

**THE
GLOBAL
SPECIALIST
FOR METALS
RELIES ON
BRUDERER.**



Pforzheim with its famous jewellery and watch industry is known as the ‚Golden City‘. What’s less widely known, however, is that Pforzheim’s jewellery production paved the way for further international industries such as precision manufacturing and medical and stamping technology.

The latter is the stomping ground for G.RAU GmbH & Co. KG, which like no other company is at home in the highly complex and versatile world of metals.

In 1877, Gustav Rau founded his company for the manufacture of pressings from gold and silver alloys and thus became a supplier for the regional jewellery industry. Shortly afterwards, with the introduction of mechanical production, the company began to flourish and expand. Today, G.RAU is a world-wide supplier in the field of metal engineering and acknowledged expert in the production of strips, tubes and wires made of precious metals, special alloys and composite materials. In addition, G.RAU also uses these prematerials to manufacture precision parts and entire complex assemblies. More than 200 various kinds of metals and metal alloys are processed and refined. 'Metals are our world' thus makes a fitting slogan for G.RAU. With its expert knowledge, the company is a trailblazer in the field of shape memory alloys, including special materials such as Nitinol, a corrosion-resistant, high-strength but nevertheless pseudoelastic nickel-titanium alloy.



Dr. Axel Pfrommer, Managing Partner
G.RAU GmbH & Co. KG

Valued partner for many branches of industry

Thanks to this special focus, G.RAU has become the preferred supplier to a variety of industry sectors. With its three business segments – semi-finished industrial products, parts & assemblies and semi-finished products for the medical engineering industry –, G.RAU is a declared partner of distinguished enterprises in the fields of automotive supply, electrical engineering, measurement and control technology, medical engineering and many other sectors. Today, with around 650 employees, G.RAU is still a family-owned metal engineering company with three production sites in Pforzheim, one in Costa Rica and a subsidiary in the United States.

G.RAU is also the parent company of several well-known suppliers in the field of medical technology, such as the two Pforzheim-based enterprises EUROFLEX GmbH and ADMEDES GmbH. Both companies are global market leaders in their respective product areas. Whereas EUROFLEX predominantly supplies semi-finished products for implants, such as wires, profiles or tubes, ADMEDES is specialised in the manufacture of components made of Nitinol. Currently, another five companies are part of the G.RAU Group with around 1,480 employees in Germany, USA and Costa Rica. With a group turnover of 196 million Euros – of which 88 million generated by G.RAU in Pforzheim – the company is now a global leader in metal solutions.

Expansion is the clear aim

This also explains the further strategic direction of the company. Managing Director and owner Dr. Axel Pfrommer has a clear vision: "We will continue to focus on a wide range of products and invest in expanding into new markets. As a specialist for metals and metal alloys, however, we will remain true to our strategic orientation and in addition, focus more intensely on the field of surface engineering, specifically on reel-to-reel electroplating." Here, the company has set its sights mainly on stamped parts with special surfaces, as they currently offer the best chances in the marketplace and provide the greatest opportunity for value creation. "We know this particular business segment like the back of our hands and can supply everything from a single source," says Dr. Pfrommer. "From the production of the

“Metals are our world.”

strip through to stamping and surface finishing, everything is done in house. For example, a metal strip for stamping can be plated with 2µm silver on one side and 4µm silver on the other side. For large quantities, this can result in enormous cost savings.”

Complete control over all processes

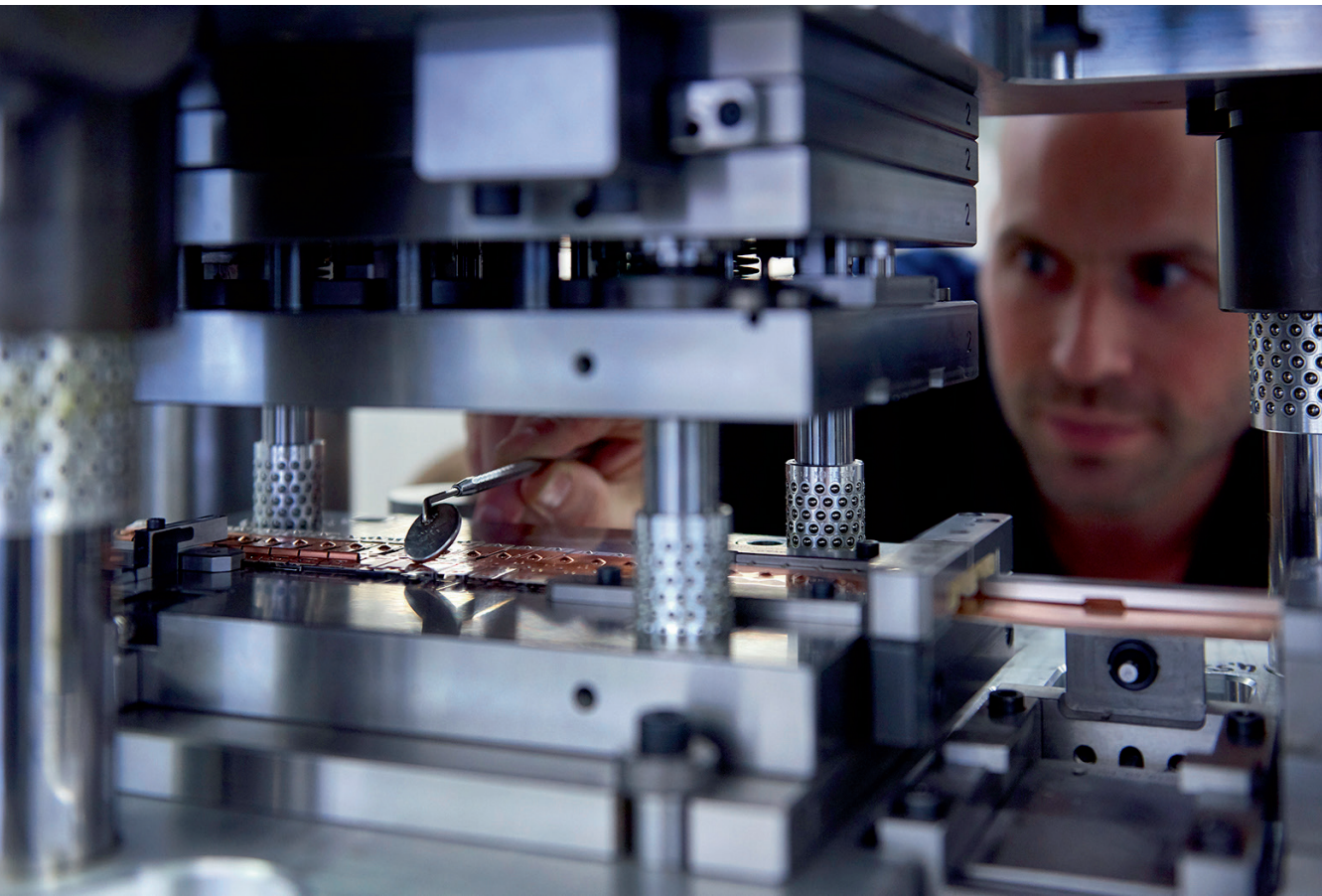
The high precision required can only be achieved with state-of-the-art technology. For this reason, G.RAU uses in-house surface treatment processes in all three factories in Pforzheim. “This allows us to keep an eye on all processes and deliver first-class quality for all types of coating,” assures Frank-Uwe Hofmann, team leader at G.RAU. “The same applies to stamping. All contact stamping-bending parts and assemblies are produced on modern stamping and bending equipment made by BRUDERER. “We use copper, copper alloys, nickel, nickel alloys, steel or stainless steel as well as compound materials based on gold and silver for the contact surfaces. Following this, our surface engineering department can electroplate or chemically coat stamped strips and parts.”

From semi-finished products to assemblies

G.RAU offers a comprehensive range of products and services in this business segment. Fully automated, they can process several strips simultaneously into assemblies, weld contact materials or rivet contacts, cut threads or insert screws – and all this with a process-integrated 100% vision control. A special product is the sliding contact which the expert for metal solutions produces for the automotive industry. It is used in the fuel tank encoder system and is part of the fuel gauge. As there are different types of petrol world-wide, the coating of the sliding contact is matched to the fuel type used. “Each sliding contact must be within a tolerance of five-hundredths of a millimeter. We have experimented with different stamping presses and thus know that the series production of this part within these tight tolerances is only possible on a high-performance BRUDERER stamping press. On the BRUDERER stamping line, all parts are fully finished and ready for dispatch.” →

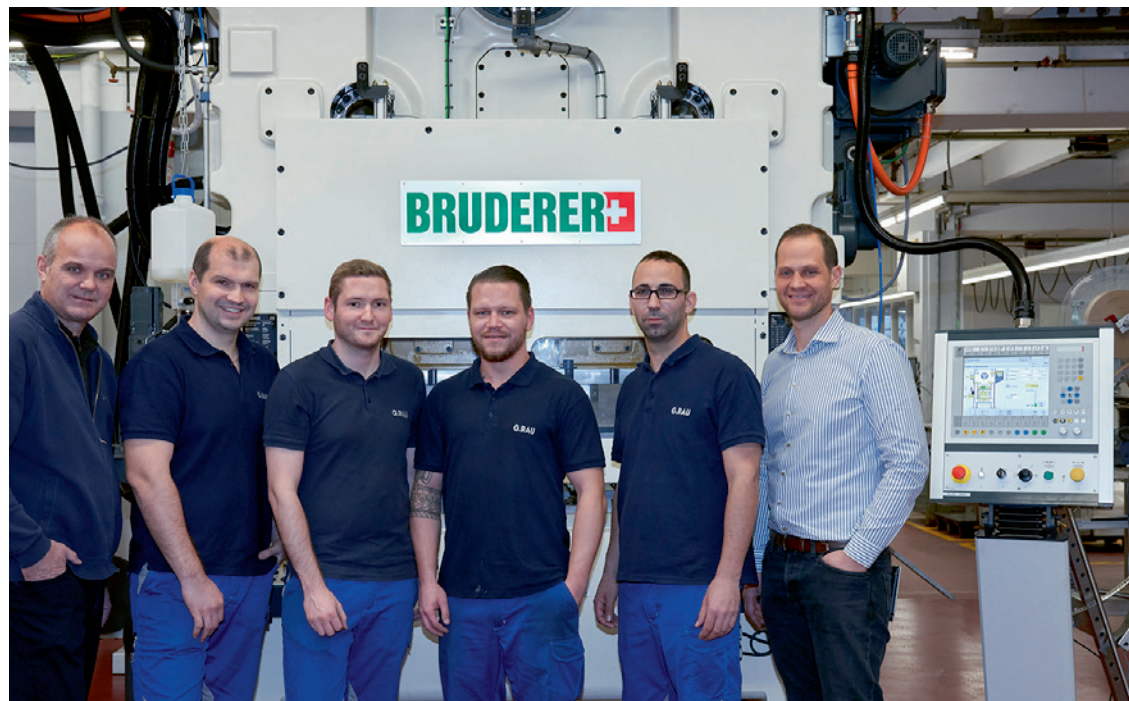
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*Dr. Axel Pfrommer,
Managing Partner G.RAU*



An eye for perfection: tool making at G.RAU.

Stamping team
G.RAU.



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Dr. Axel Pfrommer

Precision in large-scale production

On 32,000 m² production space, G.RAU produces more than a billion stamped parts per year. “Developments show that we are on the right track with our claim for precision,” states Dr. Axel Pfrommer. “In our core markets, the trend towards even tighter tolerances will continue in the next few years. If a company can keep pace and deliver the best values, it will stay at the cutting edge well into the future. Therefore for stamped parts, we will continue to rely on sophisticated BRUDERER stamping technology.” Currently, 14 BSTA high-performance stamping presses in the range of 20 to 80 tons are in operation at Pforzheim. They process all types of steel, thermostatic bimetal, non-ferrous metal and alloy strips with widths of up to 120 mm and thicknesses from 60 µm to 5 mm.

Even stamping tools are produced in-house

The use of perfect stamping tools is vital for G.RAU in order to guarantee their customers the accuracy of the parts in series production. Thus it is no surprise that they have an in-house tooling department which produces stamping tools exclusively for internal use. Only in exceptional circumstances are additional stamping tools bought in. With their 40 members of staff, including six design engineers specialised in tool making, G.RAU are able to manufacture nearly all tool types themselves – a key advantage for their stamping business.

Achim Regelmann, Manager of the Division Parts & Assemblies at G.RAU, is convinced that “the synergies between stamping technology, deep drawing and extrusion lead to optimum tooling solutions for our clients. Our in-house surface engineering processes – such as electroplating, chemical coating or vibratory finishing, i.e. deburring – give us a clear competitive advantage.”

Customers appreciate experience and flexibility

According to Managing Director Dr. Pfrommer, the competitive advantage is not only due to the precision for which G.RAU is known, but also to the high degree of flexibility when developing innovative products for their customers. “Our expertise, which allows us to recommend and test new materials for specific applications and thus develop and produce unique products together with our customers, is a clear USP of G.RAU.”

As a reliable and competent partner, the company supports its customers in the complete material and process development process. G.RAU are able to make this promise as they have all the necessary departments and facilities in-house, from consulting, conceptual design and developing the samples to serial production. The development department has its own chemical and physics lab with a scanning electron microscope and several other testing systems. In the design department, high-performance tool concepts are developed using state-of-the-art 3D CAD systems and simulation programmes, and finalised in collaboration with the production and quality management department. These product development efforts, in combination with the experience of in-house tool manufacturing capabilities and project management, ensure professional assistance and advisory services even for complex projects.

Outstanding quality offers peace of mind

The current certifications in accordance with ISO 9001:2015, IATF 16949:2016 and ISO 13485:2016 clearly demonstrate that G.RAU puts special emphasis on compliance with all required standards as well as the continuous development and improvement of all business processes. This also applies to the topic of sustainability. Environmentally-friendly materials, energy-efficient components and the latest technology are taken into consideration for all projects as an integral part of the process. Thus G.RAU is also certified to ISO 14001:2015 and ISO 50001:2011, which is greatly appreciated by many customers and forms the basis of the high level of confidence that customers have placed in G.RAU. 