In the field of small- and medium series we realise the sample production as a base for the large-scale production. That way we attend our costumer during the whole product life cycle as a flexible and reliable partner. We also produce smaller batch sizes for industries with highest requirements on matters of finished part quality.

Our core technologies

**Turning**
- batch sizes from 5 to approx. 100,000 units
- CNC-turning up to 120mm bar capacity
- CNC-straight turning up to 16mm bar capacity and 100mm part length
- processing of aluminium- and copper alloys, steel or high-grade steel and plastics

**Milling**
- single part production up to batch sizes of ca. 6,000 units
- 4-axis-handling with direct input of the costumers CAD data and a maximum procession area of 1000 x 500 x 400mm
- HSC-cutting with a maximum procession area of 550 x 400 x 400mm
- processing of aluminium- and copper alloys, steel or high-grade steel, cast material and plastics

**Electrical discharge machining (EDM)**
- die sinking with a maximum procession area of 400 x 300 x 300mm
- wire eroding with a maximum procession area of 350 x 220 x 220mm

**Parts refinement and unit assembly**

We are able to refine the surface of finished parts through grinding, lapping, printing or varnishing to meet the high expectations of our costumers.

Our product portfolio is rounded off by the assembly of components.
In the field of **large-scale production** we also meet the challenges of the commodity markets and the need for a minimum cycle time. Taking advantage of various different technologies and its combination, we achieve an high level of efficiency.

**The synergy of forming and cutting**

In a pre-processing step, we form the raw material to its approximate geometry. After that, the actual geometry is finished by overturning or CBN-plunge cut grinding.

In the case of cold-deformed raw material we are able to process steels with a carbon percentage of max 0.5% or an alloy percentage of 5% as well as various other non-noble metals.

The advantages are:

**Current method: cutting as a complete process**

+ flexibility with small batch sizes  
- extraordinary high cutting effort  
+ high material effort

**New approach: cutting based on raw material**

+ optimized material usage  
+ minimized cutting effort

**The synergy of cutting and injection moulding**

In a first step we cut the more mechanically stressed but geometrically easier shaped metal parts as a base for further processing. Following, the metal base will be injection moulded with plastics to finish the final, but more complex part geometry.

We process various metal or plastic materials depending on the costumer demand and the required quality characteristics.

The advantages are:

**Current method: production with metal only**

+ flexibility with small batch sizes  
- extraordinary high cutting effort  
- high material costs  
- heavy parts weight

**New approach: plastic injection moulded turned metal parts**

+ material costs reduction  
+ minimized cutting effort  
+ optimized material usage  
+ parts weight reduction
PENTACON - A strong partner

We always meet the market challenges and are a competent and well established partner in the following fields:

- optical and opto-electronical systems
- automotive
- medical technology and pharmaceutical engineering
- electrotechnology and electronics
- mechanical engineering

We are certified according to:
- DIN EN ISO 9001
- ISO/TS 16949
- eco-management according to Ökoprofit
  DIN EN ISO 14001 (projected)
- DIN EN ISO/ IEC 17025:2005 (DKD accreditation)

For further information please contact us at:

Mr. Klaus Krieg
Tel.: +49-(0)351-2589-372
Fax: +49-(0)351-2589-303
klaus.krieg@pentacon.de

Mr. Torsten Zill
Tel.: +49-(0)351-2589-232
Fax: +49-(0)351-2589-303
torsten.zill@pentacon.de