Ready for new Tasks?  
So are we.  
The new SCHUNK Tools  
for automated Machining
SCHUNK Tools for Robotic Material Removal
Higher Productivity, Constant Quality

Always assisting you during machining Processes: The Robot

Robots have successfully established themselves as helpers for numerous handling tasks. They load and unload, transport and support during assembly. With the new SCHUNK portfolio all about robotic material removal, you can open up the full potential of your robot.

More Efficiency and Constant Quality

Take your machining process to the next level with new SCHUNK tools. Automating steps that were previously manual increases your productivity and at the same time provide perfect machining results.

Deburring

One of the classical post-processing operations in the metal-cutting industry is deburring of sharp edges and removing burrs. However, manual deburring has a low value, is highly monotonous, and may cause injury. SCHUNK offers a broad range of tools for robotic deburring.

Grinding

Grinding parts before polishing operations is physically challenging and time consuming. The SCHUNK tools for automated grinding are ideal for automated machining and are well suited for coarse material removal, especially with large workpieces, whether or not they are made of metal, wood, or plastics.

Polishing

Polishing is usually the last machining step, giving the workpiece that perfect finish. The contact force is a crucial factor for achieving excellent results. The SCHUNK tools allow for automated machining of workpieces. The outcome: smooth surfaces for a perfect end result.
SCHUNK Tools for Robotic Material Removal

The new SCHUNK Tools

Deburring

Grinding and Polishing
From manual to automated: In no time at all

In many industrial operations, fine machining is done by hand because sensitivity and adaptability of humans can hardly be imitated. Even if handwork seems to be unavoidable, it does not always lead to the desired results. Moreover, a cost-effective implementation in mass production is very difficult to carry out. Manual finishing is often monotonous, is an ergonomic burden, and carries a risk of injury.

The human eye is indispensable for assessing the quality of the machining work. However, robots can efficiently support the user with repetitive tasks. Because the SCHUNK tools have innovative features for compensating force and positional inaccuracies, almost perfect results can be achieved.

Benefits of changing over to robot-assisted machining:

- Constant quality of the machining results
- Reduction of the lead times
- Improved ergonomic working conditions
- Increased workplace safety for employees

Robots are reliable workers for machining tasks: Time-consuming, monotonous activities are fatiguing, and therefore are error-prone. An automation solution can improve quality and efficiency.

Image: A robot is equipped with a pneumatic orbital sander tool AOV. It has a constant contact force resulting in more consistent results.
Robots can do both: loading and machining

Do you already use a robot for loading and unloading processes? Then you can use the same tool for other tasks between cycles.

You can utilize your robot capacity for deburring tasks simultaneously between loading and unloading. This way an enormous benefit can be achieved with a relatively small investment capital.

Your surplus of multiple use of already existing robots:

- Higher utilization of the robot
- Elimination of a separate working step for deburring
- Reduced lead times
- Lower manufacturing costs

First load, then debur: Robots are versatile and can be used for various tasks in production. With the SCHUNK tools, robots can be used for deburring the workpiece right after loading. Image: The stationary deburring tool CRT is used for filing an edge. In this case the robot transports the workpiece directly from the machine to the tool.
SCHUNK Tools for Robotic Material Removal
A comprehensive Product Range

The right solution for any Application: the new SCHUNK Tools

**Deburring Spindle RCV**
Pneumatic deburring spindle with vane motor and radial compensation for machining various workpieces and geometries.

**Deburring Tool CDB**
Compliant tool for high-precision deburring. Universal pick-up for using proven blades.

**Deburring Tool CRT**
Pneumatically driven file with radial compensation with standardized pick-up for the use of conventional files.

**Deburring Spindle FDB**
Pneumatic deburring spindle with turbine engine and radial compensation for the use on robots.

**Deburring Spindle FDB-AC**
Pneumatic deburring spindle with axial compensation and conical cutting tool for the use on robots.
SCHUNK Tools for Robotic Material Removal
A comprehensive Product Range

Orbital Sander Tool AOV
Pneumatic orbital sander tool with axial compensation and adjustable contact force for polishing and grinding surfaces.

Polishing Spindle MFT
Pneumatic spindle with axial compensation for polishing, grinding and brushing workpieces.

Polishing Spindle MFT-R
Pneumatic spindle with radial compensation for polishing, grinding and brushing workpieces.

Compensation Unit PCFC
Pneumatically controlled compensation unit with position measurement for adjusting compliance and contact forces.

For further information and products please visit: schunk.com/material-removal
»We do not sell just the necessary accessories. We keep an eye on the whole application and develop a properly functioning complete solution.«

Felix Eißele, SCHUNK Product Specialist, Brackenheim-Hausen
See our Tools for yourself: We will be glad to visit you at your Company!

Please contact us. We will be glad to visit you, and along a selection of SCHUNK machining tools to show you the products and features on site.

Arrange an appointment with your personal SCHUNK consultant.

schunk.com/contact
When you need Support: We will support you.

In the SCHUNK CoLab, we are testing applications for you in a realistic surrounding for you. Our application engineers develop an automation concept with you, in which everything is included: from the SCHUNK components to the matching tools up to the robot connection.

Every working step has its specific challenges. Besides the selection of the right tool, other factors must be considered, which are important for achieving the perfect machining result: The machining speed and also the choice of the matching abrasives or cutting tools have an important impact.

From the Component to the Application

In the new SCHUNK CoLab application center for robotics and automation technology match components and test the feasibility of your application in a realistic surrounding for you. Twelve industrial robots and cobots are available, as well as specifically arranged cells for tool design, industrial robotics and test set-ups. Moreover, the CoLab team of six employees can support you in developing your automation process with over 11,000 standard components of the SCHUNK program. You receive a solution for your specific application, the validation results for it, a feasibility study and process analysis, and also a view into the world of the new fields of application and technology.

Leave it in experts hands: SCHUNK is a competence and world market leader for gripping systems and clamping technology. In the CoLab, the new SCHUNK application center, SCHUNK experts evaluate your handling task and test its feasibility of using SCHUNK components.
How to proceed step by step to achieve the optimal result:

1. Contact us.
2. A specialist will discuss the framework and conditions with you and evaluate the requirements.
3. You will provide us the corresponding workpiece. We proceed with the relevant tests and examinations.
4. You will then receive a final report together with a validation of feasibility. We will discuss the results with you.

New SCHUNK Technologies in the CoLab – our service portfolio:

- Robot cells with comprehensive equipment for validating your machining process
- Feasibility study with your workpiece and our machining tools
- Process analysis including test report on tools and process parameters
- Approval and demonstration of your machining process on site in the CoLab or online.

Being well prepared for your automation process – your benefits:

- Complete test report: We test the application for you in advance and check feasibility with our tools
- Minimization of risks: Evaluate your process without any risk to you
- Reduced effort: Safe time and money for commissioning your processes
- Increase in efficiency: Focus on the important topics. We will support you in validation.

The SCHUNK CoLab application center at the Brackenheim–Hausen location offers a cutting edge test surrounding for your applications.

schunk.com/colab-video