Plastic Injection Moulding
and Tool Making
Based on our many years experience in the production of high-precision parts, we are offering you a variety of services starting with the R&D, the construction, the mould and die production up to the refined final injection moulded plastic part or an assembled unit. Everything from one source.

**R&D/ Construction**

In close cooperation with our clients, PENTACON is working out a customized and innovative solution based on your sketches, drawings, samples or prototypes.

- close collaboration with scientific institutes and universities
- modern CAD software
- filling simulation for optimized tooling usage

For a smooth running file exchange we are able to process the following formats: STEP, IGES, STL, DXF, DWG, VDA, PARASOLID, SAT (other formats upon request)

**Tool making**

High qualified and motivated engineers construct your injection moulding tools up to a size of 346 x 546mm on the latest CNC milling, die sinking or wire eroding machines.

- Injection moulds for plastics and ceramics
  - sliding split mould
  - unscrewing mould
  - hot runner mould
  - micro injection moulds
  - multi components moulds
- device and gauge construction

**Electrical discharge machining (EDM)**

Using high quality wire eroding and die sinking machines, we are able to offer precise and competitive parts. Upon request we also control the production with our own 3D measuring machine and certify the test results.

- die sinking up to a working area of 550 x 470 x 400mm
- wire eroding up to a working area of 350 x 220 x 220mm
Contract manufacturing: HSC-cutting

Using high-end HSC cutting technology, we produce high precision milled parts from filigree and complex 3D geometries.

- HSC-cutting up to a working area of 550 x 400 x 400mm

Plastic injection moulding

On modern NC controlled injection moulding machines with CNC controlled handling systems we produce injection moulded parts from 0.1g up to 300g of all thermoplastics except PVC.

Our machines (ARBURG, DEMAG, ENGEL) work with closure loads of 200kN up to 1500kN and mounting plates from 340 x 250mm up to 700 x 700mm.

- fully automated injection moulding around inserts
- metal substitution
- injection moulding in a clean room
- optical parts
- multi components technology
  - core-back technique
  - rotating plate technique
  - bi-injection technique

Having a vast range of granules on stock we guarantee a quick production using various plastic materials. Adjustments to colour can be flexible realized as well.

Surface refinement/ Unit assembly

We offer the post refinement of surfaces or the assembly of complete units.

- spray painting up to 700 x 400 x 500mm
- screen and pad printing
- evaporating and other surface refinement in collaboration with qualified external partners
- unit assembly

We also offer other refinement methods upon request.
PENTACON - A strong partner

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

- mechanical engineering
- automotive
- medical technology
- furniture industry
- electrotechnology and electronics
- fine mechanics
- optics

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:

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