Superior Clamping and Gripping

SCHUNK®

SCHUNK Gripping Systems

Product Overview

Superior Clamping and Gripping

Henrik A. Schunk, Kristina I. Schunk, brand ambassador Jens Lehmann, and Heinz-Dieter Schunk

Top Performance in the Team

SCHUNK is the world's No. 1 in clamping technology and gripping systems – from the smallest parallel gripper to the largest standard chuck jaw program.

As a competence leader, we recognize and develop standards with a large potential for the future, which will drive the rapid progress in many industries.

Our customers profit from the expert knowledge, the experience and team spirit of almost 3,000 employees in our innovative family-owned company.

The Schunk family wishes you improved end results with our quality products.

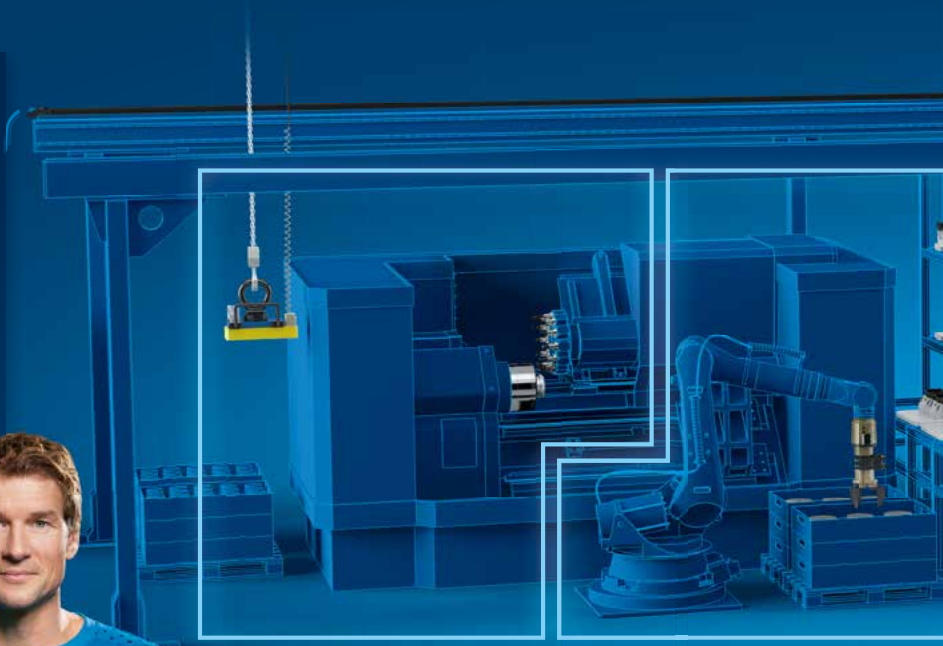
Heinz-Dieter Schunk | Henrik A. Schunk | Kristina I. Schunk

Superior Clamping and Gripping

Jens Lehmann stands for safe, precise gripping and holding. As a brand ambassador of the SCHUNK team, the No. 1 goalkeeper represents our global competence leadership for gripping systems and clamping technology.
The top performance of SCHUNK and Jens Lehmann are characterized by dynamics, precision, and reliability.

For more information visit our website:
schunk.com/lehmann

Jens Lehmann



... in your Lathe

... for your Automated Machine Loading

It's time to use of your machine's full potential!

With our superior components, find potentials in your machine, where you would least expect to find them. SCHUNK SYNERGY – the perfectly harmonized interplay between gripping systems and clamping technology – turns our customers into productivity champions.

SCHUNK Grippers

Precise grip!
From a few grams to over a ton.

Linear Modules

Accurate movement!
High speed in all axes.

Modular Assembly

Uniquely individual!
Due to the flexibility of the modular system.

Robot Accessories

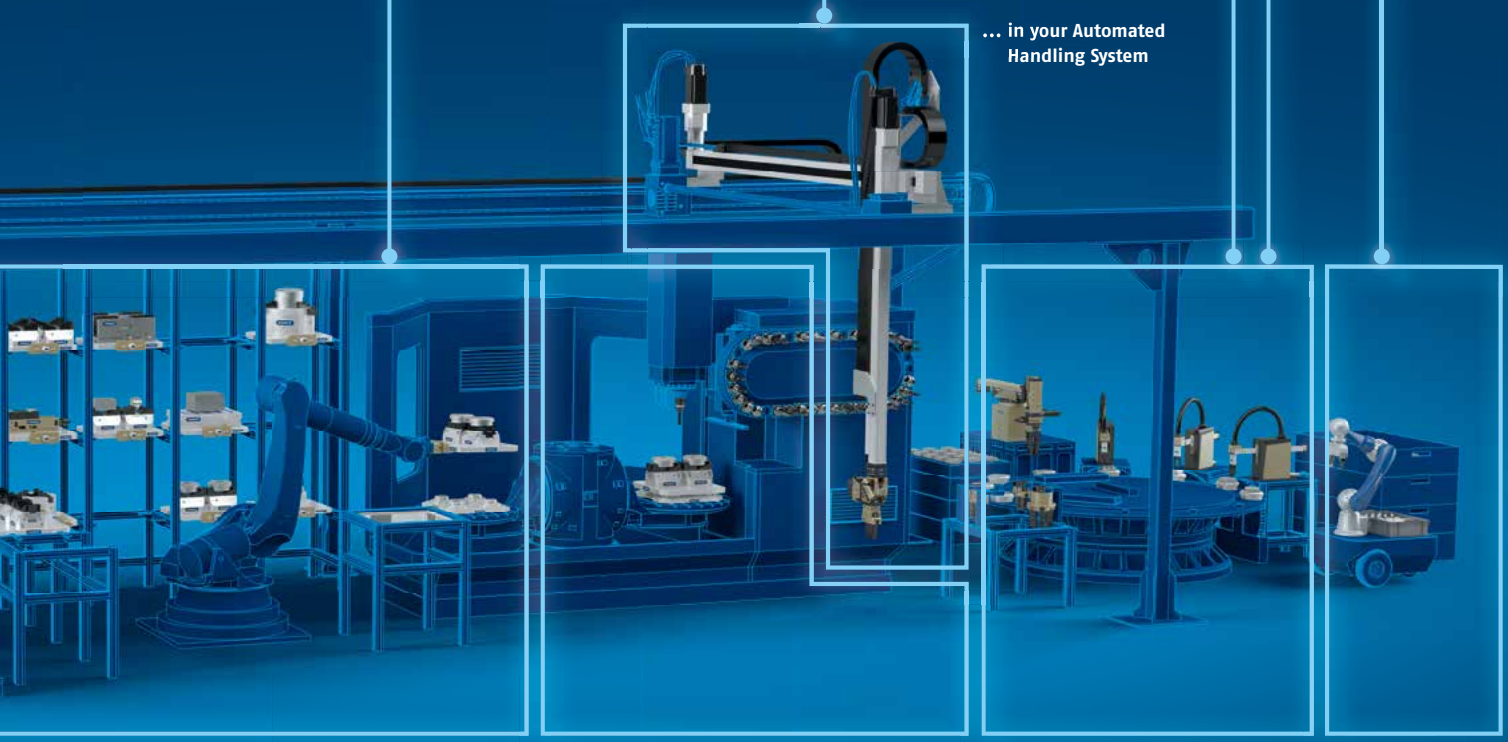
Perfectly connected!
The interplay between robot and tool.

Rotary Modules

Get the hang of it!
Limited or endless – free or clocked.

Mobile Gripping Systems

Technologies for handling the future.



... in your Automated Handling System

... in your Machining Center

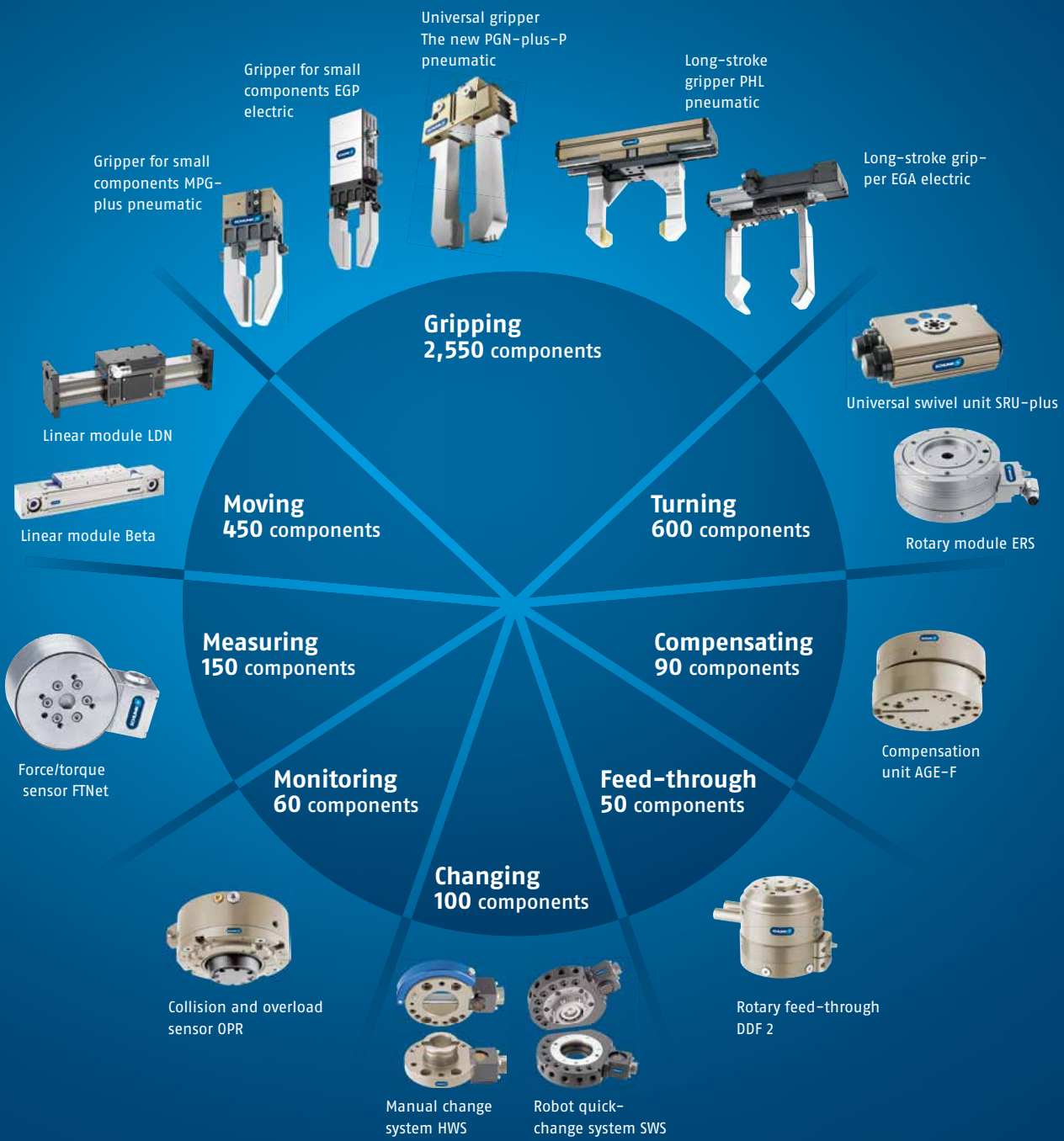
... in your Automated Assembly

... in your Service Robotics Application

Benefit from the SCHUNK Modular System with over 4,000 Standard Components.

For every Robot, for every Industry, for every Handling Task.

SCHUNK sets standards in the automotive industry worldwide with its components and gripping systems. Our robot accessories include a uniquely comprehensive standard range of modules for the mechanical, sensory, and power connection of handling devices and robots. The comprehensive range of robust and long-lasting grippers for small components and universal grippers features high product quality, precision, and numerous monitoring options. What's more, SCHUNK's axis system handling solutions open up new perspectives for cost and benefit-optimized automation solutions from a single source.

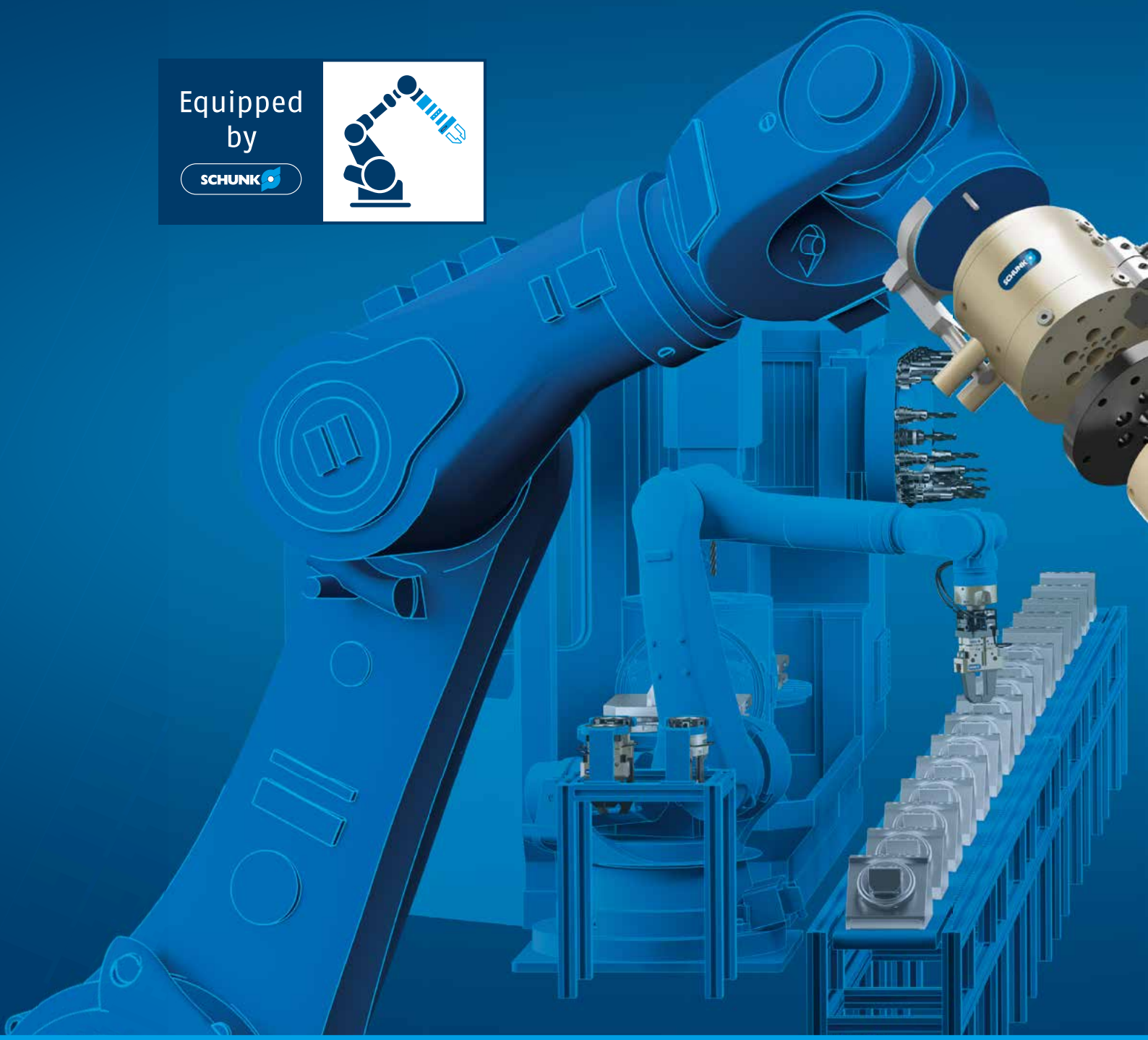


Content

Robots: Equipped by SCHUNK

The SCHUNK End-of-Arm Competence for your Robot. From the standard Component to the standard Gripping System.

SCHUNK provides the most comprehensive range of modules for the mechanical, sensory, and power connection of handling devices and robots. Quick-change systems, rotary feed-throughs, collision and overload protection modules, force sensors, as well as compensation units, and insertion units ensure optimum interplay between the robot arm and gripper. The basis for this cutting-edge technology "Made in Germany" is our constant innovation.



Feeding through

Page 68

Over **50** process-stable pneumatic, electrical or combined SCHUNK rotary feed-throughs.
schunk.com/feeding-through


DDF 2


DDF-SE

Monitoring

Page 72

Over **60** collision and overload sensors used to monitor, record and avoid collisions.
schunk.com/monitoring


OPR


OPS

Measuring

Page 69

Over **150** sensors for precise measurement of forces and moments.
schunk.com/measuring


FTN


FTW

Changing

Page 64

More than **100** precise quick-change systems for flexible, fast change of effectors.
schunk.com/changing


SWS


SHS


EWS

Compensating

Page 66

Over **90** components to compensate position deviations and tolerances between the robot and the tool.
schunk.com/compensating


AGE-W


AGE-Z 2


TCU

SCHUNK Grippers

Page 18

The world's most extensive gripper portfolio with over **2,550** pneumatic and electric components. **schunk.com/grippers**


PGN-plus-P


PZN-plus


DPG-plus


PHL


EGA


EGN

Machining

Page 73

Flexible SCHUNK deburing spindles for the use on robots with up to **65,000** revolutions per minute.
schunk.com/machining

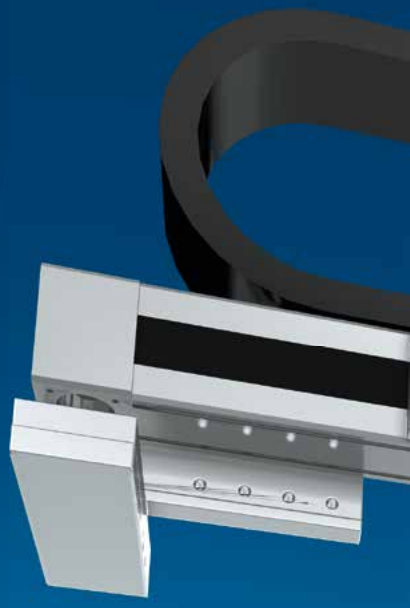

FDB


FDB-AC

Further production information is available at:
schunk.com/robot-accessories

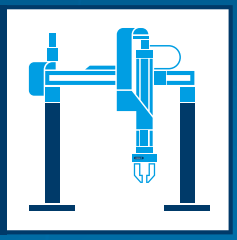
Gantry Systems: Equipped by SCHUNK

SCHUNK End-of-Arm Competence for your Gantry. Over 4,000 Components for Handling and Assembly.



The linear module product offering combined with rotary modules, swivel units, grippers, quick-change systems, rotary indexing tables and sensor systems, SCHUNK opens up new perspectives for cost and use-optimized automation solutions.
Designed to be compact and from the modular system: From the axis right up to the gripper finger and combined for customized axis system handling solution.

Equipped by SCHUNK



Change Systems

Page 64

More than **100** precise quick-change systems for flexible, fast change of effectors.
schunk.com/changing


SWS


SHS

Rotary Modules

Page 46

Over **600** components are available for rotatory movements. Variable from 180° to infinite rotation.
schunk.com/rotary-modules


SRU-plus


SRH-plus


ERM


ERS


PDU 2


ERD

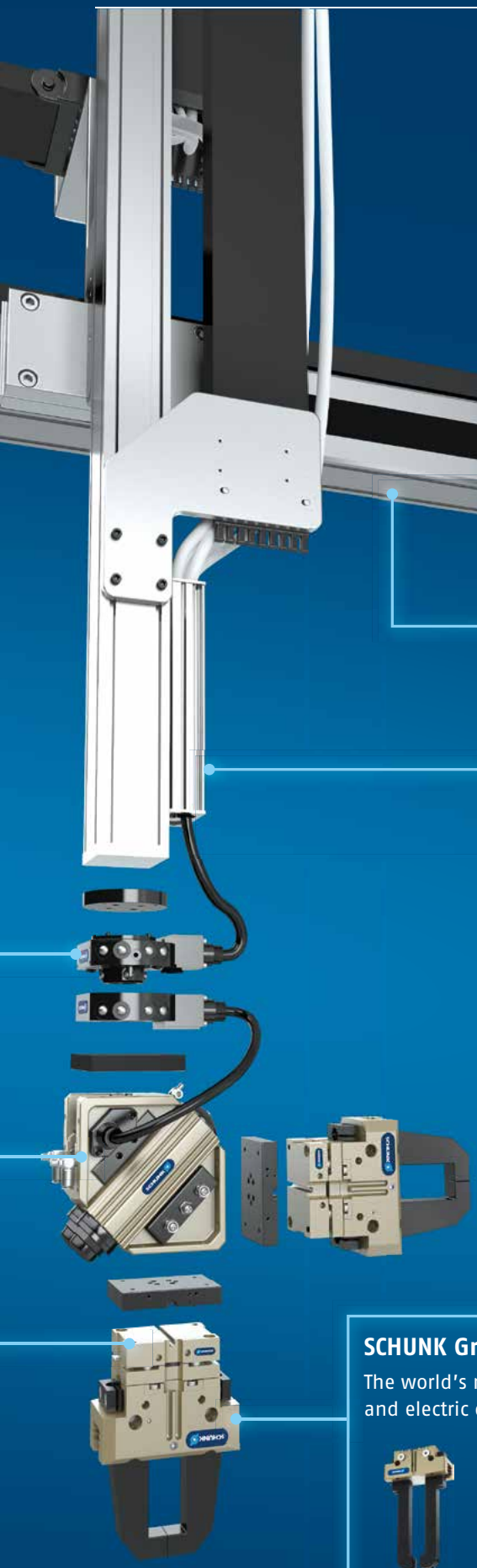
Compensation Units

Page 66

Over **90** components to compensate position deviations and tolerances between the robot and the tool.
schunk.com/compensating


TCU


AGE-S



Linear Modules

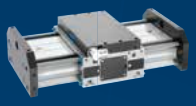
Page 54

More than **450** pneumatic and electric components with up to **7,000 mm** stroke. The most comprehensive offering on the market.
schunk.com/linearmodules


Beta

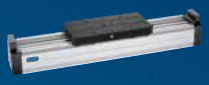

Delta


Gamma


LDT


LDK


LDN


PMP

Multi-axis Systems

Page 63

Over **500** combination possibilities can be configured as standard! Besides the SCHUNK standard gantry range, individual axis systems can be implemented individually and easily. **schunk.com/multi-axis-systems**


LPP


LPE


RPE

SCHUNK Grippers

Page 18

The world's most comprehensive gripper portfolio with over **2,550** pneumatic and electric components. **schunk.com/grippers**

PGN-plus-P


PZN-plus


PWG-plus


PSH


PGN-plus-E

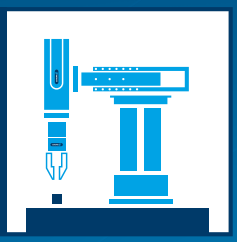

EGL

Assembly Automation: Equipped by SCHUNK

100% Flexibility with the Modular System.

Design an infinite number of applications for small parts handling and assembly automation with the SCHUNK modular assembly system.
An incredible variety of automation solutions can be realized with standard modules from the SCHUNK modular system.

Equipped by SCHUNK



Rotary Modules

Page 46

Over **600** components available for rotatory movements.
Variable from 180° to infinite rotation.
schunk.com/rotary-modules

RM-F

RM-W

RST-D

ERD

ERS

SCHUNK Grippers

Page 18

The world's most comprehensive gripper portfolio with over **2,550** pneumatic and electric components.
schunk.com/grippers

MPG-plus

MPG

KGG

PGN-plus-P

MPZ

PZN-plus

SWG

PWG-plus

GAP

EGP

PGN-plus-E

Linear Modules

Page 54

More than **450** pneumatic and electric components with up to **7,000 mm** stroke. The most comprehensive program on the market.
schunk.com/linearmodules


LM


CLM


KLM

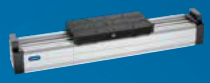

HLM


ELP


ELB


ELM


ELS


PMP


Beta

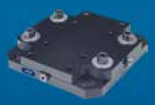

Delta

SCHUNK Pillar Assembly System

Page 74

100% flexible. Achieves a virtually infinite number of possibilities for combining components. Pillars up to **1,000 mm** long.
schunk.com/pillar-assembly-system

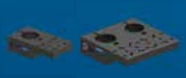

Media feed-through


VEH


SOE


AMEH/AMDH


AMEV/AMDV


APEH/APDH


STG/STR

Cobots Equipped by SCHUNK

The Mega Trend of Human/Robot Collaboration

co-act Gripper

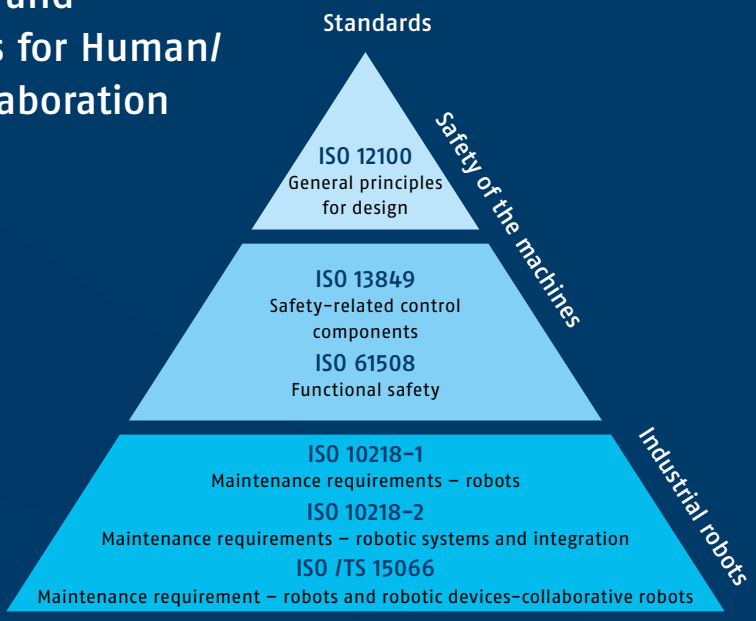
From robots that replace workers to robots that serve as helpful colleagues, the field of robotic automation is experiencing a new trend that represents a huge challenge for component manufacturers.
Whenever full automation of production or assembly lines is not the most economically feasible option, it is necessary to single out individual processes to be delegated between humans and robots. In such situations, autonomous cobots, meaning robots used in the worker's immediate environment, can handle non-ergonomic or monotonous tasks such as assisting with lifting or positioning loads. This reduces the physical workload for workers and makes the process more efficient. At the same time, humans and robots working hand in hand helps to minimize space requirements and to increase flexibility.

The number of robotic assistance systems will increase in the future, especially with regard to assembly applications. Reliable grippers, safety functions, sensor systems, and a universal networking at the component level will be vital.

As the competence leader for gripping systems and clamping technology, SCHUNK is intensely committed to this new challenge.

The NEW SCHUNK Grippers for Collaborative Operations

Standards and Guidelines for Human/ Robot Collaboration



From standard requirements to customer solutions

The listed standards and guidelines are not exhaustive. For every application the applicability of further standards or guidelines have to be determined.

The Path toward the optimum Gripper for your HRC Application

To determine the optimum gripper for collaborative applications, the properties of the task, workpiece, and gripper must be taken into account.

The **SCHUNK Co-act team** recommends a structured approach, considering all factors and parameters.

Step 1

Task description and feasibility check

- Are the task and workpiece suitable for human/robot collaboration?

Step 2

Selection of the robot or cobot

- Definition of the basic system with mechanical and electrical connection of the peripheral devices
- Ensuring a defined control

Step 3

Selecting the gripper in collaboration with the SCHUNK Co-act team considering the following points:

- Workpiece with respect to gripping position, required gripping force, and required stroke
- Pick and place position and in turn analysis of the interfering contour
- Connection to the superordinate mechanical and electrical periphery
- Clamping and shearing points on the gripper or the attached fingers

Assembly Automation: Equipped by SCHUNK

The new Standard in Assembly Automation. The 24 V Mechatronics Offering from SCHUNK.

For the first time, complete assembly systems with linear modules, rotary modules and grippers can be entirely implemented using the 24 V technology as a basis. The reduced maintenance costs, high process stability, and lower operating costs are revolutionary.
The 24 V mechatronics range offers the advantages of mechatronic modules while being as simple as pneumatics. This results in revolutionary advantages for handling in assembly automation, for instance such as a very low maintenance effort, simple and fast commissioning, and high energy efficiency.

Easy to Create!

Complete Pick & Place applications can be intuitively configured with minimal design and assembly effort
schunk.com/3d-configurator

Pick & Place Production Cell

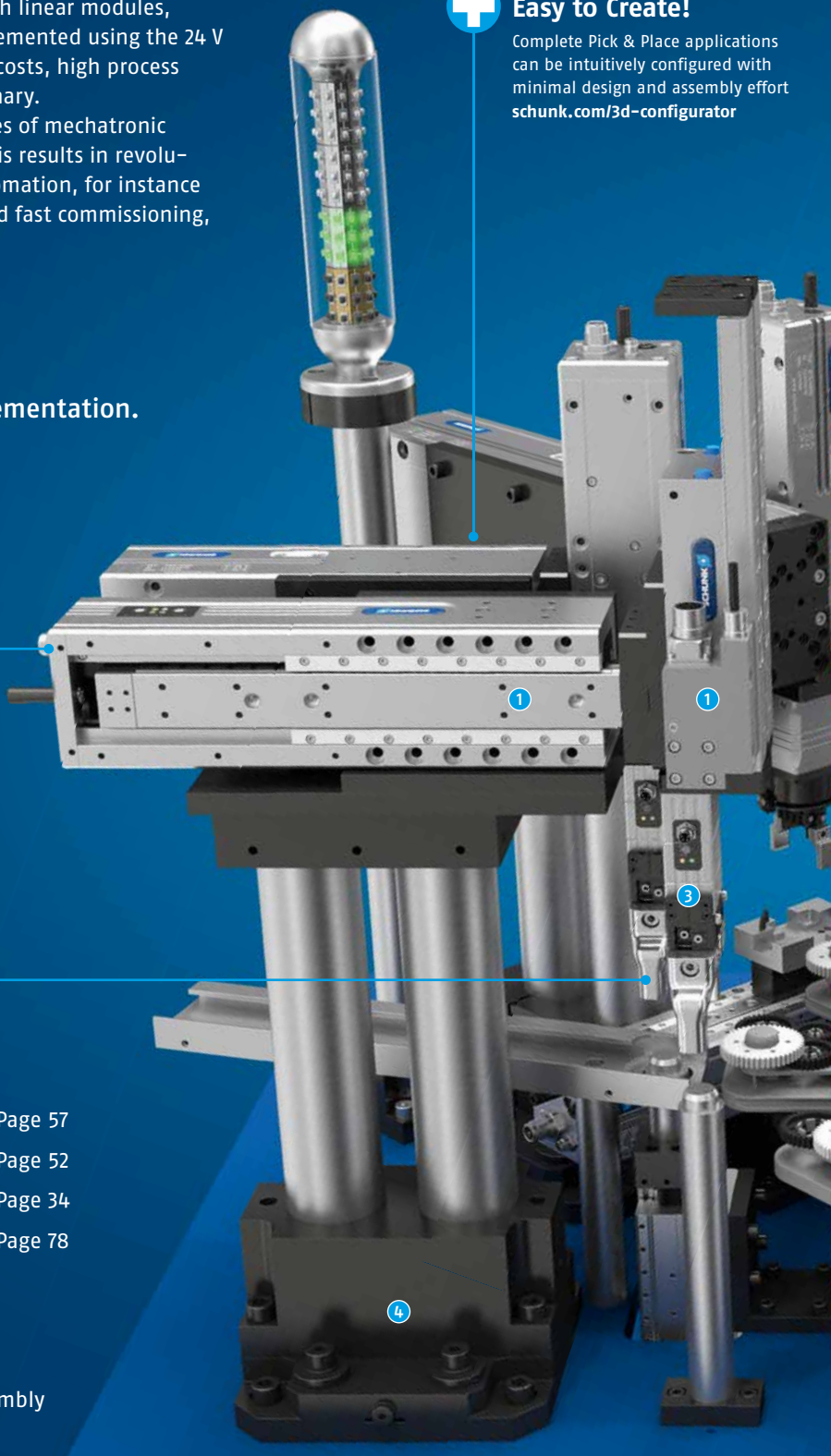
Electric, simple, compact and fast implementation.

Easy to Start Up!

Simple commissioning of the mechatronic modules. Simpler and more intuitive than pneumatic modules

Plug & Work!

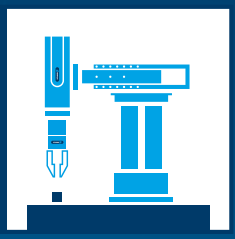
Easily combine, integrate and seamlessly commission mechatronic SCHUNK grippers, rotary and linear modules from the modular system



1	**Electric Linear Module ELP**	Page 57
2	**Electric Rotary Gripping Unit EGS**	Page 52
3	**Electric Gripper for Small Components EGP**	Page 34
4	**SCHUNK Pillar Assembly System SAS**	Page 78

Further information on the new standard in assembly automation:
schunk.com/standard-in-assembly-automation

Equipped by SCHUNK

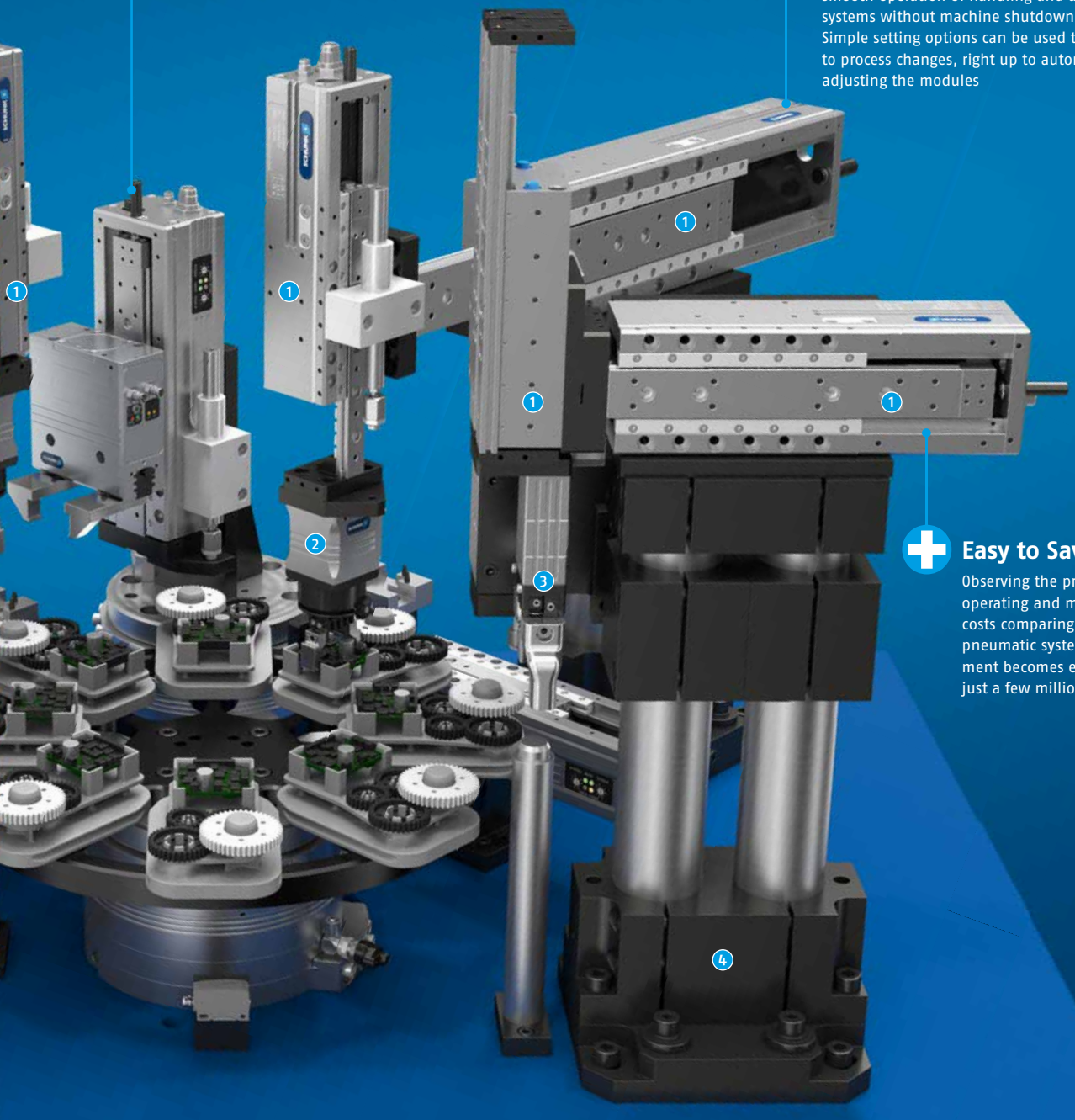


Easy to Integrate!

Versatile and energy-efficient integration into the system. Consistent supply concept with standardized connecting plug and control with digital I/O. Using conventional, standardized cables and distributors, systems can be implemented easily and very compactly

Easy to Use!

Low-wear and maintenance-free modules for smooth operation of handling and assembly systems without machine shutdown.
Simple setting options can be used to react quickly to process changes, right up to automatically adjusting the modules



Easy to Save Money!

Observing the procurement, operating and maintenance costs comparing with purely pneumatic systems, the deployment becomes economically after just a few million cycles.

MECHATRONIK3
Alternative – Adaptable – Intelligent

One Strategy – 3 Features

Mechatronics³ is the strategy with which SCHUNK **is the first** manufacturer to bundle a comprehensive mechatronic product portfolio. Its three features – **Alternative**, **Adaptable** and **Intelligent** – combine to form a unique modular system. This combines our decades of experience in the field of pneumatics and our pioneering success in the field of mechatronics, and offers sophisticated and efficient automation solutions for almost any mechatronic requirement.

With mechatronic SCHUNK products, the changeover to electrically driven components is as simple and easy as it is feasible. From simple pneumatic alternatives right up to highly intelligent modules, SCHUNK provides the right product for any application.

Benefit from the leading Modular System with the 3 Features into which all mechatronic SCHUNK Products can be classified:

Alternative

Replace pneumatics 1:1 while maintaining the same performance.
Common pneumatic functions can be replicated with 100% accuracy using SCHUNK mechatronic components.

Adaptable

Driven by conventional servomotors.
A motor adapter allows you to connect conventional servomotors to your SCHUNK components.

Intelligent

Fully integrated motor and control technology.
The controller is either integrated into the SCHUNK component to save space, or installed in the control cabinet.

SCHUNK Components

offer maximum Flexibility when it comes to Incorporating them into existing Control System Concepts

Standard mechatronic SCHUNK components offer the greatest flexibility when it comes to connecting customized control concepts. Depending on your requirements, you have the choice between various SCHUNK modules with integrated or external drive, and drive regulators and the possibility to control via digital I/O signals.
From the customer controller right up to components, SCHUNK offers the appropriate components and therefore maximized flexibility for every control concept.

Customer Controller

The controller serves as the interface with the application and is specified by the customer.
SIEMENS® | BoschRexroth® | BECKHOFF® | B & R® | Schneider Electric® | Lenze | More upon request

Communication-interfaces & periphery

Digital I/O

PROFINET/PROFIBUS/CAN/DeviceNet
More on request

Digital I/O distributor

IO Link Master

Drive controller
e.g. SCHUNK/Siemens®/BoschRexroth®
Others on request

Digital I/O

IO-Link

Standard servomotors
e.g. SCHUNK/ SIEMENS®/ BoschRexroth®

SCHUNK Products

SCHUNK products mechatronics alternative to pneumatics

SCHUNK Products with IO-Link

SCHUNK products mechatronics adaptable

SCHUNK products mechatronic intelligent with integrated motor

SCHUNK products mechatronic intelligent with integrated motor and drive regulator

Alternative	Adaptable	Intelligent	Intelligent
Replace pneumatics 1:1 while maintaining the same performance.	Driven by conventional motors.	Controller external, motor integrated	Motor and controller fully integrated

SCHUNK Grippers
The world's most proven Grippers on the Market.

SCHUNK offers the world's most comprehensive portfolio of grippers. Standard grippers, ready-to-install gripping system assembly groups and an extremely wide range of customized gripping system solutions for your handling and assembly, automation and robot end-of-arm solution.
We always meet the most complicated gripping requirements, and we solve them.
The result: robust and durable gripping systems which ensure maximum reliability in systems and machines all over the world for 30 years.

Equipped by SCHUNK

Over **2,500** standard grippers

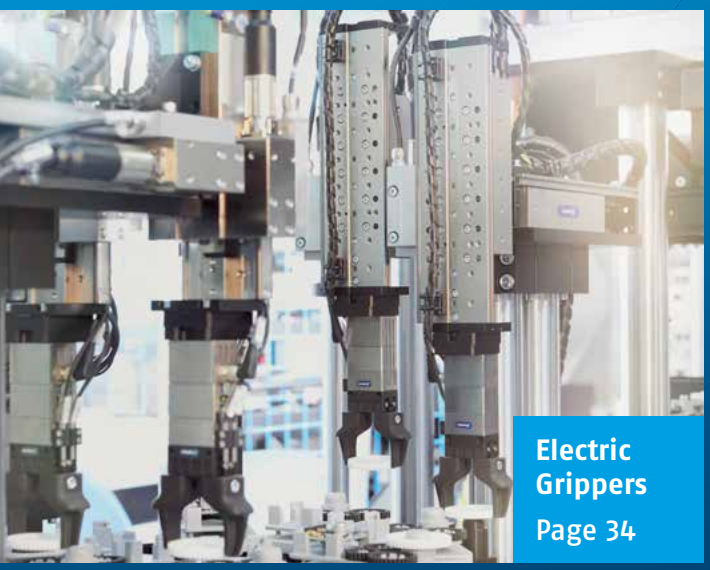
Over **300** mechatronic grippers

More than **12,000** implemented gripping system solutions

More than **1,000,000** products in use worldwide

Pneumatic 2-Finger Parallel Gripper
Page 22

Pneumatic 3-Finger Centric Grippers
Page 28



Electric Grippers
Page 34

Special Grippers and Gripping Hands
Page 38

The new SCHUNK Universal Grippers PGN-plus-P and PGN-plus-E

In a Class of its Own!

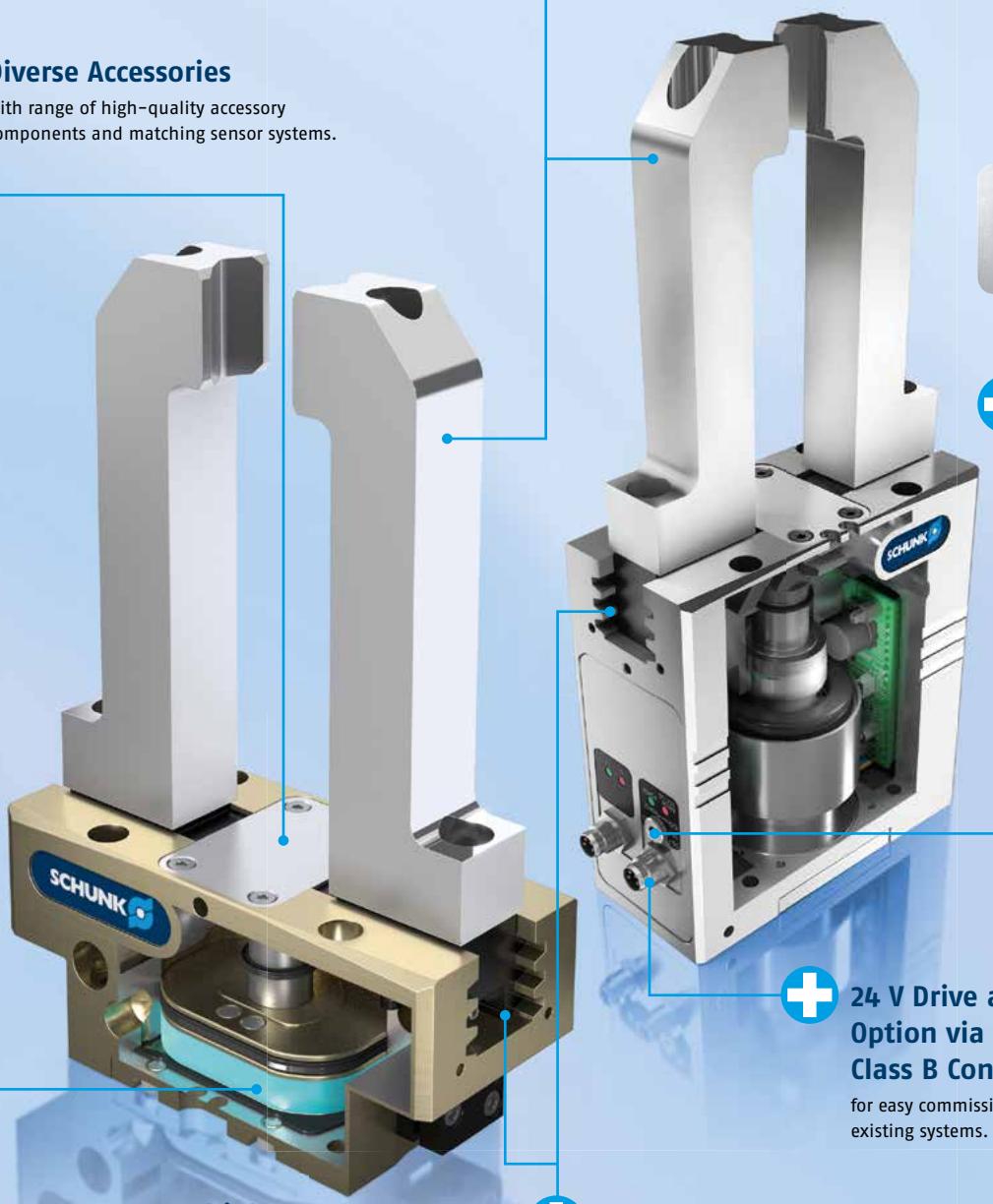
Patented Precision!
Patentierte Präzision!
Multi-tooth guidance
Vielzahnführung

NEW: Up to 50% longer Gripper Fingers

The higher maximum moments of the perfected SCHUNK multi-tooth guidance enable use of longer gripper fingers.

Diverse Accessories

with range of high-quality accessory components and matching sensor systems.



Alternative
Adaptable
Intelligent
MECHATRONIK 3

Four-stage adjustable Gripping Force

for simple adaption to sensitive workpieces.

24 V Drive and Control on Option via digital I/O or IO-Link Class B Connection

for easy commissioning and quick integration into existing systems.

NEW: Up to 50% higher Gripping Force

with the enlarged surface of the drive piston.

NEW: Lifelong Maintenance-free*

The perfected SCHUNK multi-tooth guidance with continuous lubricant pockets ensures even and permanent lubrication.

* Under normal, clean operating conditions

Content

2-Finger Parallel Gripper

Pneumatic

The new SCHUNK Gripper PGN-plus-P

Patented Precision!
Patentierte Präzision!
Multi-tooth guidance
Vielzahnführung

The world's most proven gripper on the market – Now NEW with permanent lubrication in the multi-tooth guidance. Lifelong maintenance free.* Guaranteed!

With the new SCHUNK gripper PGN-plus-P, SCHUNK is raising the bar even further for pneumatically actuated universal grippers. By consistently optimizing the multi-tooth guidance, it is setting a new benchmark for the market. At the same time the PGN-plus-P benefits from the unique SCHUNK accessory program for the nearly complete spectrum of feasible automation applications.

Your benefits:

- **NEW: Up to 50% longer gripper fingers** due to higher maximum moments
- **NEW: Up to 50% higher gripping force** due to the increased surface of the drive piston
- **NEW: Lifelong maintenance-free *** due to the perfected SCHUNK multi-tooth guidance with consistent lubrication pockets
- **NEW: Maximum process reliability** with up to 60% larger diagonal pull area and therefore lower surface pressure
- **Diversity with the accessories** wide range of high-quality accessory components and corresponding sensor systems.

* Under normal, clean operating conditions

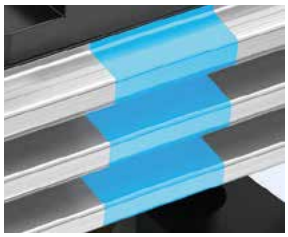
schunk.com/pgn-plus-p

Up to 50% longer gripper fingers – due to higher maximum moments

The improved multi-tooth guidance enables the use of even longer gripper fingers for the same gripper size due to higher maximum moments, without overloading the guidance. Interfering contour-optimized gripping with confined handling tasks therefore become even easier.

Up to 50% higher gripping force

The larger surface of the drive piston in the available, and at the same time compact assembly space increases the gripping force with the PGN-plus-P. In relation to the gripper size, higher workpiece weights can be handled.



Maximum service life due to the perfected SCHUNK multi-tooth guidance with consistent lubrication pockets

Permanent lubrication pockets ensure a continuous grease supply. At the same time, it ensures that an even lubricant film is created rapidly, even with short strokes.

Maximum process reliability with up to 60% larger diagonal pull area

A larger diagonal pull surface and therefore lower surface pressure, for process reliability and low-wear transmission of power to the base jaw.

2-Finger Parallel Gripper

Pneumatic

	2-Finger Parallel Gripper			
	MPG-plus	MPG	KTG	
				
Technical data				
Number of sizes	7	9	1	
Gripping force [N]	29 .. 370	7 – 270	13	
Stroke per jaw [mm]	1.5 – 10	1 .. 14	4.5	
Weight [kg]	0.022 – 0.63	0.01 .. 1.35	0.08	
Recommended workpiece weight [kg]	0 .. 1.25	0 .. 1.9	0.07	
Closing/opening time [s]	0.011 .. 0.08/0.011 .. 0.08	0.01 .. 0.085/0.01 .. 0.085	0.05/0.05	
Max. permissible finger length [mm]	80	80	50	
Repeat accuracy [mm]	0.02	0.02	0.02	
Protection class IP	30	30	20	
Cleanroom class ISO 14644-1	5	5		
Sensor systems	++	++	+	
Wide variety	++	++	+	
Description	The most powerful pneumatic miniature parallel gripper on the market with a unique combination of oval piston drive and cross roller guide	2-finger parallel gripper with smooth roller guides of the base jaws	2-finger parallel gripper with center bore	
Field of application				
	• Gripping and moving • For small to medium-sized workpieces • In the field of assembly, testing, laboratory, pharmacies	• Gripping and moving • For small to medium-sized workpieces • In the filed of assembly, testing, laboratory, pharmacies	• Gripping and moving • For small to medium-sized workpieces • Equipped with a continuous center bore for workpiece supply, sensor or actuator systems	
Ambient conditions				
Clean	●	●	●	
Contaminated/coarse dust	○	○	○	
Contaminated/fine dust and liquids				
Contaminated/aggressive liquids				
High temperature range > 90° C			●	
Cleanroom	○	○	○	

● = very highly suitable ◑ = highly suitable ○ = suitable in customized version
+ = medium-sized selection ++ = wide selection +++ = very wide selection

KGG	RH	PGN-plus-P	PGN-plus	JGP
				
7	10	5	11	10
45 .. 540	13 .. 460	220 .. 4200	123 .. 21150	123 .. 7400
10 .. 60	2.5 .. 40	2 .. 13	2 .. 45	2 .. 35
0.09 .. 4.2	0.04 .. 1.1	0.17 .. 1.9	0.08 .. 39.5	0.08 .. 17.5
0 .. 2.7	0 .. 2.3	0 .. 15	0 .. 80.5	0 .. 30
0.03 .. 0.29/0.03 .. 0.25	0.17 .. 0.5/0.17 .. 0.5	0.02 .. 0.12/0.02 .. 0.12	0.02 .. 0.8/0.02 .. 0.8	0.02 .. 0.7/0.02 .. 0.7
160	100	200	400	300
up to 0.02	up to 0.01	0.01	up to 0.01	up to 0.01
40	30	40	40/64	40
			5	
+	+	+++	+++	++
++	+	+++	+++	+
Narrow 2-finger parallel gripper with large stroke	The RH series is an attractively priced gripping system, which is particularly suitable for light applications	Universal 2-finger parallel gripper with a high gripping force and high maximum moments due to the multi-tooth guidance	Universal 2-finger parallel gripper with a high gripping force and high maximum moments due to the multi-tooth guidance	Universal 2-finger parallel gripper of the compact class with T-slot guidance and good cost-performance ratio
• Universal use • For light to medium-sized workpiece weights • With a large range of stroke	• With low process forces	• Optimum standard solution for many fields of application • Universal use	• Optimum standard solution for many fields of application • Universal use	• Optimum standard solution for many fields of application • Universal use • In the areas of machine and plant construction, assembly and handling as well as the automotive industry
●	●	●	●	●
○		●	●	◑
		◑	◑	
		◑	◑	
●		●	●	
○		◑	◑	

PGF	PGB	DPG-plus	PHL
			
5	4	11	5
240 .. 1900	90 .. 610	110 .. 11250	390 .. 4630
7.5 .. 31.5	4 .. 10	2 .. 45	30 .. 160
0.3 .. 5.3	0.28 .. 1.32	0.12 .. 52	1.38 .. 24.18
0 .. 7.1	0 .. 3.3	0 .. 46.35	0 .. 15.5
0.03 .. 0.4/0.03 .. 0.4	0.02 .. 0.08/0.02 .. 0.08	0.03 .. 1.1/0.03 .. 1.1	0.12 .. 1.82/0.12 .. 2.91
125	125	380	800
up to 0.02	0.01	up to 0.01	0.02
40	40	67	41
		5	
+	++	+	++
+	+	+	++
Universal parallel gripper with surface-guided base jaws	Universal 2-finger parallel gripper with a high gripping force and high moment capacity due to the multi-tooth guideway as well as the center bore	Despite the high moment load of the base jaws, this sealed 2-finger parallel gripper meets the IP67 requirements and does not permit any substances from the working environment to penetrate the interior of the unit	2-finger parallel gripper with long jaw stroke for large parts and/or a broad range of parts
• For high part diversities due to its long jaw stroke and high gripping forces	• Universal use • Suitable for applications that require a center bore, e.g. for workpiece feeding, special sensor systems or optical recognition systems	• Ideally suitable for handling of rough or dirty workpieces • Its field of application extends from the loading and unloading of machines, such as in the case of sanitary blocks, grinding machines, lathes or milling machines, to handling tasks in painting plants, in powder-processing or underwater	• Optimum standard solution for many fields of application • Universal use • In the areas of machine and plant design, assembly and handling as well as the automotive industry
●	●	●	●
○	◑	●	◑
		●	○
		◑	
●	●		
○	○	◑	

	PFH-mini	PFH	PSH	SPG
				
	3	4	4	1
	630 .. 2950	2200	320 .. 1760	10000
	30 .. 100	150 .. 300	14 .. 100	100
	2.65 .. 12.6	18.9 .. 33.6	0.77 .. 8.05	35
	0 .. 13	0 .. 14.7	0 .. 8.8	50
	0.3 .. 1.0/0.3 .. 1.2	0.7 .. 1.25/0.7 .. 1.25	0.12 .. 04/0.12 .. 0.4	1.5/1.5
	250	900	300	500
	0.05	0.02	up to 0.05	0.1
	41	30	67	30
	++	++	+	+
	++	+	+	+
	Gripper with long jaw stroke for large parts and a broad range of parts	2-finger parallel gripper with long jaw stroke for large parts and/or a broad range of parts	2-finger parallel gripper with long jaw stroke and dirt-resistant round guides	Sturdy 2-finger parallel gripper for heavy components and a broad part range, equipped with robust guides and therefore it is suitable for high gripping forces and maximum moment loads.
	• For precise handling of a wide variety of workpieces	• Particularly suitable for handling vehicle wheel rims	• For a wide range of parts	• Covering a wide range of parts with a long jaw stroke • High gripping force for high workpiece weights
	●	●	●	●
	◑	○	●	○
	○	○	●	
			●	
	●	●	●	
			○	

SCHUNK Gripper MPG-plus

The most powerful pneumatic miniature parallel gripper on the market.

Highly efficient small parts handling in the most compact space. With its power density, the MPG-plus sets the new standard for handling small parts. The unique combination of oval piston and cross roller guide of the MPG-plus ensures higher efficiency because of higher force and load capacity.

Your benefits:

- **25% higher gripping forces** with identical size
- **25% longer gripper fingers** with identical gripper size
- **30% higher basic load rating** by improved guidance (cross roller guide)
- **10% less weight** for higher dynamics
- **20% improved closing time** for shorter cycle times

comparison with the SCHUNK MPG gripper, which until now defined the benchmark in small parts handling.

MPG-plus: award-winning at the AUTOMATICA show

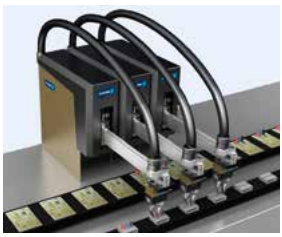
schunk.com/mpg-plus

Larger piston surface – more precise guidance

The larger oval piston surface and increase in the number of cross rollers ensure significantly improved efficiency. The improved cross roller guide with an increased number of junction rollers permits higher gripping forces.

Variable mounting options – maximum flexibility

Diverse mounting options ensure quick, easy gripper assembly and exchange. The gripper can be easily positioned using the centering sleeves and can be screwed through and fixed either laterally or at the bottom.



From a single source – Pick & Place with MPG-plus

Combine the MPG-plus miniature parallel gripper with the PPU-P from SCHUNK, the fastest pneumatic pick & place unit on the market. Benefit from high-speed pick & place with 95 cycles per minute.

Add-on valve ABV – shorter hosing, improved cycle time

The electrically controlled 3/2 pneumatic micro valves ABV are screwed onto the gripper. This hose-free direct assembly minimizes the hosing effort and reduces cycle times.

3-Finger Centric Gripper

Pneumatic

	3-Finger Centric Gripper	
	MPZ	PZN-plus
		
Technical data		
Number of sizes	6	11
Gripping force [N]	20 .. 310	255 .. 57300
Stroke per jaw [mm]	1 – 5	2 .. 45
Weight [kg]	0.01 .. 0.29	0.13 .. 80
Recommended workpiece weight [kg]	0 .. 1.15	0 .. 227
Closing/opening time [s]	0.02 .. 0.06/0.02 .. 0.06	0.02 .. 4.6/0.02 .. 3
Max. permissible finger length [mm]	45	250
Repeat accuracy [mm]	0.01	up to 0.01
Protection class IP	40	40/64
Cleanroom class ISO 14644-1	5	5
Comprehensive ranges	+	+++
Variety of sensor systems	+	+++
Description	Small 3-finger centric gripper with base jaws guided on T-slots	Universal centric gripper with high gripping force and maximum moments due to multi-tooth guidance
Field of application		
	• Universal use • Particularly suitable for gripping small workpieces	• Universal use due to numerous product variants; also in areas where there are special demands on the gripper (temperature, chemical durability, contamination, and much more)
Ambient conditions		
Clean	●	●
Contaminated/coarse dust	◑	●
Contaminated/fine dust and liquids		◑
Contaminated/aggressive liquids		◑
High temperature range > 90 °C		●
Cleanroom	○	◑

● = very highly suitable ◑ = highly suitable ○ = suitable in customized version
+ = medium-sized selection ++ = wide selection +++ = very wide selection

	JGZ	PZH-plus	PZB-plus	DPZ-plus	
					
	7	4	9	8	
	225 .. 7990	375 .. 4200	340 .. 27400	230 .. 16500	
	2 .. 16	20 .. 75	2 .. 35	2 .. 25	
	0.12 .. 8	1.5 .. 33	0.26 .. 53	0.2 .. 20.1	
	0 .. 30	0 .. 22	0 .. 100	0 .. 60	
	0.02 .. 0.8/0.02 .. 0.8	0.25 .. 1.05/0.2 .. 0.85	0.02 .. 2.5/0.02 .. 2.5	0.03 .. 1.8/0.03 .. 1.8	
	200	400	250	160	
	up to 0.01	up to 0.02	up to 0.01	up to 0.01	
	40	40	40	67	
	5	5		5	
	+	+	+	+	
	++	+	++	+	
	Universal 3-finger centric gripper of the compact class with T-slot guidance and best cost-performance ratio	Universal centric gripper with high gripping force and maximum moments due to multi-tooth guidance	Universal 3-finger centric gripper with large gripping force and high maximum moments per finger, plus center bore	Despite the high moment load of the base jaws, this sealed 3-finger centric gripper meets the requirements of IP67 and does not permit any substances from the working environment to penetrate the interior of the component	
	• Optimum standard solution for many fields of application • Universal use • In the areas of machine and plant design, assembly and handling as well as the automotive industry	• Universal use due to numerous product variants; also in areas where there are special demands on the gripper (temperature, chemical durability, contamination, and much more)	• Universal use • Suitable for fields of application that require a center bore, e.g. for workpiece feeding, special sensor systems or optical recognition systems	• Ideally suitable for handling of rough or dirty workpieces • Its field of application extends from the loading and unloading of machines, such as in the case of sanitary blocks, grinding machines, lathes or milling machines, to handling tasks in painting plants, in powder-processing or underwater	
	●	●	●	●	
	◑	◑	◑	●	
		○	○	●	
		○	○	◑	
		○	●		
				◑	

	PZH-SF-mini	PZH-SF	Multi-finger Centric Gripper PZV
			
	1	1	5
			570 .. 6900
			4 .. 16
	3.3	20	0.5 .. 10
	0 .. 9.8	0 .. 8	0 .. 34.5
	0.5/0.5	0.5/0.5	0.02 .. 0.15/0.02 .. 0.15
	80	140	140
	0.05		up to 0.01
	64	40	40
	+	+	+
	+	+	+++
	Universal 3-finger centric gripper with a large, rotating jaw stroke capable of handling a broad range of workpiece sizes and a round guidance which is protected against dirt	Universal 3-finger centric gripper with a large, rotary jaw stroke capable of handling a broad range of workpiece sizes and a round guidance which is protected against dirt	The multi-finger gripper for applications in which two or three fingers are insufficient
	• Long stroke for a large range of parts or for undercut sections • Optimum for rotationally symmetric parts	• Particularly suitable for handling vehicle wheel rims	• 4-finger centric grippers have advantages over the usual 3-finger centric grippers, for example when cylindrical workpieces are being magazined in tablets • The PZV process-reliably handles the work-pieces despite the interfering contours
	●	●	●
	◑	◑	◑
	◑	◑	
			◑

The new SCHUNK 3-Finger Centric Gripper PZN-plus-P

Now NEW with permanent lubrication in the multi-tooth guidance. Lifelong maintenance-free.*

The new SCHUNK PZN-plus-P gripper is now equipped with a permanent lubrication in the multi-tooth guidance which, under normal, clean operating conditions, guarantees lifelong maintenance-free operation. With short strokes in particular, the continuous lubrication pockets produce a particularly fast and even distribution of lubricant along the entire multi-tooth guidance contour. Compared with conventional T-slot-guided 3-finger centric grippers, the new SCHUNK PZN-plus enables up to 50% longer gripper fingers and a finger load up to 120% higher.

Your benefits:

- **NEW: Up to 50% longer gripper fingers** due to higher maximum moments
- **NEW: Up to 50% higher gripping force** due to the increased surface of the drive piston
- **NEW: Lifelong maintenance-free*** due to the perfected SCHUNK multi-tooth guidance with consistent lubrication pockets
- **Up to 120% higher finger load** The improved multi-tooth guidance facilities higher maximum moments due to the enlarged guiding areas.
- **Rapid** and **even lubricant distribution** even with short strokes
- **Continuously reliable** and **robust**

schunk.com/pzn-plus-p

* Under normal, clean operating conditions

SCHUNK Miniature Gripper MPZ

schunk.com/mpz

Powerful handling of small parts

The powerful 3-finger miniature centric gripper can be used in small parts handling systems, e.g. for handling and mounting products such as needles, microprocessors or small electric components. A characteristic feature of the MPZ is the tried-and-tested, accurate T-slot guidance with hardened, ground steel base jaws. This ensures reliability and high performance. The gripping force maintenance device that can be integrated as an option is protected by very small springs during opening and closing. For example, this prevents loss of components in the event of a sudden drop of the pneumatic pressure.

Your benefits:

- **Proven T-slot guidance**
- **Wedge-hook principle** for high force transmission and synchronized gripping
- **Gripping force maintenance device optional**

Angular Gripper

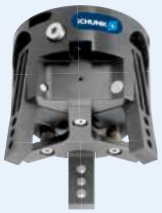
Pneumatic

	2-Finger Angular Gripper			2-Finger Radial Gripper
	SGB	SWG	PWG-plus	PRG
				
Technical data				
Number of sizes	3	8	8	8
Gripping moment [Nm]	0.9 .. 4.95	0.01 – 2.8	3.32 .. 1025	2 .. 295
Opening angle per jaw [°]	8	15	15	30 .. 90
Weight [kg]	0.04 .. 0.06	0.0025 – 0.213	0.13 .. 13.6	0.13 .. 6.72
Recommended workpiece weight [kg]	0 .. 0.8	0 .. 0.46	0 .. 23.13	0 .. 6.96
Closing/ opening time [s]	0.06 .. 0.08/ 0.04 .. 0.05	0.015 .. 0.03/ 0.02 .. 0.06	0.06 .. 0.32/ 0.01 .. 0.46	0.06 .. 0.75/ 0.06 .. 0.92
Max. permissible finger length [mm]	50	42	300	240
Repeat accuracy [mm]	0.1	0.05	0.02	up to 0.05
Protection class IP	20	30	30	20
Cleanroom class ISO 14644-1				
Sensor systems	+	+	++	++
Comprehensive ranges	+	+	++	++
Description	Small, simple actuated plastic angular gripper with spring reset	Narrow double-acting 2-finger angular gripper	Robust 2-finger angular gripper with oval piston and bone drive	180° radial gripper with powerful 1-shift slotted link gear and oval piston
Field of application				
	• Universal use • With special requirements on corrosion resistance and antistatic properties of the gripping unit	• Universal use • Suitable for applications which require a stacked, space-optimized gripper arrangement	• Universal use	• For areas of application which, in addition to a large gripping force, require the shortest possible motion sequences through the radial design of the jaw stroke
Ambient conditions				
Clean	●	●	●	●
Contaminated/coarse dust	○	○	◑	○
Contaminated/fine dust and liquids			○	
Contaminated/aggressive liquids			○	
High temperature range > 90 °C		●	●	●
Cleanroom	○	○	○	○

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

* The GAP Is an angular parallel gripper, which means the values must be understood as forces [N].

+ = medium-sized selection ++ = wide selection +++ = very wide selection

	DRG	GAP	3-Finger Angular Gripper SGW
			
	5	3	3
	8.2 .. 143	92 .. 430*	1.35 .. 7.45
	10 .. 90	30 .. 90	8
	0.5 .. 4.46	0.3 .. 1.33	0.05 .. 0.17
	0 .. 7.2	0 .. 125	0 .. 13
	0.4 .. 0.3/ 0.5 .. 0.6	0.09 .. 0.35/ 0.09 .. 0.35	0.02 .. 0.02/ 0.03 .. 0.03
	125	65	50
	0.1	0.05	0.1
	67	40	20
	++	+	+
	++	++	+
	Sealed 180° angular gripper for use in dirty environments	2-finger angular parallel gripper with gripper finger actuation of up to 90 degrees per jaw	Small, simple actuated plastic angular gripper with spring return
	• For applications requiring a large opening range • Particularly suitable for the use in dirty environments	• Gripping and moving • For small to medium-sized workpieces	• Universal use • With special requirements on corrosion resistance and antistatic properties of the gripping unit
	●	●	●
	●	○	○
	●		
	◑		
	●		
	○	○	○

SCHUNK Gripper PWG-plus

Compact powerhouse

The double oval piston drive, the one-piece, high-strength aluminum housing and the practically wear-free bone drive make the PWG-plus 2-finger angular gripper a compact and robust powerhouse. Depending on the application it can be equipped with or without a mechanical gripping force maintenance device.
In addition, extensive accessories are available, including inductive sensors and magnetic switches.

schunk.com/pwg

Your benefits:

- **Workpiece weights between 0.5 kg and 7.3 kg**
- **Gripping moments** amount **between 3.5 Nm and 143 Nm**
- **Stroke per finger 15°**
- **Overgrip angle per jaw at least 3°**
- **Maximum force transmission** and **low wear** due to robust bone drive
- **High power density** due to oval piston drive
- **Flexible design of workpiece supports** because of connection threads and centering possibilities

SCHUNK Grippers

Electric

	2-Finger Parallel Gripper			
	Alternative		Adaptable	
	EGP	PGN-plus-E	LEG	EGA
				
Technical Data				
Number of sizes	4	1	3	2
Gripping force [N]	12 .. 300	110 – 570	300 ... 1050	150 .. 1300
Stroke per jaw [mm]	3 .. 10	8	101 .. 281	30 .. 100
Weight [kg]	0.11 .. 0.8	1.01	5.4 .. 7.9	2.2 .. 9
Recommended workpiece weight [kg]	0 .. 125	0 .. 2.85	0 .. 7.5	0 .. 6.5
Closing/opening time [s]	0.03 .. 0.49	0.26		
Max. permissible finger length [mm]	80	125	600	500
Repeat accuracy [mm]	0.02	0.01	0.05	0.05
Nominal voltage [V]	24 DC	24 DC	Motor-dependent	Motor-dependent
Nominal current [A]	0.14 .. 0.3	0.6	Motor-dependent	Motor-dependent
Protection class IP	30	40	20	40
Type of measuring system			Motor-dependent	Motor-dependent
Great variety	++	+	++	++
Description	Electric 2-finger parallel gripper with smooth-running roller bearing guide in the base jaw	Electric 2-finger parallel gripper with integrated motor and electronics as well as reliable multi-tooth guidance	Light long-stroke gripper for flexible and highly dynamic handling of different components	Electric 2-finger parallel gripper with adaptable servomotor
Motor & Controller				
Motor	Integrated	Integrated	Adaptable	Adaptable
Controller	Integrated	Integrated	External	External
Controller type			Motor-dependent	Motor-dependent
Field of application				
	• Gripping and moving • For small to medium-sized workpieces with flexible force and high speed • In the areas of assembly, testing, laboratory, pharmacies	• Optimum standard solution for many fields of application • Universal use	• For very flexible gripping of various geometries and types of components • Due to the servo-electric drives, the gripping position and the gripping force can be exactly determined	• Gripping and moving • For medium-sized workpieces with flexible force and high speed
Ambient conditions				
Clean	●	●	●	●
Contaminated/coarse dust	○	◑	○	◑
Contaminated/fine dust and liquids		○		○
Contaminated/aggressive liquids				
High temperature range > 90 °C				
Cleanroom	○			

● = very highly suitable ◑ = highly suitable ○ = suitable in customized version
+ = medium-sized selection ++ = wide selection +++ = very wide selection

Intelligent

MEG	PG	EGL	WSG	PEH
				
3	1	1	3	3
35 .. 140	30 .. 200	50 .. 600	5 .. 80	150 .. 1800
6 .. 10	34	42.5	32 .. 105	60 .. 100
0.47 .. 1.42	1.4	1.8	0.32 .. 1.6	5.4 .. 16.8
0 .. 0.7	1	0 – 3	0 .. 0.4	0 .. 9
0.3 .. 0.62	0 .. 1	0.7	0.5 .. 1.0	1 .. 1.5
64	140	165	170	270
0.02	0.05	0.05	±0.03	±0.05
24 DC	24 DC	24 DC	24 DC	24 DC
0.6 .. 1.3	1.4	2.5	0.3 .. 0.9	2.4 .. 10
30	20	46	40	41
	Incremental	Incremental	Incremental	Incremental
+	+	+	++	+
Electric 2-finger parallel gripper with smooth-running roller bearing guide in the base jaw	Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke	Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke	Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke	Servo-electric 2-finger parallel gripper with large jaw stroke for large parts and/or diverse parts spectrum
Integrated	Integrated	Integrated	Integrated	Integrated
External	Integrated	Integrated	Integrated	Integrated
MEG-C				
• Gripping and moving • For small to medium-sized workpieces with flexible force, stroke or speed	• Universally applicable, highly flexible gripper • For a wide range of parts and sensitive components	• Various workpieces can be gripped either sensitively or with a high force • Flexible workpiece handling possible even in a contaminated environment	• Universally applicable, highly flexible gripper • For a wide range of parts and sensitive components	• Universally applicable, highly flexible gripper • With a wide variety of parts
●	●	●	●	●
○		●		○
		◑		
○	○		○	

	3-Finger Centric Gripper	Electromagnetic Grippers	
		Alternative	
EGN	EZN	EGM-M	EGM-B
			
3	2	6	8
170 .. 1000	140 .. 800	780 .. 11700	1800 .. 20370
8 .. 16	6 .. 10		
0.84 .. 3.4	0.98 .. 2.3	1 .. 7	5.5 .. 25
0 – 5	0 .. 4	0 .. 75	0 .. 118
0.35 .. 0.5	0.25 .. 0.4	0.3	0.3
200	125		
±0.01	±0.01		
24 DC	24 DC	400 AC	400 AC
1 .. 2.6	2 .. 3	2.2 .. 3.7	2.9 .. 12.3
41	41	54	54
Resolver	Resolver		
++	++	+++	+++
Servo-electric 2-finger parallel gripper with high gripping force and moment loads due to the multi-tooth guidance	Servo-electric 3-finger centric gripper with high gripping force and high maximum moment due to the multi-tooth guidance	Electric permanent magnetic gripper for energy-efficient handling of ferromagnetic workpieces	Electric permanent magnetic gripper for energy-efficient handling of ferromagnetic workpieces
Integrated	Integrated		
External	External	External	External
ECM	ECM	ECG	ECG
• Optimum standard solution for many fields of application • Flexible use due to controllable gripping force, position, and speed	• Optimum standard solution for many areas of application; flexible use due to controllable gripping force, position, and speed	• Universally applicable, compact gripper, with large diversity of parts	• Universally applicable, compact gripper, with large diversity of parts
●	●	●	●
●	●	●	●
◑	◑	◑	◑
◑	◑		
○	○	○	○

The new SCHUNK Gripper PGN-plus-E

Patented Precision!
Patentierte Präzision!
Multi-tooth guidance
Vielzahnführung

The first electric gripper with reliable multi-tooth guidance. Multi-tooth guidance, digital actuation and 24 V drive with permanent lubrication.

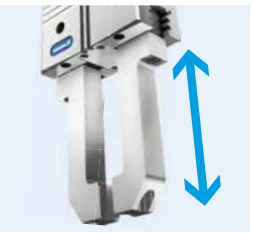
The new electric SCHUNK PGN-plus-E gripper transfers the proven high performance features of the new PGN-plus-P pneumatic gripper directly to the area of mechatronic handling. The first electric gripper with proven multi-tooth guidance with permanent lubrication, digital actuation, and 24 V drive makes the changeover from pneumatic to electric components particularly easy. Its actuation via digital I/O simplifies commissioning, enabling rapid integration in existing systems.

Your benefits:

- **NEW: Up to 50% longer gripper fingers**
  due to higher maximum moments
- **Four-stage gripping force**
  for simple adaptation to sensitive workpieces
- **NEW: Lifelong maintenance-free**
  The SCHUNK multi-tooth guide with continuous lubrication pockets ensures even lubrication.
- **NEW: 24 V drive and actuation via either digital I/O or IO-Link Class B connection**
  for a simplified commissioning and fast integration into existing systems
- **Integrated sensor system**

Alternative
Adaptable
Intelligent
MECHATRONIK3

schunk.com/pgn-plus-e

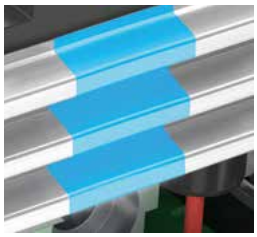


Up to 50% longer gripper fingers

The improved multi-tooth guidance enables the use of even longer gripper fingers for the same gripper size due to higher maximum moments, without overloading the guidance.

Gripping force adjustable to four stages

The gripping force of the new SCHUNK gripper PGN-plus-E can be quickly, safely and manually adjusted in four stages.



Maximum life span due to lubrication pockets in the robust multi-tooth guidance

Permanent lubrication pockets ensure a continuous grease supply. At the same time, it ensures that an even lubricant film is created rapidly, even with short strokes.

Maximum process safety

The multi-tooth guidance enables a greater diagonal pull surface, and therefore a lower surface pressure, for process-reliable and low-wear transmission of power to the base jaw.

Integrated sensor system

The control and power electronics are already completely integrated so that no space is taken up in the control cabinet. The 24 V gripper is actuated via digital I/O inputs. Up to 2 gripper positions can be queried via one M8 connection.

Special Gripper

Pneumatic

	Universal Gripper with Shank Interface GSW-B	Universal Gripper with Shank Interface and Compensation Unit GSW-B with AGE	Vacuum Gripper with Shank Interface GSW-V
			
Comprehensive ranges	++	++	+
Variety of sensor systems	+	+	
Description	Universal gripper with shank interface for toolholder	Universal gripper with shank interface for toolholder and compensation unit	Vacuum gripper with shank interface for machine self-operation
Field of application			
	• For fully automated loading and unloading of machining centers	• For fully automated loading and unloading of clamping devices such as vises	• For fully automated loading and unloading of flat workpieces
ambient conditions			
Clean	●	●	●
Contaminated/coarse dust	●	◑	○
Contaminated/fine dust and liquids	◑	◑	○
Contaminated/aggressive liquids	◑	◑	
High temperature range > 90 °C	●	●	
Cleanroom	○	○	

● = very highly suitable ◑ = highly suitable ○ = suitable in customized version
+ = medium-sized selection ++ = wide selection +++ = wide large selection

SCHUNK PZN-plus with Shank Interface GSW-B

The SCHUNK GWS gripper with shank interface loads and unloads machining centers fully automatically using the machine's own axis. It is inserted in a toolholder like a tool and can be swapped lightning fast out of the tool rack, and loaded from the tool changer into the machine spindle directly by the machine without requiring a robot or gantry.
The result: fully automatic workpiece change only with the help of the machine axis. Operation via the coolant supply.

Your benefits:

- **30% higher productivity due to automated machine loading**
- **No additional energy supply** required in the machine

	Magnetic Gripper with Shank Interface GSW-M	Cleaning Device with Shank Interface RGG	Internal Hole Gripper LOG	O-Ring Gripper ORG
				
	+	+	+++	+
				+
	Magnetic gripper with shank interface for toolholder	Cleaning device with shank interface for toolholder	Lightweight gripper made from a chemical resistant polyamide with a closed membrane system.	6-finger gripper reliable internal and external assembly of O-rings
	• For fully automated loading and unloading of ferromagnetic work-pieces	• For cleaning of clamping devices and for automating cleaning of machine tools	• Particularly suitable for highly dynamic applications with light workpieces • For handling of small parts and plastic parts, as well as sand core handling	• For automated assembly of O-rings
	●	●	●	●
	○	●	●	
	○	●	●	
		●		
		●		
			○	○

SCHUNK ORG
Special Gripper for O-ring Assembly

The SCHUNK O-ring gripper must be positioned with custom fingers can be used to mount, O-rings and other sealing rings, both on shafts (external assembly) and in bores (internal assembly).

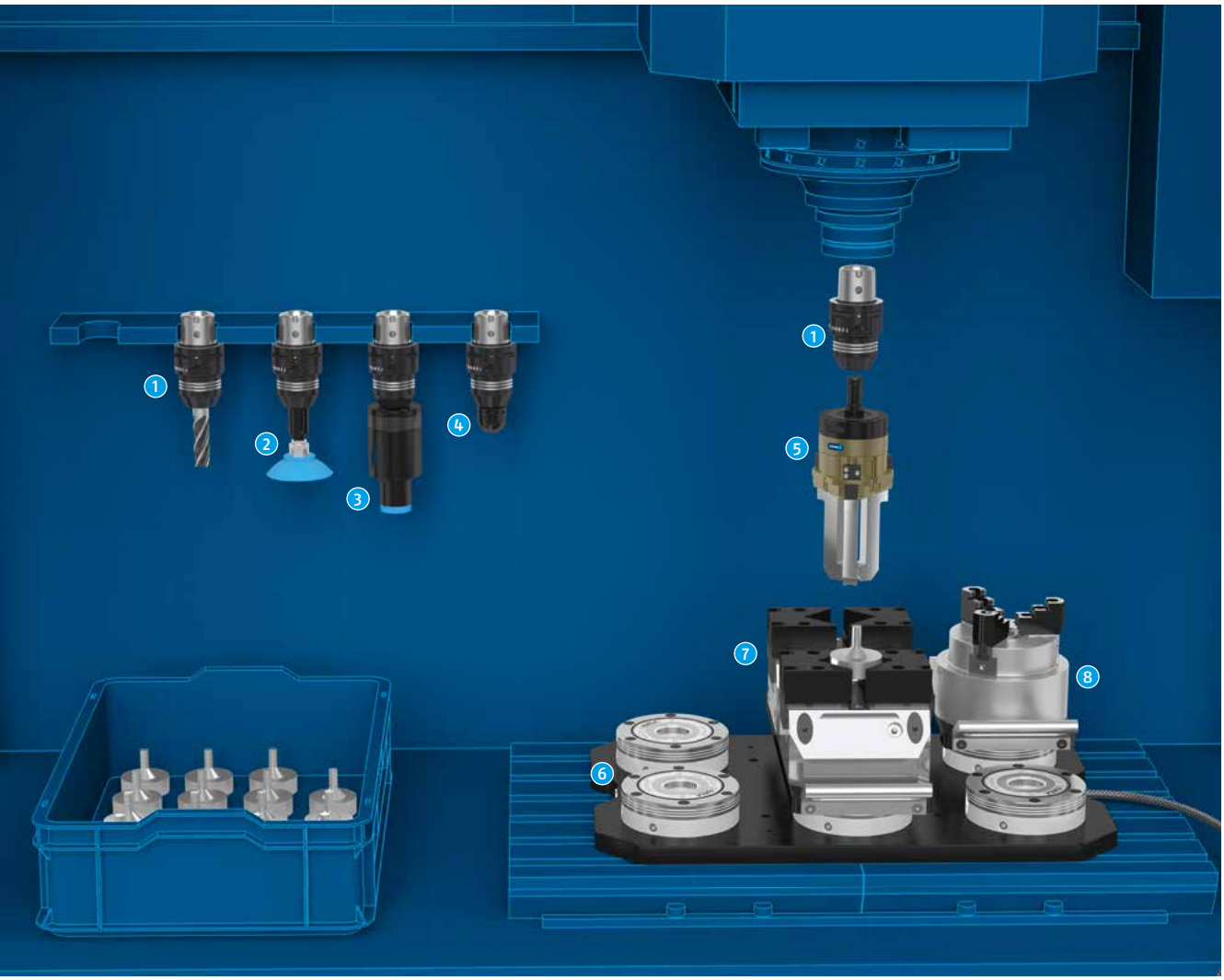
Your benefits:

- **Up to 30% time saving** as the external and internal assembly can be done with one gripper

	Gripping Hands	
	Intelligent	
	Servo-electric 5-Finger Gripping Hand SVH	Servo-electric 3-Finger Gripping Hand SDH
	First DGUV certified 5-finger hand 	 2014 
Technical data		
Overall length [mm]	242.5	248.8
Total width [mm]	92	120.2
Max. finger width [mm]	19.6	46.4
Finger length [mm]	102.7	155
Finger spacing [mm]	25	66
Ratio to human hand	1:1	1.4:1
Number of drives	9	7
Number of fingers	5	3
Degrees of freedom	20	7
Weight [kg]	1.3	1.95
IP class	20	50
Power supply [V DC]	24	24
Nominal current [A]	0.16	2
Max. current [A]	3.5	5
CAN		●
RS232		●
RS485	●	
Ethernet TCP/IP		●
Environment		
Clean environment	●	●
Easily contaminated environments		●
Tactile sensor systems		
Tactile sensor systems		●

SCHUNK Lean Automation: Gripping Systems and Clamping Technology for the Automation of your Machine Tool

When it comes to precision, when seconds are decisive, set-up times are too long and costs too high, there is no room for compromise. And this is precisely where SCHUNK's lean automation range comes in. Because your machine can do more than you think. With efficient and suitable solutions for loading, changing, and cleaning. And of course with optimum tool and workpiece clamping.

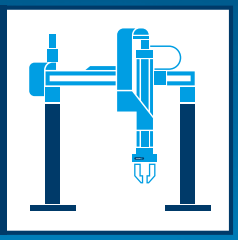


1. **TENDO E compact Hydraulic Expansion Toolholder**
   The ultimate tool for every cutting tool, for every application
2. **Vacuum Gripper GSW-V**
   for handling workpieces with a flat surface
3. **Magnetic Gripper GSW-M**
   for handling ferromagnetic workpieces
4. **Cleaning Unit RGG**
   for cleaning the machine room in a matter of seconds
5. **SCHUNK Universal Gripper PZN-plus with shank interface**
   for automatic loading and unloading of your tooling machine
6. **VERO-S Quick-change Pallet System**
   Positioning and clamping in a single operation
7. **TANDEM Clamping Force Blocks**
   for workpiece clamping in confined spaces
8. **ROTA Lathe Chuck**
   for precise clamping of round workpieces

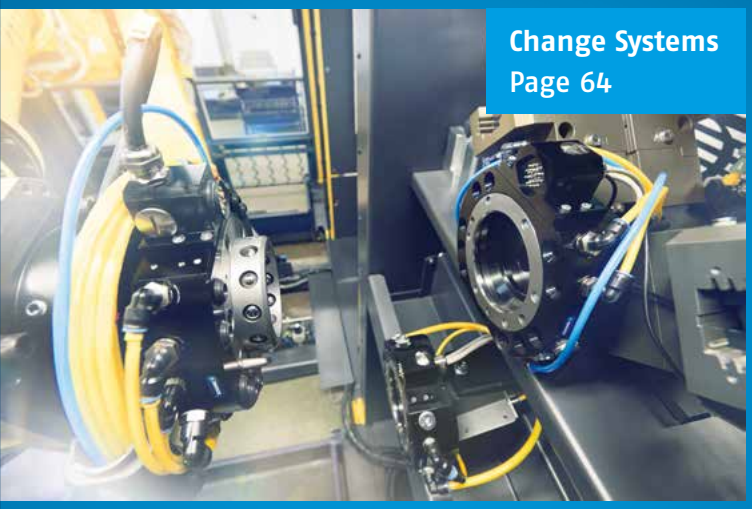
Handling and Assembly – SCHUNK has the perfect Solution for every Requirement.

With our wide range of pneumatically and electrically driven linear, rotary and gripper standard components and many products for robots, SCHUNK offers perfect prerequisites for individual handling solutions. An enormous variety of automated solutions can be implemented by using just a few standard components – fast, simple, and professional.
Application-specific automation systems provide high dynamics during 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.

Equipped by SCHUNK

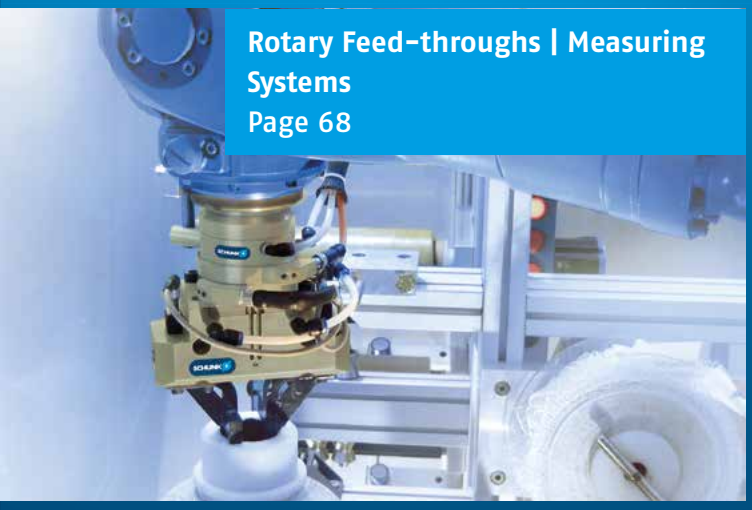


Over **4,000** standard components in the most comprehensive selection of modules for handling and assembly



Change Systems
Page 64

Compensation Units
Page 66



Rotary Feed-throughs | Measuring Systems
Page 68

Monitoring Sensors Machining Tools
Page 72

Linear Modules
Page 54

Rotary Modules
Page 46

Pick & Place | Multi-axis Systems
Page 62

New! Linear Module ELP

Easily adjustable in a Maximum of 60 Seconds.

In a Class of its Own!

Alternative
Adaptable
Intelligent
MECHATRONIK3

Maximum Process Reliability

Auto-learn function compensates incorrect speed configurations In the teach-in process, the maximum possible speed is automatically adjusted depending on the attachment weight.

Low-maintenance 24 V Linear Direct Drive

Process-reliable and long-lasting

Quick End Position Configuration

Simple adjustment using mechanical adjusting screw

Unique Auto-learn Function

Optimum speed adjustment in the first 2-5 cycles

Easy Control

Decentral actuation using a fieldbus distributor or directly over digital I/O signals. Fully compatible in the 24 V modular system.

Repeat Accuracy ±0.01 mm

Play-free roller guidance

Simple fine Adjustment of the Extension and Retraction Speed

Via two rotary switches and integrated LED display

Regulation and Power Electronics integrated compactly in the Module

Less space required in the control cabinet

NEW: Electric Holding Brake

For protection against falling mounting loads in vertical applications in the case of a loss of energy.

Content

Rotary Modules

Pneumatic

Rotary Modules, pneumatic	Vane Swivel Unit	
	SFL	RM-W
		
Technical data		
Angle of rotation < 360 ° [°]	90 .. 180	90/180
Angle of rotation > 360 ° [°]		
Number of sizes	3	4
Torque [Nm]	0.1 .. 3.6	0.7 .. 22
Weight [kg]	0.09 .. 0.71	0.65 .. 8.3
Max. permissible mass moment of inertia [kgm²]	0.005	0.27
Repeat accuracy [°]	0.05	up to 0.036
Protection class IP	52	40
Description	Rotary actuator with a high torque for easy rotation tasks up to 180°	Swivel vane with high torque for fast rotation tasks
Gripping force [N]		
Stroke per jaw [mm]		
Recommended workpiece weight [kg]		
Closing/opening time [s]		
Max. permissible finger length [mm]		
Options/versions		
Center bore		
Pneumatic rotary feed-through		
Electric rotary feed-through		
Center position		
ATEX-certified		
Gripping force maintenance device		
Rotation adapter		
Monitoring options		
Inductive proximity switches		●
Magnetic switches	●	
Field of application		
	• The optimum solution for easy rotation tasks	• For fast movement cycles
Ambient conditions		
Clean	●	●
Slightly dirty	●	●
Extremely dirty		

● = fully supported

	Rotary Actuators			Swivel Heads
	SRU-mini	RM-F	SRU-plus	SRH-plus
				
	0 .. 180	0 .. 190	0 .. 180	180
	4	6	8	7
	0.16 .. 1.15	0.05 .. 1.9	3 .. 115	3 .. 69.9
	0.15 .. 0.65	0.046 .. 1.6	1.2 .. 26.5	2.1 .. 21.2
	0.01	0.023	32	2.6
	0.07	up to 0.082	0.05	0.05
	65	40	67	67
	Light and fast flat swivel unit with multiple options such as fluid feed-through, hydraulic damping, hydraulic-elastomer damping and a pneumatic center position	Light and fast rotary unit	Universal unit for pneumatic swivel and turning movements	Universal swivel head SRH-plus for fast loading and unloading tasks, with integrated fluid and electrical feed-through
	●	●	●	●
	●		●	●
			●	●
	●	●	●	
			●	●
		●	●	●
	●		●	●
	• For fast movement cycles	• For fast movement cycles	• For universal use with any swiveling movement	• Recommended for loading and unloading machine tools
	●	●	●	●
	●	●	●	●
			●	●

	SKE	Rotary Finger GFS	Rotary Indexing Tables RST-D	Rotary Gripping Modules with 2-Finger Parallel Gripper GSM-P	 RP
					
	90	90 .. 180		0 .. 180	0 .. 190
			22.5 .. 90		
	4	4	3	4	5
	0.4 .. 9	0.64 .. 10	3.1 .. 29.3	0.3 .. 2.9	0.38 .. 1.9
	0.13 .. 1.95	0.55 .. 5	1 .. 8.3	0.37 .. 1.51	0.5 .. 2.2
			0.6		
	0.03	0.07	up to 0.04	0.02	0.02
	30	54	50	30	40
	90° swivel head with single piston drive	Rotary finger for turning workpieces that are held by a gripper or can also be used as a special rotary unit	Ring indexing unit for endlessly turning with a rotation angle up to 90° per cycle.	Compact gripper swivel combination, consisting of a powerful rotor drive and a 2-finger parallel gripper	Compact 2-finger parallel gripper swivel module with double piston rack and pinion swivel drive
				39 .. 162	50 .. 420
				1.5 .. 10	2.5 .. 8
				0.2 .. 0.61	0.25 .. 1.4
				0.01 .. 0.05/ 0.01 .. 0.05	0.015 .. 0.06/ 0.015 .. 0.06
				64	100
			●		
					●
				●	●
					●
	●			●	
		●	●	●	
	• For light external loads	• For universal use	• For fast movement cycles	• For gripping and swiveling small to medium-sized workpieces in clean environments	• For gripping and swiveling workpieces in clean environments
	●	●	●	●	●
		●	●		●

SCHUNK Universal Rotary Actuator SRU-plus

Robust. Quick. Powerful.

Universal pneumatic unit for rotary and turning movements in both clean and dirty areas.

schunk.com/sru-plus

Your benefits:

- **Graduated series with uniform torque increase**
  – the correct size is available for delivery for many applications.
- **Selectable angle of rotation either 90° or 180°,**
  complete freedom in choice of angle of rotation; special angles available on request
- **Choice of end position adjustability:**
  +3°/-3° (small) or +3°/-90° (large)
- **Choice of pneumatic or locked center position;**
  locked center positions can be unlocked under load. The two types of center position always allow further rotation in either direction.
- **Fluid feed-through suitable for gases, liquids, and vacuum**
  – no need for troublesome hoses
- **Electrical rotary feed-through**
  for continuous fail-safe feed-through of sensor and actuator signals; bus feed through available on request
- **Choice of electronic magnetic switches or inductive proximity switches**
  for absolute variability in position sensing
- **Series extends downwards**
  with SRU mini-series for a broad range of applications

Rotary Modules

Electric

Electric Rotary Modules	Rotary Actuators	
	Adaptable	Intelligent
	ERM	PR 2
		
Technical data		
Number of sizes	1	3
Torque [Nm]	75	4.3 .. 98
Max. speed [min-1]	62.5	13 .. 78
Weight [kg]	15.5	1.9 .. 6.4
Max. permissible mass moment of inertia [kgm²]	20	9.5
Repeat accuracy [°]	0.035	0.03
Gear ratio	48	51 .. 161
Intermediate circuit/nominal voltage [V]	Motor-dependent	24
Nominal current [A]		5 .. 12
Diameter of center bore	22	
Number of electric feed-throughs	0	0
Number of pneumatic feed-throughs	8	0
Protection class IP	65	40
Type of measuring system	Motor-dependent	Incremental
Angle of rotation		
Description	Electric rotary module with adaptable servomotor, angle of rotation > 360°, center bore and optional feed-throughs	Servo-electric rotary actuator with angle of rotation > 360°, precision gear and integrated electronics
Gripping force [N]/opening angle [Nm]		
Stroke/opening angle per jaw [mm]/[°]		
Recommended workpiece weight [kg]		
Closing/opening time [s]		
Max. permissible finger length [mm]		
Motor & Controller*		
Motor	Adaptable	Integrated
Controller	External	Integrated
Controller type	Motor-dependent	
Options/versions		
Center bore	●	
Pneumatic rotary feed-through	●	
Electric rotary feed-through		
Brake	●	●
Field of application		
	• Universal, extremely flexible rotary module • Suitable for use as a component in a handling or positioning system	• Universal-use, extremely flexible rotary actuator • As a component in a handling or positioning system • As an axis for lightweight arms in industrial or service robotics
Ambient conditions		
Clean	●	●
Slightly dirty	●	●
Extremely dirty	●	

● = fully supported

* = Control concepts for mechatronic SCHUNK components see page 17

** = More controllers available upo

	Drives				
	PRH	ERD	ERS	PDU 2	
					
	3	3	3	3	
	0.75 .. 6.8	0.4 .. 1.2	2.5 – 10	4.3 .. 98	
	35 .. 117	600	140 .. 2300	13 .. 78	
	0.75 .. 1.55	1.2 – 1.8	2.7 – 10.9	1.9 .. 6.1	
	0.3	0.0012	0.6		
	0.004	0.01	up to 0.01	0.03	
	30 .. 100			51 .. 161	
	24	560	48/560	24	
	1.3 .. 6.5	0.43 .. 1.6	1.2 .. 6.3	5 .. 13	
	0	4	8	0	
	0	2	1	0	
	54 .. 65	40 – 54	40	40	
	Incremental	Absolute (Hiperface)	Incremental	Incremental	
	Servo-electric miniature rotary actuator with angle of rotation > 360°, center bore and precision gear	Powerful torque motor with absolute-value transducer and electric and pneumatic rotary feed-throughs	Electric rotary actuator with torque motor and angle of rotation > 360° in optional protection class IP54 plus optional rotary feed-through and holding brake	Servo-electric drive with angle of rotation > 360°, precision gear and integrated electronics	
	Integrated	Integrated	Integrated	Integrated	
	Integrated	External	External	Integrated	
		BoschRexroth®, SIEMENS®**	BoschRexroth®, SIEMENS®**		
	●		●		
		●	●		
		●	●		
			●	●	
	• Universal-use, extremely flexible rotary actuator	• For all applications with unusual requirements in terms of repeat accuracy, speed of rotation, acceleration and service life	• Universal-use, extremely flexible rotary actuator • For applications with unusual requirements in terms of maximum mass moment of inertia, compactness, and reliability • As a component in a handling or positioning system	• Servo drive for linear, rotary or CNC axes • Axis motor for measuring and testing technology applications	
	●	●	●	●	
	●			●	
	●				

n request

	2-Axis modules	Gripper Swivel Modules with 2-Finger Parallel Gripper
		Adaptable
PSM 2	PW	EGS
		
3	2	2
0.16 .. 0.88	12 .. 23/2 .. 12	0.04 ..0.11
2125 .. 6500		
1.3 .. 3.9	1.8/3.4	0.45 .. 1.2
		0.00018
0.2	up to 0.03	1
	121 .. 161/101 .. 121	
24	24	24
6 .. 12		1.6
0	0	
0	0	
40	40	30
Incremental	Incremental	
		30 .. 270
Servo-electric drive with angle of rotation > 360° and integrated electronics	Servo-electric rotary pan-tilt actuator with precision gear and integrated electronics	Compact electrical 2-finger parallel rotary gripper module with smooth-running roller bearing guide
		15 .. 140
		3 .. 6
		0 .. 0.55
		0.03 .. 0.22
		50
Integrated	Integrated	Integrated
Integrated	Integrated	Integrated
●		
• Servo drive for linear, rotary or CNC axes • Axis motor for measuring and testing technology applications	• Universal-use, highly versatile rotary pan-tilt actuator • As a component in a handling or positioning system for cameras or laser scanners • Can be used as a wrist module on robots	• For electrical gripping and swiveling of small to medium-sized workpieces up to 270°
●	●	●
●	●	

SCHUNK Gripper Swivel Unit EGS

The world's most compact electric gripper swivel unit.

The SCHUNK electric gripper swivel unit EGS facilitates the switch to pneumatic-free handling solutions. For the first time ever, it successfully combines electrical gripping and swiveling in the smallest space in a compact housing. The low-maintenance and price-attractive module paves the way for highly efficient pneumatic-free systems. Coupling of the gripping and rotation gear, patented by SCHUNK, allows continuous rotation without an electric feed-through.

Your benefits:

- **Quick switch** to pneumatic-free handling
- **Simple, fast commissioning** without external regulators and additional programming
- **Gripping and swiveling** with this extremely compact module
- **Swiveling time 0.18 s/180°**
- **Gripping time 0.03 s/stroke**
- **Freely definable angle of rotation** between 30° and 270°
- **4 digital inputs** (open gripper, close gripper, turn left, turn right)
- **Controlled with 24 V**

schunk.com/gripper-swivel-module-egs

SCHUNK Rotary Module ERS with Rotary Feed-through DDF

Compact, dynamic and uniquely versatile

The electric SCHUNK rotary module ERS offers the option of a pneumatic or electric rotary feed-through. This module is driven by a torque motor with a hollow shaft and features a rotary feed-through, making it one of the most compact electric rotary modules with an integrated pneumatic and electric feed-through on the market. As standard, the rotary feed-through has more than eight signal feed-throughs and a pneumatic air duct.

Your benefits:

- **Extremely flat** design
- **Dynamically stable and torsion-proof**
- **With pneumatic and electric feed-through**
- Endlessly turning at up to **250 RPM**
- **Simple systems integration** due to standard sensor interface
- Great process versatility due to **free choice of intermediate positions**
- **High acceleration** and **short cycle times** due to **high torque**

schunk.com/ers-with-ddf

Linear Modules

Pneumatic

Pneumatic Linear Modules	Stroke Module HLM	Compact Slide CLM	Universal Linear Module LM	
				
Drive type				
Piston rod cylinders	●	●	●	
Rodless cylinder				
Technical data				
Number of sizes	4	6	5	
Number of pistons	1	1	1	
Repeat accuracy [mm]	up to 0.01	up to 0.01	up to 0.01	
Useful stroke [mm]	0 .. 150	0 .. 150	0 .. 450	
Max. driving force [N]	482	482	753	
Weight [kg]	0.5 .. 5.64	0.07 .. 5.32	0.44 .. 15.81	
Adjustable end positions	Yes	Yes	Yes	
Max. end positions adjustment per side [mm]	25	25	25	
Guidance type	Cross roller guide	Cross roller guide	Cross roller guide	
Comprehensive ranges	+	++	+++	
Required maintenance	Hydraulic shock absorbers, lubrication of the guide, replacement of seals	Hydraulic shock absorbers, lubrication of the guide, replacement of seals	Hydraulic shock absorbers, lubrication of the guide, replacement of seals	
Note	Optionally available with rod lock	Optionally available with rod lock	Optionally available with up to two intermediate positions and with rod lock	
Field of application				
	• Compact • Optimum for lifting workpieces • Ideal for space-optimized applications	• Universally applicable • Optimum for short-stroke applications • For demanding requirements with respect to precision	• Universally applicable • For demanding requirements with respect to precision, flexibility and rigidity	
Ambient conditions				
Clean	●	●	●	
Slightly dirty				
Dirty				

● = fully supported ○ = technically possible
\+ = medium-sized selection ++ = wide selection +++ = very wide selection

	Linear Module KLM	Gantry Axis PMP
		
	●	
		●
	4	2
	1	1
	up to 0.02	0.04
	0 .. 300	0 .. 3700
	753	250
	0.5 .. 13.2	3 .. 44.91
	Yes	Yes
	25	50
	Ball bushing guide	(Double) profiled rail guide
	++	+++
	Hydraulic shock absorbers, lubrication of the guide, replacement of seals	Hydraulic shock absorbers, lubrication of the guide, replacement of seals
	Optionally available with up to two intermediate positions, rod lock and dustproof version	Optionally available with bellow, several intermediate positions and cable track
	• Simple stroke module • Optimum use as Z-axle in handling modules • For high requirements of flexibility	• Robust and precise gantry systems • For large range of stroke
	●	●
	●	●
	○	

SCHUNK Universal Linear Module LM

Pneumatic linear modules LM from SCHUNK are characterized by long life span and reliability. The use of cross roller guides convinces with respect to accuracy, rigidity, and low friction. And also in terms of minimal space requirements, the linear modules score with their very compact design, even when two guide rails running in parallel are used.

Your benefits:

- **5 sizes** with a total of **52 stroke variants**
- **High availability off the shelf**
- Over **20 years of experience** with cross roller guides
- **Can be flexibly combined** by up to 38 fastening threads on one side
- **No additional interfering contour** when adding shock absorbers or sensors

Intermediate Stops ZZA for Pneumatic Linear Modules LM and KLM

Up to two intermediate stops ZZA are possible per linear module. Therefore up to four positions are available to the linear unit. With the intermediate stops ZZA on a linear unit, NOK parts (not OK parts) can be rejected for instance on an assembly station.

Your benefits:

- Up to **two intermediate positions** possible
- **No oscillations** in the intermediate position
- Can be moved from the intermediate position **in both directions**

SCHUNK Linear Module ELP

The new benchmark for mechatronic linear modules.

The SCHUNK ELP is the most easy to adjust electric linear module on the market and is put into operation more quickly than the pneumatic linear module. Due to the revolutionary auto-learn function, no more shock absorbers are required. This makes the SCHUNK ELP practically wear-free and therefore robust and long-lasting. Actuation can be done in decentralized manner using a fieldbus distributor or directly over digital signals.

Alternative
Adaptable
Intelligent
MECHATRONIK 3

schunk.com/linear-module-elp

Your benefits:

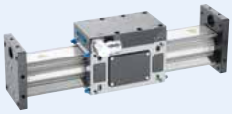
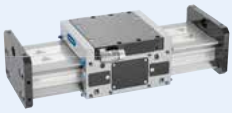
- **Simple 1:1 replacement** of pneumatic through mechatronic components
- **No shock absorbers,** therefore **no wearing parts and maintenance-free!**
- **Commissioning in just 2 working steps** due to the revolutionary auto-learn function
- **Simple speed configuration** using two rotary switches
- **0.01 mm repeat accuracy** due to low-play roller guidance
- **Linear direct drive** for high dynamics and long lifespan

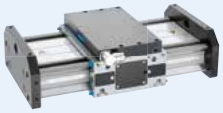
Linear Modules

Electric

	Electric Linear Modules		
	Alternative	Intelligent	
	Compact Linear Module ELP	Compact Linear Module ELM	Compact Linear Module ELB
			
Drive type			
Spindle drive			
Toothed belt drive			
Rack and pinion drive			
Direct drive (linear motor)	●	●	●
Technical data			
Number of sizes	3	2	1
Repeat accuracy [mm]	±0.01	±0.05	±0.01
Max. useful stroke [mm]	200	260	125
Max. driving force [N]	104	160	150
Max. speed [m/s]	Auto-learn function	1.5	4
Max. acceleration [m/s²]	Auto-learn function	40	100
Type of measuring system		Hall-effect sensor	Absolute or incremental
Guidance type	Cross roller guide	Profiled rail guide	Cross roller guide
Comprehensive ranges	++	++	+++
Required maintenance	Maintenance-free	Cleaning of the magnetic tracks, lubrication of the guide	Cleaning of the magnetic tracks, lubrication of the guide
Note	Axis with mechanically adjustable stop positions, optionally available with load balance	Freely programmable, optionally available with rod lock	Freely programmable, optionally available with rod lock, brake or load balance
Motor & controller			
Motor	Integrated	Integrated	Integrated
Drive controller	Integrated	LinMot®	BoschRexroth®, SIEMENS®*
interfaces	Digtal I/O	Sercos III, EtherNet/IP, EtherCAT, PROFINET, PROFIBUS DP, PowerLink, CANopen	Sercos III, EtherNet/IP, EtherCAT, PROFINET, PROFIBUS DP, PowerLink, CANopen
Field of application			
	• Simple, compact short stroke module • For small loads • For exceptionally dynamic positionings	• Extremely compact and simple short stroke module • For small loads • For exceptionally dynamic positionings	• Compact and simple short stroke module • For small loads • For exceptionally dynamic positionings
Ambient conditions			
Clean	●	●	●
Slightly dirty			

● = fully supported
+ = medium-sized selection ++ = wide selection +++ = extremely wide selection
* = Additional controllers available upon request ** = Depending on the drive type

	Short Stroke Module LDH	Stroke Module LDK	Universal Linear Module LDN	Universal Linear Module LDM
				
	●	●	●	●
	1	2	2	2
	±0.01	±0.01	±0.01	±0.01
	200	400	2700	2700
	125	500	500	1000
	4	4	4	4
	40	40	40	40
	Absolute or incremental	Absolute or incremental	Absolute or incremental	Absolute or incremental
	Steel rail guide	Roller guide	Roller guide	Roller guide
	+	++	+++	++
	Cleaning the magnetic tracks	Cleaning the magnetic tracks	Cleaning the magnetic tracks	Cleaning the magnetic tracks
	Freely programmable, optionally available with brake, limit switch, reference switch, cable track, supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, cable track, supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, cable track, supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, cable track, supported profile
	Integrated	Integrated	Integrated	Integrated
	BoschRexroth®, SIEMENS®*	BoschRexroth®, SIEMENS®*	BoschRexroth®, SIEMENS®*	BoschRexroth®*
	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
	• Compact and simple short stroke module • For small loads • For extremely dynamic movements in the Z axis	• Compact and simple short stroke module • For small loads • For exceptionally dynamic positionings	• Universally applicable • Linear motor axis with simple X-profile • For applications with demanding requirements with respect to dynamics| • For a faster and precise movement or controlled press-in operation of workpieces in the high-speed assembly	• Universally applicable • Linear motor axis with double X-profile • For medium loads with very high dynamic and precise requirements • For a faster and precise movement or controlled press-in operation of workpieces in the high-speed assembly
	●	●	●	●

			Adaptable	
	Universal Linear Module LDT	**Flat Linear Module LDL**	**Compact Linear Module ELS**	**Linear Table Alpha**
				
			●	●
	●	●		
	2	2	2	4
	±0.01	±0.01	±0.01	±0.03
	2700	3800	260	2540
	1500	500	150	18000
	4	4	1	2.5
	40	40	8.5	20
	Absolute or incremental	Absolute or incremental	Motor-dependent	Motor-dependent
	Roller guide	Roller guide	Profiled rail guide	Double-profiled rail guide
	++	+	+	++
	Cleaning the magnetic tracks	Cleaning the magnetic tracks	Lubrication of the guide and the spindle	Lubrication of the guide and the spindle
	Freely programmable, optionally available with brake, limit switch, reference switch, cable track, supported profile	Freely programmable, optionally available with brake, limit switch, reference switch, cable track	Freely programmable, also available standard-equipped with BoschRexroth® motor	Freely programmable, optionally available with customized motor, limit switch and reference switch
	Integrated	Integrated	Adaptable	Adaptable
	BoschRexroth®, SIEMENS®*	BoschRexroth®, SIEMENS®*	Motor-dependent	Motor-dependent
	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Multi-Ethernet (Sercos III, PROFINET IO, EtherNet/IP, EtherCAT), PROFIBUS	Controller-dependent	Controller-dependent
	• Universally usable linear motor axis with triple X-profile • For heavy loads with very high dynamic and precise requirements • For a faster and precise movement or controlled press-in operation of workpieces in the high-speed assembly.	• Flat linear motor axis • For applications with very high dynamic and precise requirements • For a faster and precise movement or controlled press-in operation of workpieces in the high-speed assembly.	• Compact spindle cantilever axis • For short strokes • For high precision and driving force requirements	• Particularly flat design for table assembly • For high precision and driving force requirements
	●	●	●	●
				●

	Universal Linear Module Beta	Flat Linear Module Delta	Universal Linear Module Gamma
			
	●	●	
	●	●	●
	●		●
	12	5	3
	0.03 or 0.08***	up to ±0.03**	up to ±0.05
	7720	7700	7685
	18000**	12000**	4000
	8	5	5
	60	60	60
	Motor-dependent	Motor-dependent	Motor-dependent
	Double-profiled rail guide	Double-profiled rail guide	Double-profiled rail guide
	+++	+++	+++
	Lubrication of the guide and (if necessary) the spindle, replacement of the cover tape	Lubrication of the guide and (if necessary) the spindle, replacement of the cover tape	Lubrication of the guide and (if necessary) the gear rack
	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
	Adaptable	Adaptable	Adaptable
	Motor-dependent	Motor-dependent	Motor-dependent
	Controller-dependent	Controller-dependent	Controller-dependent
	• Universally applicable • Ball-screw drive for high precision and driving force requirements • Belt drive for high dynamic requirements with large stroke	• Flat design for large loads • Universally applicable • Spindle drive for high precision requirements with high driving force • Belt drive for high dynamic requirements with large stroke	• With closed profile for high rigidity requirements • With rack and pinion drive for precise applications and large strokes • Toothed belt drive for dynamic applications
	●	●	●
	●	●	●

SCHUNK Linear Module Beta

Linear module with adaptive drive.

The product range includes 12 sizes. Depending on the application, choose between spindles, belt or rack and pinion depending on the drive type as well as between roller guidance and profile rail guidance. The Beta series is outstanding for its economical axis applications with high requirements with respect to dynamism and smooth running. Even long stroke lengths can be implemented with this drive system.

Your benefits:

- **12 profile sizes**
- **3 drive types**
  (spindle/belts/gear rack)
- **2 guide systems**
- **100% modular**
  for high availability
- **20 years of experience**
  with linear systems
- **100% flexible actuation**
  due to adaptable motors

schunk.com/beta

Accessories for spindle, belt and rack and pinion driven Linear Modules

Servomotors

With the **linear modules Alpha, Beta, Gamma, Delta** and **ELS** with **adaptable** drive, you receive from SCHUNK on request an already completed configuration with servomotors that is designed in accordance with your specific application and technical requirements. We can use servomotors either from BoschRexroth®, SIEMENS® or SCHUNK.

We will be happy to supply you with the required IndraDrive series controller from BoschRexroth® or the SINAMICS series from SIEMENS® – depending on the servo motors used. Naturally, you have the option of attaching any other servo motor yourself to the linear axes listed.

BoschRexroth® Servo motor

SIEMENS® Servo motor

Compact SCHUNK servo drive type PDU 2 with precision gears and integrated controller

Pick & Place

Pneumatic and electric

	Lifting/Rotary Unit	Pick & Place Unit	
	Pneumatic	Pneumatic	Electric*
	DRL	PPU-P	PPU-E
			
Technical data			
Number of sizes	2	2	3
Horizontal stroke in Y [mm]		121 .. 210	0 .. 280
Horizontal stroke in X [mm]			
Vertical stroke [mm]	23 .. 40	30 .. 45	0 .. 150
Rotating angle [°]	90 .. 180		
Useful load [kg]	0 .. 3	0 .. 3	0 .. 5
Repeat accuracy X-axis [mm]			
Repeat accuracy Y-axis [mm]		up to ±0.01	±0.01
Repeat accuracy Z-axis [mm]	±0.01	up to ±0.01	±0.01
Repeat accuracy, rotary [°]	0.02		
Weight [kg]	2.7 .. 5	4.5 .. 15.5	15 .. 35
Max. cycle time/picks per minute	63	95	110
Actuation	Pneumatic valve	Pneumatic valve	External controller
Protection class IP	40	40	40
Guidance type	Guidance/ deep groove ball bearing	Cross roller guide	Profiled rail guide
Number of possible combinations			
Comprehensive ranges	+	+	++
Motor & controller*			
Motor			Integrated
Drive controller			BoschRexroth®, SIEMENS®*
Options/versions			
Rod lock	●	●	●
Center position	●		
Integrated valve			●
Additional C-axis			●
Drive package			
Description	Compact lifting/rotary unit consisting of a powerful short-stroke cylinder and a rack and pinion swivel actuator	Compact 2-axis unit for running a typical pick & place motion	Compact 2-axis unit for flexible running of any curve on one plane
Field of application	· For the rapid and precise transfer and turning of workpieces in high-speed assembly	· For the rapid and precise transfer of workpieces in high-speed assembly	· For the rapid and precise transfer or controlled press-in operation of workpieces in high-speed assembly
Ambient conditions			
Clean	●	●	●
Slightly dirty			

● = fully supported + = medium-sized selection ++ = wide selection

* = Control concepts for mechatronic SCHUNK components see page 17 ** = More controllers available upon request

Standard Gantries		
Pneumatic	Electric*	
Line Gantry LPP	Line Gantry LPE	Room Gantry RPE
		
1	2	2
200 .. 1500	500 .. 1500	500 .. 1500
		500 .. 1500
0 .. 225	100 .. 500	100 .. 500
0 .. 5	0 .. 20	0 .. 20
		±0.08
±0.01	±0.08	±0.08
±0.01	±0.03	±0.03
Pneumatic valve	Controller on external motor	Controller on external motor
40	40	40
Profiled rail/ cross roller guide	Profiled rail guide	Profiled rail guide
234	90	150
+	+	+
	Adaptable	Adaptable
BoschRexroth®, SIEMENS®*	BoschRexroth®, SIEMENS®*	BoschRexroth®, SIEMENS®**
●		
●		
	●	●
Line gantry with a horizontal, pneumatic gantry axis, and a vertical, pneumatic linear module	Line gantry with a horizontal, electric toothed belt axis, and a vertical, electric spindle axis	Room gantry with two electric toothed belt axes in a horizontal direction, and one electric spindle axis in a vertical direction
• For easily conducting the most common two-dimensional handling and assembly tasks for small to medium-sized workpieces	• For easily conducting the most common two-dimensional handling and assembly tasks for medium-sized and large workpieces	• For easily conducting the most common three-dimensional handling and assembly tasks for medium-sized and large workpieces
●	●	●
	●	●

Change Systems

Robot Accessories

Change Systems	Quick-change Systems			
	SWS	SWS-L	EWS	GWS
				
Product features				
Manual actuation				
Pneumatic actuation	●	●		●
Electric actuation			●	
Locking monitoring possible	●	●	●	●
Tool presence monitoring possible*	●	●	●	
Pneumatic energy transmission	●	●	●	●
Electric energy transmission	●	●	●	●
Technical data				
Number of sizes	14	4	1	3
Recommended workpiece weight [kg]	0 – 450	0 .. 1350	18	0 .. 170
Moment load M_{xy} [Nm]	3 .. 9870	7600 .. 13500	56.5	225 .. 1200
Moment load M_z [Nm]	3.5 .. 8460	4060 .. 16200	78	300 .. 1800
Repeat accuracy [mm]	up to 0.01	0.01	±0.015	0.04
Weight [kg]	0.25 .. 19.1	7.8 .. 28	1.8	0.85 .. 4
Screwed flange on the robot	Adapter plates/ direct assembly ISO-9409	Adapter plates/ Direct mounting ISO-9409	Adapter plates	Adapter plates Direct mounting ISO-9409
Advantages/your added value				
	• Patented self-sustaining locking system for a reliable connection between the quick-change head and the quick-change adapter • Standardized storage modules available for any size		• Integrated locking queries • Control via digital I/O for easy commissioning and rapid integration into existing systems	• Integrated pneumatic feed-throughs for reliable electricity, gas and water supply of the tools • Robust wedge-hook kinematics for a secure connection between the gripper change head and the gripper change adapter
Ambient conditions				
Clean	●	●	●	●
Slightly dirty	●	●	●	●
High-temperature and stainless steel version on request	●	●		

* Tool presence monitoring optionally available with SWS-076, SWS-110, SWS-160 and SWS-300. SWS-L and EWS included in the scope of delivery.

Quick-change Head

Quick-change Adapter

SCHUNK Quick-change System SWS

Fast effector change for high flexibility in production, handling and assembly.

When changing grippers, tools and other end-effectors, an automatic quick-change system (as robot accessory) can clearly reduce manual work or even entirely replace it. While manually re-equipping a pneumatic effector takes ten to thirty minutes, a quick-change system reduces this time down to ten to thirty seconds, with merely locking and unlocking taking even just milliseconds.

	Manual Change Systems		
NSR-A	SHS	CWS	MWS
			
	●	●	●
●			
●	●		
●	●		
●	●	●	●
●	●		●
2	6	5	2
	0 .. 58	0 .. 28	0 .. 1
75 .. 600	15 .. 320	20 .. 160	0.5 .. 1
200 .. 1600	25 .. 775	10 .. 200	0.2 .. 0.75
0.02	0.02	0.01	0.1
0.4 .. 1.6	0.14 .. 4	0.07 .. 0.445	0.007 .. 0.016
Adapter plates ISO-9409	Adapter plates/ direct mounting ISO-9409	Adapter plates	Adapter plates
• Form-fitting lock, self-locking, for a reliable connection between the pallet change head and the pallet change adapter • Integrated piston stroke monitoring and tool presence control for monitoring the system	• Integrated pneumatic feed-through for secure energy supply of the handling modules and tools • Optionally available with monitoring of the locking and presence monitoring	• Flat and weight-optimized through direct assembly of the gripper onto the change system without adapter plate. • Integrated pneumatic feed-throughs for reliable electricity, gas and water supply of the grippers	• Extremely flat design for minimal interference contours • Integrated feed-throughs for six pneumatic or electrical signals
●	●	●	●
●	●		
●	●		

Your benefits

- **Payloads up to 1,350 kg** possible
- **Patented** self-locking locking system
- **No-Touch-locking™**
  Secure locking without making contact, for the SWS even when the SWK and SWA do not touch
- **21 sizes** for optimal size selection and a broad application range
- All functional components made of **hardened steel** for **high bearing load capacity** of the change system
- **Transmission possibility** for electric, pneumatic and fluid media
- For a **process-reliable connection** between the quick-change head and the quick-change adapter with **self-sealing couplings**

Compensation Units

Robot Accessories

	Compensation Units			
	AGE-XY	AGE-Z 2	AGE-S	AGE-W
				
Product features				
Pneumatic locking	●	●	●	●
Position memory	●		●	
Screwed flange acc. to ISO-9409 standard	●	●	●	●
Monitoring via proximity switch	●	●	●	●
Technical data				
Number of sizes	3	3	4	1
Compensation stroke XY [mm]	±2.5 .. ±4		4 .. 12	
Compensation stroke Z		8 .. 10	10 .. 14	
Rotatory compensation [°]	±12 .. ±16			±19
Spring force [N]		20 .. 120	240 .. 1100	
Piston force Z at 6 bar in extended position [N]		500 .. 1500	800 .. 3000	
Piston force Z at 6 bar in retracted position [N]		300 .. 1450		
Weight [kg]	0.46 .. 1.5	0.55 .. 1.7	2.6 .. 29.5	2.7
Locking force at 6 bar [N]	235 .. 580		800 .. 2700	
Horizontal payload [kg]	0 ... 10	0 .. 5	0 .. 100	23
Vertical payload [kg]	0 .. 15	0 ... 12	0 .. 160	
Repeat accuracy [mm]	0.01	0.02	0.1	±0.09
Axial force F_z [N]	1700 .. 3200	200 .. 500	110 .. 2000	
Moment load capacity M_x, M_y [Nm]	16 .. 30	10 – 30	30 .. 500	68
Twist torque M_z [Nm]	3.5 .. 9	20 – 80	30 .. 250	62
Angular compensation x [°]				±13
Angular compensation y [°]				±13
Angular compensation z [°]				±13
Advantages/your added value				
	• Robust guidance for high moment loads even with minimal space requirements.	• Locking in order to switch the unit rigid in retracted or extended position.	• Three compensation directions XYZ in one unit. • Compact design for minimal design heights.	• Deflection in rotation and in the angle compensates for inaccuracies in the component position. • Centric locking via ball system. • Protective cover is optionally available.
ISO flange pattern, simple assembly on most types of robot without additional adapter plates	●	●	●	
Field of application				
	Universally applicable for assembling, palletizing and inserting workpieces with high precision			For use in assembly, for loading and unloading and for bin picking
Ambient conditions				
Clean	●	●	●	●
Slightly dirty			●	●
High-temperature version on request	●	●	●	

	Tolerance Compensation Unit	
AGE-F	TCU	FUS
 	 	 
	•	•
•	•	•
4	8	5
±1.5 .. ±5		±1.7 .. ±2.2
		0.4 .. 1.3
	1 .. 1.5	2.5 .. 5
0.5 .. 190		
0.1 .. 3.1	0.08 .. 2.45	0.05 to 1.8
	30 .. 700	
0 ... 32		
0.01	up to 0.02	up to 0.01
75 .. 1600		9 .. 395
3.5 .. 50	3 .. 55	1.1 .. 45.2
6 .. 150	1.0 .. 32	
	1 – 2	1
	1	1
	1.2 .. 2	
• Spring reset and spring force adjustable in three spring stiffnesses. Defined centric position with a high repeat accuracy. Compensation stroke flexibly adjustable.	• Pneumatic locking. Long-lasting elastomers, rigid unit during travel.	• Compensates for angular errors and tolerances with jointing applications. This reduces the cycle times and increase the productivity. The pneumatic locking ensures that the unit can be locked centrically and rigid again.
• Direct assembly of parallel and centric grippers. SCHUNK grippers PGN-plus, PZN-plus can be mounted onto AGE-F without additional adapter plate.	• Direct mounting of parallel and centric grippers, no additional adapter plate required.	
Assembling, palletizing and inserting workpieces without feeding external media.	In the fields of assembly automation and machine tool loading.	Assembly tasks with very little play among the parts to be aligned.
•	•	•
	•	•

SCHUNK Compensation Unit AGE-S-XYZ

Palletizing, joining and assembling with flexibility.

The compensation unit AGE-S extends the AGE series (AGE-XY/AGE-Z/AGE-F) for the medium and heavy load range. The compensation unit provides the required flexibility between the effector and the robot arm.

The AGE-S-XYZ helps you to avoid damage to the system and malfunctions, while increasing process reliability. During handling in XY- as well as Z-direction, the unit can be made rigid using the integrated pneumatic lock and eccentrically locked using the position memory in XY-direction.

Your benefits:

- The housing consists of **high-strength, hard-coated aluminum alloy**
- The functional components are made of **hardened steel**
- **Three compensation directions** in one unit, compact design for minimal heights
- **Centric locking** for rigid switching of the unit at a defined centric position
- **Pneumatic position memory** for eccentric locking in deflected position

Rotary Feed-through

Robot Accessories

Rotary Feed-throughs	Rotary Feed-throughs DDF 2	Stationary Rotary Feed-through DDF-SE
		
Product features		
Endless rotary movement	●	●
Screwed flange acc. to ISO-9409 standard	●	
Pneumatic energy transmission	●	●
Vacuum energy transmission		
Electric energy transmission	●	●
Bus transmission		
Technical data		
Number of sizes	12	2
Recommended workpiece weight [kg]	0 .. 250	
Max. speed [RPM]	120	500
Continuous torque [Nm]	0.8 .. 22	4 .. 13
Starting torque [after shutdown] [Nm]	1.3 .. 25	6 .. 20
Forces F_z [N]	1000 .. 9000	2000 .. 4000
Moments M_x, M_y [Nm]	15 to 550	60 .. 250
Moments M_z [Nm]	10 .. 400	60 .. 250
Pneumatic energy transmissions	2 .. 4	4 .. 6
Electrical energy transmission	4 .. 10	6 .. 8
Weight [kg]	0.5 .. 14.2	3.3 .. 9
Advantages/your added value		
	Three versions to choose from **Version 1:** For the feed-through of pneumatic and electrical signals. **Version 2:** For the feed-through of pneumatics. **Version 3:** For the feed-through of electrical signals.	**Standardized shaft end** for easy assembly of gears. **Revolutions of up to 500 RPM** Your gripping system is safely supplied with pneumatics and electronics even in the event of fast, endless rotary movements of up to 500 RPM.
Combined pneumatic and electric feed-through	●	●
ISO flange pattern, simple assembly on most robot types without additional adapter plates	●	
Field of application		
	Rotary feed-through for reliable pneumatic and electric feed-through in the event of robot applications with endlessly rotating movements.	Ideally suitable for the use on rotary indexing tables and for stationary applications.
Ambient conditions		
Clean	●	●
Slightly dirty	●	●

Measuring Systems

Robot Accessories

Measuring Systems	6-Axis Force/Torque Sensors	
	FTN	FTD
		
	NET	DAQ
Protection class IP		
Without IP protection	●	●
IP60	●	●
IP65	●	●
IP68	●	●
Technical data		
Number of sizes	16	16
Calibration	SI-12-0,12 .. SI-40000-6000	SI-12-0,12 .. SI-40000-6000
Evaluation electronics	Net-Box	DAQ card
Weight of sensor [kg]	0.09 .. 47	0.09 .. 47
Range of measurement F_x F_y [N]	±12 .. ±40000	±12 .. ±40000
Range of measurement F_z [N]	±17 .. ±88000	±17 .. ±88000
Range of measurement M_x M_y [Nm]	±12 .. ±6000	±12 .. ±6000
Range of measurement M_z [Nm]	±12 .. ±6000	±12 .. ±6000
Resolution F_x F_y [N]	1/320 .. 1000/160	1/320 .. 1000/160
Resolution F_z [N]	1/320 .. 1000/60	1/320 .. 1000/60
Resolution M_x M_y [Nm]	1/64000 .. 3/2	1/64000 .. 3/2
Resolution M_z [Nm]	1/64000 .. 3/4	1/64000 .. 3/4
Advantages/your added value		
	FTN sensor Evaluation via Ethernet, EtherCAT, DeviceNet, optional PROFINET	**FTD sensor** Evaluation via DAQ card (PCI, USB)
Sizes with different ranges of measurement	16	16
High measured-value resolution and fast data transmission for nearly real-time control	●	●
Robust version, high overload range for a long life span	●	●
Rotation and translation of the coordinate systems in all three directions in space	●	●
Easy operation, minimized commissioning time	●	●
Field of application		
	Universally usable in robot applications such as haptics, medicine, grinding, inspecting, joining and research and development.	
Ambient conditions (sensor)		
Clean	●	●
Slightly dirty	●	●
Extremely dirty	●	●
Humid	●	●

	FTS	Wireless Transmitter FTW
		
	Stand-Alone	
	●	
	●	
	●	
	●	
	16	
	SI-12-0,12 .. SI-40000-6000	
	Stand-Alone-Controller	
	0.09 .. 47	
	±12 .. ±40000	
	±17 .. ±88000	
	±12 .. ±6000	
	±12 .. ±6000	
	1/160 .. 1000/80	
	1/160 .. 1000/30	
	1/32 .. 3/1	
	1/32 .. 3/2	
	FTS sensor Evaluation via analog voltage (0-10 V or DIO)	• Handy wireless transmitters for the 6-axis force/torque sensors SCHUNK FT-Nano and SCHUNK FT-Mini • WiFi transmission allows easy integration of up to 6 sensors into existing WiFi systems • Wireless transmission for mobile applications
	16	
	●	
	●	
	●	
	●	
	Universally usable with robot applications such as haptics, medicine, grinding, inspecting, joining and research and development.	
	●	
	●	
	●	
	●	

SCHUNK 6-Axis Force/Torque Sensor FTN

Interface variety with Ethernet, EtherNet/IP, EtherCAT, DeviceNet and a CAN interface.
With its high-speed data output, four possible communication protocols, remote monitoring via LAN and configuration via web interface, the 6-axis force/torque sensor FTN is currently the most multi-functional force/torque sensor for industrial automation. Suitable for machining tasks in the field of e.g. grinding and polishing, robot assemblies or robotic surgery as well as applications in rehabilitation and neurological applications. The sensor allows for automating difficult assembly, machining and finish machining tasks, that could previously only be performed by hand or using complex special machines.

Your benefits:

- **16 sizes**
- **Torque ranges** between **0.12 Nm** and **6,000 Nm**
- **Load ranges** between **12 N** and **40,000 N**
- **The sensor measures the force and torque** in all **six degrees of freedom.**
- **Simple process integration** due to simple interface compatibility
- Possible **remote monitoring,** via **LAN connection**

SCHUNK Rotary Feed-through DDF 2

More powerful. More versatile. More energy efficient.
The DDF 2 is the latest standard for state-of-the-art robot and assembly applications. It ensures highest process reliability even with 360° unlimited rotational movements. SCHUNK offers the DDF 2 in three variations: for the feed-through of pneumatics or electrical signals or for the combined version. A significantly increased load allows the use of a steel shaft for transmitting dynamic forces and moments. Due to a specially developed seal, the DDF 2 ensures a long service life and energy efficiency due to the possibility of using smaller drives.

Your benefits:

- **85% longer service life** due to newly developed seals
- **50% greater moment load** due to transmission of the dynamic forces and moments via a steel shaft
- **20% greater load capacity**
- Newly developed, **smoothly running** and especially **durable seals** produce a smaller starting and continuous torque, which allows you to use smaller, i.e. more economical drives
- Depending on the size, **two and four pneumatic feed-throughs** are standard, as are between **four and ten electrical transmissions** for signals 1 A/60 V
- Allows for 360° **continuous rotation**
- Complete series with **14 sizes** for optimal size selection
- **Electrical connector contacts** enable rapid and easy replacement in the event of cable breakage at the robot arm or gripper

Monitoring Sensors

Robot Accessories

	Collision and Overload Sensors	
	OPS	OPR
		
	Manual reset	Automatic reset
Product features		
Pneumatic actuation	●	●
Built-in spring optionally available		●
Technical data		
Number of sizes	4	7
Moments M_x, M_y [Nm]	7.5 .. 430	6 .. 2000
Forces F_z [N]	500 .. 7000	440 .. 14000
Axial deflection [mm]	9.5 .. 12	5.1 .. 16
Angle deflection [°]	4 .. 12	8 .. 13
Rotatory deflection [°]	45 .. 360	20
Repeat accuracy [mm]	up to 0.02	±0.025
Operating pressure range [bar]	0.5 .. 6.0	1.4 .. 6.2
Weight [kg]	0.4 .. 7.0	0.24 .. 11.7
Advantages/your added value		
Automatic return position for faster resuming of production after a collision		●
Integrated monitoring for signal transmission in the event of a collision	●	●
Triggering force and moment can be set via the operating pressure for optimum protection of robot and components	●	●
ISO adapter plates are optional for simple assembly on most types of robot without additional production costs	●	●
Field of application		
Standard solution for all robot applications where robots, tools, or workpieces are to be monitored for possible collisions	●	●
Ambient conditions		
Clean	●	●
Slightly dirty		●
Humid		●

SCHUNK OPR, Collision and Overload Sensor

The effective protection both for robots and for handling devices against damage as a result of collision or overload. Unique with automatic return position.

The SCHUNK collision and overload sensors OPR effectively monitor the robot as well as handling devices. SCHUNK OPR features an automatic return position, enabling the system to resume production as soon as possible after a collision. In case of overloads or collisions, the tool plate deflects and, at the same time, automatically actuates the system's emergency stop. The system's sensitivity can be adjusted via the operating pressure.

Your benefits:

- **Automatic reset** into the center position
- **Overload detection** occurs in **X-, Y- (+/-)** and **Z-direction** and equally **during rotation** around the **X-, Y- and Z-direction**
- **Integrated cable breakage control** to avoid malfunctions
- Also available as **IP65** protected version
- **Triggering forces and moments** can be adjusted via operating pressure

Machining Tools	Deburring Spindle		Polishing Spindle
	FDB	FDB-AC	MFT
			
Product features			
Pneumatic actuation	●	●	●
Technical data			
Compensation	Radial	Axial	Axial
Number of sizes	6	2	1
Power [W]	150 .. 1040	250	390
Compensation path [mm]	±5.1 .. ±9.1	±4.1	±7.5 .. 15
Recommended compensation path [mm]	±2.5 .. ±5.1	±2	±7.5
Compensation force [N]	3.1 .. 89	1 .. 25	14 .. 74
Compensating pressure [bar]	1 .. 4.1	1 .. 3	0.34 .. 4.1
Idle speed [1/min]	65000 .. 25000	30000	5600
Air consumption at idle run [l/s]	1.4 .. 7.6	6.6	9
Air consumption blocked [l/s]	3.8 .. 19		
Collet diameter [mm]	3 .. 6		9.5
Weight [kg]	1.1 .. 4.53	0.51	3.3
Advantages/your added value			
Flexible high-frequency spindle for maximum versatility for chamfering	●	●	
Flexible high-frequency spindle for maximum flexibility for polishing or brushing			●
Rigidity of the **spindle adjustable via compressed** air for clean chamfering in any installation position	●	●	●
High speeds for high feed rates	●	●	
Flexible use on robot arms or as a stationary unit	●	●	●
Field of application			
	Standard solution for flexible and robot-guided chamfering of all sorts of workpieces.		
Ambient conditions			
Clean	●	●	●
Extremely dirty	●	●	●

SCHUNK Deburring Spindle FDB

The solution for perfect finishing.
SCHUNK standard solution for flexible and robot-guided deburring of all sorts of workpieces. The drive of the unit is carried out via a pneumatic spindle with of up to 65,000 RPM – depending on the unit size. For compensating part tolerances during machining, the shank has compliant bearings.

Your benefits:

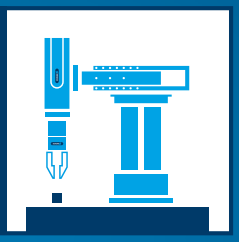
- Flexible **high-frequency spindle** for **maximum versatility** for deburring
- **Adjustable rigidity** of the deburing spindle by means of the pneumatics
- For **clean chamfer edges** in every installation position
- **High rotational speeds**
- For **high** feed rates
- **Versatile use** on the **robot arm** or applicable as a **stationary** unit

The right Solution for every Application

SCHUNK original accessories for sensor systems and pillar assembly components enhance the versatility and the field of application of our standard modules for your application. Optimum functionality, reliability, and precise positioning are ensured by SCHUNK original accessories. Experience highest quality and utmost longevity.

Original accessories for an excellent accuracy of fit and function. Compatible for every SCHUNK standard product, easy integration into existing plants and systems.

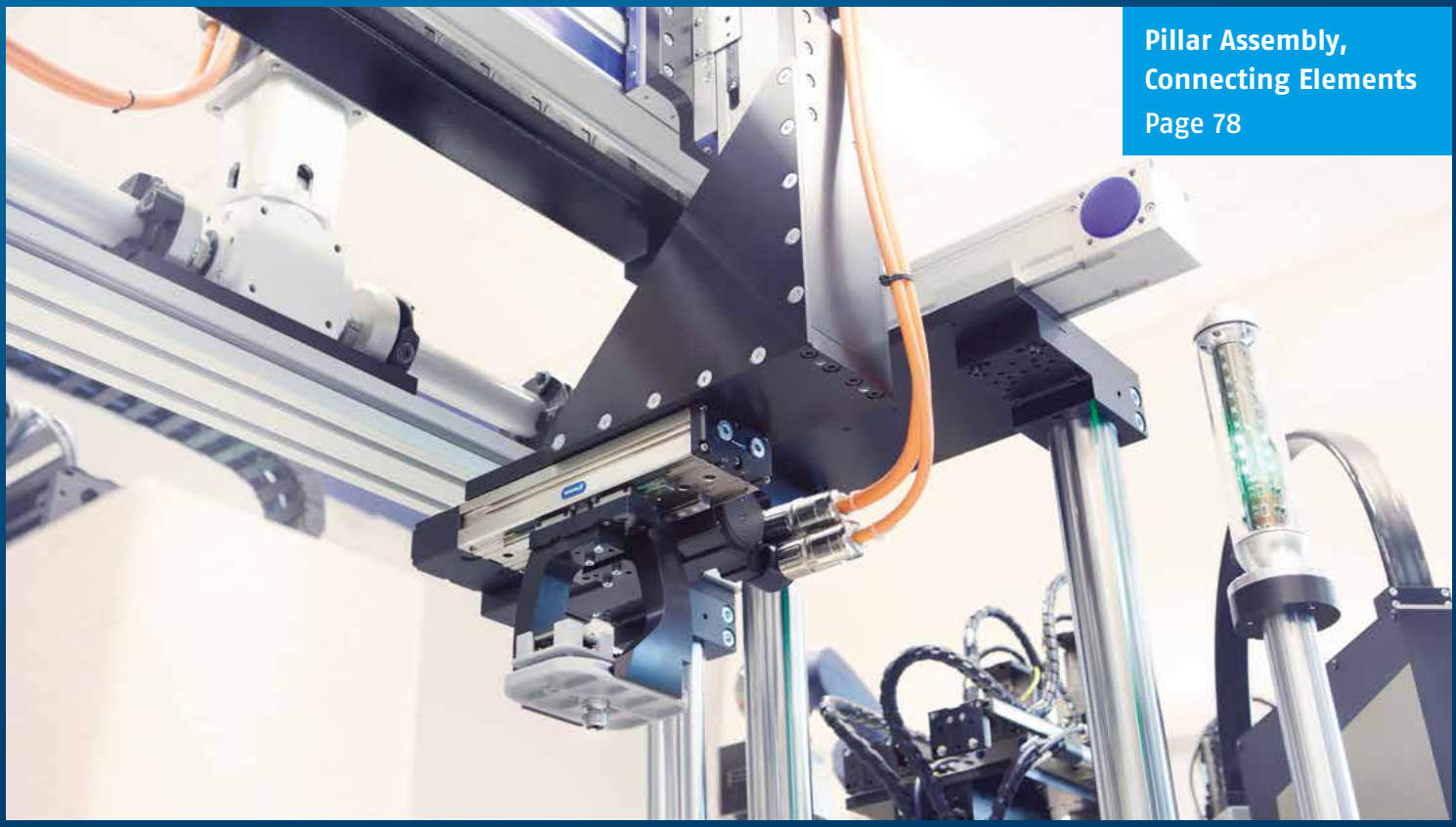
Equipped by SCHUNK



Pillar assembly system **100%** variable, thousands of combinations of SCHUNK components are possible

The world's **most extensive** range of accessories for gripping systems

More than **150** sensors for precise force measurement and workpiece and position monitoring



Pillar Assembly, Connecting Elements
Page 78

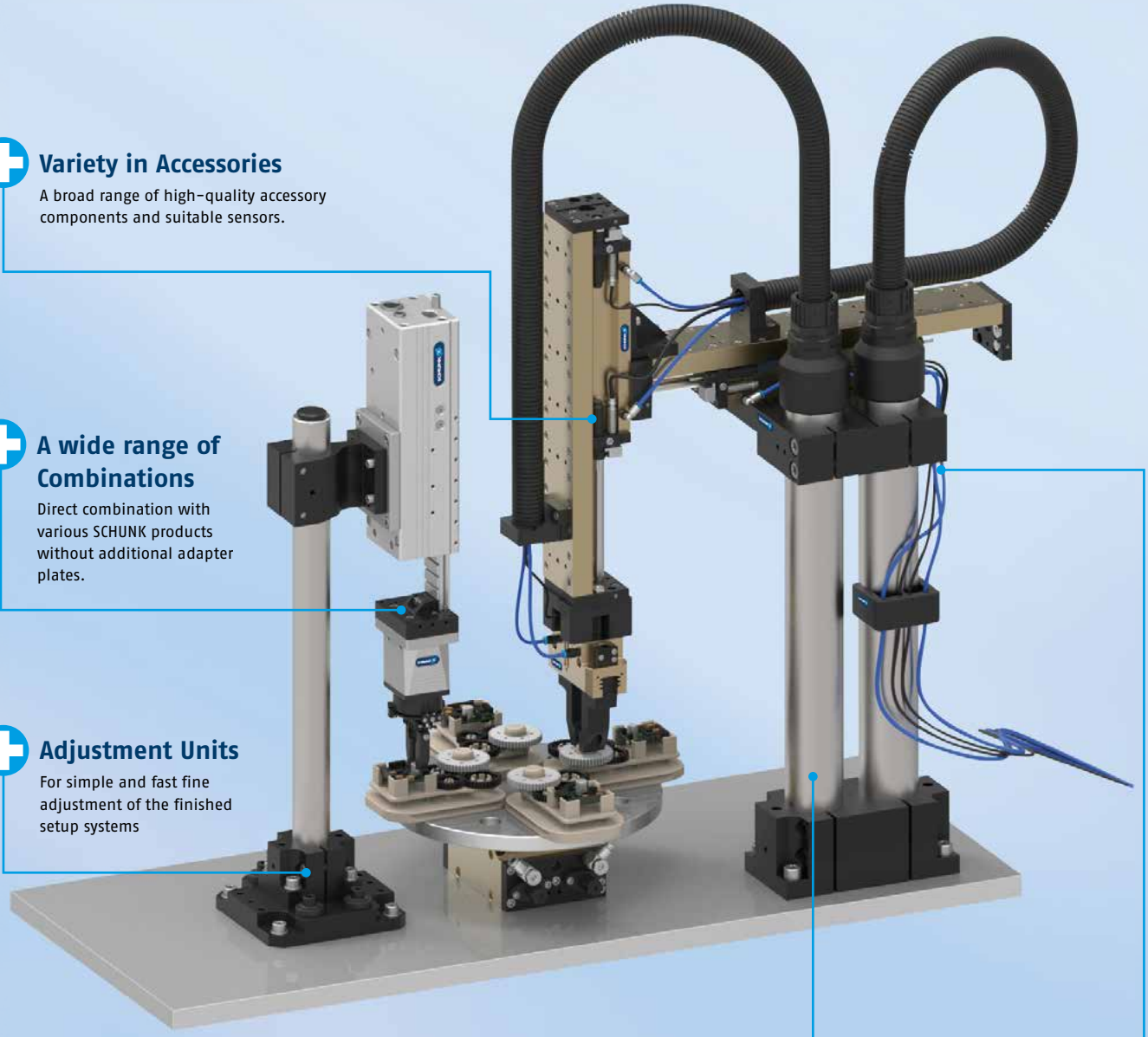
Accessories
Page 82

Sensor Systems
Page 86

SCHUNK Pillar Assembly System SAS

More than 10,000 combination Possibilities

100% Flexibility for your Applications



Variety in Accessories

A broad range of high-quality accessory components and suitable sensors.

A wide range of Combinations

Direct combination with various SCHUNK products without additional adapter plates.

Adjustment Units

For simple and fast fine adjustment of the finished setup systems

100% flexible

Various customized lengths of the pillars possible as standard. Individual or double pillars can be selected.
Various support plates for horizontal, vertical or variable connection on five sides

Media supply

Simple and fast combinations from the modular system

Content

SCHUNK Pillar Assembly System SAS.

Over 10,000 possible Combinations.

With more than 10,000 possible combinations, SCHUNK offers the world's most comprehensive range of pillar assembly applications. The SCHUNK pillar assembly system allows for a combination of diverse handling modules without mechanical adaptation by means of mounting and centering holes, for an exact fit and angular precision as well as the safe, stable, and reproducible mounting of components.

Adjustment Unit VEH

For easy fine adjustments of the finished assembly

- For linear and rotary compensation
- Adjustable with hexagon socket wrench
- Suitable for single and double sockets

Pillar Assembly System

High level of precision despite high modularity and flexibility

- 3 different pillar diameters
- Up to 1,000 mm pillar length
- 17 elements combined as desired
- Direct screw connection for SCHUNK components

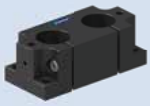
Media Routing

Simple and fast combinations from the modular system

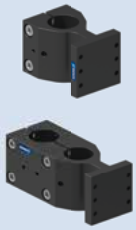
- Precise hose and cable guidance possible
- Either through the hollow pillars or attached with clips along the pillars
- Media hose for supplying the actuators can be mounted directly

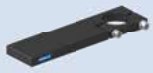
Pillar Assembly System

Connecting Elements

	① Adjustment Unit	② Pillar Assembly System			
	Adjustment Unit VEH	Base Support SOE	Base Support SOD	Hollow Pillars SLH	Horizontal Mounting Plates APEH/APDH
					
Application with					
Pillars Ø 20 mm		●	●	●	●
Pillars Ø 35 mm	●	●	●	●	●
Pillars Ø 55 mm	●	●	●	●	●
Material	Aluminum, hard-anodized	Aluminum, hard-anodized	Aluminum, hard-anodized	Steel, hard-chromium plated	Aluminum, hard-anodized
Description	The adjustment unit simplifies mechanical adjustment of complete handling systems	The base support is the base used for the pillar assembly system and can be directly mounted onto a firm surface	The base support is the base used for the pillar assembly system and can be directly mounted onto a firm surface. A 2-pillar assembly can be mounted with the SOD	Versatile steel pillars can be inserted at various lengths and provide high rigidity	The mounting plates connect the various SCHUNK modules of the modular system to the pillar system
Field of application	For universal use with structures that must be readjusted during assembly.	The base used for all pillar assemblies with a single pillar	The base used for all pillar assemblies with a double pillars	For all assembly systems and frames and as a mounting option for automation components	For attaching SCHUNK linear modules with horizontal movement
Advantages	• Mechanical adjustment • High degree of flexibility	• Robust and highly precise	• Robust and highly precise	• Robust and highly precise • Weight-optimized due to hollow profile • Can be used as a hose and cable channel	• Robust and highly precise • Standardized interface for many SCHUNK products

● = highly suitable/fully supported ○ = suitable to a limited extent

Vertical Mounting Plates APEV/APDV	Horizontal Mounting Plates AMEH/AMDH	Vertical Mounting Plates AMEV/AMDV	Axial Mounting Plates APDA/APEA	Adjustment ring STG/STR
				
●				○
●	●	●	●	●
●	●	●	●	●
Aluminum, hard-anodized	Aluminum, hard-anodized	Aluminum, hard-anodized	Aluminum, hard-anodized	Aluminum, hard-anodized
The mounting plates connect the various SCHUNK modules of the modular system to the pillar system	The mounting plates with functional screw connection diagram connect various SCHUNK modules or customized structures to the pillar system	The mounting plates with functional screw connection diagram connect various SCHUNK modules or customized structures to the pillar system	The mounting plates with functional screw connection diagram connect various SCHUNK modules or customized structures to the pillar system	The adjustment ring provides accurate positioning of the assembly elements that are mounted to the pillars
For attaching SCHUNK linear modules with horizontal and vertical movement	For horizontal attachment of customized structures or other automation components	For vertical attachment of customized structures or other automation components	For attaching customized structures or other automation components	For positioning mounting plates of the pillar assembly system
• Robust and high-precison • Standardized interface for many SCHUNK products	• Robust and high-precision • Flexible mounting options	• Robust and high-precision • Flexible mounting options	• Robust and high-precision • Flexible mounting options • Mounting options on five sides	• Fine adjustment • High degree of flexibility

	Cross Connector KVB	Mounting Plate MPL	③Media Routing Mounting Clip MFC	Hose Routing SPL/MFB/MFS	Hose Routing MFS/MFV/MFK
					
	●	●			
	●	●	●	●	●
	●	●	●	●	●
	Aluminum, hard-anodized	Aluminum, hard-anodized	POM	POM	POM
	Cross connectors allow for right-angle junctions to be included in the pillar assembly system.	The mounting plate offers the possibility of adding extra functionalities or structures	Mounting clips can be used to mount and route cables and hoses along the pillars	The hose routing, which is directly attachable to the linear module, allows for pneumatic hoses or cables to be collectively routed directly from the actuator to the pillar system	The hose routing, which is directly attachable to the pillars, allows for pneumatic hoses routed via the media channels or actuator cables to be routed further from within the hollow pillars
	For expanding the pillar assembly system vertically	For supporting or mounting additional structures	For all pneumatic or electric sensors and actuators that are mounted to the pillar system	For all pneumatic or electric sensors and actuators that are mounted to the pillar system	For all pneumatic or electric sensors and actuators that are mounted to the pillar system
	• Robust and high-precision • High degree of flexibility	• Robust and high-precision • High degree of flexibility	• Module attachable • Reduction of cable breakage	• Module attachable • Reduction of cable breakage • Visual enhancement	• Module attachment • Reduction of cable breakage • Visual enhancement

SCHUNK Grippers

Our Response to Flexibility: Variety in Accessories.

Along with the world's most extensive gripper range, SCHUNK also provides an unmatched range of offering. The PGN-plus universal gripper features a large number of variants and a superior range of accessories offering everything needed for flexible use in your specific automation application. For each kind of application and handling requirement – including under extreme conditions.

Accessories

SCHUNK Gripping Systems

	ABR/SBR	BSWS-B/-A	ABR/SBR-BSWS	BSWS-AR/-UR	UZB	SDV-P
	 26	 21 22	 20 24	 20 25	 18	
Jaw quick-change system		●	●	●		
Adjustable intermediate jaw					●	
Top jaws blank	●		●			
Pressure maintenance valve						●
Field of application	For quick and easy creation of top jaws by adding the clamping contour	With highly diverse workpieces for quick jaw changes with any clamping contours	With highly diverse workpieces for quick jaw changes with simple clamping contours	With highly diverse workpieces for quick jaw changes with any clamping contours	With highly diverse workpieces that can be covered by increasing the clamping width	For applications in which the force or position must be maintained temporarily
Description	Finger blanks made of aluminum or steel for application-specific rework	The BSWS consists of one base and two adapter pins. The form-fit locking mechanics ensures a fast exchange of the gripper fingers	The BSWS consists of two adapter pins and one finger blank with locking mechanism. The form-fit locking mechanics ensures a fast exchange of the gripper fingers	The BSWS consists of two adapter pins and the locking mechanism located in the customized finger. The form-fit locking mechanics ensures a fast exchange of the gripper fingers	Allows fast tool-free and reliable replugging and shifting of top jaws	With a loss of air pressure, venting of the module will be prevented temporarily by the pressure maintenance valve
Advantages	• Matching finger blanks for commonly used gripper types • Clamping contour can be machined rapidly and easily	• One gripper can be used universally in various applications • Quick and easy for high flexibility • Firm up to the max. loadability of the base jaws	• One gripper can be used universally in various applications • Quick and easy for high flexibility • Firm up to the max. loadability of the base jaws • Matching finger blanks for commonly used gripper types • Clamping contour can be machined rapidly and easily	• One gripper can be used universally in various applications • Quick and easy for high flexibility • Firm up to the max. loadability of the base jaws • Clamping contour can be created as required	• Toolless adjustment and clamping for quick and easy conversion • Stable guide bar, suitable for long gripper fingers	• Versatile in its application, since it has standard air connections • Manual air bleed screw means no removal of pressurized hoses

Benefit from the SCHUNK Modular System with over 4,000 standard Components.

More than 30 years of expertise in gripping forms the basis for the largest standardized range of gripping technology in the world with more than 4,000 components, a modular system with perfectly matching standard components on linear modules, turning and rotary actuators and robot accessories.

SCHUNK Compact Change System CWS

The flat and weight-reduced manual change system CWS from SCHUNK ensures the fast manual change of grippers at the robot when re-equipping for a new range of parts. A noticeable increase in productivity can thus be achieved in particular for small and medium batch sizes.

- Simple tool change on the robot due to the simple working principle
- Full compatibility due to integrated ISO robot flange
- The screw connection diagram is used to mount the most important SCHUNK gripping and compensation modules directly on the quick-change system without an adapter plate


12

SCHUNK Compensation Unit TCU

SCHUNK presents the TCU, a compensation unit with base plates connected together by elastomer elements. As a result, the TCU can compensate in the X and Y directions, allowing it to correct angle errors and provide rotational compensation.

- Suitable for gripper types PGN-plus, PZN-plus, DPG-plus and DPZ-plus
- The compensation travel distances in X/Y directions are two to four millimeters depending on the size, while the compensation angles are between 1.5 and 3.5°
- Maximum handling weights between 1 and 24 kg, depending on gripper size


13

SCHUNK Universal Rotary Actuator SRU-plus

Universal pneumatic unit for swiveling and turning movements in both clean and dirty areas.

- Graduated series with a steady increase in torque
- Swivel angle can be selected as either 90° or 180°
- End position adjustability: +3°/-3° (small) or +3°/-90° (large)
- Middle position can be selected as pneumatic or locked
- Fluid feed-through of gases, fluids and vacuums without bothersome hoses, as well as electric rotary feed-through for long-lasting and safe operational feed-through of sensors and actuator signals. Optionally with bus feed-through.
- Electronic magnetic switches or inductive proximity sensors for absolute variability in position sensing

Linear Module CLM

Compact linear modules with reduced length and high power density in relation to size. The mini-slides are ideal for use in constrained installation spaces - shock absorbers and proximity switches are integrated into the projection surface and do not give rise to any interference contours.

- 6 sizes with a total of 22 stroke variants
- 95% available from stock
- More than 20 years of experience with junction roller guides
- 90% of the applications can be implemented in assembly automation
- 0% additional interference contour due to shock absorbers or sensors


16

① **Universal Gripper PGN-plus**
Universal 2-finger parallel gripper with large gripping force and high maximum moments due to multi-tooth guidance

② **Inductive Proximity Switch IN ...**
Inductive proximity switch with molded cables and optional axial/lateral cable outlet

③ **Flexible Positioning Sensor FPS**
Digital measuring system for monitoring up to five different, freely selectable positions

④ **Analog Positioning Sensor APS-Z80**
Inductive measuring system for accurate detection of the gripper jaw position with analog ouput

⑤ **Analog Positioning Sensor APS-M1S**
Mechanical Measuring System for accurate detection of the gripper jaw position with analog output

⑥ **Reed Switch RMS**
Round version of the reed switch

⑦ **Electronic Magnetic Switch MMS 22**
Magnetic switch with either axial or lateral cable outlet for position monitoring

⑧ **Programmable Magnetic Switch MMS 22-PI1**
Magnetic switch with either axial/lateral cable outlet for monitoring a freely programmable position

⑨ **Programmable Magnetic Switch MMS 22-PI2**
Magnetic switch with axial cable outlet for monitoring two freely programmable positions

⑩ **Programmable Magnetic Switch MMS-P**
Magnetic switch with axial cable outlet for monitoring two freely programmable positions

⑪ **Reed Switch RMS-22**
Reed switch for direct assembly in the C-slot

⑫ **Compact Change System CWS**
Manual change system with integrated air feed-through for simple exchange of the handling components

⑬ **Tolerance Compensation Unit TCU**
Tolerance compensation unit for compensation of small tolerances in the plane

⑭ **Compensation Unit XY AGE**
Compensation unit for compensation of large tolerances along the X and Y-axes

⑮ **Adapter Plate ASG**
Adapter plate for combining various automation components in the modular system

⑯ **Compact Slide CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers

⑰ **Optical Distance Sensor OAS**
Optical distance and presence sensor for detecting the presence of a workpiece as well as its distance

⑱ **Universal Intermediate Jaw UZB**
The universal intermediate jaw allows fast, tool-free, and safe movement of top jaws on the gripper

⑲ **Force-measuring Jaws FMS**
Force-measuring jaws for measuring gripping forces and workpiece weights

⑳ **Jaw Quick-change System BSWS-AR**
Adapter coupling of the jaw quick-change system for fast, manual change of top jaws

㉑ **Jaw Quick-change System BSWS-B**
Locking mechanism of the jaw quick-change system for fast, manual change of top jaws

㉒ **Jaw Quick-change System BSWS-A**
Adaptor coupling of the jaw quick-change system for adaptation to the customized finger

㉓ **Customized Finger**

㉔ **Finger Blank BSWS-ABR**
Finger blank made of aluminum with the interface of the jaw quick-change system

㉔ **Finger Blanks BSWS-SBR**
Finger blank made of steel with interface of the jaw quick-change system

㉕ **Jaw Quick-change System BSWS-UR**
Locking mechanism for integration of the jaw quick-change system into customized fingers

㉖ **Finger Blanks ABR/SBR**
Finger blanks made of steel or aluminum with standardized screw connection diagram

㉗ **Intermediate Jaws ZBA**
Intermediate jaws for re-orienting the mounting surface

Accessories

Sensor System

	Position Monitoring					
	MMS 22	MMS-PI 1/2	IN	RMS	FPS	
		 8	 2	 7	 4	
Switching behavior						
1 digital point	●	●	●	●		
2 digital point	●	●				
5 digital point					●	
Analog						
Ambient conditions						
Clean	●	●	●	●	●	
Slightly dirty	●	●	●	●	●	
Extremely dirty				●		
Technical data						
Number of sizes	1	1	6	2	6	
Operating principle	Magnetic	Magnetic	Inductive	Reed	Magnetic	
IP protection max.	67	67	67	67	67	
Supply voltage [V DC]	24	24	24	24	24	
Supply current [mA]	< 50	< 50	< 200	< 10	< 10	
PNP version	●	●	●	●	●	
NPN version	●	●	●	●		
LED display	●	●		●		
Measurement switching distance [mm]	Not adjustable	Not adjustable	0.8 .. 2.5	Not adjustable	Not adjustable	
Closer	●	●	●	●	●	
Opener			●			
Connection type						
Number of wires	3/44	3/4	3	3	7	
Cable version	●	●	●		●	
Connection plug M8 version	●	●	●	●		
Connection plug M12 version			●			

● = highly suitable/fully supported ◑ = suitable in special design (on request) ○ = suitable to a limited extent

Controller ECM. Modular 24/48 V Controller for SCHUNK Modules

Fast and easy commissioning

The modular SCHUNK controller ECM has been developed particularly for electrically driven gripping and rotary modules with an input voltage of 24 V or 48 V. Equipped with standardized plug connections, it can be quickly and easily connected.

Your benefits

- Service interface **USB** and **two rotary encoding switches**
- **Standardized plug-in technqiue** for communication and **cage clamp terminals** for power
- **DIP switches** with first test and commissioning functions
- Clear information on current controller status via **7-segment display** and **4 LEDs**
- **Toolless connection** of the cables with spring cage terminals and plug connectors
- Maximum interface flexibility due to **PROFIBUS, CAN, 4 digital I/Os** and **PROFINET**

schunk.com/controller-unit-ecm

	APS-M1	APS-Z80	MMS-A	Workpiece Monitoring OAS
	 6	 5		 17
				●
	●	●	●	●
	●	●	●	●
	●	●	●	
			●	
	1	1	1	11
	Mechanical	Inductive	Magnetic	Visual
	67	67	67	67
	24	24	24	24
	< 150	< 200	< 50	< 180
				●
			●	
	Not adjustable	0.5 .. 2	Not adjustable	10 .. 200
				●
				●
	3	3	3	3
	●	●		●
		●	●	
			●	

Inductive Proximity Switch IN

Reliable. Contactless. Easy assembly.

Inductive proximity switches are used to monitor the current status of automation components. SCHUNK supplies them in two versions: IN (sensor with 30 cm cable and cable connector) and INK (sensor with 2 m supply cable and wire strands for connecting).

Your benefits:

- **Bracket mounting** for easy and fast assembly
- **Version with LED display** for checking the switching status directly at the sensor
- **Version with plug connector** for fast and easy extension cable replacement
- **Highly flexible PUR cable** for a long service life and resistance against many chemicals
- **Proximity switch is flush mountable** to reduce interfering contours in the application

Force Measuring System FMS

The SCHUNK force measuring system FMS is used for measuring forces acting in the direction of the jaw movements on the base jaw. The intermediate jaws FMS are screwed on between the gripper base jaw and the top jaw, which comes in contact with the workpiece. Gripping forces on the top jaw result in a flow of force through the FMS intermediate jaw. Intelligently arranged strain gauges inside the intermediate jaw react to the resulting deformation. The FMS electronics detects the change in the strain gauges and emits an analog signal indicating the force.

Your benefits:

- **Simplest handling** via a control line that is directly connected to a PLC
- **It is easy to measure** the gripping force that is actually acting
- **Result output via analog voltage value**
- **Simple linear relationship** between output voltage and gripping force
- **Simple zero adjustment** with button or via control line
- **Integrated LC display** for visual monitoring
- **Easy assembly**
- **Dirt and water-tight** for applications even under extreme ambient conditions

All inclusive!

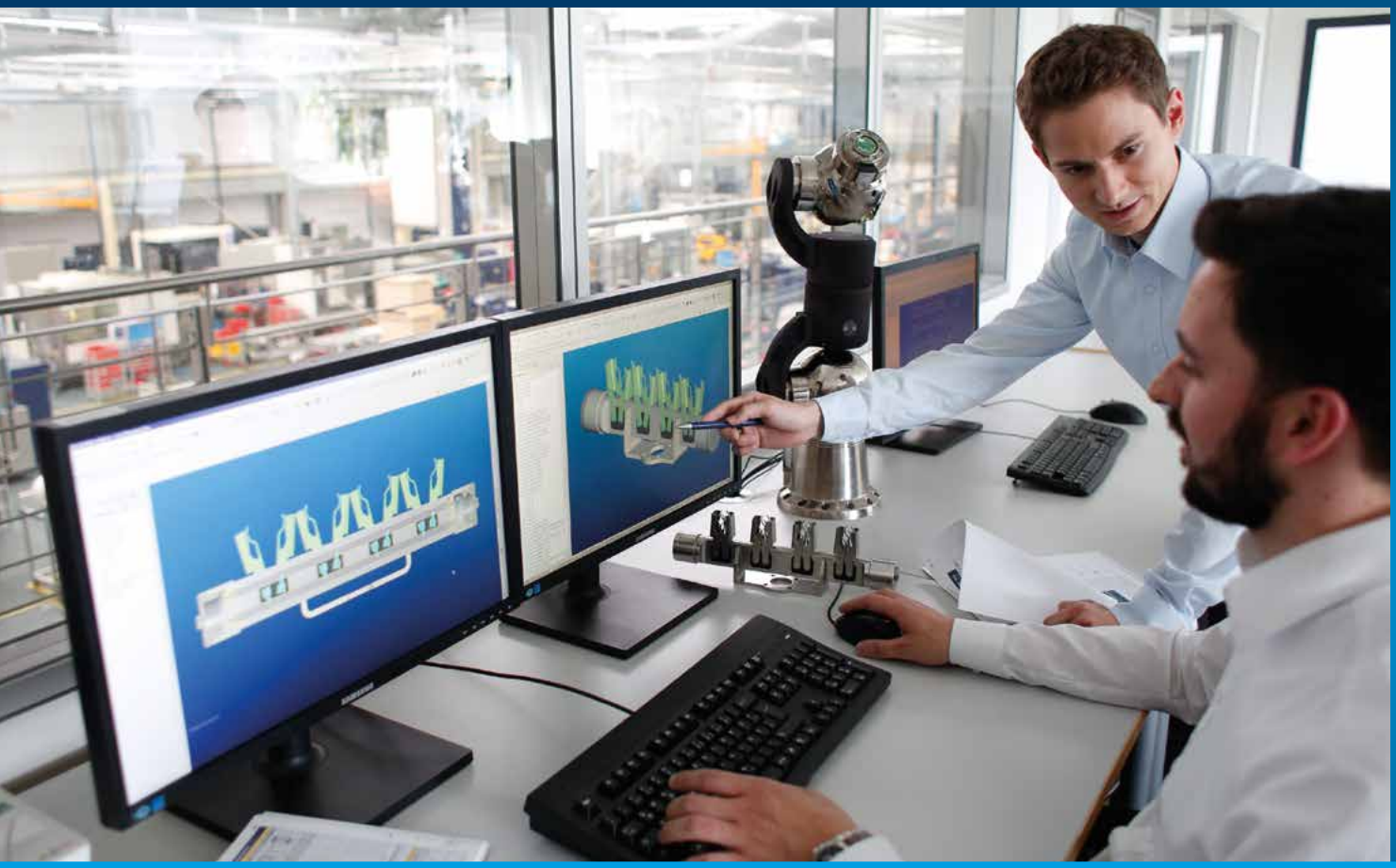
SCHUNK customized Gripping Systems. Benefit from our Experience.

SCHUNK has realized more than **12,000** solutions, a figure that speaks for itself.

Permanent and comprehensive project management is an important part of the SCHUNK philosophy.
Our approach is systematic and tailored to your individual project – each step is traceable and documented.

At SCHUNK, our analysis of complex processes and holistic approach to our customers' parts and products allows us to develop effective, customized gripping systems.
Maximum precision is required in order to present automation processes visually – so we use the latest work technology, from 2D and 3D presentations to 3D simulation. Our components and configurations carry the decisive performance potential that can make your process chain more efficient. We make full use of this potential. And you benefit from this.

Advice › **Project planning** › **Engineering** › **Implementation** › **Service**



This will pay off for you!

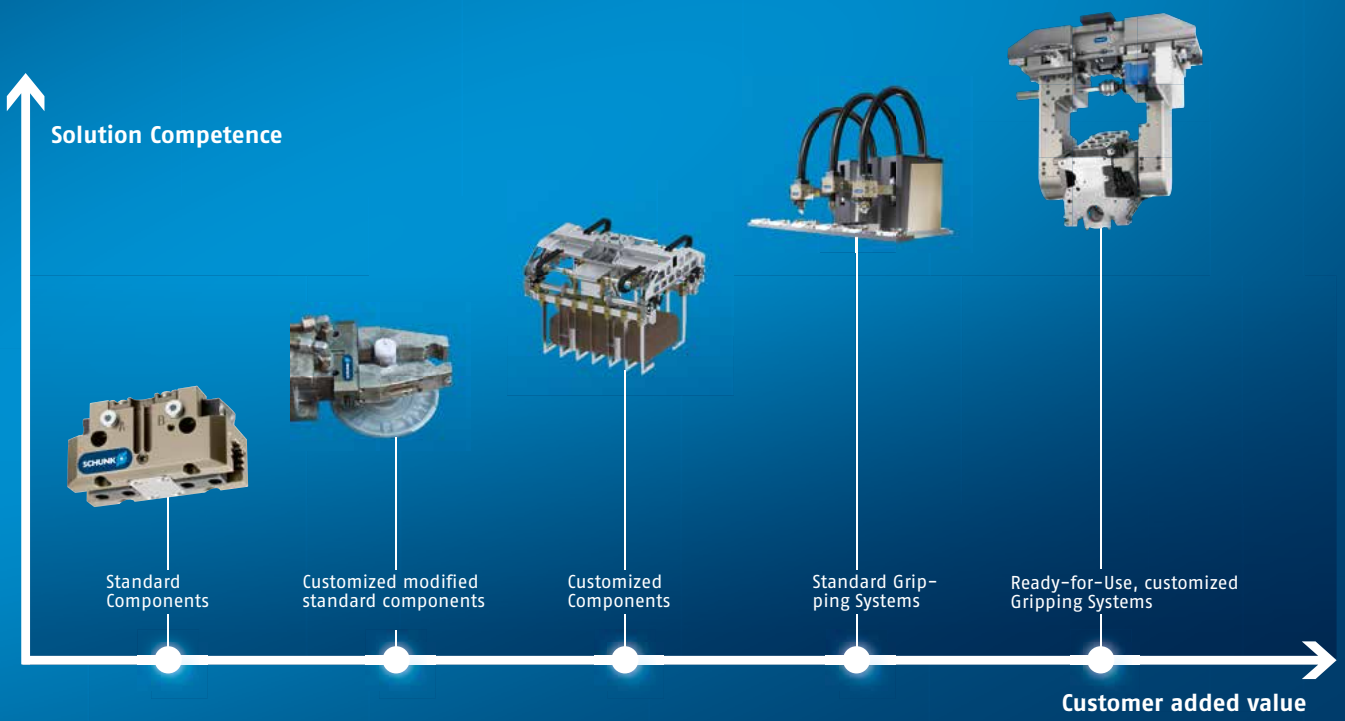
From standard Components to customized Gripping Systems.

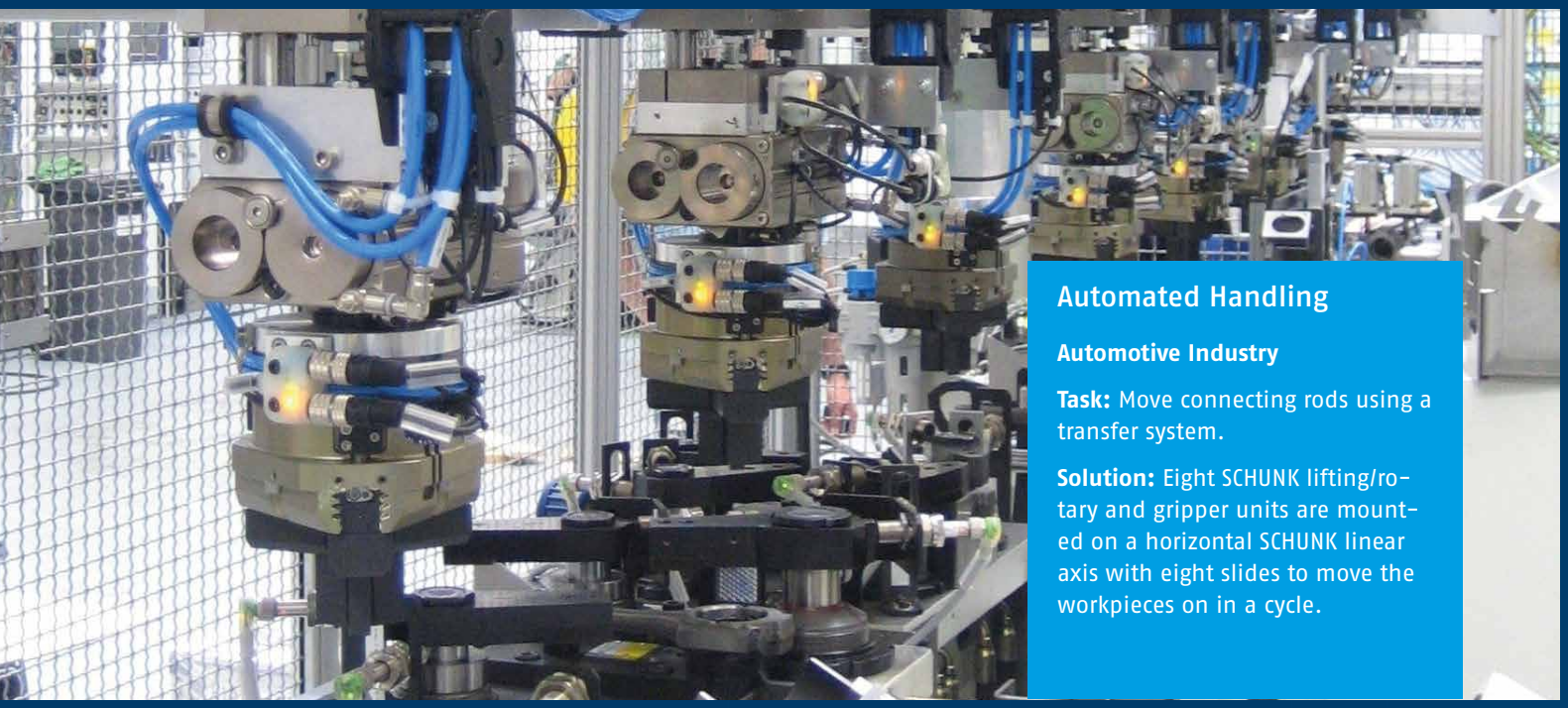
1 personal contact for your solution from one source.

For smooth communications, a personal contact person is available to you from the start of the project until completion. Your contact acts as the liaison between you and those involved in the project, and ensures that information is exchanged smoothly. From planning, to continued support after the conclusion of the project, SCHUNK ensures that your project will be handled cooperatively and efficiently.

Your added value

- Over 30 years of experience with gripping systems
- Over 12,000 implemented gripping systems for most diverse industries
- The world's largest modular system with perfectly adapted standard components
- Highest accuracy of fit due to standardized interfaces
- Shorter project lead times due to standardized systems
- Process-reliable implementation and planning security without extra project costs
- Functional assembly groups fitted on request or ready for use
- Time savings due to the perfect solution from a single source





Automated Handling

Automotive Industry

Task: Move connecting rods using a transfer system.

Solution: Eight SCHUNK lifting/rotary and gripper units are mounted on a horizontal SCHUNK linear axis with eight slides to move the workpieces on in a cycle.

Handling of Sand Cores

Foundry Industry

Task: Sand cores with different weights and interfering contours need to be gripped in a process-optimized way.

Solution: Using a SCHUNK quick-change system SWS in combination with sealed SCHUNK 2-finger long-stroke grippers PSH ensures a safe and precise hold. The SCHUNK gripping systems are designed for carrying loads up to 200 kg, depending on the application.

Conrod Handling

Automotive Industry

Task: To save costs using multiple handling of conrod parts during production.

Solution: A especially developed conrod gripper based on a SCHUNK pneumatic universal gripper PGN-plus with special gripper fingers is mounted on a SCHUNK rotary module ERM. Due to the rotary module with adaptable drive, this solution can use the same drive as the axis system. This creates a universal drive concept.

Handling Plastic Gears

Plastics Industry

Task: Plastic gears must be moved fast and accurately positioned during an assembly process.

Solution: Pneumatic and mechatronic SCHUNK pick & place units from the SCHUNK modular assembly system come individually designed for use. As well as grippers for small components such as the SCHUNK MPG-plus.

Handling of Hinge Parts

Metal Industry

Task: Hinge parts have to be reliably transferred to the workpiece carrier in the linear transfer system.

Solution: Electric and pneumatic SCHUNK pick & place components with pillar assembly system and a compact pick & place unit, SCHUNK gripper for small components EGP and 2-finger parallel gripper PGN-plus as well as an swivel unit SRU-mini come available for use.

Handling of Worm Gear Shafts

Metal-cutting Industry

Task: To remove worm gear shafts in a machining center and store them temporarily before they are machined further.

Solution: A customized SCHUNK gripping system solution comprising two pneumatic 2-finger parallel grippers PGN-plus mounted on a SCHUNK swivel head SRH-plus, which take it in turns to take a ground, finished part from a clamping device and replace it with a blank. Finish-machined parts are deposited on a pallet, raw parts are gripped from the pallet.

SCHUNK Service

Competent and skilled personnel ensure optimal availability of your SCHUNK products, and make sure that their value will be maintained.

Your advantage:

- Fast supply of original spare parts
- Reduction of down-times
- The complete spectrum of components from one source
- Quality and availability that can only be guaranteed by the original manufacturer
- 12-month warranty

Initial operation

- Professional assembly
- Fast and trouble-free

Inspection

- Inspection is carried out by skilled service engineers
- Avoiding unplanned failures of workholding and toolholding equipment

Maintenance

- Regular maintenance carried out by skilled service engineers
- Increasing and ensuring the availability of your workholding and tool-holding equipment

Repairs

- Short down-times due to fast intervention of the SCHUNK service engineers
- Spare parts and accessories

Training

- Fast and practical training
- Efficient use of your SCHUNK products by training of the operating personnel
- The basis for proper machining of workpieces
- Ensures longevity of your SCHUNK products

Individual service – for better results

- Hotline to our inside technical consultants weekdays from 7 a.m. to 6 p.m.
- Project-oriented and on-site technical advice at your location
- Training on innovations and SCHUNK products – across the world in our local subsidiaries

Online service – for a fast overview

All information in digital form, clearly structured and up-to-date on our website at www.schunk.com

- List of contact persons
- Online product search based on product descriptions
- Product news and trends
- Data sheets
- Order forms for easy and convenient ordering
- Free download area for pages from our product catalogs and technical data, for software and calculation programs for your gripping and rotary modules
- Free 2D/3D CAD design models, provided in a wide range of different CAD formats – for easy integration into your design!

schunk.com/service

Catalog order

Copy, complete, fax to **+49-7133-103-2779**

Quality Management ISO 9001:2008
Reg. No. 003496 QM08

schunk.com/catalogorder

The SCHUNK Gripper Catalog

The world's most comprehensive gripper portfolio of more than 1,800 pages. Order now!

Catalog order

Copy, complete, fax to **+49-7133-103-2779**

Gripping Systems

Quantity

Highlights New Products
Current innovations in SCHUNK Gripping Systems ☐

Complete Program Gripping Systems
Catalogs SCHUNK Grippers, Rotary Modules, Linear Modules, Robot Accessories ☐

Catalog SCHUNK Grippers
The compact SCHUNK Gripping Competence on over 1,760 pages ☐

Catalog Linear Modules
The whole variety of SCHUNK Linear Modules on over 750 pages ☐

Catalog Rotary Modules
Cutting-edge technology for rotary movements on more than 610 pages ☐

Catalog Robot Accessories
The SCHUNK End-of-Arm Competence on over 830 pages
The optimum interaction between the robot arm and gripper ☐

Product Overview SCHUNK Grippers
SCHUNK Grippers at a glance ☐

Product Overview Rotary Modules
SCHUNK Rotary Modules at a glance ☐

Product Overview Linear Modules
SCHUNK Linear Modules at a glance ☐

Product Overview Robot Accessories
SCHUNK Robot Accessories at a glance ☐

Product Overview Modular Assembly Automation
Comprehensive range from the modular system ☐

Product Overview Mechatronics³
Alternative – Adaptable – Intelligent ☐

Depanelling Machine

Product Overview Depanelling Machine
Solutions for the complete spectrum of depanelling technology ☐

Clamping Technology

Quantity

Highlights New Products
Current innovations in SCHUNK Clamping Technology ☐

Complete Program Clamping Technology
Catalogs Toolholders, Stationary Workholding, Lathe Chucks, Chuck Jaws ☐

Catalog Toolholders
The complete precision toolholder range for perfect machining on around 520 pages ☐

Catalog Lathe Chucks
Lathe chucks for sophisticated machining of world-renowned quality on 650 compact pages ☐

Catalog Chuck Jaws
With 1,200 types – the world's largest chuck jaw program on over 720 pages ☐

Catalog Stationary Workholding
The largest modular system for individualists with more than 500 variants for workpiece clamping on around 830 pages ☐

Product Overview Lathe Chuck Technology
The whole World of Lathe Chucks ☐

Product Catalog MAGNOS Magnetic Clamping Technology
5-sided workpiece machining in one set-up ☐

Product Catalog PLANOS Vacuum Clamping Technology
The universal, modular designed clamping system with high holding forces ☐

Catalog Hydraulic Expansion Technology
More than 75,000 implemented customized clamping solutions for tool and workpiece ☐

Product Catalog TRIBOS Micromachining
The No. 1 in Micromachining ☐

Synergy SCHUNK

Competence Catalog Clamping Technology | Gripping Systems
The SCHUNK No. 1 service provider for your processing machines and automated production processes ☐

Company	Name	Department
Street	ZIP	City
Tel.	Fax	E-Mail

No. 1

for safe, precise gripping and holding.

Jens Lehmann, German goalkeeper legend,
SCHUNK brand ambassador since 2012
for safe, precise gripping and holding.
schunk.com/lehmann

852 minutes without a goal against him in the Champions League

681 minutes without a goal against him on the national team

2 intercepted penalties in the 2006 World Cup

1 headed goal as a goalie

0 defeats English Soccer Champion

and

More than **2,000,000** sold precision toolholders

About **1,000,000** delivered SCHUNK grippers

More than **100,000** lathe chucks and stationary workholding systems are in use worldwide

More than **16,000,000** sold standard chuck jaws

More than **75,000** implement hydraulic expansion customized solutions

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-2503
Fax +49-7133-103-2189
cmg@de.schunk.com

schunk.com
youtube.com/schunkhq
twitter.com/schunk_hq
facebook.com/schunk.hq