Schmalz Robotics

Smart Hands for Every Cobot

WWW.SCHMALZ-ROBOTICS.COM
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.

“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

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Vacuum gripping solutions for lightweight robots and cobots

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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 / ECBPM
2. Robot set FXCB
3. Robot set VEE

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.
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.

**Electrical Vacuum Generators**

Compact, smart and compressed air free

The electrical vacuum generator ECBPi and the mini version ECBPM 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 ECBPM 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.

**Lightweight Grippers SLG**

Configured online, automatically designed, additively manufactured

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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.

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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