Gottlieb Roll GmbH & Co. KG

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- Heat treatment
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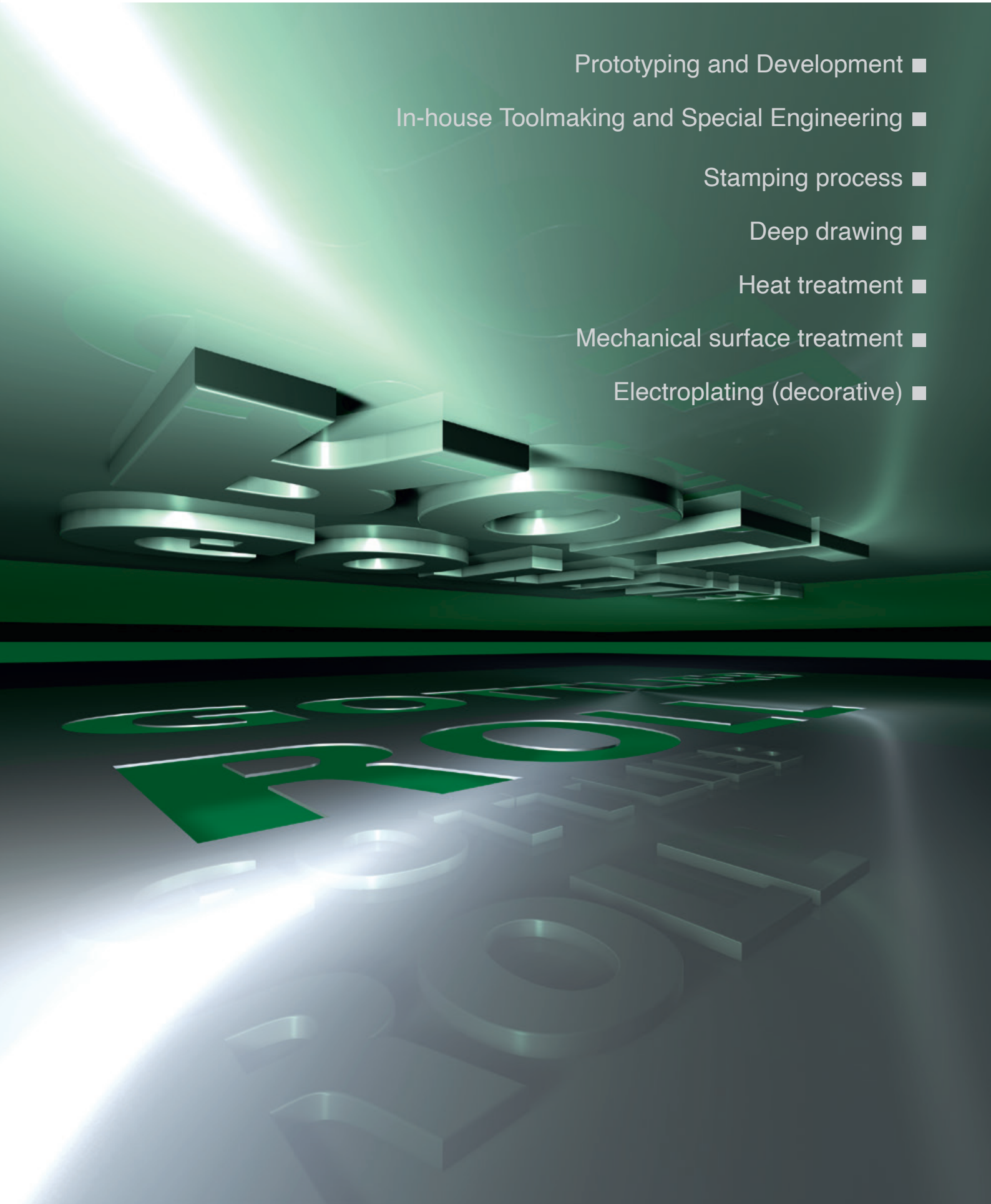
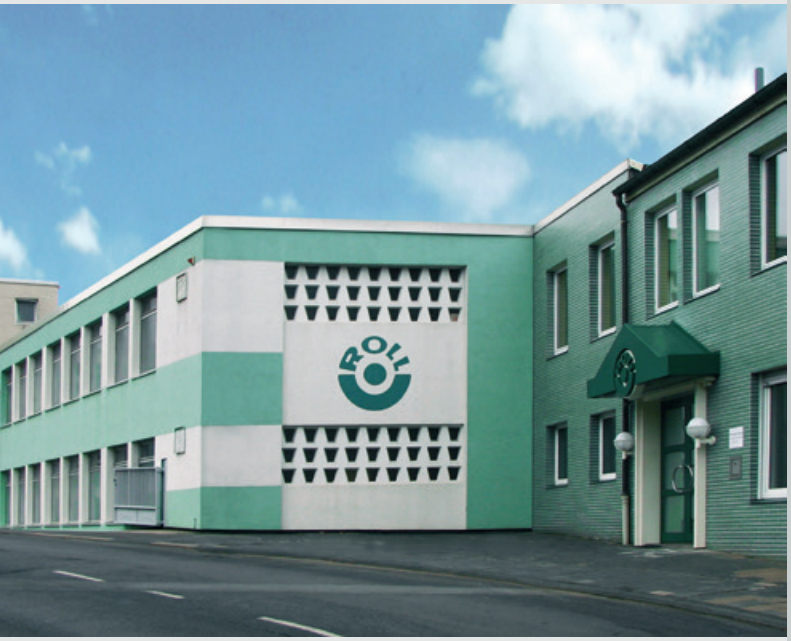
- Electroplating (decorative)



Since 1920: Made in Germany



In 1920 Gottlieb Roll founded an engraving and stamping business in Idar-Oberstein, a city well-known for its sophisticated jewellery industry.

Today, the family business is the world‘s leading supplier of metal components to the writing instrument industry. Roll has been an established partner of this sector for more than 60 years and still produces exclusively in Germany.

Furthermore, we produce stamping parts and deep-drawn parts for the electrical and electronics industry as well as for the cosmetics and consumer goods sector.

Our experienced team provides support during the design and development process of new metal parts and components. Patents, registered utility models and registered designs demonstrate our innovative strength.

Our highly qualified technical staff and decades of experience are the roots of a long-standing successful partnership with our customers.

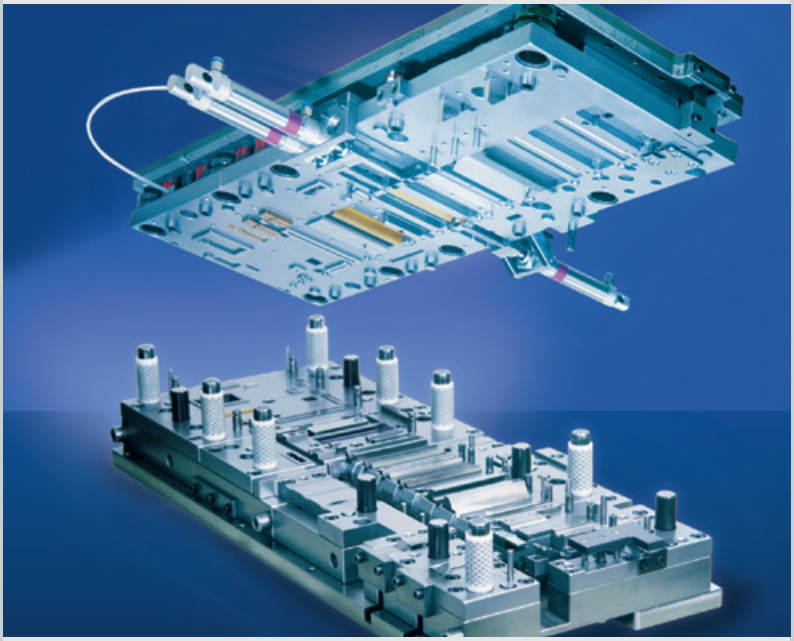
Prototyping and Development

Roll develops system solutions, technical solutions and new products in a close dialogue with its clients.

Our experienced team offers the development of prototypes. These prototypes are produced with similar methods as used in the follow-on composite tools. The results obtained during the prototyping process can therefore be reproduced in the later mass production process.

Prototyping allows us to provide our customers not only with design samples but with fully functional parts. Mechanical qualities can thus be tested during the early stages of development.

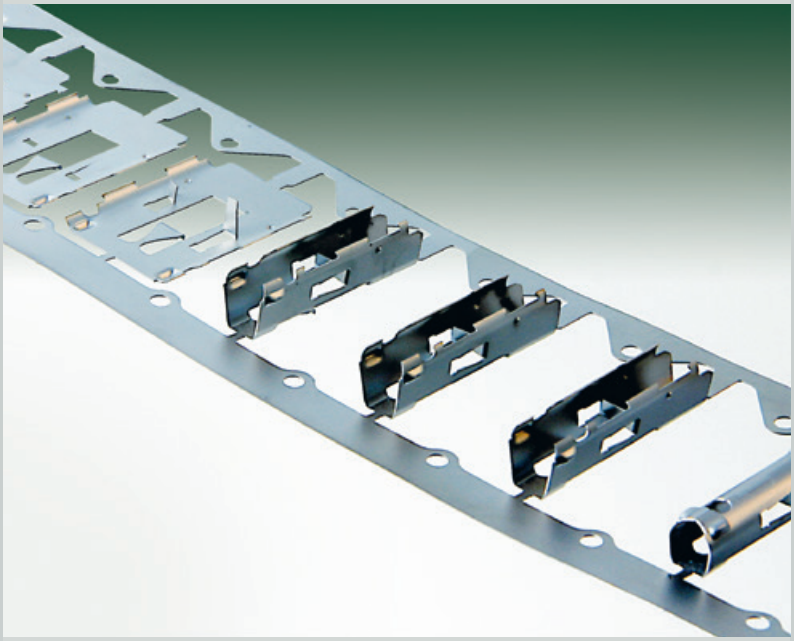
In-house Toolmaking and Special Engineering



We are designing and constructing all stamping- and follow-on composite tools in-house. Direct control of the entire production process allows us to remain flexible, react promptly and produce tools of high quality.

A set of different tool concepts answers to our customers' respective requirements. The follow-on composite tools are both suitable for small-lot production and mass production.

Stamping process



Our automatic stamping machines are capable of a pressing force of up to 100 tons and a lifting frequency of up to 1200 strokes per minute. The strip material used is up to 320 mm wide and between 0,1 mm to 1,5 mm thick. It can be processed in tools of a length of up to 2 metres. Besides steel and stainless steel strips also nonferrous metal is employed.

Each year millions of stampings are thus produced both economically and with high precision for our customers worldwide.

The parts can be additionally tempered and surface treated in-house. A high degree of automation furthermore guarantees a very good price-performance ratio.

Deep drawing

We produce deep-drawing parts with a length of up to 80 mm both on transfer presses and with follow-on composite tools. Besides steel and stainless steel strips also nonferrous metal is employed.

Also the deep-drawn parts can be surface treated in-house.

Heat treatment – Tempering

We offer austempering as our in-house heat treatment.

Austempering:

The austempering process leads to a good combination of hardness and toughness when using material based on steel or cast iron. The austeniting process at between 850 and 1050 °C is followed by a quenching process at a specific transformation temperature, usually in a salt bath. The salt temperature is dependent on the material in question and the required hardness and varies between 250 and 400 °C.

Compared to the conventional heat treatment, austempering offers numerous advantages:

- only minor hardening distortion
- good combination of toughness and a high degree of hardness
- a high degree of Izod notched impact strength
- an improved fatigue strength
- improved bending properties

Mechanical surface treatment

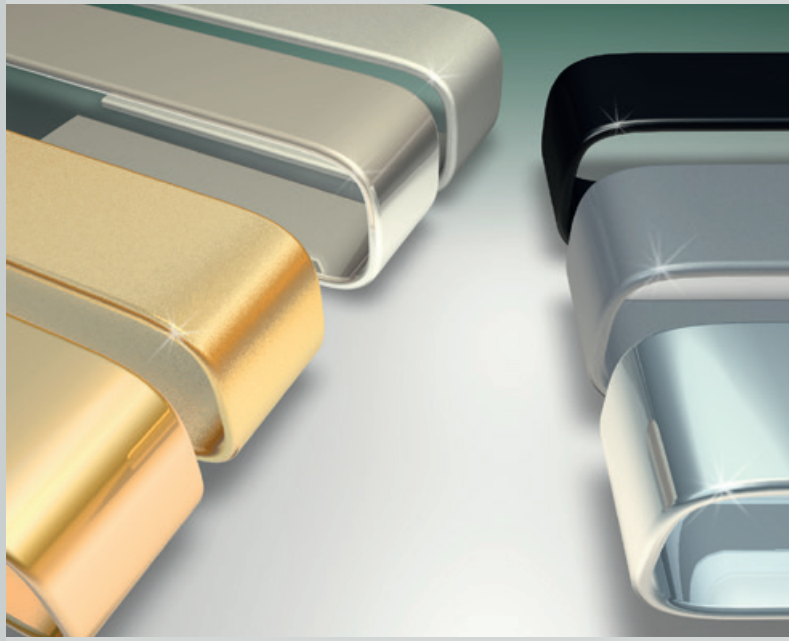
For the mechanical surface treatment (deburring, polishing) we use different methods such as barrel grinding, vibratory grinding and centrifugal grinding.

A variety of grinding media allows us to optimize our processes and meet our clients' requests.

For the mechanical surface treatment of cylindrical and conic workpieces (e. g. deep-drawn products) circular grinding machines are used.

We furthermore offer electropolishing to meet specific surface requirements.

Electroplating (decorative)



Roll offers electrolytically deposited electroplated layers of barrel and rack quality.

Our standard surface finishes (barrel plating):

• nickel	bright
• nickel/gold	bright
• nickel/white bronze	bright

Our standard surface finishes (rack plating):

• nickel/gold	bright
• nickel/chrome	bright or dull
• lacquer (electrocoating)	

Please contact us for additional finishes.

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