

Light



Strong



Resistant



The Innovation Network

WEBO – formed light weight solutions in aluminum



SCHULER KONSTRUKTIONEN

Engineering, Design,
Documentation

ENTECH

Product Development,
Simulation, FEM
Calculation

ROHTECH

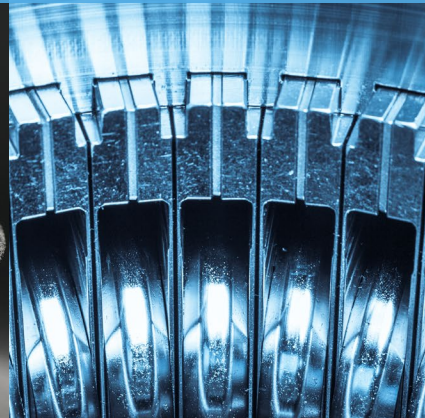
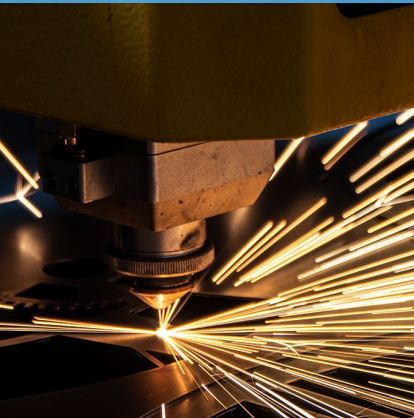
Engineering Automotive
Planning, Manufacturing,
Simulation, Design for
Automotive needs

ROHTECH-DST

Engineering Production
lines, Automotive,
Aerospace

SHF

Logistic
Technologies,
Intralogistics



SHM

Special Machine
Development, Plant
Construction,
Assembly Technology

OPAL

Machine Development
for Machining
Processes

SYTECH

IT- and Software
Technologies

KOLIBRI

Additive Manufacturing,
3D-Print of Tools Steels
and Carbide Metals
(MMC)

WEBO

Tool Manufacturing, Part
Production, Part
Development

SCHULER INDEPENDENT COMPANIES GROUP

As a worldwide technology leader in the areas of tool and special machine construction, series parts manufacturer and component developer, we meet the high demands of our global clientele on a daily basis.

In addition to precision and delivery reliability, our quality is always in the foreground. Since 2019, we have been a reliable supplier for services, material science, tactile and non-contact 3D measurement technology. If required, we can analyse materials technology issues for you in our in-house laboratory. WEBO is certified according to DIN EN ISO 9001.

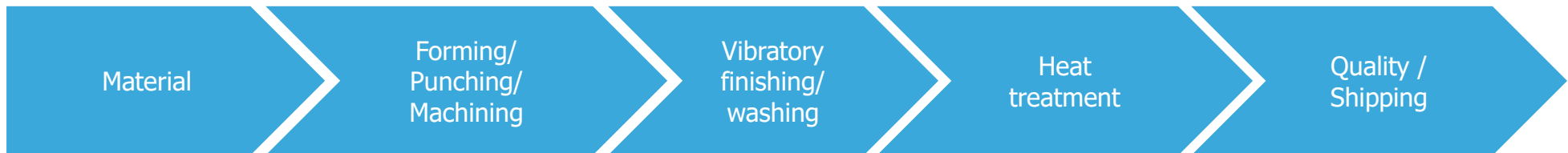


Our relationship with aluminium processing has a history. Especially in recent years, WEBO has been increasingly confronted with lightweight materials. Since its foundation in 2008, WEBO has been constantly pushing ahead with developments and investments to bring aluminium or composite components made of aluminium and steel to series production readiness. Most recently, investments were made in a high-tech furnace system.



Always in the focus of our components: Low weight combined with optimum component performance in terms of hardness / rigidity / load capacity. WEBO sees itself as a technology leader, especially in the segment of toothed and rotationally symmetrical components.

The in-house process chain:



Our preferred materials are mostly hard enable and very often leave the factory in T6 condition.

Preferred materials of the DIN / EN AW classes 1.60XX, 1.70XX, 1.50XX are determined together with our customers.

What we can do, here at a glance:

Component development

- Sketching
- FEM calculation
- Forming simulation
- Prototypes also from ZSB
- Assembly concepts
- Metrological analysis
- Laboratory
- Final finish

Series production

- Machining with P-change
- Forming with transfer
- Punching
- Fineblanking
- Vibratory grinding
- Washing
- Heat treatment
- Metrology and quality

Assembly technology

- Forming joining
- Clinching
- Screws
- Rolling
- Welding
- Fastener insertion
- Digitally monitored processes

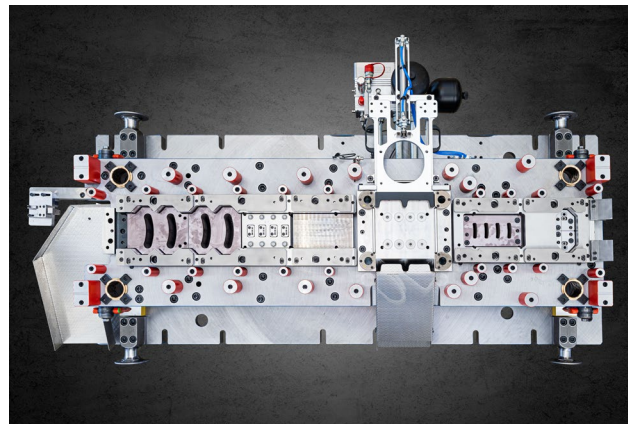
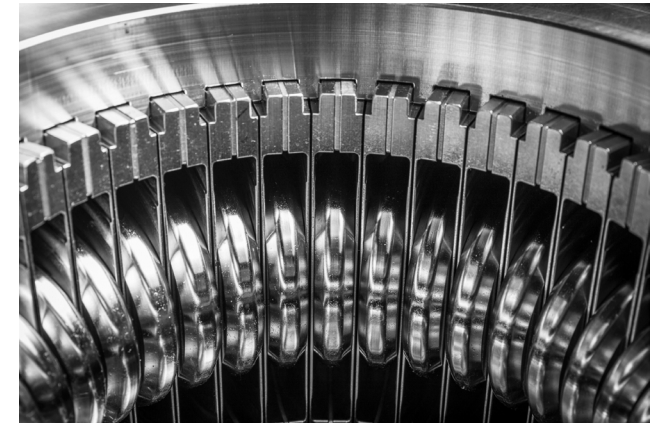
Heat treatment and cleaning

- Solution annealing
- Tempered and time-controlled quenching
- Artificial ageing
- Heat distribution analysis and homogeneity-batches
- Automatic processes with digital protocols
- Distillation cleaning for highest demands
- Fluid cleaning and drying
- Contamination control and analysis

Metallographic examination

- Micrograph preparation and micrograph analysis
- Specimen preparation Microscopy
- Pore analysis
- Microstructure analysis
- Ageing effect analysis
- Weld inspection by macroscopic and microscopic analysis
- Particle size distribution of powder (3D printing/additive manufacturing)

From progressive dies to transfer tools and fine blanking tools. WEBO mostly produces its tools and production equipment in-house. In addition to component development using FEM and various simulation processes such as Simufact, through to prototype production and final tool design, the diverse customer requirements can be satisfied with efficient solutions. Precision, speed and competitiveness play a special role here, which WEBO carries in its genes.

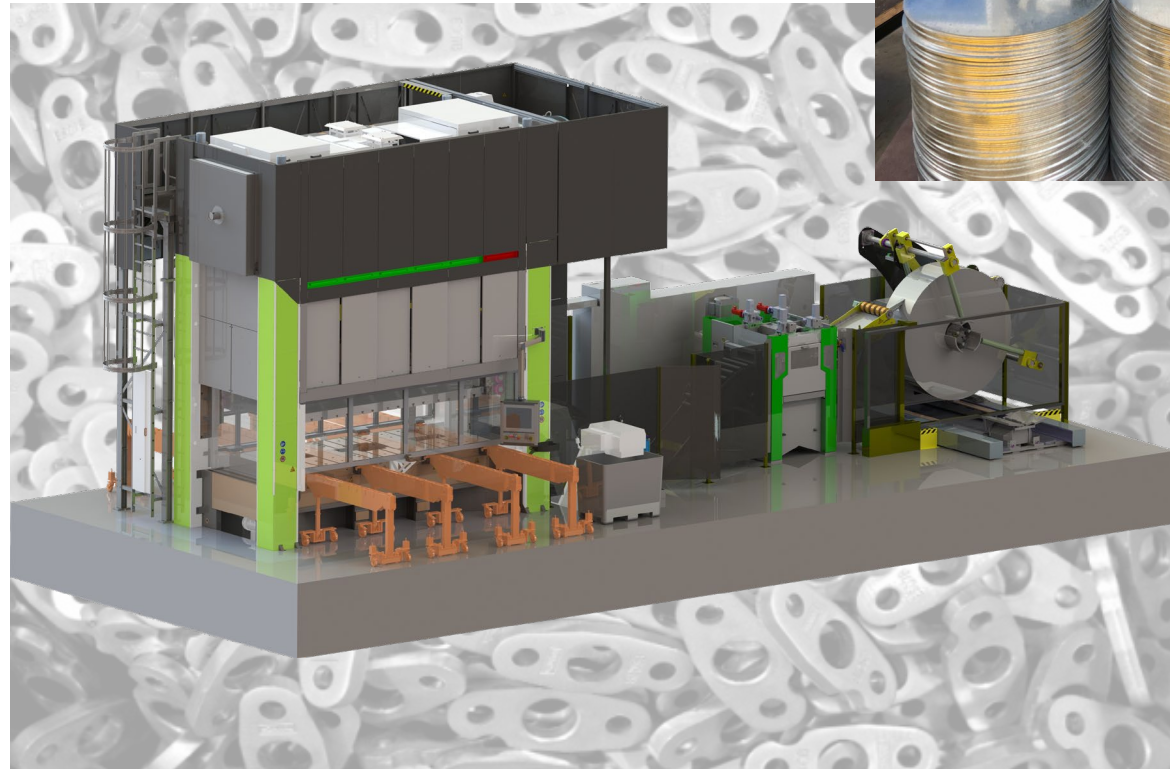
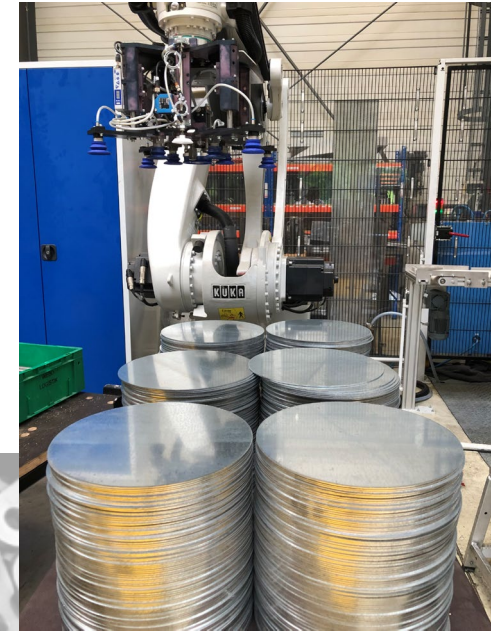


Series production with presses at WEBO

Transfer presses and presses for progressive dies with maximum press forces of up to 6,300 kN are available for our series production. The material can be processed from the coil or from the blank.

Tools for fine cutting can also be operated on our presses using FSP's patented WEBO technology.

Continuous quality measurement by means of digital recording of measurement data and its processing are a matter of course for us.

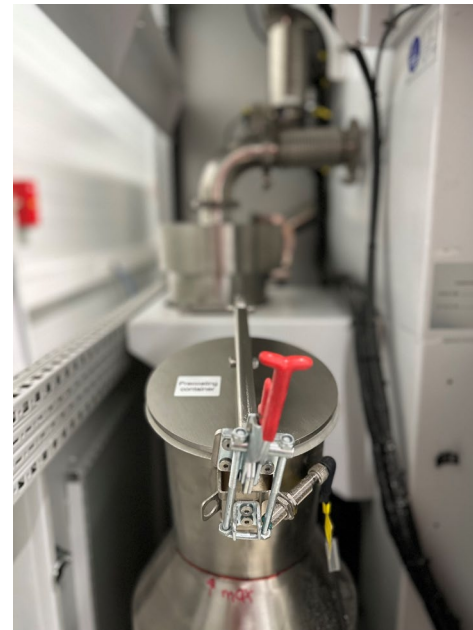
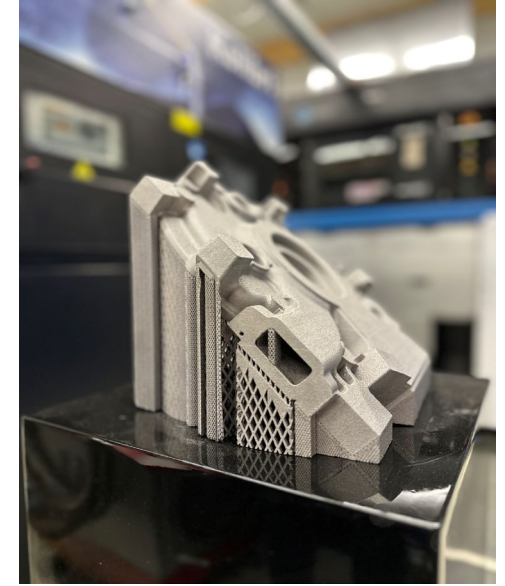


The 3D printing of aluminium by WEBO/Kolibri

Within WEBO's premises, a wide variety of materials are also 3D printed using the additive process of laser-based powder bed fusion. These include aluminium alloys from the AW-50XX, AW-60XX and AW-70XX alloy family class.

The existing aluminium expertise in combination with heat treatment at WEBO results in prototypes and additive series solutions, some of which are not available on the open market.

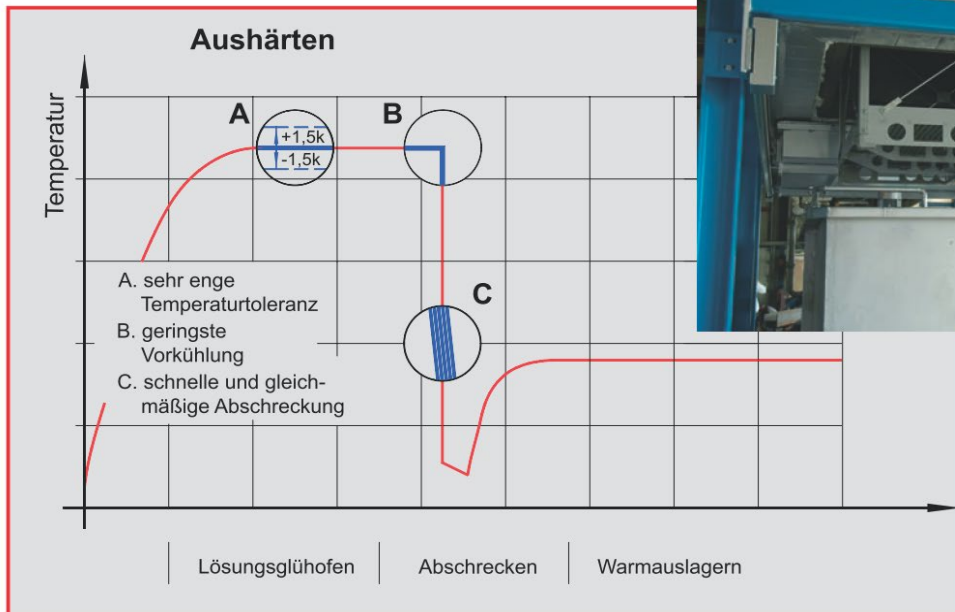
Lightweight construction combined with design freedom and the exclusive material mixtures offered by WEBO and its partner Kolibri create completely new product possibilities.



By investing in new electrically controlled furnaces, a wide variety of processes can now be realised with regard to the heat treatment of aluminium.

In addition to solution annealing (up to 650°C) from state T0 to T4 with subsequent quenching in a heated water bath, the components are ready for subsequent artificial ageing (up to 250°C) to increase hardness. Batches of up to 700 kg with dimensions of 1500 x 1500 x 970 mm in the charging rack can be run per furnace process (batch).

The fully automated furnace system offers the safe process according to CQI9/AMS2750.



The component - final finish at WEBO

The final finish is close to our hearts. The PERO cleaning system stands for high efficiency in process engineering and sets the standard for the most efficient use of energy. The optimum solvent for the respective cleaning task and contamination can be selected from all common solvents. Customers from the automotive to the aviation industry appreciate the precise cleaning technology with cleaning with hydrocarbons or modified alcohols as well as halogenated hydrocarbons.

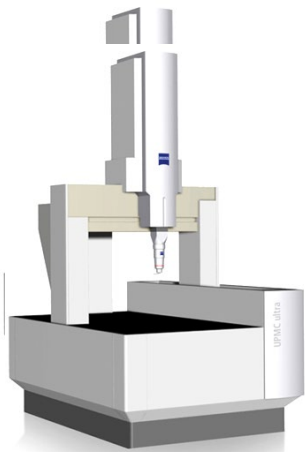
Vibratory finishing and polishing are processes of the final finish, which we master both manually and automatically. Different metallic materials require careful selection of the right method.



All tactile and non-contact measuring methods are used in our air-conditioned measuring area. Component tests can be carried out up to 25,000 rpm in the centrifugal / speed test stand.

Measurement technology

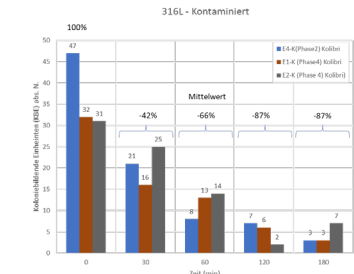
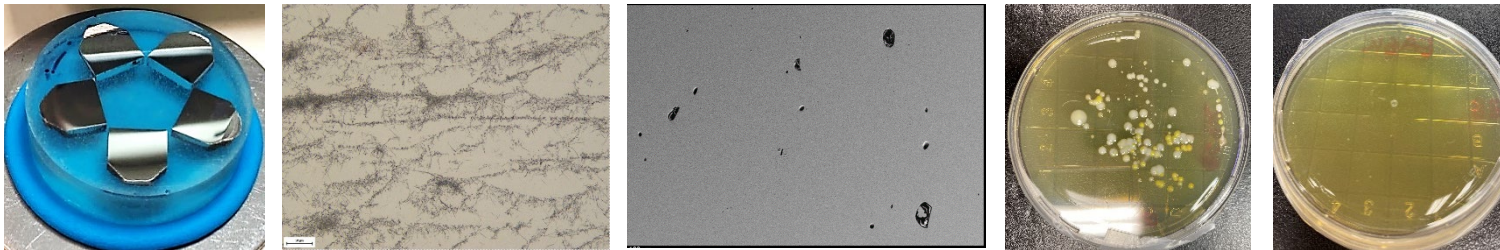
Our equipment at a glance:



In our air-conditioned laboratory, we produce micrographs and analyse flexural fatigue strengths, material hardnesses, microstructures, welds, surfaces, coatings, electrical and thermal conductivities, grain size distribution, powder flow rates, contamination levels and detect contaminated surfaces by microbial count analyses.

Own laboratory:

Various equipment and devices enable professional scientific analysis.



High standard need save rules. Certifications for save and reliable processes and zero fault deliveries.

Here the list of our Certifications for your kind analysis:

WEBO GmbH: ISO 9001, ISO 14001, sustainability certificate in preparation

Kolibri Metals GmbH: ISO 9001, ISO 14001, sustainability certificate in preparation

Schuler Design Group – all remaining members: ISO 9001;

GlobalTek on different locations for the customer and product circle:

ISO 9001, ISO 14001, IATF 16949, ISO 13485, AS 9100D, NASCAP Chemical Processing, GE-GT 193 Certificated, SAFRAN DMP 12-031 Certificated, SAFRAN –FAL Certificated, SPP Special Process Approval



We love what we are doing...



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