

REALISING SPECIAL FORMS  
**PROTOTYPE  
CREATION**

**FROM CAD DATA TO PROTOTYPE  
WITHIN 1 DAY**

We can turn your 3D data or those created by us "graspable" prototypes. Revision of your components appropriate for the tools and materials involved forms the basis of our development work.

**RAPID PROTOTYPING**

- ✓ 3D printing
- ✓ Selective laser sintering
- ✓ Stereolithography
- ✓ Vacuum casting



**RAPID TOOLING**

- ✓ 3D printed tools
- ✓ Tools made of resin
- ✓ Tools made of aluminium
- ✓ Tools made of steel

TURNING IDEAS INTO FORMS  
**OUR SERVICES**

**DEVELOPMENT**

Our long years of experience in the development and implementation of ideas in plastic products puts us in a position to master even difficult challenges. We work out the optimum solution to problems in dialogue with our clients.

**CONSTRUCTION**

Close collaboration with our clients produces optimally designed geometries that guarantee reliable manufacturing of an article. Your ideas are translated into structures with the latest CAD systems.

**TOOL & MOULD MAKING**

Computer controlled machine tools are supplied online via 3D-CAM with the data created in the design engineering process, so as to convert them into the necessary injection moulding forms. The latest CNC technology guarantees the required precision.

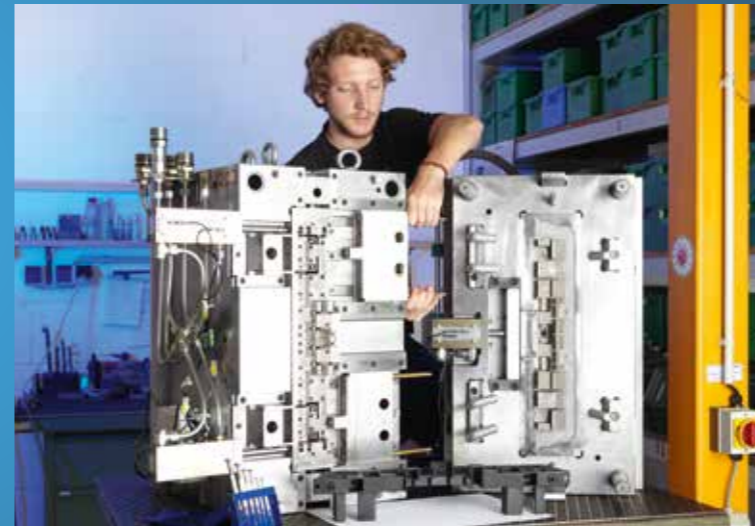
**INJECTION MOULDING**

A wide range of inserts, especially in metal, for various automobile suppliers and for machine construction, are extrusion-coated with high-technology special polymers or other materials.

HUNOLD + KNOOP  
**READY FOR YOUR  
CHALLENGES!**

We have cooperated with partners in the industry for over 40 years now and with 170 employees and have since then continued to expand our range of products.

Ranging from preliminary designs to engineering and tool construction, long turning, injection moulding, CNC machining and even complete assembly, we handle all stages involved in the manufacturing process.



*we make  
ideas plastic*



**PREMIUM PLASTIC COMPONENTS  
FOR MACHINE BUILDING, TOOL AND  
AUTOMOTIVE INDUSTRIES**



[www.hunold-knoop.de](http://www.hunold-knoop.de)

- ✓ PREMIUM PLASTIC COMPONENTS
- ✓ HIGH-TECH PRODUCTS
- ✓ PROTOTYPE CREATION

**HK** Hunold + Knoop  
Kunststofftechnik

FORMEN | TRADITION | LEIDENSCHAFT

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## HIGHEST QUALITY REQUIREMENTS PREMIUM PLASTIC COMPONENTS

We are suppliers and development partners for premium manufacturers in equipment and machine construction as well as for the automotive industry. We will help you to exceed your quality promise with smart ideas and the highest-quality technological components and assemblies in plastic.



## MOULDED TECHNICAL PARTS

On 50 process-controlled injection moulding machines with locking pressures of up to 500 tonnes we can manufacture over 3,000 different high-precision plastic moulded technical parts for you.



**World market leader**  
for extruded shafts

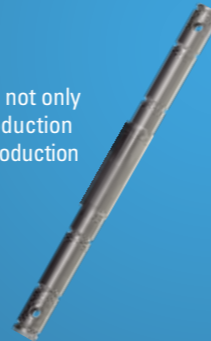


## WITH PLASTIC EXTRUDED SHAFTS, ROLLERS AND CYLINDERS

In this area Hunold + Knoop is a world leader. Optimum speed and quality by complete in-house production, including long turned parts in our own Machine Shop.

## TURNED PARTS AND LONG TURNED PARTS

A special feature of Hunold + Knoop is that we not only process plastics, but also the turning parts production is in-house. This area guarantees a rational production of long and slim precision turned parts.



## FINISHED FORM PRODUCTION HIGH-TECH PRODUCTS

We are always working on and with the latest production methods. For example, the premium material TPU-X®, for that H+K has a patented production process. Or replace metals with advanced plastics.

## METAL SUBSTITUTION

In many application cases thermoplastics are excellently suited as substitutes for metals and offer many advantages at the same time.

### Some advantages of metal substitution:

- ✓ Integration of functions
- ✓ Lower number of parts, simplification of manufacturing, etc.
- ✓ Even complicated tool sliders can be used
- ✓ Weight reduction
- ✓ Noise reduction
- ✓ Targeted improvement of product properties (e.g. impact resistance, corrosion stability)



## HIGHEST PERFORMANCE WITH TPU-X®

The premium material TPU-X® is deployed anywhere where the highest performance is required. The revolutionary material properties of cross-linked polyurethane (TPU-X®) are what make this new material so unique. High stresses in machine and plant construction become manageable with TPU-X®.

### Some advantages of TPU-X®:

- ✓ Enorm hohe Temperaturbeständigkeit
- ✓ Rubber-elastic properties
- ✓ Enormous dynamic properties
- ✓ Considerably increased life expectancy under extreme conditions
- ✓ Extremely high resilience
- ✓ Very high level of "snappiness"
- ✓ Lower abrasion
- ✓ Excellent oscillation and vibration dampening (NVH)
- ✓ Drastically shortened process chain compared to expensive vulcanisation
- ✓ Storage stable in contrast to rubber



**CERTIFICATION**

Our company is certified according to:

- ✓ DIN ISO 9001:2015
- ✓ DIN ISO 14001:2015

These certifications confirm our quality capability and proves that the company processes are controlled and structured.

