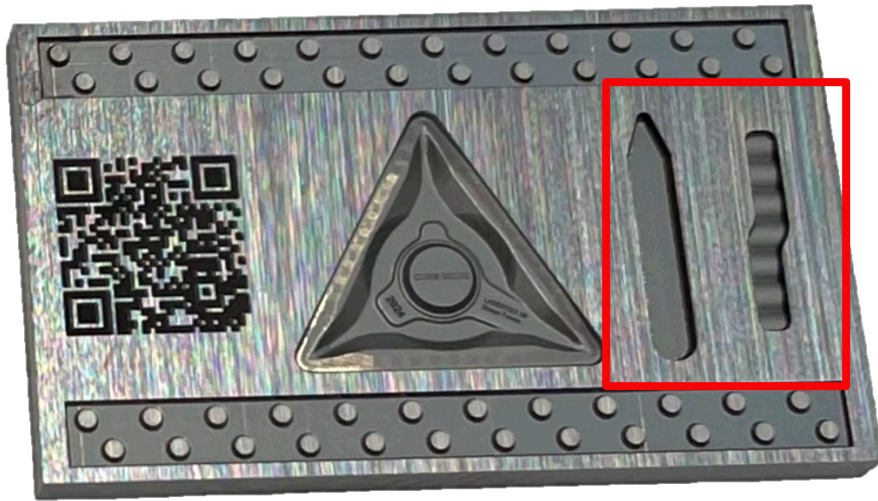
- + Contact-free laser machining without tool wear
- + Femtosecond laser for “cold” and slag free ablation with surface finishes of $Ra \leq 0.1 \mu m$
- + Machinability of Advanced Materials (tungsten carbide, ceramics, PCD ...)
- + 24/7 automation with PH 50



APPLICATION REPORT

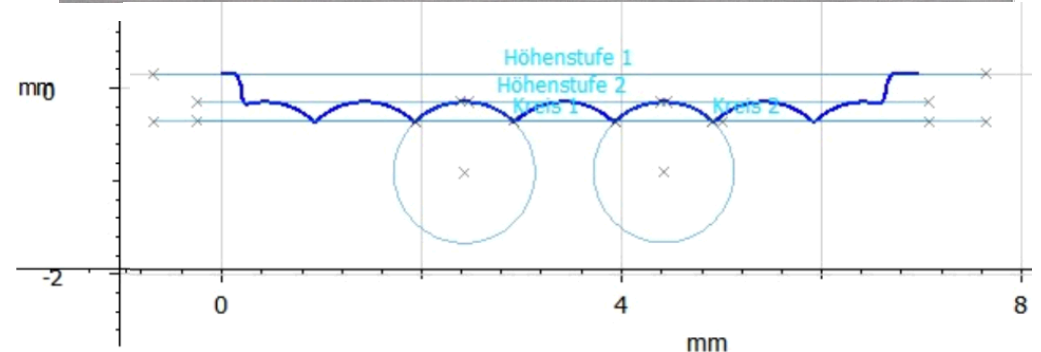
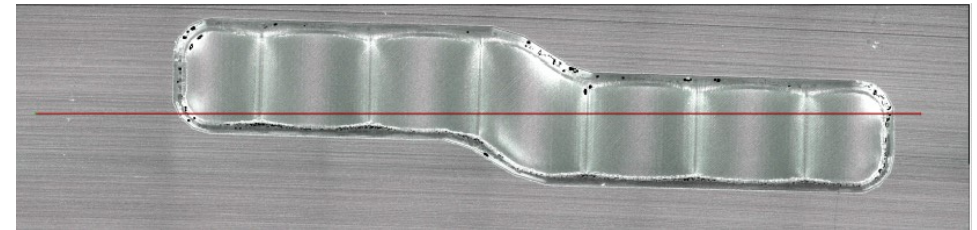
| | |
|------------------------|---------------------|
| Machining time: | 47 min |
| Deviation from target: | 9 μm |
| Flatness | 5 μm |
| Edge radius | <10 μm |
| Ra surface finish: | 0,166 μm |
| Rz surface finish: | 1,525 μm |

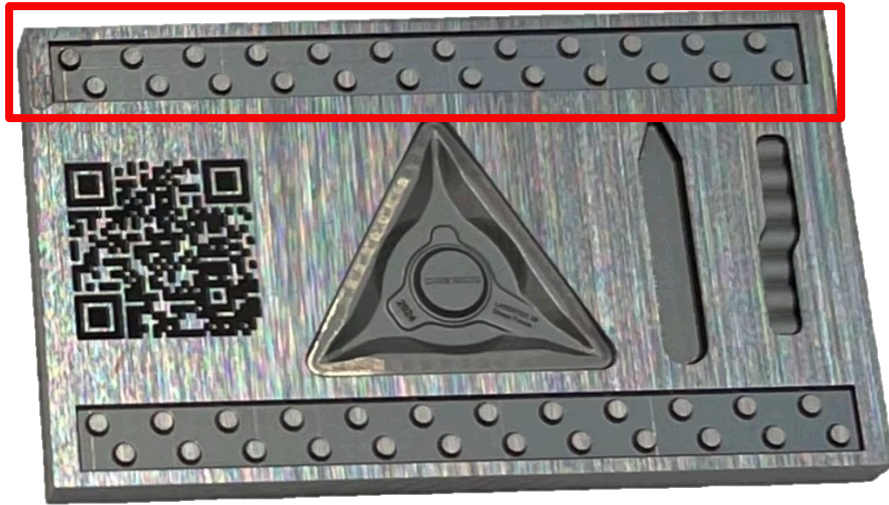




APPLICATION REPORT

| | |
|------------------------|--|
| Machining time: | 30 min |
| Total contour depth: | 528 μm / 425 μm |
| Achievable wall angle: | 8° |
| Radius: | 707 μm (dev 2 μm) |
| Ra surface finish: | 0,166 μm |
| Rz surface finish: | 1,525 μm |





APPLICATION REPORT

| | |
|------------------------|---|
| Machining time: | 24 min |
| Radius: | 298,6 μm (target 300 μm) |
| Achievable wall angle: | 12° |
| Pin height: | 252 μm (target 250 μm) |
| Ra surface finish: | 0,166 μm |
| Rz surface finish: | 1,525 μm |

