

For immediate release

Customized AM lightweight grippers - configured online in 10 minutes

BERLIN, November 11th, 2019 – Individual handling operations require a broad variety of gripper geometries. J. Schmalz GmbH, the market leader in vacuum gripping technology, now provides its customers with the opportunity to configure their grippers 100% individually: additively manufactured and designed with the help of trinckle paramate in just a few mouse clicks.





-  100% optimized for the individual handling task of the customer
-  Configuration in just 10 minutes
-  No manual design costs
-  Customer integration into an intuitive configuration process



Image: J. Schmalz GmbH

Increasing demand for customized solutions: An opportunity for AM

Due to the increasing degree of automation in the industry and the constantly changing production environments, more and more individual handling applications emerge and there is an increasing demand for individual gripper solutions. Here, additive manufacturing offers enormous potential, as it allows a shift away from the one-size-fits-all strategy towards production in batch size one.

For this reason, Schmalz has been working with additive manufacturing technology for several years now in order to use it not only in product development, but also in small series production.

Bottleneck design: time for new approaches

However, the manual design of an application-specific gripping system in conventional CAD is anything but trivial. An experienced designer needs about one working day for the manual design of such a gripping system. Here, Schmalz is now using trinckle and its software system paramate to provide its customers with an intuitive engineering tool.

"We made a deliberate decision to work with trinckle because the Berlin-based software company contributes a great deal of expertise in 3D printing and design automation. In combination with our in-depth knowledge of gripping workpieces, this has resulted in a very innovative digital solution for our customers."

- Dr. Kurt Schmalz, Managing Director of J. Schmalz GmbH.

Based on its cloud technology paramate, trinckle developed a web application for Schmalz in which users can customize their vacuum gripper. This can be done in minutes and without required in-depth knowledge. This application is integrated into Schmalz's website so that employees and customers worldwide can access it at any time.



Image: trinckle

From cardboard boxes to free-form workpieces

At the beginning, the user defines the handling task and thus defines his specific individual requirements. In addition to various predefined workpieces, the user can upload his own objects - regardless of whether they are cubic, angular or with free-form surfaces. Then, the user starts the configuration of the matching gripper geometry. The tool intuitively guides the user through the

various design steps, giving him application-specific recommendations on the number, diameter and type of suction cups. Intelligent algorithms suggest an appropriate positioning of the suction cups. Alternatively, the user can define the positions of the suction points by a mouse click in a graphical user interface at any time.

Finally, the user selects the preferred flange insert and the most suitable vacuum generation. Once all components and parameters have been defined, the customer receives a CAD model and an offer for his gripping solution.

The entire configuration of the use-case-specific gripper takes about 10 minutes and does not require any expertise in classic CAD software or 3D printable design. The complexity of the geometry generation itself is handled by rule-based algorithms.

Individual lightweight grippers combine the advantages of additive manufacturing

The additive manufacturing technology is the key to cost-efficient and fast single-part production in just a few days. In addition, it reduces interfering contours due to integrated air guidance, for example. In this way, Schmalz produces lightweight and robust grippers in a short time, which are designed for the respective application. Attached to lightweight robots and cobots, the Schmalz solution can hold loads of up to ten kilograms.

Automated design for a scalable business model

The benefits of additive manufacturing are combined with new approaches for automated design. trinckle's cloud-based software provides the crucial cornerstone to turn a formerly very cost-intensive manual process into a scalable serial application.

"Thanks to trinckle's software solution, we enable now our customers worldwide to design their individual grippers online - intuitively, quickly and in the familiar high quality. We have found the right partner in the team from Berlin."

Managing Director of J. Schmalz GmbH.

- Dr. Kurt Schmalz,

The use-case including vacuum grippers and software in action will be presented at the [Formnext \(November 19th-22th 2019\)](#) in Frankfurt in hall 11.1, booth C59.



Image: J. Schmalz GmbH

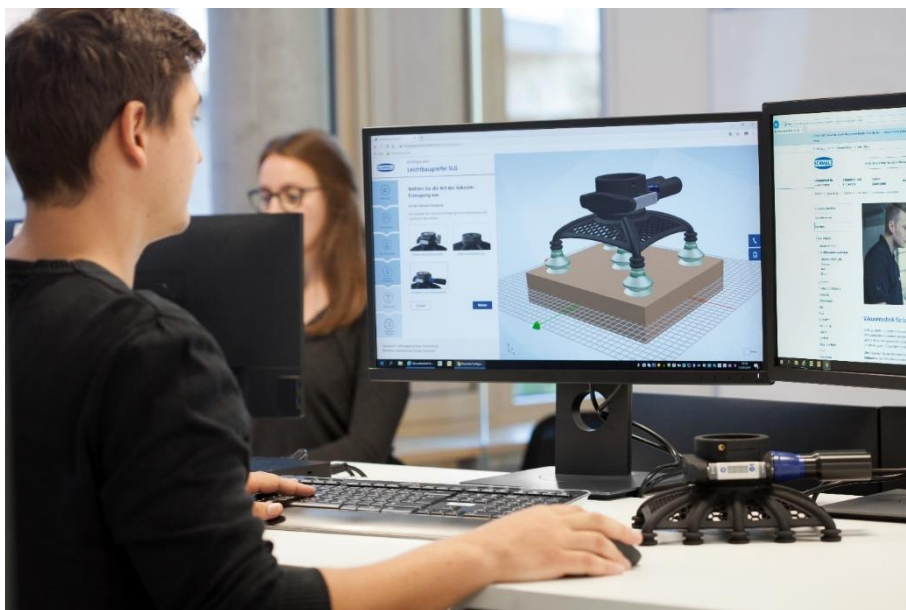


Image: J. Schmalz GmbH

[About J. Schmalz GmbH](#)

Schmalz is the market leader in vacuum automation and ergonomic handling systems. As a global company, Schmalz's products are used in applications in the logistics industry, the automotive industry, the electronics sector and in furniture production. Its wide range of products in the Business Unit Vacuum Automation includes individual components such as suction cups and vacuum generators as well as complete gripping systems and clamping solutions for holding workpieces, for example in CNC machining centers. In the Business Unit Handling Systems, Schmalz offers innovative handling solutions with vacuum lifters and crane systems for industrial and handicraft applications. With the Business Unit Energy Storage, the company has added a new pillar in the field of stationary energy storage.

With its comprehensive consulting, focus on innovation and first-class quality, Schmalz offers its customers long-lasting benefits. Schmalz's intelligent solutions make production and logistics processes more flexible and efficient, while also preparing them for the increasing trend toward digitalization.

With its own locations and its trade partners, Schmalz is represented in more than 80 countries and in all of the most important markets. The family-owned company has around 1,500 employees at its headquarters in Glatten (in the Black Forest region of Germany) and its 18 international subsidiaries.

About trinckle

trinckle develops software for the age of additive manufacturing.

The core product paramate automates design processes, both for faster internal product development and for intuitive product configuration by the end customer. paramate enables the customization of any product - whether prostheses tailor-made for one patient, individual industrial components or personalized lifestyle products.

More information at: <http://trinckle.com>

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