

# Technology at its best

Tools for metal and plastics forming



## Experience and innovative strength



Karle + Jung GmbH is a leading tool-maker with global reference customers. For almost 35 years now, our committed employees have been working together to solve your individual tasks economically. Karle + Jung offers precise and flexible tooling system solutions for forming of sheet metal and plastics, ranging from consulting and planning through to design and production as well as final acceptance and pilot series production in its own tryout center.

As a company in the Dieffenbacher Group, we not only use the most modern planning and production technologies but also benefit from synergy effects resulting from the other company divisions. We are your expert partner whether you are looking to draw, cut, emboss or bend sheet metal or if you require moulds for plastic forming.



## Tooling systems

### Metalforming

- Drawing dies
- Bending dies
- Blanking and punching dies
- Embossing and calibrating dies
- Progressive dies
- Transfer dies

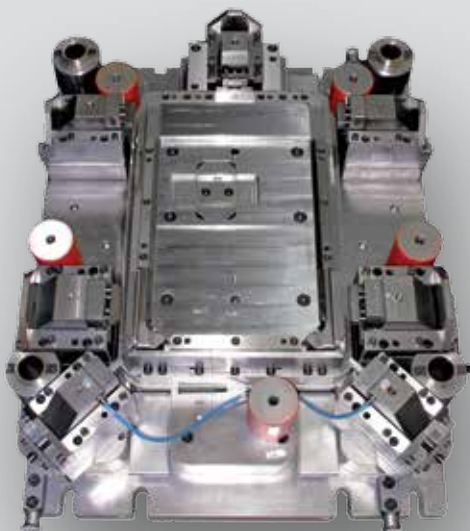
### Plastic forming

- Press moulds
- Punching tools
- Blow moulds
- Foam moulds
- Draw moulds

## Range of services

- Consulting, planning and engineering
- Modular die concepts
- Tryout in the tryout center under realistic series production conditions
- Production support
- Small and pilot series production

## Most modern machining centers



With our modern machining centers, we are capable of manufacturing dies weighing up to 20 tonnes. On several milling machines, we produce workpieces up to 4,000 mm length, 2,600 mm width and 1,500 mm in height.

The range of machines also includes wire cutting machines, drilling machines and grinding machines. As a result, we are geared up to meet all the requirements of modern diemaking - with the highest level of precision, it goes without saying.



**Greater productivity due to:**

- Fast and efficient die manufacture
- Professional development tools

**Greater flexibility due to:**

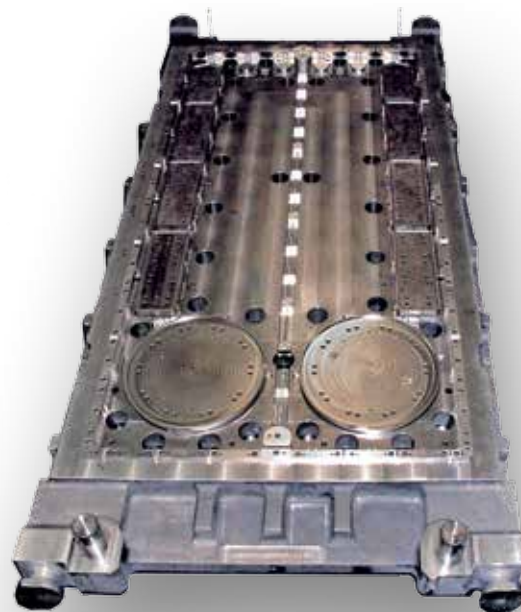
- Modular die concepts

**Greater quality due to:**

- Most modern machining centers

**Greater safety due to:**

- Many years of experience
- Tryout in our own tryout center under realistic series production conditions



## Tooling for metal forming



### **Automotive**

Whether stainless steel fuel tanks or decorative parts in aluminum, our competence comes to the fore in applications at the limits of drawing technology.

By applying our experience in the high-grade steel forming segment or handling visible surfaces in line with demanding requirements, synergy effects are created that turn visions into reality.



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**Metal forming** 10

Plastic forming 8

Pressed part production 10



### **Domestic appliances**

The domestic appliance industry in Europe and, in particular, in Germany is relying more and more on premium quality in response to ever fiercer market pressure. The challenge of achieving high die quality at justifiable investment costs is certainly one that our dies have met across the board.

Our range of products and services includes not only straightforward manual feed concepts for special types with low quantities, but also complete transfer sets for high-volume production.

### **Industry**

In view of the vast range of industrial components that are manufactured using forming technology, it is generally necessary to have good ideas in order to turn a component drawing into an efficient production concept. In this case, our motivation and our strength lie in not only planning the sequence of stages but also configuring efficient die concepts and selecting suitable materials and surface treatments.

## Tooling for plastic forming



Fiber-reinforced plastics are increasingly replacing steel and aluminum as part of the trend towards lightweight construction in the automotive industry. Nowadays, they are used both as structural components as well as components with first-class surface quality.

Benefit from the experience held by the market and technology leader in processing fiber-reinforced plastics.



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Many years of cooperation with renowned research institutes make it possible for us to optimize developments and processing techniques in both an economical and environmentally friendly way.

- Press forming in areas such as SMC, GMT, LFT, LFI, GRP, wood, PE, RTM, etc.
- Blow forming for hollow bodies made from PP (polypropylene) and PE (polyethylene) with high density
- Foam forming for PUR (polyurethane) and RIM
- Deep draw forming for PET (polyethylene terephthalate) or EPDM (ethylene propylene diene monomer rubber) and other plastic materials
- Punching dies for plastic parts with overlapping contour cut

## Pressed part production in the tryout center



With its expert knowledge, Karle + Jung enables production of small and medium series of drawn, punched and bent parts. It is possible to produce parts either with the customer's dies or with dies manufactured by Karle + Jung.

The efficient and reliable services range from providing assistance at short-notice in case of machine failures, conversion work and production bottlenecks, through to complete substitution of uneconomical production in a small press shop.

All services can be achieved using batch production or the parts can be held in stock and delivered just-in-time in response to an order.



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#### Tryout center equipment:

- Dieffenbacher drawing press, 12,000 kN with MPC system
- Dieffenbacher drawing press, 12,000 kN, active / passive acting
- Dieffenbacher column press, 4,000 kN
- CNC lubricant application machine with spraying technology
- Press brake, 1,000 kN
- Laser machine, for dimensions up to 3,000 x 1,500 mm and thickness up to 16 mm mild steel or 6 mm stainless steel



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