Gripper variety made by SCHUNK:

Your requirements are our motivation

SCHUNK offers the world's most comprehensive portfolio of grippers. Standard grippers, ready-to-install assembly groups, and customized gripping technology solutions for your handling and assembly, automation and robot end-of-arm applications. We always face the most complicated gripping requirements, and we solve them. The result: Robust and durable gripping solutions which have ensured reliability in systems and machines all over the world for 30 years.

Grippers for
Small components

Grippers for handling small, light, and sensitive workpieces

Universal
grippers

Grippers for a wide range of applications

Long-stroke
grippers

Grippers with long jaw stroke and high gripping force

Pneumatic grippers

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

Mechatronic grippers

For the requirements of modern process flows, electric gripper solutions offer many advantages. In modern process flows, our electric grippers enjoy advantages such as application flexibility and process feedback.

Adhesive grippers

The bionically inspired ADHESO gripper technology is based on the principle of adhesion and uses intermolecularly acting Van der Waals forces to handle various workpieces.

Magnetic grippers

SCHUNK's magnetic grippers move ferromagnetic components in any position and size.

Accessories

To match the gripper range, SCHUNK offers accessories for each kind of application and handling requirement – and also in extreme conditions.

Pneumatic grippers

Tech

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

Premium

In the premium segment you will find grippers of the highest quality with a wide range of variants and options. In addition to more robust grippers, we also offer more maintenance-free gripping cycles and long service life.

Parallel gripper

Tech

- Process specialists
- Maximum service life
- Best performance data

KTG

DPG-plus

Premium

- Best performance data
- Maximum service life
- Up to 36 months warranty
- Wide range of variants and matching accessories

MPG-plus

PGN-plus-P

Economy

- Proven SCHUNK quality at attractive conditions
- Focused performance
- Maximum economic efficiency

MPC

JGP-P

Economy

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

The power of our pneumatic grippers

- **Proven**
- **Long service life**
- **Versatile**
- **High-quality**

	Centric grippers			Angular/radial gripper	
					
PSH	ORG	DPZ-plus	PZB-plus	GAP	DRG
					
PHL	MPZ	PZN-plus	PZH-plus	SWG	PRG
					
	JGZ			SGB	

Universal gripper PGL-plus-P

The PGL-plus-P from SCHUNK is a universal 2-finger parallel gripper with long jaw stroke, integrated sensor system, and higher torque absorption.
It is the world's first pneumatic gripper with certified gripping force maintenance.

Secure, certified gripping force maintenance, GripGuard

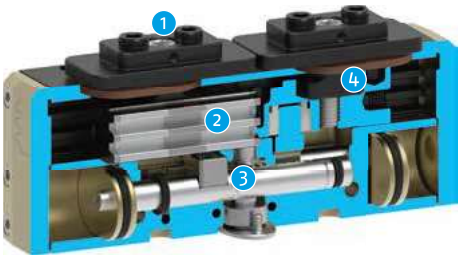
holds the gripped workpiece safely and also ensures a permanent gripping force of min. 80% in case of pressure drop. It also ensures that no dangerous, spontaneous jaw movements can occur in the event of a pressure drop.

Integrated sensor system

for precise and process-reliable monitoring of the complete gripper stroke via IO-Link.

Long jaw stroke

allows flexible handling of a large range of parts.



1. **Base jaw**
with standardized screw connection diagram for adaption of workpiece-specific gripper fingers. The centering sleeves are attached so that they cannot be lost during exchange of fingers

2. **Multi-tooth guidance**
Maximum service life due to lubricant pockets in the robust multi-tooth guidance, and absorption of high forces and torques by means of the large guidance support

3. **Pneumatical drive piston and kinematics**
maximum power generation through two oval pneumatic pistons. The gear rack-and-pinion kinematics ensure synchronization of the base jaws and centric clamping

4. **Dust cover**
The entire circumference of the gripper is encapsulated with metal, and additionally sealed with a lip seal at the base jaws so that it is suitable for universal use, even in dirty environments

Pneumatic positioning device PPD

The pneumatic positioning device is an accessory for pneumatic grippers. Together with a position sensor, any position of the gripper fingers can be approached in addition to the end positions (gripper open and gripper closed). Four integrated high-speed 2/2 valves with the integrated electronics ensure a closed control loop. Communication takes place via IO-Link.

Free positioning of a pneumatic gripper

enables cycle time optimization or collision avoidance by pre-positioning the gripper finger

Adjustability of the gripper jaw speed

for gentle gripping of the workpieces by reducing the gripping impulse

Gripping force adjustability by adjusting the initial pressure

for gripping workpieces of varying sensitivity

1. **Pneumatic positioning device PPD**
2. **Pneumatic gripper** PGL-plus-P-IOL
3. **Position sensor**

	2-finger parallel gripper			
	Premium			
	Gripper for small components		Universal grippers	
	MPG-plus	KGG	PGN-plus-P	PGL-plus-P
				
Description				
	Powerful, compact gripper for small components with smooth-running roller guide of the base jaws	Narrow gripper with long stroke of up to 60 mm per finger	Guaranteed maintenance-free universal gripper with powerful gripping force and high maximum moments	Universal grippers with a long jaw stroke, integrated sensor system and high maximum moments
	For small to medium-sized workpieces	For light to medium-heavy workpieces	For light to heavy workpieces	Flexible handling of a wide range of parts
	Areas of application: Assembly, testing, laboratory, pharmaceutical, food	Areas of application: Universally applicable	Areas of application: Universally applicable	Areas of application: Different applications in clean as well as dirty environments
Advantages				
	Maximum gripping force with oval piston drive	High maximum moment due to the robust T-slot guidance	Precise handling due to robust multi-tooth guidance	Secure, certified gripping force maintenance, GripGuard
	Precise gripping thanks to the minimal play junction roller guide	Direct power transmission and high efficiency thanks to pneumatic 2-piston drive concept	Use of long gripper fingers possible	Precise and process-reliable monitoring of the complete gripper stroke via IO-Link thanks to the integrated sensor system.
	Food-compliant lubrication	Workpiece is clamped centrally using a pinion-rack principle	Process reliability and extended maintenance intervals thanks to permanent lubrication	IP 64 dirt protected as standard
Technical data				
Number of sizes	9	7	11	5
Gripping force [N]	7 .. 370	45 .. 540	180 .. 27000	145 .. 1900
Stroke per jaw [mm]	1 .. 10	10 .. 60	2 .. 45	10 .. 25
Weight [kg]	0.01 .. 0.63	0.09 .. 4.2	0.08 .. 39.8	0.46 .. 7.9
Recommended workpiece weight [kg]	0 .. 1.25	0 .. 2.7	0 .. 97.5	0 .. 7
Closing/opening time [s]	0.01 .. 0.08/0.011 .. 0.08	0.03 .. 0.29/0.03 .. 0.25	0.02 .. 0.8/0.02 .. 0.8	0.03 .. 0.35 / 0.03 .. 0.35
Max. permissible finger length [mm]	80	160	400	100 .. 260
Repeat accuracy [mm]	0.02	bis zu 0.02	up to 0.01	0.03
Protection class IP	30/54	40	40/64	64/67
Cleanroom class ISO 14644-1	6		7 (sizes 40 – 100)	
Sensor system	++	+	+++	+++
High number of variants	++	++	+++	+++
Ambient conditions				
Clean	●	●	●	●
Contaminated/coarse dust	○	○	●	●
Contaminated/fine dust and liquids			◑	●
Contaminated/aggressive liquids			◑	◑
High-temperature range > 90 °C	◑	○	●	●
Cleanroom	◑	○	◑	◑

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Long-stroke grippers		Tech	
		Gripper for small components	Universal gripper
PHL	**PLG**	**KTG**	**PGB**
			
Grippers with high maximum moments and a long jaw stroke	Customizable long-stroke gripper with high gripping force and profiled rail guide	Gripper for small components with center bore	Universal centric gripper with high gripping force and high maximum moments and center bore
For large workpieces and/or a wide range of parts	For very large workpieces and/or a wide range of parts	For small to medium-sized workpieces	For small to medium-sized workpieces
Areas of application: Mechanical and plant engineering, assembly and handling, automotive	Areas of application: Individually configurable for the application area	Areas of application: If workpiece feeding, sensors or actuators are required	Areas of application: If workpiece feeding, sensors or actuators are required
Use of long gripper fingers possible	Stroke per jaw configurable to the millimeter from 100 mm to 400 mm	Low weight for weight-optimized handling solutions	Precise handling due to robust multi-tooth guidance
Workpiece is clamped centrally using a pinion-rack principle	Application-specific standard gripper thanks to diverse variants and options and individual configuration	Large stroke in relation to size	Use of long gripper fingers possible
Universal and flexible gripper assembly	Reduced design effort, simple and fast design via web tool	Precise gripping due to base jaws guided on rolling bearings	Maximum gripping force up to 610 N with oval piston drive
5	5	1	4
500 .. 4630	1650 .. 11650N	13	90 .. 610
30 .. 160	100 .. 400mm	4.5	4 .. 10
1.49 .. 23.55	19.03 .. 137.7	0.08	0.28 .. 1.32
2.5 .. 15.5	8.25 .. 58.25	0.07	0 .. 3.3
0.11 .. 1.82/0.11 .. 2.91	0.08 .. 1.7/1.1 .. 2.2	0.05/0.05	0.02 .. 0.08/0.02 .. 0.08
800	800	50	125
0.02	0.03	0.02	0.01
41	30	20	40
++	++	+	++
++	+++	+	+
●	●	●	●
◑	◑	○	◑
○			
		○	●
		○	○

	2-finger parallel gripper			
Tech				
	Universal gripper	**Long-stroke grippers**		
	DPG-plus	**PFH**	**PSH**	**SPG**
				
Description				
	Reliably sealed universal gripper according to IP67	Grippers with high torque capacity and long jaw stroke	Gripper with long jaw stroke up to 100 mm and dirt-resistant round guides	Stable grippers with high maximum moments and long jaw stroke
	For small to medium-sized workpieces	For large workpieces and/or a wide range of parts	For large workpieces	For heavy workpieces and a wide variance in parts
	Areas of application: for use in harsh environments such as foundries, grinding shops or forges	Areas of application: e.g. handling of motor vehicle rims	Applications: for use in harsh environments and with a wide range of workpieces	Areas of application: assembly, automotive
Advantages				
	Precise handling of different workpieces thanks to robust multi-tooth guidance	Precise handling of different workpieces thanks to robust guidance	Sealed round guidance for long strokes	Precise handling due to robust guidance
	Permanently secure sealing thanks to lip seal on the outer circular guide	Use of long gripper fingers possible	Use of long gripper fingers possible	Use of long gripper fingers possible
	Use of long gripper fingers possible	Centric clamping thanks to double-piston rack-and-pinion principle	Universal and flexible gripper assembly	High efficiency due to direct drive
Technical data				
Number of sizes	11	4	4	1
Gripping force [N]	110 .. 11250	2200	320 .. 1760	10000
Stroke per jaw [mm]	2 .. 45	150 .. 300	14 .. 100	100
Weight [kg]	0.12 .. 52	18.9 .. 33.6	0.77 .. 8.05	35
Recommended workpiece weight [kg]	0 .. 46.35	0 .. 14.7	0 .. 8.8	50
Closing/opening time [s]	0.03 .. 1.1/0.03 .. 1.1	0.7 .. 1.25/0.7 .. 1.25	0.12 .. 0.4/0.12 .. 0.4	1.5/1.5
Max. permissible finger length [mm]	380	900	300	500
Repeat accuracy [mm]	up to 0.01	0.02	up to 0.05	0.1
Protection class IP	67	30	67	30
Cleanroom class ISO 14644-1	5			
Sensor system	+	++	+	+
High number of variants	++	+	+	+
Ambient conditions				
Clean	●	●	●	●
Contaminated/coarse dust	●	○	●	○
Contaminated/fine dust and liquids	●	○	●	
Contaminated/aggressive liquids	◑		●	
High-temperature range > 90 °C	◑	●	●	
Cleanroom	◑		○	

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Economy			
Gripper for small components	Universal grippers		Long-stroke gripper
MPC	JGP-P	PGF	PFH-mini
			
Basic gripper for small components with good price-performance ratio	Basic universal gripper with good price-performance ratio	Compact universal gripper with surface-guided base jaws	Gripper with high maximum moments and a long jaw stroke
For small to medium-sized workpieces up to 1.85 kg	For light to medium-heavy workpieces	Suitable for large workpieces	For large workpieces and/or a wide range of parts
Areas of application: simple applications in small components handling	Areas of application: mechanical and plant engineering, assembly, handling, automotive	Areas of application: universally applicable	Areas of application: mechanical and plant engineering, assembly and handling
Cost-effective alternative	Cost-effective alternative	Very good guidance characteristics due to precise flat guidance	Use of long gripper fingers possible
Wide range of applications thanks to six sizes	Precise handling of different workpieces	Minimal interfering contours despite long stroke	Workpiece is clamped centrally using a pinion-rack principle
Simple, functional gripping system all from a single source	Comprehensive sensor accessories and monitoring of the stroke position with appropriate sensor accessories	Universal and flexible gripper assembly possible	Universal and flexible gripper assembly
6	10	5	3
16 .. 370	180 .. 8200	240 .. 1900	630 .. 2950
2.5 .. 15	2 .. 35	7.5 .. 31.5	30 .. 100
0.05 .. 0.94	0.08 .. 17.2	0.3 .. 5.3	2.65 .. 12.6
0 .. 1.85	0 .. 35	0 .. 7.1	0 .. 13
0.03 .. 0.11/0.03 .. 0.11	0.02 .. 0.7/0.02 .. 0.7	0.03 .. 0.4/0.03 .. 0.4	0.3 .. 1.0/0.3 .. 1.2
60	300	125	250
0.02	up to 0.01	up to 0.02	0.05
30	40	40	41
+	++	+	++
+	+	+	++
●	●	●	●
	◑	○	◑
			○
		●	●
		○	

	3-finger centric cripper		
	Premium		
	Gripper for small components	Universal gripper	Long-stroke gripper
	MPZ	PZN-plus	PZH-plus
			
Desription			
	Small 3-finger centric gripper with base jaws guided on T-slots	Universal 3-finger centric gripper with high gripping force and high maximum moments	Universal 3-finger centric gripper with a long stroke and high maximum moments
	Especially suitable for small workpieces	Flexible handling of a wide range of parts	For large, sensitive workpieces
	Areas of application: universally applicable	Areas of application: can also be used in areas with special requirements such as temperature, chemical resistance, contamination	Areas of application: can also be used in areas with special requirements such as temperature, chemical resistance, contamination
Advantages			
	Precise gripping with high bearing load capacity thanks to T-slot guidance	Precise handling due to robust multi-tooth guidance	Sensitive gripping for deformation-free handling
	Monitoring of finger positions also possible via FPS	Use of long gripper fingers possible	Precise handling due to robust multi-tooth guidance
	Compact dimensions for minimum interfering contours in handling	High force transmission and synchro-nized gripping due to wedge-hook design	Use of long gripper fingers possible
Technical data			
Number of sizes	6	11	4
Gripping force [N]	20 .. 310	255 .. 57300	375 .. 4200
Stroke per jaw [mm]	1 .. 5	2 .. 45	20 .. 75
Weight [kg]	0.01 .. 0.29	0.13 .. 80	1.5 .. 33
Recommended workpiece weight [kg]	0 .. 1.15	0 .. 227	0 .. 22
Closing/opening time [s]	0.02 .. 0.06/0.02 .. 0.06	0.02 .. 4.6/0.02 .. 3	0.25 .. 1.05/0.2 .. 0.85
Max. permissible finger length [mm]	45	250	400
Repeat accuracy [mm]	0.01	up to 0.01	up to 0.02
Protection class IP	40	40/64	40
Cleanroom class ISO 14644-1	5	5	5
Sensor system	+	+++	+
High number of variants	+	+++	+
Ambient conditions			
Clean	●	●	●
Contaminated/coarse dust	◑	●	◑
Contaminated/fine dust and liquids		◑	○
Contaminated/aggressive liquids		◑	○
High-temperature range > 90 °C		●	○
Cleanroom		◑	

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Tech			Economy
Universal grippers			Universal gripper
DPZ-plus	PZB-plus	PZV	JGZ
			
Reliably sealed 3-finger centric gripper according to IP67	3-finger centric gripper with high gripping force and high maximum moments and center bore	Multi-finger gripper for applications, in which two or three fingers are insufficient	Universal 3-finger centric gripper of the compact class with T-slot guidance and best cost-performance ratio
For rough or dirty workpieces	Flexible handling of a wide range of parts	E.g. for cylindrical workpieces	Flexible handling of a wide range of parts
Areas of application: wide range of applications from wet cells, grinding machines, lathes and milling machines to powder and paint spraying systems	Areas of application: when workpiece feeding, sensors, actuators or customer-side attachments are required	Areas of application: MedTech, laboratory automation, pharmaceuticals	Areas of application: mechanical and plant engineering, assembly and handling, automotive
Precise handling of different workpieces thanks to robust multi-tooth guidance	Precise handling of different workpieces thanks to robust multi-tooth guidance	Process-reliable handling despite interfering contours	Cost-effective alternative
Permanently secure sealing thanks to lip seal on the outer circular guide	Use of long gripper fingers possible	Precise handling due to robust multi-tooth guidance	Compact dimensions and low weight for minimum interfering contours in handling
Use of long gripper fingers possible	Multi-functional range of applications due to high gripping forces	High force transmission and synchronized gripping due to wedge-hook design	Use of long gripper fingers possible
8	9	5	7
230 .. 16500	340 .. 27400	570 .. 6900	225 .. 7990
2 .. 25	2 .. 35	4 .. 16	2 .. 16
0.2 .. 20.1	0.26 .. 53	0.5 .. 10	0.12 .. 8
0 .. 60	0 .. 100	0 .. 34.5	0 .. 30
0.03 .. 1.8/0.03 .. 1.8	0.02 .. 2.5/0.02 .. 2.5	0.02 .. 0.15/0.02 .. 0.15	0.02 .. 0.8/0.02 .. 0.8
160	250	140	200
up to 0.01	up to 0.01	up to 0.01	up to 0.01
67	40	40	40
5			
+	++	+++	++
++	+	+	+
●	●	●	●
●	◑	◑	◑
●	○		
◑	○		
●	●	◑	
◑			

	Angular/radial grippers		
	Premium		
	Gripper for small components	Universal gripper	
	SWG	PWG-plus	PRG
			
Description			
	Narrow double-acting 2-finger angular gripper	Robust 2-finger angular gripper with oval piston and bone drive	180° radial gripper with powerful 1-pin crank system and oval piston
	For small to medium-sized workpieces	Flexible handling of a wide range of parts	Flexible handling of a wide range of parts
	Areas of application: areas which require a stacked, space-optimized gripper arrangement	Areas of application: can be used in challenging environments	Areas of application: applications that require a large gripping force with the shortest possible movement sequences at the same time
Advantages			
	Narrow design, allowing the grippers to be arranged in a row	Variable top jaw design, as grippers are available in jaw version, but also in finger version via intermediate jaws	Almost constant closing torque at closing angles from −5° to +7° due to kinematics
	Spring-supported gripping force maintenance in the event of a pressure loss	Equipped with gripping force maintenance in the event of a pressure loss	Optimized cycle time due to innovative damping directly in the drive chain
	High force transmission and synchronized gripping due to wedge-hook design	Optional stroke limitation upon opening, for confined spaces and short cycle times	Higher closing moments for longer and more stable gripper fingers due to maximum power density
Technical data			
Number of sizes	8	8	8
Gripping moment [Nm]	0.01 .. 2.8	3.32 .. 1025	2 .. 295
Opening angle per jaw [°]	15	15	30 .. 90
Weight [kg]	0.0025 .. 0.213	0.13 .. 13.6	0.13 .. 6.72
Recommended workpiece weight [kg]	0 .. 0.46	0 .. 23.13	0 .. 6.96
Closing/opening time [s]	0.015 .. 0.03/0.02 .. 0.06	0.06 .. 0.32/0.06 .. 0.46	0.06 .. 0.75/0.06 .. 0.92
Max. permissible finger length [mm]	42	300	240
Repeat accuracy [mm]	0.05	0.02	up to 0.05
Protection class IP	30	30	20
Cleanroom class ISO 14644-1			
Sensor system	+	++	++
High number of variants	+	++	++
Ambient conditions			
Clean	●	●	●
Contaminated/coarse dust	○	◑	○
Contaminated/fine dust and liquids		○	
Contaminated/aggressive liquids		○	
High-temperature range > 90 °C	●	●	●
Cleanroom	○	○	○

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

Tech		Economy	
Gripper for small components	Universal gripper	Gripper for small components	
GAP	DRG	SGB	SGW
			
Compact, double-acting, 2-finger angular parallel gripper for parallel O.D. gripping after swiveling in the gripper finger up to 90 degrees per jaw	Sealed 180° angular gripper for the use in contaminated environments	Small, single-acting, plastic 2-finger angular gripper with spring return	Small, single-acting, plastic 3-finger angular gripper with spring return
For small to medium-sized workpieces	Flexible handling of a wide range of parts	For small to medium-sized workpieces	For small to medium-sized workpieces
Areas of application: applications requiring parallel external gripping with previous swiveling of the gripper fingers up to 90° per jaw	Areas of application: can be used in dirty environments	Areas of application: applications requiring corrosion resistance and anti-static properties	Areas of application: applications requiring corrosion resistance and anti-static properties
Positively driven angular and parallel movement in a single functional unit	Completely sealed gripper version	Cost-effective alternative	Cost-effective alternative
Maximum positioning accuracy, due to absolute centric clamping in the parallel stroke	Opening angle adjustable from 20° to 180°	Light and corrosion free, housing is made from fiberglass-reinforced plastic	Light and corrosion free, housing is made from plastic
High force transmission and synchronized gripping due to stable kinematics	Equipped with gripping force maintenance in the event of a pressure loss	High power transmission and synchronized gripping thanks to single-acting double-piston drive with lever transmission	High power transmission and synchronized gripping thanks to single-acting 3-piston drive with lever transmission
4	5	3	3
56 .. 430	8.2 .. 143	0.9 .. 4.95	1.35 .. 7.45
30 .. 90	10 .. 90	8	8
0.16 .. 1.33	0.5 .. 4.46	0.04 .. 0.06	0.05 .. 0.17
0 .. 1.25	0 .. 7.2	0 .. 0.8	0 .. 1.3
0.09 .. 0.35/0.09 .. 0.35	0.4 .. 0.3/0.5 .. 0.6	0.06 .. 0.08/ 0.04 .. 0.05	0.02 .. 0.02/0.03 .. 0.03
65	125	50	50
0.05	0.1	0.1	0.1
40	67	20	20
+	++	+	+
++	++	+	+
●	●	●	●
○	●	○	○
	●		
	◑		
	●		
○	○	○	○

	Special grippers		
	Tech		
	0-ring gripper	Gripper with shaft interface for toolholder	
	ORG	GSW-B	GSW-B with AGE
			
Description			
	6-finger gripper for process-reliable internal and external assembly of 0-rings	Universal gripper	Universal gripper with compensation unit
	For 0-rings, quad-rings, etc. up to 160 mm outer diameter	Flexible handling of a wide range of parts	Flexible handling of a wide range of parts
	Areas of application: automated assembly	Areas of application: for fully automated loading and unloading of machining centers	Areas of application: for fully automated loading and unloading of clamping devices such as vises
Advantages			
	Exterior and interior assembly with one gripper for flexibility and cost savings	Cost effective module consisting of a universal gripper PGN-plus-P/PZN-plus and a shank interface	Cost effective module consisting of a universal gripper PGN-plus-P/PZN-plus and a shank interface
	Reliable performance due to new mounting principle for high availability	Fast automated gripper change from the tool rack	Fast automated gripper change from the tool rack
	Standard assembly finger for external assembly for common ring sizes for fast commissioning	Fully automatic tool change without the use of robots or gantries	Fully automatic tool change without the use of robots or gantries
Sensor system	+		
High number of variants	+	++	++
Ambient conditions			
Clean	●	●	●
Contaminated/coarse dust		●	◑
Contaminated/fine dust and liquids		◑	◑
Contaminated/aggressive liquids		◑	◑
High-temperature range > 90 °C		●	●
Cleanroom	○		

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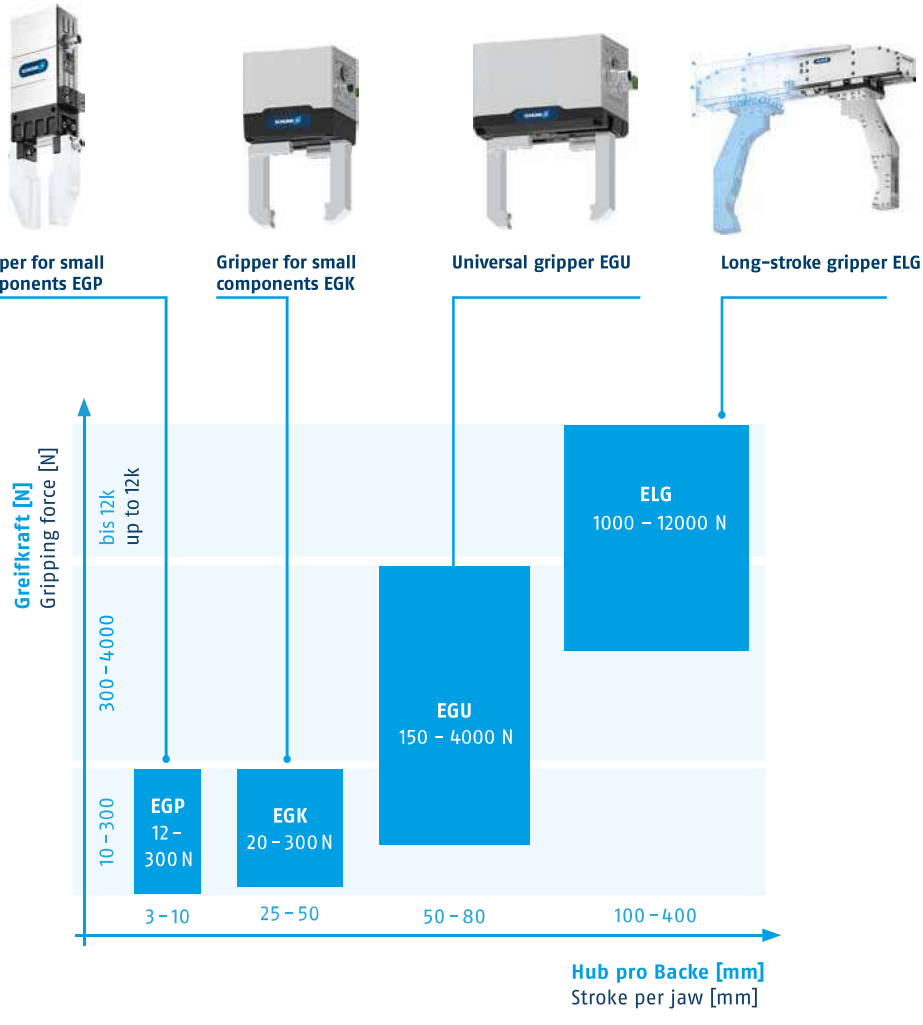
				Internal hole gripper
	GSW-V	GSW-M	RGG	LOG
				
	Vacuum gripper VGS for spindle interfaces	Magnetic gripper for spindle interfaces	Cleaning unit for up to 80 bar operating pressure	Light gripper made of very resistant polyamide with closed diaphragm system
	For flat workpieces weighing up to 4.9 kg	For flat, ferromagnetic workpieces	For machine fluid (filtered, max. particle size of 30 µm) or filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4].	For light workpieces up to 3 kg weight such as small components, plastic components and sand cores
	Areas of application: for fully automated loading and unloading	Areas of application: for fully automated loading and unloading	Areas of application: for cleaning of clamping devices and for automated cleaning of machine tools	Areas of application: particularly suitable for highly dynamic applications with lightweight workpieces
	Cost-effective unit for flexible automation in the machine	No electricity required, actuated using cooling lubricant	Cost-effective unit for flexible automation in the machine	High dynamics in the application due to low weight
	Fast automated gripper change from the tool rack	Cost-effective unit for flexible automation in the machine	Fast automated cleaning for maximum machine utilization	A closed membrane system and internal stop protect the expansion membrane from damage
	Fully automatic tool change without the use of robots or gantries	Fully automatic tool change without the use of robots or gantries	Increased safety for machine operators	A long service life ensures long-lasting economical use
	+	+	+	+++
	●	●	●	●
	○	○	●	●
	○	○	●	●
			●	
			●	
				○

Mechatronic grippers

Our range of electric parallel grippers currently comprises four product series that are optimally adapted for use in various application areas in terms of gripping force and stroke. This allows you to quickly find the right gripping solution for your application.

For the requirements of modern process flows, mechatronic gripper solutions offer many advantages

- **Flexibility:** Variety of parts, adjustment options (positioning, stroke, force, modes), future-proof thanks to new software functions that can be added at a later date
- **Reducing the workload of employees**
  Connectivity: Added value through standardized interfaces (flexible and simple networking with all relevant robot and controller manufacturers)
- **Process feedback:** For greater process stability and reliability due to integrated monitoring and analysis options
- **Independent of compressed air:** For improved availability, cleanliness and sustainability even in mobile applications



Connectivity EGK and EGU

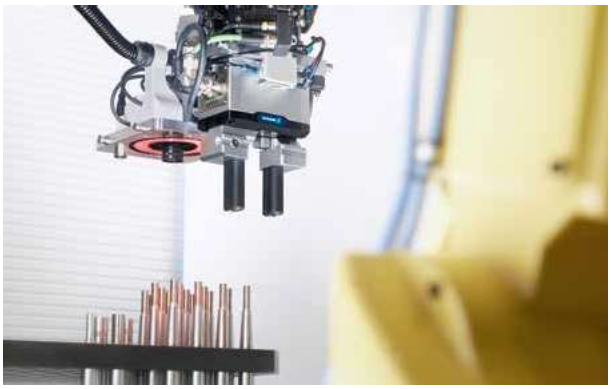
Communication interfaces
For easy integration, the two new mechatronic grippers EGU and EGK are equipped with a variety of communication interfaces.
This allows them to be quickly and easily connected with all relevant robot and controller manufacturers.

PLC integration
For a seamless interaction between gripper and PLC control, function modules for the programming interface of leading manufacturers are available (Allen Bradley, Beckhoff, Siemens). This means that all gripper functions can be used directly without any additional programming effort.

Robot integration
In order to be able to integrate grippers quickly and easily into robot control systems (ABB, FANUC, KUKA, Universal Robots, Yaskawa), software modules are available. These enable the use of all gripper functions without additional programming effort.

Application examples

Flexible machine tool loading



Assembly and joining tasks

Handling of printed circuit boards in electronics production

Laboratory automation

	2-finger parallel grippers		
	Gripper for small components		Universal gripper
	EGP	**EGK**	**EGU**
			
Description			
	2-finger gripper for small components with smooth-running base jaws guided on roller bearings	Versatile 2-finger gripper for small components for maximum workpiece diversity with maximum process reliability	Versatile 2-finger universal gripper for the highest level of workpiece variety with maximum robustness
	For precise small components handling with short cycle times	For delicate and fragile workpieces such as printed circuit boards, samples and trays	Universal workpiece handling, even for large and heavy workpieces
	Areas of application: electronics manufacturing, laboratory automation and assembly automation in rigidly interlinked production processes	Areas of application: flexible production processes in electronics manufacturing and laboratory automation	Areas of application: loading and unloading of machine tools, assembly and joining tasks with external process forces
Advantages			
	Compact dimensions for minimum interfering contours in handling	Versatile and productive due to the long and freely programmable jaw stroke with stepless gripping force adjustment	Versatile and productive due to the long and freely programmable jaw stroke with stepless gripping force adjustment
	Control via digital I/O for easy commissioning and rapid integration into existing systems	Gripping force maintenance with loss detection	Gripping force maintenance with loss detection
	Control via IO-Link. Enables pre-positioning of the gripper finger and evaluation of the gripper condition as well as the adjustability of special gripping modes	Always referenced in the event of both emergency stop and power failure thanks to integrated absolute encoder	Always referenced in the event of both emergency stop and power failure thanks to integrated absolute encoder
Technical data			
Number of sizes	4	3	4
Gripping force [N]	12 .. 300	20 .. 300	150 .. 4000
Stroke per jaw [mm]	3 .. 10	26.5 .. 51.5	41 .. 80
Dead weight [kg]	0.11 .. 0.83	0.58 .. 1.63	1.44 .. 7.88
Max. permissible finger length [mm]	80	130	200
Nominal voltage [V]	24	24	24
Protection class IP	30	67	67
Communication interface	Digital I/O, IO-Link	PROFINET, EtherNet/IP, EtherCAT, IO-Link, Modbus RTU	PROFINET, EtherNet/IP, EtherCAT, IO-Link, Modbus RTU
Sensor system			
High number of variants	+++	+++	+++
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 ++ = large selection +++ = very large selection

		3-finger centric gripper	Special gripper
Long-stroke gripper	Collaborating	Universal gripper	Servo-electric 5-finger gripping hand
ELG	Co-act EGP-C	EZN	SVH
			
Configurable 2-finger long-stroke gripper with a gripping force of up to 12000 N	Collaborating 2-finger gripper for small components with control via 24 V and digital I/O	3-finger parallel gripper with high maximum moments due to multi-tooth guidance	The servo-electric 5-finger hand grips almost as perfectly as the human hand
For large, bulky and heavy workpieces	For small and light workpieces	For cylindrical workpieces	For a wide variety of gripping and manipulation tasks
Applications: customized, handling of crates, boxes, rims, white goods and much more	Areas of application: applications with direct collaboration between humans and cobots	Areas of application: loading and unloading of machine tools	Areas of application: mobile robotics, research and development
Adaptable drive motor for flexible actuation and easy integration into existing control concepts	Plug & Work: compatible with a wide range of cobots	External electronics for easy integration into existing control concepts via PROFINET	Various gripping operations can be executed with high sensitivity thanks to the moving parts with a total of nine drives
Reduced design costs due to simple and fast design of individual long-stroke grippers via the web tool	Certified by German statutory accident insurance (DGUV)	Centering of cylindrical workpieces	Reliable grip on objects due to elastic gripping surfaces
CAD data available at the press of a button; the gripper can be immediately integrated into the CAD system design	Functional safety ensured due to inherent safety with current limitation	Possibility of pre-positioning for cycle time reduction due to a short working stroke	Extremely compact design due to integration of the complete control, regulator, and power electronics in wrist
4	2	2	1
1000 .. 12000	140 .. 230	500 .. 800	
100 .. 400	6 .. 10	6 .. 10	
8.1 .. 56.5	0.59 .. 1.38	0.98 .. 2.48	1.3
800	80	80	
Motor-dependent	24	24	24
20 .. 44	30	41 .. 65	20
Controller-dependent	Digital I/O	PROFINET	RS485
			+
+++	++	++	+
●	●	●	●
●		●	
◑		◑	

ADHESO Adhesive gripper

The ADHESO gripper technology is based on an adhesive system inspired by nature. The adhesive forces used by animals such as geckos for locomotion are now being utilized by SCHUNK for use in handling applications in the most diverse of fields.

The advantages of the ADHESO gripper technology are revolutionary

- **Low operating costs due to energy-efficient gripping** without an additional energy supply
- **Gripping without any visible residues** for sensitive workpieces
- **No particle emission,** making it suitable for clean room applications
- **Versatile in use and ideally adapted** to different ranges of applications

Material and surface

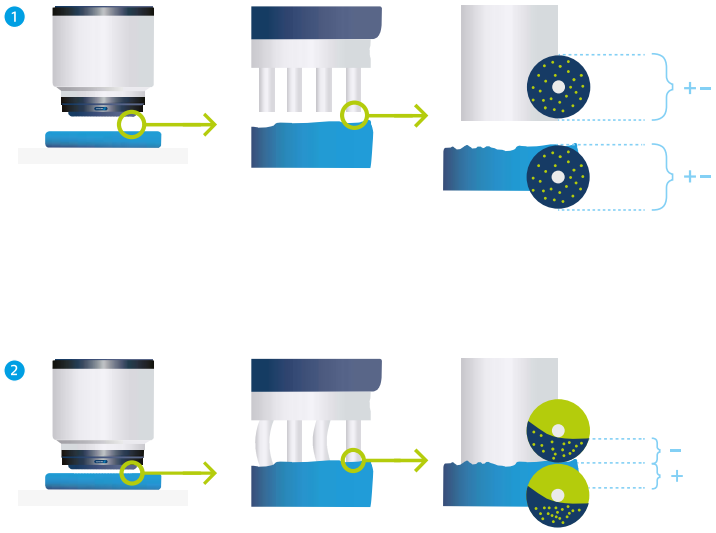
SCHUNK grippers with ADHESO gripper technology have a distinctive surface architecture made of special polymers. The result is a structure of extremely finely structured legs, which adheres residue-free to the different materials and objects. The scalability options and use of different material characteristics allows the adhesive structure to be adapted to different workpieces and surfaces. This makes grippers with ADHESO technology easy to customize for the most diverse workpieces and applications.

IKU
Der Innovationspreis für Klima und Umwelt 2022
Preisträger

The German Federal Ministry for Economic Affairs and Climate Protection awarded the innovative ADHESO gripper technology from SCHUNK with the IKU 2022.

Principle of function

The bionic-inspired ADHESO gripper technology is based on the principle of adhesion, using intermolecularly acting Van der Waals forces for handling various workpieces and materials. Due to the high variability of the adhesive structures, grippers with ADHESO technology can be individually tailored to different applications.



1. **Initial situation**
2. **Gripping process**

Application examples

Handling of lab samples

Handling of semiconductors

Handling of vehicle components

Handling of food

Magnetic gripper

As if by superpower, SCHUNK's magnetic grippers move ferromagnetic components in any position and size. Whatever their position – the workpieces are always gripped quickly and securely. A short pulse of current is all it takes to get the magnetic grippers ready for use. Uncomplicated, easy to handle and exceptionally strong – it's time to add the invisible force of magnetism to your production!

The advantages of magnetic gripping technology offer you real added value

- **High holding forces for reliable part handling** in compact systems
- **Actuation via 24 V voltage supply** saves energy and simplifies connection and wiring
- **Workpiece accessibility** from five sides free from interfering contours
- **Low weight for high dynamics** in challenging applications
- **Reliable maintenance of holding force** for process-reliable use even in emergency-stop scenarios

Application examples

Handling of battery round cells

Handling of sheet metal

Bin picking of raw parts

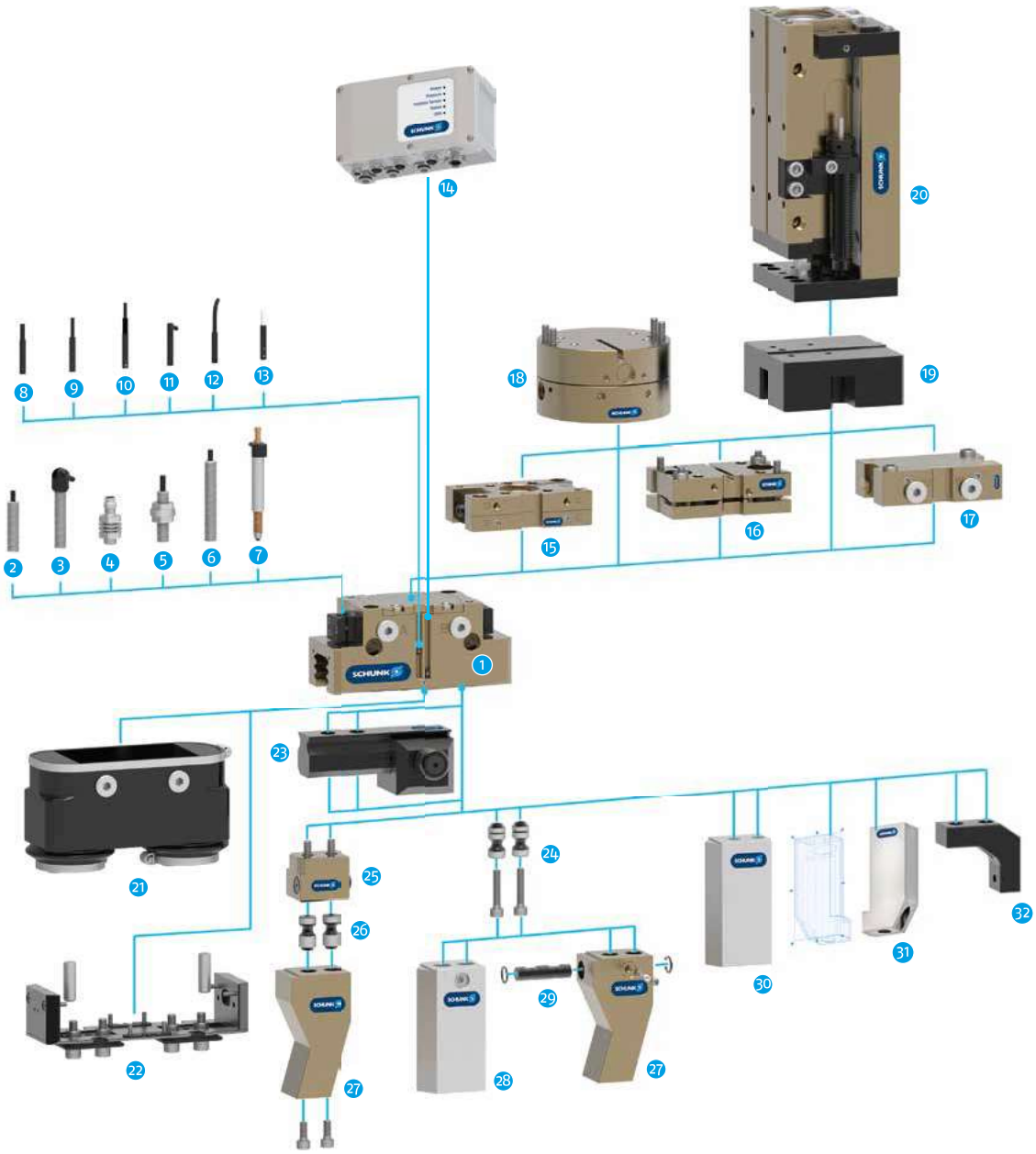
Handling of motors

	Electromagentic grippers	
	EGM	**EMH**
		
Description		
	Compact electro-permanent magnetic gripper for energy-efficient handling	Compact electro-permanent magnetic gripper for energy-efficient handling with integrated electronics and feedback function
	For ferromagnetic workpieces weighing up to 118 kg	For ferromagnetic workpieces weighing up to 70 kg
	Areas of application: universally applicable for a wide variety of parts	Areas of application: universally applicable for a wide variety of parts
Advantages		
	Reliable part handling in compact systems due to high holding forces in very small spaces	Reliable part handling in compact systems due to high holding forces in very small spaces
	Low weight for high dynamics in challenging applications	Compact design due to integrated electronics without additional controller
	Reliable gripping force maintenance for process-reliable use even in emergency-stop scenarios	3:1 ratio of workpiece weight to dead weight for high dynamics in demanding applications
Technical data		
Number of sizes	14	6
Gripping force [N]	780 .. 20370	530 .. 10550
Weight [kg]	1 .. 25	1 .. 8
Recommended workpiece weight [kg]	0 .. 118	0 .. 70
Closing/opening time [s]	0.3	0.2
Nominal voltage [V]	400 AC	24 DC
Nominal current [A]	2.2 .. 12.3	3.1...9.8
Protection class IP	54	52
Communication interface	Controller-dependent	Digital I/O
High number of variants	+++	++
Motor & controller		
Motor		
Controller	External	Intergrated
Controller type	ECG	
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 ++ = large selection +++ = very large selection

Accessories

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



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

Sensor system

2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet

3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet

4 **IN-C 80**
Inductive proximity switch, directly plugable

5 **FPS**
Flexible position sensor for monitoring up to five different, freely selectable positions

6 **APS-Z80**
Inductive position sensor for precise position detection of the gripper jaws with analog output

7 **APS-M1S**
Mechanic measuring system for accurate acquisition of the gripper jaw position with analog output

8 **MMS 22**
Magnetic switch with straight cable outlet for monitoring a position

MMS 22-PI1
Magnetic switch with straight cable outlet for monitoring freely programmable positions

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

10 **MMS 22-PI1-HD**
MMS 22-PI1 in robust design

MMS 22-PI2-HD
MMS 22-PI2 in robust design

11 **MMS 22-SA**
Magnetic switch with lateral cable outlet for monitoring a position

MMS 22-PI1-SA
Magnetic switch with side cable outlet for monitoring a freely programmable position

MMS 22-PI1-EX
Magnetic switch in ATEX version with straight cable outlet for monitoring a freely programmable position

12 **MMS-P**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions

13 **MMS-A**
Analog magnetic switch with straight cable outlet for measuring the gripper jaw position with analog output and teach function

MMS-IOL
Magnetic switch with straight cable outlet for measuring the gripper jaw position with IO-Link interface and teach function

Complementary products

14 **PPD**
Pneumatic positioning device for flexible control of pneumatic grippers

15 **CWS**
Manual change system with integrated air feed-through for simple exchange of the handling components

16 **TCU**
Tolerance compensation unit for compensation of small tolerances in the plane

17 **SDV-P-E-P**
Pressure maintenance valve for temporary force and position maintenance

18 **AGE**
Compensation unit for compensation of large tolerances along the X and Y axes

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

20 **CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers

21 **HUE**
Sleeve for protection against dirt

22 **SAD**
Dustproof version, retrofit kit

Finger accessories

23 **UZB**
The universal intermediate jaw allows for the fast tool-free and reliable plugging and shifting of top jaws on the gripper.

24 **BSWS-AR**
Adapter coupling of jaw quick-change system for fast, manual change of top jaws

25 **BSWS-B**
Locking mechanism of the jaw quick-change system for fast, manual change of top jaws

26 **BSWS-A**
Adapter coupling of the jaw quick-change system for adaptation to the customized finger

27 **Customized fingers**

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

BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system

29 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers

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

31 **FGR**
Configurable, workpiece-specific gripper finger made of aluminum or steel

32 **ZBA**
Intermediate jaws for reorientation of the mounting surface

	Finger accessories			
	Workpiece-specific gripper fingers	Top jaw blank	Jaw quick-change system	Jaw quick-change system
	FGR	ABR/SBR	BSWS-B/-A	BSWS-BM/-A
	 31	 30	 25 26	 26
Description				
	Workpiece-specific configurable gripper finger made of aluminum or steel	Blanks made of aluminum or steel for rework by the customer	Jaw quick-change system consisting of a base and two adapter pins	Tool-free jaw quick-change system consisting of a base and two adapter pins
	Suitable for many gripper types	Suitable for common gripper types	Handling of various workpieces	Handling of various workpieces
	Areas of application: universally applicable	Areas of application: for quick and easy creation of top jaws by adding the clamping contour	Areas of application: with highly diverse workpieces for quick jaw changes with any clamping contours	Areas of application: with highly diverse workpieces for quick jaw changes with any clamping contours
Advantages				
	Easy configuration of individual gripper fingers	Matching finger blanks for commonly used gripper types	Fast replacement of the gripper fingers thanks to the form-fit locking mechanics	One gripper can be used universally in various applications
	Short delivery times for quick availability without tying up your own resources	Easy to assemble due to standardized drilling pattern	Saving time when converting applications	Tool-free jaw change via the unlocking button
	No CAD program or expertise required thanks to license-free web tool	High replacement accuracy due to centering	Universal use of one single gripper in various applications	Saving time when converting applications

				Complementary products		
	Jaw quick-change system with top jaw blank	Jaw quick-change system	Adjustable interme-diate jaw	Pneumatic positioning device	Pressure maintenance valve	Protective cover
	ABR/SBR-BSWS	**BSWS-AR/-UR**	**UZB**	**PPD**	**SDV-P**	**HUE**
	 28	 29	 23	 14	 17	 21
	Jaw quick-change system consisting of two adapter pins and a finger blank	Jaw quick-change system consisting of two adapter pins and locking mechanism of the customized finger	Universal intermediate jaw for fast tool-free and reliable plugging and shifting of top jaws on the gripper	Pneumatic positioning device for flexible control of pneumatic grippers	Prevents venting of the module in the event of a loss in air pressure in the supply line	Protective cover for gripper against external influences in a dirty environment
	Handling of various workpieces	Handling of various workpieces	Handling of various workpieces	The PPD enables flexibility through free positioning, gripping force and speed adjustment in every appli-cation where pneumatic grippers are used	This is especially useful for grippers where a mechanical grip force maintenance solution is not possible	Suitable for grippers PGN-plus-P, PGN-plus, PZN-plus, EGN and EZN
	Areas of application: with highly diverse workpieces for quick jaw changes with any clamping contours	Areas of application: with highly diverse workpieces for quick jaw changes with any clamping contours	Areas of application: with highly diverse workpieces that can be covered by increasing the clamping width	Fields of application: suitable for use in industrial environments due to the sealed design of the PPD	Areas of application: temporary force or position maintenance for various pneumatic actuators	Areas of application: suitable for applications of up to IP65 if an additional sealing of the cover bottom is provided
	Fast replacement of the gripper fingers thanks to the form-fit locking mechanics	Fast replacement of the gripper fingers thanks to the form-fit locking mechanics	Gripper and finger-side centering for universal and flexible assembly of the gripper	Free positioning of a pneu-matic gripper enables cycle time optimization or colli-sions avoidance due to pre-positioning of the gripper fingers	Greater operational safety when using pneumatic components	Cost effective for economical handling
	Saving time when con-verting applications	Saving time when con-verting applications	Stable guide strip, suitable for long gripper fingers	Adjustable gripping force since the output pressure can be adjusted for gripping differently sensitive workpieces	Long-term reliable application thanks to robust design	Can be retrofitted
	No disturbing mounting bores in the finger contour	No disturbing mounting bores in the finger contour	Precise and repeatable grid	Adjustable gripper jaw speed for gentle gripping of the workpiece since the gripping impulse is reduce	Universally applicable, as it can be combined with almost any pneumatic actuator	Space-saving due to low interfering contours

Sensors

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

● = highly suitable/fully supported

Cables

	Cables	
	Sensor cable	Actuator cable
		
Description		
	Optimally suited for signal transmission of SCHUNK sensor technology	Perfectly suited to supply and control SCHUNK components
	Areas of application: for use on all SCHUNK sensors as well as components with integrated sensor technology	Areas of application: the connectors are used for every sensor, gripping, rotary and linear module, and also for numerous components in the robot accessories field
Advantages		
	Industrial standard plug connector	Industrial standard plug connector
	Different connections possible (straight/angled)	Different connections possible (straight/angled)
	Combination with plug-in connector possible	Combination with plug-in connector possible

			Monitoring of the overall stroke			
		5 digital switching points	IO-Link signal	Analog signal		
	MMS-P	FPS	MMS 22 IO-Link	APS-M1	APS-Z80	MMS-A
	 12	 5	 13	 7	 6	 13
	1	3	1	1	1	1
	Magnetic	Magnetic	Magnetic	Mechanical	Inductive	Magnetic
	67	67	67	67	67	67
	24	24	24	24	24	24
	100	200	25			
	●	●	●			
	●		●			●
	5 .. 55	–25 .. 70	5 .. 55	0 .. 60	–10 .. 70	5 .. 55
	●	●	●			
	4	7	3	4	3	3
	●	●		●	●	
	●		●		●	●
			●			●
	●	●	●	●	●	●
	●	●	●	●	●	●

			Plug connector
	Communication cable	Power/sensor cable	Plug-in connectors
			
	Optimally suited for reliable transmission of bus signals from the higher-level control system to the mechatronic SCHUNK components	Perfectly suited to supply and control SCHUNK components	For the assembly of cables for sensors and actuators
	Areas of application: the connectors are used for every sensor, gripping, rotary and linear module, and also for numerous components in the robot accessories field	Areas of application: the connectors are used for every sensor, gripping, rotary and linear module, and also for numerous components in the robot accessories field	Areas of application: in connection with sensors, actuators, distributors and cables. Wherever customized cable lengths are required
	Industrial standard plug connector	Industrial standard plug connector	Industrial standard plug connector
	Different connections possible (straight/angled)	Different connections possible (straight/angled)	Different connections possible (straight/angled)
	Available in torsion or cable track capability	Suitable for connection to the respective SCHUNK component	Easy assembly