

Your specialist for  
**SPECIAL MACHINE  
CONSTRUCTION & MACHINING  
in the micro range**



**PRECISION WITH**

**SENSITIVITY**



**Microautomation &  
Microassembly**



**Micromachining**



**Wire processing**



# PRECISION THAT MOVES

## DEVELOPMENT & PRODUCTION: IN A NUTSHELL.

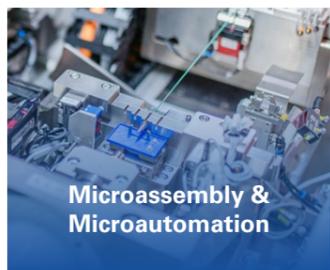
**In the field of special-purpose machine construction and micro-machining, we can do what almost nobody else can:** We develop and produce machines that can precisely process materials in the micrometre range. A magnifying glass and sufficient light are usually needed to see which product comes out after it has been cut, wound, lasered or glued.



### The future begins with us

**At ZORN Maschinenbau, technical and entrepreneurial innovations are delivered by the people who make things possible.**

Thanks to our specialisation in machines for the precise machining of micro parts, we have enjoyed a good reputation in the market from the very beginning.



Microassembly & Microautomation



Micromachining  
zornmicroone



Wire processing

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Sustainability

# OUR STORY

The mechanical engineering department originates from the equipment manufacturing department of a former light bulb factory in Stockach. For decades, all devices and machines were developed and manufactured in-house. The first systems for processing glass and wire were followed by many other special-purpose machines for precision assembly tasks.

Today, ZORN Maschinenbau still regularly processes wire in a wide variety of forms on our systems.



Component size approx. 5x3 mm



THE TRUE GREATNESS lies in the detail



## RELOCATION from Berlin to Stockach

Relocation from Berlin to a new building in Stockach.  
Employees in Stockach: 4  
Employees in Berlin: 80

## MOVETO new company building

New company premises in Stockach with 3000 square metres for production, and expanded special-purpose machine construction.

## EXPANSION of light sources with LED technology

ZORN is expanding its range of light sources to include products with LED technology.

## NEW PORTFOLIO Micromachining

The ZORN micro one - a compact miniature machining centre - has been specially developed for the micromachining of micro parts.

## 3. AWARDED TOP JOB seal

For inpotron Schaltnetzteile GmbH in the group of companies.

## ZORN MICRO ONE moves to Switzerland

Starting in February 2024, our sales partner URMA takes over distribution of ZORN micro one in Switzerland.

1951

1961

1971

1987

2001

2009

2013

2015

2019

2022

2023

2024

2025

### ZORN Company foundation

Mr Zorn Sr. founded the company in Berlin with around 10 employees. The company started by producing lamps and light pointers, including the first arrow lamp.

### HEINE OPTOTECHNIK acquired ZORN

01/10/1971: Heine Optotechnik buys ZORN company

### 50YEAR anniversary

50 years of the ZORN company  
40 years of ZORN in Stockach  
30 years of ZORN in the possession of Heine Optotechnik

### ZORN MECHANICAL ENGINEERING goes independent

The mechanical engineering division now operates as the independent ZORN Maschinenbau GmbH and is part of inpotron Schaltnetzteile GmbH.

### EXPANSION into Mechanical engineering

Around 50 employees are driving progress.

### AWARD FOR Environmental & Climate protection

ZORN micro one wins the Konstanz Climate Protection Award and takes third place in the Baden-Württemberg Environmental Technology Prize.

### RELOCATION TO new building

Relocation to the new site "Im Eschle 10" with modern production facilities for the future.

# ABOUT US

# 40



Object width  
7.56 mm

FOR 40 YEARS  
**procedural experts**

For decades, our team of motivated employees and a network of creative partners have been realising both standard solutions and individual projects according to customer specifications and wishes.

MINIMAL IN SIZE  
**MAXIMUM  
IN EFFECT**

Our mechanical engineering stands for sophisticated and customised precision solutions.

We develop and manufacture machines ranging from small systems for micro applications to robot-controlled production lines.

First, we **analyse**  
your **manufacturing processes,**

then **we develop a  
machine for it.**

**Martin Zeiher**  
Managing Director

Component size  
 $\varnothing 2.2 \times 7.5$  mm



WE ARE  
**specialists in the  
micro sector**



# WHAT WE DO



## Microautomation & Microassembly

Customised special-purpose machines from small systems for micro applications to robot-controlled production lines.



## Micromachining

Compact & modular precision machining centre for milling, drilling and grinding miniature parts.



## Wire processing

Special-purpose machines for precision assembly with wire and glass in a wide variety of forms.



**ADDED VALUE FOR CUSTOMERS**

**There's no such thing as impossible.** We design, develop and build our customer systems with passion and dedication. Every machine has different requirements. What many of our customer-end products have in common, is that parts the size of a pin or wires half a hair's breadth are processed automatically, at high speed and with the utmost precision.

## OUR INDUSTRIES

- › Medical technology
- › Sensors
- › Precious metal processing
- › Electrical
- › and many more

A NEW FOCUS  
**Modular automation for flexible small-batch production**

**Quality**  
Made in Germany

## Micromounting

## Microautomation

Feed



Assembly



Further processing



- > Bending
- > Presses
- > Rivets
- > Screws
- > Upsetting
- > Gluing
- > Soldering
- > Welding  
Ultrasonic/laser/resistance welding
- > Labelling  
Laser, inkjet/pad printing, labelling
- > and much more

## Mechanical engineering

WITH A SURE INSTINCT

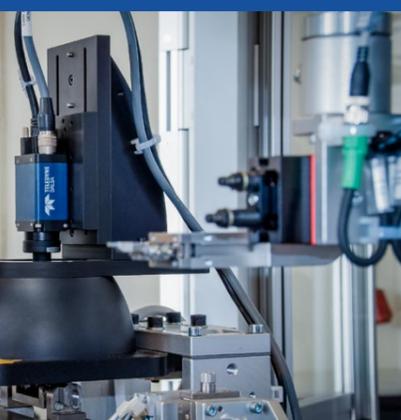
Thanks to our many years of experience in mechanical engineering for precision assembly tasks, we have a high level of expertise and can deliver both standard solutions and individual projects according to customer specifications.

We process wire in small and micro parts in a wide variety of forms on our systems.

## Testing machines, wire & glass processing, clean room

### Wire & Glass processing

We also build systems in which glass and/or wire are processed. This is historically due to our beginnings in the production of light bulbs at ZORN.



### Testing machines

ESPECIALLY FOR CRITICAL COMPONENTS

Components with curved surfaces, changeable structures and highly reflective materials can be tested without any problems.

We utilise the latest optical inspection technologies, including advanced lighting technology, for more precise results and efficient inspection processes. Different sensors and photo-optical systems are perfectly integrated into the machine concept for component inspection.

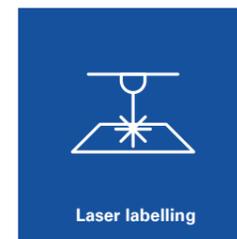


### THE SOLUTION FOR YOUR PRODUCT IN THE Clean room

Our cleanroom cells were developed with the support of a test laboratory for cleanliness analyses. Topics such as dirt generation, cleaning, installation, integrated laminar-flow facilities and guided exhaust were the main components of this development.

### INDIVIDUAL Labelling

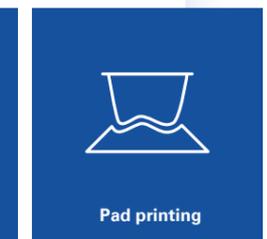
Labelling or marking we can customise your product with different systems.



Laser labelling



Inkjet



Pad printing

# Wire processing

By integrating specialised technologies, we can use a wide variety of processing methods.

- Separation
- Straightening
- Cutting
- Bending
- Soldering
- Welding
- Gluing
- and many more

Your specialist  
for processing  
**WIRE**



## Coil

from 0.02 mm



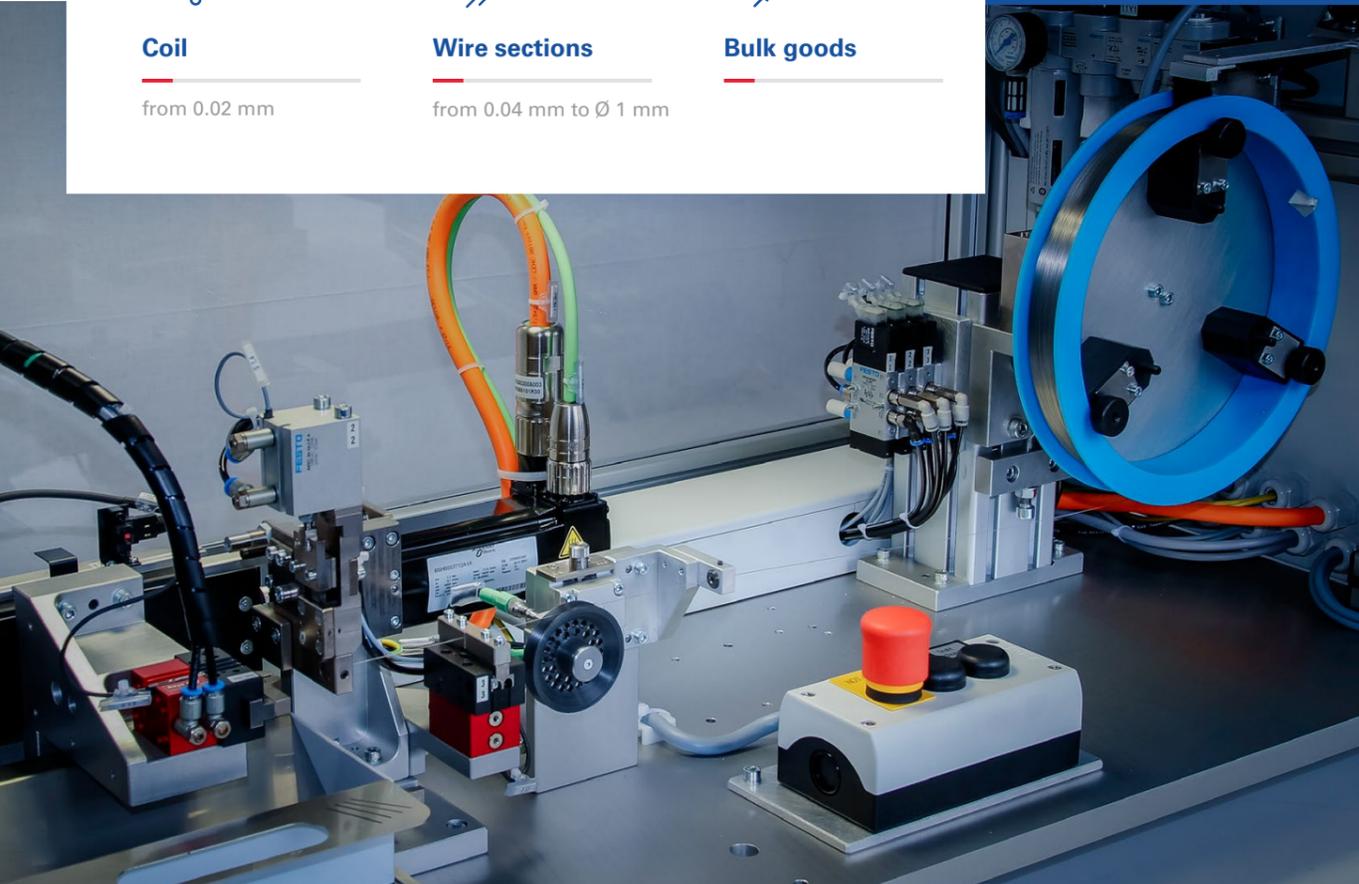
## Wire sections

from 0.04 mm to Ø 1 mm



## Bulk goods

## MATERIAL MOULD Processing



Hair, drill, milling cutter, pencil point



THIS IS WHAT OUR  
**wire-cutting**  
machine processes

## Diameter

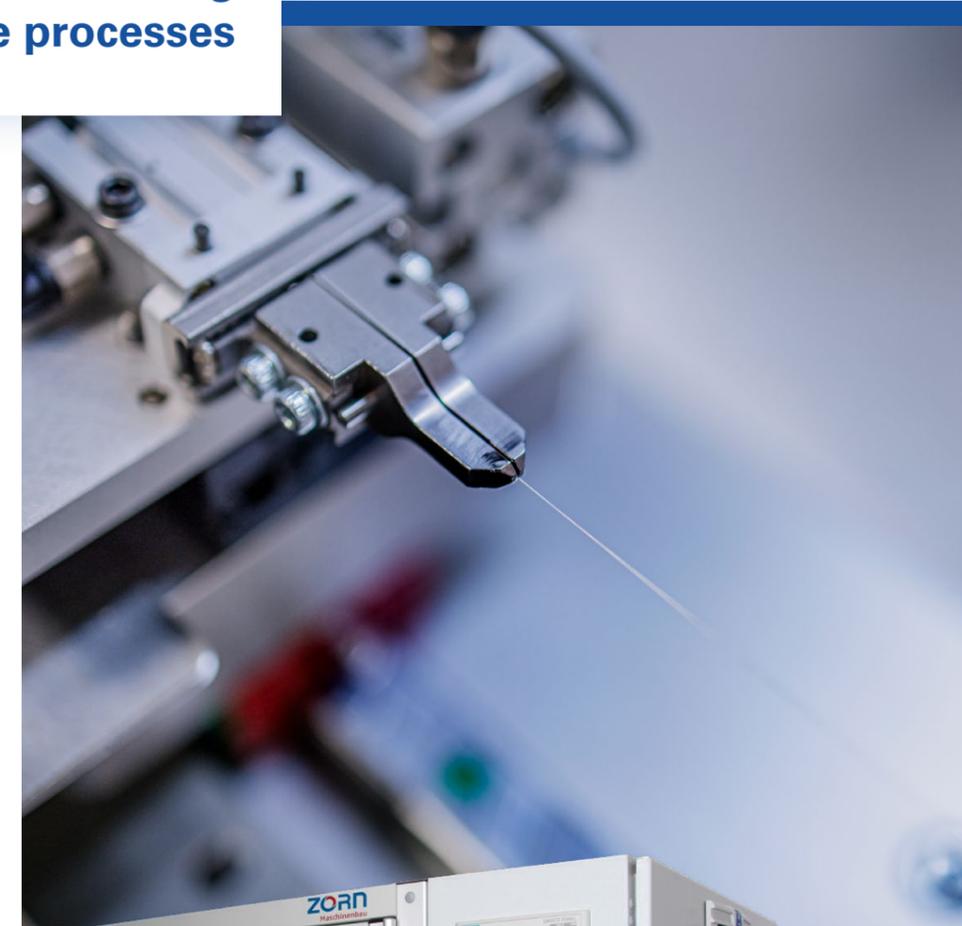
0.02- 0.8 mm

## Lengths

10- 300 mm

## Materials

Copper	Molybdenum
Platinum	Plastic
Silver	VA
Gold	etc.
Tungsten	





OUR  
**ZORN** **micro** one

# Tool holders, tool storage & clamping devices

## Spindles & tool clamping

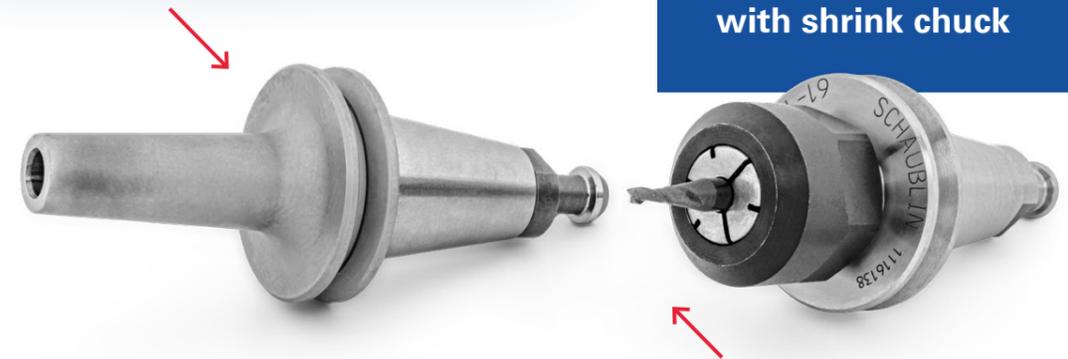
### Short distances

With all tool holder variants, the tools are always moved along the main axis and changed as close as possible to the work table. The short distances and length measurement directly at the work table are a great advantage here.

### MINIATURE

### STEEP TAPER MOUNT

with collet chuck or  
with shrink chuck



# Micromachining

ENTERING A  
new dimension in modern  
precision machining!



**ZORN** **micro** one

stands for **energy-efficient & compact micromachining without compromise.**

The ZORN micro one is an extremely compact and small precision machining centre for milling, drilling and grinding miniature parts in coordinated motion, including a modular design.

[zorn-maschinenbau.com](http://zorn-maschinenbau.com)



### Customised tool store

Up to 40 tools can be stored in the extended tool store to save space. Tools are exchanged via a drawer system and are also accessible during operation. The standard magazine holds six tools. The type of tool holder can be freely selected depending on various factors.

## Everything under control



Tool changing system with large tool store



Standard tool magazine, ISO10 with 6 pockets



Tool storage with up to 40 tools

# Automation

## ZORN MICRO<sup>one</sup>

### EVERYTHING FROM one source

During the development of the ZORN micro one, care was taken to prepare everything for future automation. When it comes to handling small components in particular, we can draw on our wealth of experience from 40 years in special-purpose machine construction.

### Advantages

- No coordination & scheduling problems
- No external providers
- Customised solutions are our specialty
- We automate & equip your new machining centre according to your requirements
- Turnkey projects or smaller requests - we are open for everything

### Control technology

The drive-based CNC from Siemens belongs to the premium class and supports the micro one machine concept with maximum performance.

- › Use of technologies for multi-tasking concepts
- › 5-axis simultaneous machining with optimised kinematics
- › Wide range of different part-machining processes
- › Flexibility & Openness



Siemens



Fanuc

NEW

### Modularity

IN "MINIATURE SIZE"

Plug and play not only for the technology, but also for transport, the micro one fits through any standard door without disassembly. The modularity of the actual processing unit makes it possible to design an ergonomic seated workstation. The supply unit is moved to the side or to the rear to provide sufficient legroom.

Processing unit

Supply unit

Maximum 0.9 m<sup>2</sup> floor space fits on a Euro pallet



Everything is possible

### APPLICATIONS OF Laser processing

Applications such as **Laser cutting**, **Laser welding** or other alternative uses, e.g. as a **3D dosing system** or similar, are possible with all the degrees of freedom of a modern machining centre.

PREMIUM

SMART



### Customisable IN RESPECT OF

We offer different versions of automation cells for different tasks, depending on the type and scope. These range from simple loading to complex further processing or interlinking. The options for parts feeding are also particularly varied, whether as raw material or prefabricated.

# Automation

## SPACE MIRACLE Automation cell

The ZORN micro one can be flexibly adapted to a wide range of requirements thanks to its compact design and separable modules.



## Modular production cell

The modular production cell is customised to the size and design of the micro one down to the last detail. The robot has maximum flexibility thanks to the ceiling mounting and can therefore reach out of the cell on all sides and operate up to three micro ones!

## Highest benefit

for the characteristic value output / m<sup>2</sup>

### SAVE VALUABLE floor space



## Automation

### MODULAR FLEXIBLE COMPACT

As a rule, the automation module is used as a feeding and removal device. Several variants of feeding technology are available for this purpose. Alternatively or in addition to this use, other manufacturing processes can be integrated in order to link other modules instead of other microones.

SAVE & WIN

# Sustainability is at the heart of production

With the ZORN micro one, we have created an innovative and contemporary product that protects our environment, is produced sustainably and is also economically significant.



Compared to a conventional CNC machine



## AWARD-WINNING Micro machining centre

In October 2023, our company was honoured twice in the space of just a few days.



### Konstanz Climate Protection Prize:

The ZORN micro one won in the energy efficiency category.



### Baden-Württemberg Environmental Technology Award in the Energy Efficiency category:

ZORN micro one took 3rd place out of a total of 123 applications submitted.

# YOUR CONTACT FOR Precision

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Ein Unternehmen  
aus der

