

# Automating the World of Life Science

SCHUNK supports you in implementing your life science application.

Hand in hand for tomorrow



# Automating the World of Life Science

As an experienced producer of toolholding and workholding, gripping technology and automation technology, we know that the requirements of the life science sector cannot be compared with any other industry. Residue-free, highly sensitive gripping, corrosion resistance and cleanroom compatibility are just three of the many standard features that are required, and for good reasons.

SCHUNK focuses on the MedTech, Lab Automation and Pharma industry disciplines. In addition to flexibility and precision, absolute process reliability is required in all three areas. The reliability required for this, including application expertise, is part of SCHUNK's portfolio of products and services.

## MedTech

### Process-reliable manufacturing in medical technology

In the MedTech segment, we complement machines and systems with components and solutions needed for the manufacturing and assembly of medical devices and consumables with highly efficient toolholding and workholding, gripping technology and automation technology. SCHUNK reliably meets the stringent requirements for lubricants, robustness and durability in the medical technology industry.



- + **Robustness**  
SCHUNK convinces its customers with the highest quality and product lifetime
- + **Process reliability**  
Our products ensure error-free manufacturing processes
- + **Advanced sensor systems**  
Sensor interrogations detect the position of the top jaws and check the presence of the workpiece

## Lab Automation

### Efficient and reliable laboratory processes

Systematically recurring procedures are at the core of many laboratories. In the area of Lab Automation, SCHUNK provides the appropriate components for automation. Everyday issues in the laboratory environment include gripping and moving reagents as well as sample carriers for measuring and analysis equipment. For this purpose, we offer compact and easily combinable systems from the fields of gripping technology and automation technology.



- + **Flexibility**  
Extensive application expertise enables products to be adapted to different requirements
- + **Sensitive gripping**  
Intelligent grippers and methods for reliable gripping force maintenance ensure maximum process reliability
- + **Laboratory-grade lubricants**  
We use H1-certified greases in the laboratory and pharmaceutical environment.

## Pharmaceuticals

### Cleanroom-compatible performance booster

In the production of pharmaceutical products such as tablets, powders, creams and liquids, purity and quality are always top priority. The reliable and high-performance automation units from SCHUNK are ideally suited for this purpose. They ensure transparent, error-free and structured processes, maximum efficiency, process reliability and cost-effectiveness.



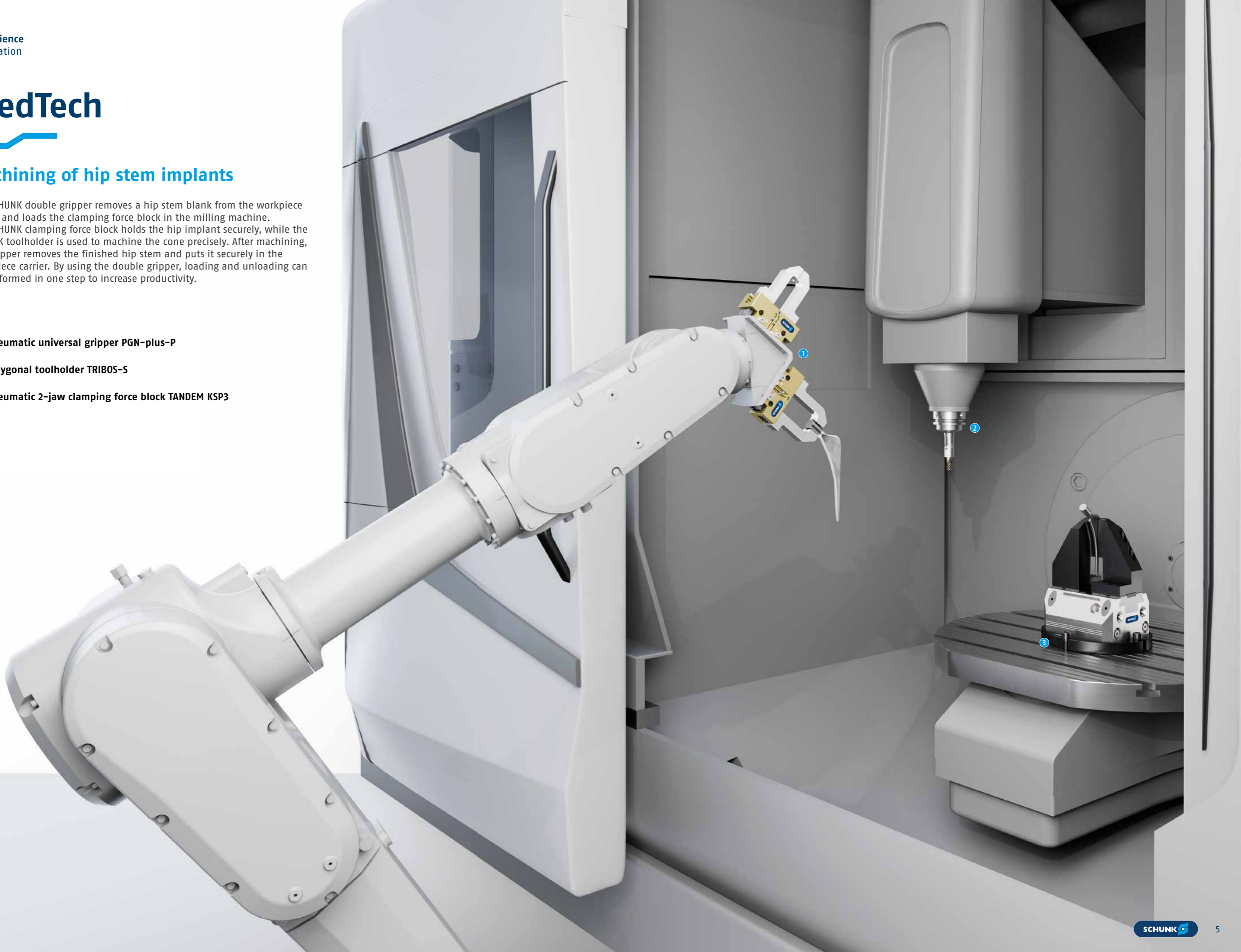
- + **Hygienic design**  
At SCHUNK, material and shape meet the requirements for hygienic production. The special product surfaces are resistant to aggressive cleaners such as VHP
- + **Cleanroom certification**  
SCHUNK products are certified according to ISO 14644 for use in cleanrooms and the company is committed to compliance with international GMP guidelines
- + **Safety in contact with pharmaceutical products**  
We use H1-compliant lubricants and FDA-listed materials

# MedTech

## Machining of hip stem implants

The SCHUNK double gripper removes a hip stem blank from the workpiece carrier and loads the clamping force block in the milling machine. The SCHUNK clamping force block holds the hip implant securely, while the SCHUNK toolholder is used to machine the cone precisely. After machining, the gripper removes the finished hip stem and puts it securely in the workpiece carrier. By using the double gripper, loading and unloading can be performed in one step to increase productivity.

- 1 Pneumatic universal gripper PGN-plus-P
- 2 Polygonal toolholder TRIBOS-S
- 3 Pneumatic 2-jaw clamping force block TANDEM KSP3

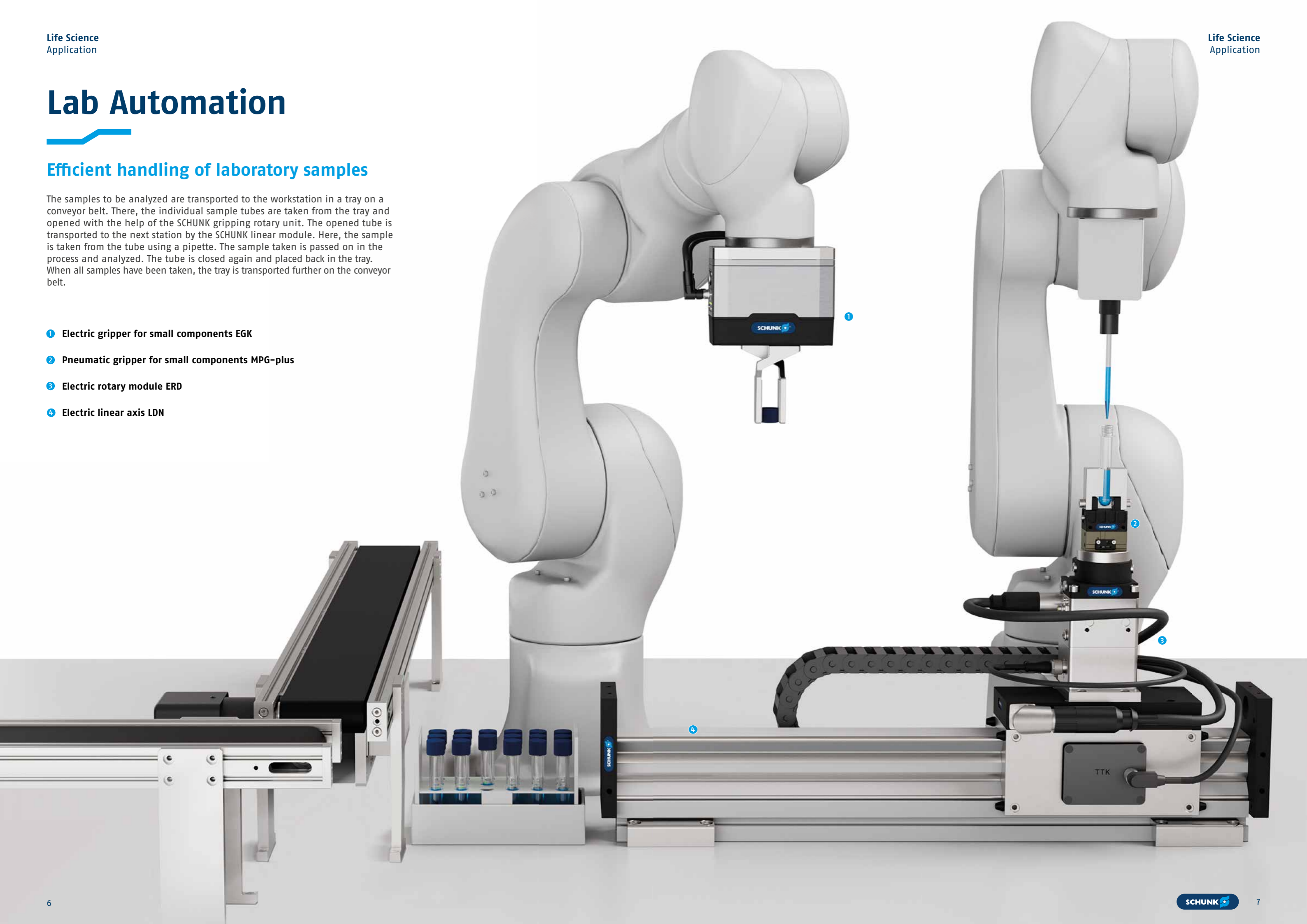


# Lab Automation

## Efficient handling of laboratory samples

The samples to be analyzed are transported to the workstation in a tray on a conveyor belt. There, the individual sample tubes are taken from the tray and opened with the help of the SCHUNK gripping rotary unit. The opened tube is transported to the next station by the SCHUNK linear module. Here, the sample is taken from the tube using a pipette. The sample taken is passed on in the process and analyzed. The tube is closed again and placed back in the tray. When all samples have been taken, the tray is transported further on the conveyor belt.

- 1 Electric gripper for small components EGK
- 2 Pneumatic gripper for small components MPG-plus
- 3 Electric rotary module ERD
- 4 Electric linear axis LDN



# Pharma

## Handling of syringes

A conveyor belt transports the filled syringes to the packaging station. There, the SCHUNK grippers pick up the syringes, swivel them by 90° with the help of a SCHUNK swivel unit and put them in the blister packaging in a reliable process. Here, the SCHUNK linear module enables a dynamic process, reduces the cycle time and thus increases the output of the system. The conveyor belt then conveys the packaging blisters to the next station for final packaging.

- 1 Pneumatic gripper for small components MPG-plus
- 2 Pneumatic universal swivel unit SRM
- 3 Electric stroke module LDK
- 4 Electric linear direct axis SLD

In our CoLab robot application center, we validate every life science application individually together with our customers.

Please feel free to contact us without obligation at [lifescience@de.schunk.com](mailto:lifescience@de.schunk.com)



# Variety of competences at SCHUNK: Expertise for your application

SCHUNK is the international technology leader in toolholding and workholding, gripping technology and automation technology. We equip modern production plants and robot systems with both, high-quality standard components and customized system solutions.

For more information, visit our website at [schunk.com/life-science](http://schunk.com/life-science) or in a personal exchange. Please feel free to contact us: [lifescience@de.schunk.com](mailto:lifescience@de.schunk.com)

## Workpiece clamping technology

The range of stationary clamping devices from SCHUNK offers more than 1,000 combination options for efficient and flexible workpiece clamping in medical technology production.



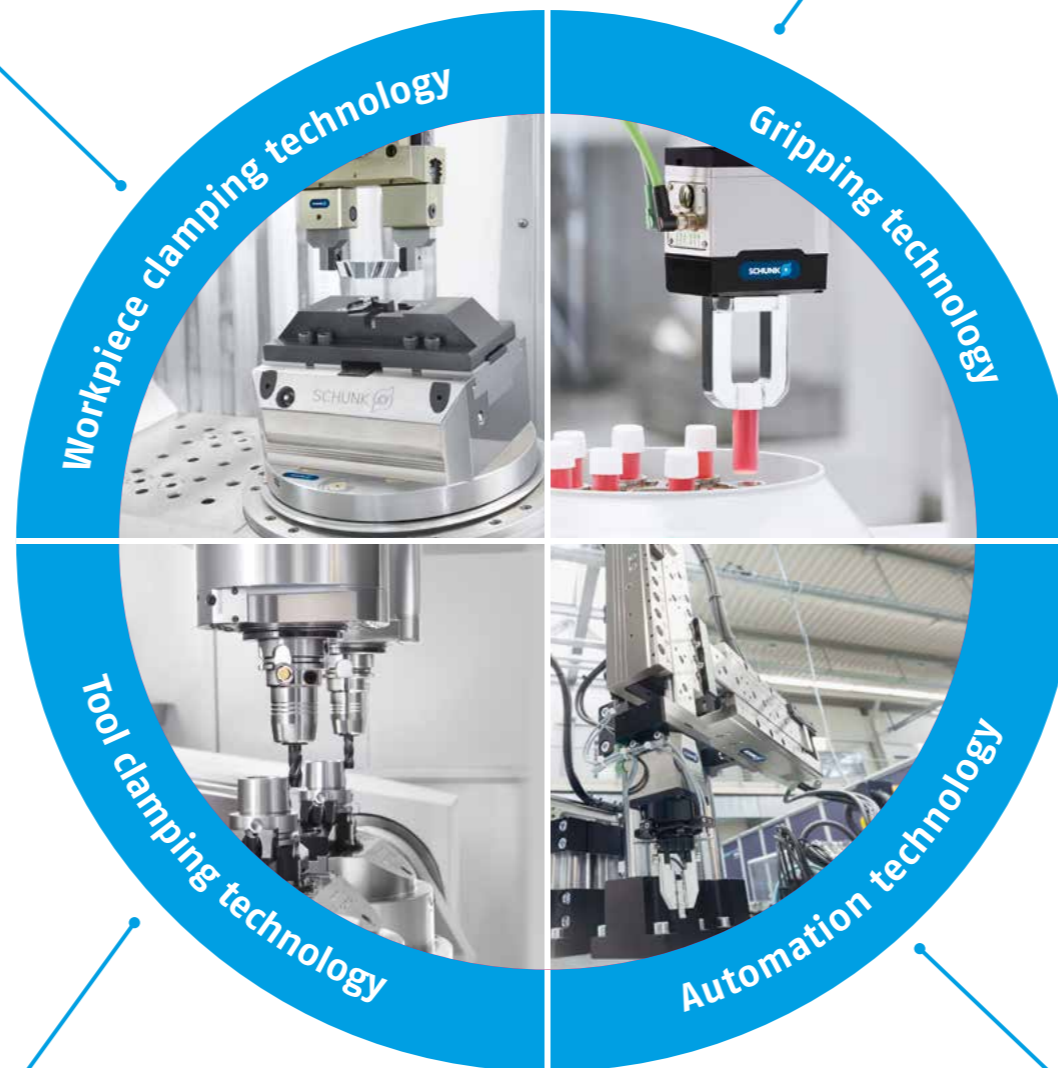
Clamping force block  
TANDEM KSP3



Intelligent toolholder  
iTENDO²

## Tool clamping technology

Whether micro-machining, ultra-fine machining, heavy-duty or volume machining – SCHUNK has the optimum toolholder for every application, with internal cooling on request. The product portfolio ranges from mechanical toolholders and low-vibration precision toolholders to hydraulic expansion technology and intelligent toolholding systems.

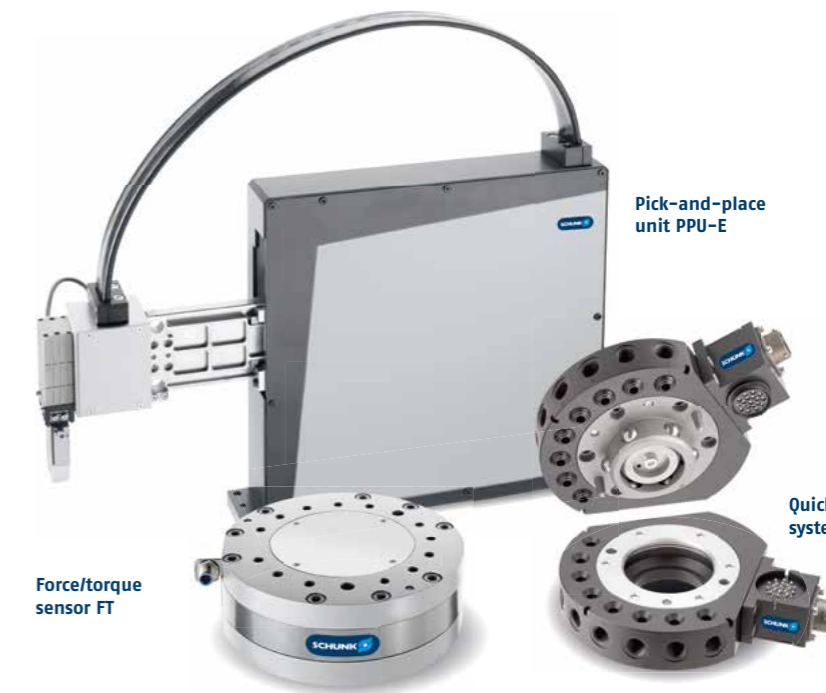


## Gripping technology

The extensive SCHUNK gripping technology portfolio meets the individual requirements of the life-science industry. Intelligent grippers and methods for reliable gripping force maintenance ensure the highest possible process reliability.



Gripper for small  
components EGK



Pick-and-place  
unit PPU-E

Force/torque  
sensor FT

Quick-change  
system SWS

## Automation technology

SCHUNK offers a comprehensive portfolio for automated handling of workpieces in the life science sector. These include linear modules, force/torque sensors, change systems and swivel modules. As a complete supplier of automation solutions, SCHUNK ensures productivity, process reliability and maximum dynamics with short cycle times.



**SCHUNK SE & Co. KG**  
**Spanntechnik**  
**Greiftechnik**  
**Automatisierungstechnik**

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1479568-4-5M-09/2023

