

inhouse manufacturing technologies

3D-micro milling – electrode processing

min. cutter \varnothing 50 μ m
min. drill \varnothing 30 μ m
accuracy \pm 2 μ m

ultra precision machining – diamond cutting

position accuracy Y \leq 0,1 μ m
(x \leq 10 μ m)
Z \leq 0,2 μ m
planarity X \leq 0,15 μ m at 100 mm
..... \leq 0,8 μ m at 800 mm
Y \leq 0,2 μ m at 100 mm
..... \leq 0,8 μ m at 350 mm
Z \leq 1 μ m at 100 mm
roughness Ra \geq 10 nm
working area 1200 x 350 mm

micro wire EDM

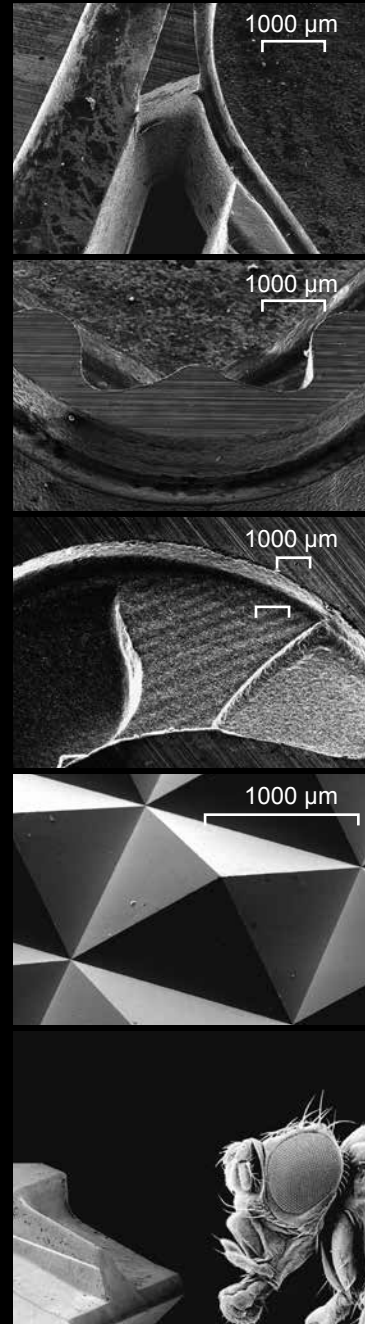
wire- \varnothing \geq 20 μ m
aspect ratio grooves 60 - 80
aspect ratio webs 20 - 30
depth (wire- \varnothing 30 μ m) \leq 7 mm
cutting gap \geq 5 μ m
radius \geq 20 μ m
roughness Ra \geq 0,1 μ m
accuracy \pm 1 μ m

die-sinking EDM

aspect ratio grooves 10 - 25
aspect ratio webs 15 - 25
radius \geq 5 μ m (2 μ m)
roughness Ra \geq 0,15 – 0,2 μ m
accuracy position \pm 1 μ m
form deviation \pm 2 μ m

micro boring

miro sinking EDM
 \varnothing \geq 90 μ m
aspect ratio 5 – 60
micro laser boring
 \varnothing \geq 40 μ m
depth \leq 7 mm
aspect ratio 140



z-microsystems is specialist for
microfluidic consumables and lab-on-a-chip
applications, from development to high
volume production.

