**Press release**

**October 2024**

**Increased productivity thanks to AI-supported sheet metal parts handling**

Schmalz offers software-supported solutions for sheet metal part handling. The Solution Kits make intelligent gripping a reality. The ivOS Sheet Metal Solution Kit optimizes the loading and unloading of processing machines by making robot grippers more flexible and intelligent. They adapt dynamically to the shape, weight, size and center of gravity of the sheet metal parts. The result: higher productivity, less strain on employees and cost savings.

The most flexible robot is still the human. But how can automation be implemented without losing this flexibility? The solution lies in the connection of intelligent gripping technology, advanced sensor technology and AI. By using intelligent and automated systems! As a technology supplier, Schmalz offers the ivOS Solution Kits on the market, which can be offered and built by Schmalz system partners, integrators and machine builders as stand-alone complete robot solutions. The ivOS Sheet Metal Solution Kit is a flexible system that controls robots and 3D camera technology using the AI-based Vision Operating System (ivOS) and continuously optimizes the handling process. The smart solution loads and unloads different sheet metal parts fully automatically and without the need for personnel. The technical innovation: the system recognizes double sheets and only grabs individual sheet metal parts thanks to intelligent control. As an option, Schmalz system partners can integrate a reversing unit that turns the sheet metal for processing the second surface.

The newly developed gripper series FMG is an elementary component. The highly flexible matrix gripper consists of seven modules, each with twelve suction cups, which are linked to form a flexible variable-area gripper. The 84 individually controllable suction points adapt automatically to the changing workpiece geometries. It recognizes and handles unknown sheet metal parts of different shapes - whether the size of a business card or Euro pallet - and guides the robot safely to the deposit target. It removes the disordered parts from a pallet and feeds them to the machine in an orderly fashion. Thanks to plug-and-play, applications do not require any expert knowledge for the start of operations; the system is quickly configured and ready for use. With full automation, the increase in productivity is around 90 percent.

Specific requirements and special solutions can be implemented using the modular automation system. In addition to Schmalz, system partners and integrators also support the application in order to optimally adapt the solution to every task. Interested parties can test the ivOS solution kit via system partner Cobo Works GmbH in a twelve-month rental model before deciding to purchase. However, the following applies to all applications: smart automation for loading and unloading sheet metal parts usually pays for itself within two to four years.

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**Service for the editorial team**

**Meta-Title:** Solution Kit ivOS ensures height productivity when handling sheet metal

**Meta description:** The ivOS solution kit from Schmalz uses artificial intelligence to continuously learn and optimize the loading and unloading of sheet metal processing machines.

**Social media:** Plug-and-play thanks to artificial intelligence. The ivOS solution kit from Schmalz is a flexible system that recognizes different sheet metals and can pick, move and place them safely with the help of automated robotics. This is made possible by the combination with a 3D camera. Implementation is simple and can be completed quickly without expert knowledge or programming skills.

**Pictures:**

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| **Ein Bild, das Cartoon enthält.  Automatisch generierte Beschreibung** |  | **Picture 1:**  The 84 suction points of the FMG matrix gripper automatically adapt to the workpieces and thus offer maximum flexibility when handling sheet metal parts. |

Pictures: J. Schmalz GmbH

**About the company**

Schmalz is one of the market leaders in vacuum automation and ergonomic handling systems. The internationally positioned company's products are used in logistics applications as well as in the automotive industry, the electronics industry and furniture production. The broad spectrum in the Vacuum Automation business unit includes individual components such as suction cups or vacuum generators, complete gripping systems and clamping solutions for holding workpieces, for example on CNC machining centers. In the handling business unit, Schmalz offers innovative handling solutions for industry and trade with vacuum lifters and crane systems. With the Energy Storage business unit, the company is designing another mainstay in the field of stationary energy storage systems.

The combination of comprehensive consultation, a high focus on innovation and first-class quality safeguards sustainable added value for customers. Intelligent solutions from Schmalz make production and logistics processes more flexible and efficient - and at the same time fit for the advancing digitalization.

#### Schmalz is represented in all major markets with its own locations and trading partners in around 70 countries. The family-owned company, headquartered in Glatten in the Black Forest, employs round 1,800 employees at 30 locations worldwide.

#### Contact for questions

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