

# ETMM

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EXTRA

### Formnext guide

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at the show

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### Logiq 3 Cham Cutting cycle time

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### Building perfect parts

Iterative processes of quality control ensure results according to specifications.

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### EDM Buyer's guide 2019

The annual EDM Buyer's Guide comprising eight different EDM categories.

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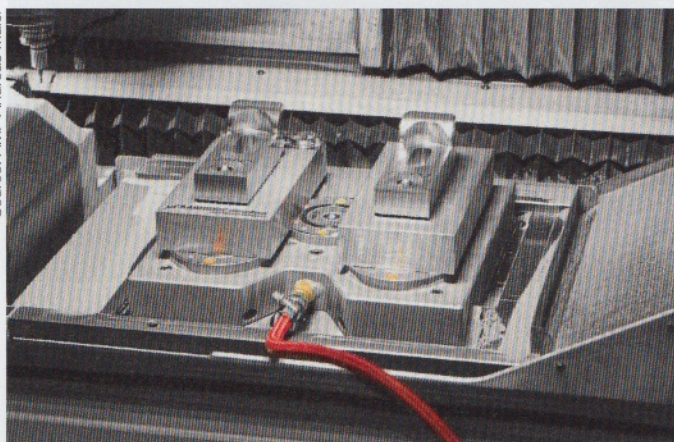
### CAM makes competitive

CAM software is an integral part of maintaining quality.

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## Zero-point clamping technology in additive production

Source: AMF Andreas Mater



Zero-point clamping helps to clamp the workpiece and the base plate together on another machine.

**Clamping** - Tool and mould makers in automotive and medical sectors are relying with increasing success on the production of pre-finished standard parts achieved by tool-free manufacturing in 3D printing. Machine manufacturers are also hands-on, as evidenced by entire machine series being fitted with AMF's zero-point system, which is said to ensure users achieve high productivity quickly.

Nowadays, 3D printing alone is not enough. Further processes like cleaning, measurement, milling, drilling or

sawing tasks mostly follow. Here, there is a need to clamp the workpiece and the base plate together on another machine, which can be difficult. Zero-point clamping is the answer. With AMF's zero-point interface deployed on 3D printers and used in all subsequent processes, set-up times can be reduced by over 90 % for the production process. Instead of reconfiguring the base plate with the component in each follow-up process, zero is 'reset' only once and then just 'taken along'.  
amf.de; Hall 12.0, Booth E81

## Testing components and more at Formnext

### Liquid Silicone Components

- Wacker Chemie 3D's printing technology Aceo, a registered trademark of Wacker, is the world's first industrial-scale technology for the additive manufacturing of liquid silicone rubber components, according to the company.

The unique drop-on-demand technology provide design freedom and allows for the printing of highly functional parts while maintaining the outstanding properties of silicone rubber, such as temperature and radiation resistance or bio-compatibility.

Printed silicone rubber components can be used in a wide range of applications and in several key industries, such as the automotive, aerospace and aviation, healthcare and equipment industries as well as in mechanical engineering. Services offered by Aceo include design support, training sessions at its print lab and a web shop for secure file upload and ordering. Its product group portfolio covers material jetting, engineering, prototyping, trials and component testing.

aceo3d.com; Hall 11.1, Booth



Source: Wacker

Wacker offers industrial-scale technology for the additive manufacturing of liquid silicone rubber components.

## Success built on thinking outside the box

Source: 1zu1 Prototypen



Based in Dornbirn, Vorarlberg, Austria, 1zu1 produces prototypes, small series and serial parts.

**Production** - Innovative minds and high-tech expertise have led to the success of 1zu1 Prototypen. The company started in 1996 and has a thing for people who like to think outside the box. This includes asking the right questions and coming up with new solutions, which is one of the reasons it has remained ahead of the competition.

1zu1 produces prototypes, small series and serial parts using 3D-printing processes like laser-sintering, stereolithography and fused deposition modelling. Vacuum-cast-

ing is also used. In injection-moulding, 1zu1 produces plastic parts using aluminium tools and, if required, in its own cleanroom. The tools are manufactured in-house.

Surface and printing technologies have also been added to its portfolio. This covers digitising of components, material extrusion, binder-jetting, coating and varnishing, dyeing, 3D metrology, production of components and assemblies, pattern-making, prototyping as well as gauge and fixture-manufacturing.

1zu1.eu; Hall 11.1, Booth B58