**Press Releasse**

**May 2025**

**Intelligent Gripping: Technology that thinks for itself**

In order to achieve the balancing act between the individualisation of furniture and efficiency, woodworking companies need creative solutions that fully exploit the advantages of automation from batch size 1. With the Solution Kit ivOS Wood, Schmalz offers them a smart system that automatically recognises, picks up and places unknown workpieces.

It should be individual. One example: a customised room divider made from recycled oak wood that blends harmoniously into the room and offers maximum storage space. The optimum solution for the end customer poses challenges for joineries and furniture construction companies. After all, they want to be able to handle this high workpiece variance in a cost-efficient manner. Traditional automation systems are usually only suitable for large series, as woodworking companies have to adapt the hardware and software to the respective production task at great expense. Batch sizes of 1 and fast product changes cannot be realised economically in this way.

With the Solution Kit ivOS Wood, Schmalz presents a smart solution that can recognise, grip and precisely place unknown boards and furniture parts. Keyword: intelligent gripping. This refers to the AI-supported handling of different wooden workpieces. Thanks to the perfect interplay of 3D vision sensors, the right gripping technology and artificial intelligence (AI), the system identifies the boards without the need for programming or manual intervention. The AI segments the workpieces to be gripped and independently selects the gripping strategy and control of the suction cups. It takes over the entire process planning, calculates the best stopping point and controls the robot collision-free until it reaches its destination. If the production requirements change, the software optimises the parts handling and continuously expands the range of recognised workpieces and executable processes. This provides companies with a future-proof system.

#### With the Solution Kit ivOS Wood, companies benefit from optimised processes, produce less waste and can deploy their staff for more value-adding activities. This enables them to achieve significant cost benefits. Whether large and small series or individual pieces - processing systems such as nesting CNC milling machines, painting systems and edge banding machines can be fed and stacked automatically.

#### *(2,359 characters incl. spaces)*

**Service for the editorial team**

**Meta-Title:** Solution Kit ivOS Wood recognises, grips and moves different wooden workpieces

**Meta-Description:** With the Solution Kit ivOS Wood, Schmalz presents a clever solution with which wood processing companies can automate their production from batch size 1.

**Social Media**: Individualisation meets efficiency. The Solution Kit ivOS Wood from Schmalz recognises, grips and places various wooden workpieces thanks to AI-supported technology - without the need for teaching. Furniture construction companies and joineries can use it to produce economically and fully automatically from batch size 1.

**Images:**

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|  |  | **Image 1:**  The Solution Kit ivOS Wood consists of an application-specific vacuum gripper, a 3D camera system and AI-supported software. |
|  |  | **Image 2:**  Automated loading and unloading with 3D vision, intelligent gripper technology and AI: The camera recognises the workpieces, the gripper grips them and then places them precisely. |

Images: 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 sector and furniture production. The broad spectrum in the vacuum automation business field includes individual components such as suction pads or vacuum generators, complete gripping systems and clamping solutions for holding workpieces, for example on CNC machining centres. In the Handling division, Schmalz offers innovative handling solutions for industry and trade with vacuum lifters and crane systems. With the Energy Storage business area, the company is establishing a further mainstay in the field of stationary energy storage systems.

The combination of comprehensive advice, a strong focus on innovation and first-class quality ensures 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 digitalisation.

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 around 1,800 people at 31 locations worldwide.

#### Contact for Questions

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