

Gripping technology and automation technology

Product overview 2026

Hand in hand for tomorrow

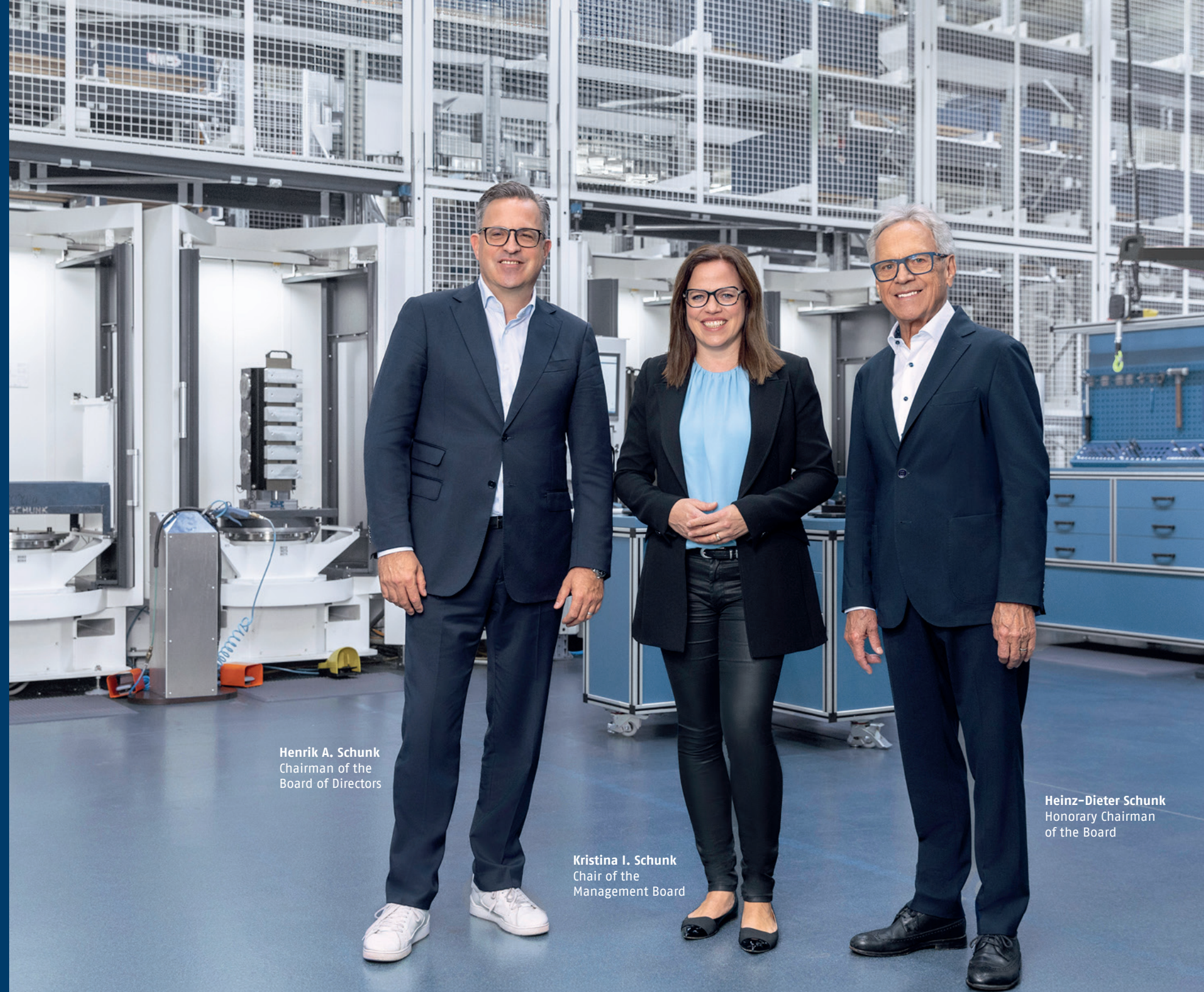


Shaping technological progress together

Hand in hand with our customers and partners

"We are convinced that innovation arises when different areas of expertise come together – in teams, in strong partnerships, and in open networks where we produce impact together. That's how exchange turns into action. We are developing new technologies that gear up manufacturing facilities for the future, while taking a responsible approach toward people and husbanding resources."

Kristina I. Schunk



Henrik A. Schunk
Chairman of the
Board of Directors

Kristina I. Schunk
Chair of the
Management Board

Heinz-Dieter Schunk
Honorary Chairman
of the Board

100%
family-owned company

3.700
employees worldwide

75
countries around
the world

13.000+
components

Hand in hand for tomorrow

As a global technology pioneer in toolholding, workholding, gripping, and automation technology, we boost productivity for customers and partners in the industrial sector.



1945

Start in a garage in Lauffen

Friedrich Schunk founded a machine shop and, using a secondhand lathe, began working as a contract manufacturer for companies in the region.

1968

First standard products

Under Heinz-Dieter Schunk, the small trade business transformed into an industrial enterprise: SCHUNK developed its first in-house products and launched clamping jaws for lathe chucks onto the market.



1982

New business units

The next logical step followed: SCHUNK expanded its portfolio, establishing new business units. In addition to toolholding and workholding, SCHUNK is now also a pioneer in standardized gripping technology.

1989

Global growth

The company's international expansion began with its first overseas branches in Belgium and Switzerland. Today, SCHUNK stays in very close proximity to its customers across the globe with 10 production facilities and 34 subsidiaries.



TODAY

Technology partner for industry

We develop cutting-edge technologies across many industries, including automotive, e-mobility, aerospace, life sciences, and electronics. SCHUNK is a reliable partner throughout the entire value chain.

TOMORROW

Digital and humanoid future

Digital services and artificial intelligence are becoming standard. Smart gripping hands are opening up new areas of application for humanoid robots.



For over 80 years, we have been developing cutting-edge technologies for modern manufacturing and automation processes – alongside our customers and partners. Close collaboration leads to solutions that effectively put digitalization, automation, and artificial intelligence into practice and help make industrial processes more efficient and resource-efficient.

Our portfolio includes standard components, engineering customer-specific components and systems, as well as complete machines for automation and electronics production.



Content

	beginning on page
Company	2
Trend topics	8
Industries	8
SCHUNK Engineering	10
Robot Plus	12
Digital services	14
Gripping technology	16
Overview	16
Pneumatic grippers	18
Electric grippers	32
Magnetic grippers	38
Accessories	40
Automation technology	46
Overview	46
Swivel units	48
Linear axes & axis systems	54
Tool changers & optional modules	60
Rotary feed-throughs	64
Compensation units	66
Collision protection	70
Force/torque sensors	72
SCHUNK worldwide	74

Industries

Every industry has different requirements: whether highest precision, maximum load capacity, or short cycle times. SCHUNK supports you with customized solutions for clamping, gripping, and automation technology. With in-depth engineering expertise and decades of experience, we develop field-proven solutions for your application. This is how you streamline processes, reduce interfaces, and sustainably boost your productivity.



Aerospace

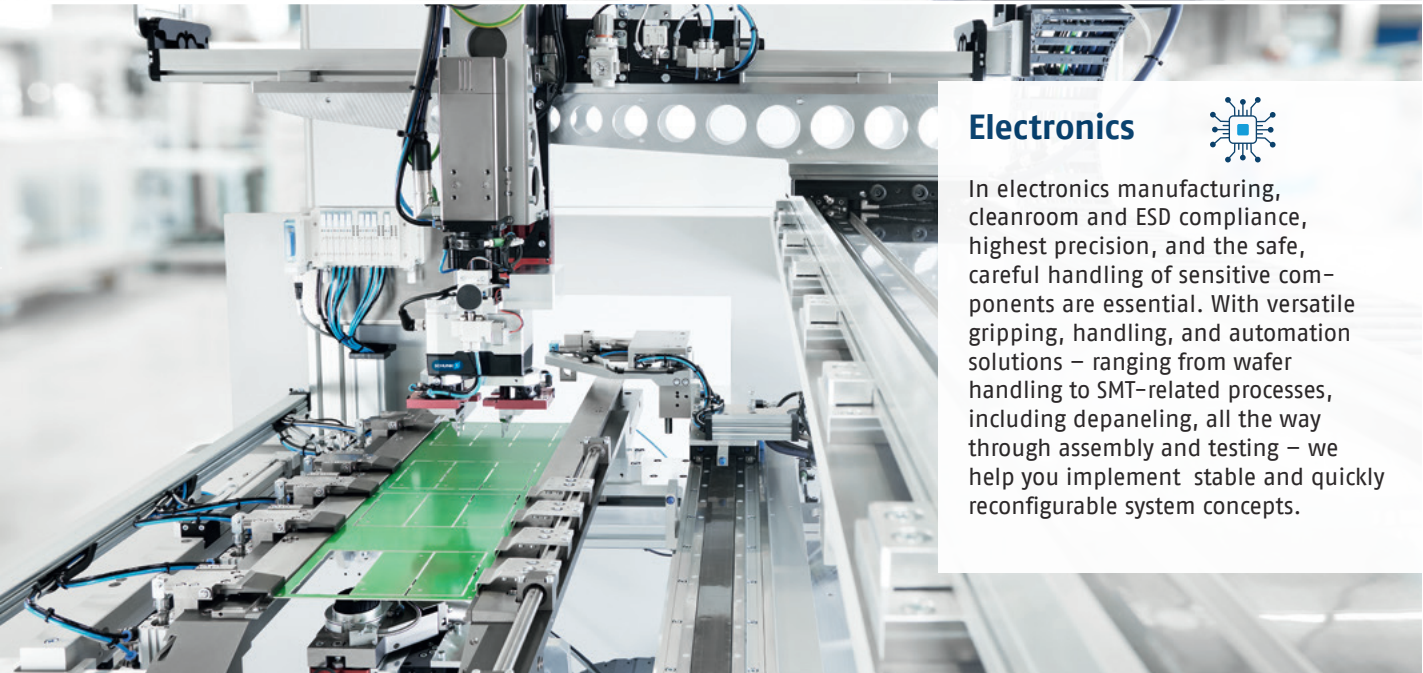


During production ramp-up in the aerospace industry, automation is key to manufacturing safety-critical components reliably, cost-effectively, and in large quantities. With our solutions, you can increase your output without compromising on quality or process stability. This also applies to the precise handling of components with complex geometries.

Automotive & E-mobility



The automotive industry demands the highest levels of precision, flexibility, and process reliability – whether in traditional powertrains or in e-mobility. As a long-standing partner of the automotive industry and its suppliers, SCHUNK supplies customized solutions. Thanks to our proven standards and modular system technology, we accelerate the integration of new production processes and ensure economical, future-proof manufacturing.



Electronics

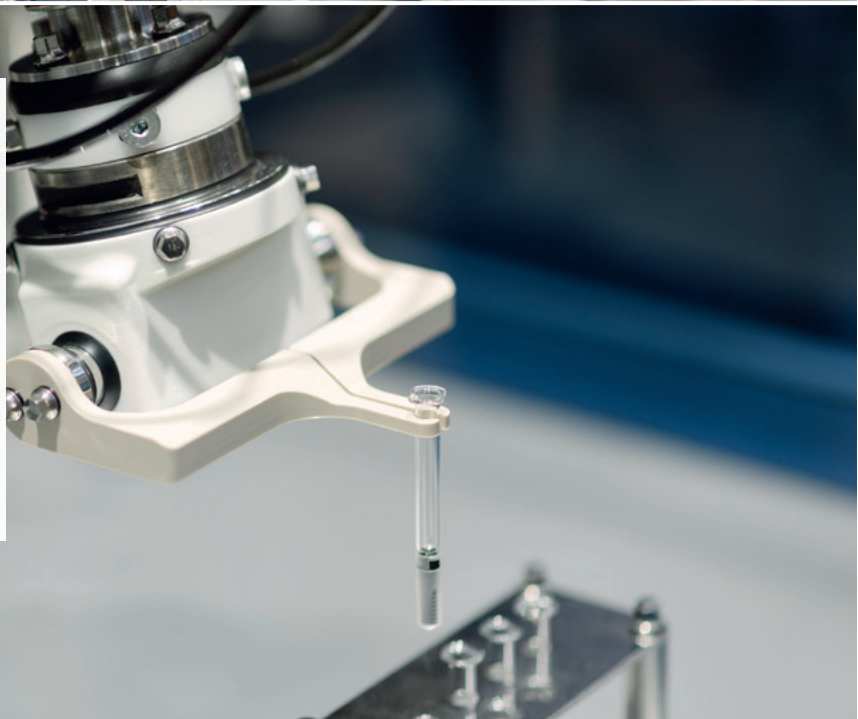


In electronics manufacturing, cleanroom and ESD compliance, highest precision, and the safe, careful handling of sensitive components are essential. With versatile gripping, handling, and automation solutions – ranging from wafer handling to SMT-related processes, including depaneling, all the way through assembly and testing – we help you implement stable and quickly reconfigurable system concepts.

Life Science



Whether in medtech, pharmaceuticals, or lab automation, SCHUNK is synonymous with precise, delicate handling in regulated environments. Our solutions are designed from the outset to be suitable for cleanroom applications, compliant with standards, and process-reliable. This is how you reduce development risks, boost your output, and ensure regulatory compliance throughout the entire lifecycle.

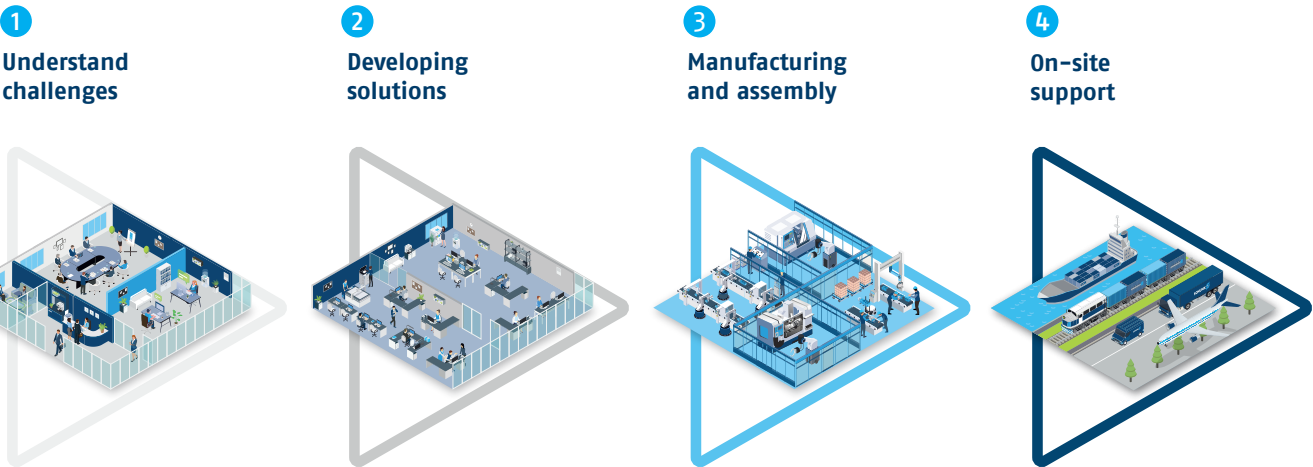


SCHUNK Engineering

Innovating Partnerships

For the development of customized solutions, we offer a comprehensive range of services: deep industry expertise, engineering processes optimized over decades, and design authority over our broad, high-quality component portfolio. The ideal foundation for your success.

Four steps to project success



From working out precise requirement specifications in personal discussions to the development of a concept with reliable budget estimates.

We work closely with you to develop customized solutions. This allows you to fully concentrate on your core competencies.

With our high level of manufacturing expertise and an end-to-end digital process chain, we ensure maximum efficiency and precision worldwide.

As a trusted partner, we take care of your concerns and support you at every step.

Close to you worldwide



Key factors for the success of our collaboration

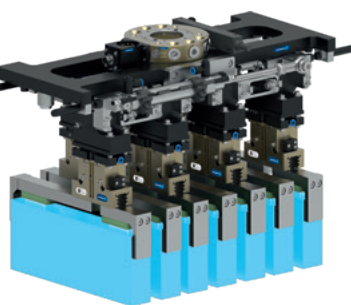
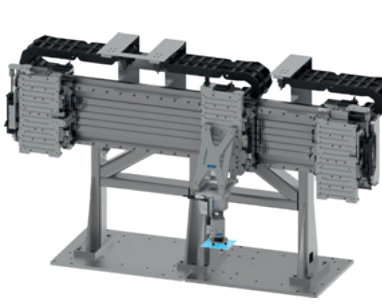
We combine our industry experience with innovative technologies and future-proof partnerships to ensure your success

 Competence Many years of experience Innovation, precision, and the ability to overcome individual challenges Tailored to specific requirements	 Trust The key to long-lasting relationships We stand for the highest level of reliability and quality	 Partnership Close cooperation Personal consultation Working together to develop solutions that are precisely tailored to your requirements	 Speed Speed is the engine of progress Dynamic processes, rapid communication, and efficient implementation
---	---	---	--

Solutions for your industry

In addition to its extensive portfolio of high-quality components for clamping, gripping and automation, SCHUNK offers a proven engineering process that has been optimized over decades to develop individual solutions. This process is based on deep industry expertise, technical excellence, rapid implementation, and global availability in the areas of project management, design, production, assembly, and after-sales service.

The result: customized axis systems and assembly modules in the areas of pneumatics, mechatronics and robot accessories from a single source, all precisely tailored to the individual requirements of customers to optimally support their production processes.

 Space-saving multi-gripper for handling prismatic battery cells 	 Assembly unit for handling solar module components 	 Double gripper unit for relocating rims 
--	---	--

Robot PLUS

Components & expertise aligned with your vision

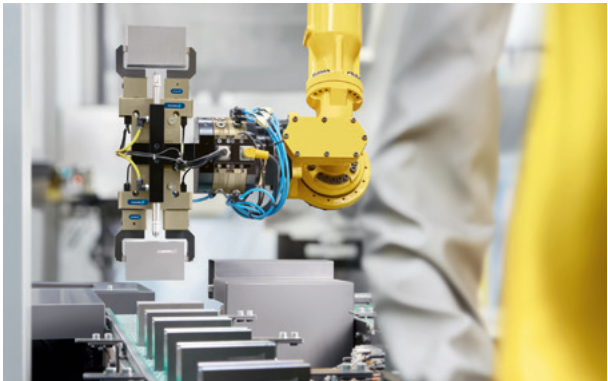
Use the possibilities of robotics to optimize your production. Flexibility and efficiency are crucial in modern manufacturing. The Robot PLUS portfolio from SCHUNK is especially designed to improve your production process. It offers a comprehensive range of tool changers, compensation units, force/torque sensors and machining tools – all developed based on decades of experience.

With SCHUNK as your partner, you benefit from a combination of high-quality products and comprehensive, reliable support to boost and advance your automation projects worldwide. Discover how SCHUNK can take your production to the next level!

Tool changers

Modern manufacturing cells require quick changes between different tools and grippers. Depending on the requirements, the replacement is performed manually by the operator or automatically during operation – reliably and efficiently.

This allows multiple tasks to be combined in a single cell, setup times to be minimized, and variants to be produced economically. A robot – versatile for a wide range of applications.



Automatic tool changer CPS

Compensation units

Tolerances are a reality in any production process. During assembly, loading, or bin picking, even the slightest deviations can lead to stress or wear.

Compensation units provide the necessary flexibility between the robot and the workpiece. They compensate for positional deviations and improve process reliability – ensuring stable operations and less scrap.



Modular compensation unit AGM

Force/torque sensors

When controlled forces are essential, force/torque sensors provide the critical information. They measure forces and torques in real time and make sensitive processes manageable.

Whether for precise joining or in demanding assembly applications, the robot responds to deviations and ensures consistent quality.



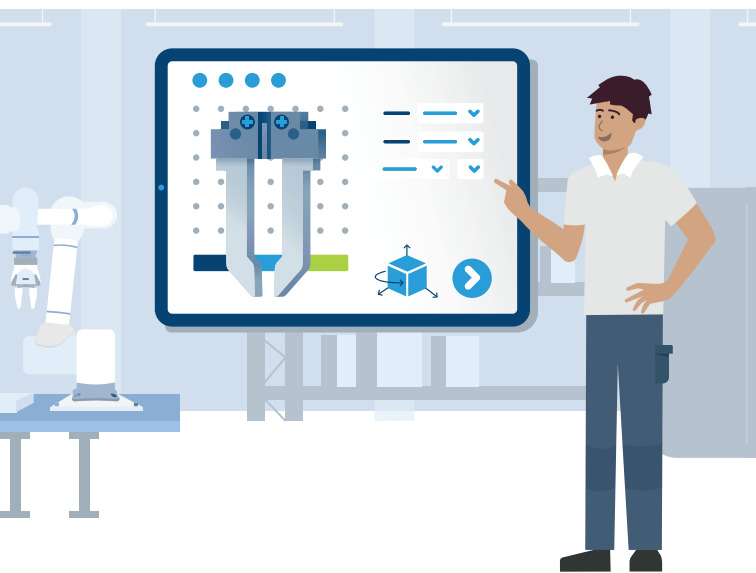
FTS force/torque sensor



Sizing assistant

Select the right product in just a few clicks

SCHUNK sizing assistants make it easy to reliably select the right product from the portfolio for each application.



- Professional:** Designed for specialists, characterized by maximum accuracy and precision.
- Personalized and reliable:** The transparent presentation of all relevant performance parameters in the result list, combined with many years of experience, ensures a personalized and reliable selection of the ideal product for each specific application.
- Optimal utilization:** Calculation of the application-specific degree of utilization of the components.
- Archiving:** The calculation parameters and sizing results can be viewed again.
- International:** Multilingual, available worldwide in 13 languages.



Product Finder
schunk.com/product-finder

Available tools:



Greeting



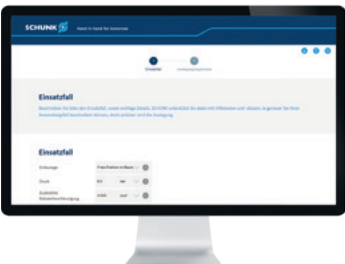
Pneumatic swiveling



Swiveling ERT



Compensation units



Collision protection OPR



Linear axes

Configuration tools

Configuring the right solution for your use case

With our configurable standard products, we reduce complexity in system planning and offer a large number of individual adaptation options. With just a few clicks, grippers, gripper fingers, linear axes, axis systems, and tool changers can be adapted to individual requirements in less than 10 minutes, opening up an even wider range of applications.

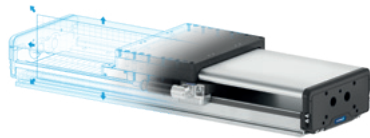


- Risk reduction:** Through SCHUNK expertise and exclusion of faulty designs.
- Resource-saving:** No development knowledge required.
- Seamless contact:** Enables dialog directly from the tool – without having to spend time searching for contacts.
- Possibility to download CAD data** after completing the configuration.
- International:** Multilingual, available worldwide in 13 languages.

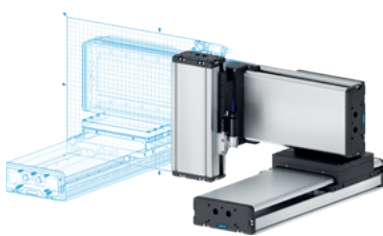


Configuration tools
schunk.com/configurator

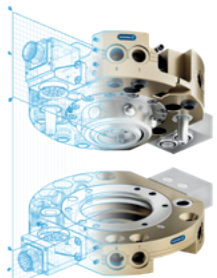
Configurable products:



Linear axes



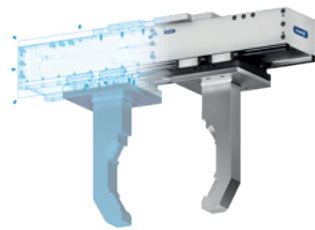
Axis systems



Tool changers



Long-stroke gripper ELG



Long-stroke gripper PLG



Gripper finger FGR

Gripper variety made by SCHUNK

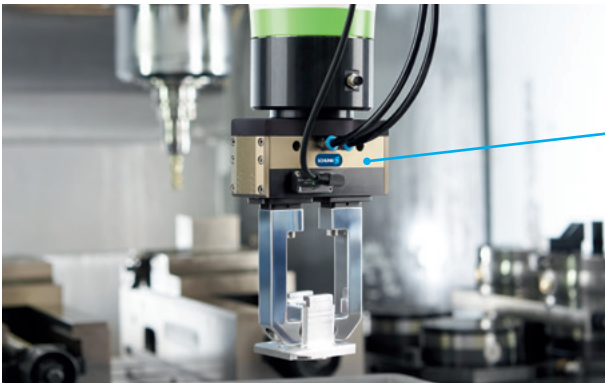
Your requirements are our motivation

SCHUNK offers a comprehensive portfolio of standard grippers for a wide variety of requirements in handling, assembly, and robotic end-of-arm applications. There is a gripper for every application. Even with complex requirements, we consistently rely on well-thought-out standard solutions. The result is robust and durable grippers that have been in reliable use worldwide for over 30 years.



Small component grippers

Grippers for handling small, light and sensitive workpieces



Universal grippers

Grippers for a wide range of applications



Long-stroke grippers

Grippers with long jaw strokes and high gripping forces

Pneumatic grippers

Pneumatic grippers from SCHUNK have stood for high quality and reliability for many years. The focus is always on your workpiece: from small to large, from round to square, for every batch size and every application environment.



Pneumatic grippers

Electric grippers

In modern process flows, our electric grippers offer advantages such as application flexibility and process feedback.



Electric grippers

Magnetic grippers

Magnetic grippers from SCHUNK move ferromagnetic components in any position and size.



Magnetic grippers

Accessories

To match the gripper range, SCHUNK offers accessories for all kinds of applications and handling requirements – also under extreme conditions.



Accessories

Pneumatic grippers

Tech
The more demanding your application, the more precise the performance of the pneumatic gripper must be to match the task at hand. With our Tech segment, you have a whole range of "specialists" at your disposal, such as grippers for handling O-rings, gears or rims.

Premium
In the premium segment you will find grippers of the highest quality with a wide range of variants and options. We not only offer more robust grippers, but also more maintenance-free gripping cycles and long life spans.

Economy
In our Economy segment, the focus is not only on performance, but also on economic efficiency: You get real SCHUNK quality at attractive conditions. Optimized for all standard applications in clean environments. The grippers focus on the essential characteristics and thus ensure efficient operation.

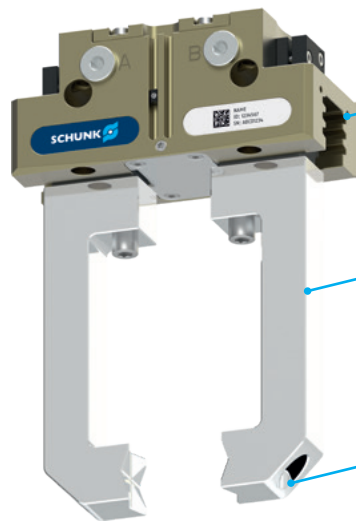
- The power of our pneumatic grippers
- + Proven
 - + Long service life
 - + Versatile
 - + High-quality

		Parallel grippers			Centric grippers			Angular/radial grippers	
Tech Premium Economy	+ Process specialists + Maximum service life + Best performance figures								
		KTG	DPG-plus	PSH	ORG	DPZ-plus	PZB-plus	GAP	DRG
	+ Best performance figures + Maximum service life + Up to 36 months warranty + Wide range of variants and matching accessories								
		MPG-plus	PGN-plus-P	PHL	MPZ	PZN-plus	PZH-plus	SWG	PRG
	+ Proven SCHUNK quality at attractive conditions + Focused performance + Maximum economic efficiency								
		MPC	JGP-P	JGZ			SGB		

Universal gripper PGN-plus-P

Compact powerhouse

The PGN-plus-P combines strong gripping force with a particularly compact design, offering excellent power density.



Strong gripping force for heavy working loads

The large piston area provides high gripping forces. This ensures a secure grip – even during demanding tasks.

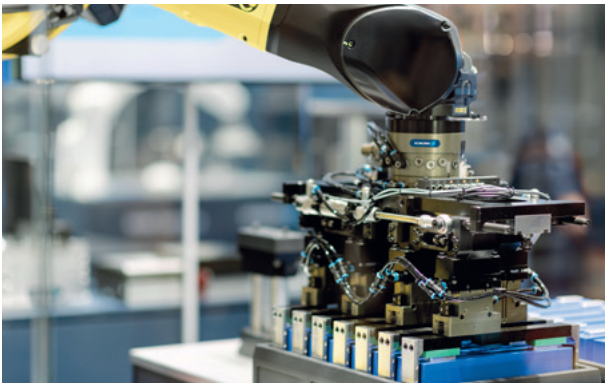
Suitable for complex gripping situations and workpieces

The multi-tooth slide guide reliably absorbs high load moments. This allows the use of long gripper fingers while simultaneously ensuring a long gripper service life.

The right gripper model for every application

A wide range of options ensures optimal solutions for a wide variety of applications.

Application examples



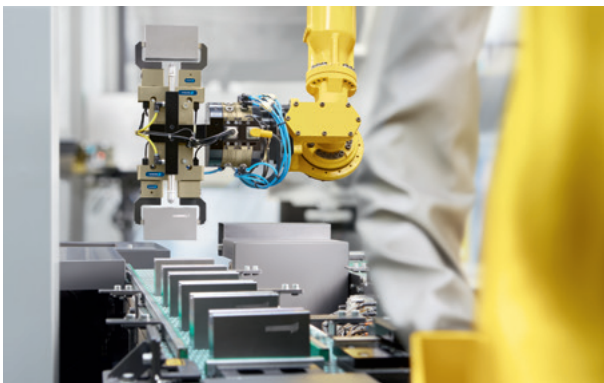
Multi-gripper for safe battery cell handling



PGN-plus-P with jaw quick-change for maximum flexibility



Double gripper for flexible workpiece handling

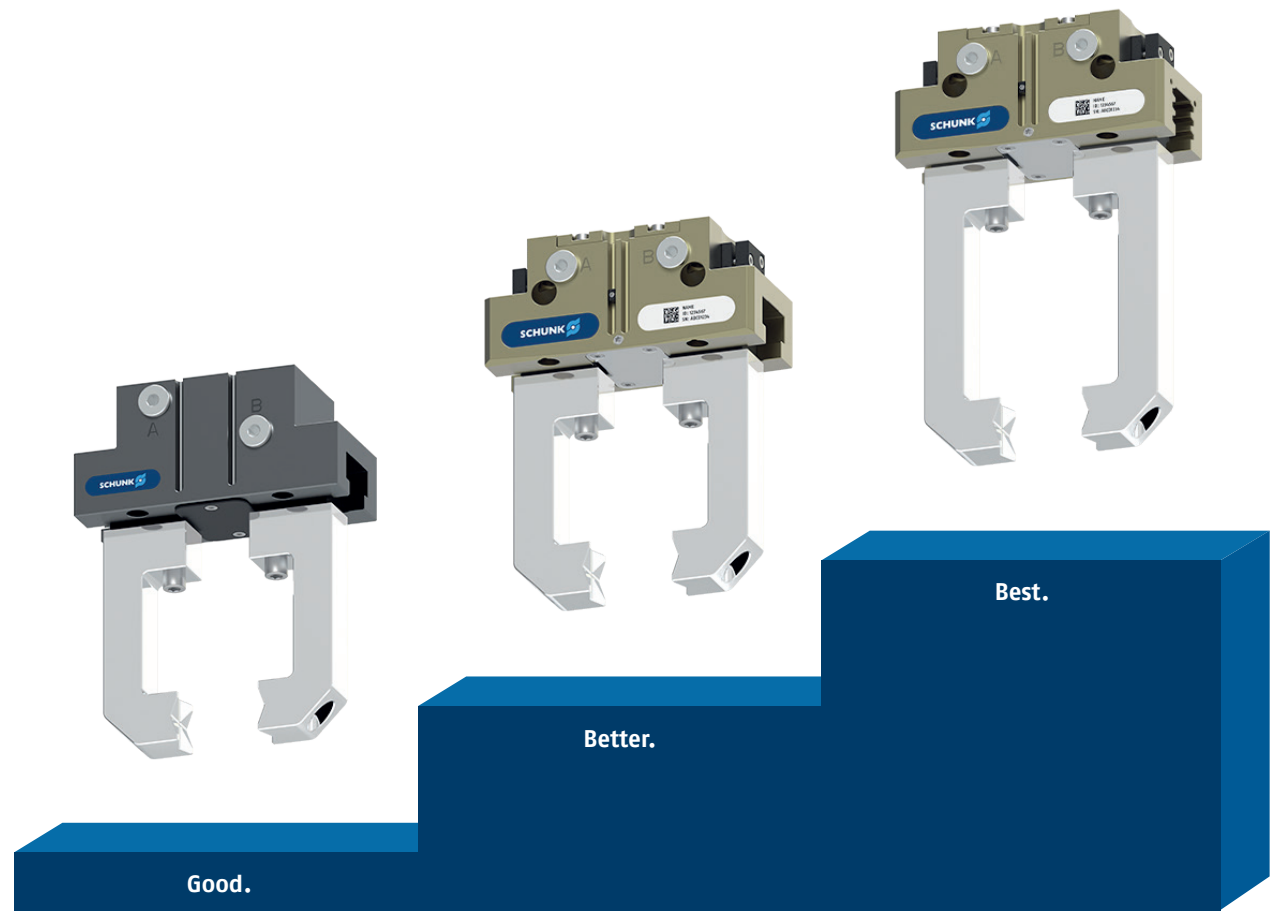


Double gripper for efficient machine loading

Good. Better. Best.

The right standard solution for every requirement

With **Good. Better. Best.** and the new parallel gripper CGP, SCHUNK is expanding its existing product segment around the **universal gripper PGN-plus-P**.



CGP

"Economical entry-level solution"

- **An attractive entry point into automation** thanks to a consistently cost-optimized design.
- **Proven SCHUNK gripping technology** for reliable functionality and solid performance in daily use.
- **Easy to integrate** thanks to standardized mechanical interfaces and free sensor choice – either magnetic or inductive.

JGP-P

"High-performance alternative for standard applications"

- **Powerful use** with high gripping forces for a wide range of handling tasks.
- **Focused range of functions** with 10 sizes and 48 variants to cover the vast majority of applications.
- **Automate processes reliably** with inductive proximity switches and magnetic switches as well as a 24-month warranty.

PGN-plus-P

"Uncompromising performance for all requirements"

- **Made for the most demanding tasks** with maximum gripping forces, even for the heaviest components and complex gripping situations.
- **Extremely robust and precise** with original SCHUNK multi-tooth guidance for long finger lengths and high moment loads, including 36-month warranty.
- **The right gripper version for every application** thanks to 11 sizes and extensive variants and combination options.

2-finger parallel grippers								
Premium						Tech		
Grippers for small components		Universal grippers		Long-stroke grippers		Gripper for small components	Universal gripper	
MPG-plus	KGG	PGN-plus-P	PGL-plus-P	PHL	PLG	KTG	PGB	
								
Description								
	Compact and powerful pneumatic gripper for small components with smooth-running base jaws guided on roller bearings for small to medium workpieces.	Pneumatic gripper for small components with a long stroke and a slim design for small to medium workpieces.	Pneumatic universal gripper with high power density and high maximum moments, featuring robust multi-tooth guidance. For light to heavy workpieces.	Pneumatic universal gripper with a long jaw stroke, integrated sensor system and high maximum moments due to use of multi-tooth guidance. For light to heavy workpieces.	Pneumatic long-stroke gripper with flat design for gripping large workpieces or when there is a wide variety of workpieces.	Configurable pneumatic long-stroke gripper for large, bulky workpieces.	Pneumatic gripper for small components with center through-hole. For small workpieces.	Pneumatic universal gripper with center through-hole and high maximum moments thanks to robust multi-tooth guidance. For light to medium-weight workpieces.
Advantages								
	Very compact design for confined spaces.	Greater flexibility when dealing with varying part sizes thanks to the long stroke.	High gripping force for heavy workpieces.	Greater flexibility when dealing with varying part sizes thanks to the long stroke.	Greater flexibility when dealing with varying part sizes thanks to the long stroke.	Application-specific configurable long-stroke gripper that stands out through the individual selection of numerous options.	The center hole facilitates the integration of workpiece feed, sensor, or actuator systems.	Facilitates the integration of, for example, workpiece feed, sensor, or actuator systems through the center hole.
	Precise gripping thanks to the junction roller guide with minimal play.	Narrow design for confined spaces.	Suitable for complex gripping situations due to compatibility with long gripper fingers.	Secure, certified gripping force maintenance, GripGuard.	Use of long gripper fingers due to the high maximum moments of the profiled rail guide.	License-free web tool reduces design effort and allows simple and quick configuration, including CAD data.	Dynamic handling thanks to low dead weight and compact design.	
		High process reliability thanks to robust guidance.	The right model for every application. High process reliability and low manufacturing down-times thanks to maintenance-free operation with permanent lubrication.	Precise and process-reliable monitoring of the complete gripper stroke via IO-Link thanks to the integrated sensor system	IP 64 dirt protection as standard.			
Technical data								
Number of sizes	9	7	11	5	5	5	1	4
Gripping force [N]	7 – 370	45 – 540	180 – 27000	145 – 1900	500 – 4630	1650 – 11650	13	90 – 610
Stroke per jaw [mm]	1 – 10	10 – 60	2 – 45	10 – 25	30 – 160	100 – 400	4.5	4 – 10
Weight [kg]	0.01 – 0.63	0.09 – 4.2	0.08 – 39.8	0.46 – 7.9	1.49 – 23.55	19.03 – 137.7	0.08	0.28 – 1.32
Recommended workpiece weight [kg]	0 – 1.25	0 – 2.7	0 – 97.5	0 – 7	2.5 – 15.5	8.25 – 58.25	0.07	0 – 3.3
Closing/opening time [s]	0.01 – 0.08/0.011 – 0.08	0.03 – 0.29/0.03 – 0.25	0.02 – 0.8/0.02 – 0.8	0.03 – 0.35 / 0.03 – 0.35	0.11 – 1.82/0.11 – 2.91	0.08 – 1.7/1.1 – 2.2	0.05/0.05	0.02 – 0.08/0.02 – 0.08
Max. permissible finger length [mm]	80	160	400	100 – 260	800	800	50	125
Repeat accuracy [mm]	0.02	up to 0.02	up to 0.01	0.03	0.02	0.03	0.02	0.01
IP protection class	30/54	40	40/64	64/67	41	30	20	40
Cleanroom class ISO 14644-1	6	7	6	6				
Sensor system	++	+	+++	+++	++	++	+	++
Range of variants	++	++	+++	+++	++	+++	+	+
Ambient conditions								
Clean	●	●	●	●	●	●	●	●
Contaminated/coarse dust	○	○	●	●	●	●	○	●
Contaminated/fine dust and liquids			○	●	○			
Contaminated/aggressive liquids			○	○				
High temperature range > 90 °C	○	○	●	●			○	●

● = very highly suitable ● = highly suitable ○ = suitable in customized version
+ = medium selection ++ = large selection +++ = very large selection

2-finger parallel grippers								
Tech			Economy					
Universal gripper		Long-stroke grippers		Gripper for small components	Universal grippers			Long-stroke gripper
DPG-plus	PSH	SPG		MPC	JGP-P	CGP	PGF	PFH-mini
								
Description								
	Pneumatic universal gripper with a sealed design and high maximum moments thanks to robust multi-tooth guidance. For light to heavy workpieces.	Pneumatic long-stroke gripper with dirt-resistant design round guides for medium to large workpieces.	Rugged pneumatic long-stroke gripper with high gripping force and a large jaw stroke for large and heavy workpieces.	Cost-effective pneumatic gripper for small components for simple applications involving small to medium workpieces.	Pneumatic universal gripper with high power density and high maximum moments thanks to a T-slot sliding guide. For light to heavy workpieces.	Pneumatic universal gripper with high power density and high maximum moments thanks to a T-slot sliding guide. For light to heavy workpieces.	Pneumatic universal gripper with a long jaw stroke and high maximum moments thanks to robust flat guidance extending the entire length of the housing. For light to medium-weight workpieces.	Compact pneumatic long-stroke gripper for medium to large workpieces.
Advantages								
	Gripper for harsh environments, featuring reliable sealing with an IP67 protection rating.	Gripper for harsh environments, featuring reliable sealing with an IP67 protection rating. Greater flexibility when dealing with varying part sizes thanks to the long stroke.	A robust sliding guide allows long gripper fingers to be used whilst simultaneously withstanding high maximum moments. Greater flexibility when dealing with varying part sizes thanks to the long stroke.	Cost-effective alternative that offers a good price-performance ratio.	Cost-effective alternative to PGN-plus-P that offers a good price-performance ratio. Suitable for the vast majority of applications, thanks to 10 sizes and the most important gripper variants.	An attractive entry point into automation thanks to a consistently cost-optimized design. Proven SCHUNK gripping technology for reliable functionality and solid performance in daily use. Easy to integrate thanks to standardized mechanical interfaces and a free choice of sensor – either magnetic or inductive.	Greater flexibility when dealing with varying part sizes thanks to the long stroke. Compact design for confined spaces.	Greater flexibility when dealing with varying part sizes thanks to the long stroke. Precise gripping with high bearing load capacity thanks to robust sliding guide.
Technical data								
Number of sizes	11	4	1	6	10	4	5	3
Gripping force [N]	110 – 11250	320 – 1760	10000	16 – 370	180 – 8200	350 – 1585	240 – 1900	630 – 2950
Stroke per jaw [mm]	2 – 45	14 – 100	100	2.5 – 15	2 – 35	6 – 13	7.5 – 31.5	30 – 100
Weight [kg]	0.12 – 52	0.77 – 8.05	35	0.05 – 0.94	0.08 – 17.2	0.28 – 1.86	0.3 – 5.3	2.65 – 12.6
Recommended workpiece weight [kg]	0 – 46.35	0 – 8.8	50	0 – 1.85	0 – 35	1.75 – 5.6	0 – 7.1	0 – 13
Closing/opening time [s]	0.03 – 1.1/0.03 – 1.1	0.12 – 0.4/0.12 – 0.4	1.5/1.5	0.03 – 0.11/0.03 – 0.11	0.02 – 0.7/0.02 – 0.7	0.02 – 0.12/0.02 – 0.12	0.03 – 0.4/0.03 – 0.4	0.3 – 1.0/0.3 – 1.2
Max. permissible finger length [mm]	380	300	500	60	300	180	125	250
Repeat accuracy [mm]	up to 0.01	up to 0.05	0.1	0.02	up to 0.01	0.02	up to 0.02	0.05
IP protection class	67	67	30	30	40	40	40	41
Cleanroom class ISO 14644-1	5							
Sensor system	+	+	+	+	++	+	+	++
Range of variants	++	+	+	+	+	+	+	++
Ambient conditions								
Clean	●	●	●	●	●	●	●	●
Contaminated/coarse dust	●	●	○		●	●	○	●
Contaminated/fine dust and liquids	●	●						○
Contaminated/aggressive liquids	○	●						
High temperature range > 90 °C	○	●					●	●

● = very highly suitable ● = highly suitable ○ = suitable in customized version
+ = medium selection ++ = large selection +++ = very large selection

3-finger centric grippers						
Premium			Tech			Economy
Gripper for small components		Universal gripper	Long-stroke gripper		Universal grippers	
MPZ	PZN-plus	PZH-plus	DPZ-plus	PZB-plus	PZV	JGZ
						
Description						
	Compact and powerful 3-finger gripper for small components with T-slot sliding guide for small to medium workpieces.	Pneumatic 3-finger universal gripper with high power density and high maximum moments thanks to robust multi-tooth guidance. For light to heavy workpieces.	Pneumatic 3-finger long-stroke gripper and high maximum moments thanks to robust multi-tooth guidance. For small to large workpieces.	Pneumatic 3-finger universal gripper with sealed design and high maximum moments thanks to robust multi-tooth guidance. For light to heavy workpieces.	Pneumatic 3-finger universal gripper with center through-hole and high maximum moments thanks to robust multi-tooth guidance. For light to medium workpieces.	Pneumatic 4-finger centric gripper with high maximum moments thanks to robust multi-tooth guidance. For light to medium-weight workpieces.
Advantages						
	Very compact design for confined spaces.	Suitable for complex gripping situations due to compatibility with long gripper fingers.	Greater flexibility when dealing with varying part sizes thanks to the long stroke.	Gripper for harsh environments, featuring reliable sealing with an IP67 protection rating.	Facilitates the integration of, for example, workpiece feed, sensor or actuator systems through the center hole.	Gripper with 4 gripper fingers for applications in which two or three fingers are insufficient.
	Precise gripping with high maximum moments thanks to T-slot sliding guide.	The right model for every application.	Flat design for confined spaces.			Can also be used as a double 2-finger parallel gripper.
Technical data						
Number of sizes	6	11	4	8	9	5
Gripping force [N]	20 – 310	255 – 57300	375 – 4200	230 – 16500	340 – 27400	570 – 6900
Stroke per jaw [mm]	1 – 5	2 – 45	20 – 75	2 – 25	2 – 35	4 – 16
Weight [kg]	0.01 – 0.29	0.13 – 80	1.5 – 33	0.2 – 20.1	0.26 – 53	0.5 – 10
Recommended workpiece weight [kg]	0 – 1.15	0 – 227	0 – 22	0 – 60	0 – 100	0 – 34.5
Closing/opening time [s]	0.02 – 0.06/0.02 – 0.06	0.02 – 4.6/0.02 – 3	0.25 – 1.05/0.2 – 0.85	0.03 – 1.8/0.03 – 1.8	0.02 – 2.5/0.02 – 2.5	0.02 – 0.15/0.02 – 0.15
Max. permissible finger length [mm]	45	250	400	160	250	140
Repeat accuracy [mm]	0.01	up to 0.01	up to 0.02	up to 0.01	up to 0.01	up to 0.01
IP protection class	40	40/64	40	67	40	40
Cleanroom class ISO 14644-1	5	5		5		
Sensor system	+	+++	+	+	++	+++
Range of variants	+	+++	+	++	+	+
Ambient conditions						
Clean	●	●	●	●	●	●
Contaminated/coarse dust	○	●	○	●	○	○
Contaminated/fine dust and liquids		○	○	●	○	
Contaminated/aggressive liquids		○	○	○	○	
High temperature range > 90 °C		●	○	●	●	○

● = very highly suitable ● = highly suitable ○ = suitable in customized version
 + = medium selection ++ = large selection +++ = very large selection

Angular/radial grippers							
Premium				Tech		Economy	
Gripper for small components		Universal grippers		Gripper for small components		Universal gripper	
SWG		PWG-plus		PRG		GAP	
DRG		SGB		SGW			
							
							
Description							
Compact pneumatic 2-finger angular gripper with slim design and a 15° opening angle per jaw. For small workpieces.		Pneumatic 2-finger angular gripper with compact design and a 15° opening angle per jaw. For light to heavy workpieces.		Pneumatic 2-finger radial gripper with compact design and a 15° opening angle per jaw. For light to heavy workpieces.		Pneumatic 2-finger angular parallel gripper for parallel O.D. gripping after swiveling in the gripper finger up to 90 degrees per jaw. For small to medium-sized workpieces.	
Pneumatic 2-finger radial gripper with a sealed design and gripper fingers that open wide, up to 90° per jaw. For light to medium-weight workpieces.		Pneumatic, single-acting 2-finger angular gripper for simple applications involving small workpieces.		Pneumatic, single-acting 3-finger angular gripper for simple applications involving small workpieces.			
Advantages							
Narrow design for confined spaces and space-optimized arrangements of multiple grippers positioned close together.		High power density for heavy workpieces.		30/60/90° opening angle options for collision-free gripping in confined spaces.		30/60/90° opening angle options for collision-free gripping in confined spaces.	
		Optional stroke limitation upon opening, for confined spaces and short cycle times.		Optimized cycle time due to innovative damping directly in the drivetrain.		High positioning accuracy, due to absolute centric clamping in the parallel stroke.	
		Variable top jaw design, since the grippers are available in both jaw and finger versions via intermediate jaws.		Compact footprint thanks to narrow and tall design.		Compact design for confined spaces.	
Technical data							
Number of sizes		8		8		4	
Gripping moment [Nm]		0.01 – 2.8		3.32 – 1025		56 – 430*	
Opening angle per jaw [°]		15		15		30 – 90	
Weight [kg]		0.0025 – 0.213		0.13 – 13.6		0.13 – 6.72	
Recommended workpiece weight [kg]		0 – 0.46		0 – 23.13		0 – 6.96	
Closing/opening time [s]		0.015 – 0.03/0.02 – 0.06		0.06 – 0.32/0.06 – 0.46		0.06 – 0.75/0.06 – 0.92	
Max. permissible finger length [mm]		42		300		240	
Repeat accuracy [mm]		0.05		0.02		up to 0.05	
IP protection class		30		30		20	
Cleanroom class ISO 14644-1							
Sensor system		+		++		++	
Range of variants		+		++		++	
Ambient conditions							
Clean		●		●		●	
Contaminated/coarse dust		○		●		○	
Contaminated/fine dust and liquids				○			
Contaminated/aggressive liquids				○			
High temperature range > 90 °C		●		●		●	

● = very highly suitable ● = highly suitable ○ = suitable in customized version
+ = medium selection ++ = large selection +++ = very large selection
* The GAP is an angular parallel gripper, which means the values must be understood as forces [N].

Special grippers								
O-ring gripper	Round cell gripper	Grippers with shaft interfaces for toolholders					Internal hole gripper	
ORG	RCG	GSW-B	GSW-B with AGE	GSW-V	GSW-M	RGG	LOG	
								
Description								
	Pneumatic O-ring assembly gripper with 6 gripper fingers for the automated assembly of O-rings.	The round cell gripper RCG is a pneumatically controlled magnetic gripper designed for handling round battery cells with a diameter of 46 mm.	Shank interface for combining a 20-mm diameter tool holder with a universal gripper for automated loading and unloading of machine tools via the machine spindle.	Shank interface with compensation unit for combining a 20-mm diameter tool holder with a universal gripper for automated loading and unloading of machine tools via the machine spindle.	Shank interface for combining a tool holder with a vacuum gripper for automated loading and unloading of flat workpieces in machine tools via the machine spindle.	Magnetic gripper with 20-mm diameter shaft interface for mounting in a tool holder for automated loading and unloading of ferromagnetic workpieces in machine tools via the machine spindle.	Cleaning unit with a 20-mm diameter shank interface for mounting in a tool holder, designed for automated cleaning of clamping devices in machine tools via the machine spindle.	Pneumatic, single-acting hole gripper for gripping components in cylindrical bores.
Advantages								
	Universal suitability for external and internal assembly of O-rings with one gripper.	Compact external dimensions of the single gripper allow maximum packing density of battery cells.	Pick up the gripper via the machine spindle and place it in the tool rack.	Pick up the gripper via the machine spindle and place it in the tool rack.	Pick up the vacuum gripper via the machine spindle and place it in the tool rack.	Pick up the magnetic gripper via the machine spindle and place it in the tool rack.	Pick up the cleaning unit via the machine spindle and place it in the tool rack.	Light and corrosion-free since housing is made from plastic.
	Rapid commissioning due to standard assembly fingers for external assembly of common O-rings.	Maximum process reliability due to sensory workpiece and status detection.	Gripper activation via coolant or compressed air.	Gripper activation via coolant or compressed air.	Gripper activation via coolant or compressed air.	Gripper activation via coolant or compressed air.	Cleaning using coolant or compressed air.	Fine size adjustment in 1-mm steps for bore diameters ranging from 20 to 110 mm.
			Allows cost-effective and fully automatic workpiece automation without robot or gantry system.	Enables cost-effective and fully automatic workpiece automation without robot or gantry system.	Allows cost-effective and fully automatic workpiece automation without robot or gantry system.	Allows cost-effective and fully automatic workpiece automation without robot or gantry system.	Allows cost-effective and fully automatic workpiece automation without robot or gantry system.	
Technical data								
Sensor system	+	++						
Range of variants	+	++	++	++	+	+	+	+++
Ambient conditions								
Clean	●	●	●	●	●	●	●	●
Contaminated/coarse dust			●	○	○	○	●	●
Contaminated/fine dust and liquids			○	○	○	○	●	●
Contaminated/aggressive liquids			○	○			●	
High temperature range > 90 °C			●	●			●	

● = very highly suitable ○ = highly suitable ○ = suitable in customized version
+ = medium selection ++ = large selection +++ = very large selection

Electric grippers

One gripper for a wide variety of workpieces

+ Electric grippers can be flexibly adapted to different components. This allows multiple part variants to be handled with a single gripper.

Your advantages:

- + Designed for a variety of handling tasks.
- + Quickly integrated and put into operation thanks to standardized communication interfaces, preconfigured function blocks, and plugins.
- + Ability to operate as a standalone application on mobile platforms.

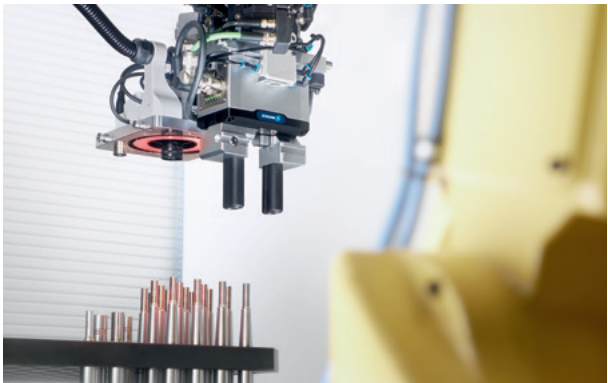
Designed for a variety of handling tasks

The portfolio includes models designed for sensitive, fragile components as well as for handling heavy workpieces – thereby covering a wide range of applications across various industries.

Application examples



EGU/EZU: Flexible machine tool loading



EGU: Assembly and joining tasks



EGK: Handling printed circuit boards



EGK: Laboratory automation

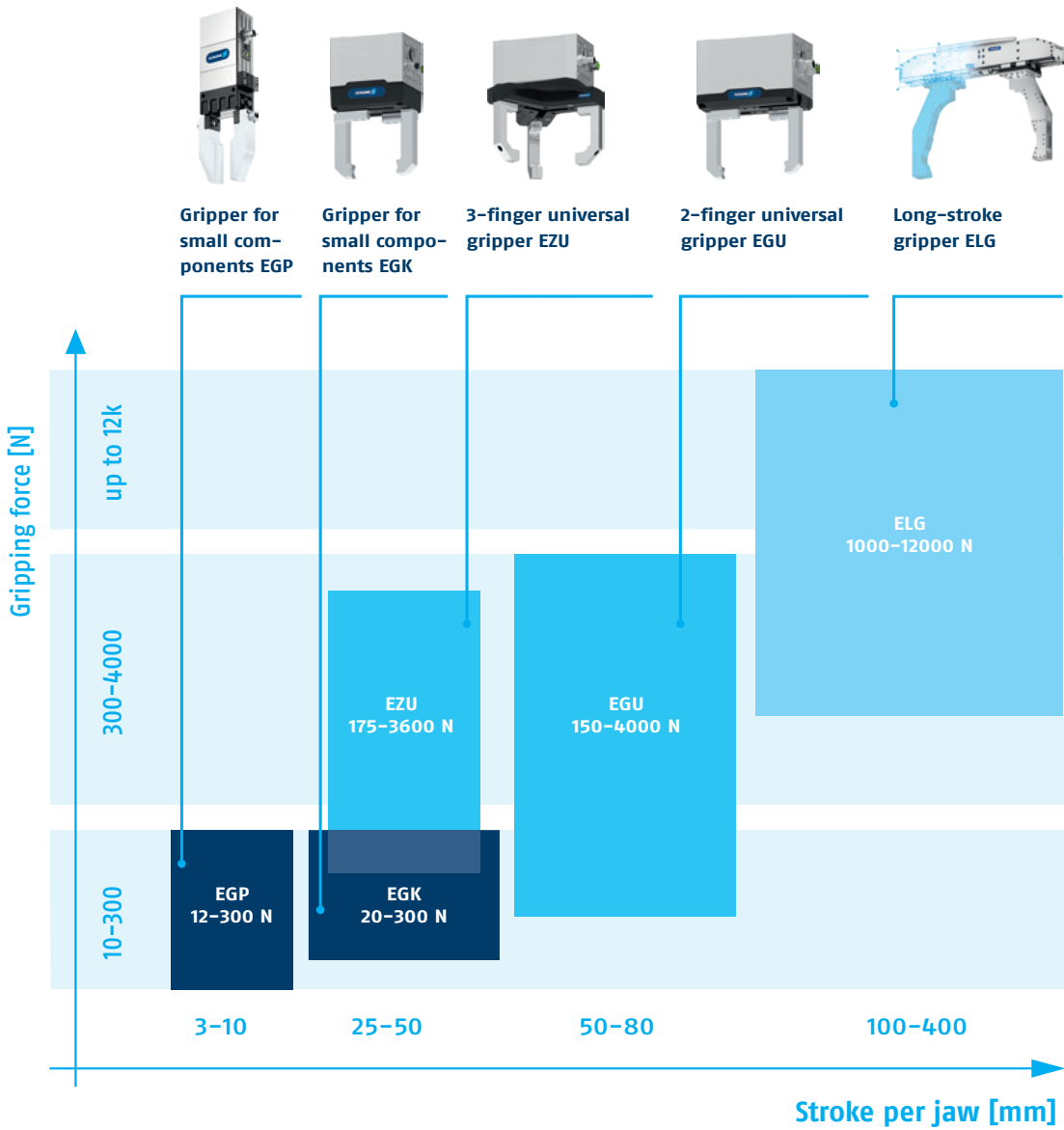


EGP: High-performance assembly



ELG: Handling heavy, bulky workpieces

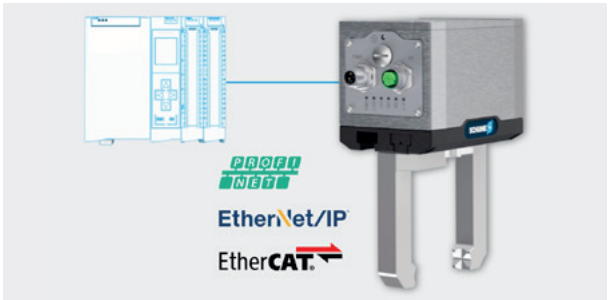
One gripper for a wide variety of workpieces



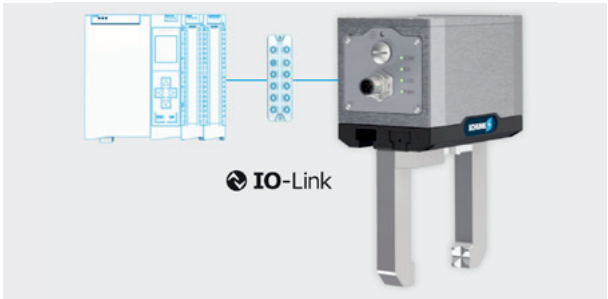
Electric grippers

Quickly integrated and commissioned

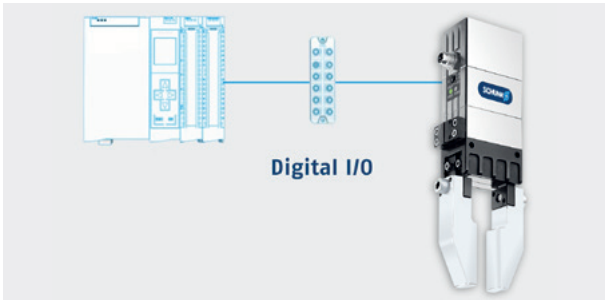
Electric grippers can be integrated directly into control and robot systems via standardized communication interfaces, pre-configured function blocks, and plugins. The SCHUNK Control Center is available as additional support for configuration, parameterization, and diagnostics.



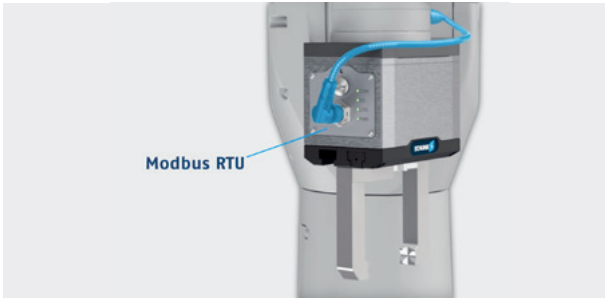
Industrial Ethernet allows direct integration into the control environment of leading PLC manufacturers on the market, without additional gateways. Industrial Ethernet offers real performance advantages for applications with high dynamic performance requirements and short cycle times.



IO-Link is independent and offers flexibility in connecting to other networks. An IO-Link master is required for the PLC connection.



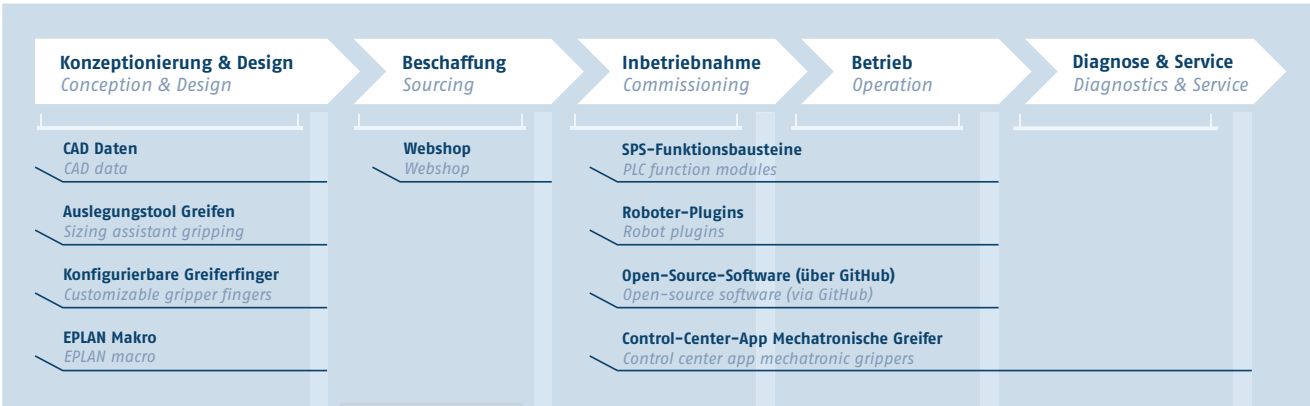
Control via **digital inputs and outputs** is the simplest type of communication and allows simple connections with basic functionalities.



With the **Modbus RTU serial interface**, the gripper can be connected to the tool flanges of leading robot manufacturers without external cable routing.

Digital tools & services

SCHUNK offers a wide range of digital tools and services for electric grippers with the aim of providing the greatest possible support throughout the machine life cycle.



SCHUNK provides you with the following tools and services:

Control system integration
For seamless interaction between gripper and control system, modules are available for leading manufacturers such as Allen Bradley, Beckhoff, Siemens, and systems such as Nexeed Automation. This means that all gripper functions can be used directly without any additional programming effort.

Robot integration
Plugins are available to enable quick and easy gripper integration into robot control systems from ABB, FANUC, Universal Robots, Yaskawa, and Kassow. After installation, you can immediately start programming applications.

SCHUNK Control Center
The Electric Grippers app provides direct access to all gripper functions – for simple configuration and quick application validation.

Open-source software
Get from concept to working application faster: on GitHub, we provide open-source packages (ROS 2 drivers, Python packages) for our electric grippers.

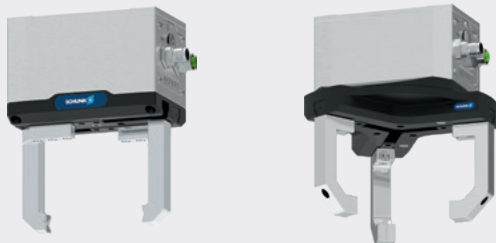
Standalone operation on mobile platforms



Our electric grippers operate independently, using the mobile platform's existing power supply. This makes automated small load carrier and box handling and picking goods at point A and placing them at point B particularly easy, reliable, and flexible to implement.

Your advantages:

- + **Standalone operation:** the gripper operates without any additional external infrastructure – ideal for mobile applications.
- + **Use of existing power supply:** no separate power supply is required.
- + **Scalable & flexible:** ideal for growing material flows and varying order profiles.

Universal grippers		Gripper for small components		Collaborating gripper		Gripper for small components		Long-stroke gripper		Servo-electric 5-finger gripping hand													
EGU		EZU		EGK				Co-act EGP-C		EGP		ELG		SVH									
																							
Description																							
Tough as nails. Dust, coolant, and tough conditions? No problem. The electric universal grippers EGU and EZU are designed for demanding industrial environments and ensure reliable workpiece handling in daily production operations.				A gentle touch. A strong process. Delicate gripping of sensitive components. Controlled gripping motions using SoftGrip modes allow gentle handling of delicate workpieces.				For safe human-robot collaboration. Suitable for applications in which humans and robots work together directly.				When space is at a premium. Designed with a compact form factor – ideal for confined spaces.				Designed for large, heavy, and bulky workpieces. Configurable, electric long-stroke gripper for workpieces such as crates, boxes, wheel rims, or white goods.				Developed for humanoid robotics. Servo-electric 5-finger hand for versatile gripping and manipulation tasks in humanoid applications.			
Advantages																							
A gripper for a wide variety of parts. Gripping force and stroke can be flexibly adjusted. This allows different workpieces to be handled with a single gripper.				A gripper for a wide variety of parts. Gripping force and stroke can be flexibly adjusted. This allows different workpieces to be handled with a single gripper.				Plug & Work – quickly connected. Wide cobot compatibility allows rapid integration and commissioning.				Designed for high-performance assembly. Fast gripping cycles allow short cycle times and ensure consistent throughput in rigidly interlinked production processes.				Can be configured as needed. Long-stroke gripper with a wide range of customizable options for various applications.				Designed for complex gripping tasks. Its high adaptability allows it to be used in a wide range of applications.			
Get started quickly and straightforwardly. Standardized interfaces, robot plugins, and preconfigured function blocks allow simple integration into robot and control systems.				Get started quickly and straightforwardly. Standardized interfaces, robot plugins, and preconfigured function blocks allow simple integration into robot and control systems.				DGUV-certified – faster approval. Less effort required for safety assessments and commissioning.				Suitable for use in highly regulated environments. Cleanroom compatibility and food-compliant lubrication allow use in sensitive industries such as electronics and life sciences.				Flexible control options – easy to integrate. A drive motor that can be individually adapted for integration into existing control concepts.				Precise manipulation with many degrees of freedom. 20 degrees of freedom with 9 integrated actuators allow precise movements.			
High process reliability in operation. Gripping force maintenance, workpiece detection, and robust guides ensure reliable gripping even under demanding production conditions.				Suitable for use in highly regulated environments. Cleanroom compatibility and food-compliant lubrication enable use in sensitive industries such as electronics and life sciences.								Flexible control – from quick integration to process-oriented solutions. The digital I/O variant can be quickly integrated into your existing I/O infrastructure. EGP: IO-Link allows pre-positioning, status monitoring, and special gripping modes for greater process control.				Quick to configure – directly with CAD data. This web tool does not need a license, allows quick and easy configuration, and provides the appropriate CAD data.				Extremely compact and integrated. Control, regulation, and power electronics are fully integrated into the wrist – for minimal space requirements.			
Technical data																							
Number of sizes		4		3		3				2		4		4		1							
Gripping force [N]		150 – 4000		175 – 3600		20 – 300				140 – 230		12 – 300		1000 – 12000									
Stroke per jaw [mm]		41 – 80		20 – 40		26.5 – 51.5				6 – 10		3 – 10		100 – 400									
Dead weight [kg]		1.44 – 7.88		2.25 – 7.55		0.58 – 1.63				0.59 – 1.38		0.11 – 0.83		8.1 – 56.5		1.3							
Nominal voltage [V]		24		24		24				24		24		Motor-dependent		24							
IP protection class		67		67		67				30		30		20 – 44		20							
Communication interface		PROFINET, EtherNet/IP, EtherCAT, IO-Link, Modbus RTU (RS485)		PROFINET, EtherNet/IP, EtherCAT, IO-Link, Modbus RTU (RS485)		PROFINET, EtherNet/IP, EtherCAT, IO-Link, Modbus RTU (RS485)				Digital I/O		Digital I/O, IO-Link		Controller-dependent		RS485							
Ambient conditions																							
Clean	●		●		●				●		●		●		●								
Contaminated/coarse dust	●		●		●								●										
Contaminated/fine dust and liquids	●		●		○								○										
Cleanroom	○		○		○						○												

● = very highly suitable ○ = highly suitable ○ = suitable in customized version

Magnetic grippers

- + **High holding force**
in the smallest spaces for reliable parts handling.
- + **More space for the process:**
flat gripping from one side creates additional clearance.
- + **Electro-permanent technology:**
stable holding force without a continuous power supply.

Application examples



EMH: Handling of battery round cells



EMH: Handling of sheet metal



EGM: Bin picking of raw parts



EGM: Handling of motors

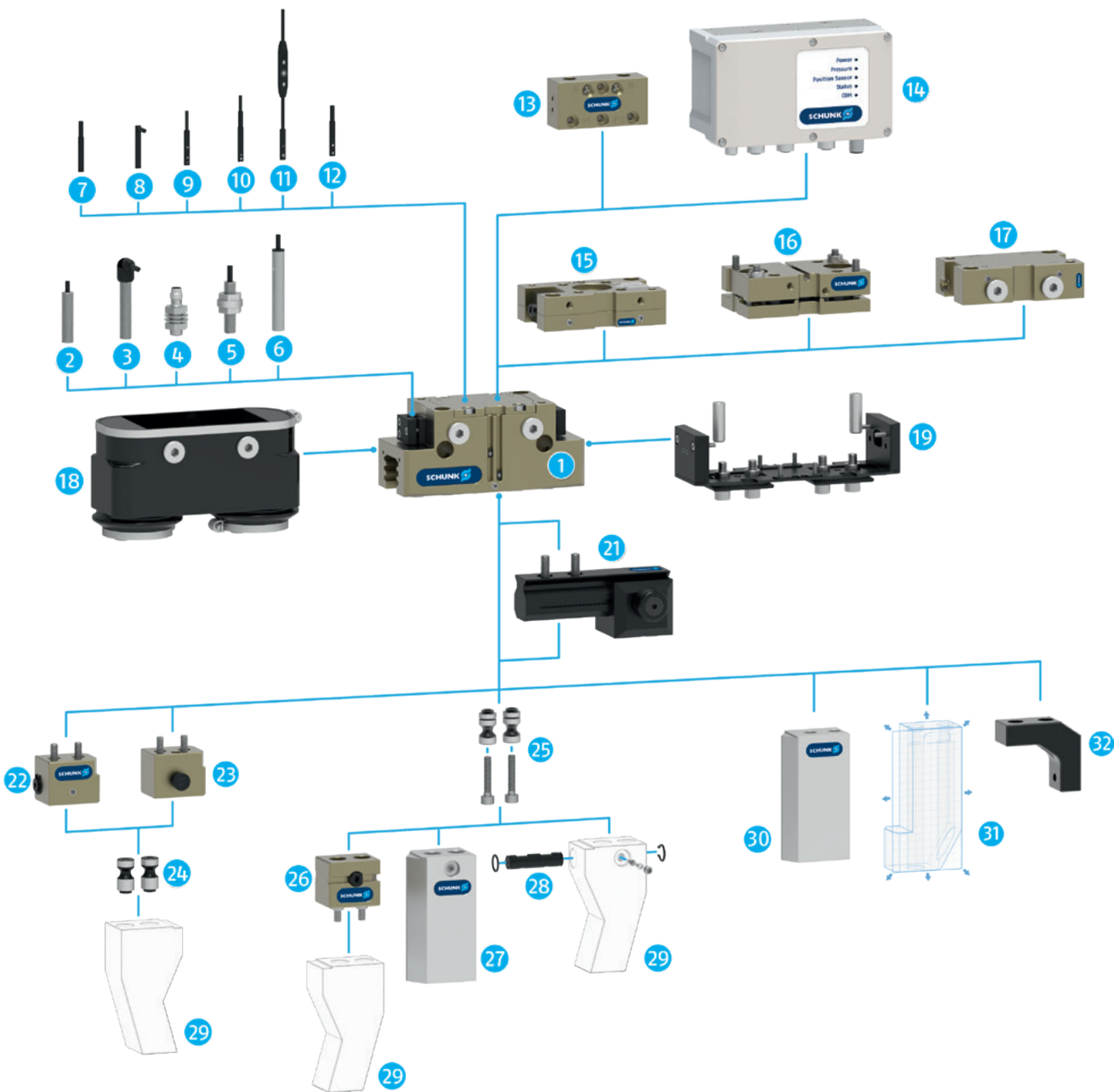
Electromagnetic grippers	
EGM	EMH
	

Description		
	Modular electro-permanent magnetic system with high holding force and compact size. Ideal for scalable system concepts.	Compact electro-permanent magnetic gripper with integrated electronics and feedback for quick and easy integration.
	Area of application: handling ferromagnetic workpieces.	Area of application: handling ferromagnetic workpieces.
Advantages		
	Reliable holding in confined spaces – high holding force for safe handling.	24V technology: Simple power supply via the existing 24V infrastructure.
	Greater dynamics – low dead weight enables rapid movements during the process.	All-in-one: integrated electronics with status monitoring simplifies commissioning.
	Process reliability even during an emergency stop: holding force is reliably maintained.	Process reliability even during an emergency stop: holding force is reliably maintained.
Technical data		
Number of sizes	14	6
Gripping force [N]	780 – 20370	530 – 10550
Weight [kg]	1 – 25	1 – 8
Nominal voltage [V]	400 AC	24 DC
IP protection class	54	52
Communication interface	Digital I/O	Digital I/O
Range of variants	+++	++
Controller	external	integrated
Ambient conditions		
Clean	●	●
Contaminated/coarse dust	●	●
Contaminated/fine dust and liquids	○	○
Cleanroom	○	○

● = very highly suitable ● = highly suitable ○ = suitable in customized version
+ = medium selection ++ = large selection +++ = very large selection

Accessories

SCHUNK also offers suitable accessories for the comprehensive gripper range. The universal gripper PGN-plus-P, for example, features a large number of variants and a superior range of accessories offering everything needed for flexible use in your specific automation application. For any kind of application and handling requirement – also under extreme conditions.



- 1 PGN-plus-P
Universal 2-finger parallel gripper with a high gripping force and high maximum moments due to the use of a multi-tooth guidance

Sensor system

- 2 IN ..
Inductive proximity switch with molded cable and straight cable outlet
- 3 IN - -SA
Inductive proximity switch with molded cable and lateral cable outlet
- 4 IN-C 80
Inductive proximity switch, directly pluggable
- 5 FPS
Flexible position sensor for monitoring up to five different, freely selectable positions
- 6 IPD
Inductive position sensor for monitoring the entire jaw stroke of SCHUNK grippers with analog output or IO-Link interface
- 7 MMS 22
Magnetic switch with straight cable outlet for monitoring a position
- 8 MMS 22-SA
Magnetic switch with lateral cable outlet for monitoring a position
- MMS 22-PI1-SA
Magnetic switch with lateral cable outlet for monitoring a freely programmable positions
- MMS 22-PI2-SA
Magnetic switch with cable outlet to the side for monitoring two freely programmable positions
- 9 MMS 22-PI1
Magnetic switch with straight cable outlet for monitoring a freely programmable position
- MMS 22-PI1-EX
Magnetic switch in ATEX version with straight cable outlet for monitoring a freely programmable position
- MMS 22-PI2
Magnetic switch with straight cable outlet for monitoring two freely programmable position
- 10 MMS 22-PI1-HD
MMS 22-PI1 in robust design
- MMS 22-PI2-HD
MMS 22-PI2 in robust design
- 11 MMS-P
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 12 MMS-A
Analog magnetic switch with straight cable outlet for measuring the gripper jaw position with analog output and teach function
- MMS-IOL
Magnetic switch with straight cable outlet for measuring the gripper jaw position with IO-Link interface and teach function

Complementary products

- 13 SDV-P
Pressure maintenance valve for temporary force and position maintenance

- 14 PPD
Pneumatic positioning device for flexible control of pneumatic grippers
- 15 CWS
Manual change system with integrated air feed-through for simple exchange of the handling components
- 16 TCU
Tolerance compensation unit for compensation of small tolerances in the plane
- 17 SDV-P-E-P
Pressure maintenance valve for temporary force or position retention and direct mounting on SCHUNK grippers
- 18 HUE
Sleeve for protection against dirt
- 19 SAD
Dust-proof version, retrofit kit

Finger accessories

- 21 UZB
Universal intermediate jaw for fast, tool-free, and secure re-plugging and repositioning of top jaws on the gripper
- 22 BSWS-B
Basic modules of the jaw quick-change system for fast, manual exchange of top jaws
- 23 BSWS-BM
Basic modules of the jaw quick-change system for fast, manual and tool-free exchange of top jaws
- 24 BSWS-A
Adapter pin of the jaw quick-change system for adaptation to the customized finger
- 25 BSWS-AR
Adapter pin of the jaw quick-change system for mounting on the base jaw of the gripper
- 26 BSWS-BR
Basic modules of the jaw quick-change system for automatic change of top jaws
- 27 BSWS-ABR / -ABRM
Finger blank made of aluminum with integrated locking mechanism of the jaw quick-change system
- BSWS-SBR
Finger blank made of steel with integrated locking mechanism of the jaw quick-change system
- 28 BSWS-UR / -URM
Locking mechanism of the jaw quick-change system for integration into customized fingers
- 29 Customized fingers
- SBR
Finger blanks made of steel with standardized screw connection diagram
- ABR
Finger blanks made of aluminum with standardized screw connection diagram
- 29 FGR
Configurable, workpiece-specific gripper finger made of aluminum or steel
- 32 ZBA
Intermediate jaws for reorientation of the mounting surface

Finger accessories					Complementary products						
Jaw quick-change systems					Adjustable intermediate jaw	Workpiece-specific gripper fingers	Top jaw blank	Pneumatic positioning device	Pressure maintenance valve	Protective cover	
BSWS	BSWS-M	BSWS-R	BSWS-ABR-/SBR/-ABRM	BSWS-UR/-URM	UZZ	FGR	ABR/SBR	PPD	SDV-P	HUE	
 22	 23	 26	 27	 28	 21	 31	 29	 14	 13	 18	
Description											
Jaw quick-change system, manual and tool-operated.					Universal intermediate jaw for fast tool-free and reliable plugging and shifting of top jaws on the gripper.					Protective cover for gripper against external influences in a dirty environment.	
Jaw quick-change system, manual and tool-free.					Workpiece-specific, configurable gripper finger made of aluminum or steel.					Prevents venting of the module in the event of a loss in air pressure in the supply line.	
Automatic jaw quick-change system.					Blanks made of aluminum or steel for rework by the customer.					Pneumatic positioning device for flexible control of pneumatic grippers.	
Finger blank for customized reworking, with integrated jaw quick-change system.					Locking mechanism of the jaw quick-change system for installation into customized gripper fingers.					The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.	
Gripper fingers changed manually using an Allen key					Areas of application: With highly diverse workpieces that can be covered by increasing the gripping width.					This is especially useful for grippers where a mechanical solution for gripping force maintenance is not possible.	
Change the gripper fingers by simply pressing the release button.					Suitable for many gripper types.					Suitable for grippers PGN-plus-P, PGN-plus, PZN-plus, EGN and EZN.	
Change the gripper fingers fully automatically without manual intervention.					Suitable for common gripper types.					Areas of application: Temporary force or position maintenance for various pneumatic actuators.	
Available as a manual tool-operated or manual tool-free system.					Areas of application: for quick and easy creation of top jaws by adding the clamping contour.					Areas of application: Suitable for applications up to IP65 if an additional sealing of the cover bottom is provided.	
Area of application: For high workpiece variance, for quickly changing the gripper fingers.											
Advantages											
Maximum flexibility: A single gripper that can be used universally for various workpieces or across a variety of applications, by changing the gripper fingers using the jaw quick-change system.					Gripper and finger-side centering for universal and flexible assembly of the gripper.					Cost-effective for economical handling.	
Time-saving retooling due to quick and easy changing of the gripper fingers.					Suitable for long gripper fingers due to stable guide strip.					Can be retrofitted.	
Quick gripper finger change.					Precise and repeatable adjustment by grid.					Space-saving thanks to low interfering contours.	
Quick gripper finger change without tools.					No CAD program or expertise required thanks to license-free web tool.					Universally applicable, as it can be combined with almost any pneumatic actuator.	
Fully automatic gripper finger change.					High replacement accuracy thanks to centering.					Adjustable gripper jaw speed for gentle gripping of the workpiece thanks to the gripping impulse being reduced.	
No disturbing fastening bores in the finger contour.											
Use for demanding finger contours.											

Sensors

Monitoring one position					Monitoring of several positions			Monitoring of the overall stroke			
1 digital switching point					2 digital switching points		5 digital switching points	IO-Link signal	IO-Link/analog	Analog signal	
MMS 22	MMS-PI 1	IN	RMS		MMS-PI 2	MMS-P	FPS	MMS 22 IO-Link	IPD	MMS-A	BIP
											
8	9	2			9	11	5	12	6	12	
Technical data											
Number of sizes	1	1	10	2	1	1	3	1	1	1	4
Operating principle	Magnetic	Magnetic	Inductive	Reed	Magnetic	Magnetic	Magnetic	Magnetic	Inductive	Magnetic	Inductive
Max. IP protection	67	67	67	67	67	67	67	67	67	67	67
Supply voltage [V DC]	24	24	24	24	24	24	24	24	24	24	24
Max. current on contact [mA]	50	50	100 – 200	400	25	100	200	25			
PNP version	●	●	●	●	●	●	●	●			
NPN version	●	●	●	●	●						
LED display	●	●		●	●	●		●	●	●	●
Min./max. ambient temperature [°C]	-10 – 70	-10 – 70	-25 – 70	-5 – 70	-10 – 70	5 – 55	-25 – 70	5 – 55	-10 – 60	5 – 55	-25 – 85
Closer		●	●	●	●	●	●				
Opener			●		●						
Connection type											
Number of wires	3	3	3	3	4	4	7	3		3	4
Cable version	●	●	●		●	●	●				
Connector M8 version	●	●	●	●	●	●		●	●	●	●
Connector M12 version			●					●	●	●	
Ambient conditions											
Clean	●	●	●	●	●	●	●	●	●	●	●
Easily contaminated	●	●	●	●	●	●	●	●	●	●	●
Extremely dirty	●			●							

● = highly suitable/fully supported

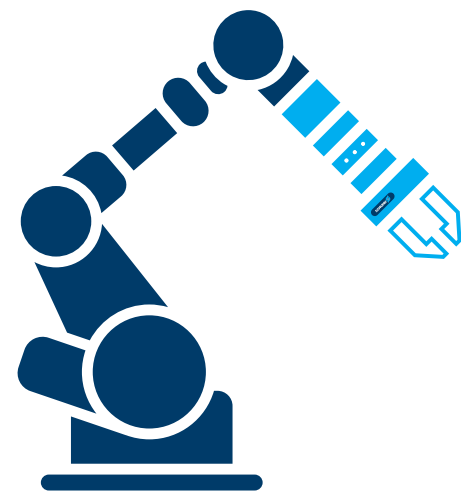
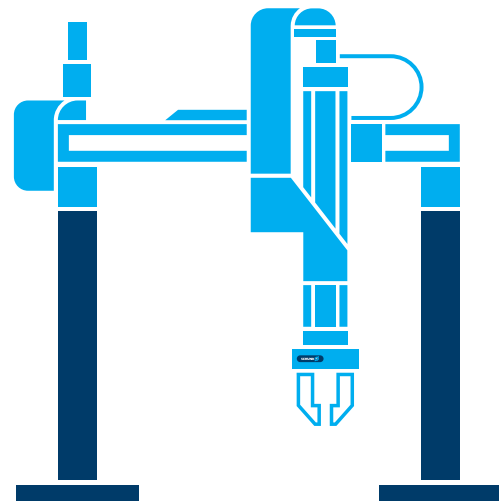
Cables

Cables					Plug connector
Sensor cable	Actuator cable	Communication cable	Power/sensor cable	Plug-in connector	
					
Description					
Optimally suited for signal transmission with SCHUNK sensor system.		Perfectly suited to supply and control SCHUNK components.		Optimally suited for reliable transmission of bus signals from the higher-level control system to the mechatronic SCHUNK components.	
Perfectly suited to supply SCHUNK components and transmit signals.		For the assembly of cables for sensors and actuators.			
Areas of application: For use on all SCHUNK sensors as well as components with integrated sensor systems.		Areas of application: For use on all SCHUNK gripping, rotating, and linear axes, as well as for numerous components in the field of robot accessories.		Areas of application: For use on all SCHUNK gripping, rotating, and linear axes, as well as for numerous components in the field of robot accessories.	
Areas of application: in conjunction with sensors, actuators, distributors and cables, wherever customized cable lengths are required					
Advantages					
Industrial standard plug connectors.		Industrial standard plug connectors.		Industrial standard plug connectors.	
Different connections possible (straight/angled).		Different connections possible (straight/angled).		Different connections possible (straight/angled).	
Combination with plug-in connector possible.		Combination with plug-in connector possible.		Available in torsion or cable track capability.	
		Suitable for connection to the respective SCHUNK component.		Easy assembly.	

Automation with SCHUNK

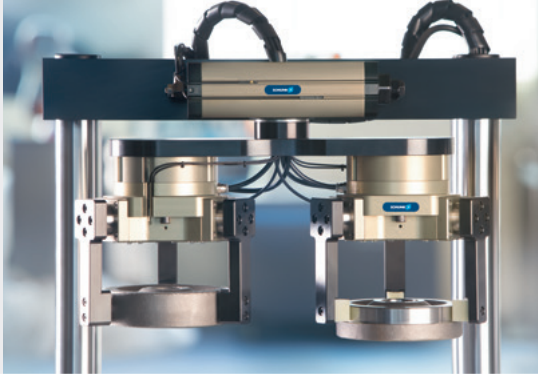
We can help you to master any challenge

SCHUNK offers a comprehensive product portfolio of technical solutions for automated handling of workpieces. Whether pick & place units, linear axes or multi-axis systems – as a complete supplier of handling solutions, we will be happy to assist you. Application-specific automation systems provide high dynamics with short cycle times – from small parts assembly in the production of electronics to the loading and unloading of machine tools to the handling of food products, pharmaceuticals or medical devices.



Swivel units

SCHUNK offers a unique range of swivel and rotary modules with various options.



Swivel units

Company

Linear axes & axis systems

Whether it's a variety of linear technology from a single source for high-speed assembly automation or an extensive axis portfolio for machine loading and unloading – SCHUNK is your partner for every type of automation and handling process.

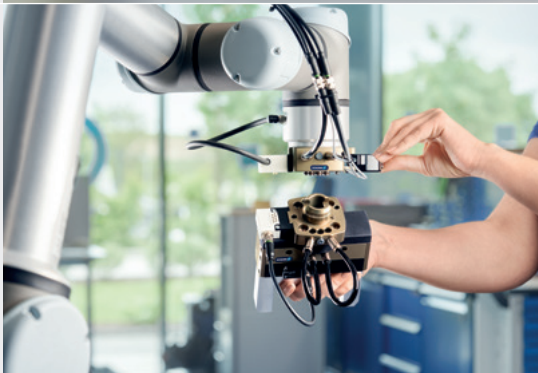


Linear axes & axis systems

Trend topics

Tool changer & optional modules

In the field of automation, SCHUNK offers the most comprehensive portfolio of components for robot applications, from small components to heavy load handling.



Tool changers & optional modules

Gripping technology

Rotary feed-throughs

SCHUNK rotary feed-throughs are the modern standard for stationary use and for automation.



Rotary feed-throughs

Automation technology

Compensation units & collision protection

SCHUNK compensation units offer the flexibility required to prevent damage to tools or workpieces. Furthermore, monitoring modules are effective instruments for reliable production in automated handling processes.



Compensation units & collision protection

Force/torque sensors

When precise results are needed, the precise force/torque sensors from SCHUNK provide robots with the required sensitivity.



Force/torque sensors

SCHUNK worldwide

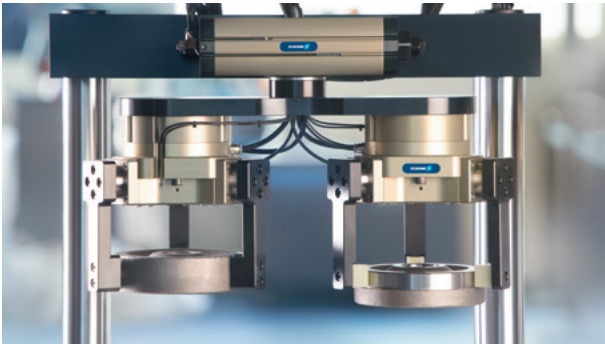
Pneumatic swivel units

Swiveling and rotating are universal processes required in any industrial situation involving the automated handling of workpieces. The requirements for the components used are very high and also very specific. SCHUNK offers a unique range of swivel and rotary modules with various options.

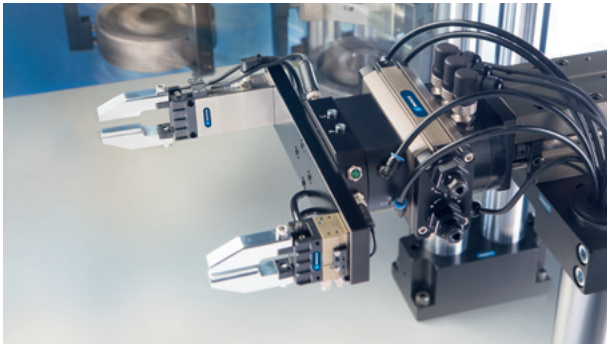
Pneumatic swivel units from SCHUNK offer you many advantages:

- + **The right product for your application**
available as standard thanks to a diverse range of series.
- + **Numerous options available**
e.g. integrated media and electrical feed-through and pneumatic center position.
- + **Advanced shock absorbers**
for high mass inertias and fast cycle times.
- + **Online configurator for gripper-swivel units**
makes it easier to find the right product.
- + **Wide range of accessories available.**

Application examples



Raw and finished parts handling



Sheet metal handling

Electric swivel units

The electric swivel units from SCHUNK more than meet the high requirements for swivel and rotary movements in automation. In addition to the diverse options and the wide range of variants, the universal use of the swivel and rotary modules is perfect for custom applications of any kind.

Electric swivel units from SCHUNK offer you many advantages:

- + **The right product for your application**
available as standard thanks to a diverse range of series
- + **Stopping at any intermediate position allows great process versatility,**
and optimal adaptation to the relevant application
- + **Extensive consulting service**
ranging from choosing the appropriate technology to design tasks
- + **Various actuation options**
facilitate easy integration into existing control concepts
- + **Numerous options available**
e.g. integrated media and electrical feed-through and integrated holding brake

Application examples



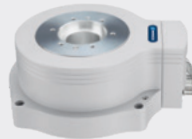
Handling of finished products



Handling of electronic components

Swivel units		Swivel head	Vane swivel unit			Rotary indexing table	Swivel finger	Gripper swivel module with parallel grippers
SRM	SRU-plus	SRH-plus	SFL		RM-W	RST-D	GFS	GSM-P
								
Description								
	Pneumatic universal swivel unit in flat design for universal rotating and swiveling movements.	Pneumatic universal swivel unit in flat design for universal rotating and swiveling movements.	Pneumatic universal swivel head for simultaneous loading and unloading of workpieces, especially on axis gantries.	Pneumatic miniature vane swivel unit for light swiveling tasks up to 180°.	Pneumatic universal vane swivel unit with high torque for fast swivel tasks.	Pneumatic ring indexing unit for endless turning with a rotation angle up to 90° per cycle.	Pneumatic swivel fingers for turning workpieces that are gripped by a gripper, for example.	Compact pneumatic gripper swivel combination, consisting of a rotor drive and a 2-finger parallel gripper.
Advantages								
	A finely graded series with a smooth increase in torque, a large center bore for cable/hose routing, and a preset shock absorber stroke for quick commissioning.	A finely graded series with uniform torque increase and a center bore for cable/hose routing.	Shorter loading times thanks to the high damping power of the hydraulic shock absorbers.	Compact design for confined spaces.	Compact design for confined spaces.	Flexibility in application thanks to clockwise rotation, counterclockwise rotation, or pendulum operation.	Cycle time optimization by rotating parts held in a gripper during the handling process.	Reduces space requirements and design complexity thanks to the integrated form of the gripper and swivel module in a single unit.
	A wide range of options and variants are available for every application.	A wide range of options and variants are available for every application.	Process reliability is ensured by the elimination of obstructive hoses and cables, thanks to integrated fluid and electrical feed-throughs.		High repeat accuracy and sensitive end position adjustment thanks to fine adjustment of the angle of rotation.	Play-free locking in the end positions.		Swivel angle variants 90° or 180°.
						Fixed center part with center bore to easily add further attachments.		
Technical data								
Angle of rotation < 360° [°]	0 – 180	0 – 180	180	90 – 180	90/180		90 – 180	0 – 180
Angle of rotation > 360° [°]						with cycle 22.5° – 90°		
Number of sizes	8	8	7	3	4	3	4	4
Torque [Nm]	0.45 – 23.7	3 – 115	3 – 69.9	0.1 – 3.6	0.7 – 22	3.1 – 29.3	0.64 – 10	0.3 – 2.9
Dead weight [kg]	0.252 – 9.74	1.2 – 26.5	2.1 – 21.2	0.09 – 0.71	0.65 – 8.3	1 – 8.3	0.55 – 5	0.37 – 1.51
Max. permissible mass moment of inertia [kgm²]	7	32	2.6	0.005	0.27	0.6		
Repeat accuracy [°]	0.03 – 0.07	0.05	0.05	0.05	up to 0.036	0.04 – 0.09°	0.07	0.02
IP protection class	40/65	67	67	52	40	50	54	30
Gripping force [N]								39 – 162
Stroke per jaw [mm]								1.5 – 10
Recommended workpiece weight [kg]								0.2 – 0.61
Closing/opening time [s]								0.01 – 0.05 / 0.01 – 0.05
Max. permissible finger length [mm]								64
Options/variants								
Center bore	●	●	●			●		
Pneumatic rotary feed-through	●	●	●					
Electrical rotary feed-through	●	●	●					
Center position	●	●				●		
ATEX certified		●	●					
Gripping force maintenance								●
Monitoring options								
Inductive proximity switch	●	●	●		●	●		●
Magnetic switch	●	●	●	●		●	●	●
Ambient conditions								
Clean	●	●	●	●	●	●	●	●
Easily contaminated	●	●	●	●	●	●	●	
Extremely dirty	●	●	●					

● = fully supported

Swivel units		Gripper swivel module with parallel gripper		
ERM	ERD	ERT	EGS	
				
Description				
	Electric heavy load rotary unit with adaptable servomotor.	Miniature rotary unit with a powerful torque motor.	Flat, electric universal rotary unit with an integrated torque motor.	When installation space is limited. The EGS gripping and swivel module features a compact design, making it ideal for applications with restricted installation space.
Advantages				
	Flexible adaptation to gantries or robots thanks to an angle of rotation > 360°, a center bore, optional feed-throughs, and a drive that can be swiveled in 90° increments.	Short cycle time thanks to high dynamic performance, and simple commissioning thanks to an absolute path measuring system. Attached grippers are reliably supplied with air and electricity through integrated air and electrical feed-throughs.	Minimal interfering contour thanks to flat design, along with full flexibility in position, speed, and torque. This is combined with low programming effort and simple commissioning thanks to an absolute path measuring system.	Designed for high-performance assembly. Fast gripping and swiveling cycles enable short cycle times and ensure consistent throughput in rigidly interlinked production processes. Suitable for use in highly regulated environments. Cleanroom compatibility and food-compliant lubrication enable use in sensitive industries such as electronics and life sciences. Quickly integrated. The digital I/O variant can be quickly integrated into your existing I/O infrastructure.
Technical data				
Number of sizes	1	3	4	2
Torque [Nm]	75	0.4 – 1.2	1.4 – 32	0.04 – 0.115
Max. speed [RPM]	62.5	600	150 – 600	
Weight [kg]	15.5	1.2 – 1.8	2.4 – 23.8	0.45 – 1.2
Max. permissible mass moment of inertia [kgm²]	20	0.011	5.53	0.00005 – 0.0002
Repeat accuracy [°]	0.035	0.01	up to 0.01	1
Gear ratio	48			
Intermediate circuit/nominal voltage [V]	Motor-dependent	530	560	24
Rated current [A]		0.43 – 1.6	0.96 – 4.4	0.8 – 1.0
Diameter of center bore [mm]	22		25 – 92	
Number of electric feed-throughs	0	4	0	
Number of pneumatic feed-throughs	8	2	0	
IP protection class	65	40 – 54	40 – 54	30
Measuring system type	Motor-dependent	Absolute, measuring system HIPERFACE and DRIVE-CLiQ	Absolute measuring systems HIPERFACE®, HIPERFACE DSL® and DRIVE-CLiQ	
Angle of rotation [°]	> 360°	> 360°	> 360°	30 – 270
Gripping force [N]/opening angle [Nm]				15 – 140
Stroke/opening angle per jaw [mm]/[°]				3 – 6
Closing/opening time [s]				0.05 – 0.16
Max. permissible finger length [mm]				32 – 50
Motor & controller				
Motor	Adaptable	Integrated	Integrated	Integrated
Controller	External	External	External	Integrated
Controller type	Motor-dependent	Bosch Rexroth, Siemens*	Bosch Rexroth, Siemens*	
Options/variants				
Center bore	●		●	
Pneumatic rotary feed-through	●	●		
Electrical rotary feed-through		●		
Brake	●		●	
Ambient conditions				
Clean	●	●	●	●
Easily contaminated	●	●	●	
Extremely dirty	●			

● = highly suitable/fully supported * = Additional controllers available upon request

Linear axes & axis systems

For positioning and movement tasks, or for any type of automation of handling processes – SCHUNK offers the diversity of linear technology from a single source. Different types of standard axes can be combined into complete systems. There are many variants to choose from for both the drive and the guide concept.

The advantages of SCHUNK linear axes and axis systems

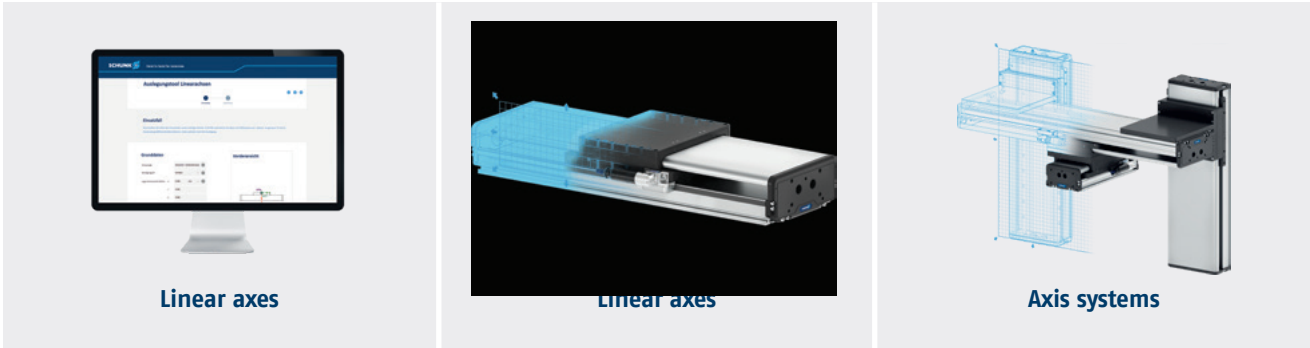
- + Flexible and extensive combinations with different drive concepts.
- + Over 25 years of experience in the field of linear technology.
- + Large axis system portfolio with more than 450 standard components.
- + Comprehensive consulting service from finding the right axis technology to design.
- + Pre-assembled complete solutions for minimal assembly effort and immediate commissioning including commissioning support.
- + Download CAD data in just a few clicks Various file formats.

Sizing assistant

Select the right product with just a few clicks
SCHUNK sizing assistants make it easy to reliably select the right specific products from the portfolio for each application.

Configurators

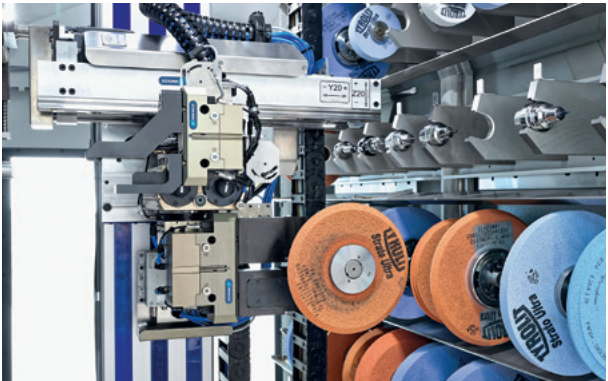
With our configurable standard products, we reduce complexity in system planning and offer a large number of individual adaptation options. With only a few clicks, linear axes can be adapted to individual requirements in less than 10 minutes, opening up an even wider range of applications. In addition to the configurable standard products, SCHUNK Engineering relies on customized solutions – please contact us!



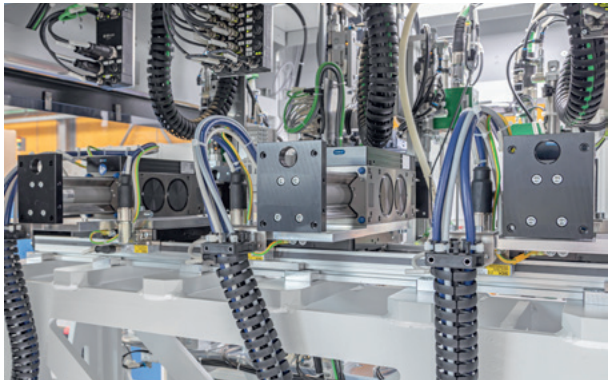
Application examples



Separating circuit boards



Automatic change of grinding wheels



Assembly automation



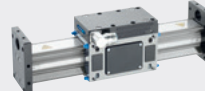
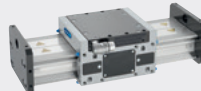
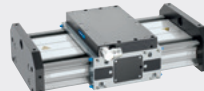
Handling of electronic components



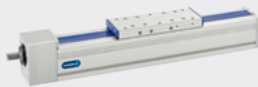
Handling of gears



Assembly of gears

Electric linear axes								
Linear direct axes – high productivity and service life, as well as short cycle times, thanks to high dynamic properties and a virtually wear-free direct drive.								
Compact linear axes		Universal linear axis		Stroke axis	Universal linear axes			Flat linear axis
ELP	ELB	SLD		LDK	LDN	LDM	LDT	LDL
								
Description								
	Electric linear direct axis with integrated control system.	Compact short-stroke axis.	Freely configurable, dynamic all-purpose axis.	Fully configurable compact short-stroke axis – ideal as a Z-axis.	Freely configurable universal linear axis with X-profile.	Freely configurable universal linear axis with double X-profile.	Freely configurable universal linear axis with triple X-profile.	Freely configurable flat linear axis.
Advantages								
	Quick integration via digital I/O and flexible cycle times thanks to a ten-step speed selection.	Minor programming effort and simple commissioning thanks to the optional absolute path measuring system.	Safety and reliability thanks to high bearing load capacity and long service life.	No mechanical play between the drive elements for fast response and high positioning accuracy.				
				High holding force and low vibrations for the shortest positioning times and process stability.				
Technical data								
Number of sizes	3	1	2	2	2	2	2	2
Repeat accuracy [mm]	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01
Max. useful stroke [mm]	200	125	5500	200	2700	2700	2700	3800
Max. driving force [N]	104	150	2400	500	500	1000	1500	500
Max. speed [m/s]	Auto-learn function	4	5	4	4	4	4	4
Max. acceleration [m/s²]	Auto-learn function	100	100	40	40	40	40	40
Type of measuring system		Absolute or incremental	Absolute or incremental	Absolute or incremental	Absolute or incremental	Absolute or incremental	Absolute or incremental	Absolute or incremental
Type of guide	Junction roller guide	Junction roller guide	Profiled rail guide	Roller guide	Roller guide	Roller guide	Roller guide	Roller guide
Range of variants	++	+++	+++	++	+++	++	++	+
Required maintenance	Maintenance-free	Cleaning of magnetic paths, lubricating guidance	Cleaning of magnetic paths, lubricating guidance	Cleaning magnetic tracks	Cleaning magnetic tracks	Cleaning magnetic tracks	Cleaning magnetic tracks	Cleaning magnetic tracks
Note	Stop position axis with mechanically adjustable stop positions, optionally available with load balance	Freely programmable, optionally available with rod lock, brake or load balance	UL certification as standard, freely programmable, optionally available with additional slides, brake, cover strip, lubrication adapter, limit switch, reference switch or drag chain	Freely programmable, optionally available with brake, limit switch, reference switch, drag chain or supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, drag chain or supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, drag chain or supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, drag chain or supported profile	Freely programmable, optionally available with brake, limit switch, reference switch or drag chain
Drive type								
Spindle drive								
Toothed belt drive								
Rack and pinion drive								
Direct drive (linear motor)	●	●	●	●	●	●	●	●
Motor & controller								
Motor	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Drive controller	Integrated	Bosch Rexroth, Siemens*	Bosch Rexroth, Siemens*	Bosch Rexroth, Siemens*	Bosch Rexroth, Siemens*	Bosch Rexroth*	Bosch Rexroth, Siemens*	Bosch Rexroth, Siemens*
Interfaces	Digital I/O	Sercos III, EtherNet/IP, EtherCAT, PROFINET, PROFIBUS DP, PowerLink, CANopen	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCat), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS
Ambient conditions								
Clean	●	●	●	●	●	●	●	●
Easily contaminated			●					

● = fully supported + = medium selection ++ = large selection +++ = very large selection * = Additional controllers available upon request

Electric linear axes					
Mechanical axes – adaptable drive motor for flexible actuation and easy integration into existing control concepts					
Linear table		Universal linear axis		Flat linear axis	Universal linear axis
Alpha		Beta		Delta	Gamma
					
Description					
	Flat linear table	Universal linear axis	Flat linear axis	Universal linear axis with a closed profile	
Advantages					
	Extremely flat design for minimal interfering contours.	Various guidance options for optimum adaptation to the application.	Extremely flat design for minimal interfering contours.	Double-profiled rail guide makes high force and moment loads possible.	
	Double-profiled rail guide makes high force and moment loads possible.		Double-profiled rail guide for maximum rigidity and precision in the application.		
Technical data					
Number of sizes	4	12	5	3	
Repeat accuracy [mm]	±0.03	0.03 or 0.08**	up to ±0.03**	up to ±0.05	
Max. useful stroke [mm]	2540	7720	7700	7685	
Max. driving force [N]	18000	18000**	12000**	4000	
Max. speed [m/s]	2.5	8	5	5	
Max. acceleration [m/s²]	20	60	60	60	
Measuring system type	Motor-dependent	Motor-dependent	Motor-dependent	Motor-dependent	
Type of guide	Double-profiled rail guide	Double-profiled rail guide	Double-profiled rail guide	Double-profiled rail guide	
Range of variants	++	+++	+++	+++	
Required maintenance	Lubrication of guidance and spindle	Lubrication of guide and, if necessary, the spindle. Replacement of the cover tape	Lubrication of guide and, if necessary, the spindle. Replacement of the cover tape	Lubrication of guide and (if necessary) the gear rack	
Remark	Freely programmable, optionally available with customized motor, limit switch and reference switch	Freely programmable, optionally available with customized motor, limit switch and reference switch	Freely programmable, optionally available with customized motor, limit switch and reference switch	Freely programmable, optionally available with customized motor, limit switch, and reference switch	
Drive type					
Spindle drive	●	●	●		
Toothed belt drive		●	●	●	
Rack and pinion drive				●	
Direct drive (linear motor)					
Motor & controller					
Motor	Adaptable	Adaptable	Adaptable	Adaptable	
Drive controller	Motor-dependent	Motor-dependent	Motor-dependent	Motor-dependent	
Interfaces	Controller-dependent	Controller-dependent	Controller-dependent	Controller-dependent	
Ambient conditions					
Clean	●	●	●	●	
Easily contaminated	●	●	●	●	

● = fully supported
+ = medium selection ++ = large selection +++ = very large selection
* = Additional controllers available upon request ** = Depends on drive type

Linear direct axes	
Pick & Place unit	
PPU-E	
	
Description	
	Compact 2-axis unit for fast, flexible running of any curve on one plane. For the rapid and precise transfer or controlled press-in operation of workpieces in high-speed assembly.
Advantages	
	High reliability and long service life of the system, as there is no cable break due to moving motors and moving motor cables. High productivity due to low cycle time. Maximum flexibility in the application, as both axes can be controlled and regulated independently of each other. Optional certified safety devices according to SIL2/PLd for applications with high requirements in the area of the machine safety.
Technical data	
Number of sizes	3
Horizontal stroke in Y [mm]	0 – 280
Vertical stroke [mm]	0 – 150
Nominal load [kg]	0 – 5
Repeat accuracy Y-axis [mm]	±0.01
Repeat accuracy Z-axis [mm]	±0.01
Dead weight [kg]	15 – 35
Max. cycle time/picks per minute	110
Actuation	External controller
IP protection class	40
Guidance type	Profiled rail guide
Range of variants	++
Motor & controller	
Motor	Integrated
Drive controller	Bosch Rexroth, Siemens*
Options/variants	
Rod lock	●
Center position	
Integrated valve	●
Additional C-axis	●
Drive package	
Ambient conditions	
Clean	●
Easily contaminated	

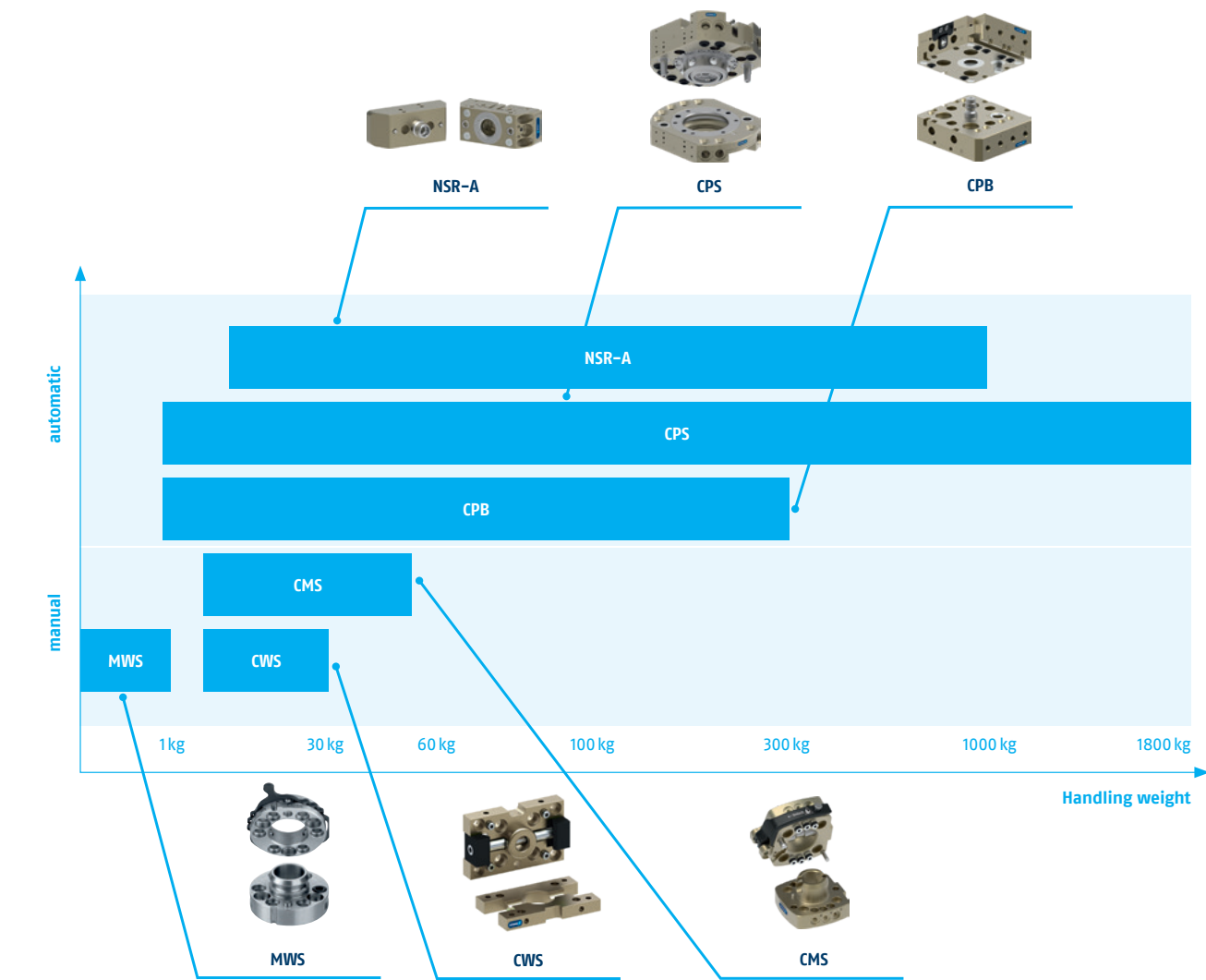
● = fully supported
+ = medium selection ++ = large selection +++ = very large selection
* = Additional controllers available upon request

Tool changers

Using SCHUNK tool changers on robot front ends increases your application's flexibility, efficiency, cycle time, and process reliability. Automatic and manual tool changers allow grippers, tools and other end effectors to be changed quickly. In the field of automation, SCHUNK also offers a broad portfolio of components for robot applications, from handling small components to heavy loads.

Increase your productivity with SCHUNK

- + **Six different series** for the optimal solution to your application case.
- + **Maximum flexibility** thanks to a load range of 0 – 1,800 kg.
- + **Proven and safe locking mechanisms** for fast and reliable tool changes.
- + **Extensive range of optional modules** and accessories for a comprehensive and complete solution from a single source.



Automatic tool changers



Automatic tool changers allow tools to be changed quickly and precisely during operation. They are ideal for applications that require seamless and fully automated processes, from series production to highly flexible production environments.

Manual tool changers



Manual tool changers offer the opportunity to change tools by hand without the need for additional mechanisms. They are particularly suitable for applications where flexibility and easy handling are paramount.

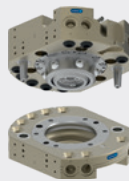
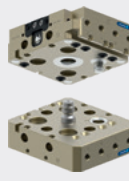
Optional modules

Safe and reliable tool changes also include safe and reliable control and supply of the changed tools. This is why our optional modules are the perfect complement to the SCHUNK tool changers. From simple signals to welding currents, a wide range of tools can be supplied. In addition, various modules are available for the implementation of pneumatics, fluids, vacuum and hydraulics.

Benefit from SCHUNK optional modules

- + **Optimal fit – for easy combination** with any size of SCHUNK tool changers
- + **Wide range of different variants** for feed-through of various electric and fluid media
- + **Combination of several optional modules** for maximum flexibility of the tool changer
- + **Minimum wear for a high number of change cycles** and a long service life
- + **Complete solution available from a single source** with cable plugs, cable extensions and protection covers



	Automatic tool changers			Manual tool changers		
	CPS	CPB	NSR-A	CMS	CWS	MWS
						
Description						
	Pneumatic tool changers with integrated pneumatic feed-throughs.		Pneumatic pallet change system with patented locking.	Manual tool changer with integrated pneumatic feed-throughs.		
Advantages						
	Reliable end-effector changeover, self-retaining in the event of an unexpected loss of compressed air. Functional parts made of hardened steel for high bearing load capacity and a long service life.	Reliable end-effector changeover, self-retaining in the event of an unexpected loss of compressed air. Integrated screw connection diagrams in accordance with ISO 9404 for simple installation.	Maximum machine capacity utilization without deceleration; thanks to the automatic pallet change, your cycle time remains constant and throughput times are predictable – ensuring smooth and efficient processes.	Proven thrust-lever technology for quick, tool-free changing in robot applications. Integrated screw connection diagrams in accordance with ISO 9404 for simple installation.	Flat and with optimized weight for use with SCHUNK gripping modules.	Miniature change system for applications in microsystems technology. A center hole allows for the transmission of laser beams, for example.
Technical data						
Number of sizes	19	7	5	6	5	2
Recommended handling weight [kg]	0 – 1800	0 – 405		0 – 58	0 – 28	0 – 1
Moment load dynamic M _{xy} [Nm]	2 – 11000	100 – 3000	15 – 4000	22.5 – 478	20 – 160	0.5 – 1
Moment load dynamic M _z [Nm]	2 – 5500	100 – 1500	32 – 4000	15 – 465	10 – 200	0.2 – 0.75
Repeat accuracy [mm]	up to 0.01	0.01	0.05	0.02	0.01	0.1
Dead weight [kg]	0.05 – 31.5	0.4 – 10.5	0.15 – 21	0.25 – 4.8	0.07 – 0.445	0.007 – 0.016
Screwed flange on the robot	Adapter plates/direct mounting ISO-9409	Direct mounting ISO-9409	Adapter plates ISO-9409	Direct mounting ISO-9409	Adapter plates	Adapter plates
Product features						
Manual actuation				•	•	•
Pneumatic actuation	•	•	•			
Locking monitoring possible	•	•	•	•		
Tool presence monitoring possible	•	•	•	•		
Pneumatic energy transmission	•	•	•	•	•	•
Electric energy transmission	•	•	•	•		•
Ambient conditions						
Clean	•	•	•	•	•	•
Easily contaminated	•	•	•	•		
High-temperature and stainless steel version on request	•	•	•	•		

• = fully supported

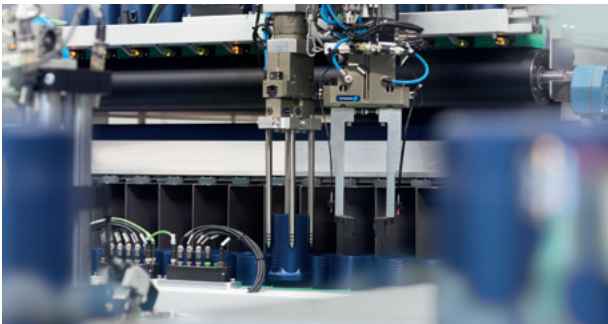
Rotary feed-throughs

Benefit from reliable transmission of electrical signals and pneumatics – even during endless rotary movements. SCHUNK rotary feed-throughs can be easily integrated into both stationary applications and robots. Smaller, cost-effective drives are made possible by durable and smooth-running seals, all while ensuring optimal force and moment design for your robot.

Reliable feedthrough of electrical signals and pneumatics

- Always the right size for your application, whether for robotic applications or rotary indexing tables.
- Less cable wear and fewer cable breaks, because continuous rotational movements are no problem for our rotary feed-throughs which make this possible.
- Pneumatic and electrical feed-throughs are possible at the same time to power your gripping systems and tools.
- Reliable power transmission – even at high speeds in your application.

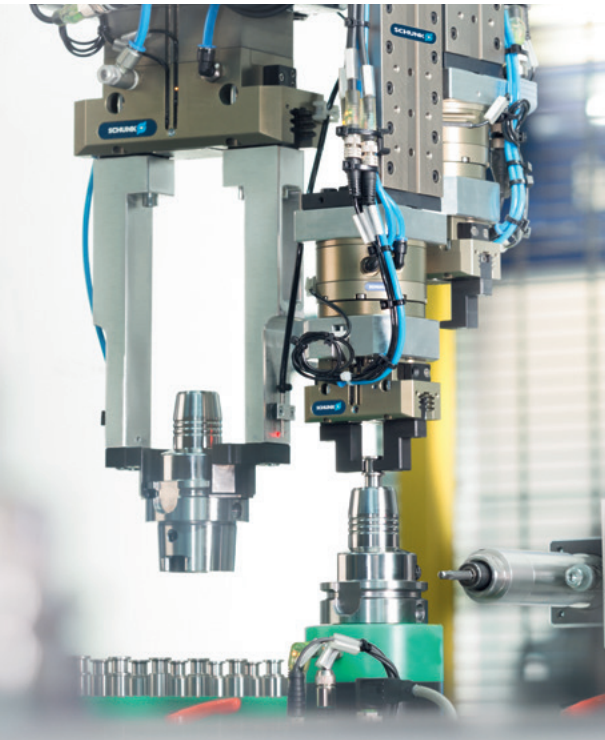
Application examples



Toolholder packing



Labeling of product packaging



Toolholder balancing

Rotary feed-through		Stationary rotary feed-through	
DDF 2		DDF-SE	
			
For feed-through of electric signals and pneumatics on the robot – even in endless rotary movements.		For feed-through of electric signals and pneumatics for stationary use.	
Areas of application: Robot applications and rotary indexing tables.			
Uninterrupted supply for maximum efficiency: your gripping system or tool remains continuously powered – without tangled cables or hoses.			
12	2		
0 – 250			
90 – 120	300 – 500		
0.8 – 22	4 – 13		
1.3 – 25	6 – 20		
240 – 9000	2000 – 4000		
2000 – 18000			
12 – 550	50 – 180		
8 – 400			
2 – 4	4 – 6		
4 – 10	6 – 8		
0.5 – 14.2	3.3 – 9		
●	●		
●			
●	●		
●	●		

● = fully supported

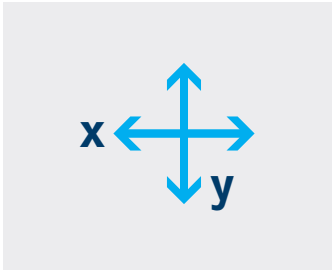
Compensation units

Avoid damage to tools and workpieces, as well as unnecessary error messages caused by tolerances or inaccuracies. SCHUNK compensation units with compensation in five degrees of freedom provide the necessary compensation and flexibility, for example between a robot and the joining position, and they ensure a smooth sequencing during tasks such as joining, assembly, or loading and unloading machines.

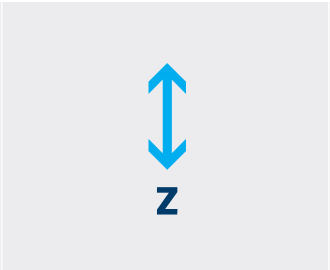
Reliable processes with SCHUNK compensation units

- The right unit for every application:**
Nine product series optimally tailored to your requirements.
- Exactly the compensation you need:**
Tolerance compensation in five degrees of freedom (XY, Z, XYZ, angular, and WZ) for precise processes.
- Exact location of your component:**
Centric reset ensures a defined position after compensation, exactly where you want to position your component.
- Greater flexibility in your processes:**
Thanks to numerous sensor options, you can easily integrate and monitor your processes.
- Broad product range for your application**
through customized solutions, e.g., for rotation compensation.

Compensation in every direction



XY compensation



Z-axis compliance



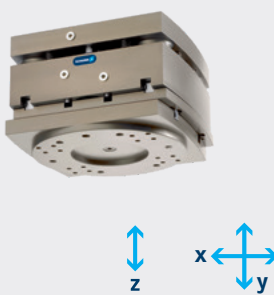
Rotation compensation



Angular compensation

Compensation units			
AGM-Z	AGM-XY	AGM-W	
 	 	 	
Modular compensation unit for Z compensation, ideal for applications that require maximum durability due to extremely heavy loads. Modular compensation unit for XY compensation. Offers maximum robustness and force absorption while maintaining a minimal height. Modular compensation unit with angular compensation, allowing the end effector to fully adapt to the component position.			
Always the optimal performance for your application without using unnecessarily large units. Gravity? No problem! Compensation in any orientation – with our unit and suitable accessories, reliable and precise compensation is possible in any position.			
Always the right compensation path for your application, whether in the Z or XY direction, angled, or a combination (XYZ, WZ).			
Fields of application: Perfectly suited for palletizing, joining, and assembly processes, as well as for handling tasks such as loading and unloading machines or bin picking. Compensation units can be used flexibly on robots or in stationary applications and are suitable for use with pneumatic, electric, or magnetic grippers.			
10	10	3	
	±2 – ±15		
4 – 20			
		±5	
0.5 – 33	0.5 – 40	1.2 – 4	
	427 – 15000		
		30 – 100	
0.02	0.05	0.08	
100 – 11000	58 – 15000	150 – 600	
200 – 20000	250 – 20000	900 – 3000	
6 – 1600	6 – 1600	25 – 100	
9 – 1800	6 – 1100	30 – 100	
magnetic & inductive	magnetic	magnetic & inductive	
●	●	●	
	●		
●	●	●	
●	●	●	
●	●	●	

● = fully supported

Compensation units					Tolerance compensation unit	
AGE-U	AGE-XY	AGE-Z 2		AGE-S	AGE-F	TCU
						
Description						
Compensation unit that adapts to the individual positions of the end effector and the component by compensation in the Z and XY planes, as well as in rotation and angle.						
Compensation unit for reliable XY and rotational compensation of inaccuracies and tolerances.						
Compensation unit that enables effective flexibility and compensation for differences in height along the Z-axis, supported by pressure springs.						
Compensation unit for combined XY and Z compensation; allows the handling of heavy loads and is ideal for demanding automation tasks.						
Compensation unit for non-pneumatic compensation along the XY axis and precise centering – thanks to the integrated spring return.						
Compensation unit for rotation and angular compensation of minor orientation and position deviations.						
Advantages						
Minimal programming effort for the robot thanks to compensation in all degrees of freedom (XY, Z, angle, rotation) and spring-assisted return.						
Components aligned quickly and precisely, despite process inaccuracies. With the centric and eccentric locking, your workpiece is aligned exactly where you need it, without any loss of time.						
Streamlined processes through flexible adaptation to different heights without time-consuming robot training or programming. In addition, the unit allows locking in defined extended or retracted positions.						
Versatile and adaptable to your application thanks to combined compensation in the XY and Z directions and centric locking in a defined position.						
Reduced effort and lower costs through precise, centered alignment of the component – completely without pneumatics thanks to the integrated spring return.						
Saves space in your system thanks to compact design with minimal height – ideal for applications where every millimeter of installation height counts.						
Fields of application: Perfectly suited for palletizing, joining, and assembly processes, as well as for handling tasks such as loading and unloading machines or bin picking. Compensation units can be used flexibly on robots or in stationary applications and are suitable for use with pneumatic, electric, or magnetic grippers.						
Technical data						
Number of sizes	1	3		4	4	8
Compensation path XY [mm]	±2.7	±2.5 – ±4		±4 – ±12	±1.5 – ±5	
Compensation path Z [mm]	6.1		8 – 10	10 – 14		
Compensation angle [°]	±3					±1 – 2
Rotational compensation [°]	±8	±12 – ±16				±1.2 – 2
Dead weight [kg]	0.6	0.46 – 1.5	0.55 – 1.7	2.6 – 29.5	0.1 – 3.1	0.1 – 2.7
Max. holding force locked [N]		130 – 310				
Repeat accuracy [mm]		0.1	0.02	0.1	0.01	up to 0.02
Max. tensile strength F _t [N]		300 – 750	200 – 500	110 – 2000	100 – 2800	
Max. contact force F _a [N]		1700 – 3200	800 – 1500	500 – 4000	200 – 12000	500 – 6200
Max. moment load M _x , M _y [Nm]	6.8	16 – 30	10 – 30	30 – 500	3.5 – 50	5 – 120
Max. moment load M _z [Nm]	3.4	3.5 – 9	20 – 80	30 – 250	6 – 150	15 – 160
Sensor system	magnetic	magnetic	magnetic & inductive	magnetic & inductive		magnetic
Product features						
Pneumatic locking	●	●	●	●		●
Position memory		●		●		
Screwed flange ISO-9409	●	●	●	●		
Monitoring via proximity switch	●	●	●	●	●	●
Ambient conditions						
Clean	●	●	●	●	●	●
Easily contaminated	●			●		●
High-temperature version on request		●	●	●		

● = fully supported

Collision protection

Reliably protect tools, workpieces, and systems from damage and avoid costly downtimes. SCHUNK monitoring modules detect collisions and overloads early on in automated handling processes and ensure reliable production. This reduces the risk of damage and helps prevent unplanned downtimes.

Process-reliable manufacturing with collision and overload sensors from SCHUNK

- Immediate response to collisions**
Thanks to the integrated signal monitoring, the robot stops immediately upon a collision – ensuring maximum safety and protection for your system.
- Protection through mechanical compliance**
Protection against collision or overload is achieved by mechanical compliance to prevent damage caused by the robot's reaction travel.
- Customizable to suit your application**
Adjustable trigger force and torque allow for optimally tailored monitoring of your robot and process.

Application examples



Pick & place with magnetic grippers



Bin picking

Collision and overload sensors	
Manual reset	Automatic reset
OPS	OPR



Description		
Reliably detects collisions and overloads, helping you protect your robot, tools, and components against major damage.		
Areas of application: robot applications.		
Advantages		
Optimal monitoring of your robots and components thanks to rapid response to overloads and collisions throughout the entire process.		Fast resumption of production without interruption after a collision thanks to automatic return.
Technical data		
Number of sizes	4	7
Max. moment load Mx, My [Nm]	7.5 – 430	6 – 2000
Triggering force F _a [N]	500 – 7000	440 – 14000
Axial deflection [mm]	8.0 – 12	5.1 – 16
Angle deflection [°]	4 – 12	8 – 13
Rotational deflection [°]	45 – 360	25
Repeat accuracy [mm]	up to ±0.02	±0.025
Operating pressure range [bar]	0.5 – 6.0	1.4 – 6.2
Dead weight [kg]	0.4 – 7.0	0.25 – 11.7
Product features		
Pneumatic actuation	●	●
Built-in spring optionally available		●
Ambient conditions		
Clean	●	●
Easily contaminated		●
Humid		●

● = fully supported

Force/torque sensors

Do you need the highest level of precision for your robot application? 6-axis-force/torque sensors measure forces and moments with high precision in all three spatial directions, providing the foundation for safe, controlled interactions between robots and their environments.

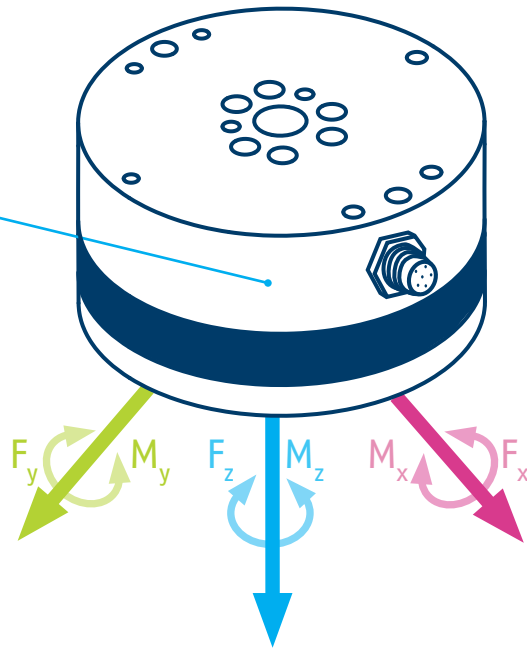
In robotics, the process forces and torques that occur are measured in real time and transmitted to the control system so that the robot's path can be readjusted with high precision.

The advantages of SCHUNK force/torque sensors

- + **High-precision measurement results**
thanks to a robust base body and high rigidity.
- + **Simple process connection**
via Ethernet (TCP/UDP), EtherNet/IP, EtherCAT and PROFINET interfaces.
- + **Intuitive commissioning**
via the SCHUNK Control Center with a user-friendly interface.
- + **The right solution for every application**
Thanks to the comprehensive series, virtually all applications can be accommodated.

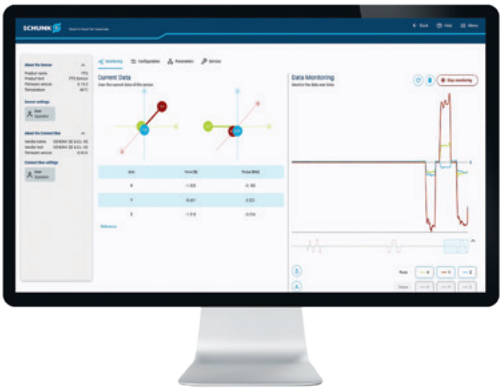
Dimensions of forces and moments

The strain gauges (DMS) of the 6-axis force/torque sensor measure the loads applied in all six degrees of freedom (F_x , F_y , F_z , M_x , M_y and M_z). The DMS signals are amplified in the sensor.



FTS

Description	
	Strain gauges mounted on the sensor body detect even the slightest mechanical deformations caused by applied forces and moments and convert them into an electrical measurement signal. Applications include quality control, process monitoring, grinding and assembly processes, as well as medical technology, among others.
Advantages	
	Can be used in demanding environments thanks to its IP67 protection rating. Status monitoring functions integrated into the housing enable quick condition monitoring.
Technical data	
Number of sizes	9
Software interfaces	Ethernet (TCP/UDP), EtherNet/IP, PROFINET, EtherCAT
Range of measurement F_x, F_y [N]	$\pm 125 - \pm 16000$
Range of measurement F_z [N]	$\pm 300 - \pm 32000$
Range of measurement M_x, M_y [Nm]	$\pm 4.5 - \pm 2800$
Range of measurement M_z [Nm]	$\pm 4.5 - \pm 2800$
Relative display deviation	$< 1.0\% - f_s$



Efficient commissioning in the SCHUNK Control Center

Commissioning the FTS is especially easy and user-friendly. For software integration, the SCHUNK Control Center offers an intuitive platform that allows uncomplicated parameterization, diagnostics, and data visualization.

Wherever you are located – SCHUNK is close to you!



Headquarters Lauffen/Neckar
SCHUNK SE & Co. KG
Spanntechnik
Greiftechnik
Automatisierungstechnik
Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com



Plant Brackenheim-Hausen
SCHUNK SE & Co. KG
Spanntechnik
Greiftechnik
Automatisierungstechnik
Robert-Bosch-Str. 12
D-74336 Brackenheim-Hausen
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com



Plant Mengen
H.-D. SCHUNK GmbH & Co.
Spanntechnik KG
Lothringer Str. 23
D-88512 Mengen
Tel. +49-7572-7614-0
Fax +49-7572-7614-1039
customercentermengen@de.schunk.com



Plant St. Georgen
SCHUNK Electronic Solutions GmbH
Am Tannwald 17
D-78112 St. Georgen
Tel. +49-7725-9166-0
Fax +49-7725-9166-5055
electronic-solutions@de.schunk.com



Plant Shanghai, China
SCHUNK Intec Precision Machinery
Trading (Shanghai) Co., Ltd.
No. 4189 Yindu Road, Minhang District,
Shanghai, 201108, PRC
Tel: +86-21-54420007
info@cn.schunk.com



Plant Aadorf, Switzerland
GRESSEL AG
Schützenstr. 25
CH-8355 Aadorf
Tel. +41-52-368-16-16
Fax +41-52-368-16-17



Plant Morrisville, USA
SCHUNK Intec Inc.
211 Kitty Hawk Drive
Morrisville, NC 27560, USA
Tel. +1-919-572-2705
info@us.schunk.com



Plant Querétaro, Mexico
SCHUNK Intec S.A. de C.V.
Parque Tecnológico Innovación,
Lateral Carretera Estatal 431
km 2+200. Int. 47. C.P. 76246,
El Marqués, Querétaro, México
Tel: +52-442 211 7800
info@mx.schunk.com



Plant Eberhardt Cleebronn
Eberhardt GmbH & Co. KG
Maybachstr. 2
D-74389 Cleebronn
Member of SCHUNK Lauffen
Tel. +49-7135-9862-0
Fax +49-7135-9862-299
info@eberhardt-stanztechnik.com



Plant Caravaggio, Italy
S.P.D. S.p.A.
Via Galileo Galilei 2/4
IT-24043 Caravaggio (BG), Italy
Tel. +39-0363-546511
Fax +39-0363-52578

Here are the locations

Our subsidiaries and distribution
partners are available for you.



[schunk.com/locations](https://www.schunk.com/locations)

Commissioning

With expert installation and commissioning, your
SCHUNK product will be up and running in no time,
ensuring that your production startup goes smoothly.



[schunk.com/commissioning](https://www.schunk.com/commissioning)



Maintenance, repairs & service

With regular maintenance and prompt repairs by
qualified service technicians, your SCHUNK product
will remain reliably available and perform at its best.



[schunk.com/maintenance-repair-service](https://www.schunk.com/maintenance-repair-service)

Spare parts, accessories

With genuine parts and compatible accessories, all
from a single source, your SCHUNK product will be back
in service quickly and can be enhanced as needed.



[schunk.com/spare-parts-accessories](https://www.schunk.com/spare-parts-accessories)



Training

Through hands-on training courses, you can equip
your staff with the skills needed to ensure that your
SCHUNK product is used efficiently, safely, and with
a long service life.



[schunk.com/training-courses](https://www.schunk.com/training-courses)





SCHUNK SE & Co. KG
Spanntechnik
Greiftechnik
Automatisierungstechnik

Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
info@de.schunk.com
schunk.com

Follow us



We print sustainably

