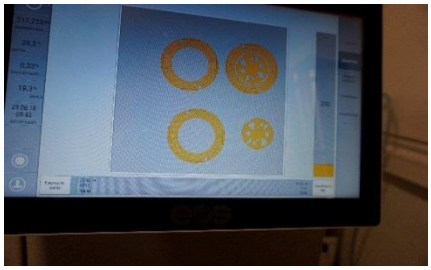
3-D-Printing at KIEFER

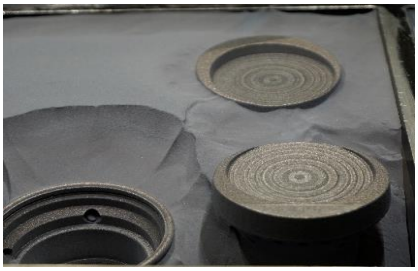
Innovative tool technologies enable new design possibilities and create resource saving solutions for the packaging industry.

Thanks to further developed components and simplified construction methods, technologically mature and economical solutions are implemented. In the attached KIEFER Technical Center test runs of customer tools are carried out and small series are produced on behalf of customers.
3-D-printer also play a decisive role in this. The latest addition to KIEFER is a metal 3-D printer. This is used in the production of prototypes and individual components. With a construction volume of 250mm lenght/ 250mm width/ 295 mm height (325mm height with construction platform) the printer enables the fast, flexible and economical production of metal components directly from CAD data.

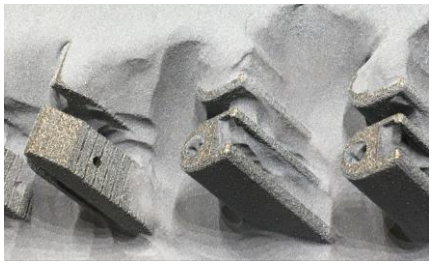


(Photos from KIEFER: manufacture of mold insert bottom)





(Photos from samples: Manufacturing of molded ring and base)



(factory standard parts , f.e. stacking hooks

KIEFER
mold technologies

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Advantages of 3-D printing

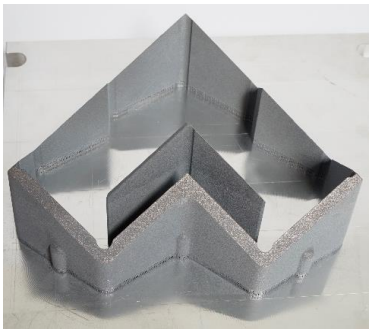
* almost any geometry complexity
* Final strength of the components that can be used directly (no sintering)
* little to no programming and editing effort
* Shrinkage 0.05 to 0.3%
* Dimensional accuracy ± 0.1mm
* The components can be machined (turning, milling, thread cutting, wire and die sinking, welding, grinding, blasting and polishing).

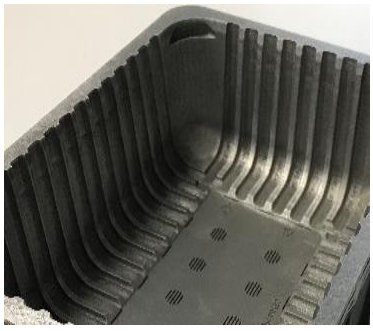
Technical data AlSi10 Mg

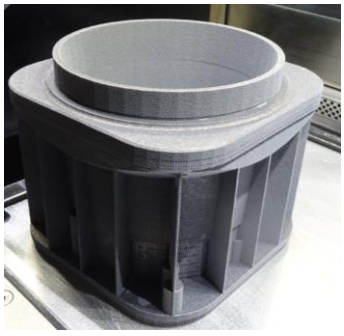
* Density 2.67 g / cm^3
* Surface roughness without reworking Ra 12-20 µm
* Surface roughness according to microblasting Ra 6-15 µm
* thermal heat treatment such as stress relieving annealing, solution annealing and artificial aging possible
* thin-walled parts with integrated cooling possible (waterproof at 10 bar with a wall distance of 3-5 mm)
* coating of the 3-D parts possible (e.g. with anodizing, hard anodizing ...)

Description

AlSi10 Mg is characterized by good strength and hardness as well as high dynamic load capacity and is therefore also used for highly stressed components. Components made from AlSi10Mg are ideal for applications that require a combination of good thermal properties and low weight.







(Photos: device for forming felt elements, mold inserts, meat bowl, mold ring)

(Device for suction cups)

KIEFER mold technologies

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