



# Supplier of high-precision metal products

Ultrashort pulse laser processing

Laser precision cutting

Micro water jet cutting

Precision forming technology

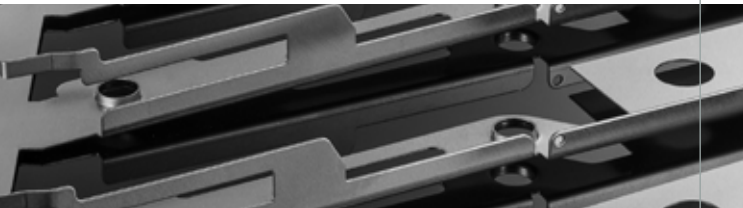
# HAILTEC

# HAIL-TEC: SERVICES



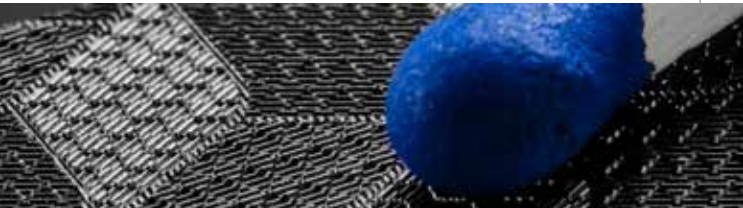
## PROTOTYPES

*Whether laser cut leadframes or curved contacts: we realize more parts for you in less time and support your R&D department – from A to Z, even under time pressure*



## SMALL SERIES

*Laser-cut or punched form springs, contact parts, filigree pins etc.: We manufacture your components reproducibly and with batch traceability*



## ULTRASHORT PULSE LASER SERVICE

*Ablation | Microstructuring | Black Marking*

# HAIL-TEC: TECHNOLOGIES

## Ultrashort pulse laser processing

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## Laser precision cutting

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## Micro water jet cutting

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## Precision forming technology

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## Tool & fixture construction

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## Surface finish

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## Nanogenous measurement technology

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# THE USP LASER JOBSHOP MAKES IT POSSIBLE

## For embossing & stamping technology

- Embossing stamp
- Form and bending inserts
- Mould plates
- Font and number embossers
- Cutting knives
- Minter

## For cutting tool manufacturers

- Press plunger
- Carbide inserts
- Chip breaker
- Microtools
- Spiral processing

coming soon

&

ABLATION

MICROSTRUCTURING

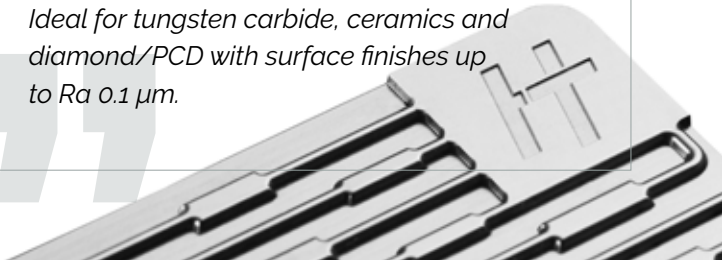
of  $\mu$ m-accurate 3D shapes



“  
Manufacturing filigree 3D shapes without tools?  
Ultra-short pulse laser processing with the  
femtolaser catapults your parts to a new level.

“  
Engraving, texturing, marking and micro-  
structuring from 2D parts up to complex filigree  
3D shapes.

“  
Ideal for tungsten carbide, ceramics and  
diamond/PCD with surface finishes up  
to Ra 0.1  $\mu$ m.



## COMPLEX MOULDS WITH HIGH PRECISION

*economical even for small batch sizes*

## & CONCENTRATED FOCUSED

*with the right „light“*

Various steal alloys

Non-ferrous | precious metals

Nickel | cobalt alloys

Tungsten carbides

PCD/MCD/diamond

Ceramics

Hilumin, Tantalum

Pre-punched belts with press-in zone

Light alloys

## LASER PRECISION CUTTING



spot  
diameter  
**< 0.025  
mm\***

**+/- cutting tolerance  
0.01 mm \***

**Nd:YAG  
LASER**  
pulsed fiber laser

**0.01  
- 3.0  
mm** best  
beam  
quality  
material  
thickness

Extensive material  
warehouse

Material dimensions up to  
**800 x 500 mm**

laser  
marking

\* depending on material, specification, contour geometry



# MICRO WATER JET CUTTING



- Cutting a wide variety of materials without changing the microstructure
- 4.000 bar focused on 0.3 mm beam diameter
- Sheet metal cutting just like wire-cut

spot diameter  
0.3 mm\*

4.000  
bar

No structural change

Smallest web widths possible

surface roughness up to  
**Ra0.8 µm**

Material dimensions up to  
**750 x 500** mm

cold cut

\* depending on material, specification, contour geometry



## PUNCHING, BENDING, FORMING

*for your prototypes, samples, small and large series  
always the right solution*

## PRECISION FORMING TECHNOLOGY

Contact parts | pins

Leadframes

Springs & clamps

Fastening elements etc.

Precision bent parts

**CNC**  
MICRO  
precision bending  
machine

toggle  
presses

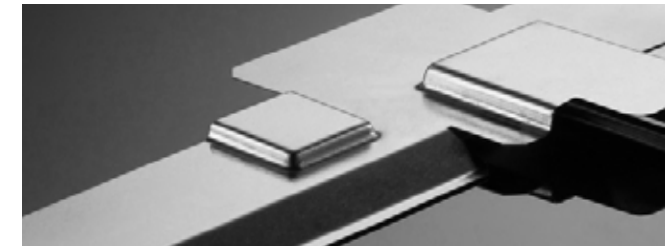
Automatic punching  
press up to

**40t**

in-house  
toolmaking

Hydraulic presses  
up to

**40t**





## TOOL & FIXTURE CONSTRUCTION



**POWERFUL  
& FLEXIBLE**

*What may we realize for you?*

Construction

High-speed-cutting 5-axis milling

EDM wire cutting

Surface grinding

SOLIDWORKS

DCAM  
CUT

high manufacturing  
depth

PEPS

IN-HOUSE  
construction

Latest

CAD  
CAM  
systems

SOLID  
CAM

combinable  
production  
technologies

## SURFACE FINISH

[deburring](#)

[degreasing](#)

[surface refinement](#)

[polishing](#)

[microblasting of surfaces](#)

[electropolishing](#)

[centrifugal and vibratory grinding](#)

[corrosion protection](#)

[heat treatment](#)

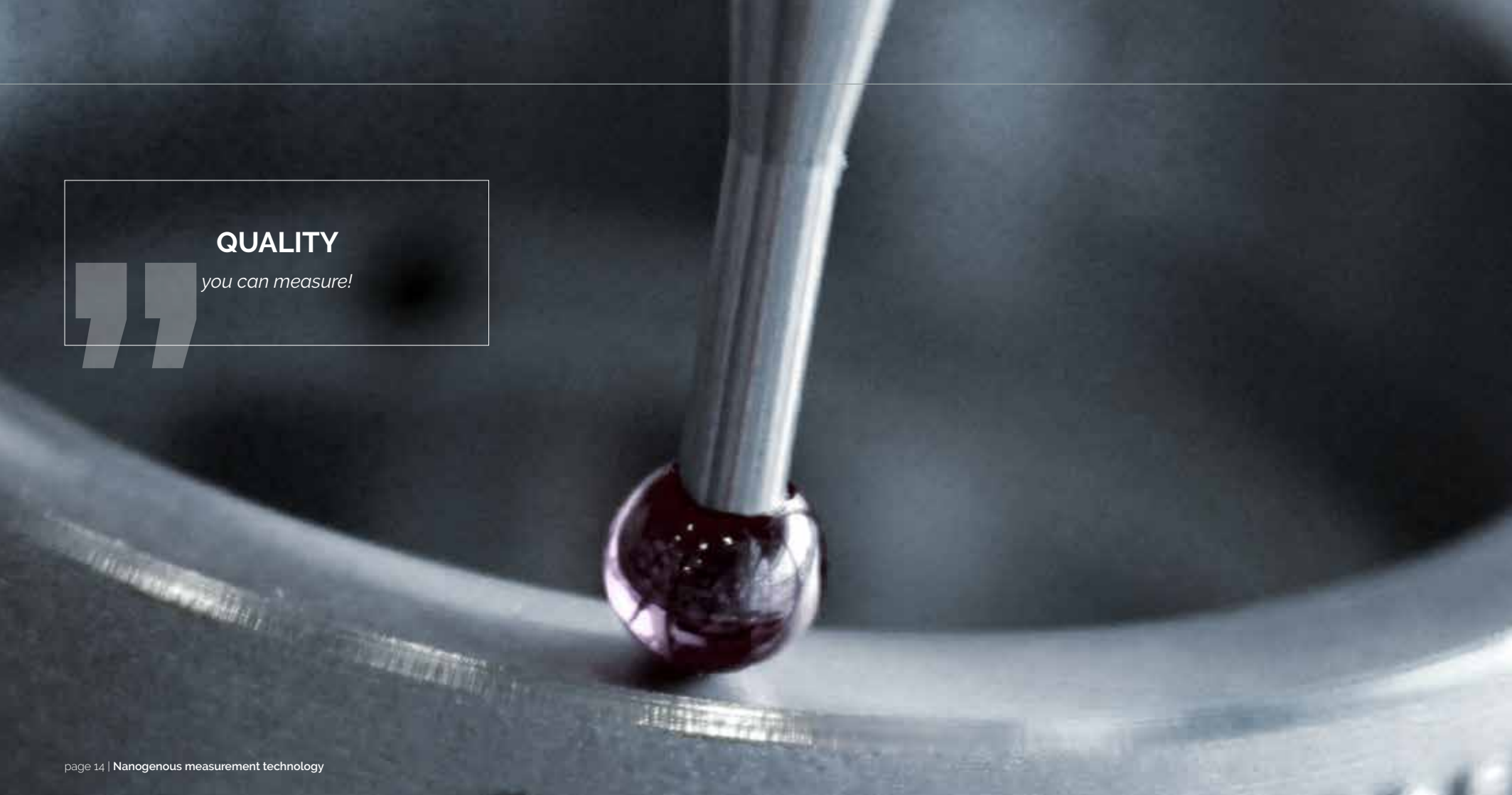
[calendering](#)

[surface polishing](#)



A CONSISTENT FINISH





**QUALITY**  
*you can measure!*

## NANO ACCURATE MEASUREMENT TECHNOLOGY

Multisensor coordinate measuring machine (tactile and optical combined)

Surface Coordinate Metrology from Alicona

Digital Measurement Projectors

Digitization of components in the  $\mu\text{m}$  range

Reverse engineering

tactically and optically  
to the  
**1/1000**  
th mm

Digitization of components  
in the  $\mu\text{m}$  range

batch  
traceability

**STATE-OF-THE-ART  
MEASURING MACHINES**

**DIN EN ISO 9001**  
CERTIFIED

Sampling  
possible

YOUR ADVANTAGE

our know-how



for high-tech industries such as

Tool and mould making

Medical technology

Aerospace

Micro- and precision mechanics

Electrical industry

Automotive

Mechanical engineering

*Everything under one roof, binding deadlines and consistently high quality – when do you test HAIL-TEC's high-precision metal solutions?*

***We are looking forward to your inquiry!***

