

Form Solutions



11. Juni 2025

Swiss family business with future



Raphael Jehle

Owner & Chairman of the Board of Directors

- ▶ With pride we can look back on the traditional history of Jehle AG. Since our **founding in 1947**, we have always dared to try something new and therefore we have grown steadily.
- ▶ Today, our **family-owned company** is successfully positioned on the market in the fields of stamping and forming, injection molding, tool and die making technology.
- ▶ Our customers are seen as our partners. Working together as a constructive team brings decisive advantages to both sides. With the third generation, the course is set for the future.



company video:

<https://www.jehleag.ch/en/company>



Technology Center – Toolmaking with passion



- ▶ As a **technology partner** for customized components made of metal and plastic, we offer complete solutions for a very broad range of customers from a wide variety of industries.
- ▶ **Solutions on point** are the result of the close cooperation between our engineers and the customer.
- ▶ With our 170 employees, we pursue every day for the same goal: **100% customer satisfaction**.
- ▶ In our Technology Center - «**Tool and Mold Making** » we work with the latest technologies as well as the optimized material, process and information flow.



Success does not accept stagnation



Company founded by Josef Jehle



Establishment of a second production plant for serial production



Inauguration of Technology Center «Tool and Mold Making» plant 5



Expansion plant 1



Building the first large factory building



Expansion of production by plant 4



Conversion of plant 1 into «2K and hybrid technology center»



We welcome Springfix AG to the Jehle Group

Ecology – something we are proud of

- ▶ **Sustainable Energy– Our Contribution to the Energy Turnaround**
 - ▶ With over 5300m² of PV system, we produce around 25% of our electricity requirements ourselves
 - ▶ We save around 473 tons of CO₂ every year
- ▶ **Disposal and recycling**
 - ▶ We use environmentally friendly materials in accordance with REACH and RoHS specifications and the PFAS regulations
 - ▶ In all our factories, we aim to avoid and recycle material waste
 - ▶ We are ISO 14001 certified



We also rely on:

- ▶ **Groundwater solution for heating and cooling**
- ▶ **Heat recovery**



Facts & Figures



Innovationen

- ▶ **Injection molding expansion**
Hybrid and 2K-Technology
- ▶ **Automation**
Charging system for heat treatment
- ▶ **Expansion of stamping technology**
21-roll automatic straightening machines
- ▶ **Hardening oven**
2. vacuum hardening oven
- ▶ **Expansion Stamping**
additional 160to Servo press
additional 315to Servo press
- ▶ **Expansion**
Expansion plant 1
- ▶ **Expansion PV**
plant 1, plant 4, plat 5
- ▶ **Expansion Stamping**
additional 315to Servo press
additional 400to Servo press
- ▶ **Expansion Washing**
Alcohol-based washing system
- ▶ **3D plastic printing**
for serial + prototyping
- ▶ **Expansion**
Inclusion of Springfix AG in Jehle Group

2021/2022



2023/2024



2025



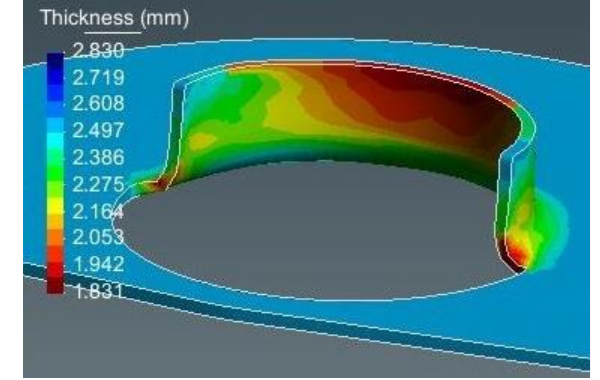
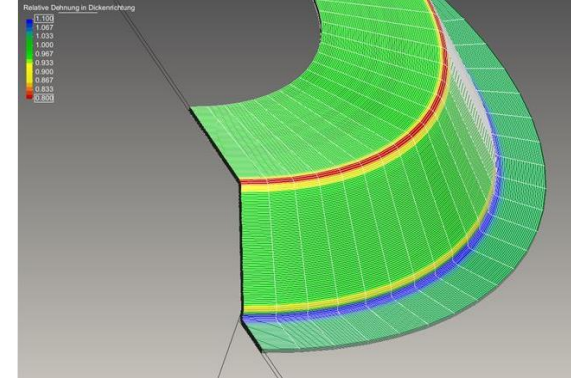
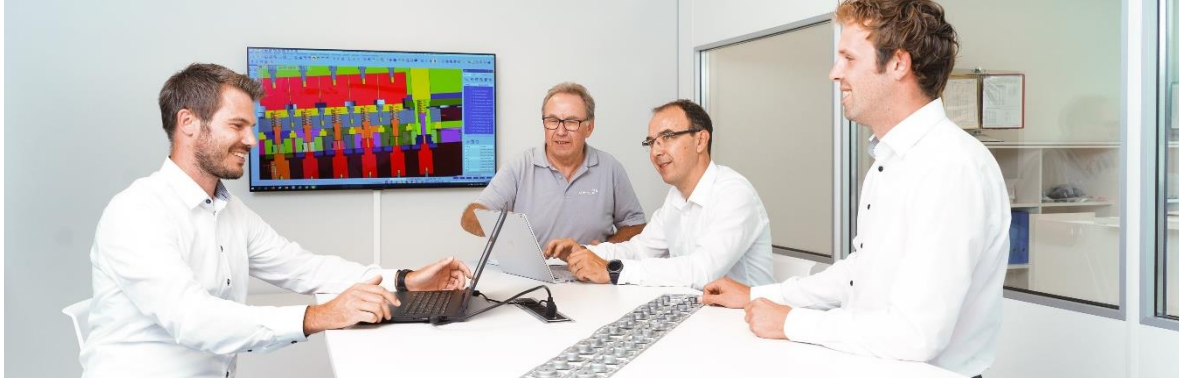
Supply chain

- ▶ Throughout the **whole supply chain**, we have skilled staff who can support you in the specialized disciplines.
- ▶ Moreover, you can take advantage of **total solutions** or only part of these services.



Development and engineering

Tool design processes



- ▶ Development of production- ready and cost-efficient parts
- ▶ Support for process layout and material selection
- ▶ Planning of manufacturing processes and means of production

- ▶ Forming simulations
- ▶ Filling studies
- ▶ Prototyping

FACTS

Added value in development for plastics processing

- in-depth knowledge of material selection
- experience in tool design
- experience in tool making
- proven know-how in the manufacturing processes
- complete technology spectrum from a single source
- 2-component molding experience - tools and production
- hybrid molding experience - tools and production
- creation of different studies for example filling, warpage, weld line and fiber flow

Added value in the development for metal processing

- in-depth knowledge of material selection
- experience in tool design
- experience in tool making
- proven know-how in the manufacturing processes
- complete technology spectrum from a single source
- simulation and calculation for drawn and formed parts

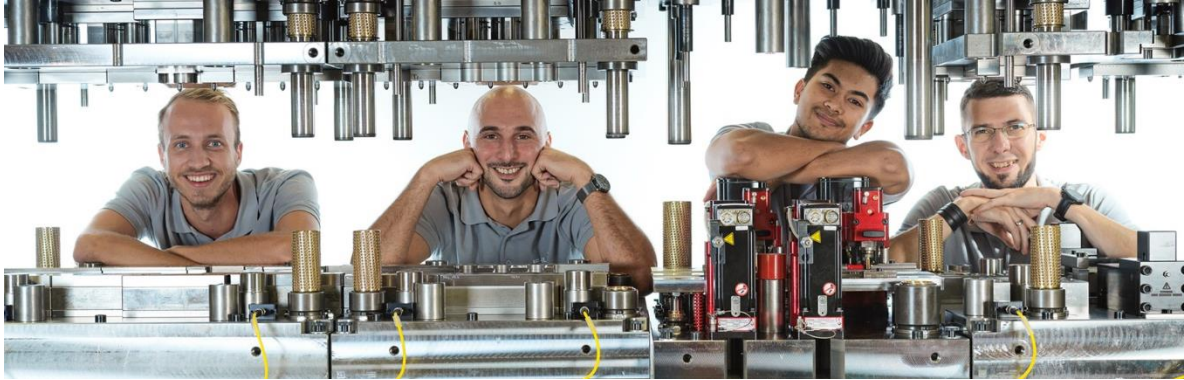
We rely on the latest CAD-Technology

with the possibility of reading the following files:

- VSI system-format wkf in files step, dxf, dwg, pdf
- Interfaces to CREO, SolidWorks and CATIA

Tool and mold making

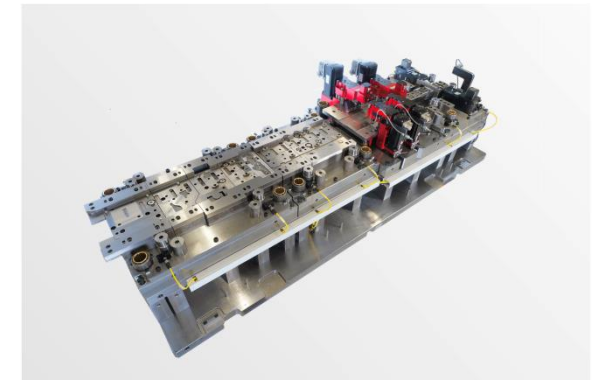
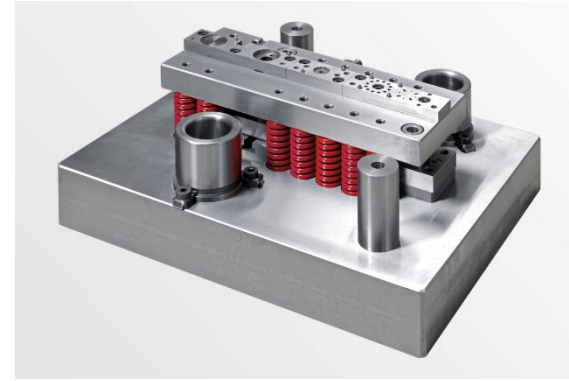
It's a
passion



- ▶ 40 employees
- ▶ Over 75 years of experience
- ▶ 2'400 m² area

- ▶ Building fully air-conditioned
- ▶ 85% of the electricity demand is covered with our own PV system
- ▶ Use of groundwater as an energy source





Complete range of services

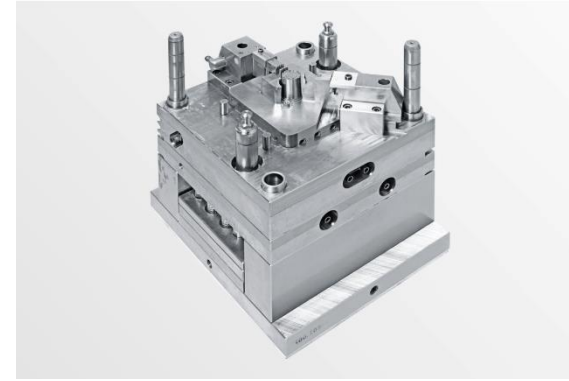
- ▶ From soft machining to heat treatment and the EDM process. **The entire process chain in-house** guarantees short response times.

Applied technologies

- ▶ Stamping tools – complete cut
- ▶ Progressive tools
- ▶ Transfer tools
- ▶ Bending tools
- ▶ Deep drawing tools

Mold making

Precision



Complete range of services

- ▶ The components are geometrically over-worked and thus demolding technology and plastic-compatible optimized.

Applied technologies

- ▶ Injection molding tools
- ▶ Press molding tools

Materials

- ▶ Thermoplastics and Thermosets

FACTS

Tooling concepts

- injection molds for thermoplastic materials
- injection molds for duroplastic materials
- press molds for thermoset materials
- 2-K molds with rotary index and rotary table process
- multi-cavity molds up to 128-cavity

tool sizes:

- 96/96 up to 896/1196 mm

Our specialties

- technical parts with high tolerance requirements
- components with thread deformation
- visible parts
- components with gear teeth
- components with complex mold separations
- overmolding of metal parts
- tools with medical requirements for use in clean rooms

Processed materials

Thermoplastics:

PA
PP
POM
ABS
TPE
PEBAX
PEI
SANTOPRENE
EP

Duroplastics:

SMC
BMC
UF
UP
MF
EP

other materials on request

Stamping, forming and follow-up technologies

Mass
with class



Nothing is impossible

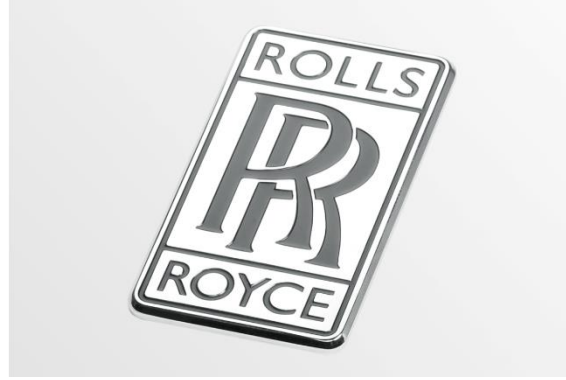
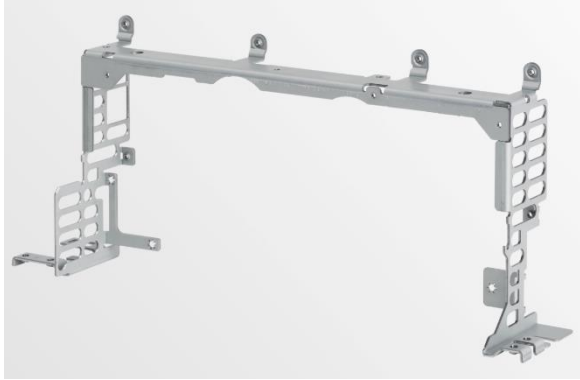
- ▶ Our core competences are stamping and forming technology.

Facts

- ▶ 20'000 m² production area
- ▶ Over 93 million parts and assemblies delivered per year

Stamping and forming technology

efficient and precise



Stamped parts in highest precision

- ▶ From precise complete cut to high-tech progressive tools up to complex transfer tools

Facts

- ▶ Stamping, bending, forming, embossing and drawing
- ▶ Production from coil, stripes and blanks
- ▶ 50 stamping presses up to stamping force of 6'300kN

FACTS

Technologies

- coil stamping machines (excenter and servo drive) up to 6'300 kN
- insert stamping machines (excenter and hydraulic drive) up to 2'500 kN
- bending machine up to 850 kN with angle sensor technology
- fine straightening machine (width up to 450 mm / thickness up to 7 mm)
- arrondier machine (width from 16 - 760 mm / thickness from 0.6 - 3.5 mm)

Part sizes

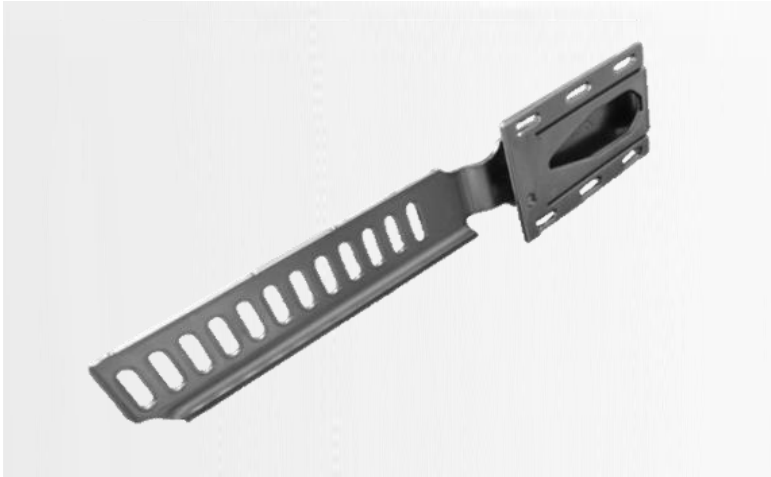
- in sheet thicknesses from 0.3 to 6 mm and up to 800 mm strip width from coil
- in sheet thicknesses from 0.3 to 10 mm from strip or cut to size
- drawing depth up to a maximum of 120 mm

Possible materials

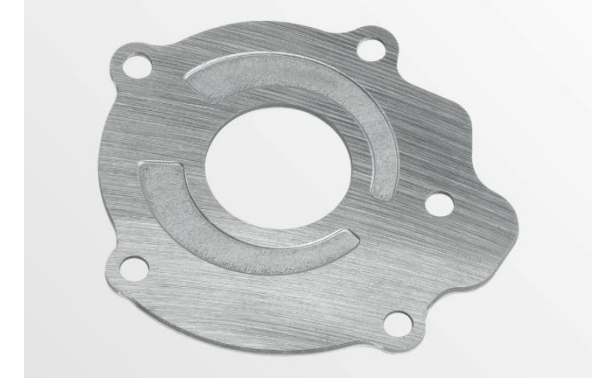
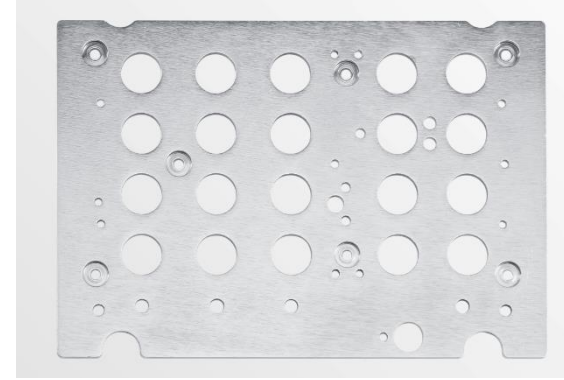
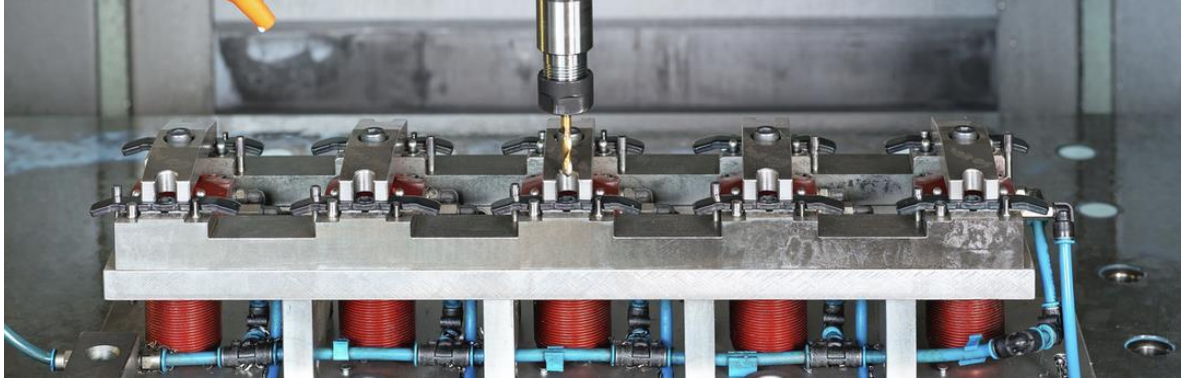
- cold and hot rolled steel sheets
- Cr-Ni steels
- aluminum
- non-ferrous metals (copper/brass/bronze)



Application examples stamping and forming







Efficient and reliable

- ▶ What cannot be realized in the stamping process for technical or economic reasons, we supplement with our downstream processes

Process Technologies

- ▶ Milling
- ▶ Drilling
- ▶ Threading
- ▶ Double side grinding
- ▶ Straightening, embossing, rounding, folding, cutting to size, notching and sawing

FACTS

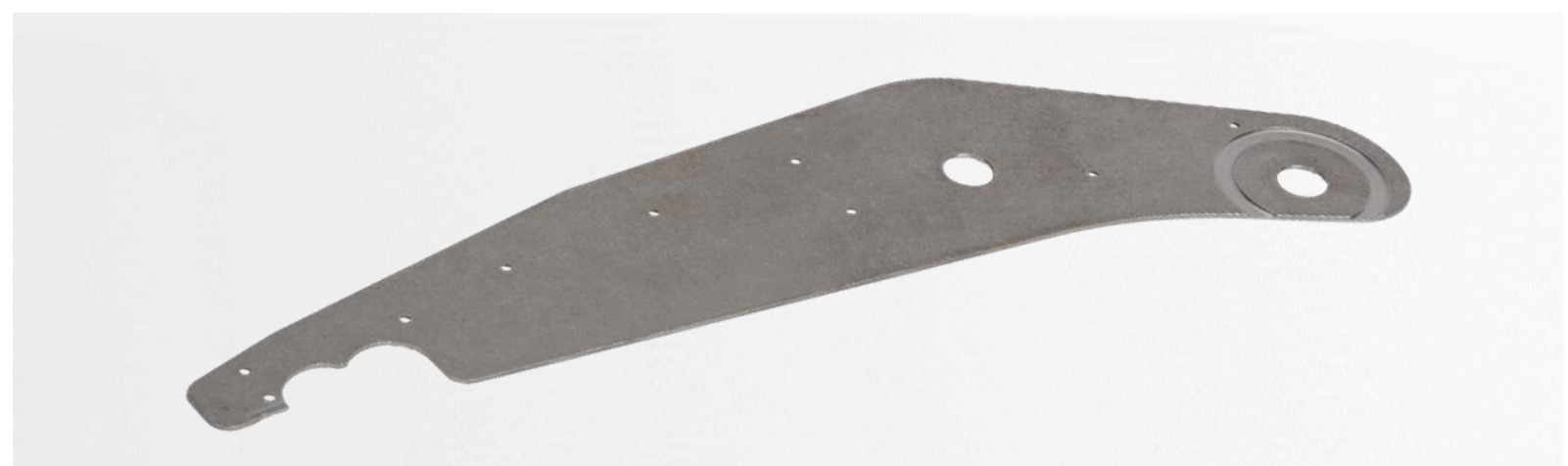
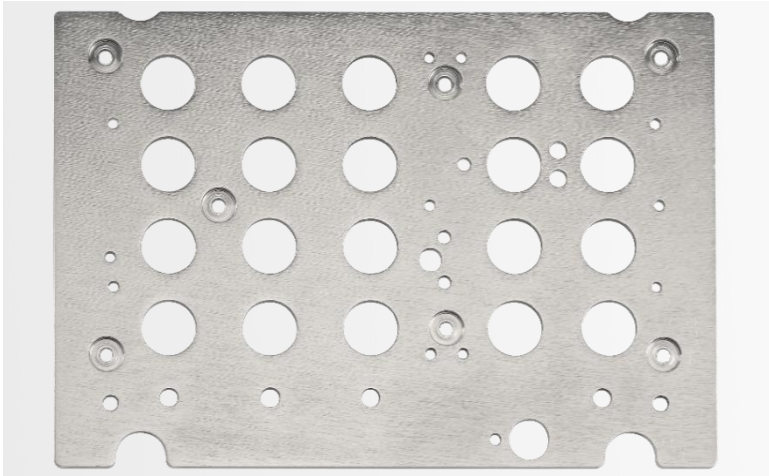
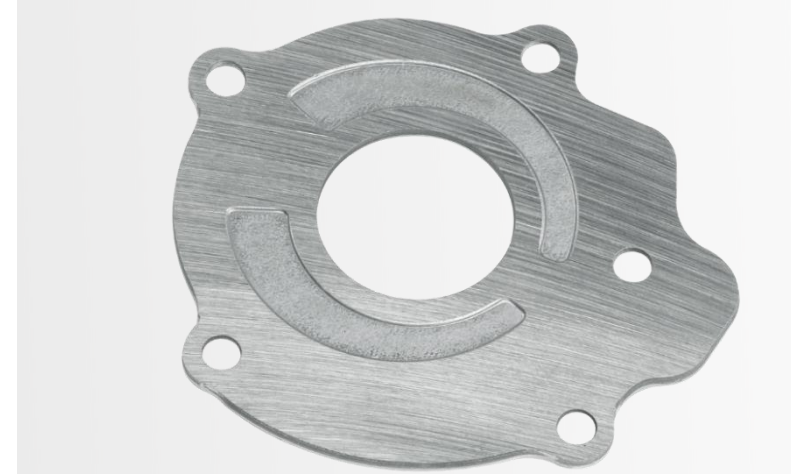
Mechanical processing

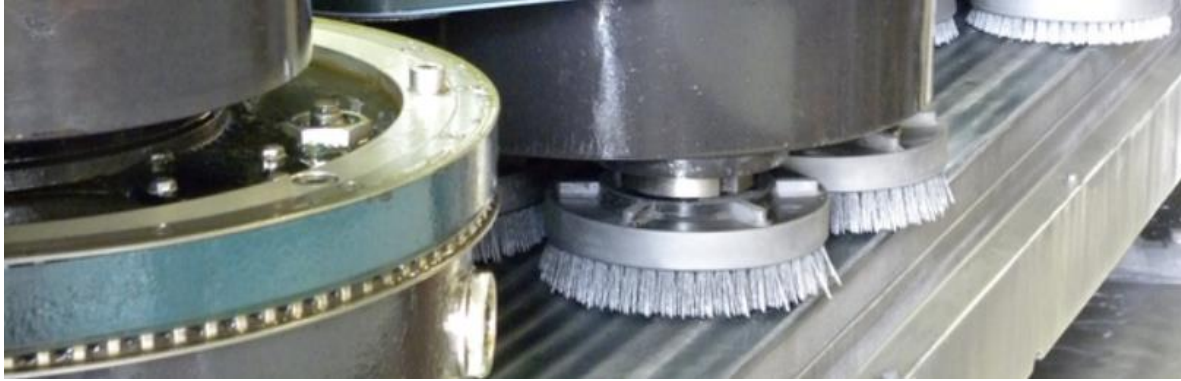
- material:
steel, galvanized steel, CrNi steels,
aluminum, non-ferrous metals
- part size:
up to 2'000 mm × 500 mm

Double side grinding

- materials:
steel, CrNi-steel
- Part size:
Ø 10-180 mm
- thickness:
1-100 mm
- achievable thickness tolerance from
+/- 2.5 µm
- achievable flatness of 5 µm
- achievable parallelism of 5 µm







Adding the finishing touch

- Often it needed for the subsequent use of the components, that they are delivered free of burrs, heat-treated or supplied with a proven technical cleanliness.

Facts

- Vibratory grinding
- Brush deburring
- Cleaning
- Heat treating

FACTS

Vibratory grinding

- part-size:
up to 300 × 120 × 30 mm
- materials:
steel, galvanized steel, CrNi steels,
aluminum, copper

Brush deburring

- part-size:
up to 270 × 270 × 80 mm –
with automatic parts turning station for
deburring on both sides
- materials:
steel, steel galvanized

Part cleaning

- part-size:
up to 600 × 400 × 300 mm
- part weight:
up to 100 kg
- materials:
steel, galvanized steel, CrNi steels,
aluminum, copper



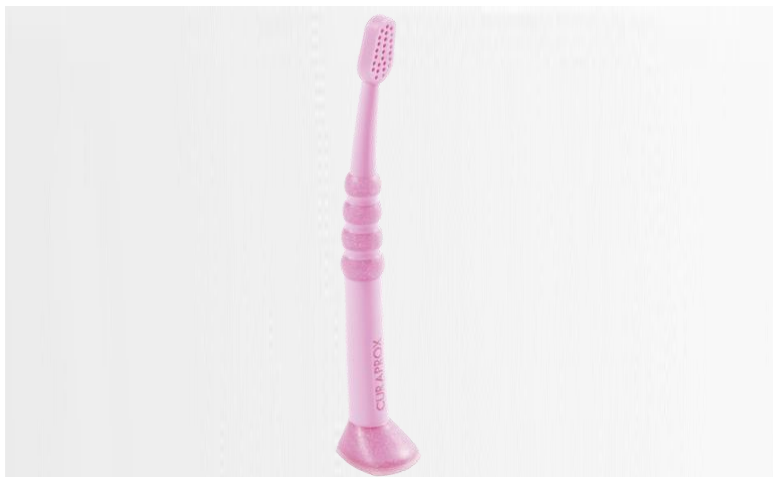
Customized injection molding processes

- ▶ **Hybrid-technology** – thanks to our broad manufacturing spectrum combined with plastics processing, you benefit from tailor-made product solutions made of metal and plastic.
- ▶ **2-Component-technology** – enables combinations of different plastics and colors.

hybrid technology



2K-technology

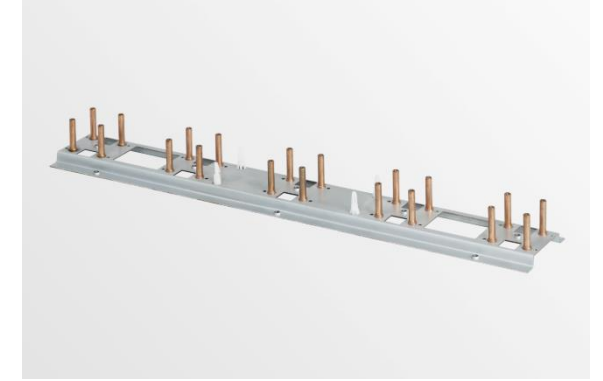


Special components



Welding and joining technology

connect what
belongs together



Challenging components

- ▶ A high level of automated joining processes allows us to manufacture demanding components and complex assemblies.



Automated and tested

- ▶ Thanks to different welding technologies, we offer solutions for all applications.
- ▶ Depending on the quantity and your requirements, we process your parts "manually" or on our welding robots with integrated quality inspection.

Welding technologies

- ▶ Laser welding
- ▶ MIG/MAG
- ▶ TIG
- ▶ Resistance welding
- ▶ Bolt welding

FACTS

Laser welding

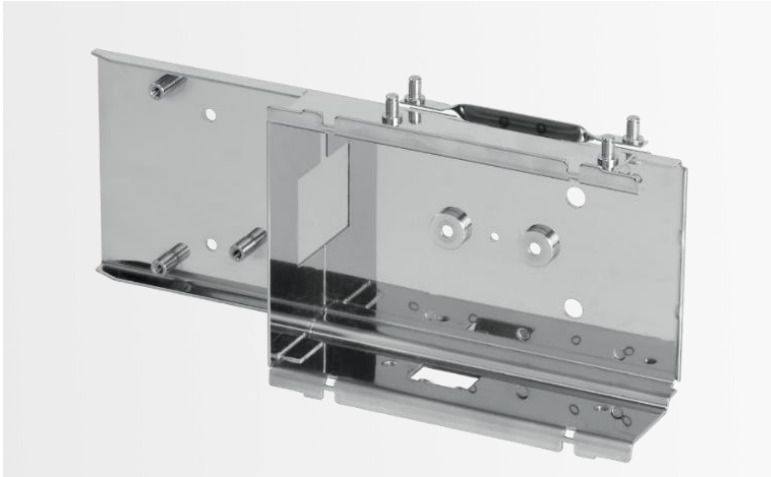
- materials:
steel, CrNi-steels
- edge distance to the weld seam already
from 1.5 mm
- power up to 3 kW
- mounting surface:
800 mm × 600 mm × 400 mm

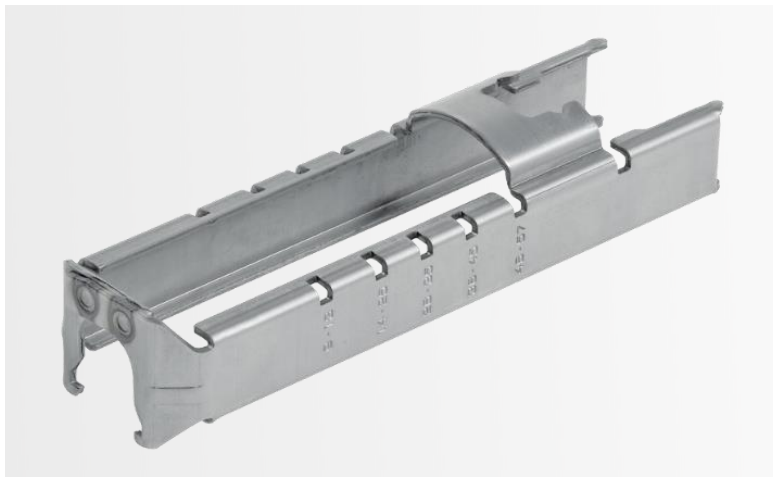
Resistance welding

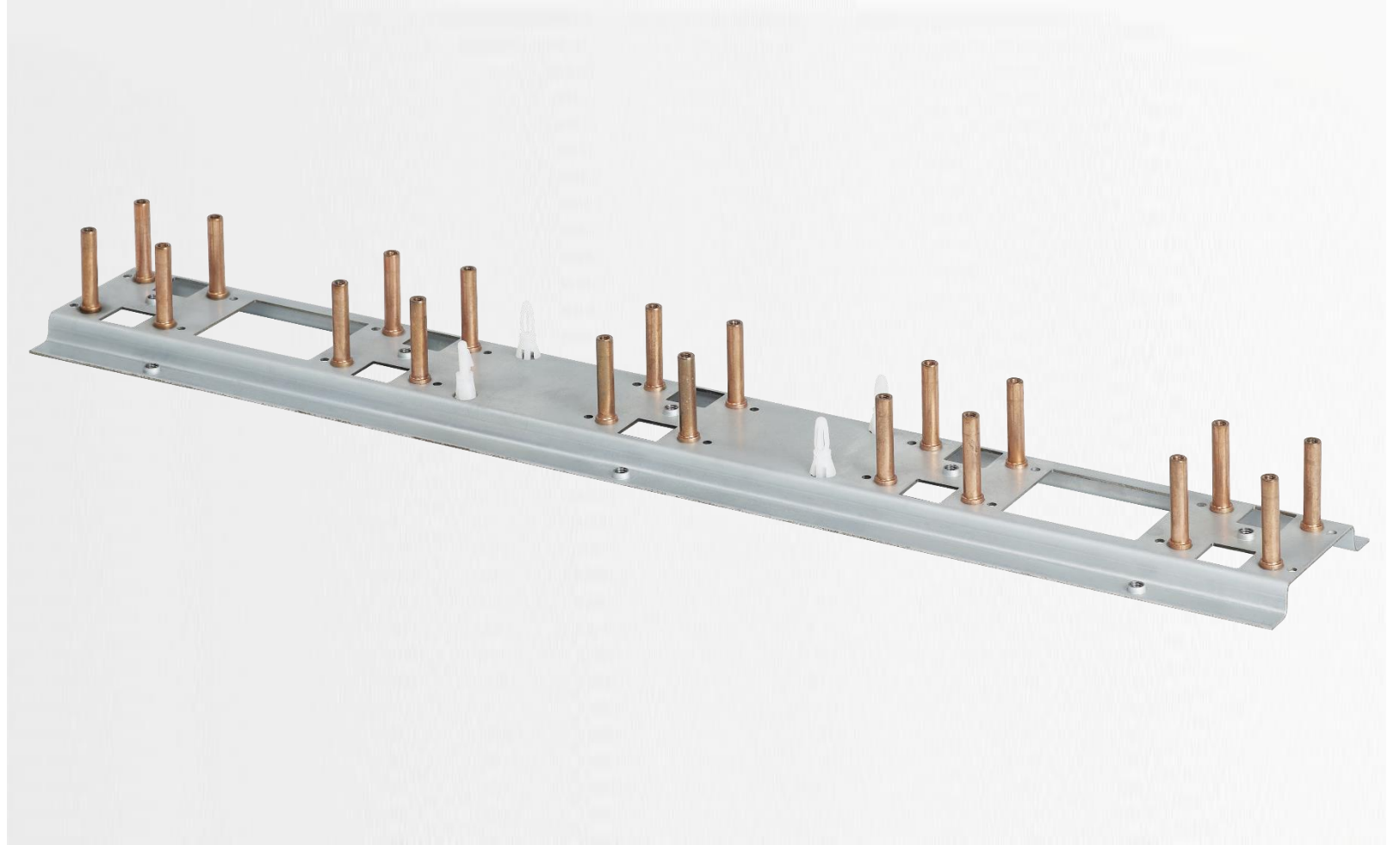
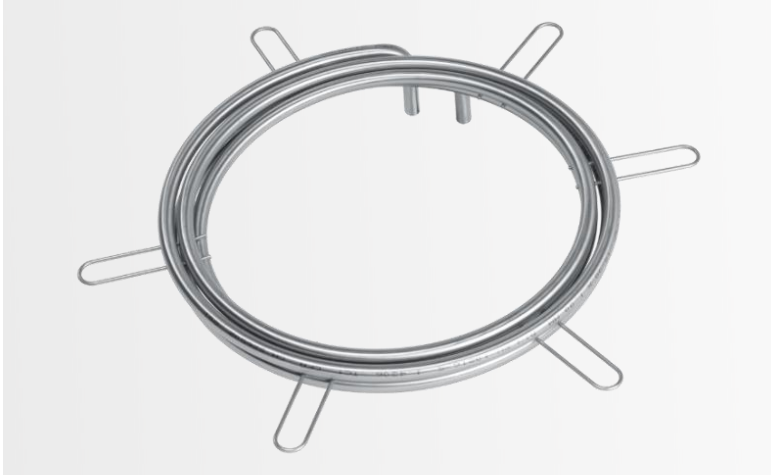
- welding of components with different
sheet thicknesses is possible
- processing of sheet thicknesses up to 8
mm
- materials: steel, galvanized steel, CrNi
steels

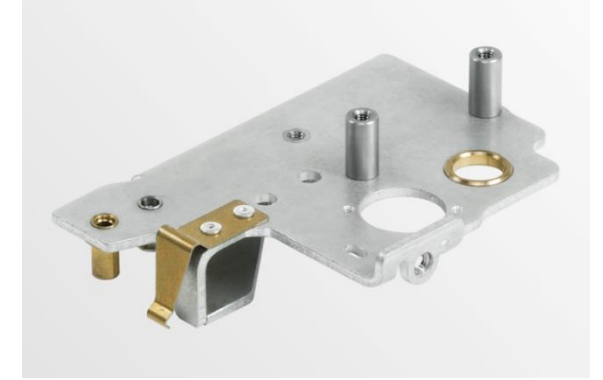
Bolt welding

- materials:
steel, galvanized steel, CrNi steels,
aluminum, copper, brass
- different materials can be combined
- no discoloration
- welding of pins, threaded bolts, threaded
bushings, sleeves, grounding lugs









Whether cold or warm

- Whether manually or as an inline solution. We use various processes to connect your components in a reliable manner.

Joining technology

- Orbital riveting
- Press riveting
- Hot riveting
- Pressing in bolts, bushes and nuts

FACTS

Orbital riveting

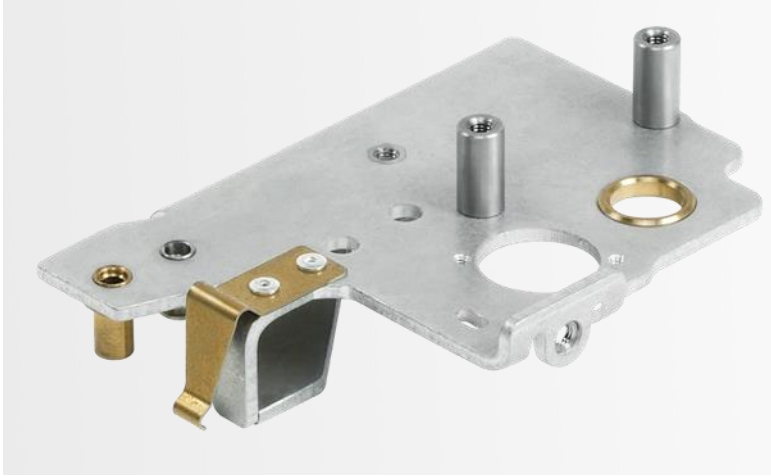
- orbital riveting of bolts with orbital shank diameter 8 mm
- materials:
steel, CrNi-steels, aluminum, copper, brass, bronze

Hot Riveting

- processing of soft and hardened bolts
- materials:
steel, CrNi-steels

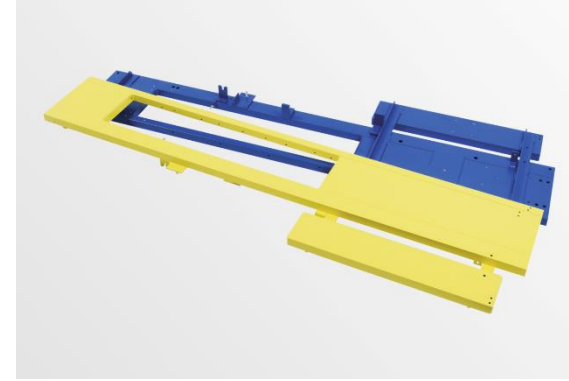
Press in operations

- materials:
steel, galvanized steel, CrNi-steels, aluminum, brass, bronze
- high precision and repeatability
- no thermal influences



Surface treatment

**customisation and
corrosion protection**



Also possible in large quantities

- ▶ For the finishing of the components, we offer you various surface coating, as well as part labelling options.

Surface technologies

- ▶ Powder coating
- ▶ Laser engraving
- ▶ Tampon printing
- ▶ Electroplating and other coating processes are offered with our supply chain

FACTS

Materials

- steel
- steel galvanized
- aluminum
- casting materials

Powder coating

- Sizes:
2500 × 1400 × 800 mm
- pretreatment by chrome-free passivation
- layer thicknesses in the range of
30 - 150 µ
- corrosion resistance up to 1,000 h in salt
spray test
- huge range of colors, texture and gloss
level

Advantages of powder coating

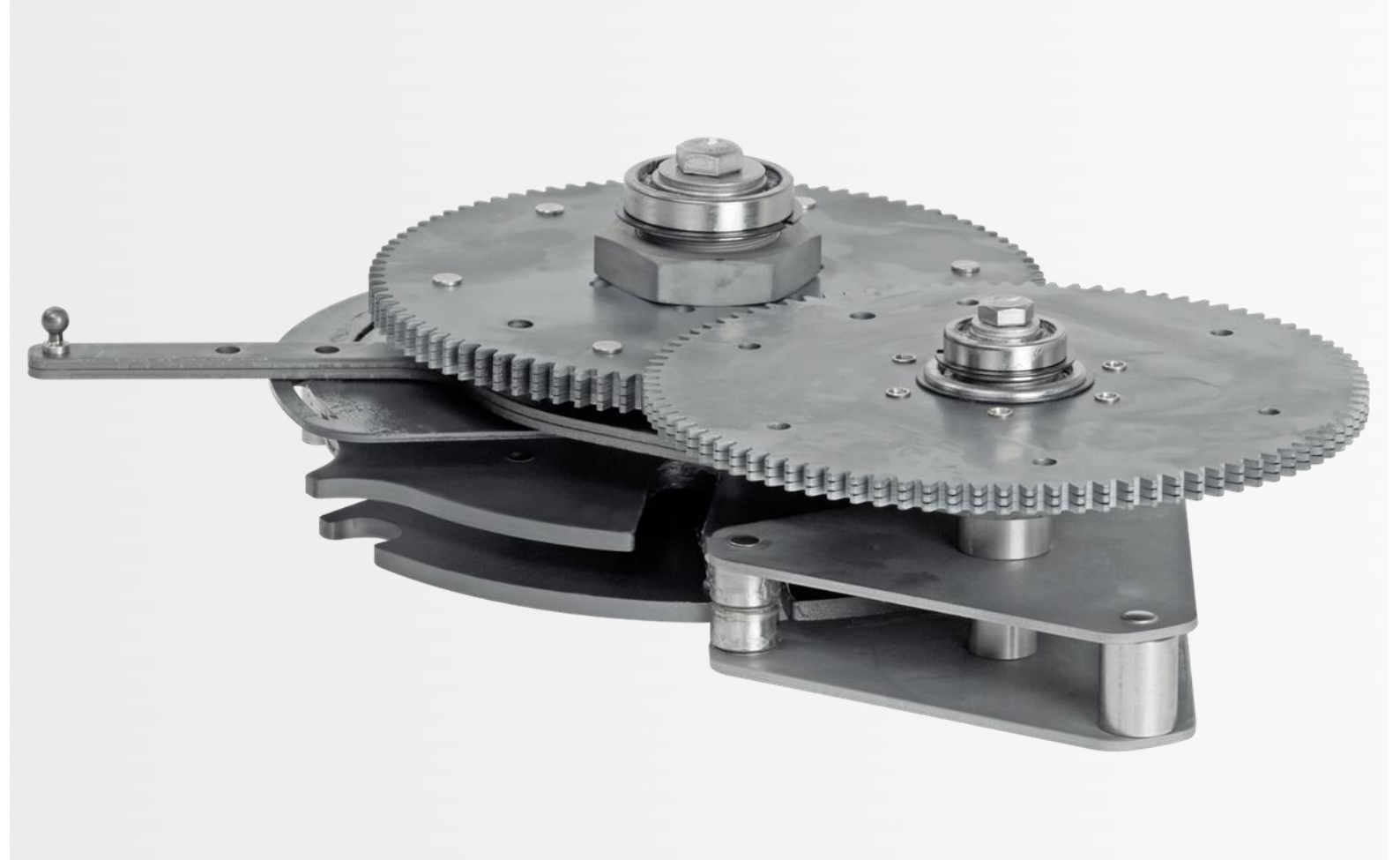
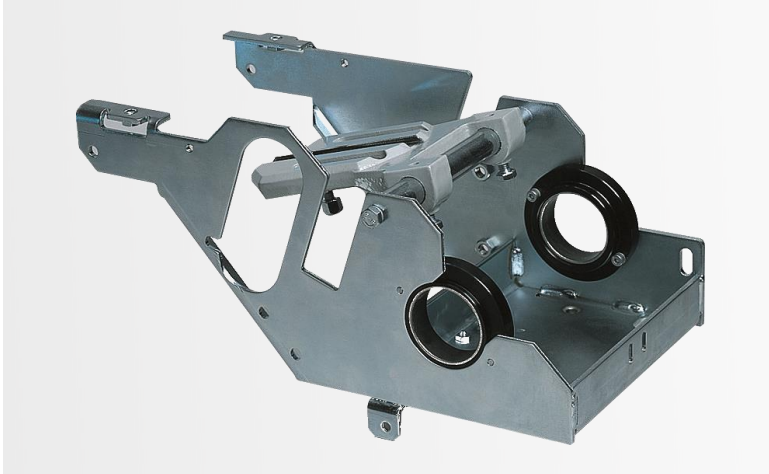
- longer life of the parts
- realization of optical requirements
- customizing by individual color design





Quantity-optimized processes

- ▶ Many of our customers appreciate the possibility of purchasing complete assemblies and thus optimally adapting our scope of services to their own production.
- ▶ We offer you unit-optimized processes from manual to fully automated assembly.







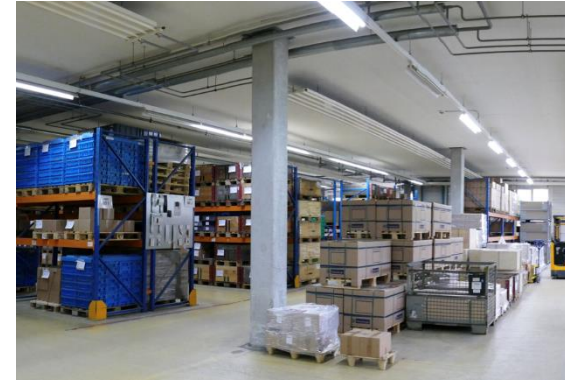
Fully automatic assembly

complete solutions



Efficient processes with constant quality

- ▶ Automatic joining, pressing, testing and packaging processes are performed on our fully automatic machines.
- ▶ By use of extensive sensor technology (part identification) and integrated quality checks, we pursue a zero-defect strategy.



World-wide

- Sustainable, resource-saving, environmentally conscious on all transport routes such as road, rail, air and over water.

Services

- **Packaging logistics** – picking, labeling
- **Warehouse logistics** – buffer stock capacity, EDI communication, CMI/VMI and empties management.
- **Transport** – fleet, export processing

We bring industries in shape



► Automotive sector (30 %)

It is a high aspiration to produce components in large quantities with a **zero-defect strategy** and at economical costs.



► Building sector (10 %)

Often these parts are invisible in the installed state, but important functional parts.

Some products remain visible and therefore also need to fulfill decorative requirements.

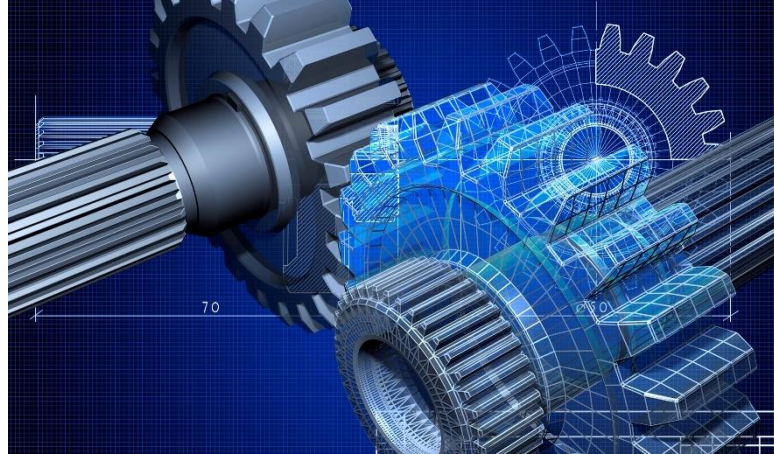


► Electronic devices (30 %)

In addition to dimensional accuracy, cleanliness and the visual requirements of **visible components** are very important.



We bring industries in shape



► **Electronics, Energy & Electrical Engineering (10 %)**

Reliability and precision are essential - components must fulfil high functional and safety requirements.

► **Mechanical Engineering & plant Engineering (10 %)**

In mechanical engineering, the focus is on mechanical resilience
- robust components ensure the function of complex systems under continuous stress.

► **Other sectors (10 %)**

- Health and Medical
- Furniture
- Aviation
- Railway



Why with Jehle AG?



✓ Very high diversity - from product Co-Engineering, tooling, stamping up to 2-components, hybrid plastics engineering and assemblies – all in-house

✓ 75 years of experience

✓ Tool- and Mold making competence centre

✓ With 50 presses for smallest and largest series

✓ Welding-, mechanical- or surface processing

✓ People with visions

✓ Ecology – Our heart beats solar

Certificates



Certificate



The SQS herewith attests that the organisation named below has a management system that meets the requirements of the normative base mentioned.

Certified site

Jehle AG Etzgen
Büntenstrasse 125
5275 Etzgen
Switzerland

IATF USI no. PP9GWT

Scope

Manufacturing of stamping, forming, welding, grinding,
injection moulding and assembly parts (without product
design)

Normative base

IATF 16949:2016

Quality Management System

Particular requirements for the application of ISO 9001:2015 for automotive
production and relevant service part organizations

Reg. no. 38200
IATF no. 0538805
Page 1 of 1

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Successful
in the market with you.

With complete solutions from
engineering to the assembly.

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