



BEIER





Precision for sophisticated tools

Deep-drawing dies

Our grounded expertise is put to optimal use in the design and manufacture of deep-drawing dies. Using single-function and multi-function deep-drawing dies, we enable the manufacture of high-quality parts with complex geometries and high sheet-metal strength for our clients.

Transfer/multi-station dies

Transfer die approaches are primarily used to manufacture disc casings for automatic gearboxes. In addition to drawing and wall ironing, the challenging forming process also includes hole punching and notch cutting using complex slide moulds.

Progressive dies

The know-how of our employees, particularly regarding the determination of the individual production steps, is the basis for the manufacture of these high-performance tools whose diversity knows no limits. The manufactured progressive dies have band widths of 50 to 1,510 mm and sheet thicknesses from 0.5 mm to 2.5 mm. The tools can have a maximum length of 3,000 mm.

Simulator

Short changeover times when switching tools on a transfer press are decisive for optimal capacity utilisation. Our simulator is the decisive foundation for this. The complicated transfer system is positioned and the entire procedure is simulated in advance outside the press.

Equipment

Components are created out of specific stamped parts in a separate manufacturing process. We create the corresponding equipment for these joining and fitting processes.

Gauges

The documentation of process monitoring requires a complex measurement process. Our gauges ensure that quality characteristics are properly documented according to the process.



From development to the pilot run

Development of manufacturing methods

Manufacturing processes are optimised through special manufacturing technologies such as low-waste stamping and forming using rolling tools. Complex manufacturing procedures in a tool and prototype development with near-series manufacturing technology also contribute to the efficiency of our manufacturing processes. Specially developed components guarantee longer service life for long-term operation.

Extensive range of materials

We process a broad range of materials such as stainless steel, zinc, copper, aluminium, ultra-high-strength materials and various plastics.

Planning and manufacture of gripper systems

We first construct the grippers as a 3D model using CAD V5. Active elements are created in an integrated evaluation of all movement procedures. The subsequent fine tuning is carried out outside of the press using the simulator.

Our own forming technologies

We develop prototypes that illustrate the forming process of the later series. The start of series production for the client is supported and the tools for a disturbance-free manufacturing process are optimised with pilot runs and short production runs.

Expert manufacturing for quality and certainty

NC milling/HSC milling

- Latest controls (Heidenhain)
- 5-axis geometry
- HSC processing of annealed materials
- Hard thread milling (over 60 HRC)

CNC turning/NC turning

- Hard turning
- Using machine-driven tools
- Processing of all materials

Boring machine processing/NC boring

- High-performance processing of large parts up to 10 t
- Highest precision

Cylindrical and surface grinding

- Grinding using CBN discs
- Grinding of all materials
- Interior and exterior grinding

Gear hobbing

- Spare part projects
- Gears up to module 15 (straight-cut and helical gearing), 1,200 mm diameter for things such as turbine construction

Welding

- Certified according to DIN ISO 3834/2 as well as DIN 15085/2
- Internal visual test/penetration test
- Repair welding using tungsten inert gas welding
- Welding low-alloy and high-alloy materials, stainless steel, aluminium

Eroding

- Start drill holes in annealed materials
- Eroding in water quenching with fine-finishing generator
- Low Rz values



Paul Beier GmbH
Werkzeug- und Maschinenbau & Co. KG

Naumburger Straße 36
34127 Kassel-Rothenditmold
Germany

Phone +49 (0)561 807 020
Fax +49 (0)561 807 0214

pbk@beier-kassel.de
www.beier-kassel.de