

# CNC Lathing CNC Milling

Max Auer Propr. Lorenz Forster e.K. CNC Machining / CNC Lathing / CNC Milling

Using the latest CNC technology, such as 1-spindle or 6spindle machining centers we run three shifts to produce simple as well as highly complex ready-to-install precision lathed parts and milled parts according to customer drawings or prototypes in small or large quantities.

#### **CNC** lathing

- ✓ Processing of rods from 1.5 to 65 mm in diametre
- ✓ Parts up to 2000 mm in length on multi-axis machining centres
- ✓ Processing of collet-held workpieces up to 250 mm in diametre

#### **CNC** milling

- ✓ CNC milled parts on machines with 3 5 axes
- ✓ Mounting size of up to 630 mm
- ✓ Automated pallet change for highest productivity

#### Materials

We process all machinable material such as

- ✓ Steel
- ✓ Stainless steel
- ✓ Aluminum
- ✓ Non-ferrous metals
- ✓ Titanium
- ✓ Plastics

#### **Production runs**

- Runs from 100 pieces to mass production
- ✓ Individual pieces.
- ✓ prototypes





#### Grinding and Honing Cold Roll Forming Thread Rolling

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### Tool / Prototype Building Surface Finishing Heat Treatment

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Our production range is completed by

#### **Centreless grinding**

for fine machining e.g. bolts and shafts

- ✓ Diametres from 1.5 to 60 mm
- ✓ Lengths up to 800 mm per pass or entry

#### CNC internal grinding

✓ Diametres from 8 to 120 mm

#### **CNC** external grinding

- ✓ Diametres from 6 to 150 mm
- ✓ Lengths up to 600 mm

#### Honing

Our honing processes achieve highest precision of measurements and shapes.

#### Precision saw cutting

- Precision saw cutting equipment to achieve flat, square, smooth surfaces of most metals
- ✓ Materials: steel, stainless steel, aluminum, nonferrous metals, titanium, plastics
- ✓ Sawing up to a width of 400 mm

# Thread rolling

We manufacture all standard and non-standard threads

- ✓ Plunge-cut rolling of M2 through M30 with a length of up to 60 mm
- ✓ Through-feed rolling of M3 through M16 with a length of up to 1,500 mm

#### Cold roll forming

Cold roll forming is a process of applying contours, knurls, sprockets etc. onto any machinable material. Our production ranges

- ✓ Up to a diametre of 30 mm
- ✓ Up to a length of 1,500 mm

Tool and prototype building are also part of our services as is the surface finishing and heat treatment of lathed and milled parts.

#### Tool building and building of general equipment

We use manually and CNC controlled tooling machines to make complex tools for use in a variety of manufacturing processes. Our tools are used for the most cost effective and fast production of mass items in our manufacturing process.

#### Prototype building

Production of lathed prototypes and milled prototypes or small quantities

#### Surface finishing

Our range of services:

- ✓ Zinc coating (also Cr6-free)
- ✓ Nickel coating
- ✓ Electroless nickel plating
- ✓ Browning / bonderizing
- ✓ Chrome-plating

#### Heat Treatment

Our range of services:

- ✓ Tempering and hardening
- ✓ Hardening and case hardening
- ✓ Soft annealing
- ✓ Stress relief annealing
- ✓ Tempering



Surface finishing and heat treatment are supplied by our long-term, quality-certified partner, who is subject to our own QM system.







# **TIG Welding EB Welding**

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We offer the latest welding technology, self-evident with documentation according to customer specifications.

#### **TIG** welding

Welding of steel, stainless steel and cobalt alloys Production runs: from prototypes to small series



#### TIG welding inside a shielding gas chamber

Welding of steel, stainless steel, cobalt and titanium allovs

Chamber size: Ø 500 mm by 1,100 mm Workable area: L 500 mm by W 400 mm by H 200 mm Production runs: from prototypes to small series

#### TIG-Welding on the horizontal rotary table

Welding of steel, stainless steel, cobalt and titanium allovs

Maximum length of workpiece: 900 mm Maximum diametre of workpiece: 900 mm Production runs: from prototypes to small series

#### Electronic beam welding

High vacuum welding for the cleanest possible weld seam, esp. for reactive metals such as titanium, niobium and stainless steel used e.g. in medical technology, precision engineering and research

Machine type: Leybold EBW 700/7,5-60 CNC U:60KV

Chamber size: 1,100 mm in length, 750 mm in width

Maximum height of workpiece: 600 mm Workable area: 430 mm by 230 mm Welding depth: up to 20 mm, depending on material and geometry of the workpiece

Production runs: from prototypes to small series



✓ Error analysis

# **Quality Management**

Max Auer is certified according to DIN EN ISO 9001 and

✓ Regular staff training to meet customer requirements

✓ Provisions for meeting customer requests for specific

✓ Involvement of contractors in the QM system

✓ Production planning to accommodate customer

✓ Support our customers in the design process

✓ Stock holding to ensure our ability to deliver

✓ Production control through the Kanban system

✓ Provision of product-specific information

committed to the protection of the environment.

We garantee highest quality through

✓ Application of the 8D-method

Customer satisfaction through

✓ Flexible terms of delivery

requests at short notice

and delivery reliability through

quality standards

✓ Just-in-time delivery ✓ EDP based MRP system

each stage and in-process gauging



# For the highest quality and delivery reliability

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#### Max Auer - your address for

- ✓ Highly complex, ready-to-install CNC lathed and milled parts from all machinable material
- ✓ Surface finishing, heat treatment
- ✓ Tool and prototype building
- ✓ grinding, honing, thread rolling, cold roll forming
- ✓ The latest in welding technology: EB / TIG welding
- the realization of your product idea: from technical  $\checkmark$ drawing to a marketable product

### We are on the market since 1920 and offer

- Decades of experience  $\checkmark$
- Certification according to DIN ISO 9001:2008  $\checkmark$
- Environmentally friendly manufacture  $\checkmark$
- Data exchange via EDI (VDA bidirectional)  $\checkmark$
- ✓ Integration into the control of your production process following the Kanban system or just-in-time delivery
- ✓ Two production sites in Germany (Berlin, Hanover)
- ✓ Global deliveries to our international customers in Europe, China, India or Brazil

## We are focused on the following sectors

- ✓ Automotive, automotive component industry, aviation and aerospace industry
- ✓ Mechanical and electrical engineering
- Medical technology (according to EU Guideline  $\checkmark$ 93/42/EEC and the GMPA, clean room class D)
- ✓ Jewellery industry

# Challenge us · We are here for you!

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