



Schmalz Robotics

Smart Hands for Every Cobot

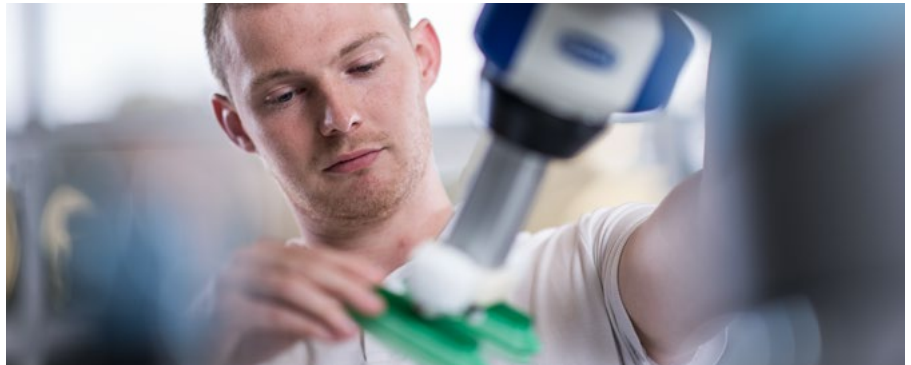
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Schmalz Robotics

Vacuum gripping solutions for lightweight robots and cobots

“With its components, Schmalz is ensuring that cobot systems can be commissioned with utmost speed and simplicity.”

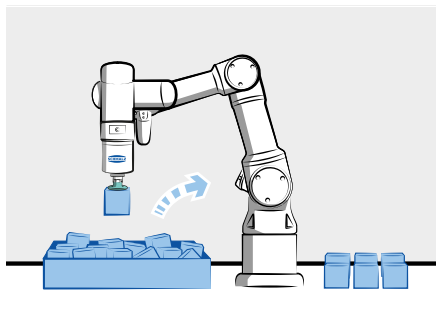
Matthias Frey, Head of Business Development,
Vacuum Automation



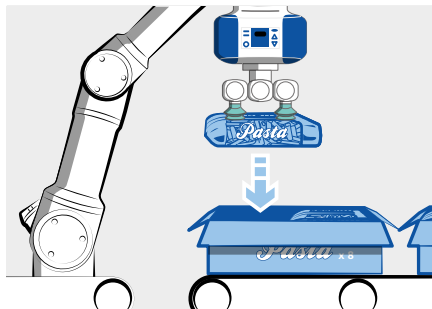
Lightweight robots and cobots play a key role in digitalization. They take on a wide range of tasks and make production more flexible. At the same time, they are relatively inexpensive and easy to program – and in this way, they make it easier to get started with automation. When it comes to the use of lightweight robots in the areas of assembly, logistics and packaging, the sky is the limit.

But the easier cobots are to use, the more important it is to choose the right gripping system. The robot can only pick up, move, position, process, assemble, sort, stack and put down a wide variety of goods and parts in combination with suitable grippers. Schmalz is the market leader in vacuum automation and develops individual, flexible gripping systems for use with lightweight robots. Thanks to our decades of experience in handling technology and our application expertise, we are able to offer our customers a significant competitive advantage.

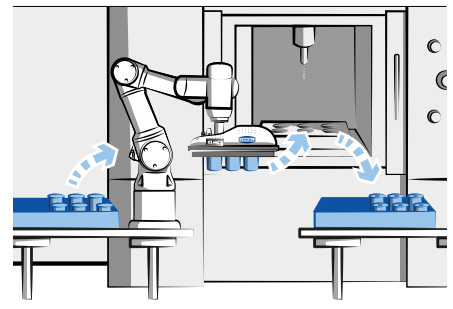
TYPICAL AREAS OF APPLICATION



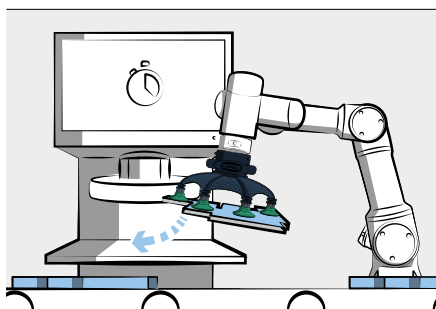
Pick and place



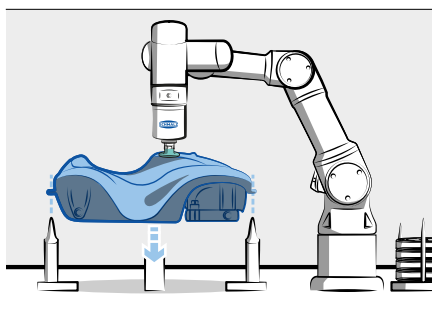
Packaging and palletizing



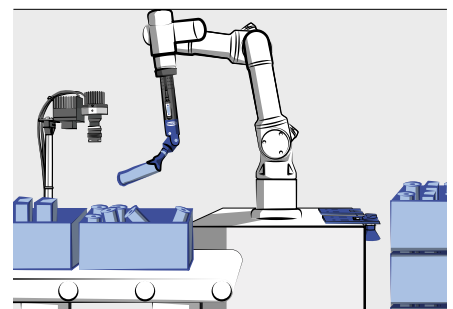
Loading and unloading machines



Quality control and lab testing



Assembly

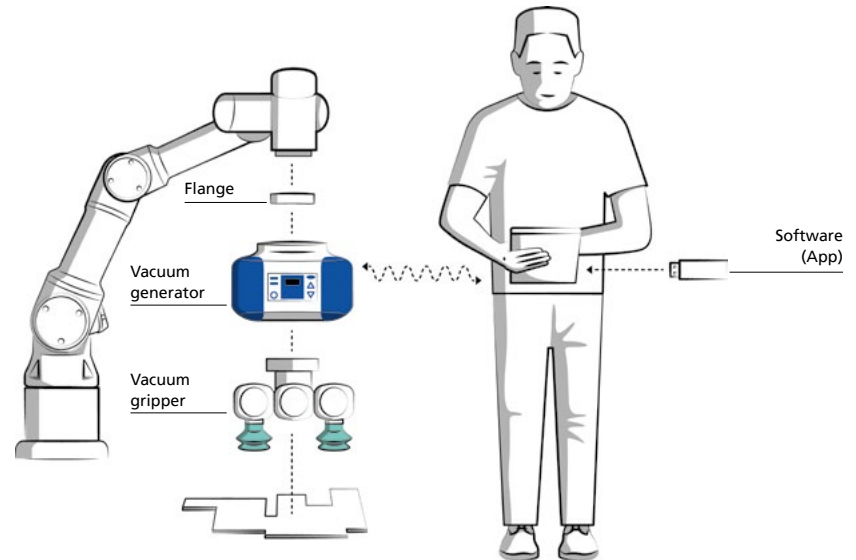


Bin picking

Plug and Work Solutions

Ready-to-connect robot sets for your cobot

*As easy to start-up
as a smartphone:
unpack, mount
and get started.*

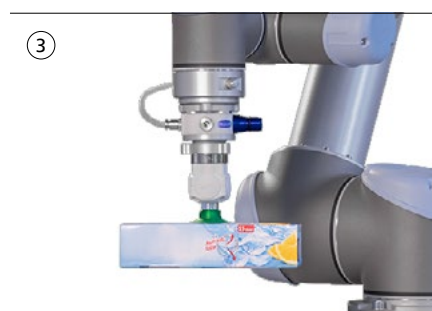


Ready-to-connect robot sets
make installation and start-up
simple

- Perfectly coordinated sets made up of vacuum generation, gripper, robot flange and connection components
- Software modules for self-explanatory set-up



- ① Robot set ECBPi / ECBPMi
- ② Robot set FXCB
- ③ Robot set VEE



Schmalz offers individual complete packages suitable for robots from different manufacturers – including the vacuum generators ECBPi or ECBPMi, the gripping systems FXCB or VEE, or as a Vision & Handling Set with 3D camera for automated bin picking. The sets include all components needed to assemble a complete gripping system.



www

Schmalz Robotics

Solutions, selection aids,
know-how.

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Software modules

Say goodbye to programming. Schmalz offers software modules that make it possible to connect the gripping systems to the cobots and integrate them into the working environment as easily as possible. Gripping points and signals such as "vacuum on/off" or "part present" can be easily taught in via the user interface of the robot.

Electrical Vacuum Generators

Compact, smart and compressed air free

Compact and electrical vacuum generators for use with lightweight robots

- Efficient vacuum generation that does not require compressed air
- Integrated interfaces for controlling and monitoring the handling process
- NFC interface for transferring data via smartphone



The electrical vacuum generator ECBPi and the mini version ECBPMi can be used with all standard lightweight robots. They do not require any compressed air, which means no hoses. The cobot remains mobile, flexible and easy to set-up. The ECBPMi generates a suction power of 1.6 l/min in a minimum of installation space and is suitable for loads of up to 4 kg. With a maximum suction power of 12 l/min and a load capacity of 10 kg, the ECBPi covers an even wider range of applications. Schmalz also offers the right solutions for pneumatic vacuum generation, such as the versatile mini ejectors SCPM.

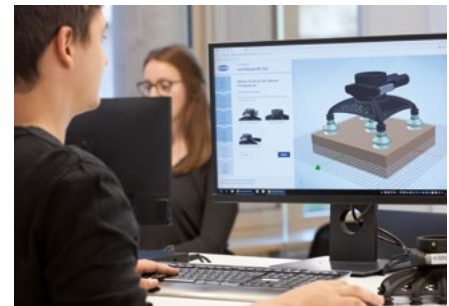
WWW.SCHMALZ.COM/VACUUM-GENERATORS

Lightweight Grippers SLG

Configured online, automatically designed, additively manufactured

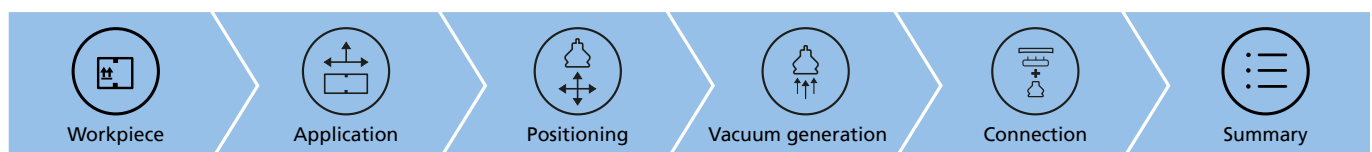
Use with cobots for handling cardboard boxes, bags and other free-form workpieces

- Individual configuration tailored to the workpiece
- Intelligent design thanks to the software
- Ideal for cobots thanks to the low weight of the gripper
- Minimal interference contours thanks to integrated air supply



The lightweight grippers SLG are not only easy to handle, but also easy to design. On our digital platform, users can choose the right gripper for their workpiece, find suitable suction cups and choose the right flange insert with just a few clicks. The SLG is then manufactured using a 3D printer and can be combined with different types of vacuum generation. It is suitable for applications with a load capacity of up to 10 kg.

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Area Grippers FXCB / FMCB

The smart assistant for collaborative work

Flexible handling of workpieces in collaborative environments, e.g. ideal for palletizing cardboard boxes

- HRC compliant design in accordance with ISO TS 15066
- 3D-printed housing with dynamic geometry
- FXCB variant with integrated vacuum generation (ejector module)
- Innovative communication technology with IO-Link and NFC chip



The area grippers FXCB / FMCB are suitable for handling workpieces of different sizes and geometries weighing up to 35 kg. As a variant with sealing foam, the gripper can reliably and safely handle, for example, rigid cardboard, boxes and components with recesses. The variant with suction cups is ideal for handling flexible workpieces such as sacks, bags or trays. Vacuum generation is either integrated or can be connected externally.

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Vacuum End Effectors VEE

System components for designing individual end effectors

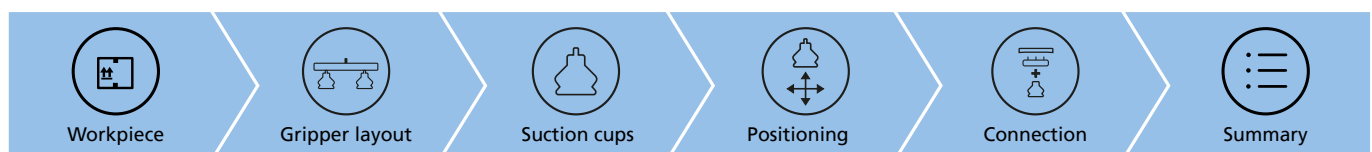
System for designing vacuum end effectors for cardboard boxes and bags quickly and at low cost

- Individual configuration
- Minimal design and manufacturing effort
- Low weight
- FDA-compliant material
- Pre-assembled sets available



The modular VEE system is comprised of a variety of individual components. Using a configurator, it is possible to design a tailored gripper, which can also be delivered pre-assembled, in no time at all. The end effectors are suitable for direct contact with food products. They are mainly used in packaging processes for loads of up to 2 kg, for example for filling cardboard boxes or for bin picking.

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