

Special Die Manufacture

Every die is unique



Individual products for numerous industries

The Special Tools business unit develops and produces dies that are used not only in the automotive industry but also in branches such as domestic goods, furniture as well as large and small electrical appliances.

Reference example of cover component

These components are produced from aluminium ALMG 3 with a wall thickness of 1 mm.

Production is carried out in a mechanised transfer die on a mechanical press with a



pressing force of 8,000 kN in our AEF press shop.

After the forming process, the two components are washed and passivated. The individual parts are packed in PE bags.

With regard to processing of the components, not only the accuracy and surface quality should be emphasized, but also the required residual dirt particle size of less than 50 µm.

The two components are always used in pairs. The range of applications includes cars in the BMW i brand.

The function there is to protect the entire vehicle electronics against external effects.

Reference example of blocker ring components

These components are highly accurate parts that are used in the area of automated manual gearboxes.

Production here takes place using combined sequential dies with up to 15 working stages. It should be noted that 2 equal



parts are produced in each stroke here. Production is carried out in our AEF press shop on a servo press with a pressing force of 6,300 kN.

The material quality of parts is in HC260 and 16MnCr5 with a sheet thickness of 2.2 mm. The challenge here concerns the demanded accuracy of the components and the process capability.

The following requirements apply here with regard to dimensional accuracy:

- Angular precision +/- 4 minutes of arc
- Concentricity accuracy -0.03 mm
- Levelness requirement 0.04 mm
- Other tolerances +/- 0.05 mm
- Furthermore, no surface markings whatsoever.

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Optimum precision work according to your requirements

Reference example thrust rod

This component is produced in a combined sequential die with a total of 11 working stages.

Component made from S 420 MS with 2 mm sheet thickness. Production on a mechanical press with a pressing force of 22,000 kN. The special aspect of this component is the precise alignment of the opposite transfer points and holes, as well as the plane-parallel configuration of the location supports.

Reference example of HAT disk carrier component 7252720002

The component is used in a new 9-speed automatic gearbox. The material quality is S 355, with a sheet thickness of 2 mm.

The component is produced on a mechanised multi-station press with a pressing force of 23,000 kN, a total of 15 working stages as well as blanking.

The special features in component production are not only dimensional accuracy but also incorporating the gearing geometry with the patented rolling process from Allgaier Automotive. This process makes it possible to increase the tooth tip removal from the die. This has the advantage that the component can be made smaller, which in turn allows a weight reduction and a lightening of the vehicle weight.

Production takes place in 10+1 working stages.

- OP 10 cutting of the round blank
- OP 20 drawing
- OP 30 rolling
- OP 40 rolling
- OP 50 rolling
- OP 60 perforating with slide
- OP 70 perforating with slide
- OP 80 chamfering
- OP 90 perforating
- OP 100 perforating with slide
- OP 110 perforating with slide



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