



Superior Clamping and Gripping



SCHUNK Grippers

The World's most proven
Grippers on the Market



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Grippers on the Market

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Spann- und Greiftechnik

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schunk.com

Follow us





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

J. Lehmann
Jens Lehmann





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 for gripping systems and clamping technology – from the smallest parallel gripper to the largest chuck jaw program.

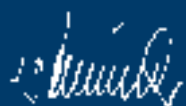
In order to boost efficiency, SCHUNK customers have bought more than 2,000,000 precision toolholders, 1,000,000 SCHUNK grippers, and 100,000 lathe chucks and stationary workholding systems so far.

This makes us proud and motivates us to attain new top performances.

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 the team spirit of more than 3,500 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

It's time to use your machine's

With superior components, find potentials in your machine where you would least expect to find them.

**Make full use of your machine's potential –
with the extensive product portfolio from SCHUNK.**

SCHUNK, the competence leader for gripping systems and clamping technology, can now open up the full potential of your processing machines and production processes. Reduce costs by combining accurate, flexible workpiece machining with dynamic production automation.

SCHUNK Synergy – when everything fits together.

With SCHUNK Synergy, you benefit from superior components from our innovative family-owned company and the result of a perfectly harmonized interplay of gripping systems and clamping technology. The more SCHUNK, the more efficient it is.

full potential!



"Gripping systems and clamping technology – the perfectly adjusted interplay makes you a champion in terms of productivity. We call it SCHUNK Synergy."

Let's have a look where the potentials in your machines are hidden."

J. Lehmann

Jens Lehmann

SCHUNK No. 1 Products for higher Productivity ...



up to **20** tons load handling
MAGNOS magnetic lifting technology

... in your Lathe

... in your Lathe

60 seconds jaw change

Lathe chucks **ROTA-S plus 2.0** and **ROTA THW plus**



300% better surface quality

TLEINblo^{***} – innovative hydraulic expansion toolholders, for lathes and turning/milling centers

1,200 standard chuck jaws

The world's largest chuck jaw program for every chuck type



... for your Automated Machine Loading



300 kg lifting force

Robot coupling **NSR-A** for pallet handling – space-saving and extremely flexible

... in your Automated Handling System



No. 1 unique

PGN-plus-P, the world-proven gripper on the market – Now with permanent lubrication in the multi-tooth guidance



more than **500** standard combinations for line and room gantries from the modular system

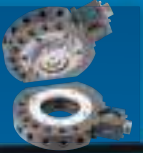
100% cycle increase

Universal swivel unit SRU-plus 20-S, the new benchmark in top performance



90% faster gripper change

Quick-change system SWS – fully automatic gripper change within seconds



... for your Automated Machine Loading



... in your Machining Center

100% control

TANDEM clamping force block KSP plus with jaw monitoring



30% more productivity

Automated machine loading with the SCHUNK gripper PGN-plus-P with spindle interface GSW



90% less set-up costs

with VERO-S, due to set-up during processing time

20 mm height

VERO-S NSE mini – the pneumatic quick-change pallet system in a very flat design



... in your Automated Handling System



... in your Machining Center



... in your Automated Assembly



75,000 customized solutions

Hydraulic expansion technology for tool or workpiece clamping

100% encapsulated

KONTEC centric clamping vise KSK fully functional in harsh environments



5-sided workpiece machining

in one set-up – MAGNOS magnetic clamping technology



0.3 mm shank diameter

TIRLIBOLS mini sets a benchmark in micro machining

less than **3** μ run-out accuracy

TIRLIBOLS-SVL super-slim tool extension optimized interfering contours



up to **85,000** RPM

TIRLIBOLS-S predestined for high-speed cutting



... in your Automated Assembly



180% better gripping force – mass ratio
EGP – The powerful electronic gripper for small components with integrated electronics

∞ combination options
SCHUNK modular assembly system



25% greater gripping force
MPG-plus – The most powerful pneumatic miniature gripper in the market

110 picks per minute
PPU-E – The fastest pick & place unit in the market, PPU-P with 90 picks/min



... in your Service Robotics Application

Future handling



6 degrees of freedom

Powerball lightweight arm LWA 4P
The lightweight arm with the world's most compact performance. Used on mobile platforms



less than **3** μ run-out accuracy
T|E|N|D|O|S-R with unique patented polygonal clamping technology



100% suitable for all SCHUNK toolholders
T|E|N|D|O-SVL tool extension – optimized interfering contours and super-slim



up to **80** bar coolant-proof or to peripheral coolant
Versatile clamping range with intermediate sleeves GZB-S



more than **35** years of experience in T|E|N|D|O hydraulic expansion technology. T|E|N|D|O, the original. With 29 interfaces, versatile, with 3 μ run-out accuracy



2,000 Nm torque with \varnothing 32 mm
T|E|N|D|O E compact for large volume cutting, boring, reaming, and threads



0 μ permanent run-out accuracy
T|E|N|D|O zero, perfect vibration damping, resulting in up to 50% longer service life



SCHUNK Grippers

The World's most proven Grippers on the Market

Our product line of gripping systems, which includes standard grippers, ready-to-install gripping system assemblies and an extremely broad range of customized gripping system solutions, is the most comprehensive of its kind. SCHUNK grippers are characterized by maximum product quality, precision, and diverse monitoring capabilities and have been setting standards worldwide for more than 30 years in automation systems in all industries. The optimum graduated series cover the entire spectrum of workpiece sizes. A prerequisite for this state-of-the-art technology, which is "Made in Germany", is our never-ending innovative potential. SCHUNK offers more. More willingness to accept challenges and to implement ideas, more commitment to invest in innovative technologies, more flexibility to solve the problems of a rapidly developing future.

Strong arguments for SCHUNK grippers:

- High gripping forces
- Long stroke ranges in relation to the gripper size
- Easy commissioning
- High torque capacity
- Powerful kinematics for maximum service life
- Economical solutions and short delivery times due to modular design
- Pneumatic or electric



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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 sensors, 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

Over **50** process-stable pneumatic, electrical or combined SCHUNK rotary feed-throughs.

schunk.com/feeding-through



DDF 2

DDF-SE

Protecting

Over **60** collision and overload sensors used to monitor, record and avoid collisions.

schunk.com/protecting



OPR

OPS

Measuring

Over **150** sensors for precise measurement of forces and torques.

schunk.com/measuring



FTN

FTW

Changing

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

schunk.com/changing



SWS

SHS

EWS

Compensating

Over **90** components to compensate position deviations and tolerances between robot and the tool.

schunk.com/compensating



AGE-Z 2

TCU

SCHUNK Grippers

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

Flexible SCHUNK deburring spindles for the use on robots with up to **65,000** revolutions per minute.

schunk.com/machining



FDB

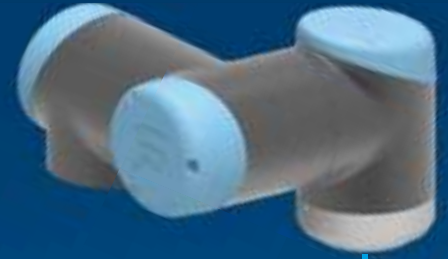
FDB-AC

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

The new SCHUNK End-of-Arm Modular System

The most comprehensive modular Gripping System for all Universal Robots on the Market.

The new SCHUNK End-of-Arm modular system, exclusively for Universal Robots, facilitates the individual and fast automation of handling and assembly tasks. The modular system provides a combination of a force/torque sensor, change system and a wide range of grippers.



Up to **36** product combination possibilities

schunk.com/ea-ur

Collaborating SCHUNK Grippers
Collaborating gripper for small components



Co-act EGP-C

Electric SCHUNK Grippers
Gripper for small components



EGP



Measuring

6-axis force/torque sensor FT-AXIA completely with adapter plates.



FT-AXIA

Changing

Manual change system SHS Quick-change master (SHK) and quick-change adapter (SHA) with suitable through-feeding module.



SHS

Pneumatic SCHUNK Grippers

Pneumatic gripping systems with direct connection and integrated micro valves, sensor system with connection cable.



PGN-plus-P



KGG



PSH



PZN-plus



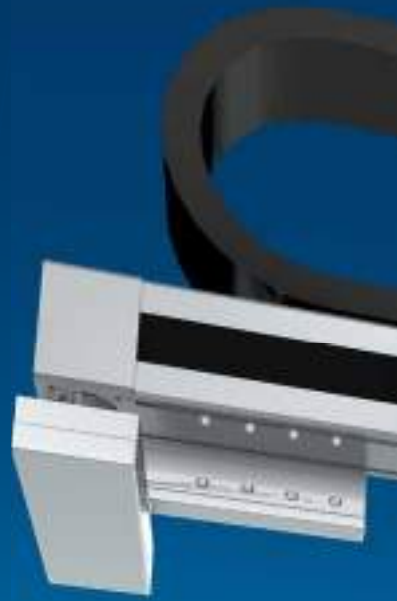
JGP

Gantry Systems: Equipped by SCHUNK

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

With 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.



Change Systems

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



SWS



SHS

Rotary Modules

Over **600** components are available for rotatory movements. Variable from 180° to infinite rotation.

schunk.com/rotary-modules



SRM



SRU-plus



SRH-plus



ERM



ERS



PR 2



ERD

Compensation Units

Over **90** components to compensate position deviations and tolerances between the robot and the tool.

schunk.com/compensating



TCU



AGE-S



Linear Modules

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



Beta



Delta



Gamma



LDT



LDK



LDN



PMP

Gantry Solutions

More than **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/gantry-solutions



LPP



LPE



RPE

SCHUNK Grippers

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

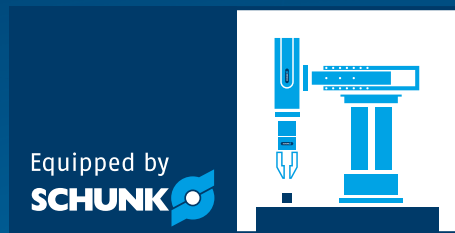


EGL

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 modular assembly system from SCHUNK. An incredible variety of automated solutions can be implemented with standard modules from the SCHUNK modular system.



Rotary Modules

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

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



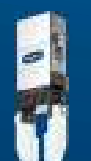
SWG



PWG-plus



GAP



EGP



PGN-plus-E



Linear Modules

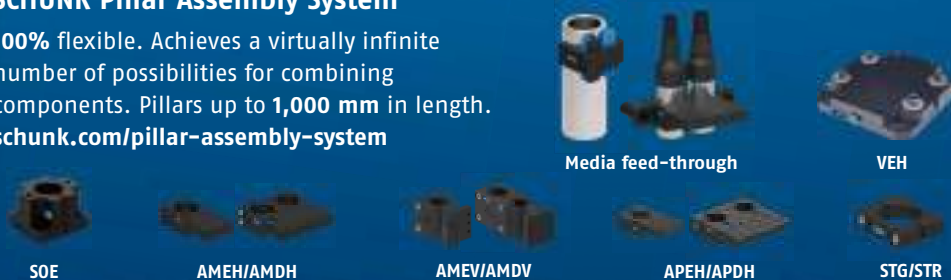
More than **450** pneumatic and electric components with up to **7,000 mm** stroke. The most comprehensive program on the market.

schunk.com/linear-modules



SCHUNK Pillar Assembly System

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



Cobots: Equipped by SCHUNK

The Mega Trend of Human-Robot Collaboration



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, and a universal networking at the component level will be vital.

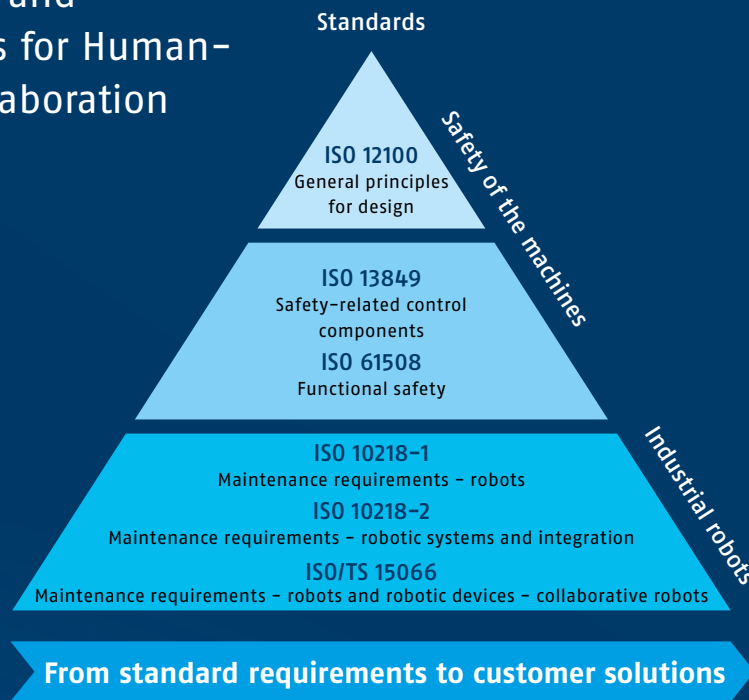
As the competence leader for gripping systems and clamping technology, SCHUNK is intensively committed to this new challenge.



The new SCHUNK Grippers for Collaborative Operations



Standards and Guidelines for Human-Robot Collaboration



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 & 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

Pneumatic Grippers

Product Quickfinder

	Page		Stroke per finger [mm]			Gripping force [N]			
			0 – 10	10 – 100	100 – 1000	0 – 100	100 – 1000	1000 – 10000	10000 – 100000
2-finger parallel gripper									
Gripper for small components MPG-plus • Cross roller guidance	24			1 – 10			7 – 370		
Gripper for small components MPC • Flat guidance • For simple applications	38			2.5 – 15			16 – 370		
Gripper for small components KTG • Center bore	48		4.5			13			
Gripper for small components KGG • Long stroke	54			10 – 60			45 – 670		
Universal gripper PGN-plus • Multi-tooth guidance	66			2 – 45				123 – 21800	
Universal gripper PGN-plus-P • Multi-tooth guidance with permanent lubrication • Use of long gripper fingers possible	84			2 – 45				180 – 9350	
Sealed universal gripper DPG-plus • Complies with IP67 requirements	98			2 – 45				110 – 11430	
Universal gripper JGP • Universal gripper for simple applications	114			2 – 35				120 – 7660	
Universal gripper PGF • Flat guidance • Long stroke at compact design	128			7.5 – 31.5				250 – 1970	
Universal gripper PGB • Multi-tooth guidance • Center bore	138			4 – 10			90 – 640		
Long-stroke gripper PHL • Modular with two alternative guidances	146			30 – 160			390 – 4630		
Long-stroke gripper PFH-mini • Compact design • Long jaw stroke for a wide range of parts	160			30 – 100			630 – 2950		
Long-stroke gripper PFH • Long jaw stroke for a wide range of parts	168			150 – 300			2120		
Long-stroke gripper PSH • Dirt-resistant circular guide	176			14 – 64			320 – 1760		
Heavy-load gripper SPG • Robust guidances • For heavy components with high degree of parts variance	184				100			11480	



	Ambient conditions					Cleanroom	Variant variety	Variety of sensor systems
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C			
	●	○				○	+++	++
	●						+	+
	●	○			●	○	+	+
	●	○			●	○	++	+
	●	●	●	●	●	●	+++	+++
	●	●	●	●	●	●	+++	+++
	●	●	●	●		●	+	+
	●	●					+	++
	●	○			●	○	+	+
	●	●			●	○	+	++
	●	●	○				++	++
	●	●	○		●		++	++
	●	○	○		●		+	++
	●	●	●	●	●	○	+	+
	●	○					+	+

● = Very highly suitable ● = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection

MPG-plus

Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

Powerful. Fast. Longer Fingers. Gripper for Small Components MPG-plus

2-finger parallel gripper with smooth roller guides of the base jaws

Field of Application

Gripping and moving of small to medium-sized workpieces in low contaminated environments, such as assembly, testing, laboratory and pharmaceutical industry.

Advantages – Your benefits

Cross roller guidance for precise gripping due to a scope-free base jaw guidance

Drive concept oval piston for maximum gripping forces

Base jaws guided on double roller bearings ensuring low friction and smoothly running

Optimized basic load rating suitable for using long gripper fingers

Monitoring with electronic magnetic switches for a maximized process reliability

Mounting from two gripper sides in four screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Compact dimensions for minimum interfering contours in handling



Sizes
Quantity: 9



Weight
0.01 .. 0.63 kg



Gripping force
9 .. 370 N



Stroke per jaw
1 .. 10 mm



Workpiece weight
0.05 .. 1.25 kg



Functional Description

The oval piston is moved up or down by compressed air. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Base jaw**
For the adaption of workpiece-specific gripper fingers
- ② **Wedge-hook principle**
For high force transmission and centric gripping
- ③ **Cross roller guidance**
Precise gripping due to backlash-free base jaw guidance
- ④ **Sensor system**
For monitoring two switching points
- ⑤ **Oval piston drive**
For power generation
- ⑥ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy

MPG-plus

Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Cover housing material: Steel

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Pneumatic Pick & Place unit for small components.

- ① Pillar assembly system
- ② Linear module CLM
- ③ 2-finger parallel gripper MPG-plus





SCHUNK offers more ...

The following components make the product MPG-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary module



Linear module



Pick & Place unit



Manual change system



Attachment valve



Pressure maintenance valve



Adapter plate



Finger blank



Flexible position sensor



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

Optional adapter plates: Allow frontal mounting of the gripper

Precision version P: For the highest accuracy

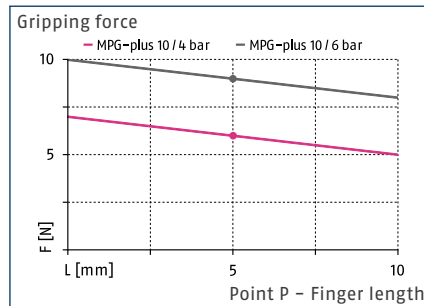
Version FPS for flexible position sensor: This version is prepared for the use with the flexible position sensor FPS, and allows monitoring of several gripping positions.

MPG-plus 10

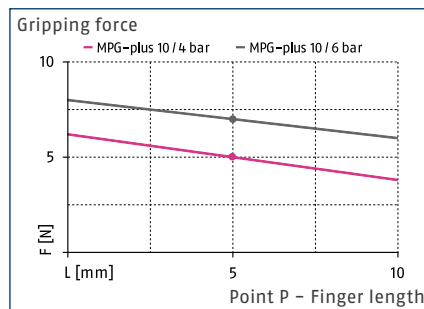
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



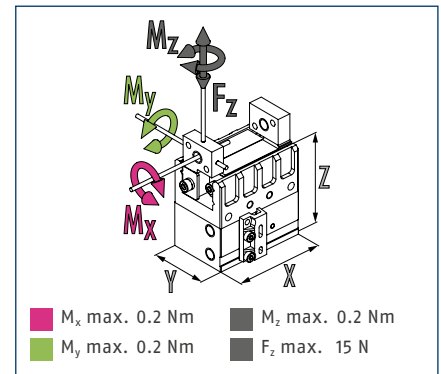
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

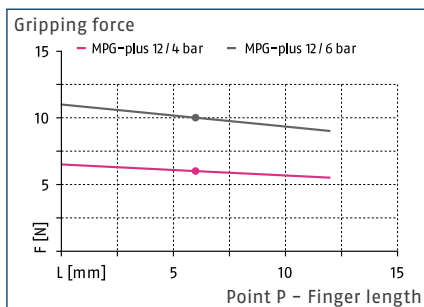
Technical data

Description		MPG-plus 10
ID		0340006
Stroke per jaw	[mm]	1
Closing/opening force	[N]	9/7
Weight	[kg]	0.01
Recommended workpiece weight	[kg]	0.05
Fluid consumption double stroke	[cm ³]	0.12
Min./nom./max. operating pressure	[bar]	3/6/6
Closing/opening time	[s]	0.01/0.01
Max. permissible finger length	[mm]	10
Max. permissible mass per finger	[kg]	0.01
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	10 x 8 x 18

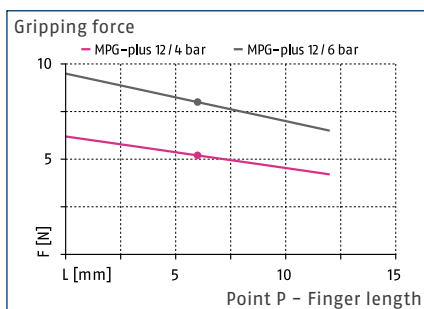
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpg-plus



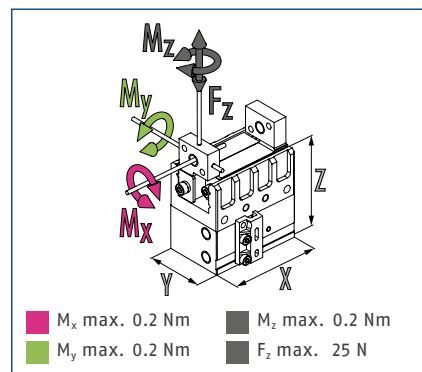
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

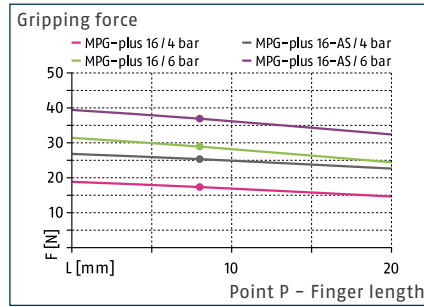
Description		MPG-plus 12
ID		0340007
Stroke per jaw	[mm]	1.2
Closing/opening force	[N]	10/8
Weight	[kg]	0.01
Recommended workpiece weight	[kg]	0.05
Fluid consumption double stroke	[cm ³]	0.17
Min./nom./max. operating pressure	[bar]	3/6/6
Closing/opening time	[s]	0.01/0.01
Max. permissible finger length	[mm]	12
Max. permissible mass per finger	[kg]	0.01
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	12 x 9.5 x 19

MPG-plus 16

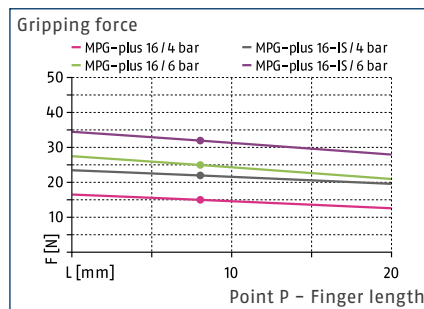
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



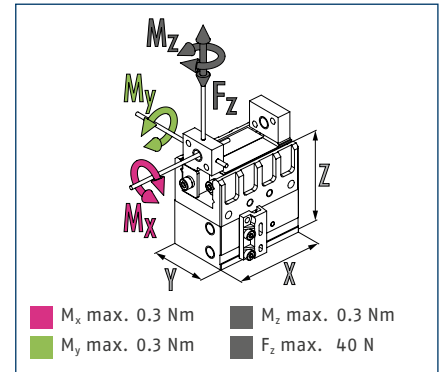
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

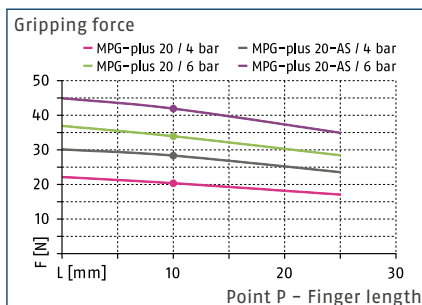
Technical data

Description		MPG-plus 16	MPG-plus 16-AS	MPG-plus 16-IS
ID		0305481	0305482	0305483
Stroke per jaw	[mm]	1.5	1.5	1.5
Closing/opening force	[N]	29/25	37/-	-/32
Min. spring force	[N]		8	7
Weight	[kg]	0.022	0.025	0.025
Recommended workpiece weight	[kg]	0.14	0.14	0.14
Fluid consumption double stroke	[cm ³]	0.32	0.69	0.53
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.011/0.011	0.011/0.015	0.015/0.011
Closing/opening time with spring	[s]		0.03	0.03
Max. permissible finger length	[mm]	20	20	20
Max. permissible mass per finger	[kg]	0.01	0.01	0.01
Protection class IP		30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	16 x 13 x 22	16 x 13 x 27	16 x 13 x 27
Options and their characteristics				
High-temperature version, ID		39305481	39305482	39305483
Min./max. ambient temperature	[°C]	5/100	5/100	5/100

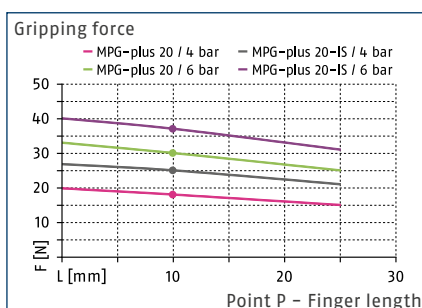
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpg-plus



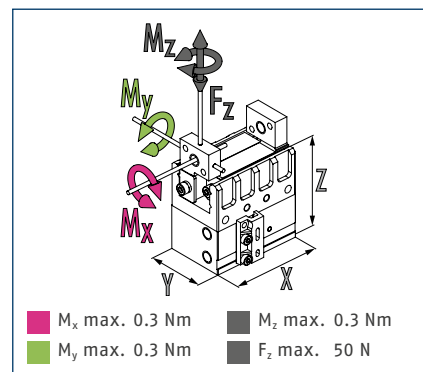
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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Technical data

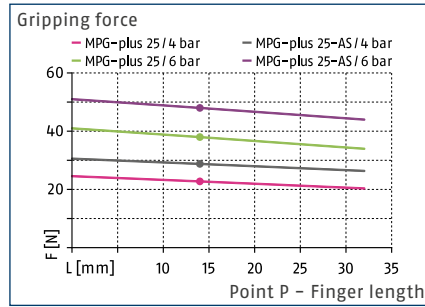
Description		MPG-plus 20	MPG-plus 20-AS	MPG-plus 20-IS	MPG-plus 20-FPS
ID		0305491	0305492	0305493	0305494
Stroke per jaw	[mm]	2	2	2	2
Closing/opening force	[N]	34/30	42/-	-/37	34/30
Min. spring force	[N]		8	7	
Weight	[kg]	0.035	0.042	0.042	0.04
Recommended workpiece weight	[kg]	0.17	0.17	0.17	0.17
Fluid consumption double stroke	[cm ³]	0.41	1.38	0.84	0.41
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5	2/6/8
Closing/opening time	[s]	0.012/0.012	0.012/0.018	0.018/0.012	0.012/0.012
Closing/opening time with spring	[s]		0.06	0.06	
Max. permissible finger length	[mm]	25	25	25	25
Max. permissible mass per finger	[kg]	0.01	0.01	0.01	0.01
Protection class IP		30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	20 x 16 x 24.9	20 x 16 x 33.9	20 x 16 x 33.9	20 x 16 x 34.9
Options and their characteristics					
High-temperature version, ID		39305491	39305492	39305493	39305494
Min./max. ambient temperature	[°C]	5/100	5/100	5/100	5/100

MPG-plus 25

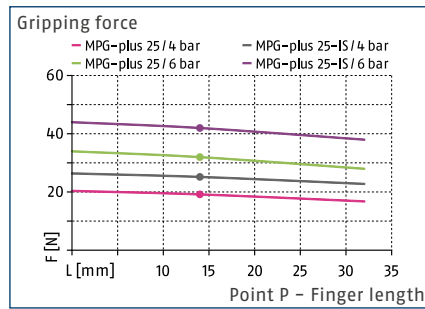
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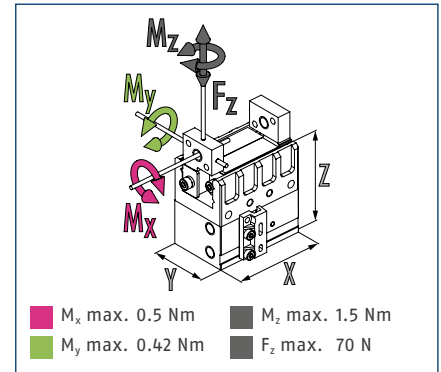
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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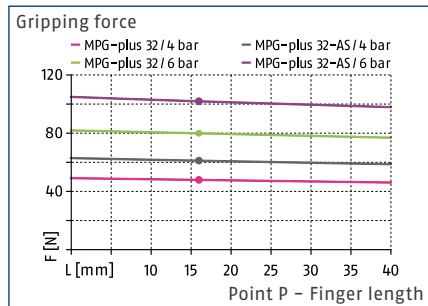
Technical data

Description		MPG-plus 25	MPG-plus 25-AS	MPG-plus 25-IS	MPG-plus 25-FPS
ID		0305501	0305502	0305503	0305504
Stroke per jaw	[mm]	3	3	3	3
Closing/opening force	[N]	38/32	48/-	-/42	38/32
Min. spring force	[N]		10	9	
Weight	[kg]	0.06	0.07	0.07	0.06
Recommended workpiece weight	[kg]	0.19	0.19	0.19	0.19
Fluid consumption double stroke	[cm ³]	0.8	2.5	2	0.8
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5	2/6/8
Closing/opening time	[s]	0.017/0.017	0.017/0.033	0.033/0.017	0.017/0.017
Closing/opening time with spring	[s]		0.10	0.10	
Max. permissible finger length	[mm]	32	32	32	32
Max. permissible mass per finger	[kg]	0.02	0.02	0.02	0.02
Protection class IP		30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	26 x 18 x 27	26 x 18 x 39.8	26 x 18 x 39.8	26 x 18 x 38.8
Options and their characteristics					
High-temperature version, ID		39305501	39305502	39305503	39305504
Min./max. ambient temperature	[°C]	5/100	5/100	5/100	5/100
Precision version, ID		0305506	0305508	0305509	

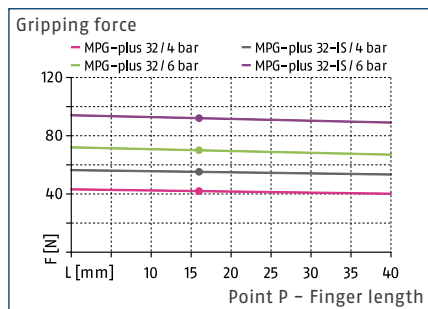
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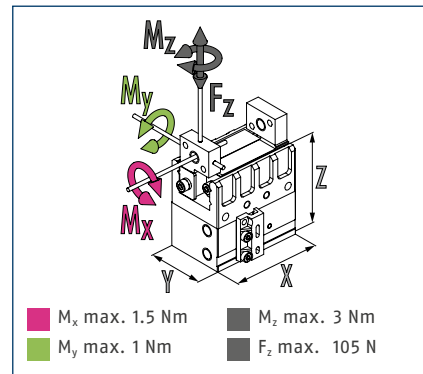
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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Technical data

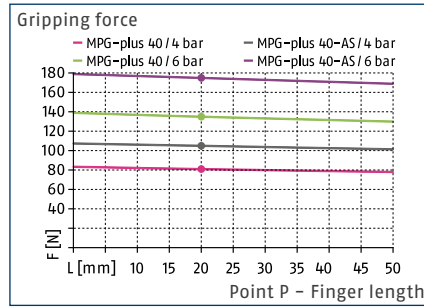
Description		MPG-plus 32	MPG-plus 32-AS	MPG-plus 32-IS	MPG-plus 32-FPS
ID		0305511	0305512	0305513	0305514
Stroke per jaw	[mm]	4	4	4	4
Closing/opening force	[N]	80/70	100/-	-/90	80/70
Min. spring force	[N]		25	20	
Weight	[kg]	0.1	0.13	0.13	0.13
Recommended workpiece weight	[kg]	0.43	0.43	0.43	0.43
Fluid consumption double stroke	[cm ³]	1.7	4.1	3.5	1.7
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5	2/6/8
Closing/opening time	[s]	0.02/0.02	0.03/0.04	0.04/0.03	0.02/0.02
Closing/opening time with spring	[s]		0.20	0.20	
Max. permissible finger length	[mm]	40	40	40	40
Max. permissible mass per finger	[kg]	0.04	0.04	0.04	0.04
Protection class IP		30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	32 x 22 x 34	32 x 22 x 47.3	32 x 22 x 47.3	32 x 22 x 44.8
Options and their characteristics					
High-temperature version, ID		39305511	39305512	39305513	39305514
Min./max. ambient temperature	[°C]	5/100	5/100	5/100	5/100
Precision version, ID		0305516	0305518	0305519	

MPG-plus 40

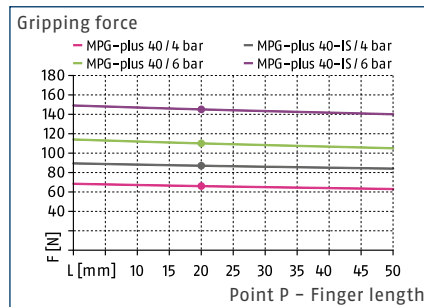
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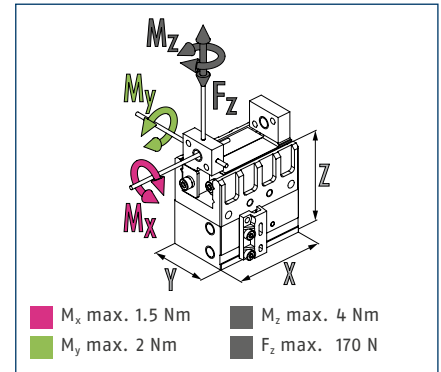
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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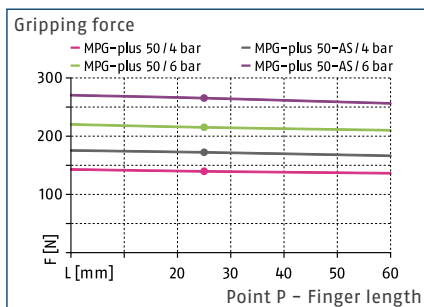
Technical data

Description		MPG-plus 40	MPG-plus 40-AS	MPG-plus 40-IS
ID		0305521	0305522	0305523
Stroke per jaw	[mm]	6	6	6
Closing/opening force	[N]	135/110	170/-	-/145
Min. spring force	[N]		35	25
Weight	[kg]	0.18	0.24	0.24
Recommended workpiece weight	[kg]	0.7	0.7	0.7
Fluid consumption double stroke	[cm ³]	4.1	10.7	10
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.04/0.04	0.045/0.075	0.075/0.045
Closing/opening time with spring	[s]		0.20	0.20
Max. permissible finger length	[mm]	50	50	50
Max. permissible mass per finger	[kg]	0.08	0.08	0.08
Protection class IP		30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	40 x 26 x 39	40 x 26 x 63.75	40 x 26 x 63.75
Options and their characteristics				
High-temperature version, ID		39305521	39305522	39305523
Min./max. ambient temperature	[°C]	5/100	5/100	5/100
Precision version, ID		0305526	0305528	0305529

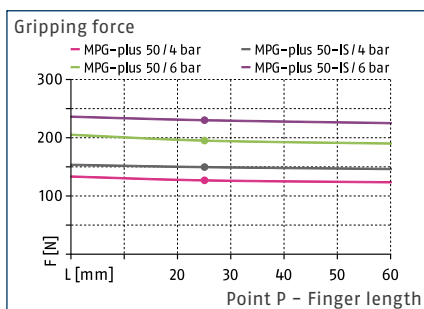
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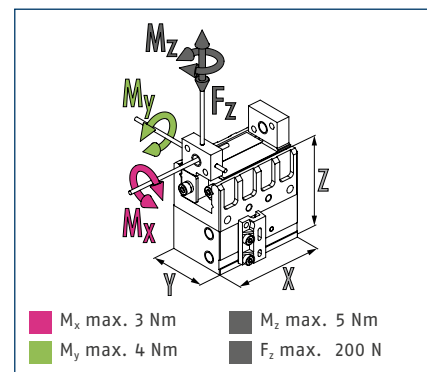
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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Technical data

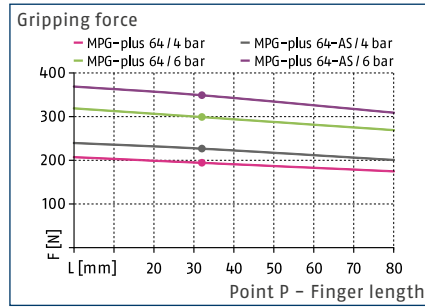
Description		MPG-plus 50	MPG-plus 50-AS	MPG-plus 50-IS
ID		0305531	0305532	0305533
Stroke per jaw	[mm]	8	8	8
Closing/opening force	[N]	215/195	265/-	-/230
Min. spring force	[N]		50	35
Weight	[kg]	0.31	0.37	0.38
Recommended workpiece weight	[kg]	1.05	1.05	1.05
Fluid consumption double stroke	[cm ³]	8	17	15
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.04/0.04	0.045/0.075	0.075/0.045
Closing/opening time with spring	[s]		0.30	0.30
Max. permissible finger length	[mm]	64	64	64
Max. permissible mass per finger	[kg]	0.14	0.14	0.14
Protection class IP		30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	50 x 30 x 46	50 x 30 x 65.3	50 x 30 x 65.3
Options and their characteristics				
High-temperature version, ID		39305531	39305532	39305533
Min./max. ambient temperature	[°C]	5/100	5/100	5/100
Precision version, ID		0305536	0305538	0305539

MPG-plus 64

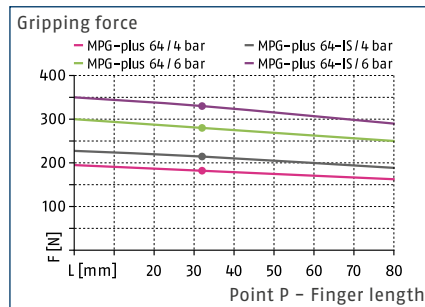
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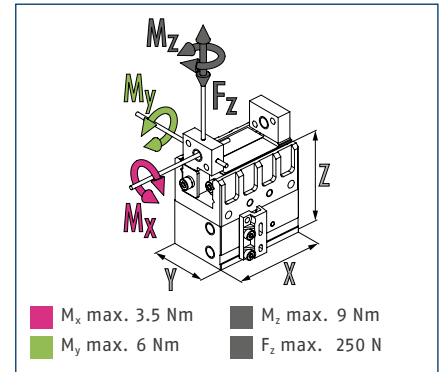
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads

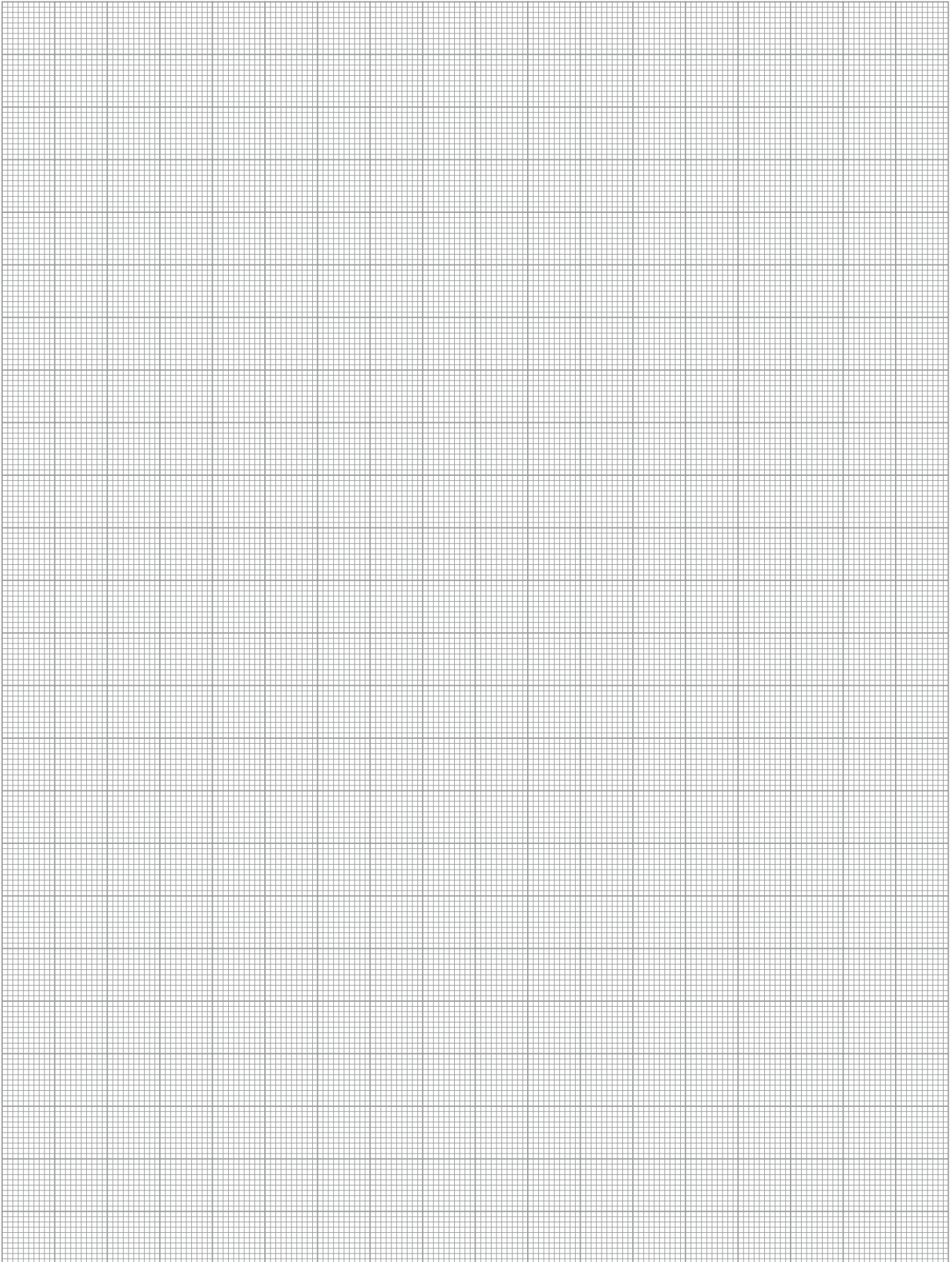


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPG-plus 64	MPG-plus 64-AS	MPG-plus 64-IS
ID		0305541	0305542	0305543
Stroke per jaw	[mm]	10	10	10
Closing/opening force	[N]	300/280	370/-	-/335
Min. spring force	[N]		70	55
Weight	[kg]	0.53	0.62	0.63
Recommended workpiece weight	[kg]	1.25	1.25	1.25
Fluid consumption double stroke	[cm ³]	15	27	24.5
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.08/0.08	0.085/0.12	0.12/0.085
Closing/opening time with spring	[s]		0.30	0.30
Max. permissible finger length	[mm]	80	80	80
Max. permissible mass per finger	[kg]	0.24	0.24	0.24
Protection class IP		30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	64 x 35 x 54	64 x 35 x 69	64 x 35 x 69
Options and their characteristics				
High-temperature version, ID		39305541	39305542	39305543
Min./max. ambient temperature	[°C]	5/100	5/100	5/100

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpg-plus



MPC

Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

Easy. Economical. Cost-efficient. Gripper for Small Components MPC

Easily built up 2-finger parallel gripper with excellent price-performance ratio

Field of Application

Gripping of small to mid-sized workpieces in low contaminated environments with reduced requirements in terms of precision and lifespan and for shorter system run times.

Advantages – Your benefits

Cost-efficient gripper with basic functionalities especially suitable for simple applications in small components handling

Series with six unit sizes for a broad range of applications from small to mid-sized workpieces

Technically and financially compatible sensor system for a simple, functional gripping system completely from a single source

Housing and guidance made of high-strength aluminum therefore exposed to high physical loads and is weight optimized



Sizes
Quantity: 6



Weight
0.05 .. 0.94 kg



Gripping force
16 .. 370 N



Stroke per jaw
2.5 .. 15 mm

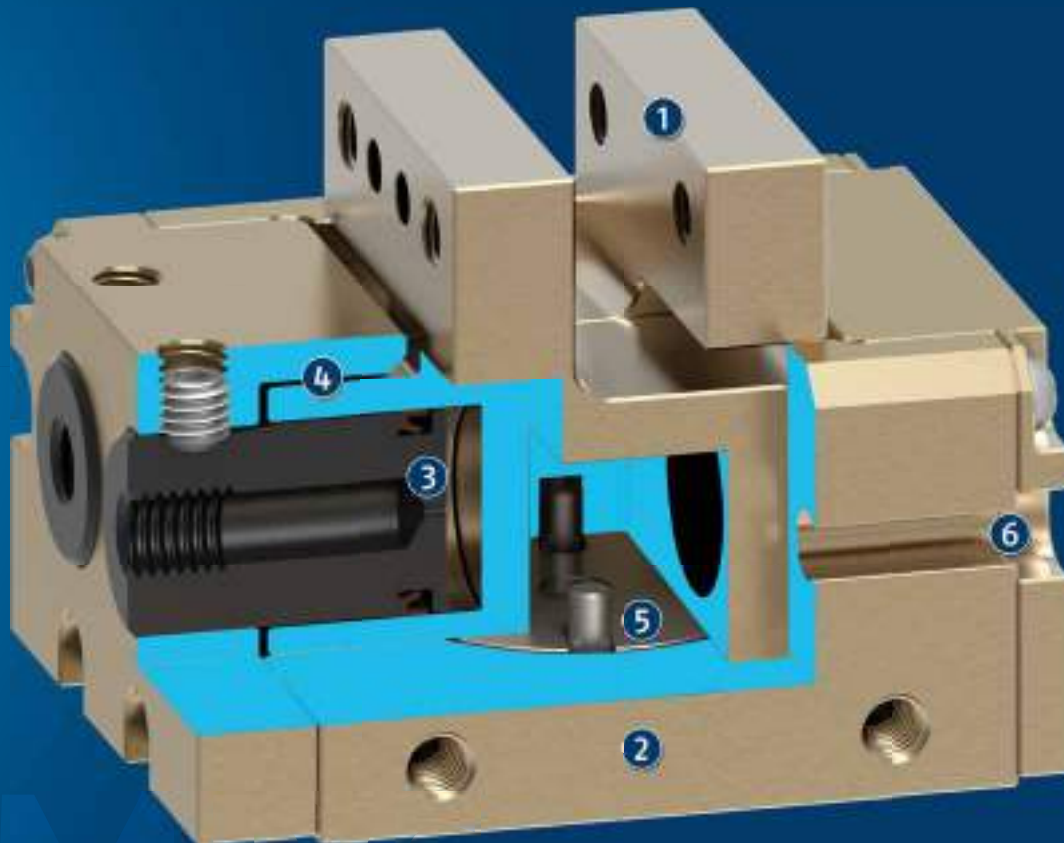


Workpiece weight
0.08 .. 1.85 kg



Functional Description

The base jaws are actuated with compressed air by the fixed piston and in turn the gripper is opened or closed. The kinematics synchronizes the movement of the base jaws.



- ① **Base jaw**
For the adaption of workpiece-specific gripper fingers
- ② **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ③ **Drive**
Through pneumatic double piston system
- ④ **Guidance**
Price-attractive flat guidance
- ⑤ **Kinematics**
Synchronization of base jaws for centric gripping
- ⑥ **Sensor system**
Double-sided C-slot for the use of magnetic sensors

General Notes about the Series

Operating principle: Synchronized double piston

Warranty: 12 months

Maintenance and repair: Is not envisaged. The gripper is maintenance-free. In the event of a defect, the entire gripper is replaced.

Scope of delivery: Accessory kit with centering pins, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

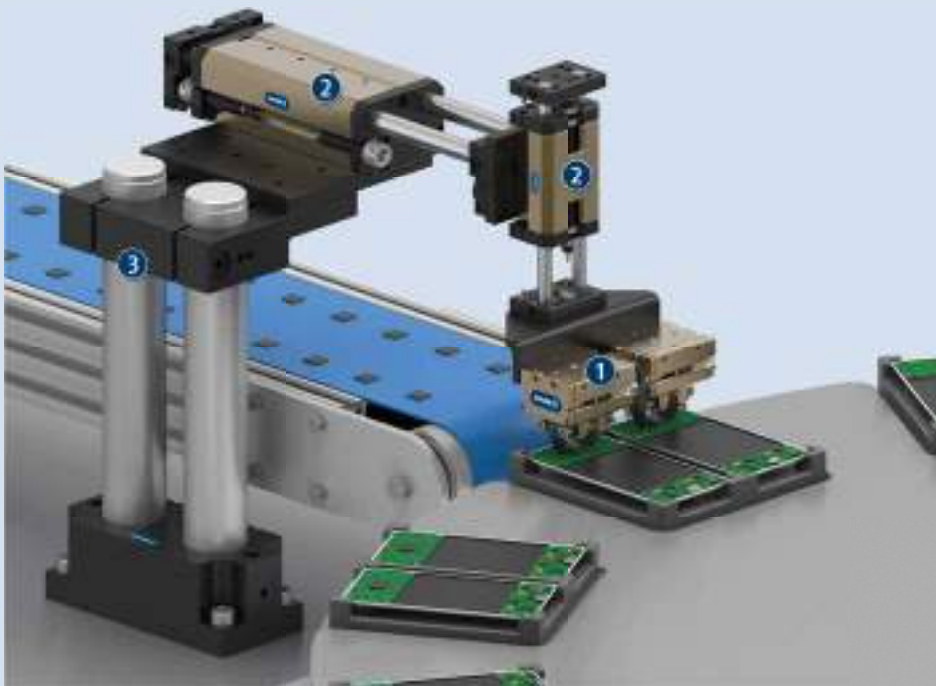
Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Pick & Place application with double gripper for mounting electronic components on end products for the communications and electronics industry.

- ① Gripper for small components MPC
- ② Linear module KLM
- ③ Pillar assembly system



SCHUNK offers more ...

The following components make the product MPC even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Rotary module



Pressure maintenance valve



Magnetic switch

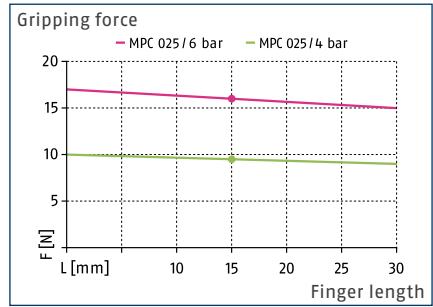
① Further information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com). Please contact us: SCHUNK technical hotline +49-7133-103-2696

MPC 25

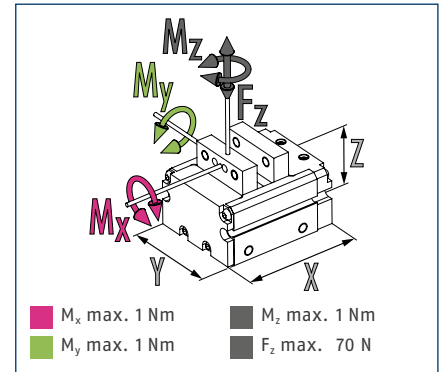
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Gripping force



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

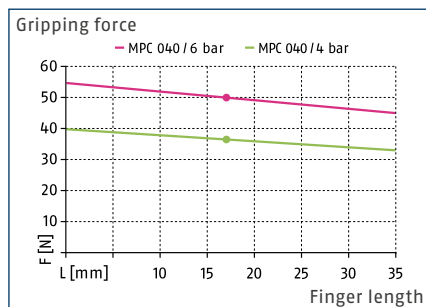
Description		MPC 025
ID		1343461
Stroke per jaw	[mm]	2.5
Closing/opening force	[N]	16/16
Weight	[kg]	0.05
Recommended workpiece weight	[kg]	0.08
Fluid consumption double stroke	[cm ³]	0.5
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.03/0.03
Max. permissible finger length	[mm]	30
Max. permissible mass per finger	[kg]	0.034
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	36.5 x 29 x 17.5

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

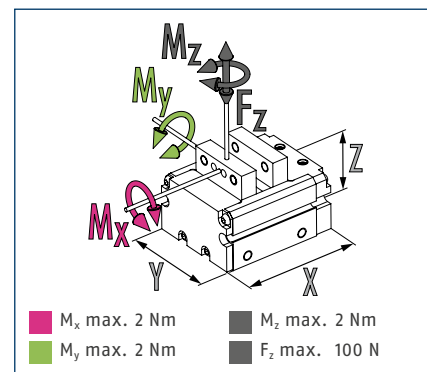
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Gripping force



Dimensions and maximum loads



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Technical data

Description		MPC 040
ID		1343463
Stroke per jaw	[mm]	4
Closing/opening force	[N]	50/50
Weight	[kg]	0.14
Recommended workpiece weight	[kg]	0.25
Fluid consumption double stroke	[cm ³]	1.3
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.05/0.05
Max. permissible finger length	[mm]	35
Max. permissible mass per finger	[kg]	0.055
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	55.5 x 40 x 25

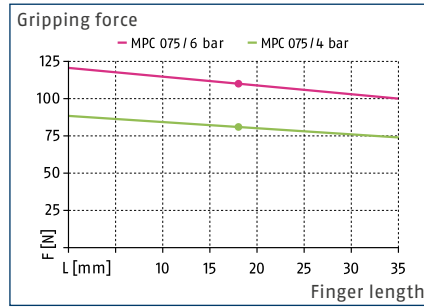
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

MPC 75

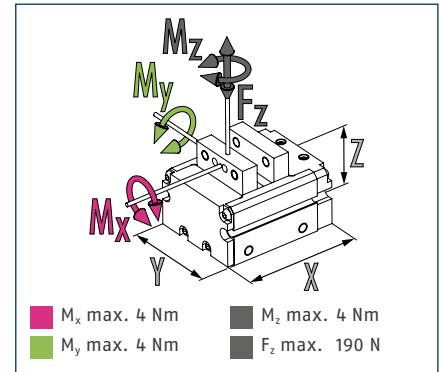
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

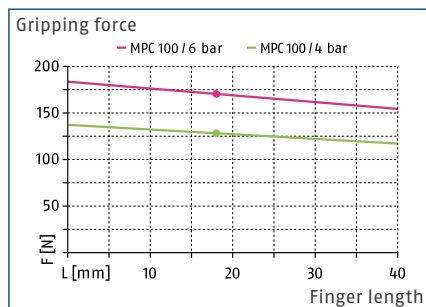
Description		MPC 075
ID		1343465
Stroke per jaw	[mm]	7.5
Closing/opening force	[N]	110/110
Weight	[kg]	0.21
Recommended workpiece weight	[kg]	0.55
Fluid consumption double stroke	[cm ³]	4
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.06/0.06
Max. permissible finger length	[mm]	35
Max. permissible mass per finger	[kg]	0.072
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	75 x 40 x 26.5

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

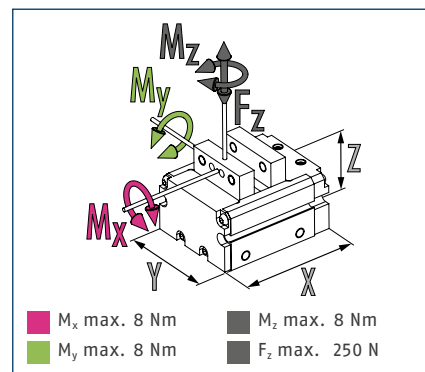
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpc



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPC 100
ID		1343466
Stroke per jaw	[mm]	10
Closing/opening force	[N]	170/170
Weight	[kg]	0.34
Recommended workpiece weight	[kg]	0.85
Fluid consumption double stroke	[cm ³]	8
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.09/0.09
Max. permissible finger length	[mm]	40
Max. permissible mass per finger	[kg]	0.13
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	92 x 46 x 31

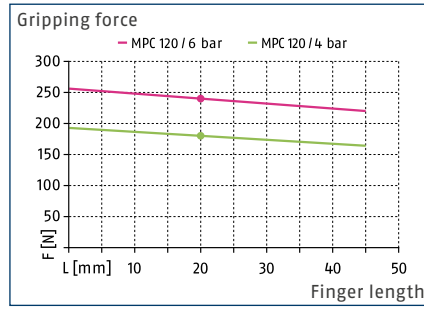
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

MPC 120

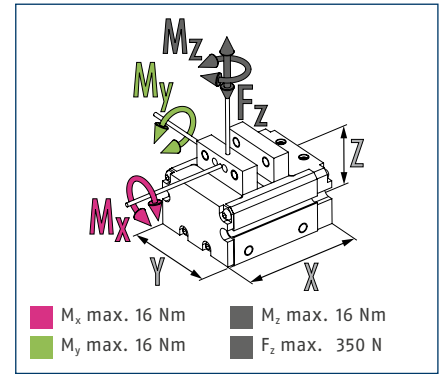
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

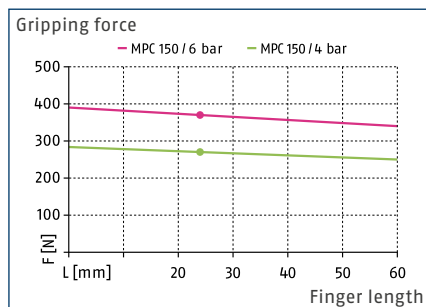
Description		MPC 120
ID		1343468
Stroke per jaw	[mm]	12
Closing/opening force	[N]	240/240
Weight	[kg]	0.54
Recommended workpiece weight	[kg]	1.2
Fluid consumption double stroke	[cm ³]	14
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.1/0.1
Max. permissible finger length	[mm]	45
Max. permissible mass per finger	[kg]	0.19
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	104 x 54 x 36

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

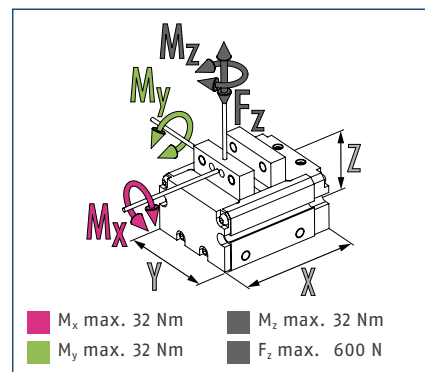
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpc



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPC 150
ID		1343470
Stroke per jaw	[mm]	15
Closing/opening force	[N]	370/370
Weight	[kg]	0.94
Recommended workpiece weight	[kg]	1.85
Fluid consumption double stroke	[cm ³]	25
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.11/0.11
Max. permissible finger length	[mm]	60
Max. permissible mass per finger	[kg]	0.32
Protection class IP		30
Min./max. ambient temperature	[°C]	5/60
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	123 x 64 x 44

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

KTG

Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

Compact. Cost-efficient. Flexible. Gripper for Small Components KTG

2-finger parallel gripper with center bore

Field of Application

Gripping and moving of small to medium-sized workpieces in low contaminated environments, equipped with end-to-end center bore for workpiece feeding, sensor systems or actuators.

Advantages – Your benefits

Low weight for weight-optimized handling solutions

Long stroke in proportion to the size

Base jaws guided on roller bearings for precise gripping

Center through-hole for workpiece feeding, sensor systems or actuators

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 1



Weight
0.08 kg



Gripping force
13 N



Stroke per jaw
4.5 mm



Workpiece weight
0.07 kg



Functional Description

By pressurizing the first or second piston, the base jaws which are individually guided by a carrier on the piston, are moved.

The movement is synchronized by means of lever kinematics.



- ① **Kinematics**
Synchronization using lever principle for centric clamping
- ② **Center bore**
For workpiece feeding, for sensor systems, actuators (ejectors) or optical workpiece recognition
- ③ **Drive**
Through pneumatic double piston system
- ④ **Profiled rail guide**
Precise gripping due to backlash-free base jaw guidance
- ⑤ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy

General Notes about the Series

Operating principle: Synchronized double piston

Housing material: Aluminum alloy, anodized

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Gripper/swivel unit for small components.

- 1 2-finger parallel gripper KTG with workpiece-specific fingers
- 2 Miniature swivel unit SRU-mini
- 3 Linear module LM





SCHUNK offers more ...

The following components make the product KTG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Pick & Place unit



Manual change system



Inductive proximity switch



Finger blank



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

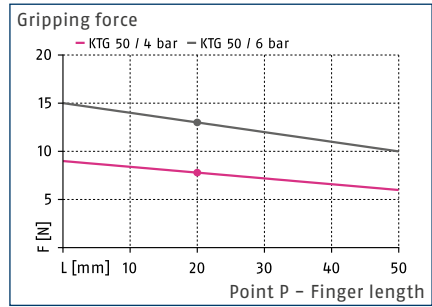
Available with reinforced jaw guidances on request. Gripping force can be maintained by the pressure maintenance valve SDV-P.

KTG 50

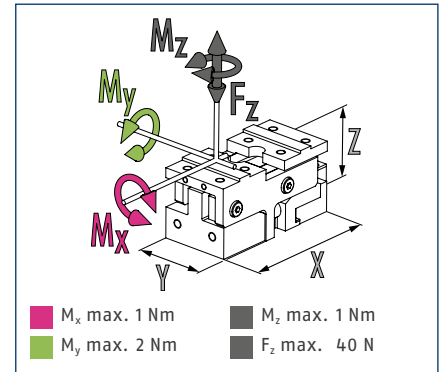
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



Gripping force



Dimensions and maximum loads

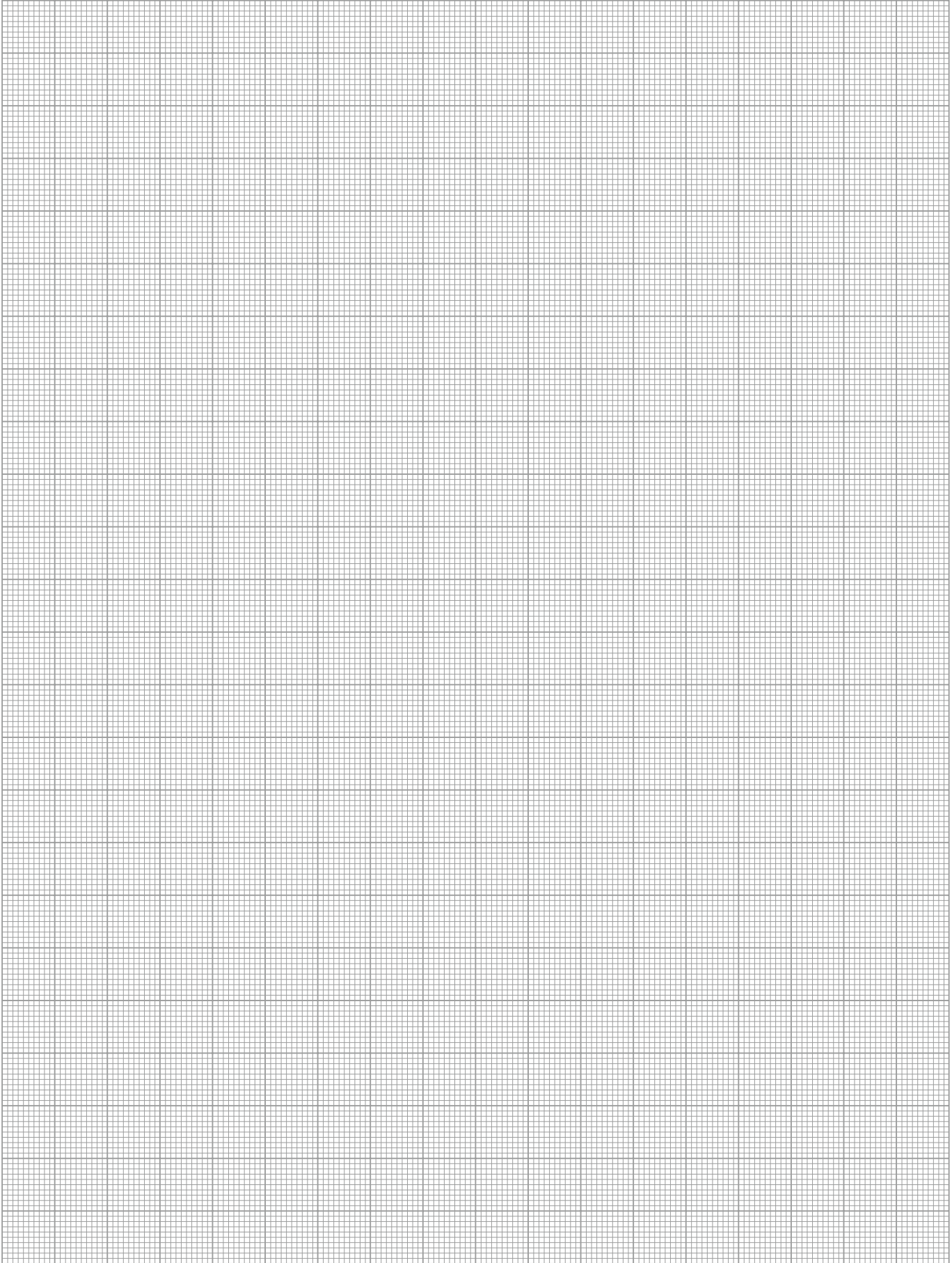


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		KTG 50
ID		0300275
Stroke per jaw	[mm]	4.5
Closing/opening force	[N]	13/13
Weight	[kg]	0.08
Recommended workpiece weight	[kg]	0.07
Fluid consumption double stroke	[cm ³]	0.23
Min./nom./max. operating pressure	[bar]	1/6/7
Closing/opening time	[s]	0.05/0.05
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.04
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Diameter of center bore	[mm]	5
Dimensions X x Y x Z	[mm]	50 x 25 x 25

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/ktg



KGG

Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

Compact. Flexible. Narrow. Gripper for Small Components KGG

Narrow 2-finger parallel gripper with long stroke

Field of Application

For universal use in clean environments with light to medium workpiece weights and a large stroke range.

Advantages – Your benefits

Robust T-slot guidance for high maximum moments

Pneumatic 2-piston drive design for direct power transmission and high efficiency

Rack and pinion principle for centric clamping

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 7



Weight
0.09 .. 4.2 kg



Gripping force
45 .. 540 N



Stroke per jaw
10 .. 60 mm



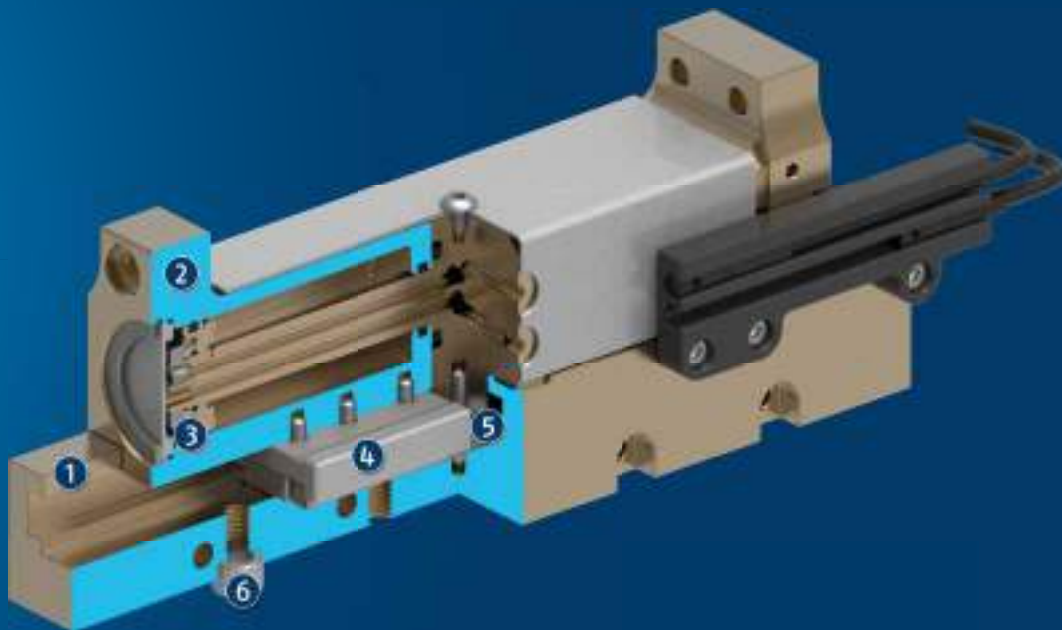
Workpiece weight
0.23 .. 2.7 kg



Functional Description

The aligned base jaws are directly actuated with compressed air by the fixed piston, which opens and closes them.

The base jaws are synchronized by the internal rack and pinion arrangement.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **Base jaw**
For the adaption of workpiece-specific gripper fingers
- ③ **Drive**
Pneumatic 2-piston system
- ④ **Sliding guide**
High maximum moments due to the robust T-slot guidance
- ⑤ **Kinematics**
Pinion and rack principle for centric clamping, even at long strokes
- ⑥ **Centering and mounting possibilities**
For assembly of the gripper to a base area and at the long side

General Notes about the Series

Operating principle: Directly driven base jaws, synchronized by rack and pinion

Housing material: Aluminum alloy, anodized

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Sorting unit for small components which require an especially long gripper stroke due to their variation in size.

- ❶ 2-finger parallel gripper KGG with workpiece-specific fingers
- ❷ Linear module KLM for vertical movement
- ❸ Linear module KLM for horizontal movement



SCHUNK offers more ...

The following components make the product KGG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Pick & Place unit



Pressure maintenance valve



Inductive proximity switch



Magnetic switch



Flexible position sensor



Finger blank

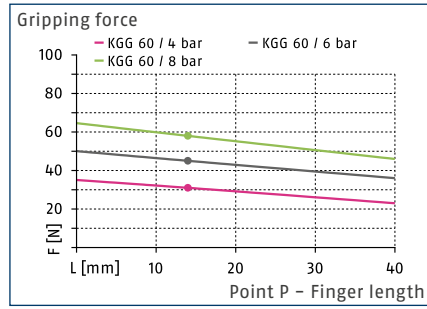
① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

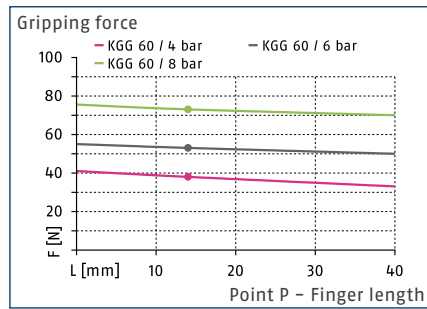
Please note that the weight of the gripper fingers should be as low as possible for long-stroke grippers.



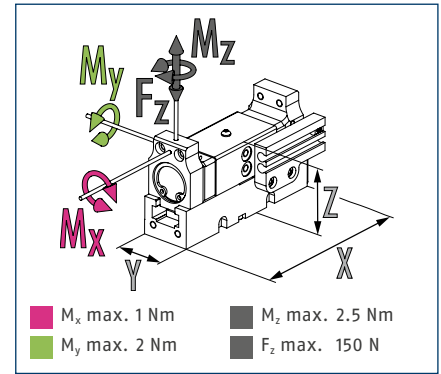
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

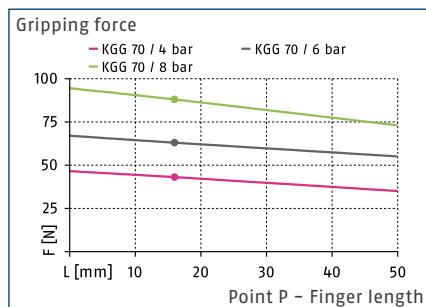
Description		KGG 60-20	KGG 60-40
ID		0303075	0303076
Stroke per jaw	[mm]	10	20
Closing/opening force	[N]	45/53	45/53
Weight	[kg]	0.09	0.11
Recommended workpiece weight	[kg]	0.23	0.23
Fluid consumption double stroke	[cm ³]	3	6
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8
Closing/opening time	[s]	0.03/0.03	0.04/0.04
Max. permissible finger length	[mm]	40	40
Max. permissible mass per finger	[kg]	0.04	0.04
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	64.4 x 18 x 29	84.4 x 18 x 29

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

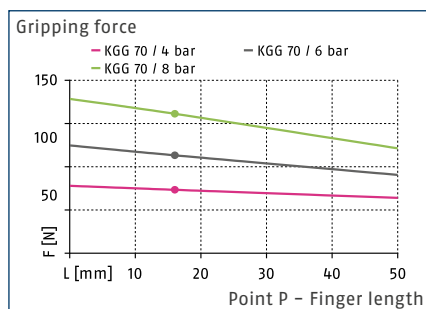
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/kgg



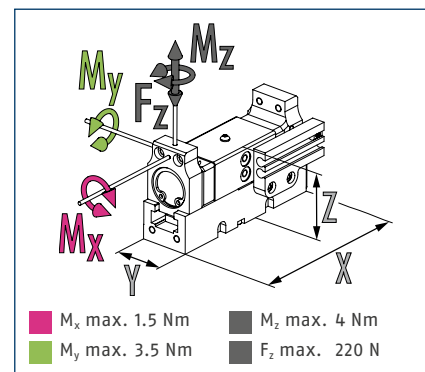
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

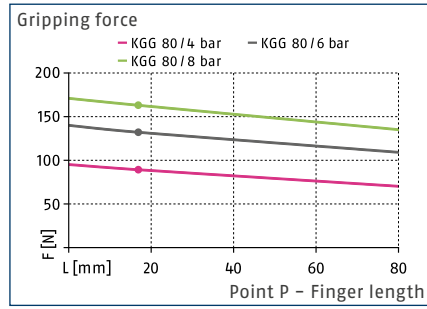
Technical data

Description		KGG 70-24	KGG 70-48
ID		0303055	0303056
Stroke per jaw	[mm]	12	24
Closing/opening force	[N]	63/85	63/85
Weight	[kg]	0.15	0.19
Recommended workpiece weight	[kg]	0.32	0.32
Fluid consumption double stroke	[cm ³]	5	10
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8
Closing/opening time	[s]	0.04/0.04	0.05/0.05
Max. permissible finger length	[mm]	50	50
Max. permissible mass per finger	[kg]	0.06	0.06
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	81.4 x 22 x 34.2	105.4 x 22 x 34.2

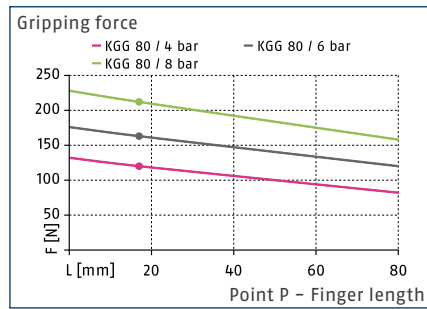
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



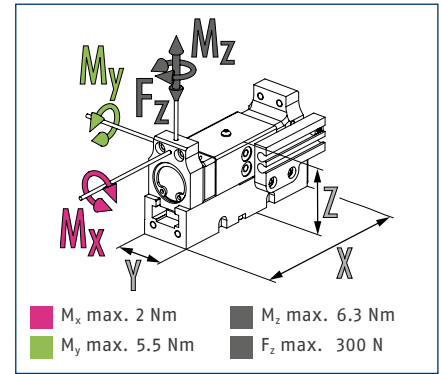
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

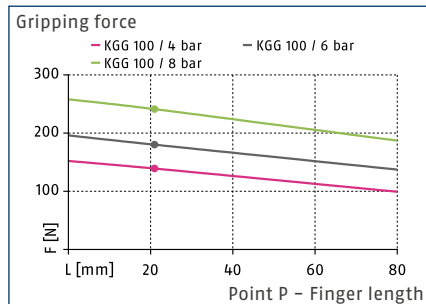
Description		KGG 80-30	KGG 80-60
ID		0303060	0303061
Stroke per jaw	[mm]	15	30
Closing/opening force	[N]	130/165	130/165
Weight	[kg]	0.25	0.33
Recommended workpiece weight	[kg]	0.66	0.66
Fluid consumption double stroke	[cm ³]	12	24
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8
Closing/opening time	[s]	0.05/0.05	0.08/0.07
Max. permissible finger length	[mm]	80	80
Max. permissible mass per finger	[kg]	0.15	0.15
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	80 x 26 x 41.3	127 x 26 x 41.3

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

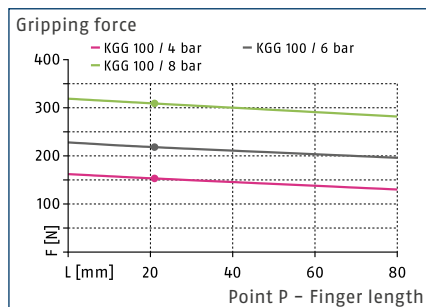
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/kgg



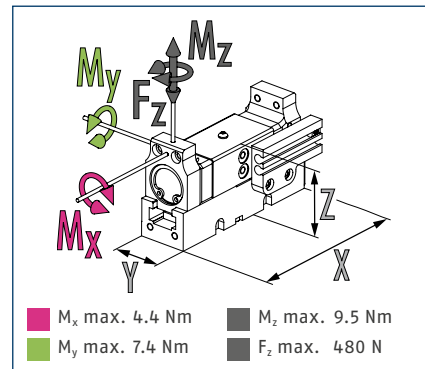
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

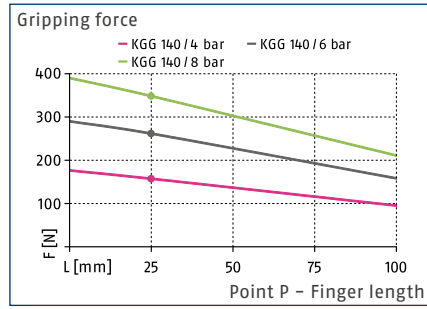
Technical data

Description		KGG 100-40	KGG 100-80
ID		0303065	0303066
Stroke per jaw	[mm]	20	40
Closing/opening force	[N]	175/220	175/220
Weight	[kg]	0.37	0.5
Recommended workpiece weight	[kg]	0.9	0.9
Fluid consumption double stroke	[cm ³]	22.5	45
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8
Closing/opening time	[s]	0.09/0.07	0.19/0.15
Max. permissible finger length	[mm]	80	80
Max. permissible mass per finger	[kg]	0.3	0.3
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	100 x 31 x 49.3	157 x 31 x 49.3

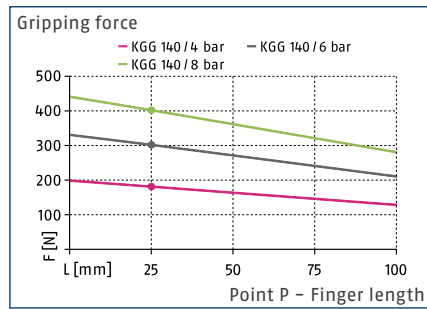
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



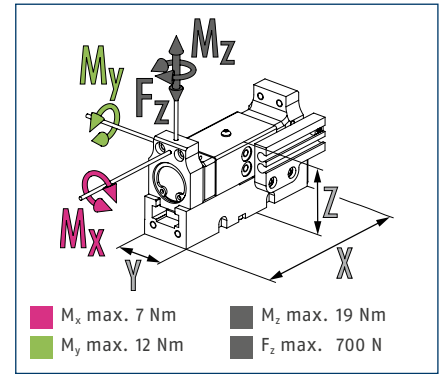
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

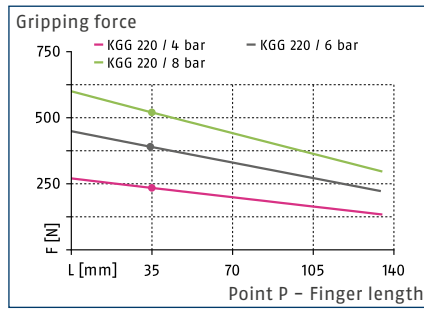
Description		KGG 140-60
ID		0303070
Stroke per jaw	[mm]	30
Closing/opening force	[N]	260/300
Weight	[kg]	0.77
Recommended workpiece weight	[kg]	1.3
Fluid consumption double stroke	[cm ³]	42
Min./nom./max. operating pressure	[bar]	2.5/6/8
Closing/opening time	[s]	0.17/0.17
Max. permissible finger length	[mm]	100
Max. permissible mass per finger	[kg]	0.5
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	140 x 36 x 53.6

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

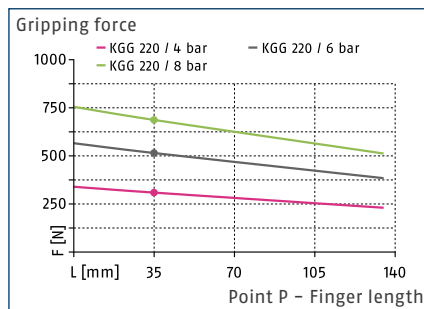
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/kgg



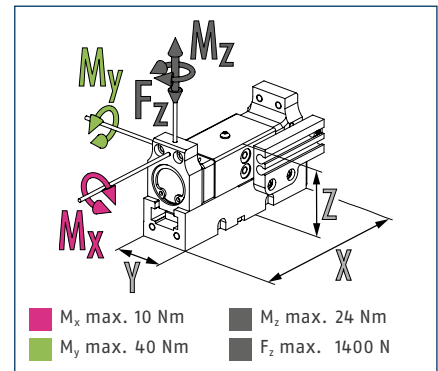
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		KGG 220
ID		0340312
Stroke per jaw	[mm]	45
Closing/opening force	[N]	390/515
Weight	[kg]	2
Recommended workpiece weight	[kg]	1.95
Fluid consumption double stroke	[cm ³]	98
Min./nom./max. operating pressure	[bar]	2.5/6/8
Closing/opening time	[s]	0.25/0.25
Max. permissible finger length	[mm]	130
Max. permissible mass per finger	[kg]	1
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	220 x 52 x 68

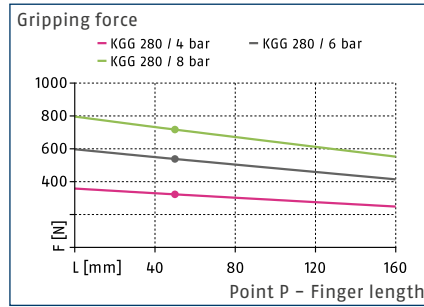
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

KGG 280

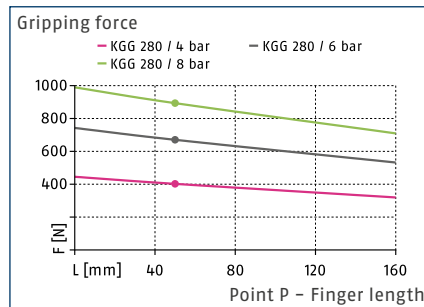
Pneumatic Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



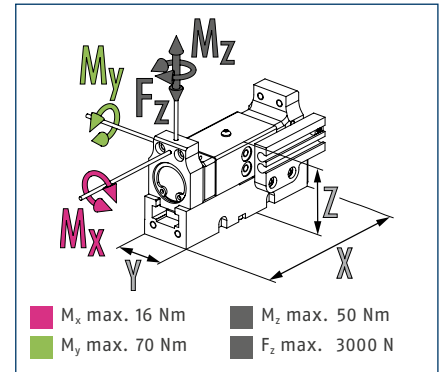
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



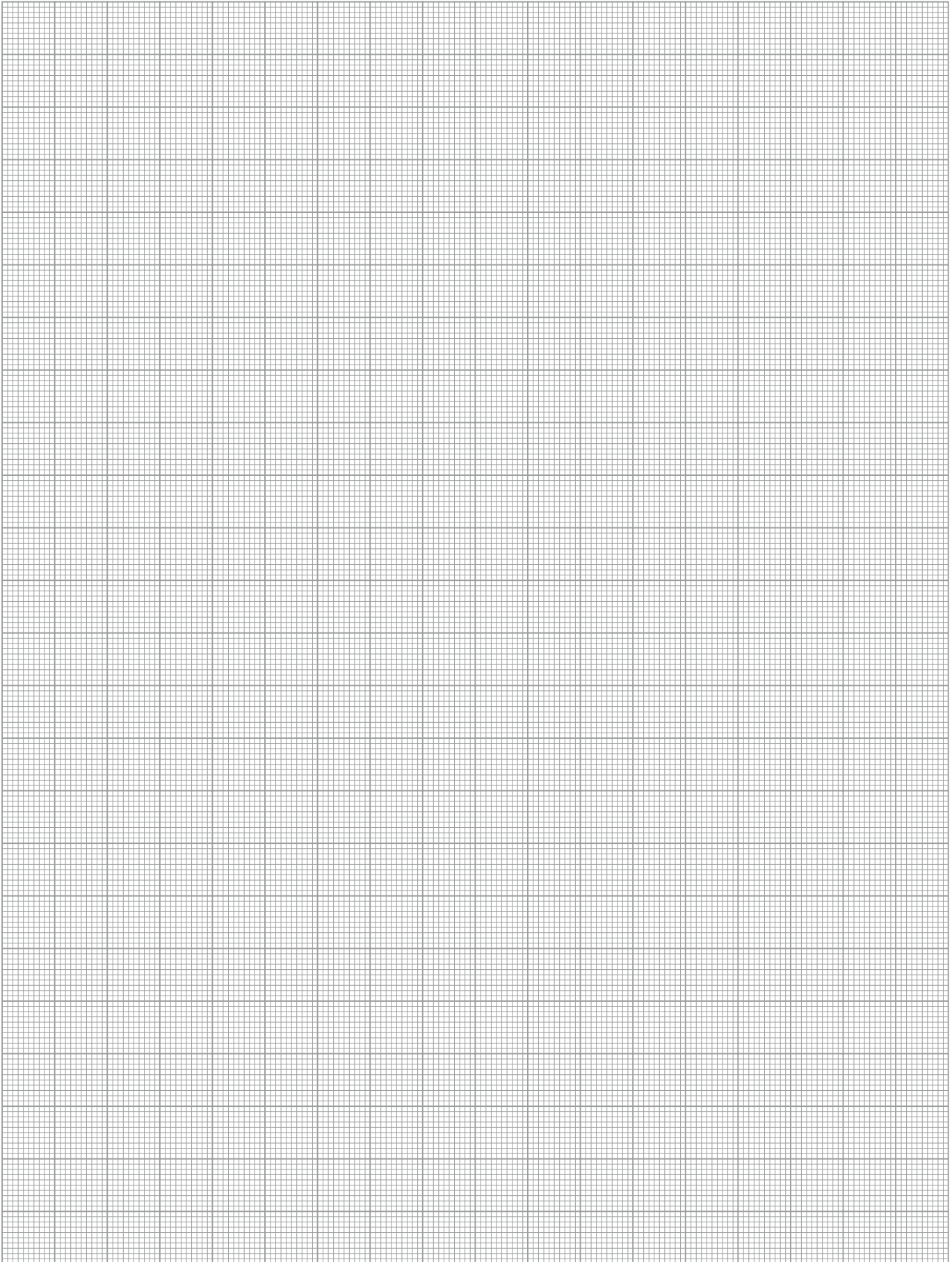
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		KGG 280
ID		0340313
Stroke per jaw	[mm]	60
Closing/opening force	[N]	540/670
Weight	[kg]	4.2
Recommended workpiece weight	[kg]	2.7
Fluid consumption double stroke	[cm ³]	170
Min./nom./max. operating pressure	[bar]	2.5/6/8
Closing/opening time	[s]	0.29/0.25
Max. permissible finger length	[mm]	160
Max. permissible mass per finger	[kg]	2
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	280 x 72 x 80

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/kgg



PGN-plus

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

Reliable. Robust. Flexible. Universal Gripper PGN-plus

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

Field of Application

Optimum standard solution for many fields of application. For universal use in clean to slightly dirty environments. Special versions available for dirty environments.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Drive concept oval piston for maximum gripping forces

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for universal and flexible gripper assembly

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Compact dimensions for minimum interfering contours in handling

Manifold options for special optimization for your specific application (dust-tight, high-temperature, corrosion-protected, etc.)



Sizes
Quantity: 11



Weight
0.08 .. 39.5 kg



Gripping force
123 .. 21600 N



Stroke per jaw
2 .. 45 mm



Workpiece weight
0.62 .. 80.5 kg



Functional Description

The oval piston is moved up or down by compressed air. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Multi-tooth guidance**
Highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ② **Base jaw**
For the adaption of workpiece-specific gripper fingers
- ③ **Sensor system**
Brackets for proximity switches and adjustable control cams in the housing
- ④ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ⑤ **Centering and mounting possibilities**
For universal assembly of the gripper
- ⑥ **Wedge-hook principle**
For high force transmission and centric gripping

General Notes about the Series

Operating principle: Wedge gear with surface power transmission

Housing material: Aluminum

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

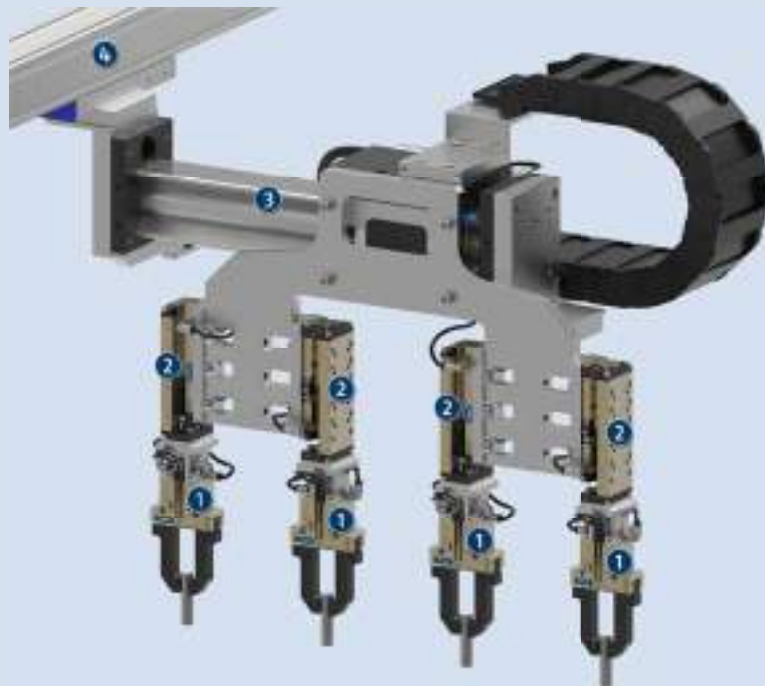
The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Cleanroom class ISO 14644-1: 5



Application Example

Handling gantry with multiple grippers for simultaneous removal of several workpieces.

- ① 2-finger parallel gripper PGN-plus
- ② Linear module CLM
- ③ Universal linear module LDN
- ④ Universal linear module Beta



SCHUNK offers more ...

The following components make the product PGN-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Quick-change system



Universal swivel unit



Compensation unit



Jaw quick-change system



Universal intermediate jaw



Pressure maintenance valve



Manual change system



Finger blank



Flexible position sensor



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

Anti-corrosion version K: For use in corrosion-inducing atmospheres

High-temperature version V/HT: For use in hot environments

Force intensified version KVZ: If higher gripping forces are required

Precision version P: For the highest accuracy

ATEX version EX: For explosive environments

Dust-tight version SD: Absolutely dust-tight, increased degree of protection against ingress of materials.

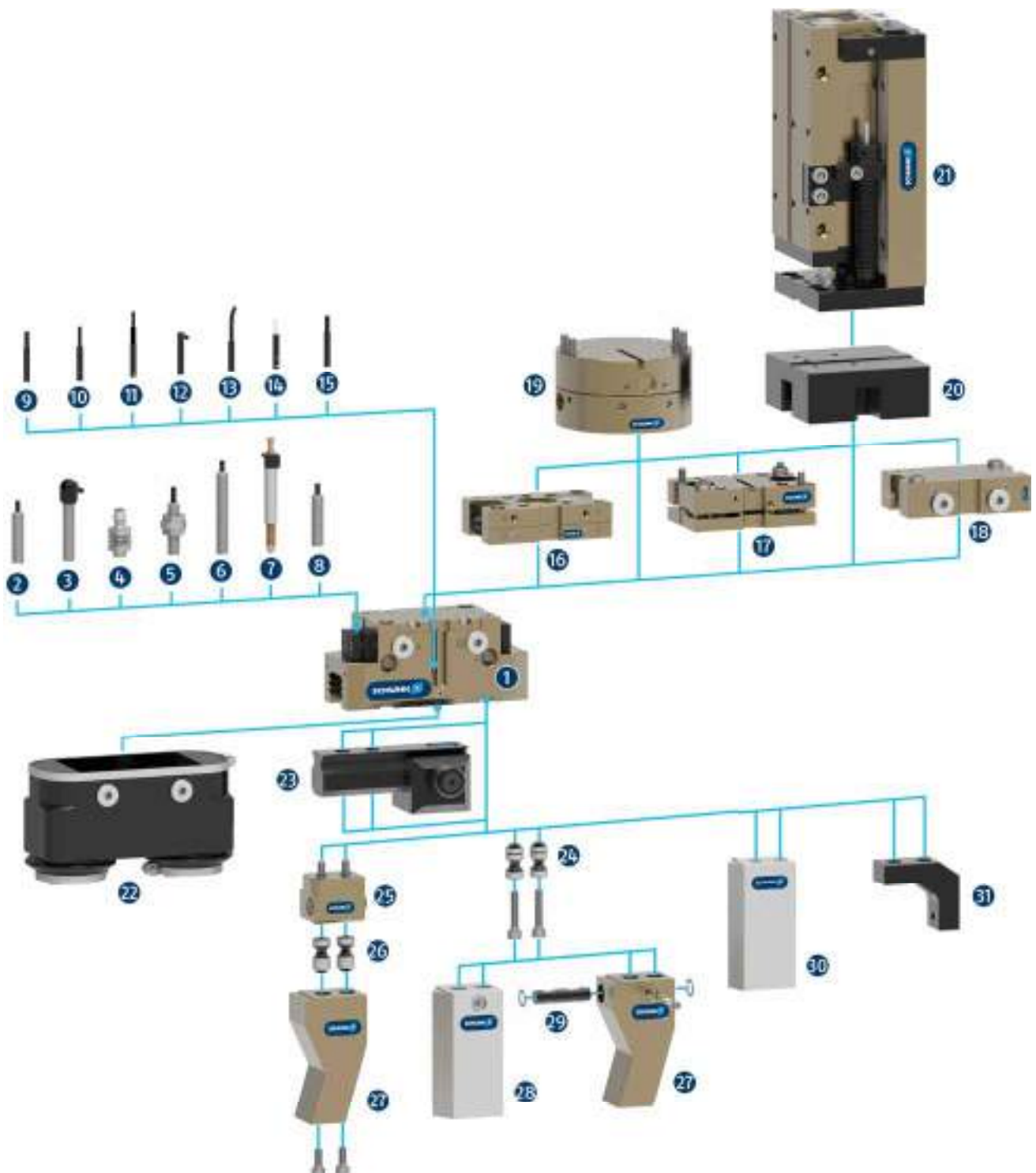
Additional versions: Various options can be combined with each other.

PGN-plus

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

SCHUNK gripper PGN-plus

Overview Accessories





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

Sensor systems

- 2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet
- 3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet
- 4 **IN-C 80**
Inductive proximity switch, directly pluggable
- 5 **FPS**
Flexible position sensor for monitoring up to five different, freely selectable positions
- 6 **APS-Z80**
Inductive position sensor for precise position detection of the gripper jaws with analog output
- 7 **APS-M1S**
Mechanical measuring system for precise position detection of the gripper jaw with analog output
- 8 **RMS 80**
Reed switch in round version
- 9 **MMS 22**
Magnetic switch with straight cable outlet for monitoring a position

MMS 22-PI1
Magnetic switch with straight cable outlet for monitoring a freely programmable position
- 10 **MMS 22-PI2**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 11 **MMS 22-PI1-HD**
MMS 22-PI1 in robust design

MMS 22-PI2-HD
MMS 22-PI2 in robust design
- 12 **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
- 13 **MMS-P**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 14 **MMS 22-A**
Analog magnetic switch with straight cable outlet for measuring the gripper jaw position with analog output and teach function

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

Complementary products

- 16 **CWS**
Manual change system with integrated air feed-through for simple exchange of the handling components
- 17 **TCU**
Tolerance compensation unit for compensating small tolerances in the plane
- 18 **SDV-P-E-P**
Pressure maintenance valve for temporary force and position maintenance
- 19 **AGE**
Compensation unit for compensation of large tolerances along the X and Y axes
- 20 **ASG**
Adapter plate for combining various automation components in the modular system
- 21 **CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers
- 22 **HUE**
Cover for protection against dirt

Finger accessory parts

- 23 **UZB**
The universal intermediate jaw allows 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 exchange 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

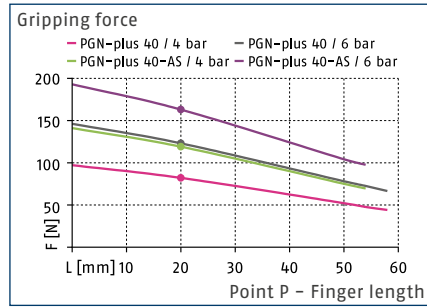
BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system
- 29 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers
- 30 **ABR/SBR**
Finger blanks made of steel or aluminum with standardized screw connection diagram
- 31 **ZBA**
Intermediate jaws for reorientation of the mounting surface

PGN-plus 40

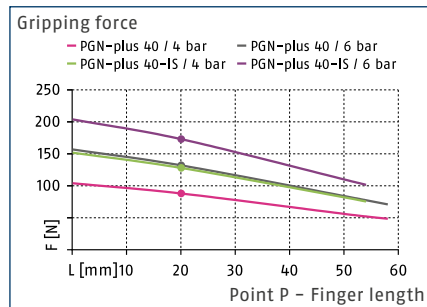
Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper



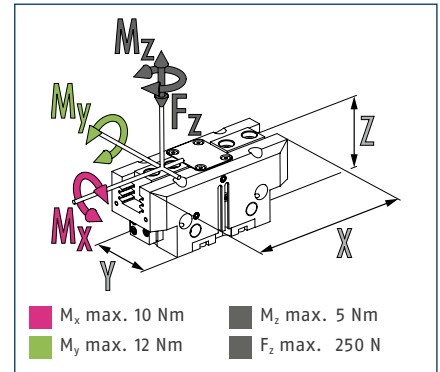
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

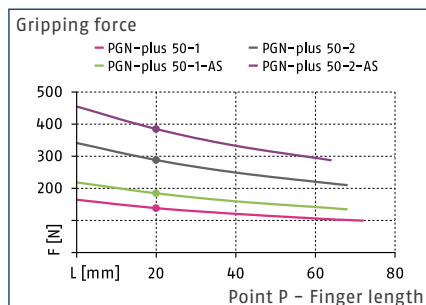
Description		PGN-plus 40	PGN-plus 40-AS	PGN-plus 40-IS
ID		0371080	0371082	0371084
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	123/132	163/-	-/173
Min. spring force	[N]		40	50
Weight	[kg]	0.08	0.1	0.1
Recommended workpiece weight	[kg]	0.62	0.62	0.62
Fluid consumption double stroke	[cm ³]	2.5	4.5	5.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.03	0.03/0.02
Closing/opening time with spring	[s]		0.05	0.05
Max. permissible finger length	[mm]	58	54	54
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	50 x 25 x 24.6	50 x 25 x 33.7	50 x 25 x 33.7
Options and their characteristics				
Dust-tight version, ID		37371080	37371082	37371084
Protection class IP		64	64	64
Weight	[kg]	0.1	0.12	0.12
Anti-corrosion version, ID		38371080	38371082	38371084
High-temperature version, ID		39371080	39371082	39371084
Min./max. ambient temperature	[°C]	5/130	5/130	5/130
Force intensified version, ID		0372098	0372398	0372458
Closing/opening force	[N]	225/235	265/-	-/285
Weight	[kg]	0.11	0.13	0.13
Maximum pressure	[bar]	6	6	6
Max. permissible finger length	[mm]	50	50	50
Precision version, ID		0371120	0371420	

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

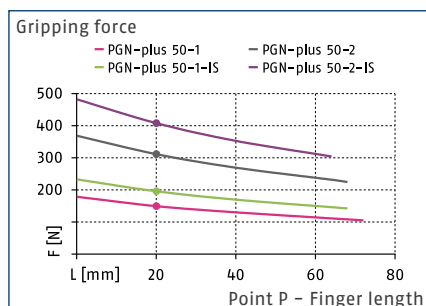
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus



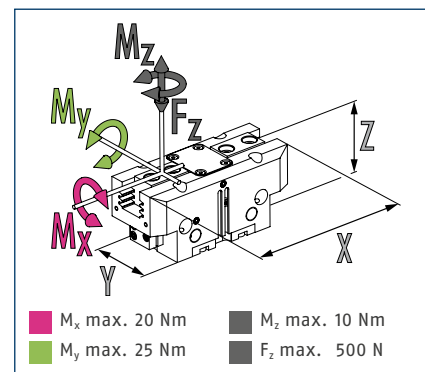
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 50-1	PGN-plus 50-2	PGN-plus 50-1-AS	PGN-plus 50-2-AS	PGN-plus 50-1-IS	PGN-plus 50-2-IS
ID		0371099	0371149	0371399	0371449	0371459	0371469
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	135/145	285/310	180/-	380/-	-/190	-/405
Min. spring force	[N]			45	95	45	95
Weight	[kg]	0.17	0.17	0.21	0.21	0.21	0.21
Recommended workpiece weight	[kg]	0.7	1.45	0.7	1.45	0.7	1.45
Fluid consumption double stroke	[cm ³]	5	5	8.5	8.5	11	11
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.02/0.03	0.02/0.03	0.03/0.02	0.03/0.02
Closing/opening time with spring	[s]			0.05	0.05	0.05	0.05
Max. permissible finger length	[mm]	72	68	68	64	68	64
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	65 x 30 x 31	65 x 30 x 31	65 x 30 x 47	65 x 30 x 47	65 x 30 x 47	65 x 30 x 47
Options and their characteristics							
Dust-tight version, ID		37371099	37371149	37371399	37371449	37371459	37371469
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.2	0.2	0.24	0.24	0.24	0.24
Anti-corrosion version, ID		38371099	38371149	38371399	38371449	38371459	38371469
High-temperature version, ID		39371099	39371149	39371399	39371449	39371459	39371469
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372099	0372149	0372399		0372459	
Closing/opening force	[N]	250/260	520/560	295/-		-/305	
Weight	[kg]	0.21	0.21	0.26		0.26	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	64	50	50		50	
Precision version, ID		0371121	0371171	0371421	0371436		

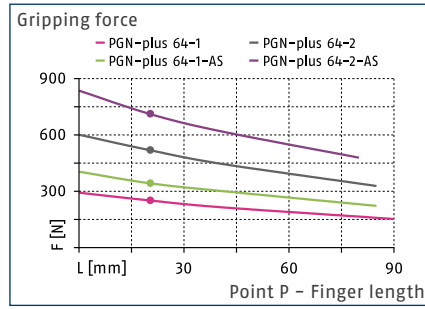
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus 64

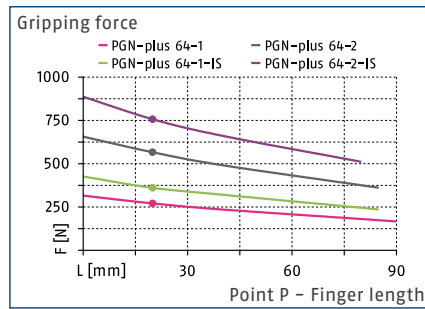
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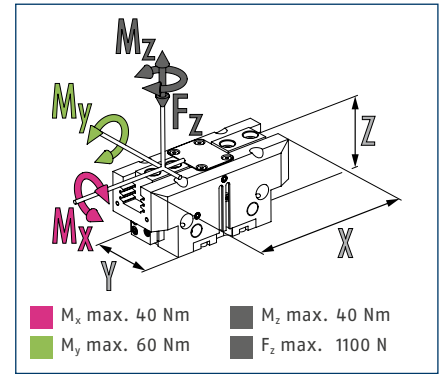
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

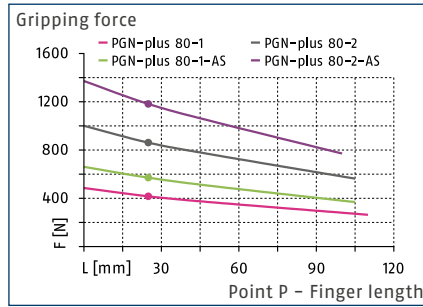
Description		PGN-plus 64-1	PGN-plus 64-2	PGN-plus 64-1-AS	PGN-plus 64-2-AS	PGN-plus 64-1-IS	PGN-plus 64-2-IS
ID		0371090	0371091	0371092	0371093	0371094	0371095
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	250/270	520/565	340/-	710/-	-/360	-/755
Min. spring force	[N]			90	190	90	190
Weight	[kg]	0.28	0.28	0.37	0.37	0.37	0.37
Recommended workpiece weight	[kg]	1.25	2.6	1.25	2.6	1.25	2.6
Fluid consumption double stroke	[cm ³]		10	17	17	21	21
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	90	85	85	80	85	80
Max. permissible mass per finger	[kg]	0.35	0.35	0.35	0.35	0.35	0.35
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	76 x 36 x 39	76 x 36 x 39	76 x 36 x 57	76 x 36 x 57	76 x 36 x 57	76 x 36 x 57
Options and their characteristics							
Dust-tight version, ID		37371090	37371091	37371092	37371093	37371094	37371095
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.35	0.35	0.44	0.44	0.44	0.44
Anti-corrosion version, ID		38371090	38371091	38371092	38371093	38371094	38371095
High-temperature version, ID		39371090	39371091	39371092	39371093	39371094	39371095
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372090	0372091	0372092		0372093	
Closing/opening force	[N]	450/485	935/1015	540/-		-/575	
Weight	[kg]	0.35	0.35	0.43		0.43	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	80	64	64		64	
Precision version, ID		0371122	0371172	0371422	0371437		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

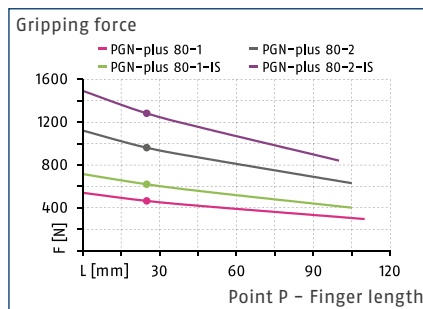
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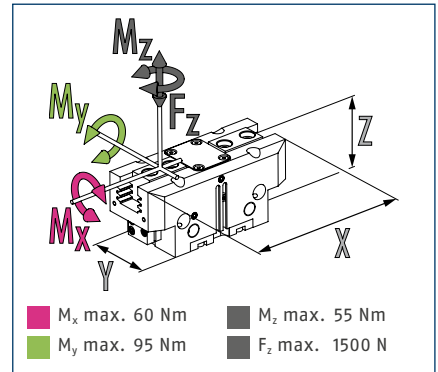
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 80-1	PGN-plus 80-2	PGN-plus 80-1-AS	PGN-plus 80-2-AS	PGN-plus 80-1-IS	PGN-plus 80-2-IS
ID		0371101	0371151	0371401	0371451	0371461	0371471
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	415/465	860/960	570/-	1180/-	-/620	-/1280
Min. spring force	[N]			155	320	155	320
Weight	[kg]	0.5	0.5	0.6	0.6	0.6	0.6
Recommended workpiece weight	[kg]	2.1	4.3	2.1	4.3	2.1	4.3
Fluid consumption double stroke	[cm ³]	22.5	22.5	36	36	42.5	42.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Closing/opening time with spring	[s]			0.10	0.10	0.10	0.10
Max. permissible finger length	[mm]	110	105	105	100	105	100
Max. permissible mass per finger	[kg]	0.6	0.6	0.6	0.6	0.6	0.6
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	96 x 42 x 49	96 x 42 x 49	96 x 42 x 67	96 x 42 x 67	96 x 42 x 67	96 x 42 x 67
Options and their characteristics							
Dust-tight version, ID		37371101	37371151	37371401	37371451	37371461	37371471
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.6	0.6	0.7	0.7	0.7	0.7
Anti-corrosion version, ID		38371101	38371151	38371401	38371451	38371461	38371471
High-temperature version, ID		39371101	39371151	39371401	39371451	39371461	39371471
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372101	0372151	0372401		0372461	
Closing/opening force	[N]	745/835	1550/1730	900/-		-/990	
Weight	[kg]	0.65	0.65	0.75		0.75	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	100	80	80		80	
Precision version, ID		0371123	0371173	0371423	0371438		

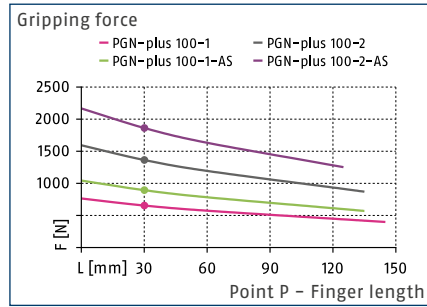
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus 100

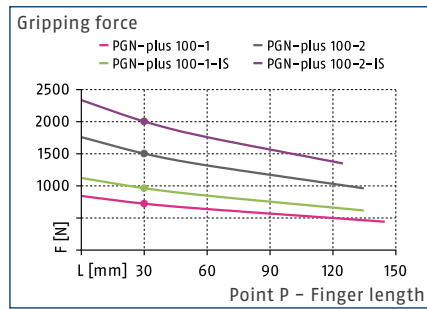
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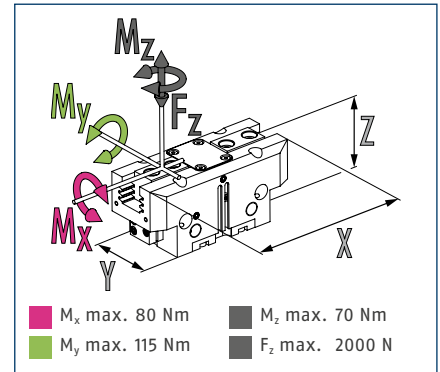
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

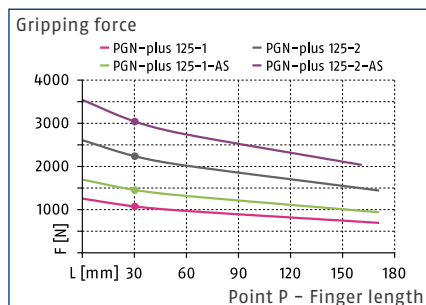
Description		PGN-plus 100-1	PGN-plus 100-2	PGN-plus 100-1-AS	PGN-plus 100-2-AS	PGN-plus 100-1-IS	PGN-plus 100-2-IS
ID		0371102	0371152	0371402	0371452	0371462	0371472
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	660/725	1370/1505	900/-	1870/-	-/965	-/2005
Min. spring force	[N]			240	500	240	500
Weight	[kg]	0.81	0.81	1	1	1	1
Recommended workpiece weight	[kg]	3.3	6.85	3.3	6.85	3.3	6.85
Fluid consumption double stroke	[cm ³]	45	45	79	79	90	90
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.07/0.07	0.07/0.07	0.05/0.09	0.05/0.09	0.09/0.05	0.09/0.05
Closing/opening time with spring	[s]			0.20	0.20	0.20	0.20
Max. permissible finger length	[mm]	145	135	135	125	135	125
Max. permissible mass per finger	[kg]	1.1	1.1	1.1	1.1	1.1	1.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	120 x 50 x 55	120 x 50 x 55	120 x 50 x 81	120 x 50 x 81	120 x 50 x 81	120 x 50 x 81
Options and their characteristics							
Dust-tight version, ID		37371102	37371152	37371402	37371452	37371462	37371472
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.99	0.99	1.18	1.18	1.18	1.18
Anti-corrosion version, ID		38371102	38371152	38371402	38371452	38371462	38371472
High-temperature version, ID		39371102	39371152	39371402	39371452	39371462	39371472
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372102	0372152	0372402		0372462	
Closing/opening force	[N]	1190/1305	2465/2700	1430/-		-/1545	
Weight	[kg]	1.05	1.05	1.3		1.3	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	125	100	100		100	
Precision version, ID		0371124	0371174	0371424	0371439		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

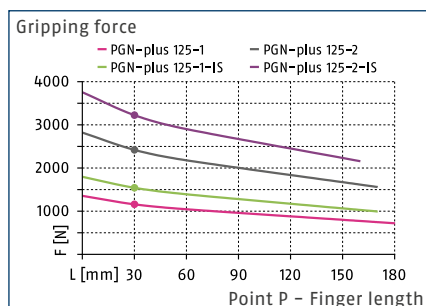
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus



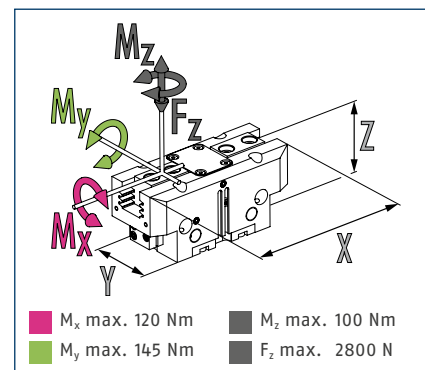
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 125-1	PGN-plus 125-2	PGN-plus 125-1-AS	PGN-plus 125-2-AS	PGN-plus 125-1-IS	PGN-plus 125-2-IS
ID		0371103	0371153	0371403	0371453	0371463	0371473
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	1080/1170	2240/2420	1460/-	3040/-	-/1550	-/3220
Min. spring force	[N]			390	800	390	800
Weight	[kg]	1.35	1.35	1.85	1.85	1.85	1.85
Recommended workpiece weight	[kg]	5.4	11.2	5.4	11.2	5.4	11.2
Fluid consumption double stroke	[cm ³]	87	87	119	119	166	166
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.1	0.08/0.12	0.08/0.12	0.12/0.08	0.12/0.08
Closing/opening time with spring	[s]			0.30	0.30	0.30	0.30
Max. permissible finger length	[mm]	180	170	170	160	170	160
Max. permissible mass per finger	[kg]	2.1	2.1	2.1	2.1	2.1	2.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	151 x 60 x 63	151 x 60 x 63	151 x 60 x 93	151 x 60 x 93	151 x 60 x 93	151 x 60 x 93
Options and their characteristics							
Dust-tight version, ID		37371103	37371153	37371403	37371453	37371463	37371473
Protection class IP		64	64	64	64	64	64
Weight	[kg]	1.55	1.55	2.05	2.05	2.05	2.05
Anti-corrosion version, ID		38371103	38371153	38371403	38371453	38371463	38371473
High-temperature version, ID		39371103	39371153	39371403	39371453	39371463	39371473
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372103	0372153	0372403		0372463	
Closing/opening force	[N]	1945/2105	4030/4355	2335/-		-/2495	
Weight	[kg]	1.85	1.85	2.3		2.3	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	160	125	125		125	
Precision version, ID		0371125	0371175	0371425	0371440		

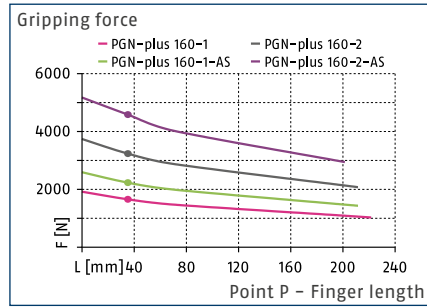
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus 160

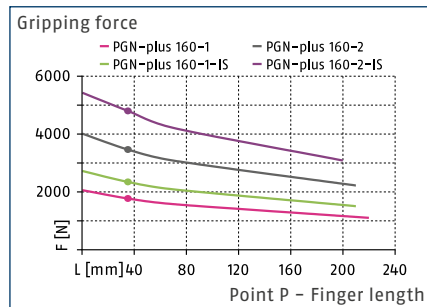
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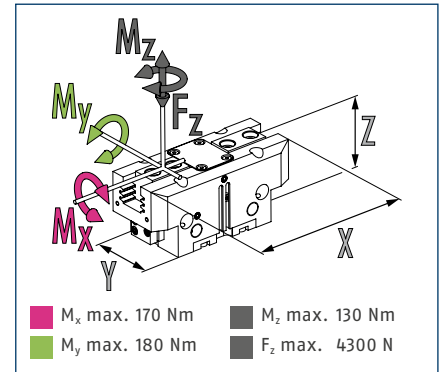
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

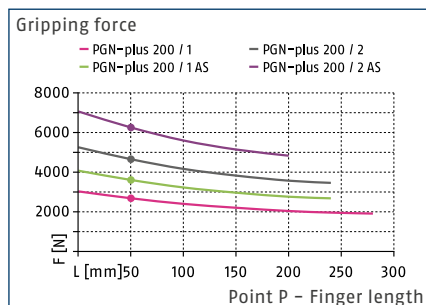
Description		PGN-plus 160-1	PGN-plus 160-2	PGN-plus 160-1-AS	PGN-plus 160-2-AS	PGN-plus 160-1-IS	PGN-plus 160-2-IS
ID		0371104	0371154	0371404	0371454	0371464	0371474
Stroke per jaw	[mm]	16	8	16	8	16	8
Closing/opening force	[N]	1640/1770	3200/3460	2210/-	4530/-	-/2340	-/4790
Min. spring force	[N]			570	1220	570	1220
Weight	[kg]	2.6	2.6	3.6	3.6	3.6	3.6
Recommended workpiece weight	[kg]	8.2	16	8.2	16	8.2	16
Fluid consumption double stroke	[cm ³]	164	164	210	210	265	265
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.15/0.15	0.15/0.15	0.12/0.25	0.12/0.25	0.25/0.12	0.25/0.12
Closing/opening time with spring	[s]			0.45	0.45	0.45	0.45
Max. permissible finger length	[mm]	220	210	210	200	210	200
Max. permissible mass per finger	[kg]	3.5	3.5	3.5	3.5	3.5	3.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	192 x 72 x 77	192 x 72 x 77	192 x 72 x 117	192 x 72 x 117	192 x 72 x 117	192 x 72 x 117
Options and their characteristics							
Dust-tight version, ID		37371104	37371154	37371404	37371454	37371464	37371474
Protection class IP		64	64	64	64	64	64
Weight	[kg]	3	3	4	4	4	4
Anti-corrosion version, ID		38371104	38371154	38371404	38371454	38371464	38371474
High-temperature version, ID		39371104	39371154	39371404	39371454	39371464	39371474
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372104	0372154	0372404		0372464	
Closing/opening force	[N]	2950/3185	5760/6230	3520/-		-/3755	
Weight	[kg]	3.4	3.4	4.4		4.4	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	160	125	125		125	
Precision version, ID		0371126	0371176	0371426	0371441		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

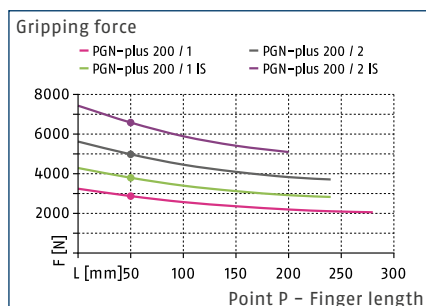
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus



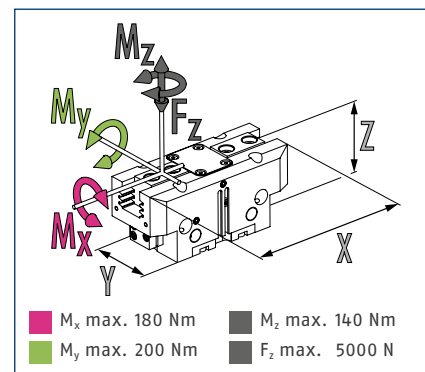
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 200-1	PGN-plus 200-2	PGN-plus 200-1-AS	PGN-plus 200-2-AS	PGN-plus 200-1-IS	PGN-plus 200-2-IS
ID		0371105	0371155	0371405	0371455	0371465	0371475
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	2690/2870	4660/4980	3610/-	6260/-	-/3790	-/6570
Min. spring force	[N]			910	1600	910	1600
Weight	[kg]	5.4	5.4	7.5	7.5	7.5	7.5
Recommended workpiece weight	[kg]	13.5	23.5	13.5	23.5	13.5	23.5
Fluid consumption double stroke	[cm ³]	385	385	495	495	620	620
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.35/0.35	0.35/0.35	0.3/0.6	0.3/0.6	0.6/0.3	0.6/0.3
Closing/opening time with spring	[s]			0.50	0.50	0.50	0.50
Max. permissible finger length	[mm]	280	240	240	200	240	200
Max. permissible mass per finger	[kg]	6.5	6.5	6.5	6.5	6.5	6.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	234 x 100 x 91	234 x 100 x 91	234 x 100 x 141	234 x 100 x 141	234 x 100 x 141	234 x 100 x 141
Options and their characteristics							
Dust-tight version, ID		37371105	37371155	37371405	37371455	37371465	37371475
Protection class IP		64	64	64	64	64	64
Weight	[kg]	6	6	8.1	8.1	8.1	8.1
Anti-corrosion version, ID		38371105	38371155	38371405	38371455	38371465	38371475
High-temperature version, ID		39371105	39371155	39371405	39371455	39371465	39371475
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372105	0372155	0372405		0372465	
Closing/opening force	[N]	4860/5165	8370/8965	5770/-		-/6075	
Weight	[kg]	6.7	6.7	9		9	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	200	160	160		160	
Precision version, ID		0371127	0371177	0371427	0371442		

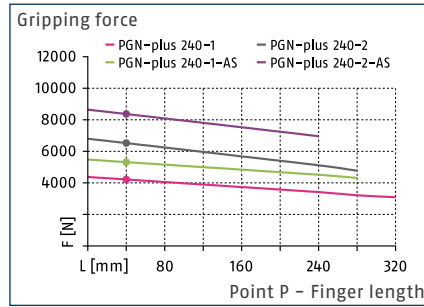
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus 240

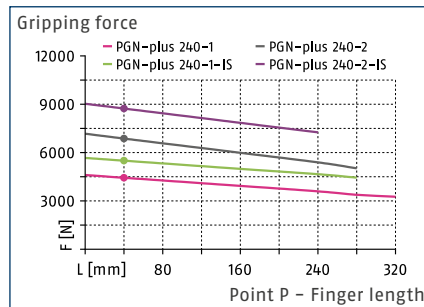
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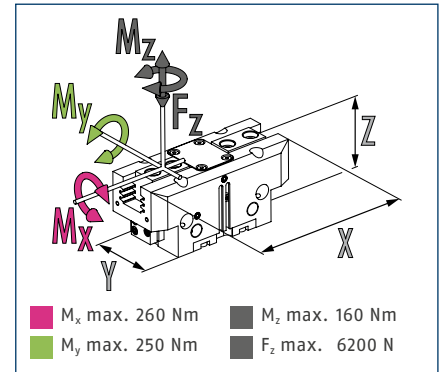
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

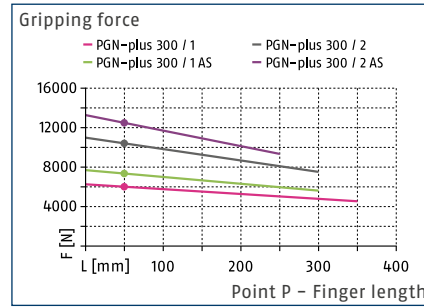
Description		PGN-plus 240-1	PGN-plus 240-2	PGN-plus 240-1-AS	PGN-plus 240-2-AS	PGN-plus 240-1-IS	PGN-plus 240-2-IS
ID		0371108	0371158	0371408	0371458	0371468	0371478
Stroke per jaw	[mm]	30	17	30	17	30	17
Closing/opening force	[N]	4200/4430	6500/6870	5300/-	8340/-	-/5500	-/8740
Min. spring force	[N]			1100	1840	1100	1840
Weight	[kg]	8.5	8.5	12	12	12	12
Recommended workpiece weight	[kg]	21.5	33	21.5	33	21.5	33
Fluid consumption double stroke	[cm ³]	650	650	810	810	995	995
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.45/0.45	0.45/0.45	0.35/0.65	0.35/0.65	0.65/0.35	0.65/0.35
Closing/opening time with spring	[s]			0.55	0.55	0.55	0.55
Max. permissible finger length	[mm]	320	280	280	240	280	240
Max. permissible mass per finger	[kg]	8.5	8.5	8.5	8.5	8.5	8.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.04	0.04	0.04	0.04	0.04	0.04
Dimensions X x Y x Z	[mm]	270 x 115 x 107	270 x 115 x 107	270 x 115 x 163.5	270 x 115 x 163.5	270 x 115 x 163.5	270 x 115 x 163.5
Options and their characteristics							
Dust-tight version, ID		37371108	37371158	37371408	37371458	37371468	37371478
Protection class IP		64	64	64	64	64	64
Weight	[kg]	11.4	11.4	14.4	14.4	14.4	14.4
Anti-corrosion version, ID		38371108	38371158	38371408	38371458	38371468	38371478
High-temperature version, ID		39371108	39371158	39371408	39371458	39371468	39371478
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0371128	0371178	0371428	0371443		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

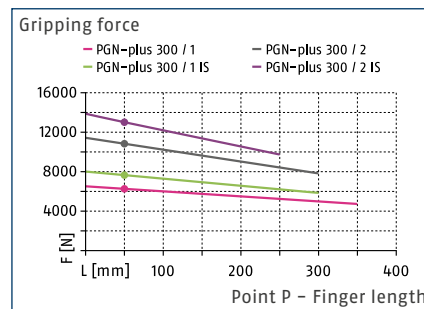
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus



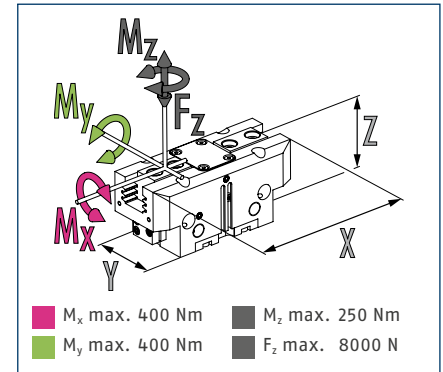
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 300-1	PGN-plus 300-2	PGN-plus 300-1-AS	PGN-plus 300-2-AS	PGN-plus 300-1-IS	PGN-plus 300-2-IS
ID		0371106	0371156	0371406	0371456	0371466	0371476
Stroke per jaw	[mm]	35	20	35	20	35	20
Closing/opening force	[N]	6020/6260	10300/10800	7360/-	12500/-	-/7650	-/13020
Min. spring force	[N]			1400	2200	1400	2200
Weight	[kg]	13.9	13.9	17.2	17.2	17.2	17.2
Recommended workpiece weight	[kg]	30	51.5	30	51.5	30	51.5
Fluid consumption double stroke	[cm ³]	1040	1040	1295	1295	1560	1560
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.5/0.5	0.5/0.5	0.4/0.7	0.4/0.7	0.7/0.4	0.7/0.4
Closing/opening time with spring	[s]			0.60	0.60	0.60	0.60
Max. permissible finger length	[mm]	350	300	300	250	300	250
Max. permissible mass per finger	[kg]	11.5	11.5	11.5	11.5	11.5	11.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	320 x 140 x 122	320 x 140 x 122	320 x 140 x 172	320 x 140 x 172	320 x 140 x 172	320 x 140 x 172
Options and their characteristics							
Dust-tight version, ID		37371106	37371156	37371406	37371456	37371466	37371476
Protection class IP		64	64	64	64	64	64
Weight	[kg]	17.6	17.6	21.3	21.3	21.3	21.3
Anti-corrosion version, ID		38371106	38371156	38371406	38371456	38371466	38371476
High-temperature version, ID		39371106	39371156	39371406	39371456	39371466	39371476
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0371129	0371179	0371429	0371444		

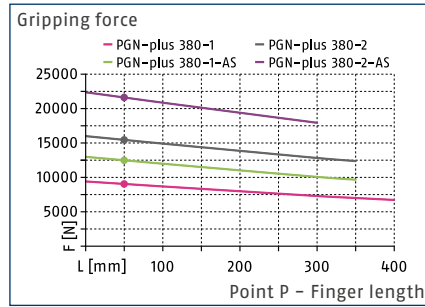
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus 380

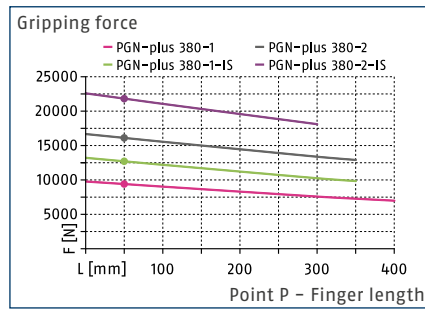
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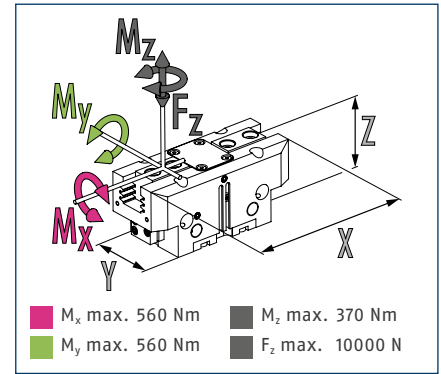
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



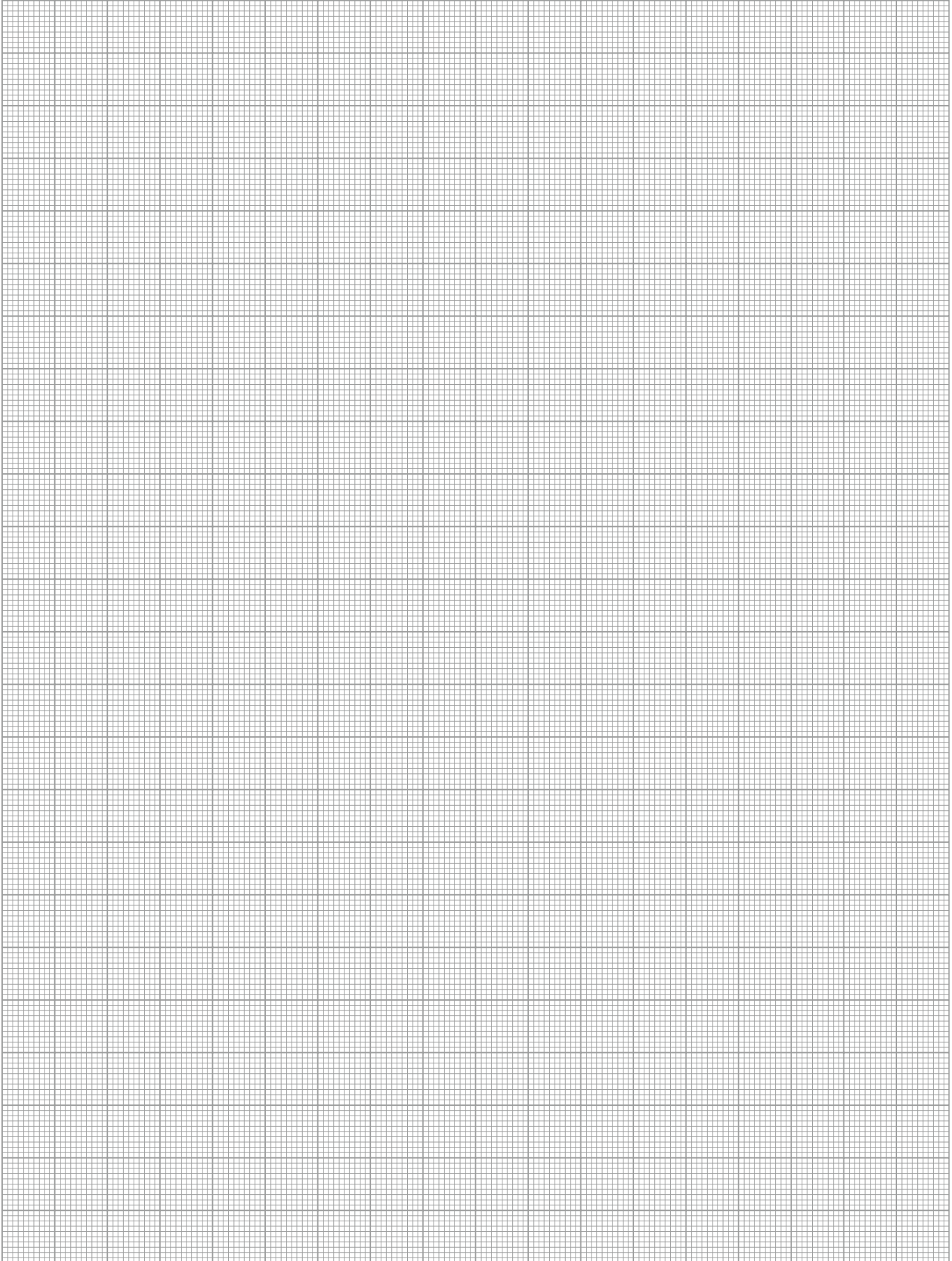
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus 380-1	PGN-plus 380-2	PGN-plus 380-1-AS	PGN-plus 380-2-AS	PGN-plus 380-1-IS	PGN-plus 380-2-IS
ID		0371107	0371157	0371407	0371457	0371467	0371477
Stroke per jaw	[mm]	45	26	45	26	45	26
Closing/opening force	[N]	9050/9400	15450/16100	12450/-	21600/-	-/12700	-/21800
Min. spring force	[N]			3300	5700	3300	5700
Weight	[kg]	28	29	36.5	37.5	36.5	37.5
Recommended workpiece weight	[kg]	47	80.5	47	80.5	47	80.5
Fluid consumption double stroke	[cm ³]	2275	2275	2705	2705	3175	3175
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.6/0.6	0.6/0.6	0.5/0.8	0.5/0.8	0.8/0.5	0.8/0.5
Closing/opening time with spring	[s]			0.80	0.80	0.80	0.80
Max. permissible finger length	[mm]	400	350	350	300	350	300
Max. permissible mass per finger	[kg]	17	17	17	17	17	17
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	410 x 170 x 155	410 x 170 x 155	410 x 170 x 226.5	410 x 170 x 226.5	410 x 170 x 226.5	410 x 170 x 226.5
Options and their characteristics							
Dust-tight version, ID		37371107	37371157	37371407	37371457	37371467	37371477
Protection class IP		64	64	64	64	64	64
Weight	[kg]	30	31	38.5	39.5	38.5	39.5
Anti-corrosion version, ID		38371107	38371157	38371407	38371457	38371467	38371477
High-temperature version, ID		39371107	39371157	39371407	39371457	39371467	39371477
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0371130	0371180	0371430	0371445		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus



PGN-plus-P

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

Reliable. Robust. Flexible.

Universal Gripper PGN-plus-P

Universal 2-finger parallel gripper with permanent lubrication, high gripping force, and high maximum moments due to the use of a multi-tooth guidance

Field of Application

Pneumatic universal gripper for handling of workpieces in universal applications. For universal use in clean to slightly dirty environments. Special versions available for dirty environments.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Lubricant pockets in the multi-tooth guidance ensure process reliability and extended maintenance intervals

Maximum piston surface area for maximum gripping forces

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for universal and flexible gripper assembly

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Manifold options for special optimization for your specific application (dust-tight, high-temperature, corrosion-protected, etc.)



Sizes
Quantity: 7



Weight
0.08 .. 7.6 kg



Gripping force
180 .. 8750 N



Stroke per jaw
2 .. 25 mm

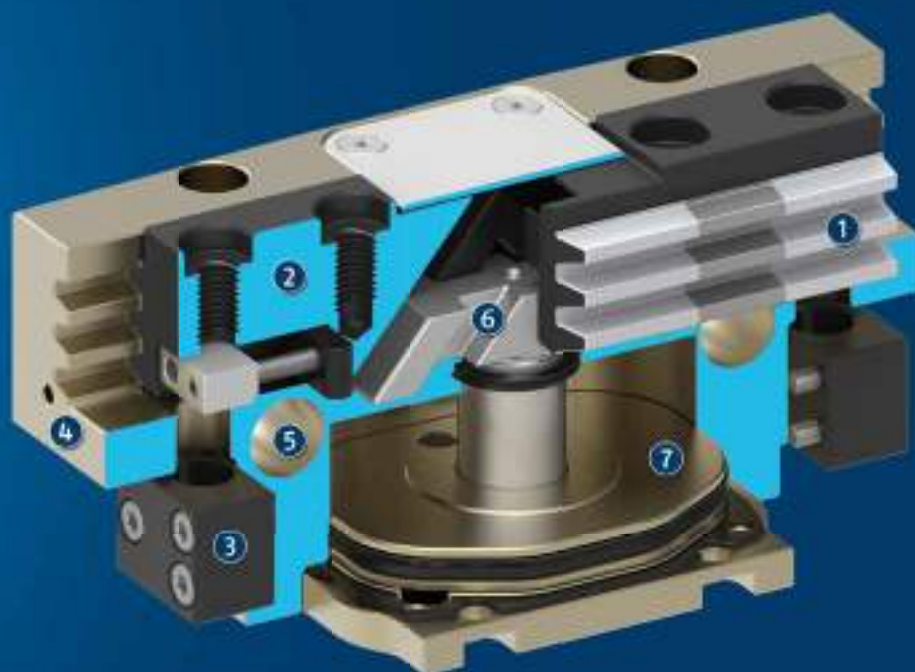


Workpiece weight
0.9 .. 32.5 kg



Functional Description

The piston is moved up and down by compressed air. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



① 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

② Base jaw

With standardized screw connection diagram for the connection of the workpiece-specific gripper fingers

③ Bracket for sensors

Brackets for proximity switches and adjustable control cams in the housing

④ Housing

Is weight-optimized due to the use of high-strength aluminum alloy

⑤ Centering and mounting possibilities

For universal assembly of the gripper

⑥ Wedge-hook principle

For high power transmission and minimum wear as a result of larger diagonal pull surfaces

⑦ Piston

Maximum force through maximum surface of drive piston

General Notes about the Series

Operating principle: Wedge gear with surface power transmission

Housing material: Aluminum

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Handling tool for loading and unloading raw and finished parts and compensation of inaccurate position. A sensor distributor is used for routing signals through a cable.

- ① Sensor distributor V4
- ② Tolerance compensation unit TCU-Z
- ③ Universal gripper PGN-plus-P
- ④ Sensors IN
- ⑤ Universal swivel unit SRM



SCHUNK offers more ...

The following components make the product PGN-plus-P even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Swivel unit



Quick-change system



Compensation unit



Linear module



Jaw quick-change system



Finger blank



Pressure maintenance valve



Universal intermediate jaw



Flexible position sensor



Analog position sensor



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

High-temperature version V/HT: For use in hot environments

Precision version P: For the highest accuracy

Anti-corrosion version K: For use in corrosion-inducing atmospheres

ATEX version EX: For explosive environments

Dust-tight version SD: Absolutely dust-tight, increased degree of protection against ingress of materials.

Additional versions: Various options can be combined with each other.

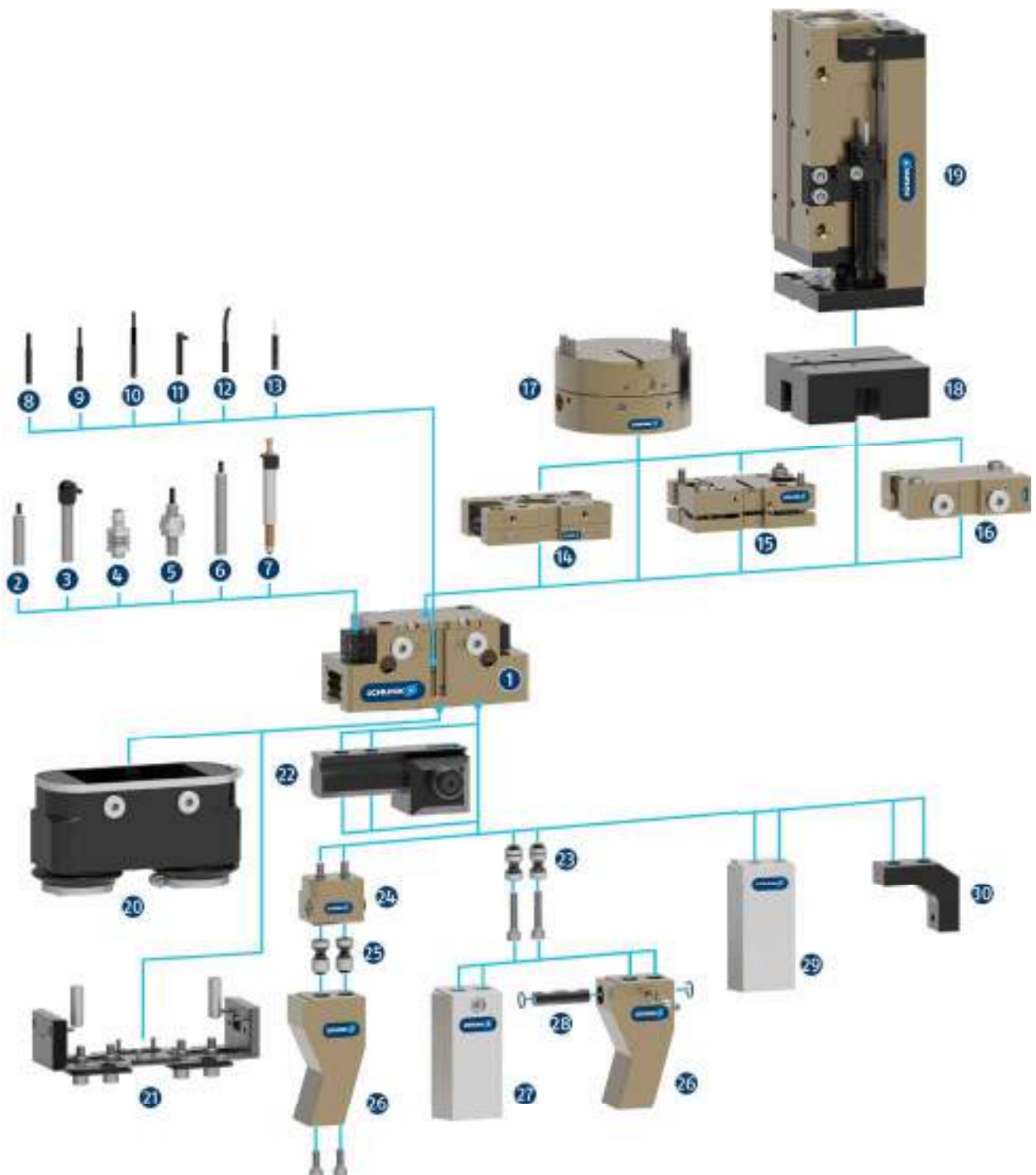
Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper

PGN-plus-P

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

SCHUNK Gripper PGN-plus-P

Overview Accessories





- 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 systems

- 2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet
- 3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet
- 4 **IN-C 80**
Inductive proximity switch, directly pluggable
- 5 **FPS**
Flexible position sensor for monitoring up to five different, freely selectable positions
- 6 **APS-Z80**
Inductive position sensor for precise position detection of the gripper jaws with analog output
- 7 **APS-M15**
Mechanical measuring system for precise position detection of the gripper jaw 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 a freely programmable position
- 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
- 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

Complementary products

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

- 15 **TCU**
Tolerance compensation unit for compensating small tolerances in the plane
- 16 **SDV-P-E-P**
Pressure maintenance valve for temporary force and position maintenance
- 17 **AGE**
Compensation unit for compensation of large tolerances along the X and Y axes
- 18 **ASG**
Adapter plate for combining various automation components in the modular system
- 19 **CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers
- 20 **HUE**
Cover for protection against dirt
- 21 **SAD**
Dust-proof version, retrofit kit

Finger accessory parts

- 22 **UZB**
The universal intermediate jaw allows fast tool-free and safe plugging and shifting of top jaws on the gripper.
- 23 **BSWS-AR**
Adapter coupling of jaw quick-change system for fast, manual change of top jaws
- 24 **BSWS-B**
Locking mechanism of the jaw quick-change system for fast, manual exchange of top jaws
- 25 **BSWS-A**
Adapter coupling of the jaw quick-change system for adaptation to the customized finger
- 26 **Customized fingers**
- 27 **BSWS-ABR**
Finger blank made of aluminum with interface to the jaw quick-change system

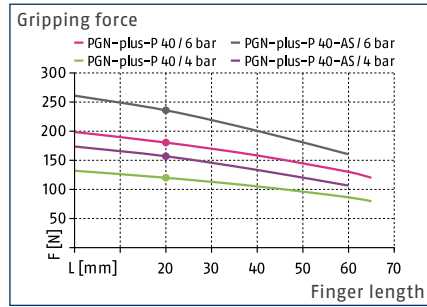
BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system
- 28 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers
- 29 **ABR/SBR**
Finger blanks made of steel or aluminum with standardized screw connection diagram
- 30 **ZBA**
Intermediate jaws for reorientation of the mounting surface

PGN-plus-P 40

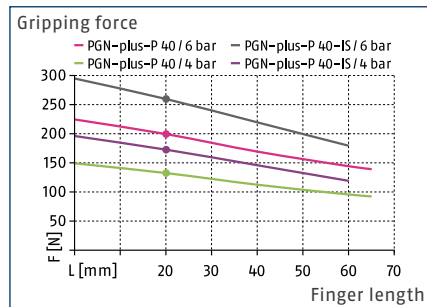
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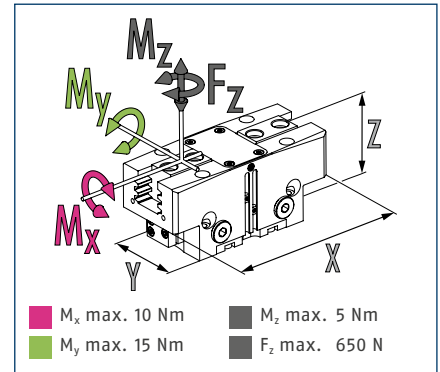
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

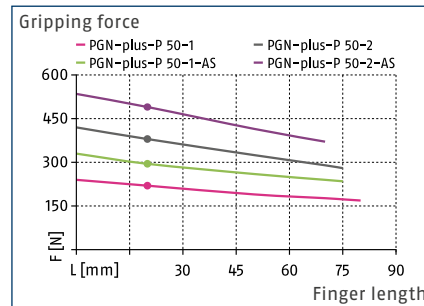
Description		PGN-plus-P 40	PGN-plus-P 40-AS	PGN-plus-P 40-IS
ID		0318448	0318450	0318452
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	180/200	235/-	-/260
Min. spring force	[N]		55	60
Weight	[kg]	0.08	0.1	0.1
Recommended workpiece weight	[kg]	0.9	0.9	0.9
Fluid consumption double stroke	[cm ³]	4	8	10
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.03	0.03/0.02
Closing/opening time with spring	[s]		0.03	0.03
Max. permissible finger length	[mm]	65	60	60
Max. permissible mass per finger	[kg]	0.12	0.12	0.12
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	50 x 25 x 24.7	50 x 25 x 33.7	50 x 25 x 33.7
Options and their characteristics				
Dust-tight version, ID		1317458	1317463	1317466
Protection class IP		64	64	64
Weight	[kg]	0.1	0.12	0.12
Anti-corrosion version, ID		1317436	1317437	1317439
High-temperature version, ID		1317423	1317428	1317431
Min./max. ambient temperature	[°C]	5/130	5/130	5/130
Precision version, ID		1317451	1317454	

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

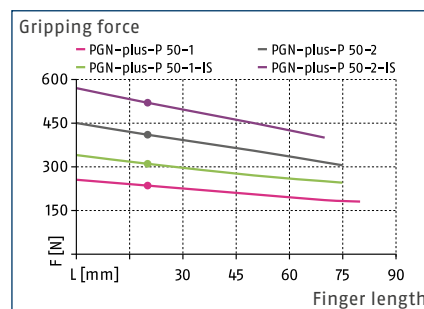
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus-p



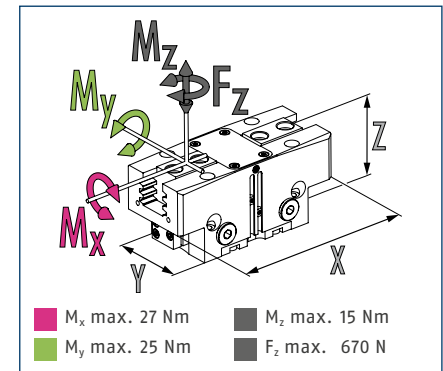
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus-P 50-1	PGN-plus-P 50-2	PGN-plus-P 50-1-AS	PGN-plus-P 50-2-AS	PGN-plus-P 50-1-IS	PGN-plus-P 50-2-IS
ID		0318472	0318473	0318474	0318475	0318476	0318477
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	220/235	380/410	295/-	490/-	-/300	-/520
Min. spring force	[N]			75	110	65	110
Weight	[kg]	0.17	0.17	0.2	0.2	0.2	0.2
Recommended workpiece weight	[kg]	1.1	1.9	1.1	1.9	1.1	1.9
Fluid consumption double stroke	[cm ³]	6	6	10	10	12	12
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.02/0.03	0.02/0.03	0.03/0.02	0.03/0.03
Closing/opening time with spring	[s]			0.03	0.03	0.03	0.03
Max. permissible finger length	[mm]	80	75	75	70	75	70
Max. permissible mass per finger	[kg]	0.2	0.2	0.2	0.2	0.2	0.2
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	65 x 30 x 31	65 x 30 x 31	65 x 30 x 47	65 x 30 x 47	65 x 30 x 47	65 x 30 x 47
Options and their characteristics							
Dust-tight version, ID		1317516	1317527	1317531	1317534	1317539	1317541
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.21	0.21	0.24	0.24	0.24	0.24
Anti-corrosion version, ID		38318472	38318473	38318474	38318475	38318476	38318477
High-temperature version, ID		39318472	39318473	39318474	39318475	39318476	39318477
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0318478	0318479	0318480	0318481		

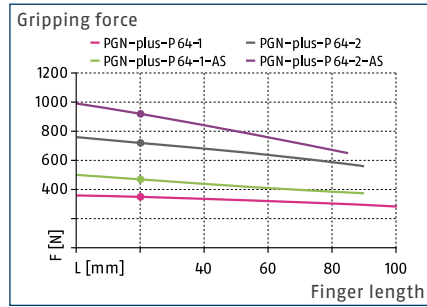
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus-P 64

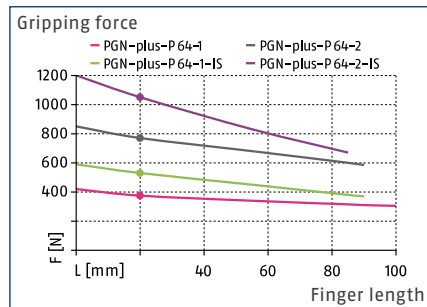
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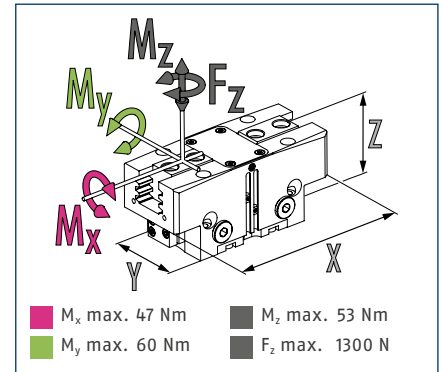
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

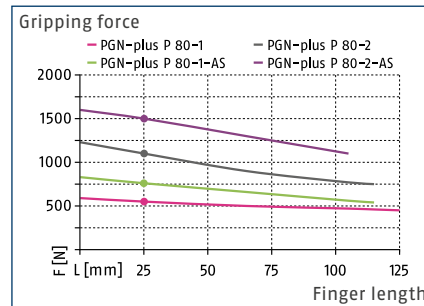
Description		PGN-plus-P 64-1	PGN-plus-P 64-2	PGN-plus-P 64-1-AS	PGN-plus-P 64-2-AS	PGN-plus-P 64-1-IS	PGN-plus-P 64-2-IS
ID		0318496	0318497	0318498	0318499	0318500	0318501
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	350/375	720/770	470/-	920/-	-/530	-/1050
Min. spring force	[N]			120	200	155	280
Weight	[kg]	0.27	0.27	0.35	0.35	0.35	0.35
Recommended workpiece weight	[kg]	1.75	3.6	1.75	3.6	1.75	3.6
Fluid consumption double stroke	[cm ³]	15	15	24	24	27	27
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.07	0.07	0.07	0.07
Max. permissible finger length	[mm]	100	90	90	85	90	85
Max. permissible mass per finger	[kg]	0.4	0.4	0.4	0.4	0.4	0.4
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	76 x 36 x 39	76 x 36 x 39	76 x 36 x 57	76 x 36 x 57	76 x 36 x 57	76 x 36 x 57
Options and their characteristics							
Dust-tight version, ID		1317542	1317543	1317545	1317548	1317549	1317558
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.34	0.34	0.42	0.42	0.42	0.42
Anti-corrosion version, ID		38318496	38318497	38318498	38318499	38318500	38318501
High-temperature version, ID		39318496	39318497	39318498	39318499	39318500	39318501
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0318502	0318503	0318504	0318505		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

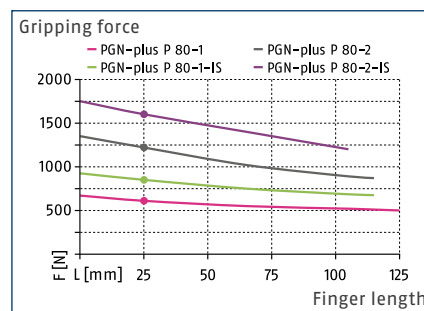
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus-p



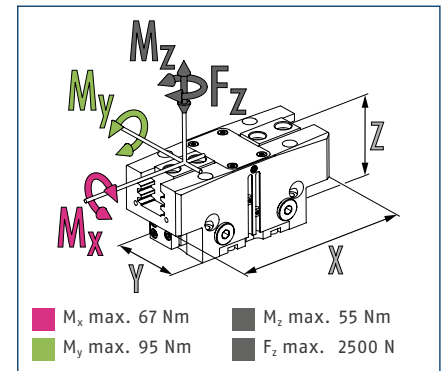
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus-P 80-1	PGN-plus-P 80-2	PGN-plus-P 80-1-AS	PGN-plus-P 80-2-AS	PGN-plus-P 80-1-IS	PGN-plus-P 80-2-IS
ID		0318520	0318521	0318522	0318523	0318524	0318525
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	550/610	1100/1220	760/-	1500/-	-/850	-/1600
Min. spring force	[N]			210	400	240	380
Weight	[kg]	0.51	0.51	0.63	0.63	0.63	0.63
Recommended workpiece weight	[kg]	2.75	5.5	2.75	5.5	2.75	5.5
Fluid consumption double stroke	[cm ³]	29	29	44	44	52	52
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	125	115	115	105	115	105
Max. permissible mass per finger	[kg]	0.7	0.7	0.7	0.7	0.7	0.7
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	96 x 42 x 49	96 x 42 x 49	96 x 42 x 67	96 x 42 x 67	96 x 42 x 67	96 x 42 x 67
Options and their characteristics							
Dust-tight version, ID		1317561	1317563	1317564	1317565	1317568	1317569
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.58	0.58	0.7	0.7	0.7	0.7
Anti-corrosion version, ID		38318520	38318521	38318522	38318523	38318524	38318525
High-temperature version, ID		39318520	39318521	39318522	39318523	39318524	39318525
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0318526	0318527	0318528	0318529		

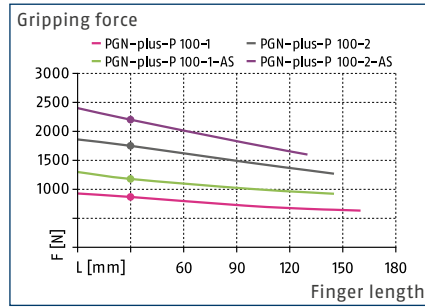
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus-P 100

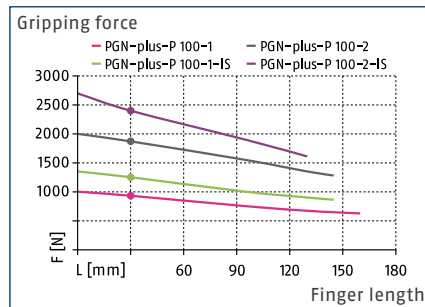
Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper



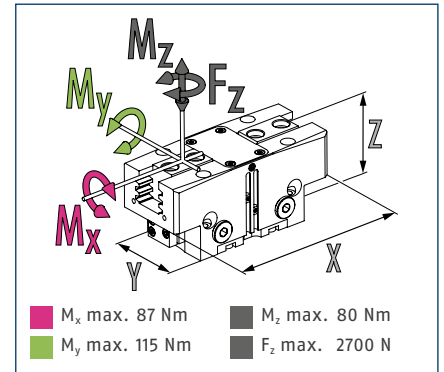
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

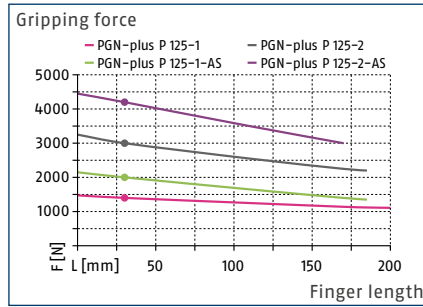
Description		PGN-plus-P 100-1	PGN-plus-P 100-2	PGN-plus-P 100-1-AS	PGN-plus-P 100-2-AS	PGN-plus-P 100-1-IS	PGN-plus-P 100-2-IS
ID		0318544	0318545	0318546	0318547	0318548	0318549
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	870/930	1750/1870	1180/-	2200/-	-/1250	-/2400
Min. spring force	[N]			310	450	320	530
Weight	[kg]	0.9	0.9	1.1	1.1	1.1	1.1
Recommended workpiece weight	[kg]	4.35	8.75	4.35	8.75	4.35	8.75
Fluid consumption double stroke	[cm ³]	55	55	84	84	92	92
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.07/0.07	0.07/0.07	0.05/0.09	0.05/0.09	0.09/0.05	0.09/0.05
Closing/opening time with spring	[s]			0.10	0.10	0.10	0.10
Max. permissible finger length	[mm]	160	145	145	130	145	130
Max. permissible mass per finger	[kg]	1.3	1.3	1.3	1.3	1.3	1.3
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	120 x 50 x 55	120 x 50 x 55	120 x 50 x 81	120 x 50 x 81	120 x 50 x 81	120 x 50 x 81
Options and their characteristics							
Dust-tight version, ID		1317570	1317571	1317572	1317574	1317578	1317581
Protection class IP		64	64	64	64	64	64
Weight	[kg]	1.02	1.02	1.22	1.22	1.22	1.22
Anti-corrosion version, ID		38318544	38318545	38318546	38318547	38318548	38318549
High-temperature version, ID		39318544	39318545	39318546	39318547	39318548	39318549
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0318550	0318551	0318552	0318553		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

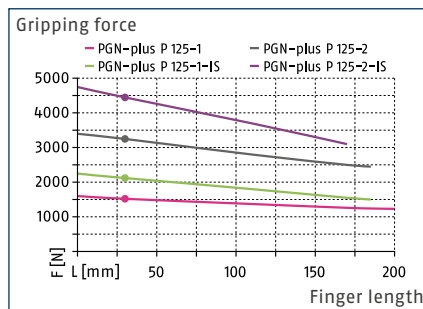
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus-p



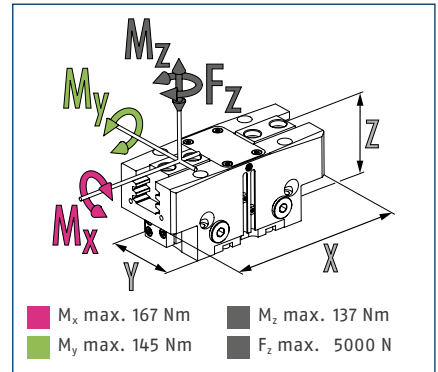
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus-P 125-1	PGN-plus-P 125-2	PGN-plus-P 125-1-AS	PGN-plus-P 125-2-AS	PGN-plus-P 125-1-IS	PGN-plus-P 125-2-IS
ID		0318568	0318569	0318570	0318571	0318572	0318573
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	1400/1520	3000/3250	2000/-	4200/-	-/2120	-/4450
Min. spring force	[N]			600	1200	600	1200
Weight	[kg]	1.4	1.4	1.9	1.9	1.9	1.9
Recommended workpiece weight	[kg]	7	15	7	15	7	15
Fluid consumption double stroke	[cm ³]	110	110	160	160	185	185
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.1	0.08/0.12	0.08/0.12	0.12/0.08	0.12/0.08
Closing/opening time with spring	[s]			0.15	0.15	0.15	0.15
Max. permissible finger length	[mm]	200	185	185	170	185	170
Max. permissible mass per finger	[kg]	2.4	2.4	2.4	2.4	2.4	2.4
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	151 x 60 x 63	151 x 60 x 63	151 x 60 x 93	151 x 60 x 93	151 x 60 x 93	151 x 60 x 93
Options and their characteristics							
Dust-tight version, ID		1317584	1317585	1317590	1317591	1317592	1317593
Protection class IP		64	64	64	64	64	64
Weight	[kg]	1.6	1.6	2.1	2.1	2.1	2.1
Anti-corrosion version, ID		38318568	38318569	38318570	38318571	38318572	38318573
High-temperature version, ID		39318568	39318569	39318570	39318571	39318572	39318573
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0318574	0318575	0318576	0318577		

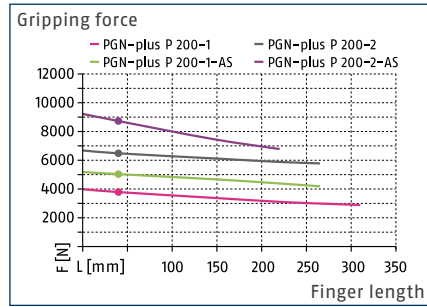
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGN-plus-P 200

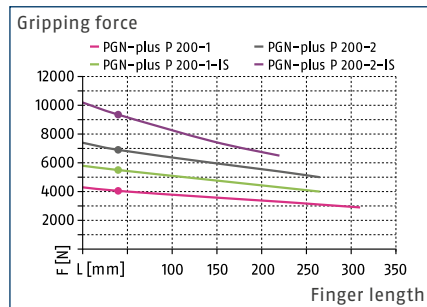
Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper



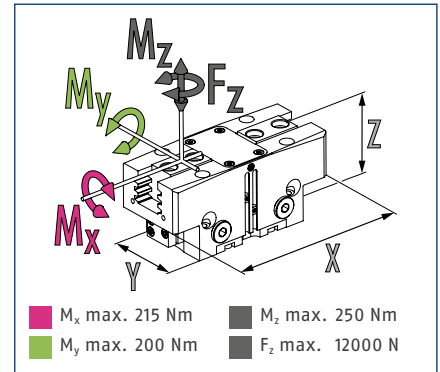
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



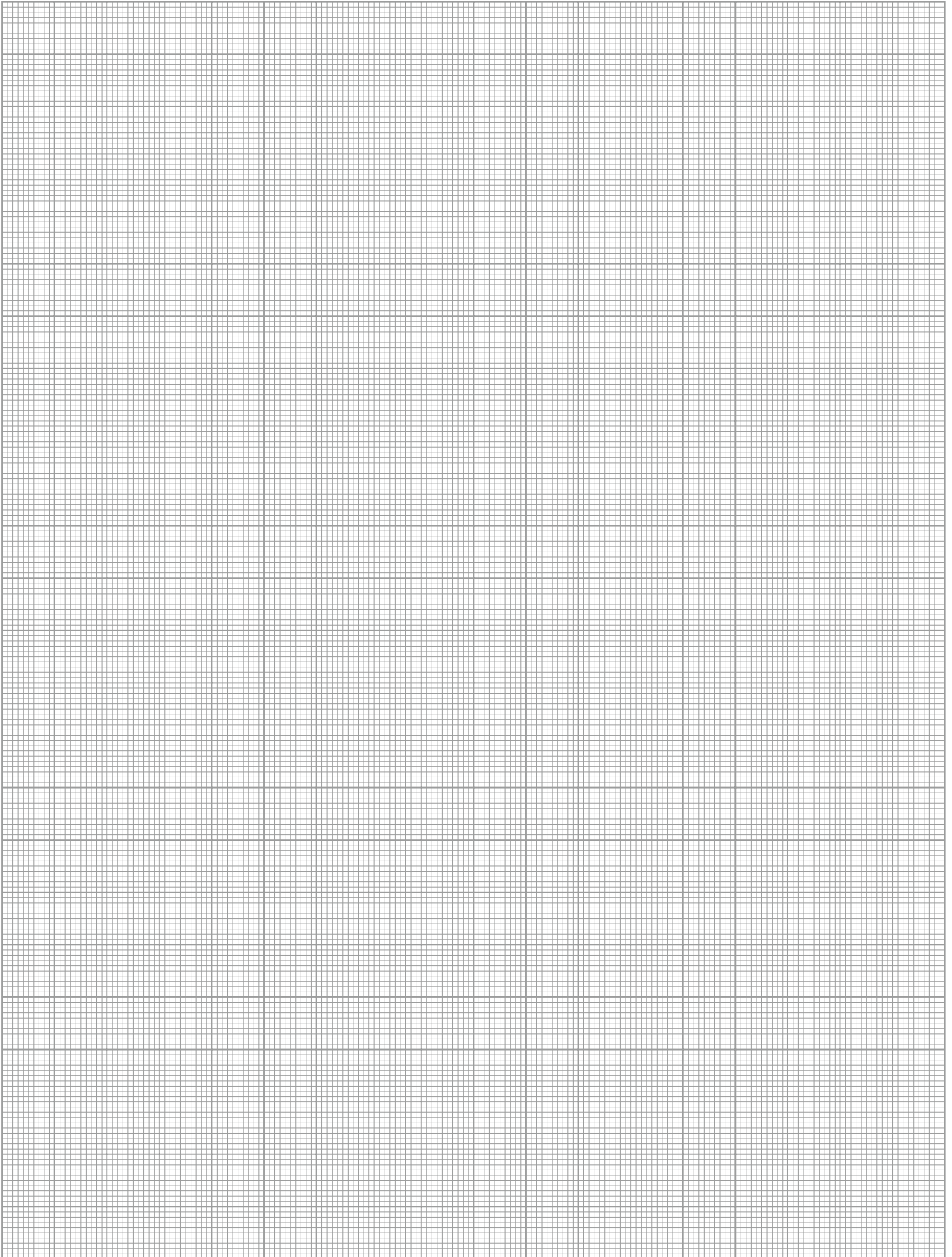
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus-P 200-1	PGN-plus-P 200-2	PGN-plus-P 200-1-AS	PGN-plus-P 200-2-AS	PGN-plus-P 200-1-IS	PGN-plus-P 200-2-IS
ID		0318616	0318617	0318618	0318619	0318620	0318621
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	3800/4050	6500/6900	5050/-	8750/-	-/5500	-/9350
Min. spring force	[N]			1250	2250	1450	2450
Weight	[kg]	5.4	5.4	7	7	6.8	6.8
Recommended workpiece weight	[kg]	19	32.5	19	32.5	19	32.5
Fluid consumption double stroke	[cm ³]	510	510	810	810	890	890
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.3/0.3	0.3/0.3	0.3/0.6	0.3/0.6	0.6/0.3	0.6/0.3
Closing/opening time with spring	[s]			0.40	0.40	0.40	0.40
Max. permissible finger length	[mm]	310	265	265	220	265	220
Max. permissible mass per finger	[kg]	6.5	6.5	6.5	6.5	6.5	6.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	234 x 100 x 91	234 x 100 x 91	234 x 100 x 141	234 x 100 x 141	234 x 100 x 141	234 x 100 x 141
Options and their characteristics							
Dust-tight version, ID		1317683	1317691	1317695	1317696	1317701	1317703
Protection class IP		64	64	64	64	64	64
Weight	[kg]	6	6	7.6	7.6	7.4	7.4
Anti-corrosion version, ID		1317675	1317676	1317678	1317679	1317680	1317681
High-temperature version, ID		1317663	1317665	1317666	1317667	1317670	1317674
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		1317705	1317706	1317708	1317710		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus-p



DPG-plus

Pneumatic Grippers | 2-Finger Parallel Grippers | Sealed Universal Gripper

Reliable. Fully encapsulated. Loadable.

Sealed Universal Gripper DPG-plus

Despite the high moment load of the base jaws, this sealed 2-finger parallel gripper meets the IP67 requirements, and does not permit the ingress of any substances from the working environment into the interior of the unit

Field of Application

The gripper is ideally suitable for handling 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.

Advantages – Your benefits

Robust interior multi-tooth guidance for the precise handling of different workpieces

Lip seal at the outside round guidance for permanent, safe gripper sealing

High maximum moments possible suitable for using long gripper fingers

Sealed 2-finger parallel gripper complies to IP67 requirements despite a high moment load

Drive concept oval piston for maximum gripping forces

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Compact dimensions for minimum interfering contours in handling



Sizes
Quantity: 11



Weight
0.12 .. 52 kg



Gripping force
110 .. 11250 N



Stroke per jaw
2 .. 45 mm

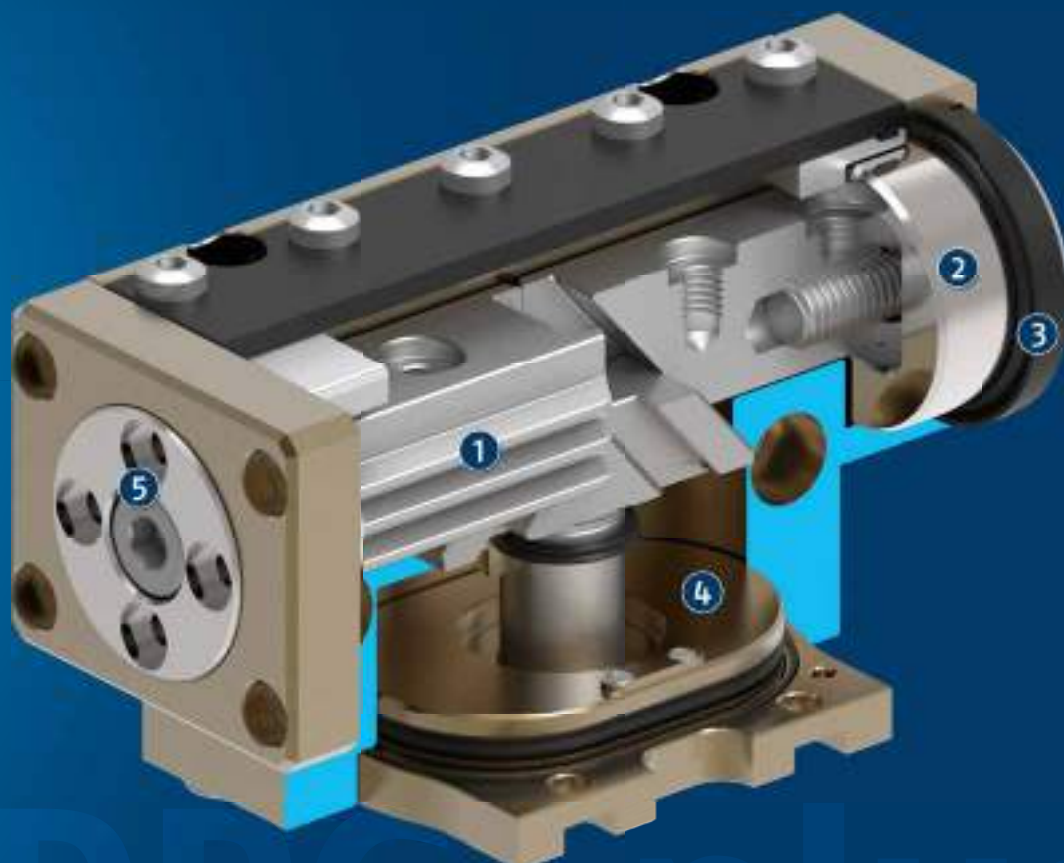


Workpiece weight
0.55 .. 46.35 kg



Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Inner base jaw with multi-tooth guidance**
For high moment loads
- ② **External round base jaw**
Providing a sealable, round surface
- ③ **Lip seal**
For permanent, safe gripper sealing
- ④ **Oval piston with rod and wedge-hook**
For power generation and transmission
- ⑤ **Centering and mounting possibilities**
For universal assembly of the gripper

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Note – tightness: Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Sealed and extremely robust gripper swivel combination for the use in harsh environments such as foundries, grinding shops or forges.

- 1 2-finger parallel gripper DPG-plus with top fingers equipped with carbide clamping inserts
- 2 Swivel unit SRU-plus in sealed IP67 standard version
- 3 Universal linear module Beta





SCHUNK offers more ...

The following components make the product DPG-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Tolerance compensation unit



Manual change system



Pressure maintenance valve



Finger blank



Jaw quick-change system



Intermediate jaw



Universal intermediate jaw



Magnetic switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

Force intensified version KVZ: If higher gripping forces are required

ATEX version EX: For explosive environments

Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!

Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper

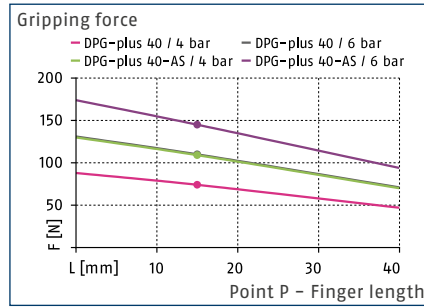
Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.

DPG-plus 40

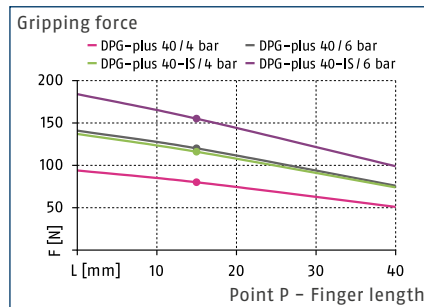
Pneumatic Grippers | 2-Finger Parallel Grippers | Sealed Universal Gripper



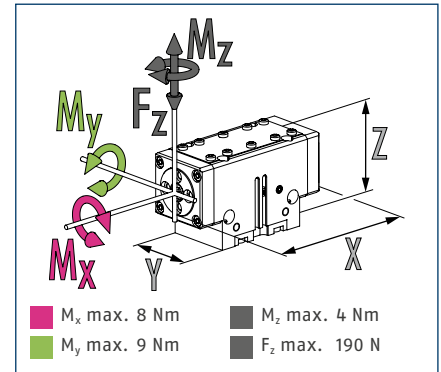
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

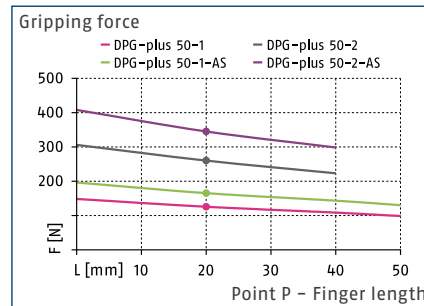
Description		DPG-plus 40	DPG-plus 40-AS	DPG-plus 40-IS
ID		1315867	1315876	1315877
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	110/120	145/-	-/165
Min. spring force	[N]		35	45
Weight	[kg]	0.12	0.14	0.14
Recommended workpiece weight	[kg]	0.55	0.55	0.55
Fluid consumption double stroke	[cm ³]	2.5	4.5	5.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.03/0.03	0.03/0.05	0.03/0.05
Max. permissible finger length	[mm]	40	40	40
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions X x Y x Z	[mm]	56 x 24 x 31.6	56 x 24 x 40.5	56 x 24 x 40.5
Options and their characteristics				
High-temperature version, ID		1321185	1321187	1321188
Min./max. ambient temperature	[°C]	5/130	5/130	5/130

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

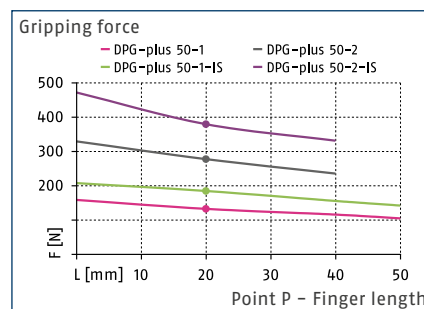
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/dpg-plus



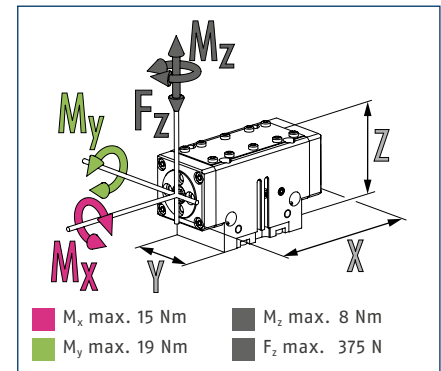
Gripping force O.D. gripping



Gripping force O.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 50-1	DPG-plus 50-2	DPG-plus 50-1-AS	DPG-plus 50-2-AS	DPG-plus 50-1-IS	DPG-plus 50-2-IS
ID		1315879	1315955	1315958	1315960	1315961	1315966
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	125/130	260/275	165/-	345/-	-/170	-/360
Min. spring force	[N]			40	85	40	85
Weight	[kg]	0.25	0.25	0.3	0.3	0.3	0.3
Recommended workpiece weight	[kg]	0.6	1.3	0.6	1.3	0.6	1.3
Fluid consumption double stroke	[cm ³]	5	5	8.5	8.5	11	11
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Max. permissible finger length	[mm]	50	40	50	40	50	40
Max. permissible mass per finger	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	71 x 30.1 x 37.5	71 x 30.1 x 37.5	71 x 30.1 x 53.5	71 x 30.1 x 53.5	71 x 30.1 x 53.5	71 x 30.1 x 53.5
Options and their characteristics							
High-temperature version, ID		1321189	1321190	1321192	1321193	1321194	1321195
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		1315952	1315957	1315959		1315965	
Closing/opening force	[N]	225/235	470/505	265/-		-/275	
Weight	[kg]	0.29	0.29	0.34		0.34	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	40	30	30		30	

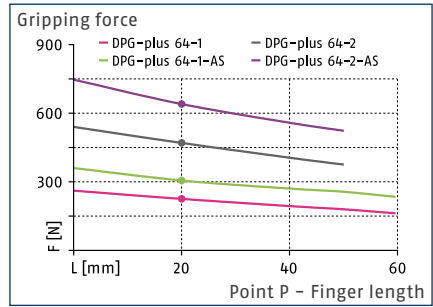
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPG-plus 64

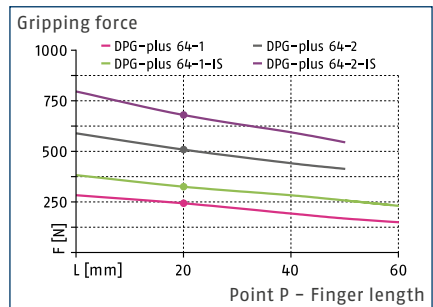
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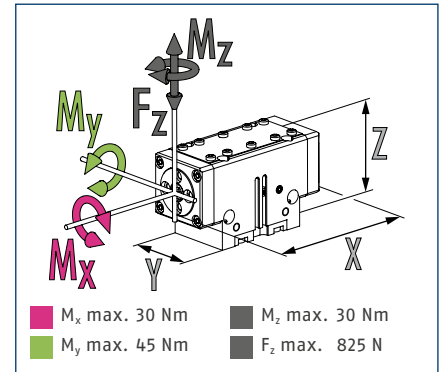
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

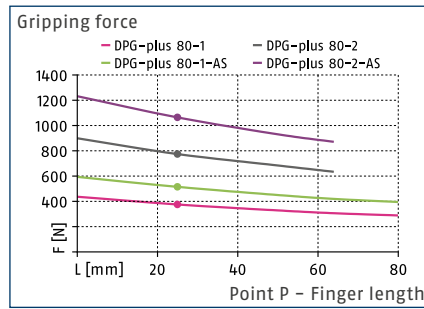
Description		DPG-plus 64-1	DPG-plus 64-2	DPG-plus 64-1-AS	DPG-plus 64-2-AS	DPG-plus 64-1-IS	DPG-plus 64-2-IS
ID		1315967	1315969	1315971	1315973	1315974	1315976
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	225/240	470/505	305/-	640/-	-/320	-/670
Min. spring force	[N]			80	170	80	170
Weight	[kg]	0.39	0.39	0.46	0.46	0.46	0.46
Recommended workpiece weight	[kg]	1.1	2.3	1.1	2.3	1.1	2.3
Fluid consumption double stroke	[cm ³]	10	10	17	17	21	21
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.06	0.03/0.06	0.06/0.03	0.06/0.03
Max. permissible finger length	[mm]	60	50	60	50	64	50
Max. permissible mass per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	82 x 36.1 x 45.4	82 x 36.1 x 45.4	82 x 36.1 x 63.4	82 x 36.1 x 63.4	82 x 36.1 x 63.4	82 x 36.1 x 63.4
Options and their characteristics							
High-temperature version, ID		1321196	1321197	1321199	1321200	1321201	1321203
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		1315968	1315970	1315972		1315975	
Closing/opening force	[N]	405/440	850/915	485/-		-/520	
Weight	[kg]	0.47	0.47	0.55		0.55	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	50	40	40		40	

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

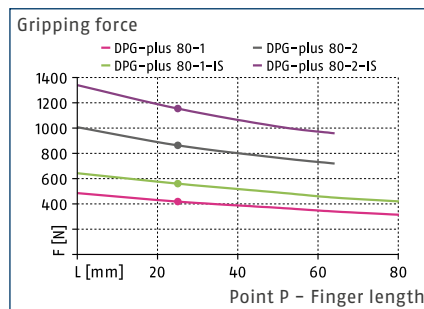
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/dpg-plus



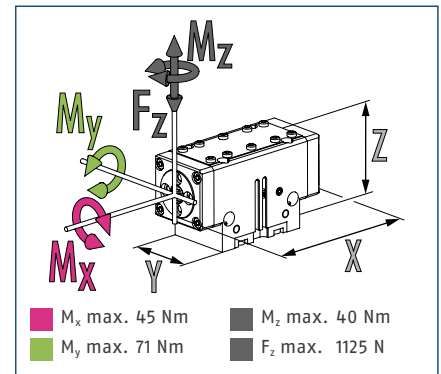
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 80-1	DPG-plus 80-2	DPG-plus 80-1-AS	DPG-plus 80-2-AS	DPG-plus 80-1-IS	DPG-plus 80-2-IS
ID		1315977	1315981	1315983	1315986	1315987	1315992
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	375/415	775/860	515/-	1065/-	-/555	-/1150
Min. spring force	[N]			140	290	140	290
Weight	[kg]	0.68	0.68	0.8	0.8	0.8	0.8
Recommended workpiece weight	[kg]	1.8	3.8	1.8	3.8	1.8	3.8
Fluid consumption double stroke	[cm ³]	22.5	22.5	36	36	42.5	42.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.07/0.07	0.07/0.07	0.07/0.04	0.07/0.04
Max. permissible finger length	[mm]	80	64	80	64	80	64
Max. permissible mass per finger	[kg]	0.5	0.5	0.5	0.5	0.5	0.5
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	98.5 x 42.1 x 56.4	98.5 x 42.1 x 56.4	98.5 x 42.1 x 74	98.5 x 42.1 x 74	98.5 x 42.1 x 74	98.5 x 42.1 x 74
Options and their characteristics							
High-temperature version, ID		1321206	1321207	1321210	1321211	1321212	1321213
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		1315980	1315982	1315985		1315990	
Closing/opening force	[N]	675/755	1395/1550	815/-		-/895	
Weight	[kg]	0.85	0.85	0.95		0.95	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	64	50	50		50	

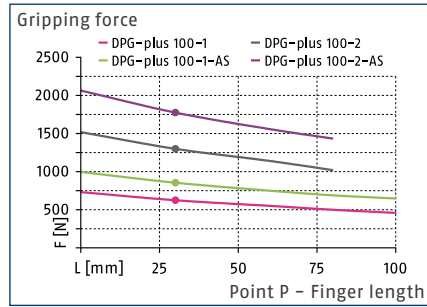
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPG-plus 100

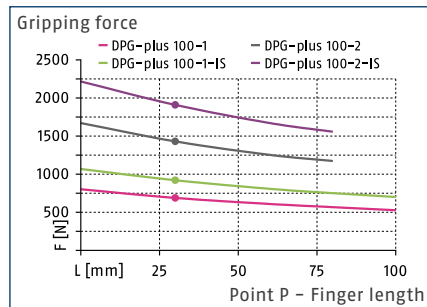
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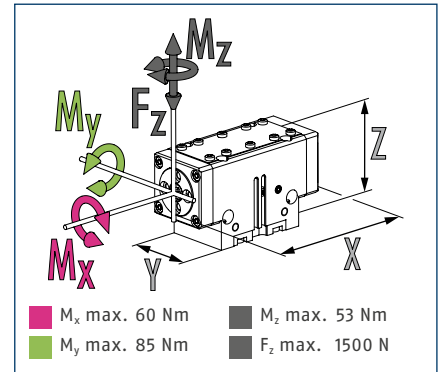
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

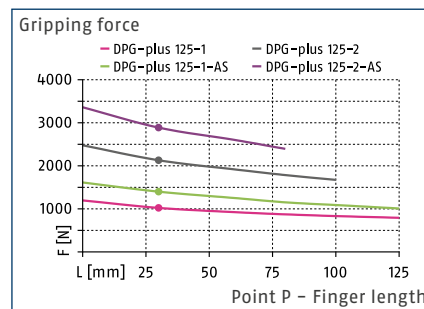
Description		DPG-plus 100-1	DPG-plus 100-2	DPG-plus 100-1-AS	DPG-plus 100-2-AS	DPG-plus 100-1-IS	DPG-plus 100-2-IS
ID		1316026	1316031	1316037	1316042	1316043	1316045
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	625/685	1300/1430	855/-	1775/-	-/915	-/1905
Min. spring force	[N]			230	475	230	475
Weight	[kg]	1.1	1.1	1.35	1.35	1.35	1.35
Recommended workpiece weight	[kg]	3.1	6.5	3.1	6.5	3.1	6.5
Fluid consumption double stroke	[cm ³]	45	45	79	79	90	90
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.09/0.09	0.09/0.09	0.07/0.12	0.07/0.12	0.12/0.07	0.12/0.07
Max. permissible finger length	[mm]	100	80	100	80	100	80
Max. permissible mass per finger	[kg]	0.95	0.95	0.95	0.95	0.95	0.95
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	122.5 x 50.1 x 63	122.5 x 50.1 x 63	122.5 x 50.1 x 89	122.5 x 50.1 x 89	122.5 x 50.1 x 89	122.5 x 50.1 x 89
Options and their characteristics							
High-temperature version, ID		1321214	1321215	1321217	1321218	1321219	1321222
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		1316029	1316034	1316041		1316044	
Closing/opening force	[N]	1125/1240	2340/2560	1355/-		-/1470	
Weight	[kg]	1.38	1.38	1.61		1.61	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	80	64	64		64	

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

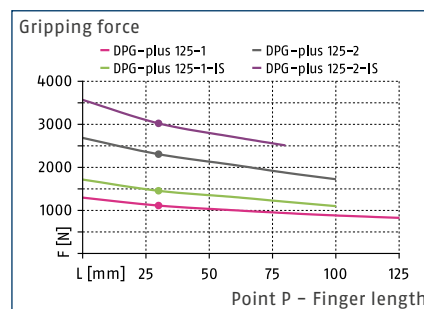
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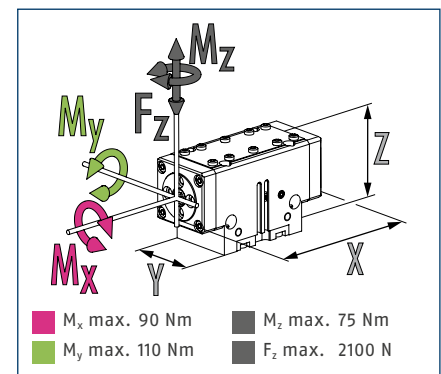
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 125-1	DPG-plus 125-2	DPG-plus 125-1-AS	DPG-plus 125-2-AS	DPG-plus 125-1-IS	DPG-plus 125-2-IS
ID		1316057	1316061	1316066	1316068	1316069	1316071
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	1025/1110	2130/2300	1400/-	2890/-	-/1485	-/3060
Min. spring force	[N]			375	760	375	760
Weight	[kg]	1.9	1.9	2.35	2.35	2.35	2.35
Recommended workpiece weight	[kg]	5.1	10.6	5.1	10.6	5.1	10.6
Fluid consumption double stroke	[cm ³]	87	87	119	119	166	166
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.13/0.13	0.13/0.13	0.11/0.16	0.11/0.16	0.16/0.11	0.16/0.11
Max. permissible finger length	[mm]	125	100	125	80	100	80
Max. permissible mass per finger	[kg]	1.75	1.75	1.75	1.75	1.75	1.75
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	154 x 60.1 x 72.9	154 x 60.1 x 72.9	154 x 60.1 x 102.9	154 x 60.1 x 102.9	154 x 60.1 x 102.9	154 x 60.1 x 102.9
Options and their characteristics							
High-temperature version, ID		1321224	1321226	1321228	1321229	1321230	1321231
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		1316059	1316062	1316067		1316070	
Closing/opening force	[N]	1845/2000	3835/4140	2220/-		-/2375	
Weight	[kg]	2.4	2.4	2.9		2.9	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	80	64	64		64	

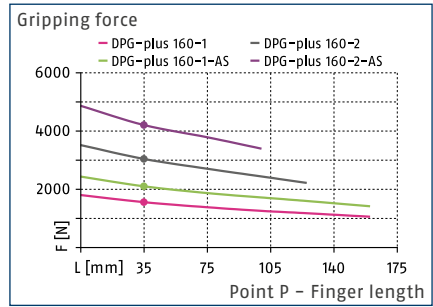
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPG-plus 160

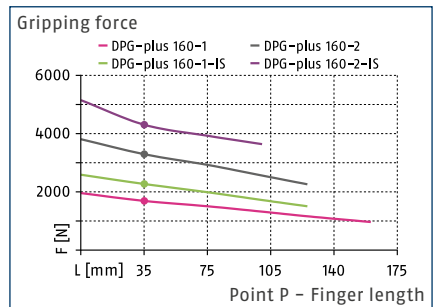
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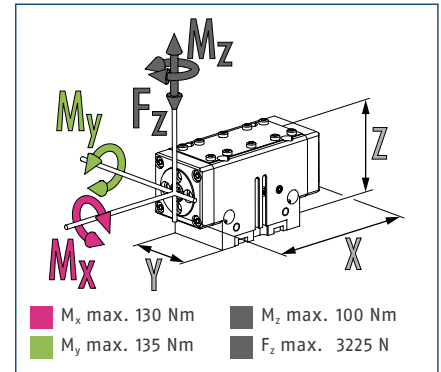
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

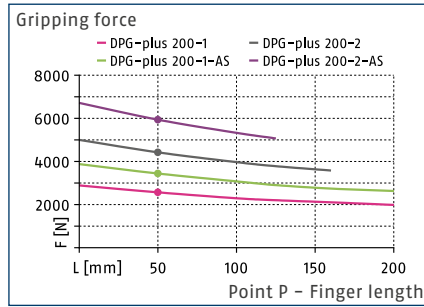
Description		DPG-plus 160-1	DPG-plus 160-2	DPG-plus 160-1-AS	DPG-plus 160-2-AS	DPG-plus 160-1-IS	DPG-plus 160-2-IS
ID		1316076	1316079	1316081	1316083	1316084	1316086
Stroke per jaw	[mm]	16	8	16	8	16	8
Closing/opening force	[N]	1560/1680	3040/3290	2100/-	4200/-	-/2220	-/4450
Min. spring force	[N]			540	1160	540	1160
Weight	[kg]	3.65	3.65	4.65	4.65	4.65	4.65
Recommended workpiece weight	[kg]	7.8	15.2	7.8	15.2	7.8	15.2
Fluid consumption double stroke	[cm ³]	164	164	210	210	265	265
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.19/0.19	0.19/0.19	0.16/0.33	0.16/0.33	0.33/0.16	0.33/0.16
Max. permissible finger length	[mm]	160	125	160	100	125	100
Max. permissible mass per finger	[kg]	3	3	3	3	3	3
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	198 x 72.1 x 89.4	198 x 72.1 x 89.4	198 x 72.1 x 129.4	198 x 72.1 x 129.4	198 x 72.1 x 129.4	198 x 72.1 x 129.4
Options and their characteristics							
High-temperature version, ID		1321232	1321235	1321237	1321238	1321239	
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	
Force intensified version, ID		1316077	1316080	1316082		1316085	
Closing/opening force	[N]	2810/3025	5470/5920	3350/-		-/3520	
Weight	[kg]	5.8	5.8	8		8	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	100	80	80		80	

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

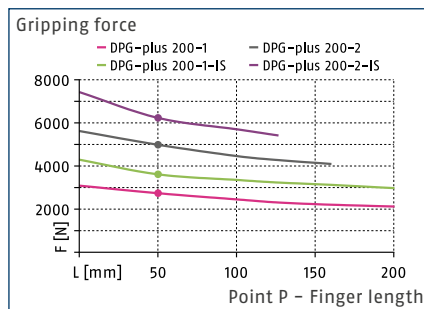
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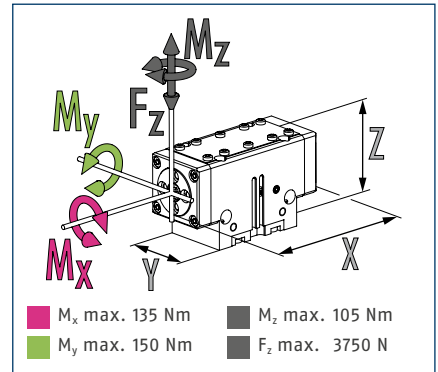
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 200-1	DPG-plus 200-2	DPG-plus 200-1-AS	DPG-plus 200-2-AS	DPG-plus 200-1-IS	DPG-plus 200-2-IS
ID		1316090	1316091	1316092	1316093	1316094	1316095
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	2565/2730	4420/4970	3440/-	5940/-	-/3605	-/6490
Min. spring force	[N]			875	1520	875	1520
Weight	[kg]	7.3	7.3	9.5	9.5	9.5	9.5
Recommended workpiece weight	[kg]	12.8	22.1	12.8	22.1	12.8	22.1
Fluid consumption double stroke	[cm ³]	385	385	495	495	620	620
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.45/0.45	0.45/0.45	0.4/0.8	0.4/0.8	0.8/0.4	0.8/0.4
Max. permissible finger length	[mm]	200	160	200	125	200	126
Max. permissible mass per finger	[kg]	5.5	5.5	5.5	5.5	5.5	5.5
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	238.5 x 100.1 x 106.4	238.5 x 100.1 x 106.4	238.5 x 100.1 x 156.4	238.5 x 100.1 x 156.4	238.5 x 100.1 x 156.4	238.5 x 100.1 x 156.4
Options and their characteristics							
High-temperature version, ID		1321242	1321243	1321244	1321245	1321246	1321247
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

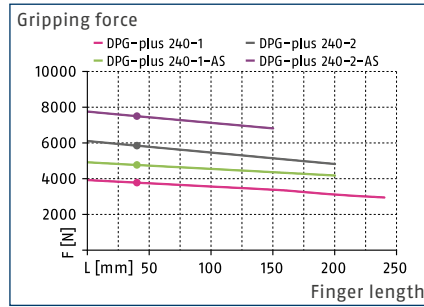
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPG-plus 240

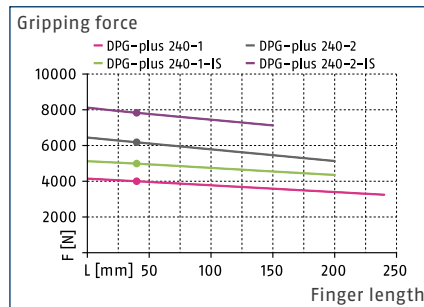
Pneumatic Grippers | 2-Finger Parallel Grippers | Sealed Universal Gripper



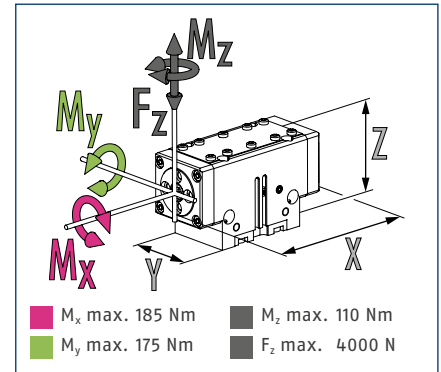
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

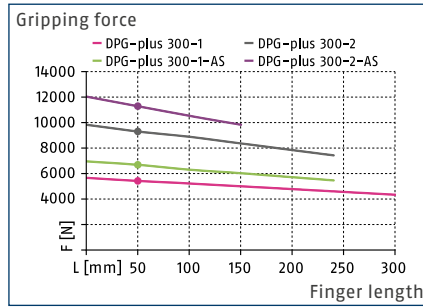
Description		DPG-plus 240-1	DPG-plus 240-2	DPG-plus 240-1-AS	DPG-plus 240-2-AS	DPG-plus 240-1-IS	DPG-plus 240-2-IS
ID		1316099	1316100	1316101	1316102	1316103	1316104
Stroke per jaw	[mm]	30	17	30	17	30	17
Closing/opening force	[N]	3780/4000	5850/6185	4770/-	7500/-	-/4990	-/7835
Min. spring force	[N]			990	1650	990	1650
Weight	[kg]	11.5	11.5	14.6	14.6	14.6	14.6
Recommended workpiece weight	[kg]	18.9	29.25	18.9	29.25	18.9	29.25
Fluid consumption double stroke	[cm ³]	650	650	810	810	995	995
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.6/0.6	0.6/0.6	0.5/1	0.5/1	1/0.5	1/0.5
Max. permissible finger length	[mm]	240	200	200	150	200	150
Max. permissible mass per finger	[kg]	7	7	7	7	7	7
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.04	0.04	0.04	0.04	0.04	0.04
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	280.5 x 115 x 123	280.5 x 115 x 123	280.5 x 115 x 179.3	280.5 x 115 x 179.3	280.5 x 115 x 179.3	280.5 x 115 x 179.3
Options and their characteristics							
High-temperature version, ID		1321248	1321249	1321251	1321252	1321253	1321254
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

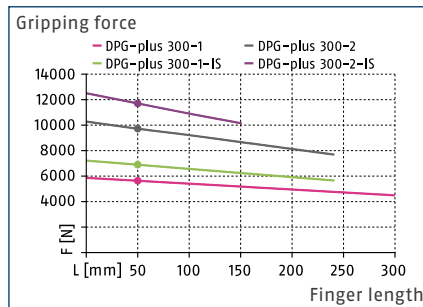
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/dpg-plus



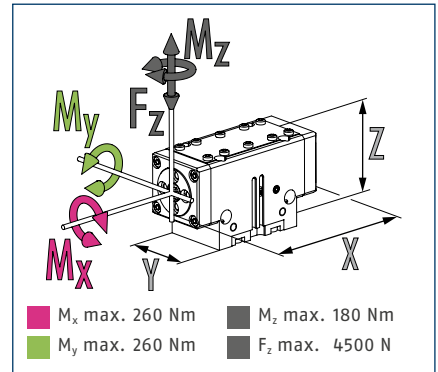
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 300-1	DPG-plus 300-2	DPG-plus 300-1-AS	DPG-plus 300-2-AS	DPG-plus 300-1-IS	DPG-plus 300-2-IS
ID		1316107	1316108	1316109	1316110	1316111	1316112
Stroke per jaw	[mm]	35	20	35	20	35	20
Closing/opening force	[N]	5400/5635	9270/9720	6660/-	11250/-	-/6895	-/11700
Min. spring force	[N]			1260	1980	1260	1980
Weight	[kg]	19.6	19.6	23.6	23.6	23.6	23.6
Recommended workpiece weight	[kg]	27	46.35	27	46.35	27	46.35
Fluid consumption double stroke	[cm ³]	1040	1040	1295	1295	1560	1560
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.7/0.7	0.7/0.7	0.6/1	0.6/1	1/0.6	1/0.6
Max. permissible finger length	[mm]	300	240	240	150	240	150
Max. permissible mass per finger	[kg]	8.5	8.5	8.5	8.5	8.5	8.5
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions X x Y x Z	[mm]	321.5 x 140 x 148	321.5 x 140 x 148	321.5 x 140 x 198	321.5 x 140 x 198	321.5 x 140 x 198	321.5 x 140 x 198
Options and their characteristics							
High-temperature version, ID		1321255	1321256	1321258	1321259	1321261	1321262
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

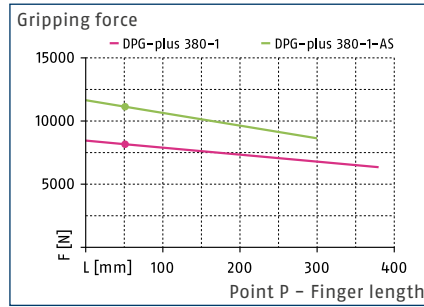
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPG-plus 380

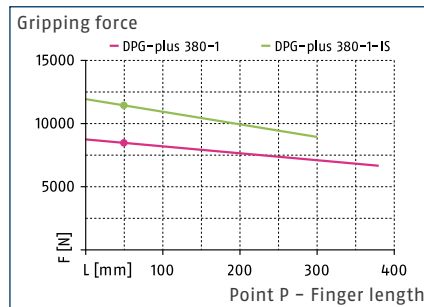
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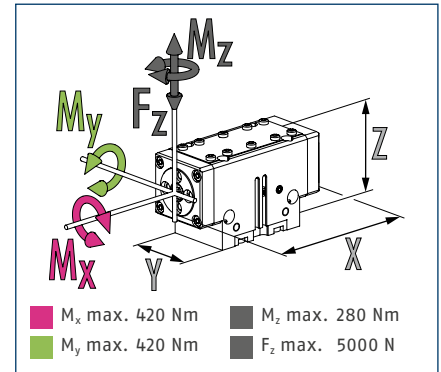
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



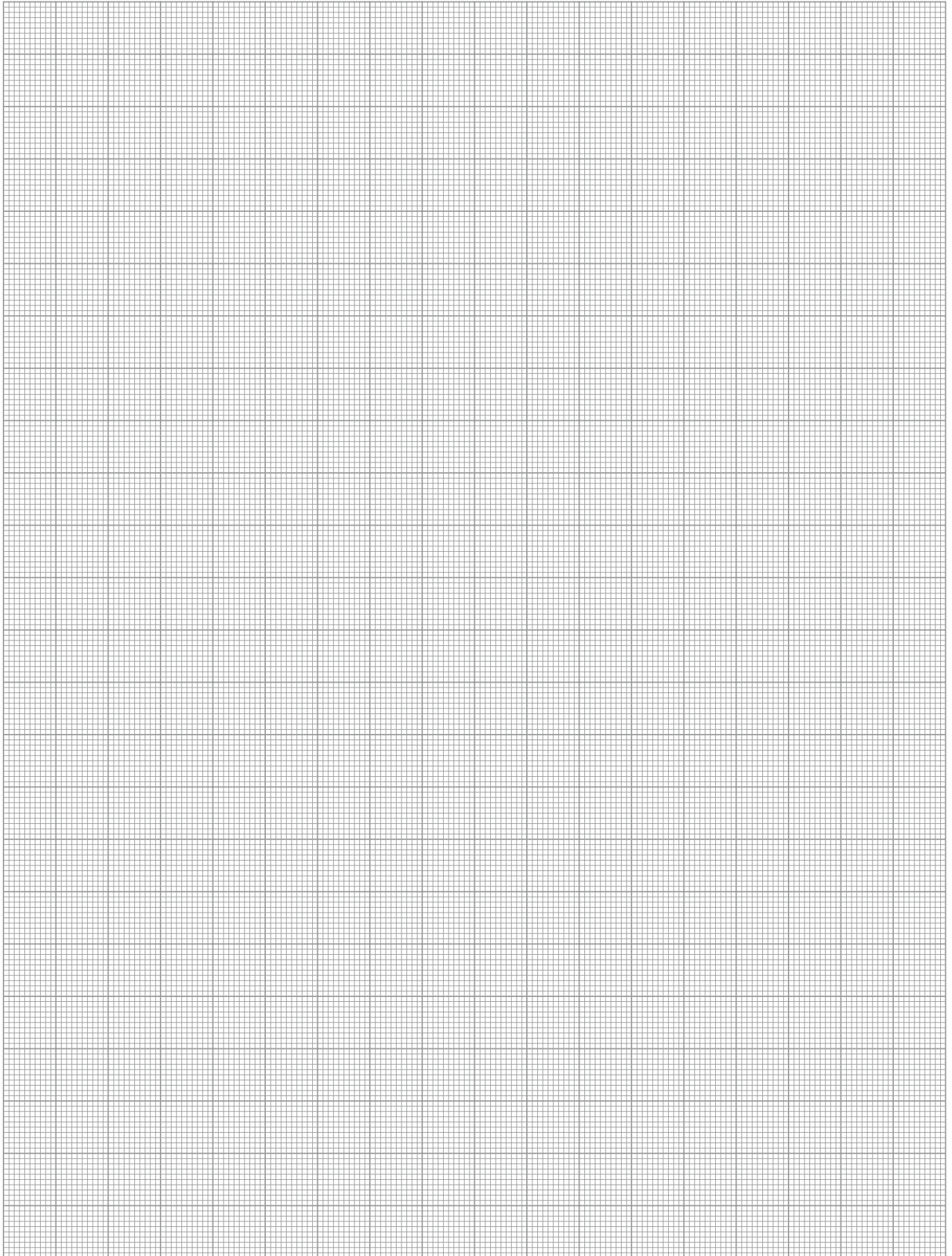
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPG-plus 380-1	DPG-plus 380-1-AS	DPG-plus 380-1-IS
ID		0304391	0304393	0304395
Stroke per jaw	[mm]	45	45	45
Closing/opening force	[N]	8140/8460	11240/-	-/11430
Weight	[kg]	42	52	52
Recommended workpiece weight	[kg]	40.7	40.7	40.7
Fluid consumption double stroke	[cm ³]	2275	2705	3175
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	1.1/1.1	0.95/1.1	1.1/0.95
Max. permissible finger length	[mm]	380	300	300
Max. permissible mass per finger	[kg]	10	10	10
Protection class IP		67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05
Cleanroom class ISO 14644-1		5	5	5
Dimensions X x Y x Z	[mm]	483.5 x 170 x 180	483.5 x 170 x 251.45	483.5 x 170 x 251.45
Options and their characteristics				
High-temperature version, ID		1321263	1321265	1321266
Min./max. ambient temperature	[°C]	5/130	5/130	5/130

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/dpg-plus



Loadable. Reliable. Compact. Universal Gripper JGP

Universal 2-finger parallel gripper of the compact class with T-slot guidance and best cost-performance ratio

Field of Application

Optimum standard solution for many fields of application. Universal application in clean and slightly dirty surroundings in machine building and plant building industry, assembly and handling as well as automotive industry.

Advantages – Your benefits

A firm focus on the essentials for maximum profitability

Sturdy T-slot guidance for the precise handling of different workpieces

Compact dimensions and low weight for minimum interfering contours in handling

High maximum moments possible suitable for using long gripper fingers

Wedge-hook principle for high power transmission and synchronized gripping

Comprehensive sensor accessories for monitoring and control of the stroke position

Mounting from two gripper sides for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 10



Weight
0.08 .. 17.5 kg



Gripping force
120 .. 7400 N



Stroke per jaw
2 .. 35 mm

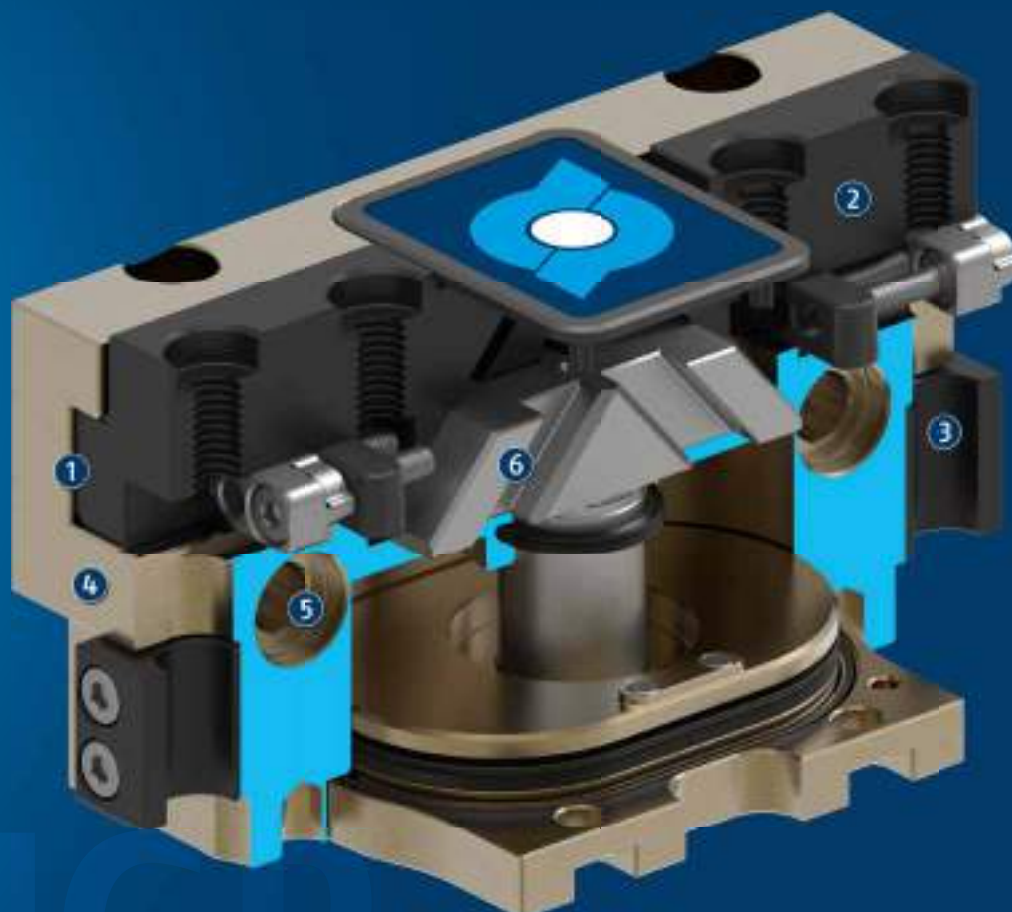


Workpiece weight
0.62 .. 30 kg



Functional Description

The oval piston is moved up or down by compressed air. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



① **T-slot guidance**

Loadable, robust base jaw guidance for extremely long gripper fingers

② **Base jaw**

For the connection of workpiece-specific gripper fingers

③ **Sensor system**

Proximity switch can be assembled without mounting kit

④ **Housing**

Is weight-optimized due to the use of high-strength aluminum alloy

⑤ **Centering and mounting possibilities**

For universal assembly of the gripper

⑥ **Wedge-hook principle**

For high force transmission and centric gripping

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Swivel head with double parallel gripper for simultaneous loading and unloading of workpieces in a machine.

- ❶ 2-finger parallel gripper JGP with workpiece-specific gripper fingers
- ❷ Swivel head SRH-plus
- ❸ Workpiece

SCHUNK offers more ...

The following components make the product JGP even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Tolerance compensation unit



Manual change system



Pressure maintenance valve



Analog position sensor



Finger blank



Jaw quick-change system



Universal intermediate jaw



Flexible position sensor



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

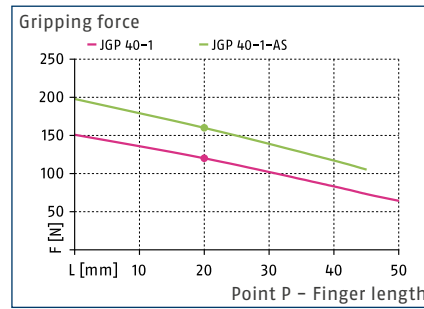
Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

The JGP series is especially suitable for economic handling solutions and distinguishes by its high cost-benefit ratio.

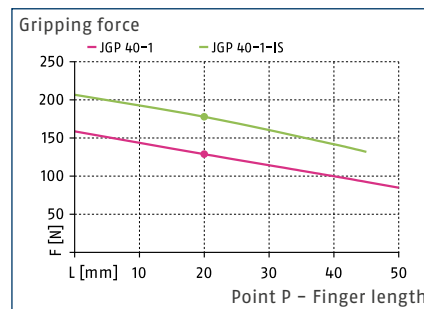
Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper



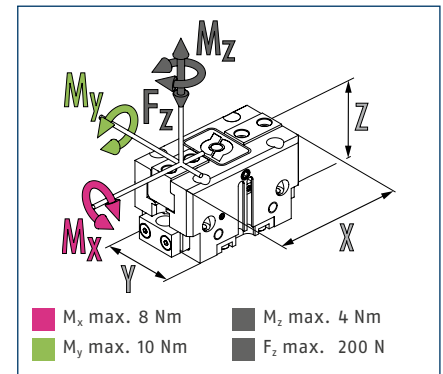
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

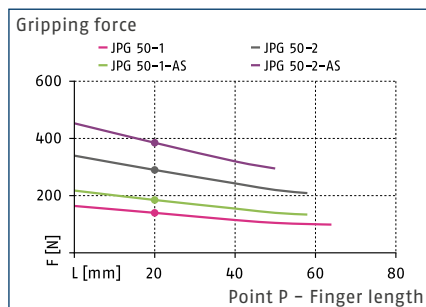
Description		JGP 40-1	JGP 40-1-AS	JGP 40-1-IS
ID		0308600	0308601	0308602
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	120/129	160/-	-/178
Min. spring force	[N]		40	50
Weight	[kg]	0.08	0.09	0.09
Recommended workpiece weight	[kg]	0.62	0.62	0.62
Fluid consumption double stroke	[cm ³]	2.5	4.5	5.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.03	0.03/0.02
Closing/opening time with spring	[s]		0.05	0.05
Max. permissible finger length	[mm]	50	45	45
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	45 x 25 x 24.6	45 x 25 x 33.75	45 x 25 x 33.75

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

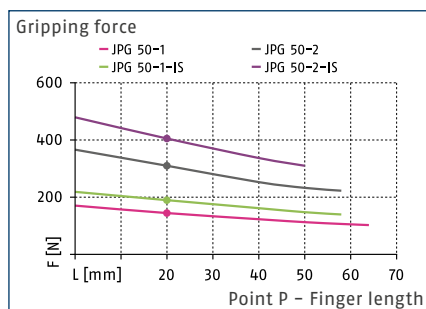
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/jgp



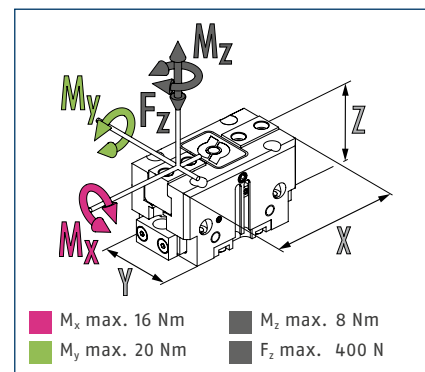
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

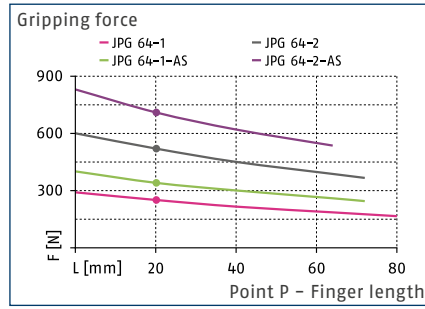
Technical data

Description		JGP 50-1	JGP 50-2	JGP 50-1-AS	JGP 50-2-AS	JGP 50-1-IS	JGP 50-2-IS
ID		0308610	0308615	0308611	0308616	0308612	0308617
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	140/145	290/310	185/-	385/-	-/190	-/405
Min. spring force	[N]			45	95	45	95
Weight	[kg]	0.15	0.15	0.2	0.2	0.2	0.21
Recommended workpiece weight	[kg]	0.7	1.45	0.7	1.45	0.7	1.45
Fluid consumption double stroke	[cm ³]	5	5	8.5	8.5	11	11
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.02/0.03	0.02/0.03	0.03/0.02	0.03/0.02
Closing/opening time with spring	[s]			0.05	0.05	0.05	0.05
Max. permissible finger length	[mm]	64	58	58	50	58	50
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	57 x 30 x 32	57 x 30 x 32	57 x 30 x 47	57 x 30 x 47	57 x 30 x 47	57 x 30 x 47

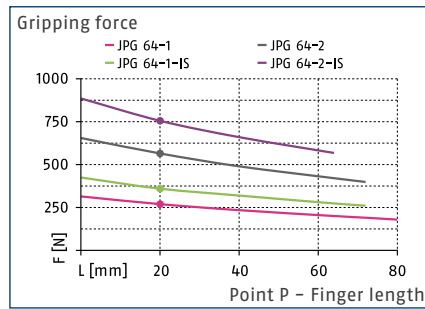
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



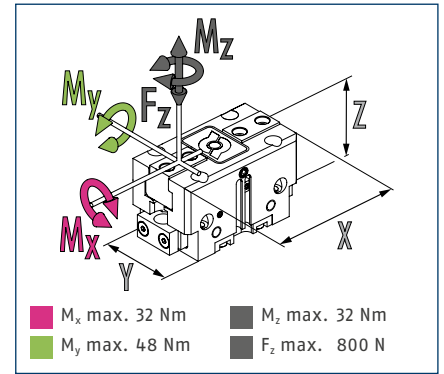
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

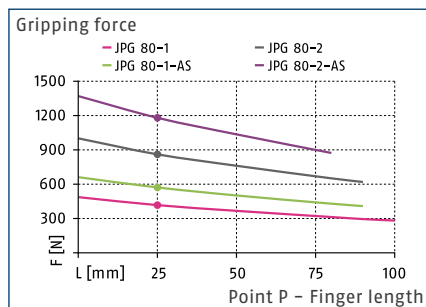
Description		JGP 64-1	JGP 64-2	JGP 64-1-AS	JGP 64-2-AS	JGP 64-1-IS	JGP 64-2-IS
ID		0308620	0308625	0308621	0308626	0308622	0308627
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	250/270	520/565	340/-	710/-	-/360	-/755
Min. spring force	[N]			90	190	90	190
Weight	[kg]	0.28	0.28	0.37	0.37	0.37	0.37
Recommended workpiece weight	[kg]	1.25	2.6	1.25	2.6	1.25	2.6
Fluid consumption double stroke	[cm ³]	10	10	17	17	21	21
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	80	72	72	64	72	64
Max. permissible mass per finger	[kg]	0.35	0.35	0.35	0.35	0.35	0.35
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	64 x 36 x 39	64 x 36 x 39	64 x 36 x 57	64 x 36 x 57	64 x 36 x 57	64 x 36 x 57

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

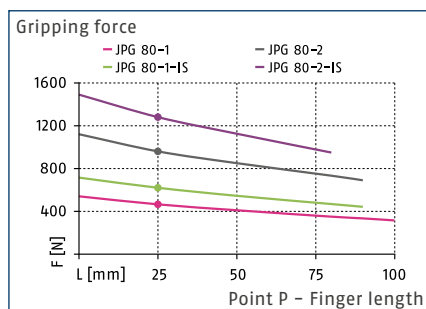
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/jgp



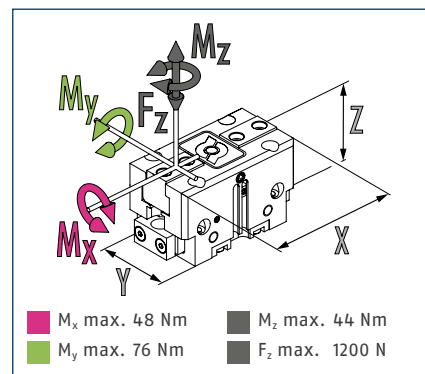
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

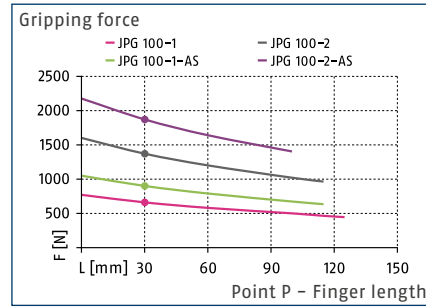
Technical data

Description		JGP 80-1	JGP 80-2	JGP 80-1-AS	JGP 80-2-AS	JGP 80-1-IS	JGP 80-2-IS
ID		0308800	0308805	0308801	0308806	0308802	0308807
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	415/465	860/960	570/-	1180/-	-/620	-/1280
Min. spring force	[N]			155	320	155	320
Weight	[kg]	0.5	0.5	0.6	0.6	0.6	0.6
Recommended workpiece weight	[kg]	2.1	4.3	2.1	4.3	2.1	4.3
Fluid consumption double stroke	[cm ³]	22.5	22.5	36	36	42.5	42.5
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Closing/opening time with spring	[s]			0.10	0.10	0.10	0.10
Max. permissible finger length	[mm]	100	90	90	80	90	80
Max. permissible mass per finger	[kg]	0.6	0.6	0.6	0.6	0.6	0.6
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	80 x 42 x 49	80 x 42 x 49	80 x 42 x 67	80 x 42 x 67	80 x 42 x 67	80 x 42 x 67

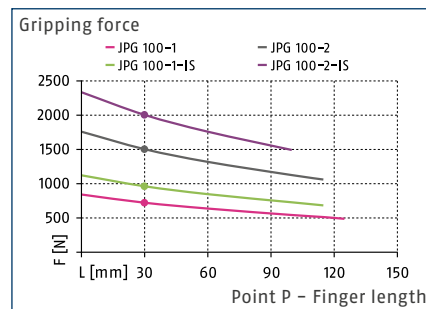
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



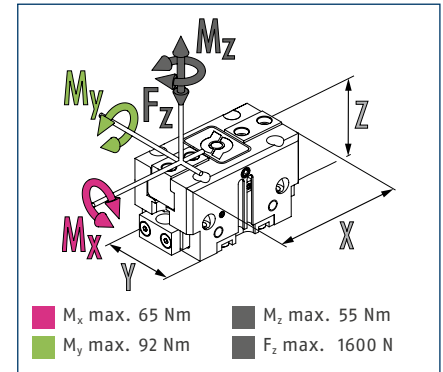
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

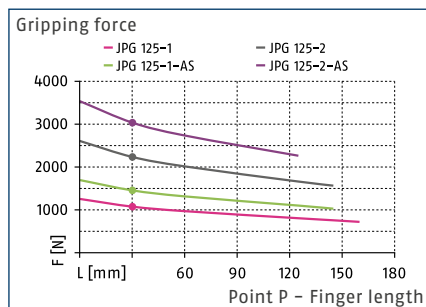
Description		JGP 100-1	JGP 100-2	JGP 100-1-AS	JGP 100-2-AS	JGP 100-1-IS	JGP 100-2-IS
ID		0308640	0308645	0308641	0308646	0308642	0308647
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	660/725	1370/1505	900/-	1870/-	-/965	-/2005
Min. spring force	[N]			240	500	240	500
Weight	[kg]	0.81	0.81	1	1	1	1
Recommended workpiece weight	[kg]	3.3	6.85	3.3	6.85	3.3	6.85
Fluid consumption double stroke	[cm ³]	45	45	79	79	90	90
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.07/0.07	0.07/0.07	0.05/0.09	0.05/0.09	0.09/0.05	0.09/0.05
Closing/opening time with spring	[s]			0.20	0.20	0.20	0.20
Max. permissible finger length	[mm]	125	115	115	100	115	100
Max. permissible mass per finger	[kg]	1.1	1.1	1.1	1.1	1.1	1.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	100 x 50 x 55	100 x 50 x 55	100 x 50 x 81	100 x 50 x 81	100 x 50 x 81	100 x 50 x 81

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

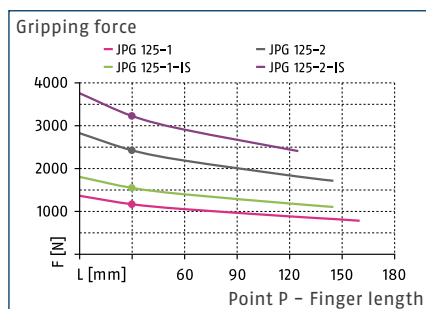
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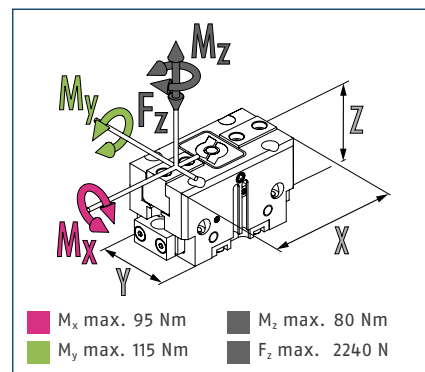
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

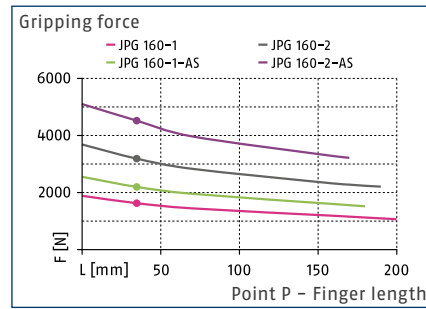
Technical data

Description		JGP 125-1	JGP 125-2	JGP 125-1-AS	JGP 125-2-AS	JGP 125-1-IS	JGP 125-2-IS
ID		0308650	0308655	0308651	0308656	0308652	0308657
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	1080/1170	2240/2420	1460/-	3040/-	-/1550	-/3220
Min. spring force	[N]			390	800	390	800
Weight	[kg]	1.35	1.35	1.85	1.85	1.85	1.85
Recommended workpiece weight	[kg]	5.4	11.2	5.4	11.2	5.4	11.2
Fluid consumption double stroke	[cm ³]	87	87	119	119	166	166
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.1	0.08/0.12	0.08/0.12	0.12/0.08	0.12/0.08
Closing/opening time with spring	[s]			0.30	0.30	0.30	0.30
Max. permissible finger length	[mm]	160	145	145	125	145	125
Max. permissible mass per finger	[kg]	2.1	2.1	2.1	2.1	2.1	2.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	125 x 60 x 63	125 x 60 x 63	125 x 60 x 93	125 x 60 x 93	125 x 60 x 93	125 x 60 x 93

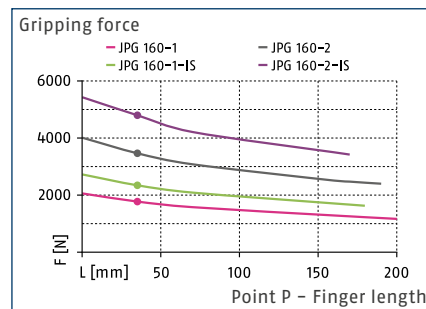
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



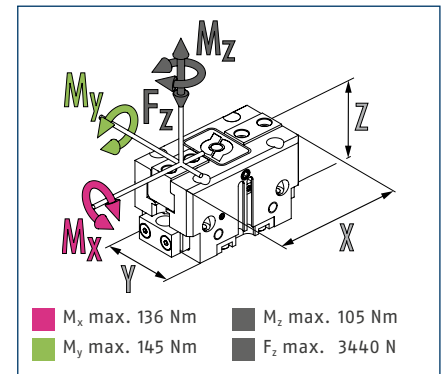
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

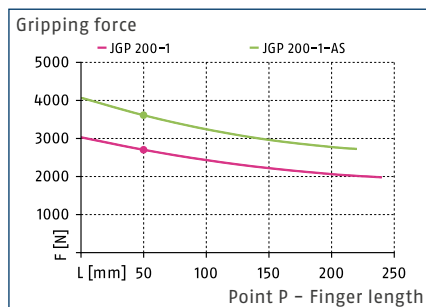
Description		JGP 160-1	JGP 160-2	JGP 160-1-AS	JGP 160-2-AS	JGP 160-1-IS	JGP 160-2-IS
ID		0308660	0308665	0308661	0308666	0308662	0308667
Stroke per jaw	[mm]	16	8	16	8	16	8
Closing/opening force	[N]	1640/1770	3200/3460	2210/-	4530/-	-/2340	-/4790
Min. spring force	[N]			570	1220	570	1220
Weight	[kg]	2.6	2.6	3.3	3.3	3.3	3.6
Recommended workpiece weight	[kg]	8.2	16	8.2	16	8.2	16
Fluid consumption double stroke	[cm ³]	164	164	210	210	265	265
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.15/0.15	0.15/0.15	0.12/0.25	0.12/0.25	0.25/0.12	0.25/0.12
Closing/opening time with spring	[s]			0.45	0.45	0.45	0.45
Max. permissible finger length	[mm]	200	190	180	170	180	170
Max. permissible mass per finger	[kg]	3.5	3.5	3.5	3.5	3.5	3.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions X x Y x Z	[mm]	160 x 72 x 77	160 x 72 x 77	160 x 72 x 117	160 x 72 x 117	160 x 72 x 117	160 x 72 x 117

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

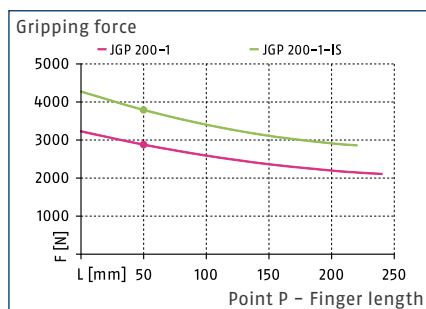
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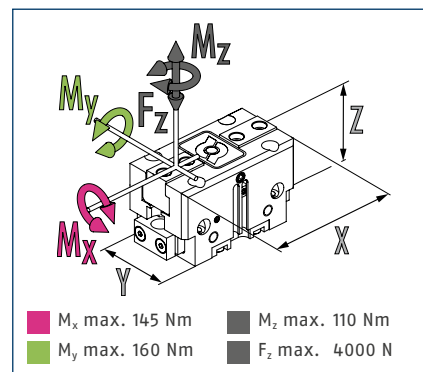
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

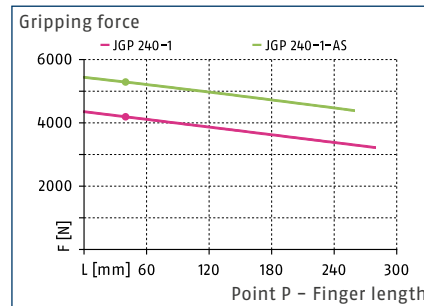
Technical data

Description		JGP 200-1	JGP 200-1-AS	JGP 200-1-IS
ID		0308670	0308671	0308672
Stroke per jaw	[mm]	25	25	25
Closing/opening force	[N]	2700/2870	3610/-	-/3780
Min. spring force	[N]		910	910
Weight	[kg]	5.2	7	7
Recommended workpiece weight	[kg]	13.5	13.5	13.5
Fluid consumption double stroke	[cm ³]	385	495	620
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.35/0.35	0.3/0.6	0.6/0.3
Closing/opening time with spring	[s]		0.50	0.50
Max. permissible finger length	[mm]	240	220	220
Max. permissible mass per finger	[kg]	6.5	6.5	6.5
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	200 x 100 x 91	200 x 100 x 141	200 x 100 x 141

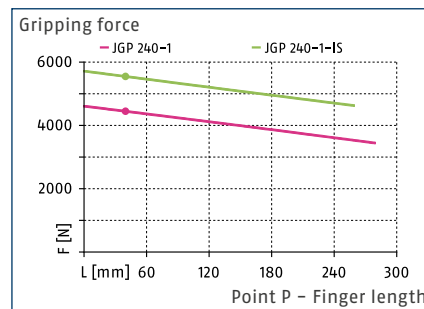
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



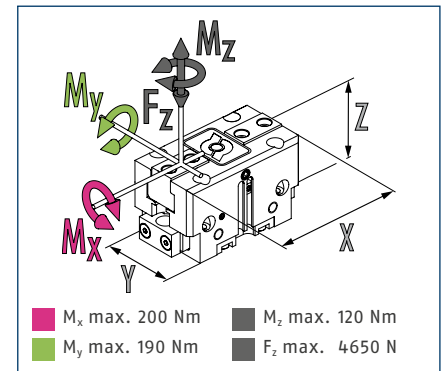
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

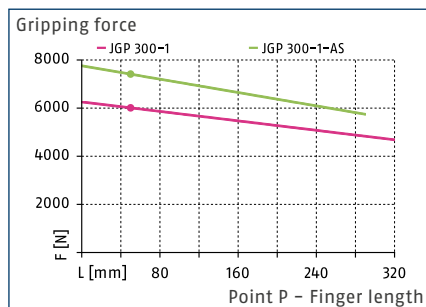
Description		JGP 240-1	JGP 240-1-AS	JGP 240-1-IS
ID		0308680	0308681	0308682
Stroke per jaw	[mm]	30	30	30
Closing/opening force	[N]	4200/4440	5300/-	-/5540
Min. spring force	[N]		1100	1100
Weight	[kg]	8	11.5	11.5
Recommended workpiece weight	[kg]	21.5	21.5	21.5
Fluid consumption double stroke	[cm ³]	650	810	995
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.45/0.45	0.35/0.65	0.65/0.35
Closing/opening time with spring	[s]		0.55	0.55
Max. permissible finger length	[mm]	280	260	260
Max. permissible mass per finger	[kg]	8.5	8.5	8.5
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.04	0.04	0.04
Dimensions X x Y x Z	[mm]	240 x 115 x 107	240 x 115 x 164	240 x 115 x 164

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

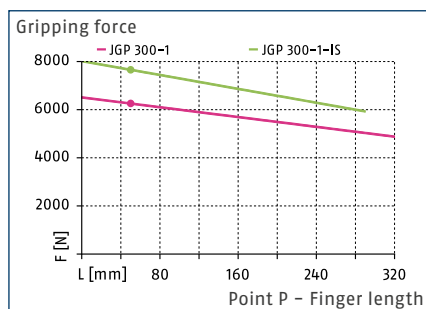
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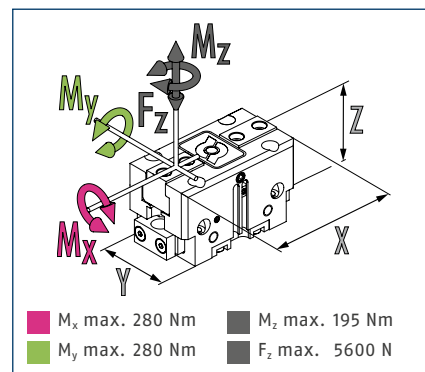
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		JGP 300-1	JGP 300-1-AS	JGP 300-1-IS
ID		0308690	0308691	0308692
Stroke per jaw	[mm]	35	35	35
Closing/opening force	[N]	6000/6260	7400/-	-/7660
Min. spring force	[N]		1400	1400
Weight	[kg]	13.5	17.5	17.5
Recommended workpiece weight	[kg]	30	30	30
Fluid consumption double stroke	[cm ³]	1040	1295	1560
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.5/0.5	0.4/0.7	0.7/0.4
Closing/opening time with spring	[s]		0.60	0.60
Max. permissible finger length	[mm]	320	290	290
Max. permissible mass per finger	[kg]	11.5	11.5	11.5
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	300 x 140 x 122	300 x 140 x 172	300 x 140 x 172

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGF

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

Flexible. Compact. Robust.

Universal Gripper PGF

Universal parallel gripper with surface-guided base jaws

Field of Application

Suitable for clean work environments and high part diversity due to its long jaw stroke and high gripping forces.

Advantages – Your benefits

Precise flat guidance for very good guidance characteristics

Long stroke at compact design for minimum interfering contours

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

M5 connection on both sides of the guidances for the use of lubricating nipples



Sizes
Quantity: 5



Weight
0.3 .. 5.3 kg



Gripping force
250 .. 1920 N



Stroke per jaw
7.5 .. 31.5 mm



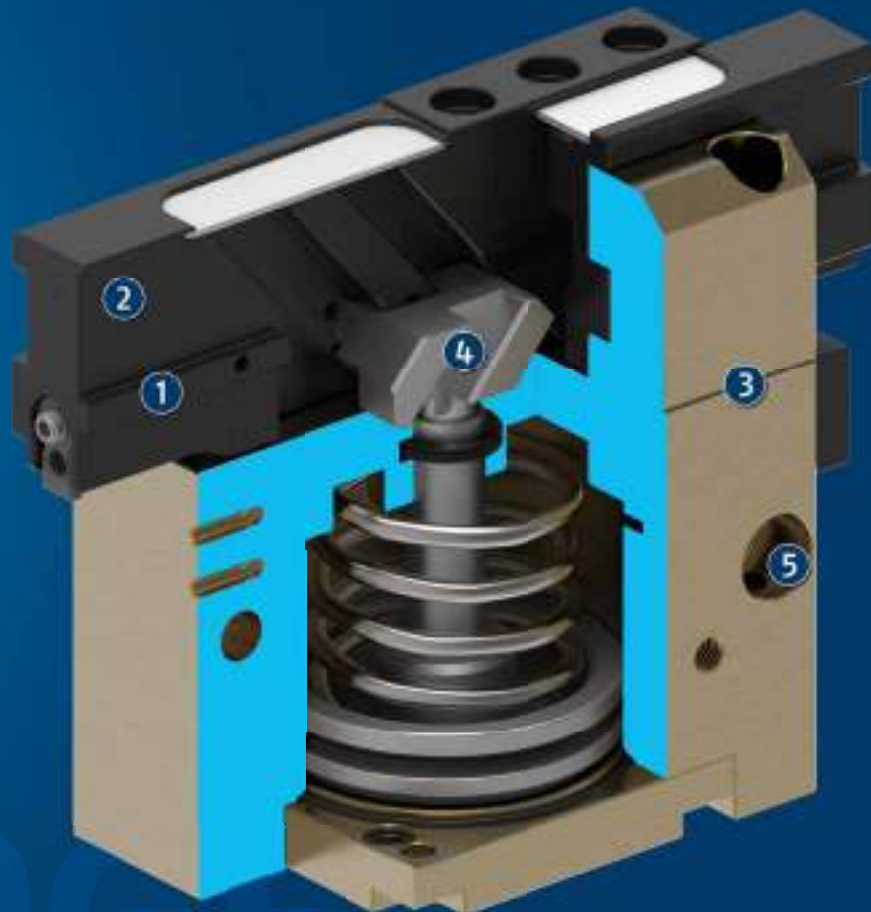
Workpiece weight
1.2 .. 7.1 kg



Functional Description

The round piston is pushed upwards or downwards with compressed air.

The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Sliding guide**
Precise gripping through flat, low-play precision ground guidance along the entire length of the housing
- ② **Base jaw**
For the connection of workpiece-specific gripper fingers
- ③ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ④ **Wedge-hook principle**
For high force transmission and centric gripping
- ⑤ **Centering and mounting possibilities**
For universal assembly of the gripper

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Compensation unit for mounting a pin in a bore with a roughly tolerated position. The compensation unit compensates for the planar offset without twisting or tilting the workpiece.

- 1 2-finger parallel gripper PGF with top finger and workpiece
- 2 Compensation unit AGE-XY





SCHUNK offers more ...

The following components make the product PGF even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Collision and overload protection sensor



Manual change system



Pressure maintenance valve



Inductive proximity switch



Flexible position sensor

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

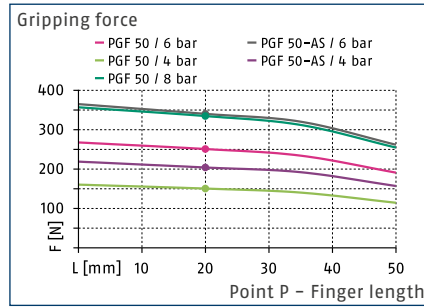
Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

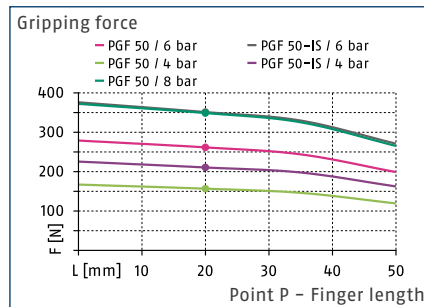
Due to the long guidance, the gripper is highly resistant during gripping operations where the gripper fingers are exposed to high moment loads. Grippers with a higher exchange accuracy are available on request.



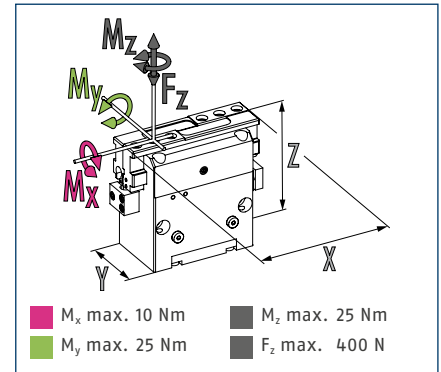
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

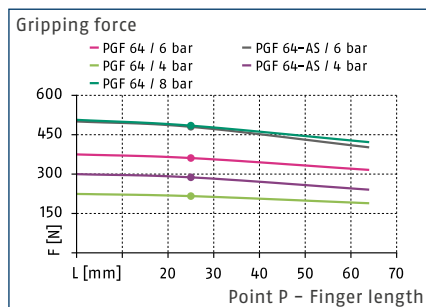
Description		PGF 50	PGF 50-AS	PGF 50-IS
ID		0340360	0340361	0340362
Stroke per jaw	[mm]	7.5	7.5	7.5
Closing/opening force	[N]	250/260	340/-	-/350
Min. spring force	[N]		100	100
Weight	[kg]	0.3	0.35	0.35
Recommended workpiece weight	[kg]	1.2	1.2	1.2
Fluid consumption double stroke	[cm ³]	14	14	14
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.03/0.03	0.03/0.07	0.07/0.03
Closing/opening time with spring	[s]		0.50	0.50
Max. permissible finger length	[mm]	50	50	50
Max. permissible mass per finger	[kg]	0.25	0.25	0.25
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	76 x 38 x 55	76 x 38 x 55	76 x 38 x 55

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

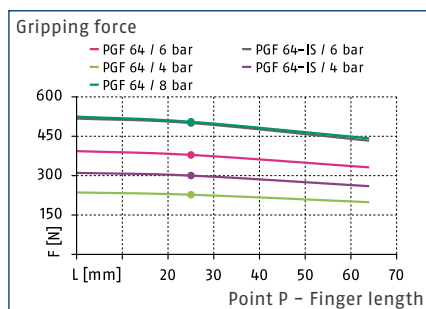
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgf



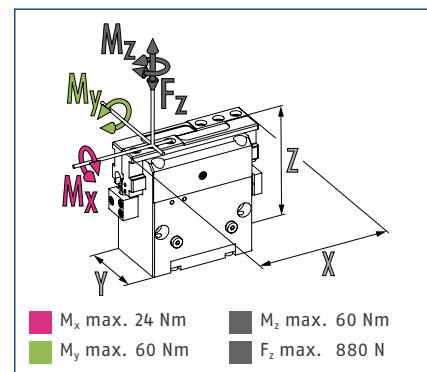
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGF 64	PGF 64-AS	PGF 64-IS
ID		0340365	0340366	0340367
Stroke per jaw	[mm]	11.5	11.5	11.5
Closing/opening force	[N]	360/380	480/-	-/500
Min. spring force	[N]		120	120
Weight	[kg]	0.6	0.7	0.7
Recommended workpiece weight	[kg]	1.8	1.8	1.8
Fluid consumption double stroke	[cm ³]	30	30	30
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.06/0.06	0.05/0.1	0.1/0.05
Closing/opening time with spring	[s]		0.50	0.50
Max. permissible finger length	[mm]	64	64	64
Max. permissible mass per finger	[kg]	0.4	0.4	0.4
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	101 x 42 x 70	101 x 42 x 70	101 x 42 x 70

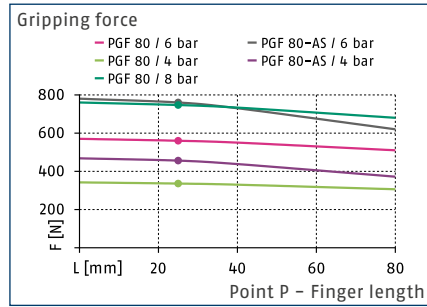
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGF 80

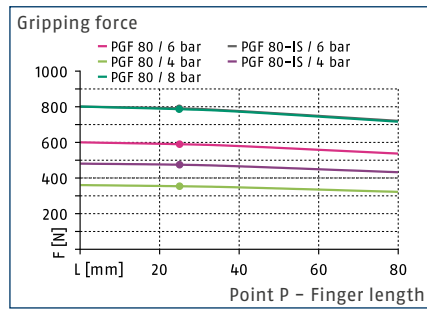
Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper



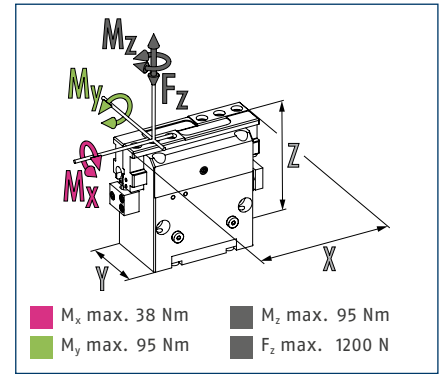
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

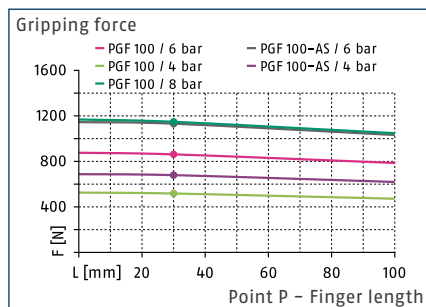
Description		PGF 80	PGF 80-AS	PGF 80-IS
ID		0340370	0340371	0340372
Stroke per jaw	[mm]	16.5	16.5	16.5
Closing/opening force	[N]	560/580	760/-	-/790
Min. spring force	[N]		200	200
Weight	[kg]	1.15	1.25	1.25
Recommended workpiece weight	[kg]	2.8	2.8	2.8
Fluid consumption double stroke	[cm ³]	77	77	77
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.1/0.1	0.08/0.14	0.14/0.08
Closing/opening time with spring	[s]		0.60	0.60
Max. permissible finger length	[mm]	80	80	80
Max. permissible mass per finger	[kg]	0.75	0.75	0.75
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	118.5 x 50 x 93	118.5 x 50 x 93	118.5 x 50 x 93

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

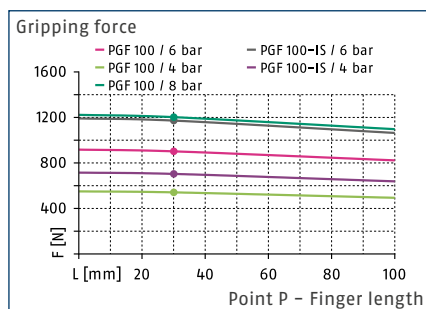
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgf



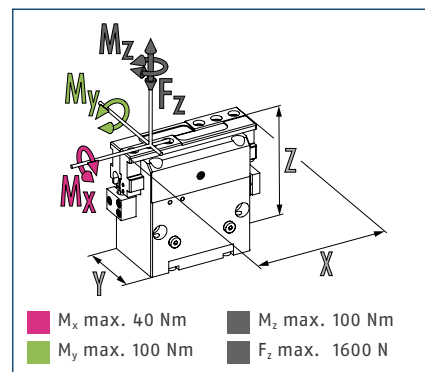
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGF 100	PGF 100-AS	PGF 100-IS
ID		0340380	0340381	0340382
Stroke per jaw	[mm]	23.5	23.5	23.5
Closing/opening force	[N]	860/900	1130/-	-/1170
Min. spring force	[N]		270	270
Weight	[kg]	2.35	2.85	2.85
Recommended workpiece weight	[kg]	4.4	4.4	4.4
Fluid consumption double stroke	[cm ³]	154	154	154
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.15/0.15	0.16/0.25	0.25/0.16
Closing/opening time with spring	[s]		0.70	0.70
Max. permissible finger length	[mm]	100	100	100
Max. permissible mass per finger	[kg]	1.4	1.4	1.4
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.03	0.03	0.03
Dimensions X x Y x Z	[mm]	148.5 x 64 x 121	148.5 x 64 x 121	148.5 x 64 x 121

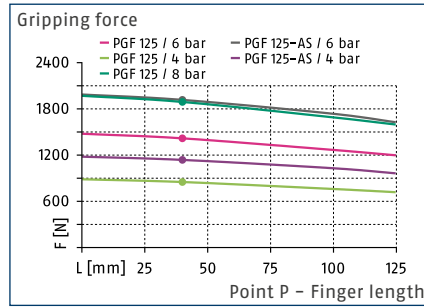
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGF 125

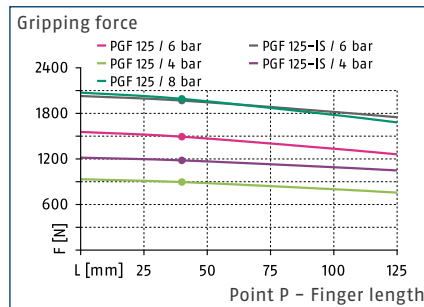
Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper



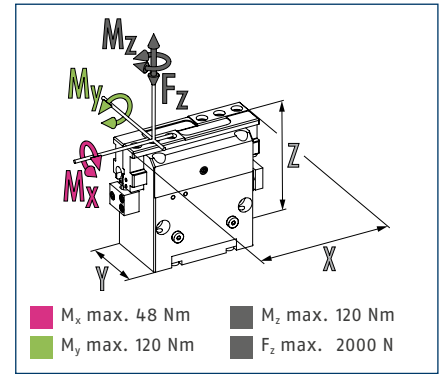
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



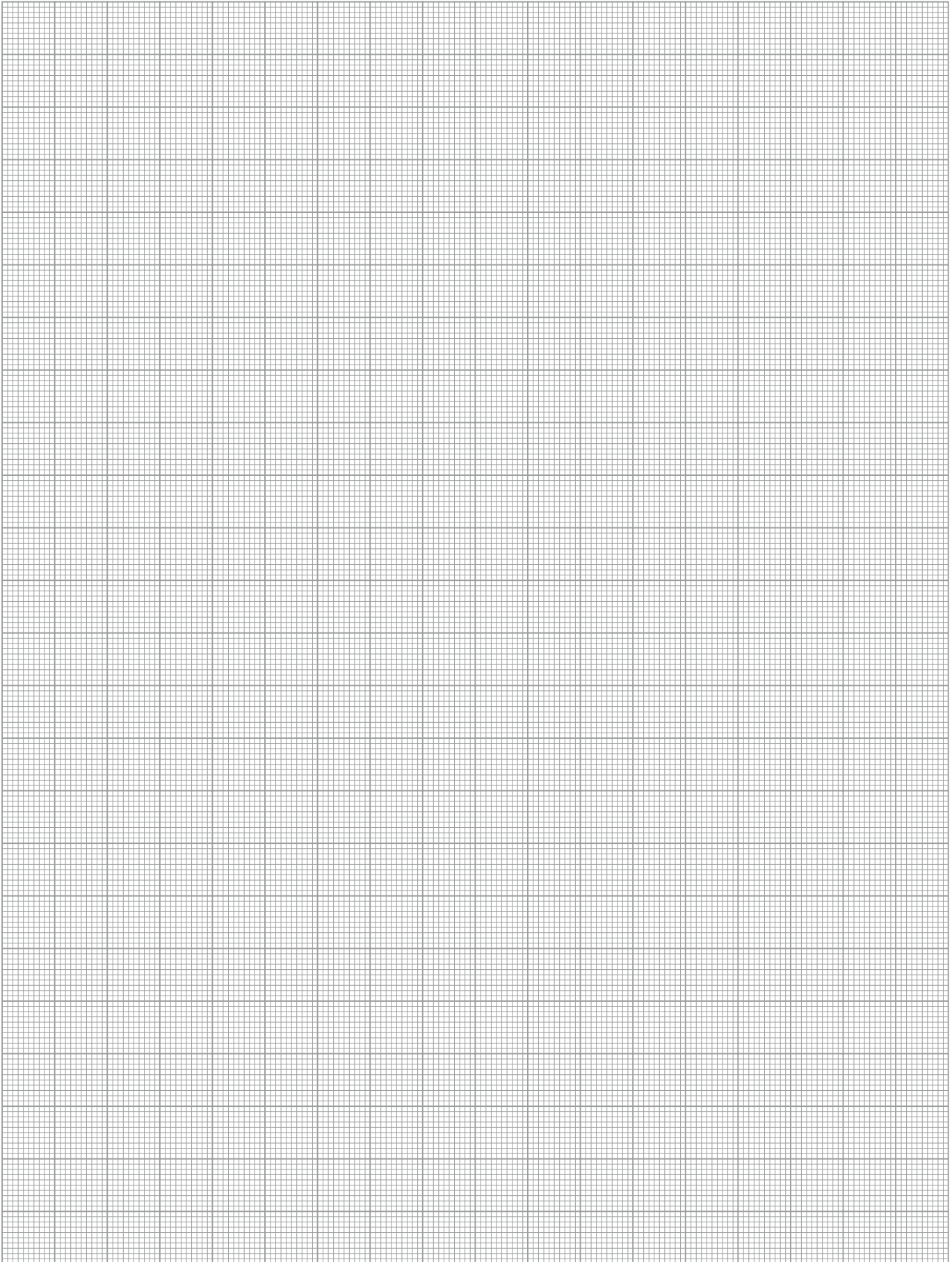
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGF 125	PGF 125-AS	PGF 125-IS
ID		0340390	0340391	0340392
Stroke per jaw	[mm]	31.5	31.5	31.5
Closing/opening force	[N]	1420/1490	1920/-	-/1970
Min. spring force	[N]		480	480
Weight	[kg]	5	5.3	5.3
Recommended workpiece weight	[kg]	7.1	7.1	7.1
Fluid consumption double stroke	[cm ³]	300	300	300
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.25/0.25	0.22/0.4	0.4/0.22
Closing/opening time with spring	[s]		0.80	0.80
Max. permissible finger length	[mm]	125	125	125
Max. permissible mass per finger	[kg]	2.4	2.4	2.4
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.03	0.03	0.03
Dimensions X x Y x Z	[mm]	191.5 x 80 x 156	191.5 x 80 x 156	191.5 x 80 x 156

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgf



PGB

Pneumatic Grippers | 2-Finger Parallel Grippers | Universal Gripper

Flexible. Loadable. Reliable.

Universal Gripper PGB

Universal 2-finger parallel gripper with high gripping force and high moment capacity due to the multi-tooth guidance as well as the center bore

Field of Application

For universal use in clean and slightly dirty environments. Suitable for applications that require a center bore, e.g. for workpiece feeding, special sensor systems or optical recognition systems.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

Center through-hole for feed-through of workpieces, supply hoses, sensor systems, optical workpiece recognition systems, etc.

High maximum moments possible suitable for using long gripper fingers

Drive concept oval piston for maximum gripping forces

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control



Sizes
Quantity: 4



Weight
0.28 .. 1.32 kg



Gripping force
90 .. 590 N



Stroke per jaw
4 .. 10 mm



Workpiece weight
0.7 .. 3.3 kg



Functional Description

The oval piston is moved up or down by compressed air. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Center bore**
For workpiece feeding, for sensor systems, actuators (ejectors) or optical workpiece recognition
- ③ **Wedge-hook principle**
For high force transmission and centric gripping
- ④ **Multi-tooth guidance**
Highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ⑤ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Assembly unit for long axes. Feeding is done space-saving via the center bore of the gripper.

- ① 2-finger parallel gripper PGB
- ② Linear module CLM

- ③ Linear module LM
- ④ Linear module LM

SCHUNK offers more ...

The following components make the product PGB even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Tolerance compensation unit



Manual change system



Pressure maintenance valve



Magnetic switch



Analog position sensor



Finger blank



Universal intermediate jaw



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

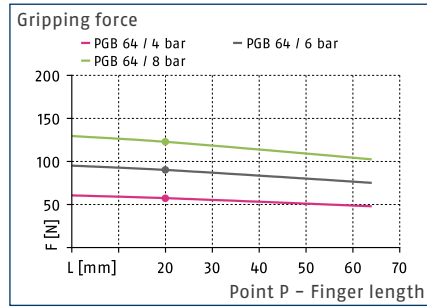
Options and special Information

With its center bore, the PGB series is the optimum standard solution for many areas of application.

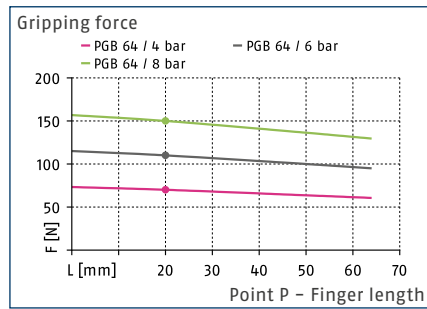
Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper



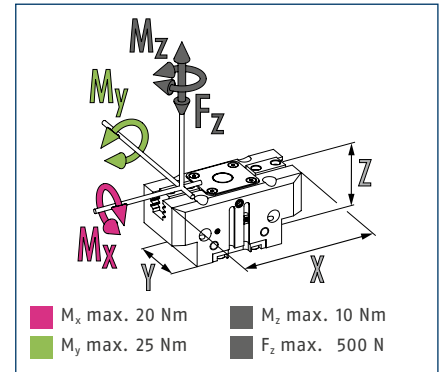
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

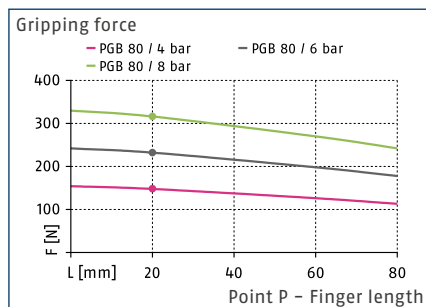
Description		PGB 64
ID		0300360
Stroke per jaw	[mm]	4
Closing/opening force	[N]	90/110
Weight	[kg]	0.28
Recommended workpiece weight	[kg]	0.7
Fluid consumption double stroke	[cm ³]	5
Min./nom./max. operating pressure	[bar]	2.5/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.02/0.02
Max. permissible finger length	[mm]	64
Max. permissible mass per finger	[kg]	0.18
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Diameter of center bore	[mm]	10
Dimensions X x Y x Z	[mm]	79.5 x 36 x 39

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

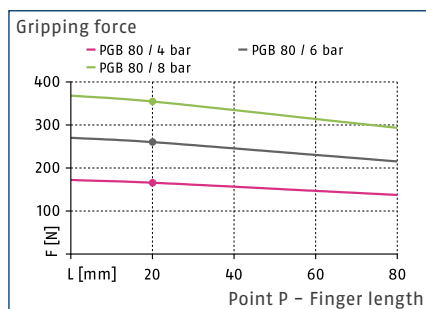
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgb



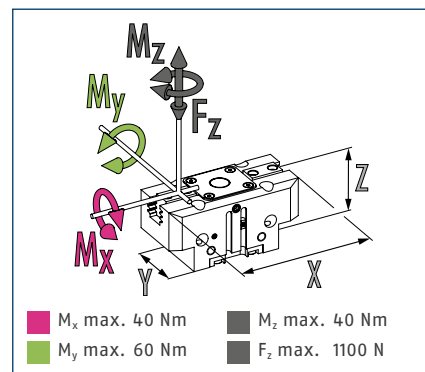
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGB 80
ID		0300363
Stroke per jaw	[mm]	6
Closing/opening force	[N]	230/260
Weight	[kg]	0.47
Recommended workpiece weight	[kg]	1.25
Fluid consumption double stroke	[cm ³]	11
Min./nom./max. operating pressure	[bar]	2.5/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.03/0.03
Max. permissible finger length	[mm]	80
Max. permissible mass per finger	[kg]	0.35
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Diameter of center bore	[mm]	14
Dimensions X x Y x Z	[mm]	96 x 42 x 49

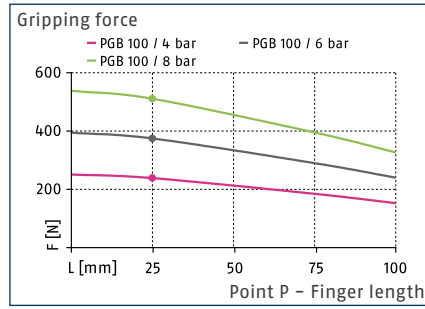
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PGB 100

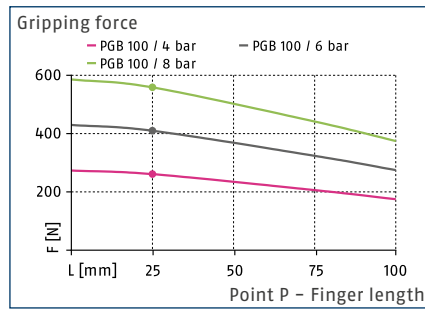
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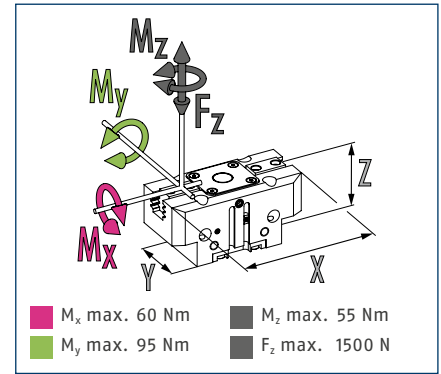
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

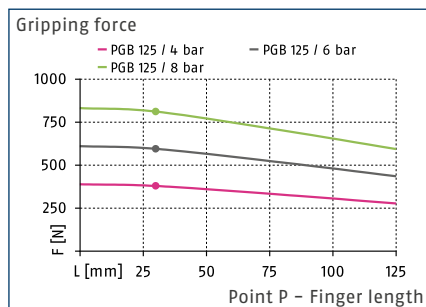
Description		PGB 100
ID		0300366
Stroke per jaw	[mm]	8
Closing/opening force	[N]	370/410
Weight	[kg]	0.78
Recommended workpiece weight	[kg]	2.1
Fluid consumption double stroke	[cm ³]	22
Min./nom./max. operating pressure	[bar]	2.5/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.07/0.07
Max. permissible finger length	[mm]	100
Max. permissible mass per finger	[kg]	0.6
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Diameter of center bore	[mm]	18
Dimensions X x Y x Z	[mm]	120 x 50 x 55

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

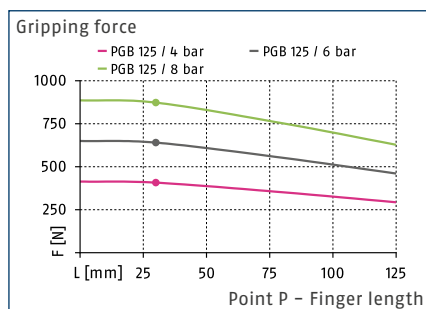
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgb



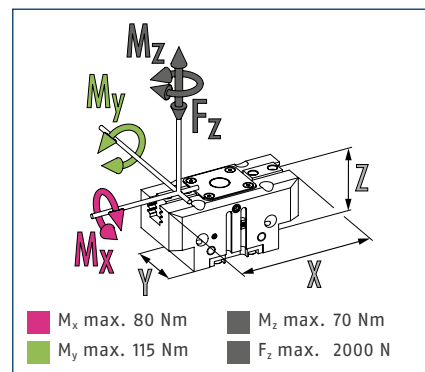
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGB 125
ID		0300369
Stroke per jaw	[mm]	10
Closing/opening force	[N]	590/640
Weight	[kg]	1.32
Recommended workpiece weight	[kg]	3.3
Fluid consumption double stroke	[cm ³]	32
Min./nom./max. operating pressure	[bar]	2.5/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.08/0.08
Max. permissible finger length	[mm]	125
Max. permissible mass per finger	[kg]	1.1
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Diameter of center bore	[mm]	24
Dimensions X x Y x Z	[mm]	151 x 60 x 63

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Flexible. Precise. Powerful.

Long-stroke Gripper PHL

2-finger parallel gripper with long jaw stroke for large parts and/or a broad range of parts

Field of Application

Optimum standard solution for many fields of application. Universal application in clean and slightly dirty surroundings in machine building and plant building industry, assembly and handling as well as automotive industry.



Advantages – Your benefits

Modular with two alternative guidances for optimum adaption to your application

High maximum moments possible suitable for using long gripper fingers

Double piston rack and pinion principle for centric clamping

Fastening at one gripper side in two screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Stroke versions for highest flexibility



Sizes
Quantity: 5



Weight
1.38 .. 23.55 kg



Gripping force
390 .. 4630 N



Stroke per jaw
30 .. 160 mm

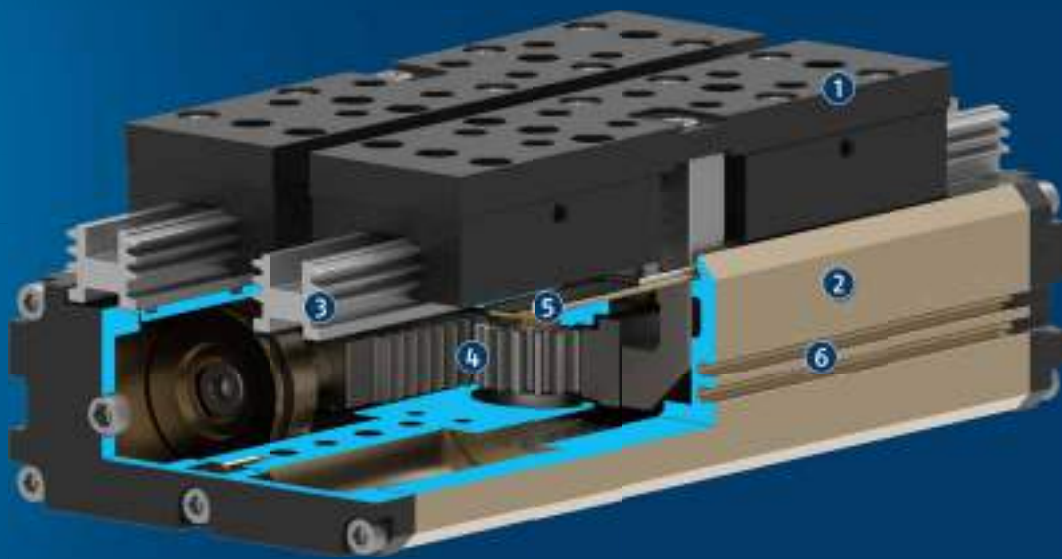


Workpiece weight
1.95 .. 15.5 kg



Functional Description

By pressure actuation of the opposing piston, the base jaws are guided by a carrier on the piston, and are set in motion. The synchronization of the jaw stroke is done with a rack and pinion principle.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ③ **Multi-tooth guidance**
Highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ④ **Kinematics**
Pinion and rack principle for centric clamping, even at large strokes
- ⑤ **Dust cover**
Along the whole guidance length against coarse dirt
- ⑥ **Sensor system**
Brackets for proximity switches and adjustable control cams in the housing

General Notes about the Series

Operating principle: Double piston rack and pinion principle

Housing material: Aluminum (extruded profile)

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Turning unit for reorientation of large workpieces.

- ❶ 2-finger long-stroke gripper PHL
- ❷ Universal swivel unit SRU-plus

- ❸ Flat linear module Delta with toothed belt drive

SCHUNK offers more ...

The following components make the product PHL even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Quick-change system



Universal swivel unit



Pressure maintenance valve



Universal intermediate jaw



Inductive proximity switch



Magnetic switch



Finger blank



Jaw quick-change system

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Sliding bearing version PHL-G: With proven SCHUNK multi-tooth guidance for robust and reliable applications

Roller bearing version PHL-W: With play-free, pre-loaded profile rail guides for higher precision, even larger loads, and longer finger lengths, and at the same time with an increased gripping force

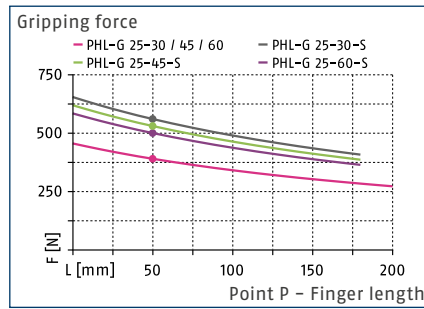
Mechanical gripping force maintenance: Ensures a minimum gripping force in the event of a pressure loss. This acts as the closing force in the S version. The design of the top jaws means that they can also be used as an opening force.

High-temperature version VHT: For use in hot environments

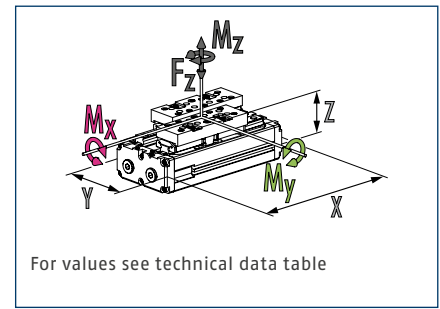
Additional stroke versions: Available in three stroke variants as standard

Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!

Gripping force



Dimensions and maximum loads



Technical data PHL-G

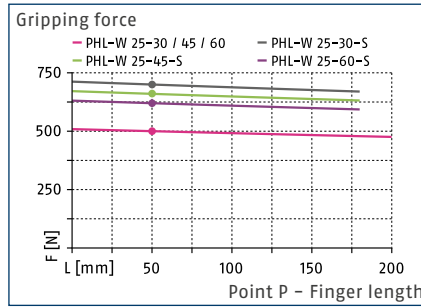
Description		PHL-G 25-030	PHL-G 25-030-S	PHL-G 25-045	PHL-G 25-045-S	PHL-G 25-060	PHL-G 25-060-S
ID		0308120	0308123	0308121	0308124	0308122	0308125
Stroke per jaw	[mm]	30	30	45	45	60	60
Closing/opening force	[N]	390/390	560/-	390/390	530/-	390/390	500/-
Min. spring force	[N]		170		140		110
Weight	[kg]	1.38	1.63	1.64	2.04	1.9	2.13
Recommended workpiece weight	[kg]	1.95	1.95	1.95	1.95	1.95	1.95
Fluid consumption double stroke	[cm ³]	77	150	107	180	138	210
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.12/0.12	0.14/0.31	0.19/0.19	0.18/0.41	0.23/0.23	0.23/0.51
Max. permissible finger length	[mm]	200	180	200	180	200	180
Max. permissible mass per finger	[kg]	1	1	1	1	1	1
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	158 x 74 x 59.8	235 x 74 x 59.8	203 x 74 x 59.8	280 x 74 x 59.8	248 x 74 x 59.8	325 x 74 x 59.8
Moments M _x max./M _y max./M _z max.	[Nm]	25/115/21	25/115/21	29/115/25	29/115/25	33/115/29	33/115/29
Forces F _z max.	[N]	1000	1000	1000	1000	1000	1000

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- ① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

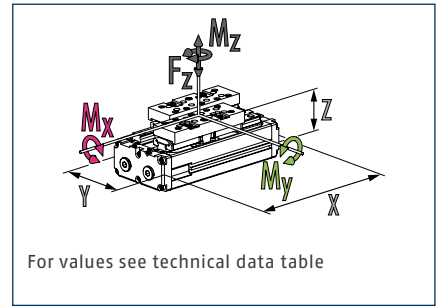
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/phl



Gripping force



Dimensions and maximum loads

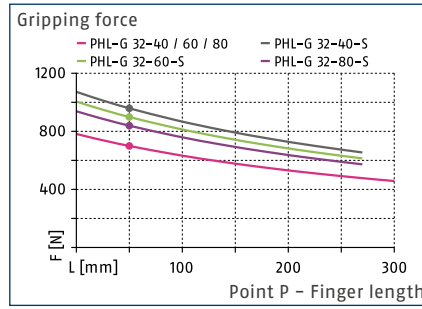


Technical data PHL-W

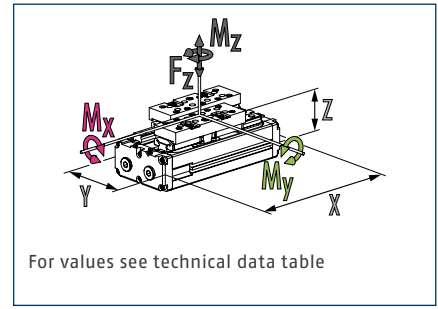
Description		PHL-W 25-030	PHL-W 25-030-S	PHL-W 25-045	PHL-W 25-045-S	PHL-W 25-060	PHL-W 25-060-S
ID		0308130	0308133	0308131	0308134	0308132	0308135
Stroke per jaw	[mm]	30	30	45	45	60	60
Closing/opening force	[N]	500/500	700/-	500/500	660/-	500/500	620/-
Min. spring force	[N]		200		160		120
Weight	[kg]	1.49	1.72	1.75	2.13	1.92	2.21
Recommended workpiece weight	[kg]	2.5	2.5	2.5	2.5	2.5	2.5
Fluid consumption double stroke	[cm ³]	77	150	107	180	138	210
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.11/0.11	0.12/0.27	0.15/0.15	0.16/0.36	0.18/0.18	0.2/0.44
Max. permissible finger length	[mm]	200	180	200	180	200	180
Max. permissible mass per finger	[kg]	1	1	1	1	1	1
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	158 x 74 x 59.7	235 x 74 x 59.7	203 x 74 x 59.7	280 x 74 x 59.7	248 x 74 x 59.7	325 x 74 x 59.7
Moments M _x max./M _y max./M _z max.	[Nm]	25/120/27	25/120/27	29/120/33	29/120/33	33/120/46	33/120/46
Forces F _z max.	[N]	1000	1000	1000	1000	1000	1000

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Gripping force



Dimensions and maximum loads



Technical data PHL-G

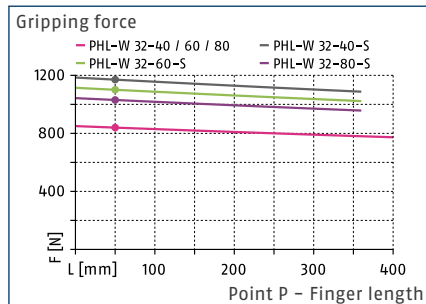
Description		PHL-G 32-040	PHL-G 32-040-S	PHL-G 32-060	PHL-G 32-060-S	PHL-G 32-080	PHL-G 32-080-S
ID		0308140	0308143	0308141	0308144	0308142	0308145
Stroke per jaw	[mm]	40	40	60	60	80	80
Closing/opening force	[N]	700/700	960/-	700/700	900/-	700/700	840/-
Min. spring force	[N]		260		200		140
Weight	[kg]	2.62	3.12	3.11	3.59	3.55	4.05
Recommended workpiece weight	[kg]	3.5	3.5	3.5	3.5	3.5	3.5
Fluid consumption double stroke	[cm ³]	161	309	227	375	292	440
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.23/0.23	0.23/0.45	0.31/0.31	0.31/0.6	0.39/0.39	0.39/0.75
Max. permissible finger length	[mm]	300	270	300	270	300	270
Max. permissible mass per finger	[kg]	2.5	2.5	2.5	2.5	2.5	2.5
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	201 x 89 x 73.9	294 x 89 x 73.9	261 x 89 x 73.9	354 x 89 x 73.9	321 x 89 x 73.9	414 x 89 x 73.9
Moments M _x max./M _y max./M _z max.	[Nm]	44/190/54	44/190/54	53/190/57	53/190/57	61/190/60	61/190/60
Forces F _z max.	[N]	2200	2200	2200	2200	2200	2200

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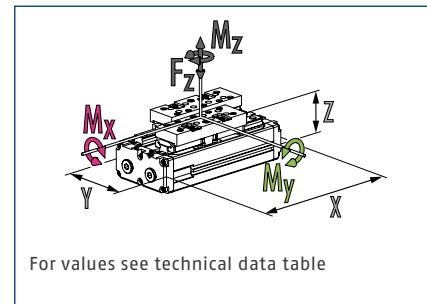
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Gripping force



Dimensions and maximum loads

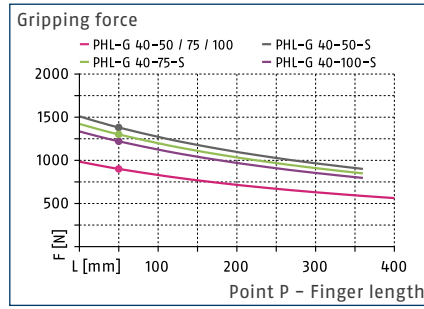


Technical data PHL-W

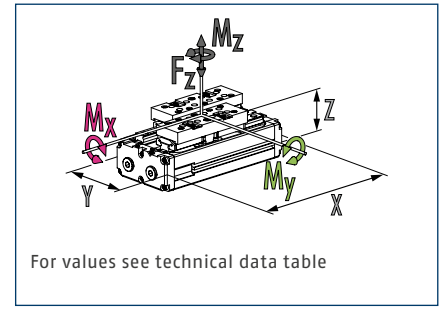
Description		PHL-W 32-040	PHL-W 32-040-S	PHL-W 32-060	PHL-W 32-060-S	PHL-W 32-080	PHL-W 32-080-S
ID		0308150	0308153	0308151	0308154	0308152	0308155
Stroke per jaw	[mm]	40	40	60	60	80	80
Closing/opening force	[N]	840/840	1170/-	840/840	1100/-	840/840	1030/-
Min. spring force	[N]		330		260		190
Weight	[kg]	3.43	3.93	3.92	4.41	4.37	4.87
Recommended workpiece weight	[kg]	4.2	4.2	4.2	4.2	4.2	4.2
Fluid consumption double stroke	[cm ³]	161	309	227	375	292	440
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.19/0.19	0.2/0.39	0.26/0.26	0.27/0.52	0.32/0.32	0.34/0.65
Max. permissible finger length	[mm]	400	360	400	360	400	360
Max. permissible mass per finger	[kg]	2.5	2.5	2.5	2.5	2.5	2.5
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	201 x 89 x 77.2	294 x 89 x 77.2	261 x 89 x 77.2	354 x 89 x 77.2	321 x 89 x 77.2	414 x 89 x 77.2
Moments M _x max./M _y max./M _z max.	[Nm]	50/230/58	50/230/58	58/230/63	58/230/63	67/230/71	67/230/71
Forces F _z max.	[N]	2200	2200	2200	2200	2200	2200

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Gripping force



Dimensions and maximum loads



Technical data PHL-G

Description		PHL-G 40-050	PHL-G 40-050-S	PHL-G 40-075	PHL-G 40-075-S	PHL-G 40-100	PHL-G 40-100-S
ID		0308160	0308163	0308161	0308164	0308162	0308165
Stroke per jaw	[mm]	50	50	75	75	100	100
Closing/opening force	[N]	900/900	1380/-	900/900	1300/-	900/900	1220/-
Min. spring force	[N]		480		400		320
Weight	[kg]	4.72	5.57	5.54	7.1	6.35	7.49
Recommended workpiece weight	[kg]	4.5	4.5	4.5	4.5	4.5	4.5
Fluid consumption double stroke	[cm ³]	302	559	430	686	558	814
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.32/0.32	0.34/0.58	0.42/0.42	0.45/0.78	0.53/0.53	0.57/0.97
Max. permissible finger length	[mm]	400	360	400	360	400	360
Max. permissible mass per finger	[kg]	5	5	5	5	5	5
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	247 x 110 x 84.8	350 x 110 x 84.8	320 x 110 x 84.8	423 x 110 x 84.8	395 x 110 x 84.8	498 x 110 x 84.8
Moments M _x max./M _y max./M _z max.	[Nm]	83/290/121	83/290/121	100/290/121	100/290/121	117/290/121	117/290/121
Forces F _z max.	[N]	3000	3000	3000	3000	3000	3000

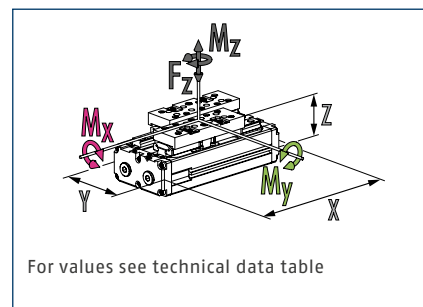
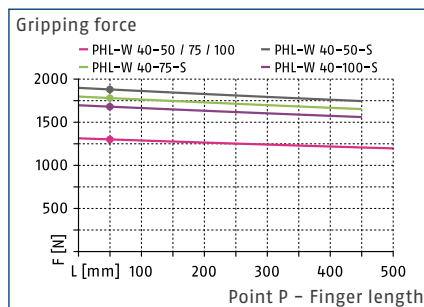
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Gripping force

Dimensions and maximum loads



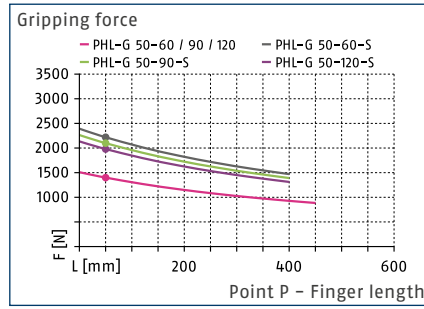
Technical data PHL-W

Description		PHL-W 40-050	PHL-W 40-050-S	PHL-W 40-075	PHL-W 40-075-S	PHL-W 40-100	PHL-W 40-100-S
ID		0308170	0308173	0308171	0308174	0308172	0308175
Stroke per jaw	[mm]	50	50	75	75	100	100
Closing/opening force	[N]	1300/1300	1880/-	1300/1300	1780/-	1300/1300	1680/-
Min. spring force	[N]		580		480		380
Weight	[kg]	5.71	6.42	6.53	8.05	7.34	8.39
Recommended workpiece weight	[kg]	6.5	6.5	6.5	6.5	6.5	6.5
Fluid consumption double stroke	[cm ³]	302	559	430	686	558	814
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.28/0.28	0.3/0.51	0.38/0.38	0.4/0.68	0.47/0.47	0.49/0.85
Max. permissible finger length	[mm]	500	450	500	450	500	450
Max. permissible mass per finger	[kg]	5	5	5	5	5	5
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	247 x 110 x 90.2	350 x 110 x 90.2	320 x 110 x 90.2	423 x 110 x 90.2	395 x 110 x 90.2	498 x 110 x 90.2
Moments M _x max./M _y max./M _z max.	[Nm]	100/350/121	100/350/121	117/350/121	117/350/121	133/350/121	133/350/121
Forces F _z max.	[N]	3000	3000	3000	3000	3000	3000

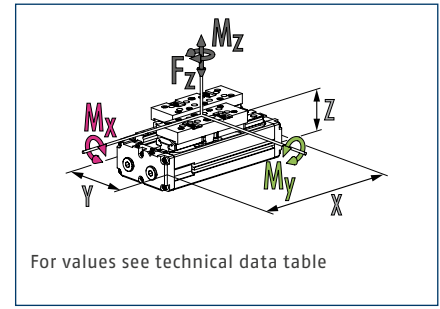
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- ① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.



Gripping force



Dimensions and maximum loads



Technical data PHL-G

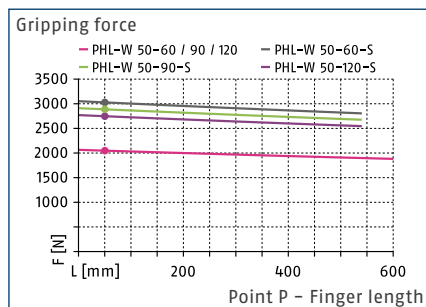
Description		PHL-G 50-060	PHL-G 50-060-S	PHL-G 50-090	PHL-G 50-090-S	PHL-G 50-120	PHL-G 50-120-S
ID		0308180	0308183	0308181	0308184	0308182	0308185
Stroke per jaw	[mm]	60	60	90	90	120	120
Closing/opening force	[N]	1400/1400	2220/-	1400/1400	2100/-	1400/1400	1980/-
Min. spring force	[N]		820		700		580
Weight	[kg]	7.83	9.52	9.28	10.95	10.67	12.37
Recommended workpiece weight	[kg]	7	7	7	7	7	7
Fluid consumption double stroke	[cm³]	575	1070	814	1309	1053	1548
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.68/0.68	0.72/1.17	0.91/0.91	0.96/1.55	1.14/1.14	1.2/1.94
Max. permissible finger length	[mm]	450	400	450	400	450	400
Max. permissible mass per finger	[kg]	8	8	8	8	8	8
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	287.4 x 132 x 99.8	416.4 x 132 x 99.8	377.4 x 132 x 99.8	506.4 x 132 x 99.8	467.4 x 132 x 99.8	596.4 x 132 x 99.8
Moments M_x max./ M_y max./ M_z max.	[Nm]	142/390/219	142/390/219	161/390/219	161/390/219	181/390/219	181/390/219
Forces F_z max.	[N]	5300	5300	5300	5300	5300	5300

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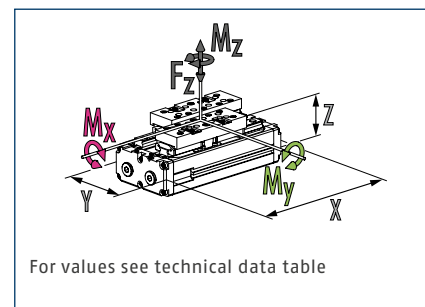
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Gripping force



Dimensions and maximum loads



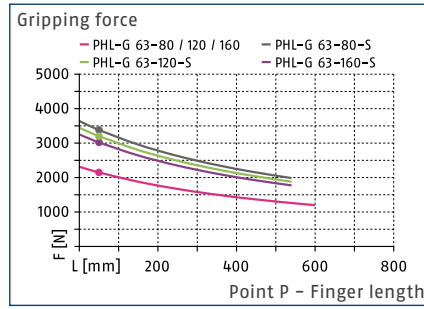
Technical data PHL-W

Description		PHL-W 50-060	PHL-W 50-060-S	PHL-W 50-090	PHL-W 50-090-S	PHL-W 50-120	PHL-W 50-120-S
ID		0308190	0308193	0308191	0308194	0308192	0308195
Stroke per jaw	[mm]	60	60	90	90	120	120
Closing/opening force	[N]	2050/2050	3030/-	2050/2050	2890/-	2050/2050	2750/-
Min. spring force	[N]		980		840		700
Weight	[kg]	9.24	10.94	10.74	11.63	12.16	13.86
Recommended workpiece weight	[kg]	10.25	10.25	10.25	10.25	10.25	10.25
Fluid consumption double stroke	[cm ³]	575	1070	814	1309	1053	1548
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.61/0.61	0.62/1.01	0.81/0.81	0.83/1.35	1.02/1.02	1.04/1.69
Max. permissible finger length	[mm]	600	540	600	540	600	540
Max. permissible mass per finger	[kg]	8	8	8	8	8	8
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	287.4 x 132 x 105.2	416.4 x 132 x 105.2	377.4 x 132 x 105.2	506.4 x 132 x 105.2	467.4 x 132 x 105.2	596.4 x 132 x 105.2
Moments M _x max./M _y max./M _z max.	[Nm]	150/590/219	150/590/219	169/590/219	169/590/219	188/590/219	188/590/219
Forces F _z max.	[N]	5300	5300	5300	5300	5300	5300

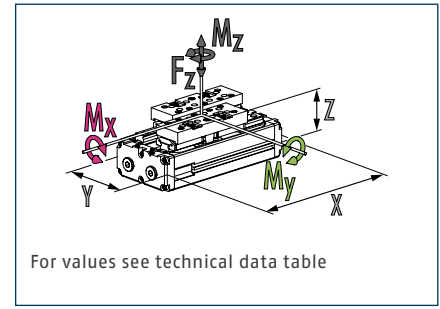
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Gripping force



Dimensions and maximum loads



Technical data PHL-G

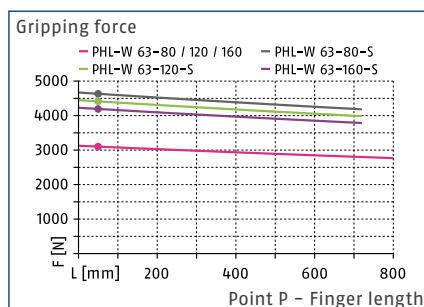
Description		PHL-G 63 -080	PHL-G 63-080-S	PHL-G 63-120	PHL-G 63-120-S	PHL-G 63-160	PHL-G 63-160-S
ID		0308260	0308263	0308261	0308264	0308262	0308265
Stroke per jaw	[mm]	80	80	120	120	160	160
Closing/opening force	[N]	2150/2150	3380/-	2150/2150	3200/-	2150/2150	3020/-
Min. spring force	[N]		1260		1080		900
Weight	[kg]	13.71	17.2	15.58	19.42	18.55	22.04
Recommended workpiece weight	[kg]	10.75	10.75	10.75	10.75	10.75	10.75
Fluid consumption double stroke	[cm³]	1280	2303	1791	2814	2303	3325
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	1.05/1.05	1.26/2.01	1.4/1.4	1.68/2.67	1.76/1.76	2.1/3.34
Max. permissible finger length	[mm]	600	540	600	540	600	540
Max. permissible mass per finger	[kg]	12	12	12	12	12	12
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	371 x 164 x 123	541 x 164 x 123	491 x 164 x 123	661 x 164 x 123	611 x 164 x 123	781 x 164 x 123
Moments M_x max./ M_y max./ M_z max.	[Nm]	175/580/417	175/580/417	185/580/417	185/580/417	195/580/417	195/580/417
Forces F_z max.	[N]	10000	10000	10000	10000	10000	10000

- ① In certain circumstances, the full gripping force as per the data table will only become effective for the PHL-G version, equipped with floating bearings after around 100 gripping cycles.
- ① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_x may arise in addition to the moment generated by the gripping force itself.

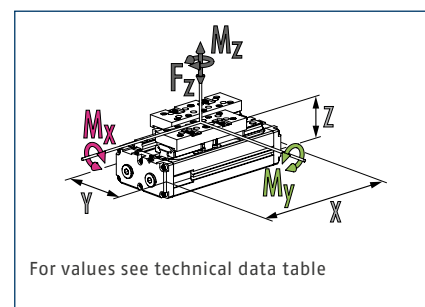
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/phl



Gripping force



Dimensions and maximum loads



Technical data PHL-W

Description		PHL-W 63-080	PHL-W 63-080-S	PHL-W 63-120	PHL-W 63-120-S	PHL-W 63-160	PHL-W 63-160-S
ID		0308270	0308273	0308271	0308274	0308272	0308275
Stroke per jaw	[mm]	80	80	120	120	160	160
Closing/opening force	[N]	3100/3100	4630/-	3100/3100	4410/-	3100/3100	4190/-
Min. spring force	[N]		1530		1310		1090
Weight	[kg]	15.21	18.7	17.39	20.93	20.06	23.55
Recommended workpiece weight	[kg]	15.5	15.5	15.5	15.5	15.5	15.5
Fluid consumption double stroke	[cm ³]	1280	2303	1791	2814	2303	3325
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.94/0.94	1.09/1.74	1.25/1.25	1.46/2.32	1.56/1.56	1.82/2.91
Max. permissible finger length	[mm]	800	720	800	720	800	720
Max. permissible mass per finger	[kg]	12	12	12	12	12	12
Protection class IP		41	41	41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	371 x 164 x 128.7	541 x 164 x 128.7	491 x 164 x 128.7	661 x 164 x 128.7	611 x 164 x 128.7	781 x 164 x 128.7
Moments M _x max./M _y max./M _z max.	[Nm]	180/1080/417	180/1080/417	190/1080/417	190/1080/417	200/1080/417	200/1080/417
Forces F _z max.	[N]	10000	10000	10000	10000	10000	10000

- ① In certain circumstances, the full gripping force as per the data table will only become effective for the PHL-G version, equipped with floating bearings after around 100 gripping cycles.
- ① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

PFH-mini

Pneumatic Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper

Loadable. Flexible. Reliable. Long-stroke Gripper PFH-mini

2-finger parallel gripper with long jaw stroke for large parts and/or a broad range of parts

Field of Application

Clean to slightly dirty environments.

Advantages – Your benefits

Robust sliding guidance for the precise handling of different workpieces

High maximum moments possible suitable for using long gripper fingers

Double piston rack and pinion principle for centric clamping

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 3



Weight
2.65 .. 12.6 kg



Gripping force
630 .. 2950 N



Stroke per jaw
30 .. 100 mm



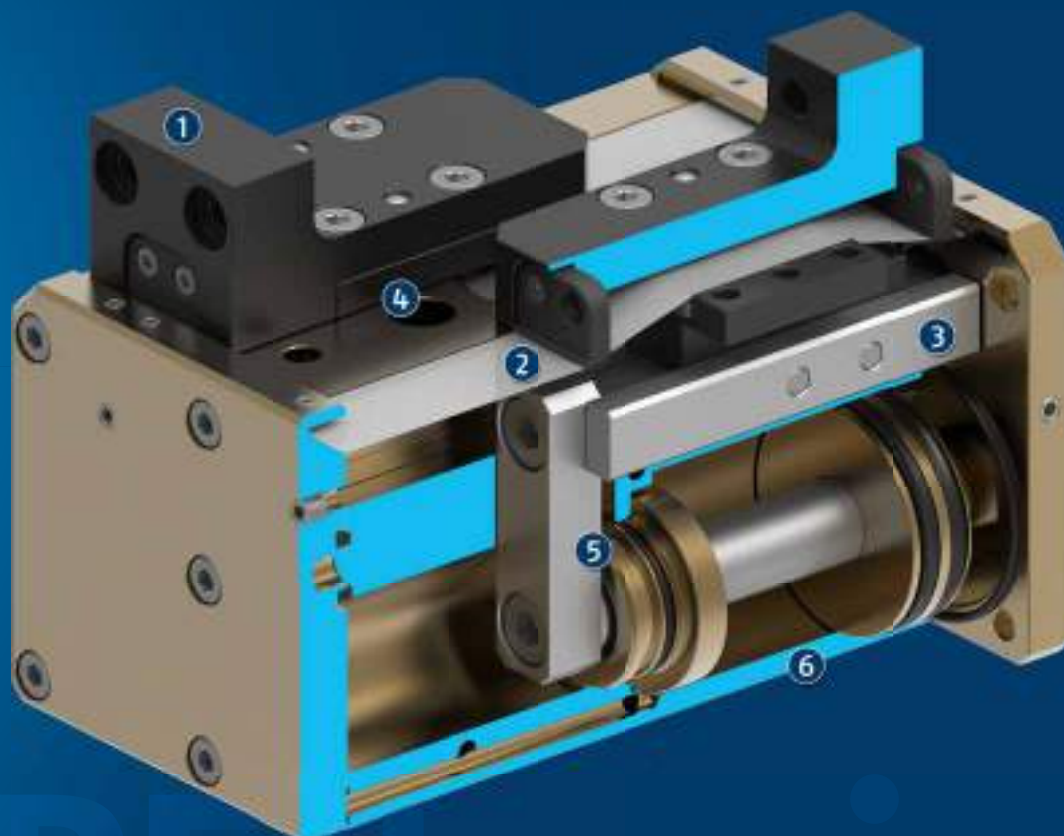
Workpiece weight
3.15 .. 13 kg



Functional Description

By pressure actuation of the opposing piston, the base jaws are guided by a carrier on the piston, and are set in motion.

The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Dust cover**
Along the whole guidance length against coarse dirt
- ③ **Sliding guide**
For precise gripping with minimum play at a high load capacity
- ④ **Centering and mounting possibilities**
For universal assembly of the gripper
- ⑤ **Kinematics**
Double piston rack and pinion principle for centric clamping
- ⑥ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy

General Notes about the Series

Operating principle: Double piston rack and pinion principle

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Assembly unit for intermediate sleeves with various diameters. The unit is equipped with a collision sensor to prevent damages.

- 1 2-finger parallel gripper PFH-mini with workpiece-specific gripper fingers
- 2 Collision sensor OPS





SCHUNK offers more ...

The following components make the product PFH-mini even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Collision and overload protection sensor



Tolerance compensation unit



Pressure maintenance valve



Finger blank



Inductive proximity switch



Magnetic switch



Flexible position sensor

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

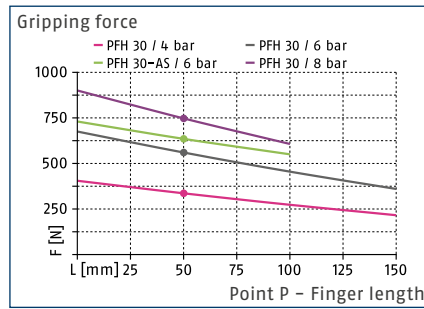
Gripper with guidance cover: Against heavy contamination

PFH-mini 30

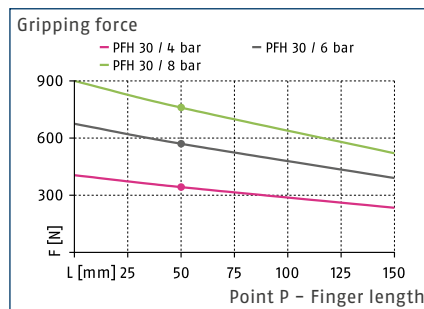
Pneumatic Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



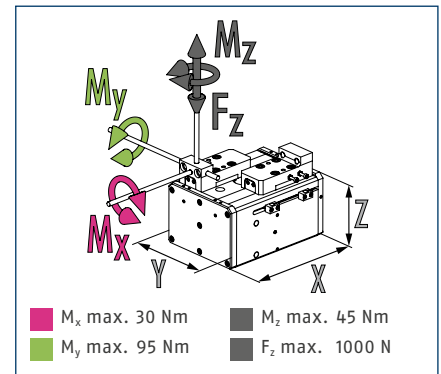
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

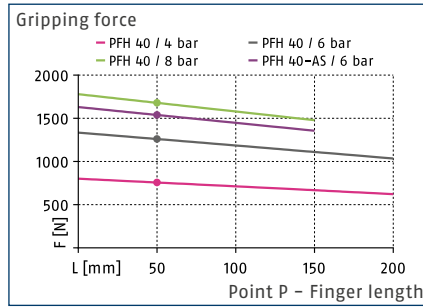
Description		PFH 30	PFH 30-60	PFH 30-AS
ID		0302030	0302033	0302031
Stroke per jaw	[mm]	30	60	30
Closing/opening force	[N]	630/570	630/570	720/-
Min. spring force	[N]			90
Weight	[kg]	2.65	3.5	2.7
Recommended workpiece weight	[kg]	3.15	3.15	3.15
Fluid consumption double stroke	[cm ³]	95	187	95
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	5/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.3/0.3	0.4/0.5	0.35/0.35
Closing/opening time with spring	[s]			0.40
Max. permissible finger length	[mm]	150	150	100
Max. permissible mass per finger	[kg]	2	2	2
Protection class IP		41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	124 x 94 x 67.8	187 x 94 x 67.8	124 x 94 x 67.8

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

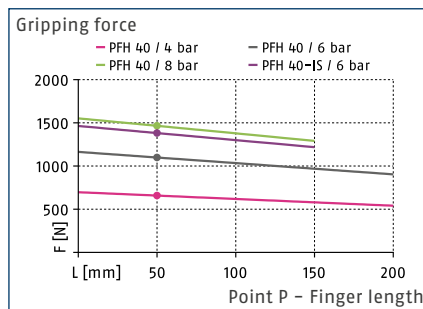
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pfh-mini



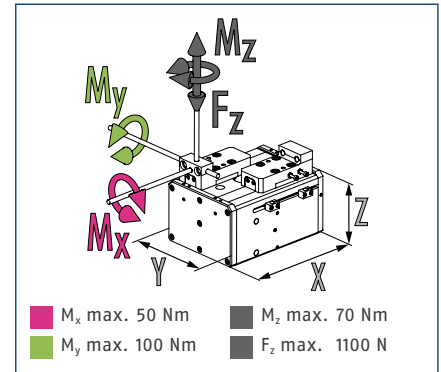
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PFH 40	PFH 40-80	PFH 40-AS	PFH 40-IS
ID		0302040	0302043	0302041	0302042
Stroke per jaw	[mm]	40	80	40	40
Closing/opening force	[N]	1260/1100	1260/1100	1540/-	-/1380
Min. spring force	[N]			280	280
Weight	[kg]	4.6	6.2	4.7	4.7
Recommended workpiece weight	[kg]	6.3	6.3	6.3	5.5
Fluid consumption double stroke	[cm ³]	245	487	245	245
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	5/6/6.5	5/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.3/0.3	0.5/0.6	0.25/0.4	0.4/0.25
Closing/opening time with spring	[s]			0.70	0.70
Max. permissible finger length	[mm]	200	200	150	150
Max. permissible mass per finger	[kg]	3	3	3	3
Protection class IP		41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	159 x 110 x 84.8	244 x 110 x 84.8	159 x 110 x 84.8	159 x 110 x 84.8

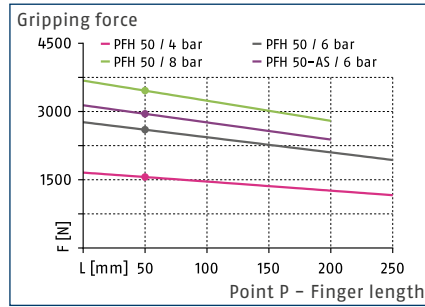
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PFH-mini 50

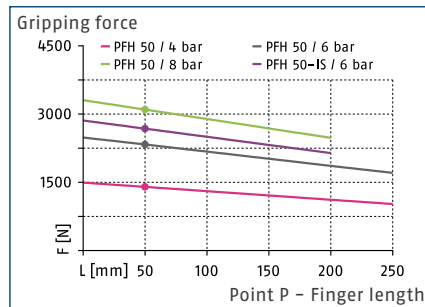
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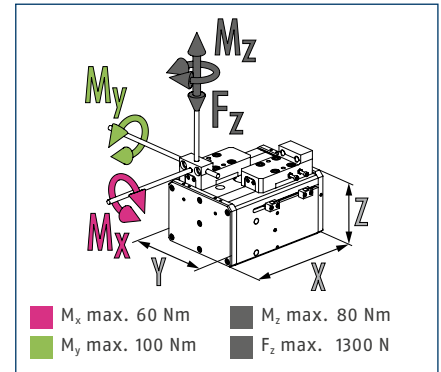
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



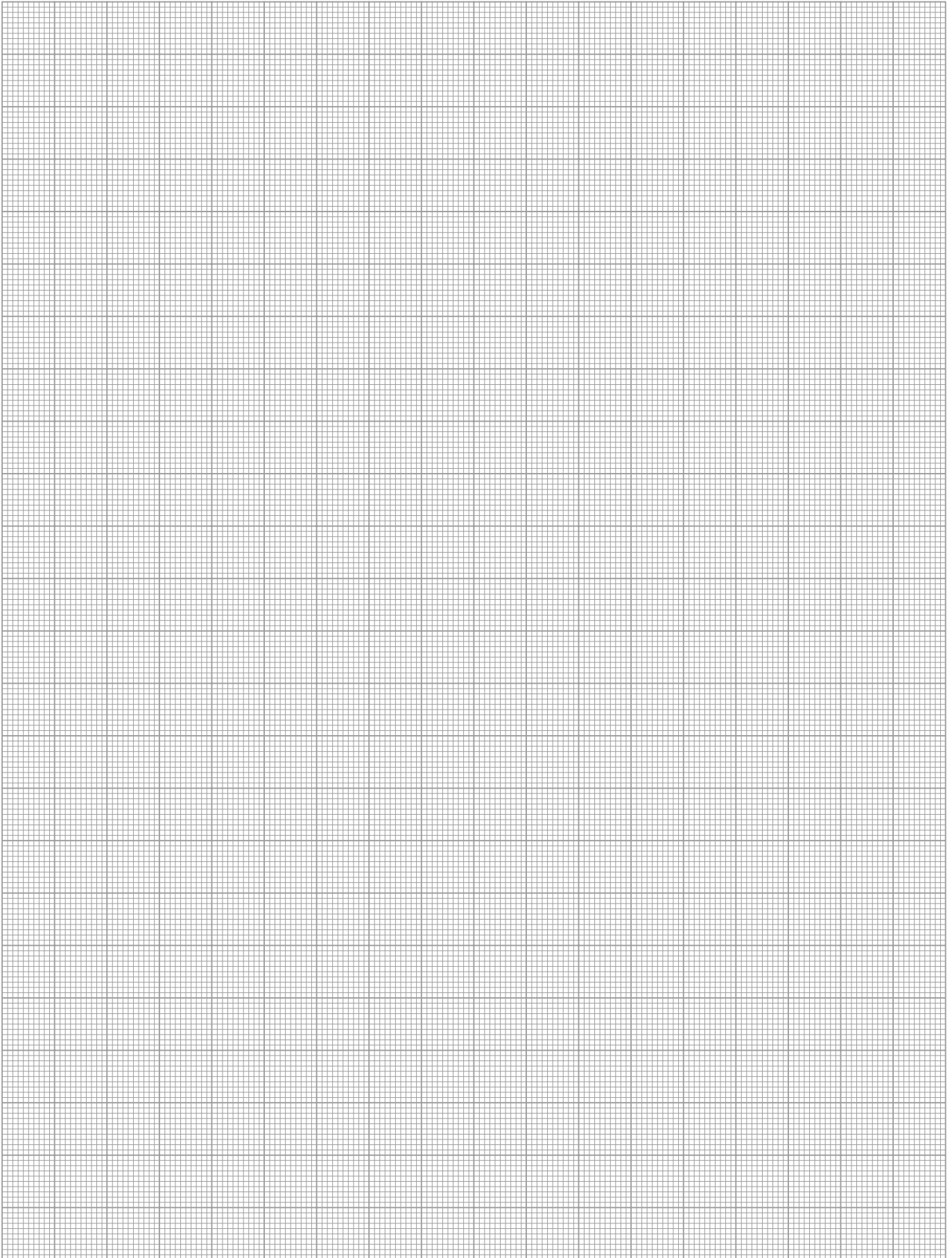
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PFH 50	PFH 50-100	PFH 50-AS	PFH 50-IS
ID		0302050	0302053	0302051	0302052
Stroke per jaw	[mm]	50	100	50	50
Closing/opening force	[N]	2600/2330	2600/2330	2950/-	-/2680
Min. spring force	[N]			350	350
Weight	[kg]	9.6	12.6	9.7	9.7
Recommended workpiece weight	[kg]	13	13	13	11.65
Fluid consumption double stroke	[cm ³]	603	1205	603	603
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	5/6/6.5	5/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.6/0.7	1/1.2	0.5/0.8	0.7/0.6
Closing/opening time with spring	[s]			0.80	0.80
Max. permissible finger length	[mm]	250	250	200	200
Max. permissible mass per finger	[kg]	4	4	4	4
Protection class IP		41	41	41	41
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	198 x 144 x 104.8	303 x 144 x 104.8	198 x 144 x 104.8	198 x 144 x 104.8

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pfh-mini



PFH

Pneumatic Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper

Loadable. Flexible. Reliable.

Long-stroke Gripper PFH

2-finger parallel gripper with long jaw stroke for large parts and a broad range of parts

Field of Application

Clean to slightly dirty working environments, particularly suitable for handling of car rims.

Advantages – Your benefits

Robust sliding guidance for the precise handling of different workpieces

High maximum moments possible suitable for using long gripper fingers

Double piston rack and pinion principle for centric clamping

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 4



Weight
18.9 .. 33.6 kg



Gripping force
2120 N



Stroke per jaw
150 .. 300 mm



Workpiece weight
11.2 .. 14.7 kg

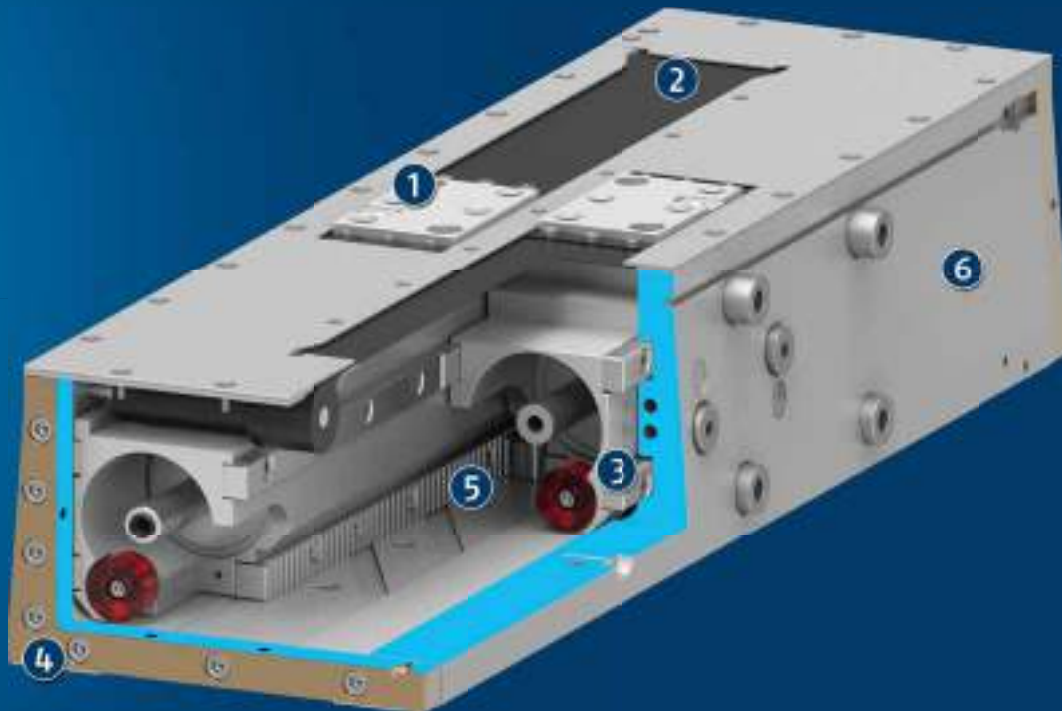


Functional Description

The base jaws form the piston chambers while the pistons themselves remain stationary.

By pressure actuation of the opposing piston areas, the base jaws set in motion.

The end of the stroke is damped with an elastomer pad.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Dust cover**
Along the whole guidance length against coarse dirt
- ③ **Sliding guide**
For precise gripping with minimum play at a high load capacity
- ④ **Centering and mounting possibilities**
For universal assembly of the gripper
- ⑤ **Kinematics**
Double piston rack and pinion principle for centric clamping
- ⑥ **Housing**
One-piece, sturdy U-section

General Notes about the Series

Operating principle: Double piston rack and pinion principle

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Gripper unit for handling car and truck rims. Special fingers enable process reliable gripping of unmachined and finished parts.

- 1 2-finger long-stroke gripper PFH
- 2 Top fingers for wheel rim handling
- 3 Workpiece: 19 inch wheel rim





SCHUNK offers more ...

The following components make the product PFH even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Quick-change system



Universal swivel unit



Pressure maintenance valve



Finger blank



Inductive proximity switch



Magnetic switch

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

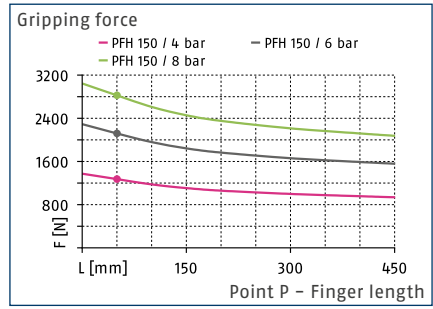
The gripper was particularly developed for handling car rims. It is capable of gripping rims from 13" to 21", but can also be used for handling other large workpieces. Units with manual stroke adjustment and versions with shorter and longer strokes are available on request.

PFH 150

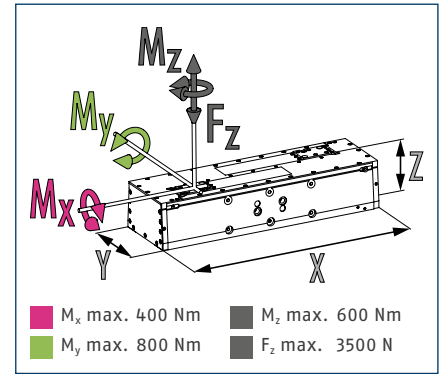
Pneumatic Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

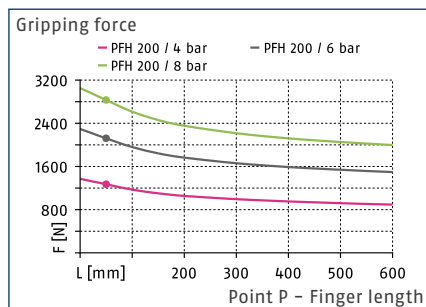
Description		PFH 150
ID		0302000
Stroke per jaw	[mm]	150
Closing/opening force	[N]	2120/2120
Weight	[kg]	18.9
Recommended workpiece weight	[kg]	11.2
Fluid consumption double stroke	[cm ³]	1510
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.7/0.7
Max. permissible finger length	[mm]	450
Max. permissible mass per finger	[kg]	7
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	470 x 182 x 125

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

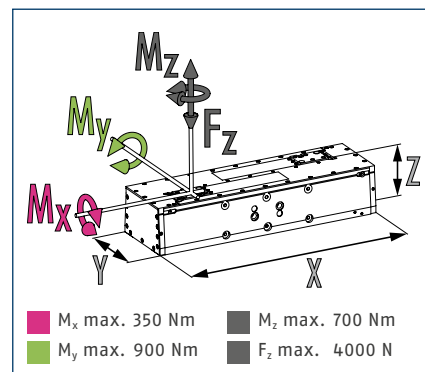
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pfh



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PFH 200
ID		0302020
Stroke per jaw	[mm]	200
Closing/opening force	[N]	2120/2120
Weight	[kg]	23.5
Recommended workpiece weight	[kg]	11.2
Fluid consumption double stroke	[cm ³]	1990
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	0.9/0.9
Max. permissible finger length	[mm]	600
Max. permissible mass per finger	[kg]	8
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	600 x 182 x 125

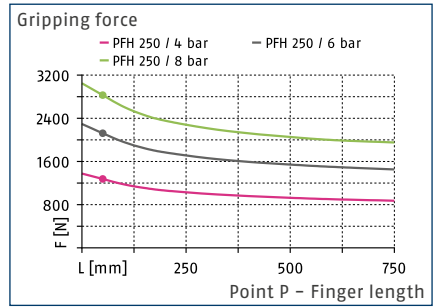
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PFH 250

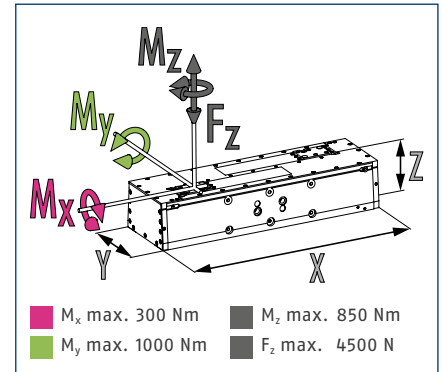
Pneumatic Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

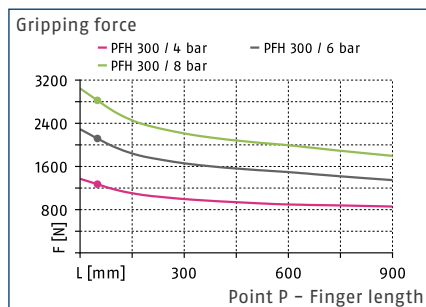
Description		PFH 250
ID		0302005
Stroke per jaw	[mm]	250
Closing/opening force	[N]	2120/2120
Weight	[kg]	28.6
Recommended workpiece weight	[kg]	11.2
Fluid consumption double stroke	[cm ³]	2510
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	1.1/1.1
Max. permissible finger length	[mm]	750
Max. permissible mass per finger	[kg]	9
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	730 x 182 x 125

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

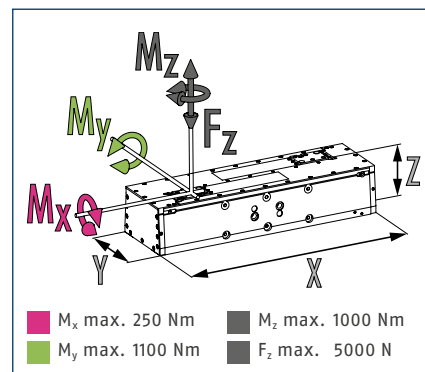
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pfh



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PFH 300
ID		0302010
Stroke per jaw	[mm]	300
Closing/opening force	[N]	2120/2120
Weight	[kg]	33.6
Recommended workpiece weight	[kg]	14.7
Fluid consumption double stroke	[cm ³]	3010
Min./nom./max. operating pressure	[bar]	2/6/8
Closing/opening time	[s]	1.25/1.25
Max. permissible finger length	[mm]	900
Max. permissible mass per finger	[kg]	10
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions X x Y x Z	[mm]	860 x 182 x 125

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Compact. Flexible. Fully encapsulated.

Long-stroke Gripper PSH

2-finger parallel gripper with long jaw stroke and dirt-resistant round guidance

Field of Application

In contaminated work environments and for a large parts spectrum.



Advantages – Your benefits

High maximum moments possible suitable for using long gripper fingers

Dirt-protected round guidances sealed, for long strokes

Fastening at two gripper sides with centering for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control



Sizes
Quantity: 4



Weight
0.77 .. 8.05 kg



Gripping force
320 .. 1760 N



Stroke per jaw
14 .. 100 mm



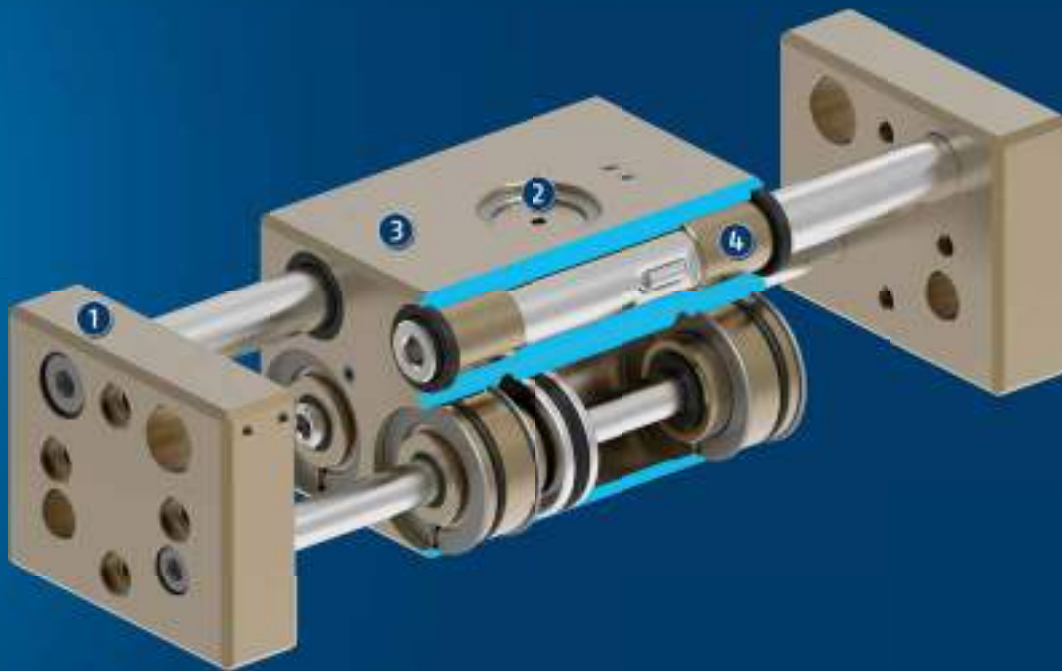
Workpiece weight
1.6 .. 8.8 kg



Functional Description

By actuating the pistons with compressed air, the base jaws, which are located at the piston and the rack, are moved.

The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Kinematics**
Rack and pinion principle for centric gripping
- ③ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ④ **Round guidances**
Sealed, for long strokes

General Notes about the Series

Operating principle: Rack and pinion principle

Housing material: Hard-anodized, high strength aluminum

Base jaw material: Hard-anodized, high strength aluminum

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Rapid loading and unloading unit on a swivel head base. Due to the robustness of this unit, it is particularly suitable for use in machine tools.

- ① 2-finger parallel gripper PSH
- ② Swivel head SRH-plus



SCHUNK offers more ...

The following components make the product PSH even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Universal swivel unit



Quick-change system



Tolerance compensation unit



Pressure maintenance valve



Magnetic switch



Finger blank



Intermediate jaw



Jaw quick-change system



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

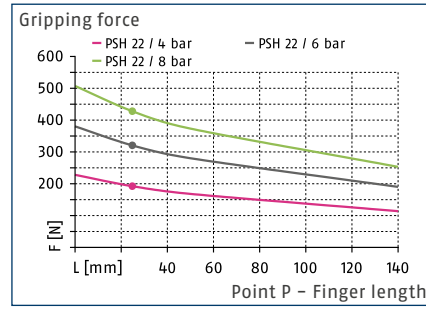
Finger position: Can be monitored by magnetic and/or inductive proximity switches. Unsynchronized version possible upon request as application-specific design.

High-temperature version VHT: For use in hot environments

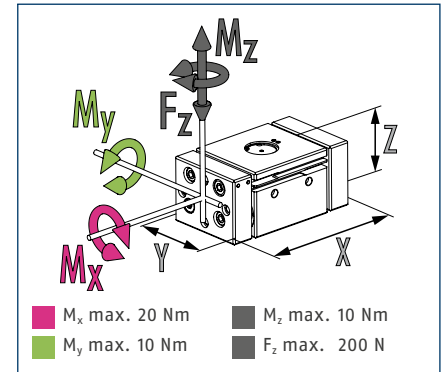
Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

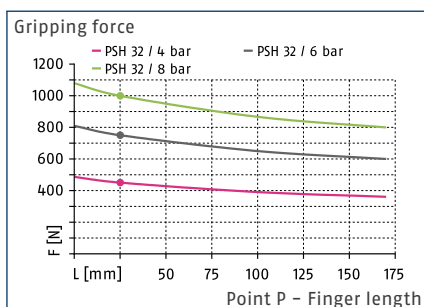
Description		PSH 22-1	PSH 22-2
ID		0302122	0302123
Stroke per jaw	[mm]	28	14
Closing/opening force	[N]	320/320	320/320
Weight	[kg]	0.95	0.77
Recommended workpiece weight	[kg]	1.6	1.6
Fluid consumption double stroke	[cm ³]	36	18
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8
Closing/opening time	[s]	0.15/0.15	0.12/0.12
Max. permissible finger length	[mm]	140	140
Max. permissible mass per finger	[kg]	0.8	0.8
Protection class IP		67	67
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1
Dimensions X x Y x Z	[mm]	137 x 58 x 48	95 x 58 x 48
Options and their characteristics			
High-temperature version, ID		39302122	39302123
Min./max. ambient temperature	[°C]	5/130	5/130

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

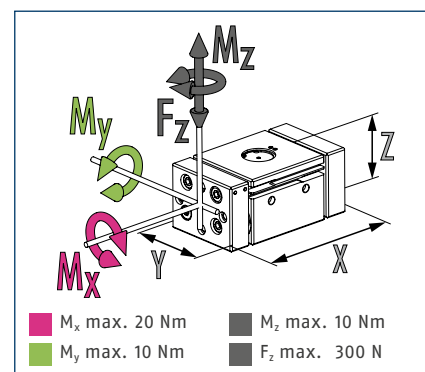
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/psh



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

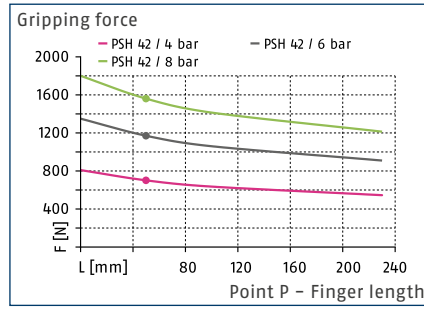
Technical data

Description		PSH 32-1	PSH 32-2
ID		0302132	0302133
Stroke per jaw	[mm]	35	22.5
Closing/opening force	[N]	750/750	750/750
Weight	[kg]	2.05	1.8
Recommended workpiece weight	[kg]	3.75	3.75
Fluid consumption double stroke	[cm ³]	101	65
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8
Closing/opening time	[s]	0.2/0.2	0.12/0.12
Max. permissible finger length	[mm]	170	170
Max. permissible mass per finger	[kg]	1.5	1.5
Protection class IP		67	67
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1
Dimensions X x Y x Z	[mm]	171 x 76 x 63	133 x 76 x 63
Options and their characteristics			
High-temperature version, ID		39302132	39302133
Min./max. ambient temperature	[°C]	5/130	5/130

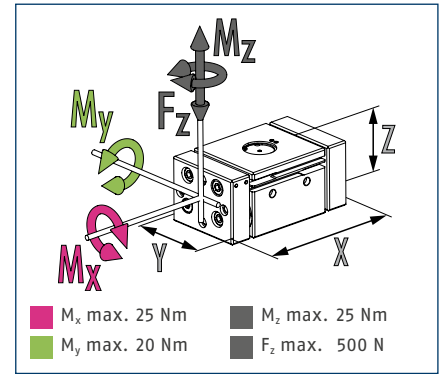
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

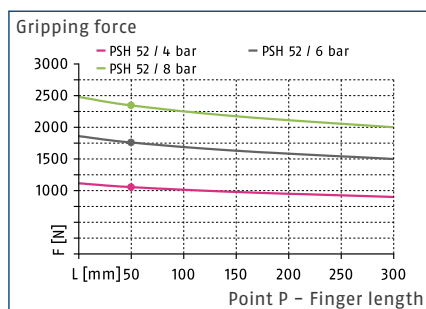
Description		PSH 42-100	PSH 42-1	PSH 42-2
ID		0302146	0302142	0302143
Stroke per jaw	[mm]	100	50	29
Closing/opening force	[N]	1170/1170	1170/1170	1170/1170
Weight	[kg]	6.7	4.65	3.9
Recommended workpiece weight	[kg]	6	6	6
Fluid consumption double stroke	[cm ³]	510	255	148
Min./nom./max. operating pressure	[bar]	3/6/8	3/6/8	3/6/8
Closing/opening time	[s]	0.4/0.4	0.25/0.25	0.15/0.15
Max. permissible finger length	[mm]	230	230	230
Max. permissible mass per finger	[kg]	2.5	2.5	2.5
Protection class IP		67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	326 x 97 x 77	232 x 97 x 77	168 x 97 x 77
Options and their characteristics				
High-temperature version, ID		39302146	39302142	39302143
Min./max. ambient temperature	[°C]	5/130	5/130	5/130

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

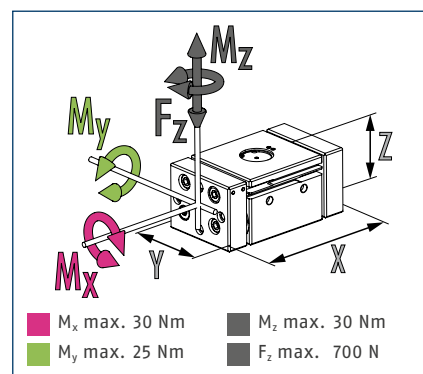
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/psh



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PSH 52-1
ID		0302152
Stroke per jaw	[mm]	64
Closing/opening force	[N]	1760/1760
Weight	[kg]	8.05
Recommended workpiece weight	[kg]	8.8
Fluid consumption double stroke	[cm ³]	504
Min./nom./max. operating pressure	[bar]	3/6/8
Closing/opening time	[s]	0.4/0.4
Max. permissible finger length	[mm]	300
Max. permissible mass per finger	[kg]	3.5
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	296 x 119 x 92
Options and their characteristics		
High-temperature version, ID		39302152
Min./max. ambient temperature	[°C]	5/130

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Strong. Robust. Flexible.

Heavy-duty Gripper SPG

Sturdy 2-finger parallel gripper for heavy components and a broad part range, equipped with robust guidances and therefore suitable for high gripping forces and maximum moment loads

Field of Application

Suitable for clean working environments, covers a broad range of parts due to its long jaw stroke and high gripping forces for heavy workpieces.

Advantages – Your benefits

- Robust sliding guidance** for precise handling
- High maximum moments possible** suitable for using long gripper fingers
- High efficiency** through direct drive
- Mounting from three gripper sides in three screw directions** for universal and flexible gripper assembly
- Air supply via hose-free direct connection or screw connections** for flexible pressure supply in all automated systems



 <p>Sizes Quantity: 1</p>	 <p>Weight 35 kg</p>	 <p>Gripping force 10000 N</p>	 <p>Stroke per jaw 100 mm</p>	 <p>Workpiece weight 50 kg</p>
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Functional Description

The aligned base jaws are actuated with compressed air directly by the fixed piston, which opens and closes them. The base jaws are synchronized by the rack and pinion kinematics.

The direct flow of force enables a high degree of efficiency and therefore very high gripping forces.



① Sliding guide

Precise gripping due to the use of a highly loadable guidance with minimum play

② Base jaw

For the connection of workpiece-specific gripper fingers

③ Housing

Is weight-optimized due to the use of high-strength aluminum alloy

④ Kinematics

Pinion and rack principle for centric clamping, even at large strokes

General Notes about the Series

Housing material: Aluminum alloy, anodized

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, cupped-type lubrication nipples, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Corresponding version with ID 0302120 includes a pressure maintenance valve SDV-P 07 in the scope of delivery. The version with ID 0302121 is supplied without pressure maintenance valve, but can be retrofitted.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Gripper unit for heavy V8 motor blocks.

- ① 2-finger heavy-load gripper SPG





SCHUNK offers more ...

The following components make the product SPG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Quick-change system



Pressure maintenance valve



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

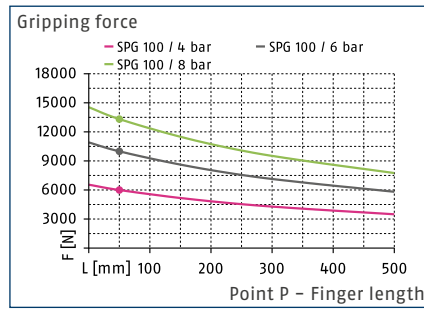
Options and special Information

Two lubricating nipples TM6 on either side for relubricating the base jaws and purge air connections are already provided.

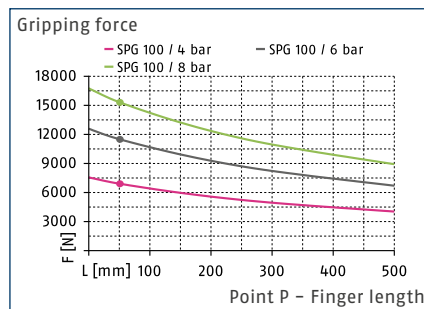
Gripping force maintenance: The SPG 100 (ID 0302121) with shortened opening and closing times of 1.5 s is supplied without a pressure maintenance valve used for gripping force maintenance.



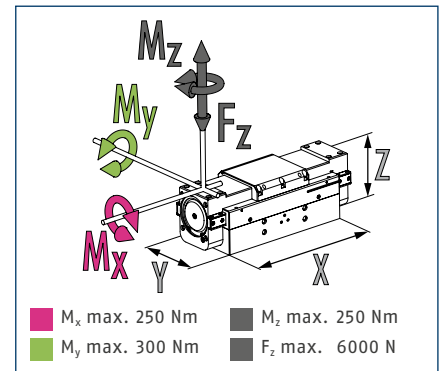
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



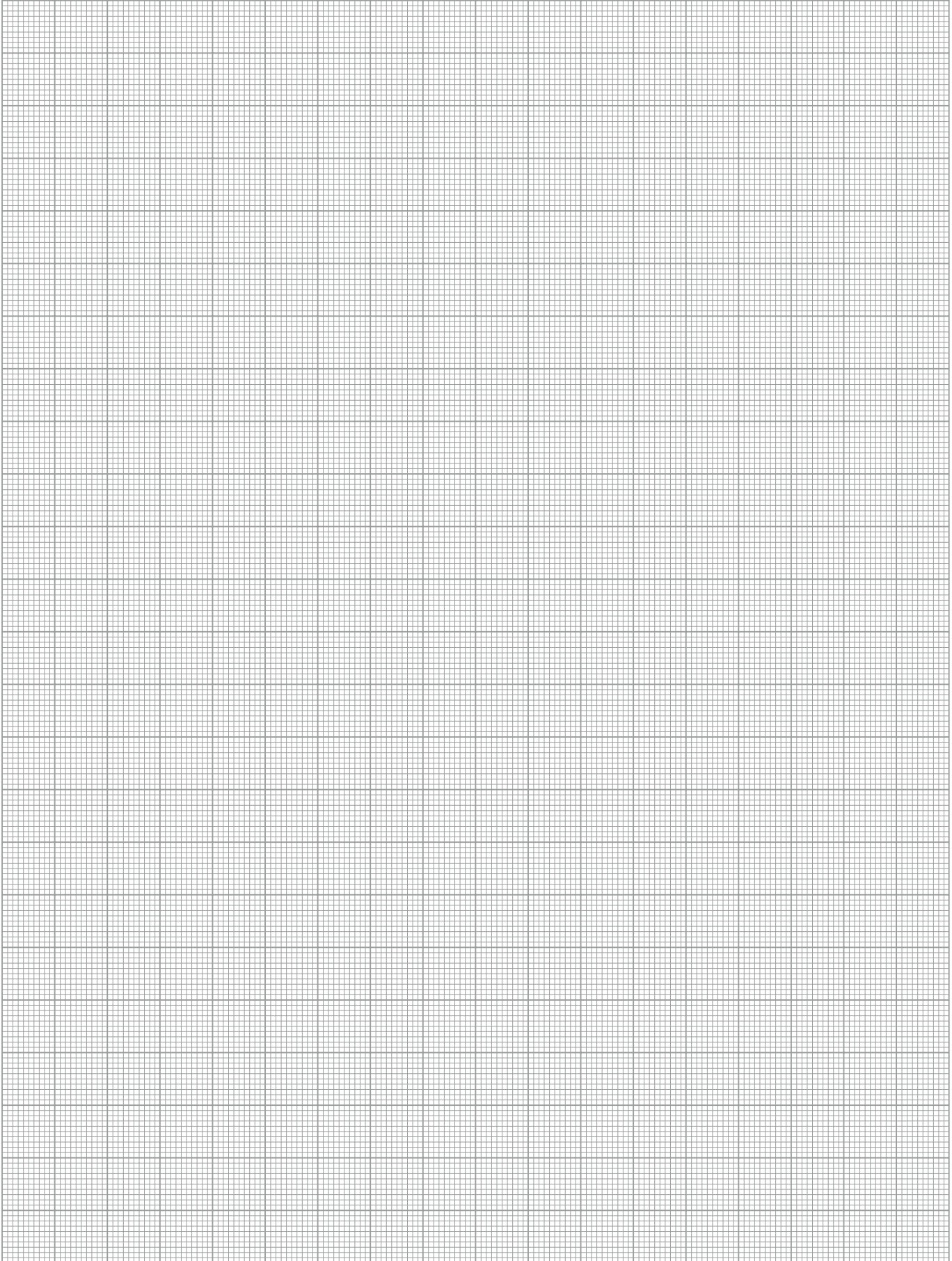
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		SPG 100	SPG 100-SDV-P
ID		0302121	0302120
Stroke per jaw	[mm]	100	100
Closing/opening force	[N]	10000/11480	10000/11480
Weight	[kg]	35	35
Recommended workpiece weight	[kg]	50	50
Fluid consumption double stroke	[cm ³]	4600	4600
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	1.5/1.5	3/3
Max. permissible finger length	[mm]	500	500
Max. permissible mass per finger	[kg]	15	15
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1
Dimensions X x Y x Z	[mm]	436 x 196 x 191.9	436 x 196 x 191.9








① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available. The closing and opening times can be further reduced by fitting rapid deaeration valves to the air connections. However, care must be taken to ensure that the jaw motion occurs without any hitting or bouncing.




More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/spg



Pneumatic Grippers

Product Quickfinder

	Page		Stroke per finger [mm]			Gripping force [N]			
			0 – 10	10 – 100	100 – 1000	0 – 100	100 – 1000	1000 – 10000	10000 – 100000
3-finger centric gripper									
Gripper for small components MPZ • T-slot guidance	192		1 – 5			20 – 330			
Universal gripper PZN-plus • Multi-tooth guidance • Use of long gripper fingers possible	202		2 – 45			255 – 59500			
Sealed universal gripper DPZ-plus • Complies with IP67 requirements	220		2 – 25			230 – 16380			
Universal gripper JGZ • For simple applications	232		2.5 – 16				255 – 8480		
Long-stroke gripper PZH-plus • Multi-tooth guidance • Center bore	244			20 – 75			375 – 4400		
Universal gripper PZB-plus • Center bore	252		2.5 – 35			330 – 27600			

	Page		Angle jaw [°]	Gripping moment [Nm]		
			0 – 360	0 – 10	10 – 100	100 – 1000
3-finger centric gripper with rotating jaw stroke						
Swivel finger gripper PZH-SF-mini • Compact • Long, rotating jaw stroke • Dirt-resistant circular guide	266		100		70	
Swivel finger gripper PZH-SF • Large, rotating jaw stroke • Dirt-resistant round guide	272		59.7			182



	Ambient conditions						Variant variety	Variety of sensor systems
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom		
	●	⦿				○	+	+
	●	●	⦿	⦿	●	⦿	+++	+++
	●	●	●	⦿		⦿	+	+
	●	⦿					+	++
	●	⦿	○	○	○		+	+
	●	⦿	○	○	●		+	++

	Ambient conditions						Variant variety	Variety of sensor systems
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom		
	●	⦿	⦿				+	+
	●	⦿	⦿				+	+

● = Very highly suitable ⦿ = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection

MPZ

Pneumatic Grippers | 3-Finger Centric Grippers | Gripper for Small Components

Precise. Compact. Reliable. Gripper for Small Components MPZ

Small 3-finger centric gripper with base jaws guided on T-slots

Field of Application

For universal use in clean to slightly dirty working environments, especially suitable for gripping small workpieces.

Advantages – Your benefits

T-slot guidance for precise gripping at high moment loads

Finger position monitoring also possible via FPS

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Compact dimensions for minimum interfering contours in handling



Sizes
Quantity: 6



Weight
0.01 .. 0.29 kg



Gripping force
20 .. 310 N



Stroke per jaw
1 .. 5 mm

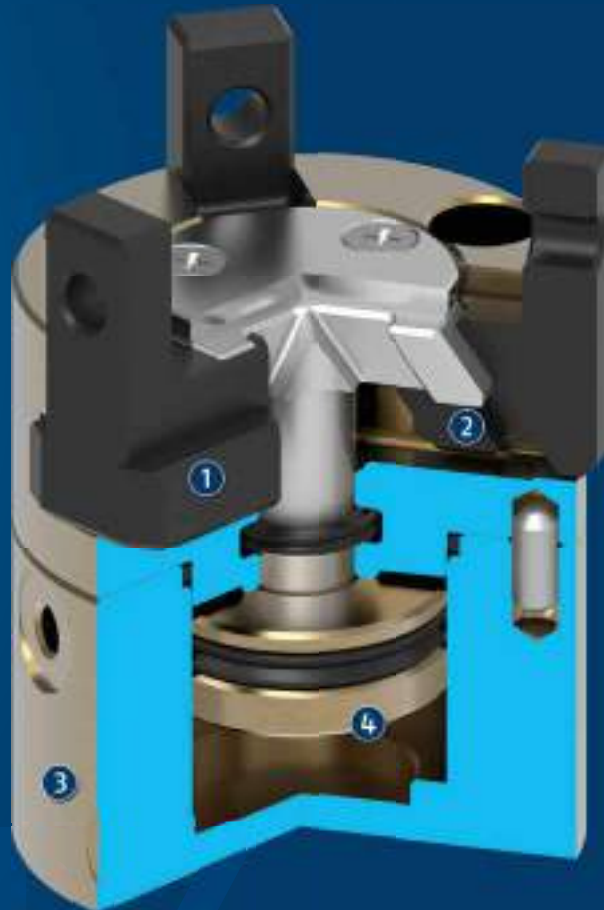


Workpiece weight
0.05 .. 1.15 kg



Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



- ① **T-slot guidance**
For precise gripping with high moment loads
- ② **Wedge-hook principle**
For high force transmission and centric gripping
- ③ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ④ **Drive**
Pneumatic, efficient, and easy to handle

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, centering pins, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Pneumatically driven 2-axis line gantry with centric gripper for gripping and repositioning small round workpieces.

- ① 3-finger centric gripper MPZ
- ② Linear module LM

- ③ Pillar assembly system SAS

SCHUNK offers more ...

The following components make the product MPZ even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Pick & Place unit



Quick-change system



Flexible position sensor



Micro valve



Pressure maintenance valve



Finger blank



Magnetic switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

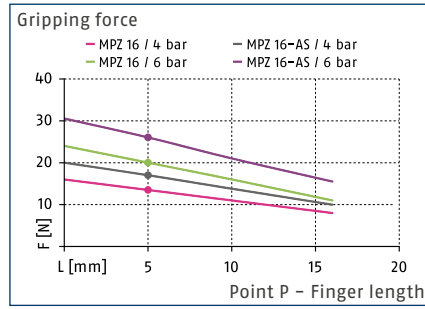
Version FPS for flexible position sensor: This version is prepared for the use with the flexible position sensor FPS, and allows monitoring of several gripping positions.

MPZ 16

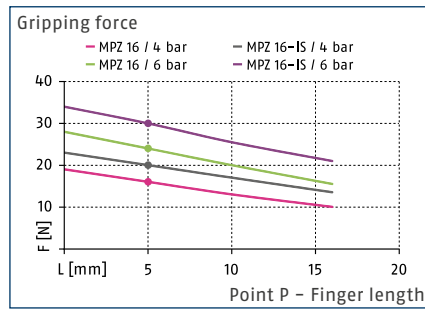
Pneumatic Grippers | 3-Finger Centric Grippers | Gripper for Small Components



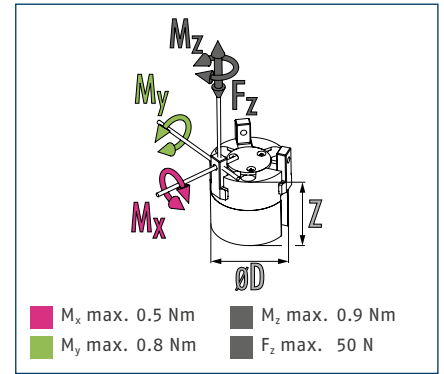
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

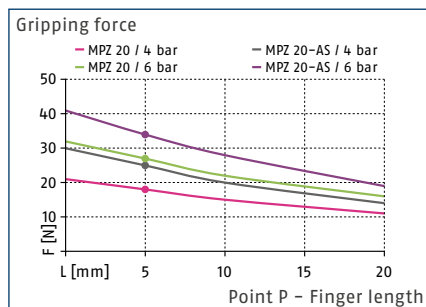
Description		MPZ 16	MPZ 16-AS	MPZ 16-IS
ID		0340480	0340481	0340482
Stroke per jaw	[mm]	1	1	1
Closing/opening force	[N]	20/24	26/-	-/30
Min. spring force	[N]		6	6
Weight	[kg]	0.01	0.02	0.02
Recommended workpiece weight	[kg]	0.05	0.05	0.05
Fluid consumption double stroke	[cm ³]	0.15	0.4	0.4
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.02/0.02	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.20	0.20
Max. permissible finger length	[mm]	16	16	16
Max. permissible mass per finger	[kg]	0.02	0.02	0.02
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	16 x 20	16 x 26	16 x 26

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

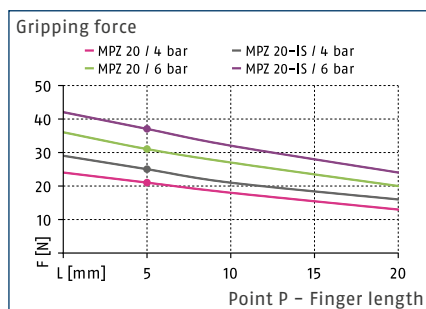
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/mpz



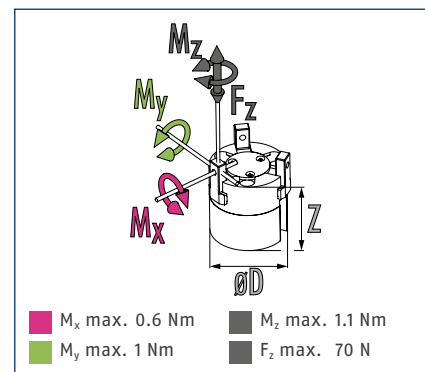
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPZ 20	MPZ 20-AS	MPZ 20-IS
ID		0340490	0340491	0340492
Stroke per jaw	[mm]	1.5	1.5	1.5
Closing/opening force	[N]	27/31	34/-	-/37
Min. spring force	[N]		8	8
Weight	[kg]	0.02	0.03	0.03
Recommended workpiece weight	[kg]	0.1	0.1	0.1
Fluid consumption double stroke	[cm ³]	0.3	0.7	0.7
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.02/0.02	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.20	0.20
Max. permissible finger length	[mm]	20	20	20
Max. permissible mass per finger	[kg]	0.03	0.03	0.03
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	20 x 27	20 x 33	20 x 33

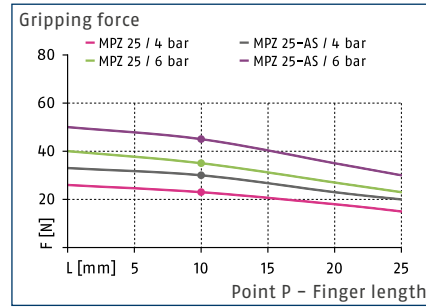
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

MPZ 25

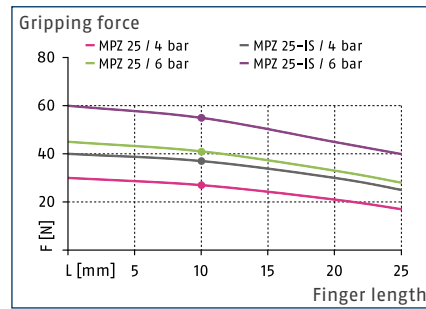
Pneumatic Grippers | 3-Finger Centric Grippers | Gripper for Small Components



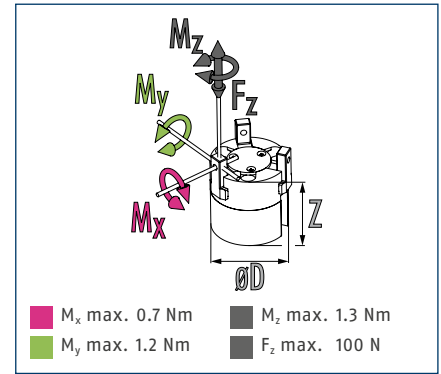
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

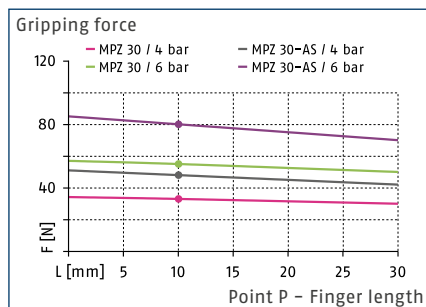
Description		MPZ 25	MPZ 25-AS	MPZ 25-IS
ID		0340500	0340501	0340502
Stroke per jaw	[mm]	2	2	2
Closing/opening force	[N]	35/40	45/-	-/55
Min. spring force	[N]		12	15
Weight	[kg]	0.04	0.06	0.06
Recommended workpiece weight	[kg]	0.2	0.2	0.2
Fluid consumption double stroke	[cm ³]	0.6	1.8	1.8
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.02/0.02	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.20	0.20
Max. permissible finger length	[mm]	25	25	25
Max. permissible mass per finger	[kg]	0.03	0.03	0.03
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	25 x 30	25 x 42	25 x 42

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

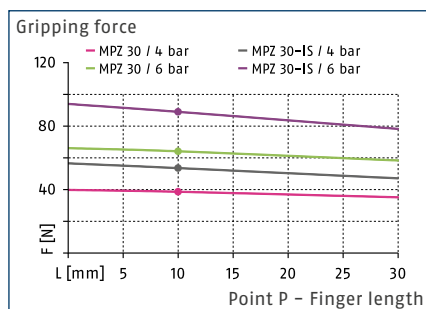
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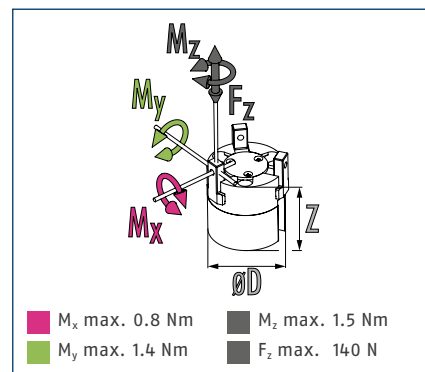
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPZ 30	MPZ 30-FPS	MPZ 30-AS	MPZ 30-IS
ID		0340510	0340513	0340511	0340512
Stroke per jaw	[mm]	3	3	3	3
Closing/opening force	[N]	55/65	55/65	80/-	-/85
Min. spring force	[N]			25	25
Weight	[kg]	0.08	0.1	0.09	0.09
Recommended workpiece weight	[kg]	0.28	0.28	0.28	0.28
Fluid consumption double stroke	[cm ³]	1.8	1.8	4.2	3.2
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]			0.30	0.30
Max. permissible finger length	[mm]	30	30	30	30
Max. permissible mass per finger	[kg]	0.03	0.03	0.03	0.03
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5
Dimensions $\varnothing D \times Z$	[mm]	30 x 32	30 x 46	30 x 45	30 x 45

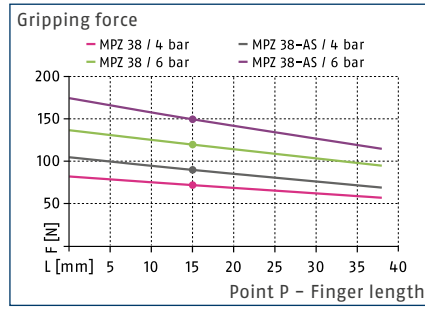
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

MPZ 38

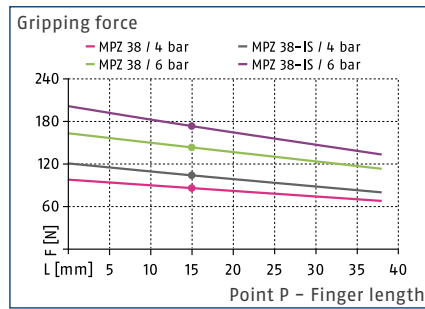
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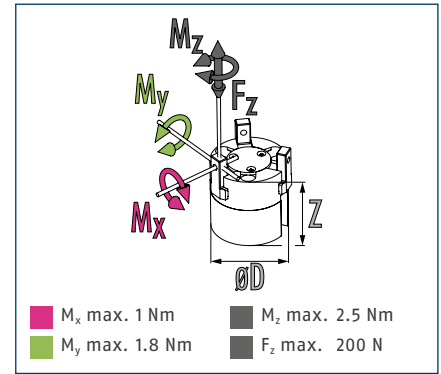
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

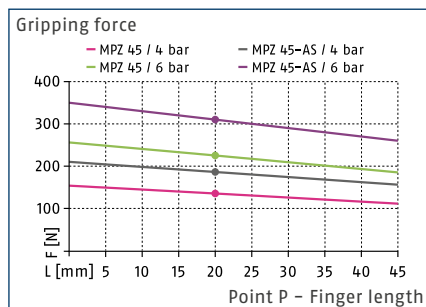
Description		MPZ 38	MPZ 38-FPS	MPZ 38-AS	MPZ 38-IS
ID		0340520	0340523	0340521	0340522
Stroke per jaw	[mm]	4	4	4	4
Closing/opening force	[N]	120/140	120/140	150/-	-/170
Min. spring force	[N]			30	40
Weight	[kg]	0.14	0.19	0.19	0.19
Recommended workpiece weight	[kg]	0.6	0.6	0.6	0.6
Fluid consumption double stroke	[cm ³]	3.5	3.5	10.3	8.4
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]			0.20	0.20
Max. permissible finger length	[mm]	38	38	38	38
Max. permissible mass per finger	[kg]	0.05	0.05	0.05	0.05
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5
Dimensions Ø D x Z	[mm]	38 x 38	38 x 53	38 x 59	38 x 59

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

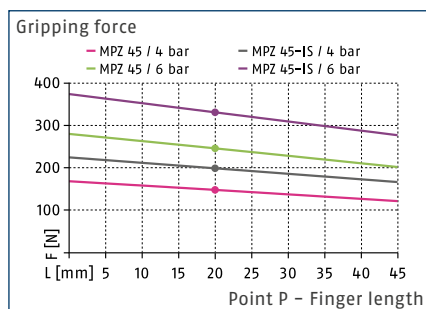
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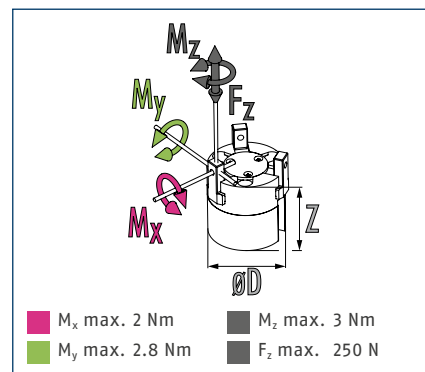
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MPZ 45	MPZ 45-FPS	MPZ 45-AS	MPZ 45-IS
ID		0340530	0340533	0340531	0340532
Stroke per jaw	[mm]	5	5	5	5
Closing/opening force	[N]	225/245	225/245	310/-	-/330
Min. spring force	[N]			85	95
Weight	[kg]	0.22	0.29	0.28	0.28
Recommended workpiece weight	[kg]	1.15	1.15	1.15	1.15
Fluid consumption double stroke	[cm ³]	8.9	8.9	18.4	15.2
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.05/0.06	0.06/0.05
Closing/opening time with spring	[s]			0.30	0.30
Max. permissible finger length	[mm]	45	45	45	45
Max. permissible mass per finger	[kg]	0.08	0.08	0.08	0.08
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5
Dimensions Ø D x Z	[mm]	45 x 43	45 x 60	45 x 58	45 x 58

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper

Reliable. Robust. Flexible. Universal Gripper PZN-plus

Universal 3-finger centric gripper with high gripping force and maximum moments due to multi-tooth guidance

Field of Application

Multi-purpose due to a diverse range of accessories. Can also be used in fields of application with special requirements to the gripper (temperature, chemical resistance, dirt, and many more).

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Wedge-hook principle for high power transmission and synchronized gripping

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Manifold options for special optimization for your specific application (dust-tight, high-temperature, corrosion-protected, etc.)

Fastening at one gripper side in two screw directions for universal and flexible gripper assembly



Sizes
Quantity: 11



Weight
0.13 .. 80 kg



Gripping force
255 .. 57300 N



Stroke per jaw
2 .. 45 mm



Workpiece weight
1.3 .. 227 kg



Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **Wedge-hook principle**
For high force transmission and centric gripping
- ③ **Sensor system**
Brackets for proximity switches and adjustable control cams in the housing
- ④ **Multi-tooth guidance**
Precise gripping through base jaw guidance with a high load capacity and a minimum play

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Cleanroom class ISO 14644-1: 5

Application Example

Insertion tool for assembly of small to medium-sized axes. Due to the rotary feed-through, the axes can be turned several times to an unlimited extent (> 360°). Slip ring contacts integrated in the rotary feed-throughs reliably supply the gripper with power.

- 1 Rotary feed-through DDF 2
- 2 Quick-change system SWS
- 3 3-finger centric gripper PZN-plus



SCHUNK offers more ...

The following components make the product PZN-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Universal intermediate jaw



Jaw quick-change system



Pressure maintenance valve



Inductive proximity switch



Magnetic switch



Finger blank

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

Anti-corrosion version K: For use in corrosion-inducing atmospheres

High-temperature version V/HT: For use in hot environments

Force intensified version KVZ: If higher gripping forces are required

Dust-tight version SD: Absolutely dust-tight, increased degree of protection against ingress of materials.

Precision version P: For the highest accuracy

ATEX version EX: For explosive environments

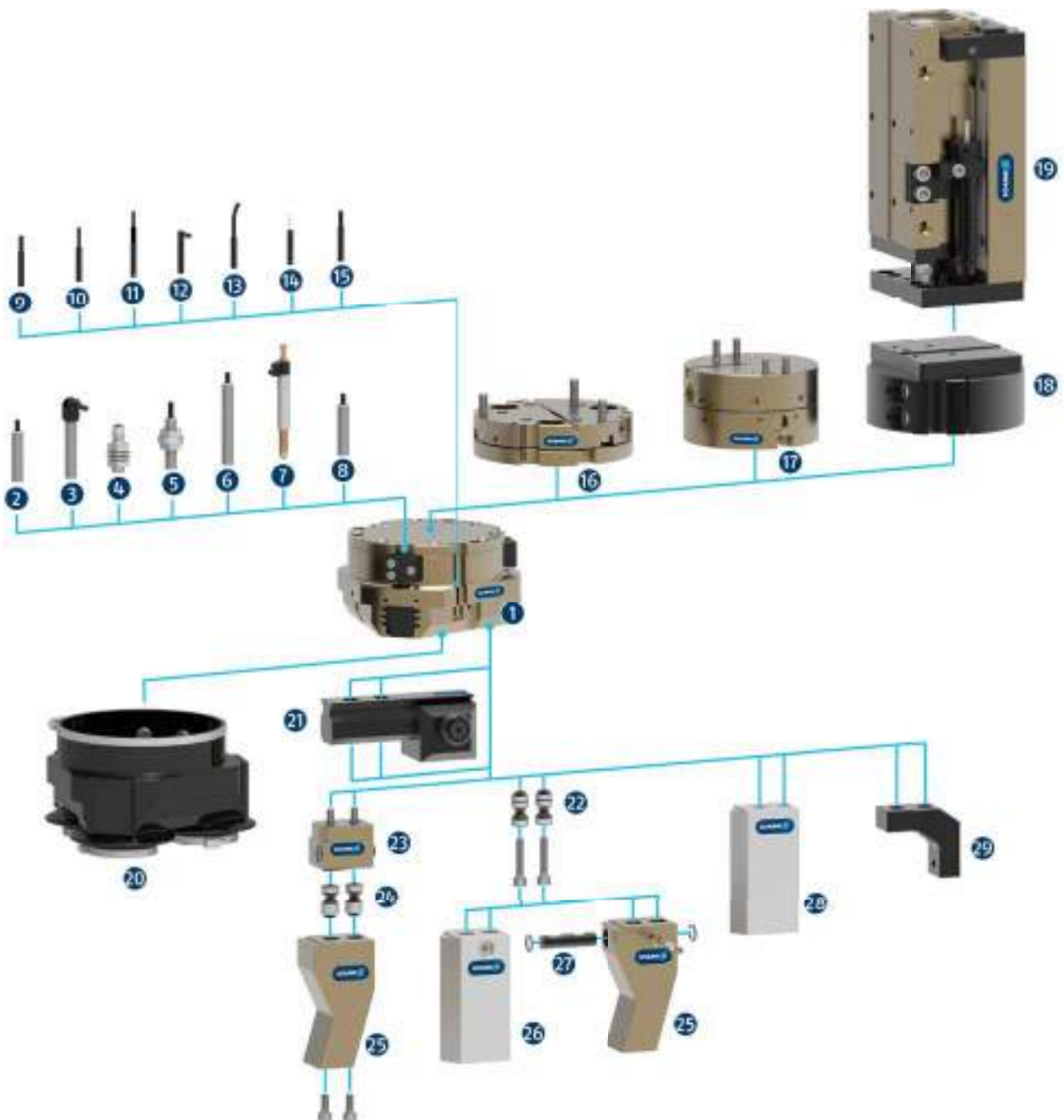
Additional versions: Various options can be combined with each other.

PZN-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper

SCHUNK gripper PZN-plus

Overview Accessories



- 1 **PZN-plus**
Universal 3-finger centric gripper with high gripping force and maximum moments due to multi-tooth guidance

Sensor systems

- 2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet
- 3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet
- 4 **IN-C 80**
Inductive proximity switch, directly pluggable
- 5 **FPS**
Flexible position sensor for monitoring up to five different, freely selectable positions
- 6 **APS-Z80**
Inductive position sensor for precise position detection of the gripper jaws with analog output
- 7 **APS-M1S**
Mechanical measuring system for precise position detection of the gripper jaw with analog output
- 8 **RMS**
Reed switch in round version
- 9 **MMS 22**
Magnetic switch with straight cable outlet for monitoring a position

MMS 22-PI1
Magnetic switch with straight cable outlet for monitoring a freely programmable position
- 10 **MMS 22-PI2**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 11 **MMS 22-PI1-HD**
MMS 22-PI1 in robust design

MMS 22-PI2-HD
MMS 22-PI2 in robust design
- 12 **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
- 13 **MMS-P**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 14 **MMS 22-A**
Analog magnetic switch with straight cable outlet for measuring the gripper jaw position with analog output and teach function

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

Complementary products

- 16 **TCU**
Tolerance compensation unit for compensating small tolerances in the plane
- 17 **AGE**
Compensation unit for compensation of large tolerances along the X and Y axes
- 18 **ASG**
Adapter plate for combining various automation components in the modular system
- 19 **CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers
- 20 **HUE**
Cover for protection against dirt

Finger accessory parts

- 21 **UZB**
The universal intermediate jaw allows fast tool-free and safe plugging and shifting of top jaws on the gripper.
- 22 **BSWS-AR**
Adapter coupling of jaw quick-change system for fast, manual change of top jaws
- 23 **BSWS-B**
Locking mechanism of the jaw quick-change system for fast, manual exchange of top jaws
- 24 **BSWS-A**
Adapter coupling of the jaw quick-change system for adaptation to the customized finger
- 25 **Customized fingers**
- 26 **BSWS-ABR**
Finger blank made of aluminum with interface to the jaw quick-change system

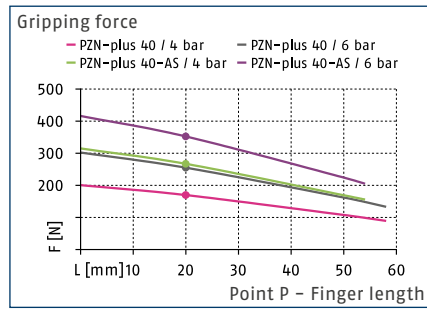
BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system
- 27 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers
- 28 **ABR/SBR**
Finger blanks made of steel or aluminum with standardized screw connection diagram
- 29 **ZBA**
Intermediate jaws for reorientation of the mounting surface

PZN-plus 40

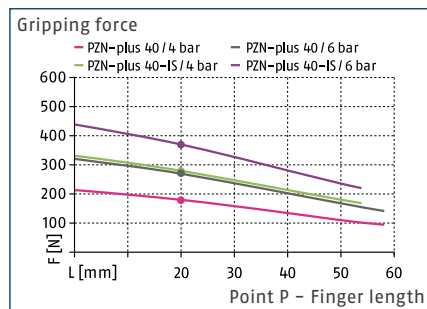
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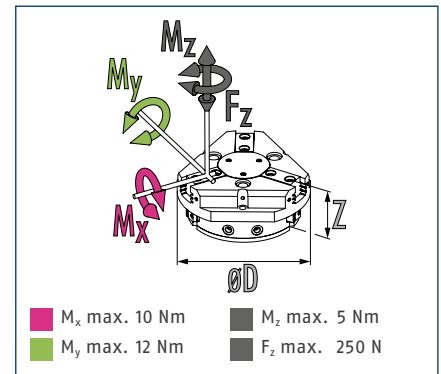
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

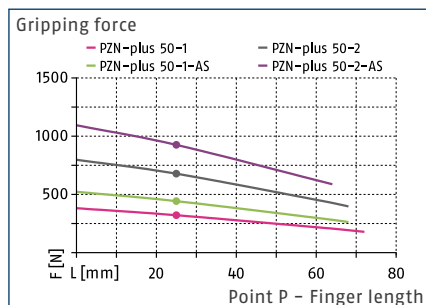
Description		PZN-plus 40	PZN-plus 40-AS	PZN-plus 40-IS
ID		0303308	0303508	0303538
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	255/270	350/-	-/370
Min. spring force	[N]		100	100
Weight	[kg]	0.13	0.15	0.15
Recommended workpiece weight	[kg]	1.3	1.3	1.3
Fluid consumption double stroke	[cm ³]	5	9	9
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.08	0.08
Max. permissible finger length	[mm]	58	54	54
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	52 x 27.2	52 x 35.2	52 x 35.2
Options and their characteristics				
Dust-tight version, ID		37303308	37303508	37303538
Protection class IP		64	64	64
Weight	[kg]	0.16	0.18	0.18
Anti-corrosion version, ID		38303308	38303508	38303538
High-temperature version, ID		39303308	39303508	39303538
Min./max. ambient temperature	[°C]	5/130	5/130	5/130
Force intensified version, ID		0372199	0372219	0372239
Closing/opening force	[N]	410/432	510/-	-/532
Weight	[kg]	0.19	0.21	0.21
Maximum pressure	[bar]	6	6	6
Max. permissible finger length	[mm]	50	40	40
Precision version, ID		0303338	0303488	

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

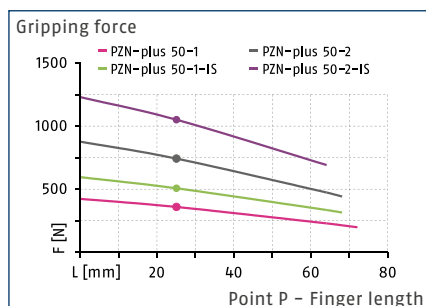
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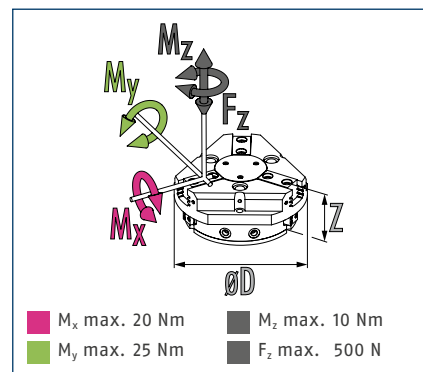
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 50-1	PZN-plus 50-2	PZN-plus 50-1-AS	PZN-plus 50-2-AS	PZN-plus 50-1-IS	PZN-plus 50-2-IS
ID		0303309	0303409	0303509	0303609	0303539	0303639
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	325/355	680/740	445/-	925/-	-/505	-/1050
Min. spring force	[N]			120	245	150	310
Weight	[kg]	0.27	0.27	0.35	0.35	0.35	0.35
Recommended workpiece weight	[kg]	1.65	3.4	1.65	3.4	1.65	3.4
Fluid consumption double stroke	[cm ³]	9	9	18	18	18	18
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	72	68	68	64	68	64
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	65 x 34	65 x 34	65 x 44.5	65 x 44.5	65 x 44.5	65 x 44.5
Options and their characteristics							
Dust-tight version, ID		37303309	37303409	37303509	37303609	37303539	37303639
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.33	0.33	0.41	0.41	0.41	0.41
Anti-corrosion version, ID		38303309	38303409	38303509	38303609	38303539	38303639
High-temperature version, ID		39303309	39303409	39303509	39303609	39303539	39303639
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372200	0372210	0372220		0372240	
Closing/opening force	[N]	520/570	1090/1185	640/-		-/720	
Weight	[kg]	0.38	0.38	0.46		0.46	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	64	50	50		50	
Precision version, ID		0303339	0303439	0303489	0303589		

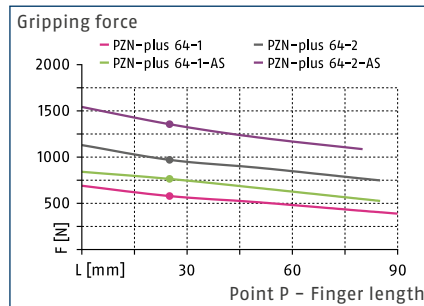
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus 64

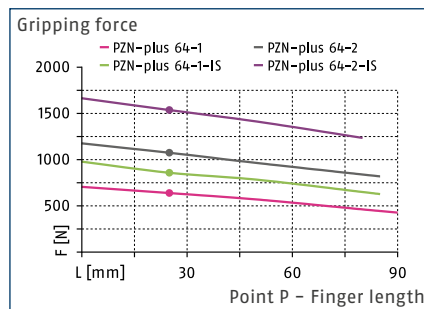
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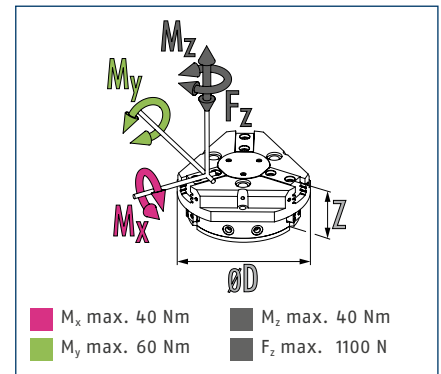
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

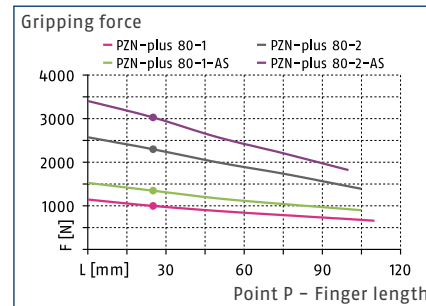
Description		PZN-plus 64-1	PZN-plus 64-2	PZN-plus 64-1-AS	PZN-plus 64-2-AS	PZN-plus 64-1-IS	PZN-plus 64-2-IS
ID		0303310	0303410	0303510	0303610	0303540	0303640
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	580/640	970/1075	765/-	1335/-	-/860	-/1535
Min. spring force	[N]			185	315	220	460
Weight	[kg]	0.43	0.43	0.54	0.54	0.54	0.54
Recommended workpiece weight	[kg]	2.9	4.85	2.9	4.85	2.9	4.85
Fluid consumption double stroke	[cm ³]	25	25	48	48	48	48
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	90	85	85	80	85	80
Max. permissible mass per finger	[kg]	0.35	0.35	0.35	0.35	0.35	0.35
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	76 x 43.3	76 x 43.3	76 x 56.8	76 x 56.8	76 x 56.8	76 x 56.8
Options and their characteristics							
Dust-tight version, ID		37303310	37303410	37303510	37303610	37303540	37303640
Protection class IP		64	64	64	64	64	64
Weight	[kg]	0.6	0.6	0.71	0.71	0.71	0.71
Anti-corrosion version, ID		38303310	38303410	38303510	38303610	38303540	38303640
High-temperature version, ID		39303310	39303410	39303510	39303610	39303540	39303640
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372201	0372211	0372221		0372241	
Closing/opening force	[N]	1045/1150	1745/1935	1230/-		-/1370	
Weight	[kg]	0.7	0.7	0.8		0.8	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	80	64	64		64	
Precision version, ID		0303340	0303440	0303490	0303590		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

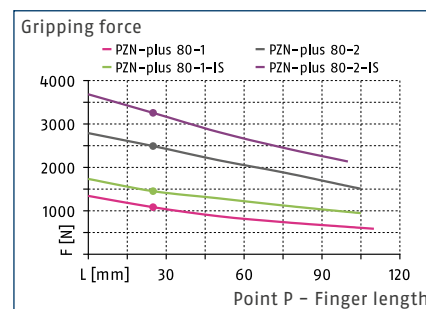
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzn-plus



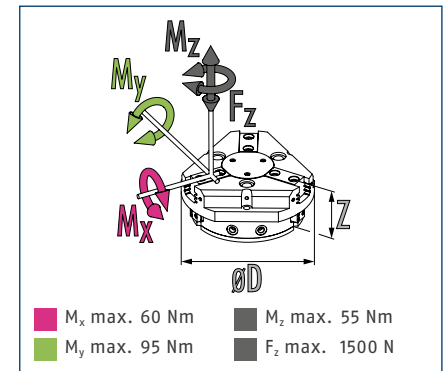
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 80-1	PZN-plus 80-2	PZN-plus 80-1-AS	PZN-plus 80-2-AS	PZN-plus 80-1-IS	PZN-plus 80-2-IS
ID		0303311	0303411	0303511	0303611	0303541	0303641
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	1000/1080	2300/2480	1350/-	3030/-	-/1450	-/3250
Min. spring force	[N]			350	730	370	760
Weight	[kg]	0.79	0.79	0.96	0.96	0.96	0.96
Recommended workpiece weight	[kg]	5	11.5	5	11.5	5	11.5
Fluid consumption double stroke	[cm ³]	60	60	108	108	108	108
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.03/0.05	0.03/0.05	0.06/0.04	0.06/0.04
Closing/opening time with spring	[s]			0.19	0.19	0.19	0.19
Max. permissible finger length	[mm]	110	105	105	100	105	100
Max. permissible mass per finger	[kg]	0.6	0.6	0.6	0.6	0.6	0.6
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	96 x 49.3	96 x 49.3	96 x 64.3	96 x 64.3	96 x 64.3	96 x 64.3
Options and their characteristics							
Dust-tight version, ID		37303311	37303411	37303511	37303611	37303541	37303641
Protection class IP		64	64	64	64	64	64
Weight	[kg]	1	1	1.17	1.17	1.17	1.17
Anti-corrosion version, ID		38303311	38303411	38303511	38303611	38303541	38303641
High-temperature version, ID		39303311	39303411	39303511	39303611	39303541	39303641
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372202	0372212	0372222		0372242	
Closing/opening force	[N]	1800/1945	4140/4480	2150/-		-/2315	
Weight	[kg]	1.2	1.2	1.4		1.4	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	100	80	80		80	
Precision version, ID		0303341	0303441	0303491	0303591		

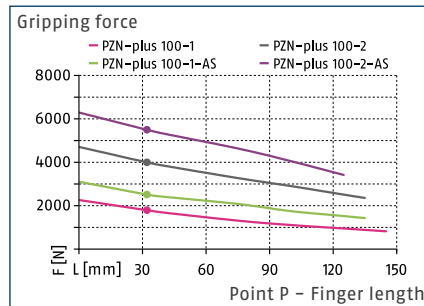
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus 100

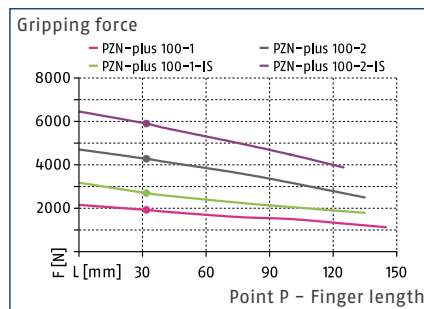
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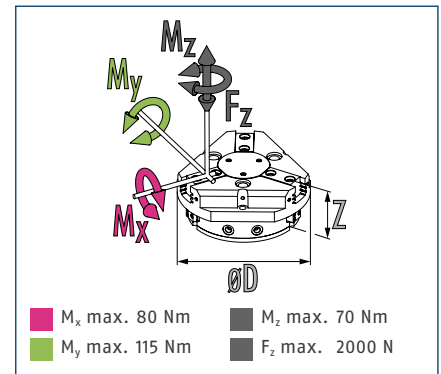
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

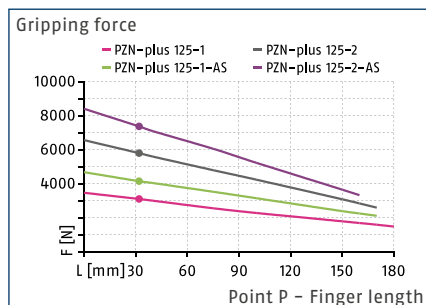
Description		PZN-plus 100-1	PZN-plus 100-2	PZN-plus 100-1-AS	PZN-plus 100-2-AS	PZN-plus 100-1-IS	PZN-plus 100-2-IS
ID		0303312	0303412	0303512	0303612	0303542	0303642
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	1800/1920	4000/4270	2520/-	5500/-	-/2700	-/5900
Min. spring force	[N]			720	1500	780	1620
Weight	[kg]	1.41	1.41	1.95	1.95	1.95	1.95
Recommended workpiece weight	[kg]	9	20	9	20	9	20
Fluid consumption double stroke	[cm ³]	120	120	210	210	210	210
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.1	0.1/0.2	0.1/0.2	0.2/0.1	0.2/0.1
Closing/opening time with spring	[s]			0.25	0.25	0.25	0.25
Max. permissible finger length	[mm]	145	135	135	125	135	125
Max. permissible mass per finger	[kg]	1.1	1.1	1.1	1.1	1.1	1.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	120 x 59.3	120 x 59.3	120 x 79.3	120 x 79.3	120 x 79.3	120 x 79.3
Options and their characteristics							
Dust-tight version, ID		37303312	37303412	37303512	37303612	37303542	37303642
Protection class IP		64	64	64	64	64	64
Weight	[kg]	1.9	1.9	2.44	2.44	2.44	2.44
Anti-corrosion version, ID		38303312	38303412	38303512	38303612	38303542	38303642
High-temperature version, ID		39303312	39303412	39303512	39303612	39303542	39303642
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372203	0372213	0372223		0372243	
Closing/opening force	[N]	3240/3455	7200/7705	3960/-		-/4235	
Weight	[kg]	2.3	2.3	2.7		2.7	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	100	80	80		80	
Precision version, ID		0303342	0303442	0303492	0303592		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

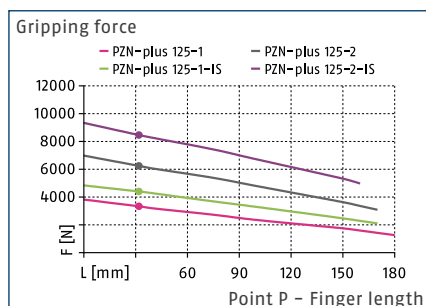
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzn-plus



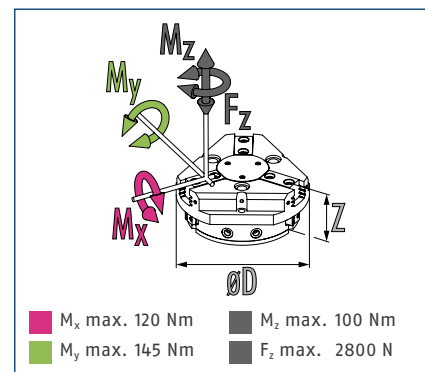
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 125-1	PZN-plus 125-2	PZN-plus 125-1-AS	PZN-plus 125-2-AS	PZN-plus 125-1-IS	PZN-plus 125-2-IS
ID		0303313	0303413	0303513	0303613	0303543	0303643
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	3100/3330	5800/6230	4150/-	7370/-	-/4400	-/8450
Min. spring force	[N]			1050	2170	1070	2210
Weight	[kg]	2.47	2.47	3.34	3.34	3.34	3.34
Recommended workpiece weight	[kg]	15.5	29	15.5	29	15.5	29
Fluid consumption double stroke	[cm ³]	230	230	383	383	383	383
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.2/0.2	0.2/0.2	0.17/0.35	0.17/0.35	0.35/0.17	0.35/0.17
Closing/opening time with spring	[s]			0.40	0.40	0.40	0.40
Max. permissible finger length	[mm]	180	170	170	160	170	160
Max. permissible mass per finger	[kg]	2.1	2.1	2.1	2.1	2.1	2.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Dimensions Ø D x Z	[mm]	150 x 67	150 x 67	150 x 91.5	150 x 91.5	150 x 91.5	150 x 91.5
Options and their characteristics							
Dust-tight version, ID		37303313	37303413	37303513	37303613	37303543	37303643
Protection class IP		64	64	64	64	64	64
Weight	[kg]	2.9	2.9	3.7	3.7	3.7	3.7
Anti-corrosion version, ID		38303313	38303413	38303513	38303613	38303543	38303643
High-temperature version, ID		39303313	39303413	39303513	39303613	39303543	39303643
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372204	0372214	0372224		0372244	
Closing/opening force	[N]	5580/5935	10440/11230	6630/-		-/7005	
Weight	[kg]	3.7	3.7	4.5		4.5	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	125	100	100		100	
Precision version, ID		0303343	0303443	0303493	0303593		

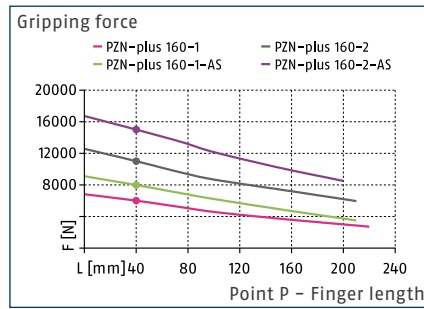
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus 160

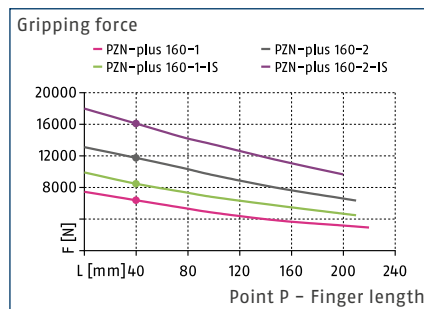
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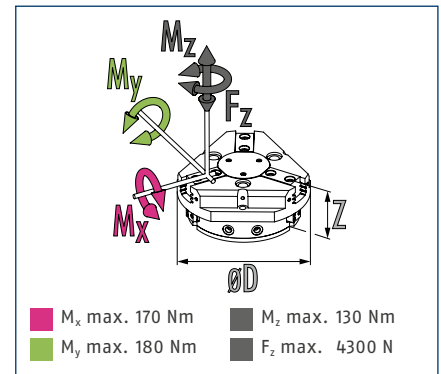
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

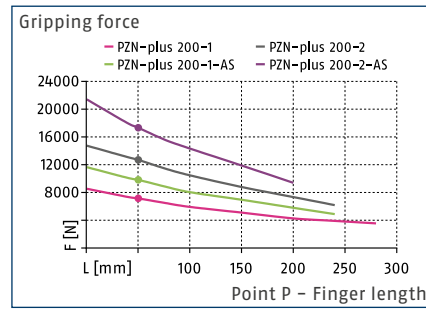
Description		PZN-plus 160-1	PZN-plus 160-2	PZN-plus 160-1-AS	PZN-plus 160-2-AS	PZN-plus 160-1-IS	PZN-plus 160-2-IS
ID		0303314	0303414	0303514	0303614	0303544	0303644
Stroke per jaw	[mm]	16	8	16	8	16	8
Closing/opening force	[N]	6000/6390	11000/11750	7990/-	15010/-	-/8480	-/16090
Min. spring force	[N]			1990	4010	2090	4340
Weight	[kg]	5.6	5.6	8	8	8	8
Recommended workpiece weight	[kg]	30	55	30	55	30	55
Fluid consumption double stroke	[cm ³]	520	520	875	875	875	875
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.5/0.5	0.5/0.5	0.4/0.8	0.4/0.8	0.8/0.4	0.8/0.4
Closing/opening time with spring	[s]			0.80	0.80	0.80	0.80
Max. permissible finger length	[mm]	220	210	210	200	210	200
Max. permissible mass per finger	[kg]	3.5	3.5	3.5	3.5	3.5	3.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Dimensions Ø D x Z	[mm]	190 x 81	190 x 81	190 x 111	190 x 111	190 x 111	190 x 111
Options and their characteristics							
Dust-tight version, ID		37303314	37303414	37303514	37303614	37303544	37303644
Protection class IP		64	64	64	64	64	64
Weight	[kg]	6.5	6.5	8.9	8.9	8.9	8.9
Anti-corrosion version, ID		38303314	38303414	38303514	38303614	38303544	38303644
High-temperature version, ID		39303314	39303414	39303514	39303614	39303544	39303644
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Force intensified version, ID		0372205	0372215	0372225		0372245	
Closing/opening force	[N]	10800/11500	19800/21150	12730/-		-/13590	
Weight	[kg]	7.8	7.8	9.6		9.6	
Maximum pressure	[bar]	6	6	6		6	
Max. permissible finger length	[mm]	125	100	100		100	
Precision version, ID		0303344	0303444	0303494	0303594		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

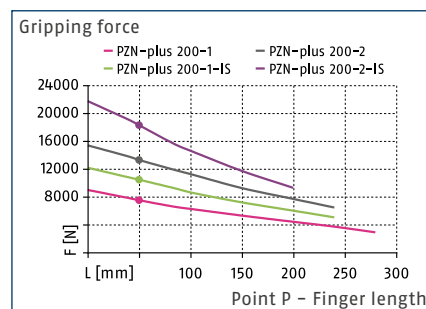
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzn-plus



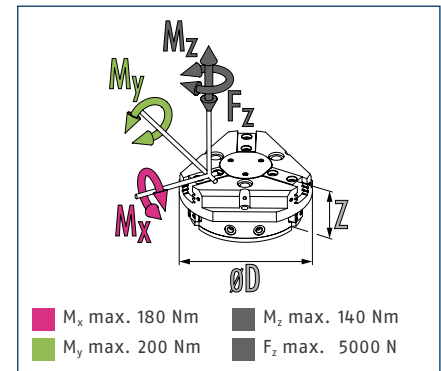
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 200-1	PZN-plus 200-2	PZN-plus 200-1-AS	PZN-plus 200-2-AS	PZN-plus 200-1-IS	PZN-plus 200-2-IS
ID		0303315	0303415	0303515	0303615	0303545	0303645
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	7100/7540	12700/13330	9800/-	17380/-	-/10500	-/18330
Min. spring force	[N]			2700	4680	2960	5000
Weight	[kg]	11	11	15.7	15.7	15.7	15.7
Recommended workpiece weight	[kg]	35.5	63.5	35.5	63.5	35.5	63.5
Fluid consumption double stroke	[cm ³]	1040	1040	1725	1725	1725	1725
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	1.2/1.2	1.2/1.2	1/1.5	1/1.5	1.5/1	1.5/1
Closing/opening time with spring	[s]			1.50	1.50	1.50	1.50
Max. permissible finger length	[mm]	280	240	240	200	240	200
Max. permissible mass per finger	[kg]	6.5	6.5	6.5	6.5	6.5	6.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions Ø D x Z	[mm]	250 x 96	250 x 96	250 x 132	250 x 132	250 x 132	250 x 132
Options and their characteristics							
Dust-tight version, ID		37303315	37303415	37303515	37303615	37303545	37303645
Protection class IP		64	64	64	64	64	64
Weight	[kg]	12	12	16.7	16.7	16.7	16.7
Anti-corrosion version, ID		38303315	38303415	38303515	38303615	38303545	38303645
High-temperature version, ID		39303315	39303415	39303515	39303615	39303545	39303645
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0303345	0303445	0303495	0303595		

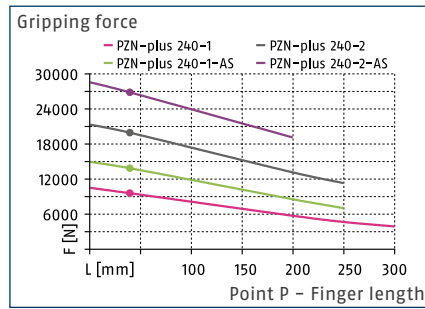
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus 240

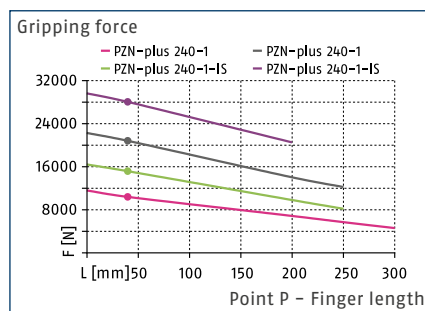
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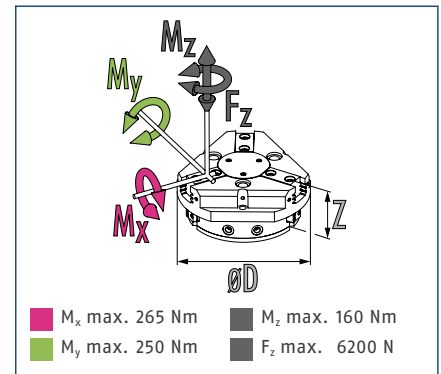
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

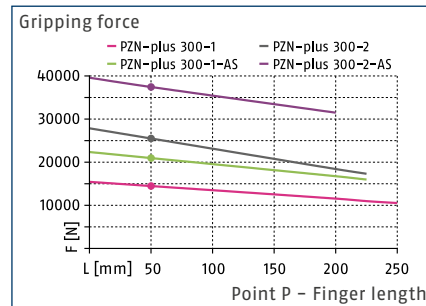
Description		PZN-plus 240-1	PZN-plus 240-2	PZN-plus 240-1-AS	PZN-plus 240-2-AS	PZN-plus 240-1-IS	PZN-plus 240-2-IS
ID		0303316	0303416	0303516	0303616	0303546	0303646
Stroke per jaw	[mm]	30	17	30	17	30	17
Closing/opening force	[N]	9500/10400	19700/20800	13720/-	26500/-	-/15170	-/28000
Min. spring force	[N]			4220	6800	4770	7200
Weight	[kg]	20	20	24	24	24	24
Recommended workpiece weight	[kg]	50	100.5	50	100.5	50	100.5
Fluid consumption double stroke	[cm ³]	1780	1780	3090	3090	3090	3090
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	1.25/1.25	1.25/1.25	1.1/2.1	1.1/2.1	1.7/1.1	1.7/1.1
Closing/opening time with spring	[s]			2.00	2.00	2.00	2.00
Max. permissible finger length	[mm]	300	250	250	200	250	200
Max. permissible mass per finger	[kg]	8.5	8.5	8.5	8.5	8.5	8.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions Ø D x Z	[mm]	290 x 128	290 x 128	290 x 172	290 x 172	290 x 172	290 x 172
Options and their characteristics							
Dust-tight version, ID		37303316	37303416	37303516	37303616	37303546	37303646
Protection class IP		64	64	64	64	64	64
Weight	[kg]	21.5	21.5	25.5	25.5	25.5	25.5
Anti-corrosion version, ID		38303316	38303416	38303516	38303616	38303546	38303646
High-temperature version, ID		39303316	39303416	39303516	39303616	39303546	39303646
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0303346	0303446	0303496	0303596		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

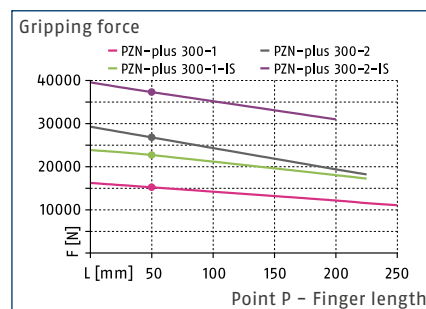
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzn-plus



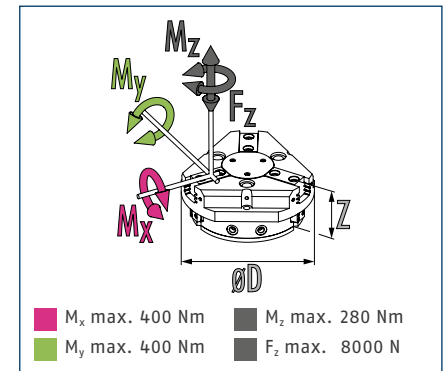
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 300-1	PZN-plus 300-2	PZN-plus 300-1-AS	PZN-plus 300-2-AS	PZN-plus 300-1-IS	PZN-plus 300-2-IS
ID		0303317	0303417	0303517	0303617	0303547	0303647
Stroke per jaw	[mm]	35	20	35	20	35	20
Closing/opening force	[N]	14500/15200	25500/26800	21000/-	37500/-	-/22700	-/37300
Min. spring force	[N]			6500	10000	7500	10500
Weight	[kg]	33	33	43.5	43.5	43.5	43.5
Recommended workpiece weight	[kg]	72.5	127.5	72.5	127.5	72.5	127.5
Fluid consumption double stroke	[cm ³]	2850	2850	5050	5050	5050	5050
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	1.3/1.3	1.3/1.3	1.2/2.5	1.2/2.5	2/1.2	2/1.2
Closing/opening time with spring	[s]			2.50	2.50	2.00	2.00
Max. permissible finger length	[mm]	250	225	225	200	225	200
Max. permissible mass per finger	[kg]	11.5	11.5	11.5	11.5	11.5	11.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions Ø D x Z	[mm]	345 x 146	345 x 146	345 x 196	345 x 196	345 x 196	345 x 196
Options and their characteristics							
Dust-tight version, ID		37303317	37303417	37303517	37303617	37303547	37303647
Protection class IP		64	64	64	64	64	64
Weight	[kg]	35.5	35.5	46	46	46	46
Anti-corrosion version, ID		38303317	38303417	38303517	38303617	38303547	38303647
High-temperature version, ID		39303317	39303417	39303517	39303617	39303547	39303647
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0303347	0303447	0303497	0303597		

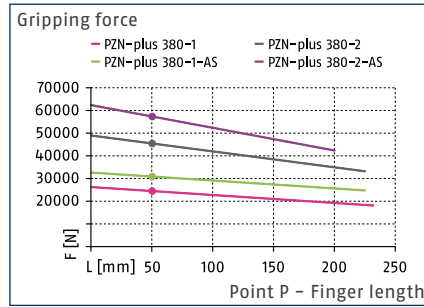
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZN-plus 380

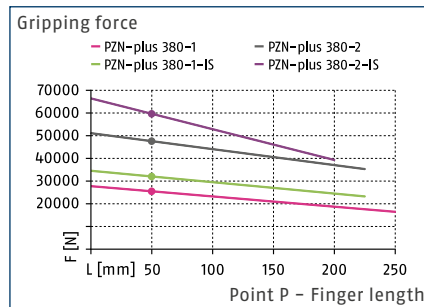
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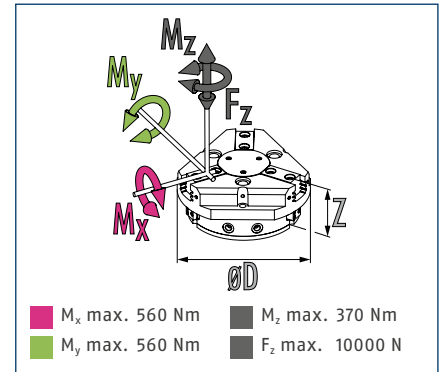
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



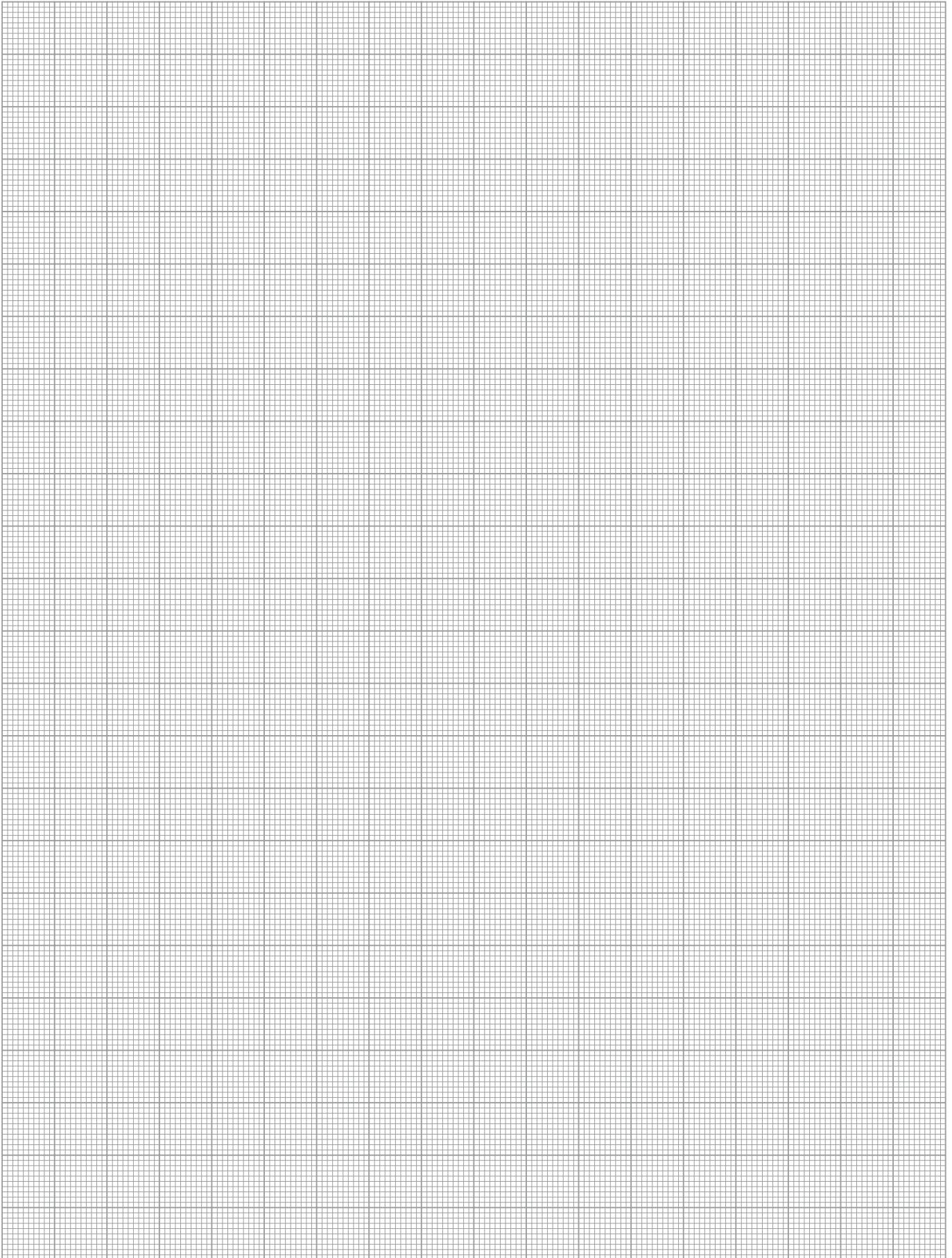
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZN-plus 380-1	PZN-plus 380-2	PZN-plus 380-1-AS	PZN-plus 380-2-AS	PZN-plus 380-1-IS	PZN-plus 380-2-IS
ID		0303318	0303418	0303518	0303618	0303548	0303648
Stroke per jaw	[mm]	45	26	45	26	45	26
Closing/opening force	[N]	24400/25500	45400/47500	30800/-	57300/-	-/32000	-/59500
Min. spring force	[N]			6400	11900	6500	12000
Weight	[kg]	64	66	75	77	75	77
Recommended workpiece weight	[kg]	122	227	122	227	122	227
Fluid consumption double stroke	[cm ³]	7200	7200	9300	9300	11500	11500
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	2.2/2.2	2.2/2.2	1.9/3	1.9/3	4.6/1.9	4.6/1.9
Closing/opening time with spring	[s]			2.60	2.60	2.20	2.20
Max. permissible finger length	[mm]	250	225	225	200	225	200
Max. permissible mass per finger	[kg]	13.5	13.5	13.5	13.5	13.5	13.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions Ø D x Z	[mm]	415 x 189	415 x 189	415 x 251	415 x 251	415 x 251	415 x 251
Options and their characteristics							
Dust-tight version, ID		37303318	37303418	37303518	37303618	37303548	37303648
Protection class IP		64	64	64	64	64	64
Weight	[kg]	67	69	78	80	78	80
Anti-corrosion version, ID		38303318	38303418	38303518	38303618	38303548	38303648
High-temperature version, ID		39303318	39303418	39303518	39303618	39303548	39303648
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Precision version, ID		0303348	0303437	0303498	0303598		

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzn-plus



DPZ-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Sealed Universal Gripper

Fully encapsulated. Reliable. Precise.

Sealed Universal Gripper DPZ-plus

Despite the high moment load of the base jaws, this sealed 3-finger centric gripper meets the requirements of IP67 and does not permit the ingress of any substances from the working environment into the interior of the component

Field of Application

The gripper is ideally suitable for handling 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.

Advantages – Your benefits

Robust interior multi-tooth guidance for the precise handling of different workpieces

Lip seal at the outside round guidance for permanent, safe gripper sealing

High maximum moments possible suitable for using long gripper fingers

Sealed 3-finger centric gripper complies to IP67 requirements despite a high moment load

Fastening at one gripper side in two screw directions for universal and flexible gripper assembly

Maximum gripping forces at a compact design for a wide range of applications

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Compact dimensions for minimum interfering contours in handling

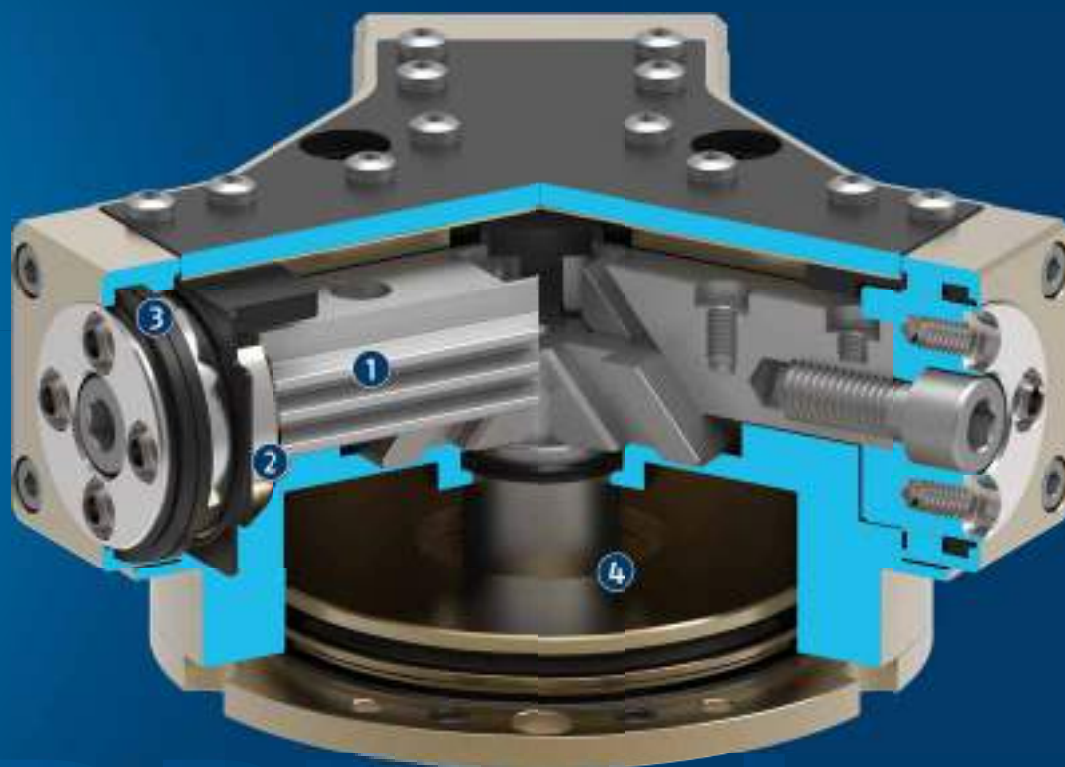


 Sizes Quantity: 8	 Weight 0.2 .. 20.1 kg	 Gripping force 230 .. 15765 N	 Stroke per jaw 2 .. 25 mm	 Workpiece weight 1.15 .. 60 kg
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Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



① **Inner base jaw with multi-tooth guidance**
For high moment loads

② **External round base jaw**
Providing a sealable, round surface

③ **Lip seal**
For permanent, safe gripper sealing

④ **Round piston with rod and wedge-hook**
For power generation

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Centering sleeves, centering pins, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Note – tightness: Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles

until the full gripping force (as indicated in the data table) will be available.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Insertion tool for assembly of small to medium-sized workpieces. The tool can be used in both clean and dirty environments. Due to its quick-change system, other tools can alternately be fixed to the robot flange.

- 1 3-finger centric gripper DPZ-plus
- 2 Quick-change system SWS



SCHUNK offers more ...

The following components make the product DPZ-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Tolerance compensation unit



Pressure maintenance valve



Universal intermediate jaw



Magnetic switch



Finger blank



Intermediate jaw



Jaw quick-change system

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

Force intensified version KVZ: If higher gripping forces are required

ATEX version EX: For explosive environments

Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!

Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper

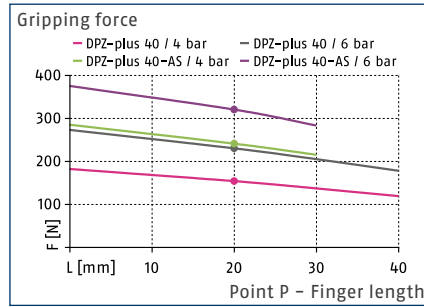
Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.

DPZ-plus 40

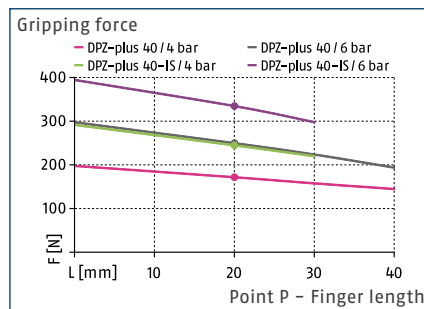
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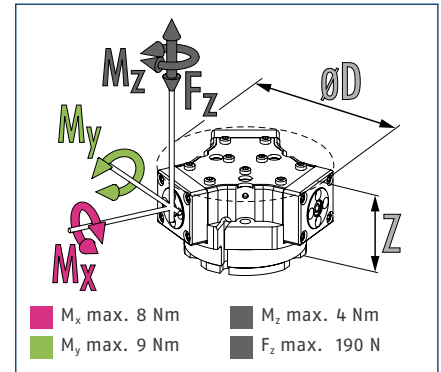
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

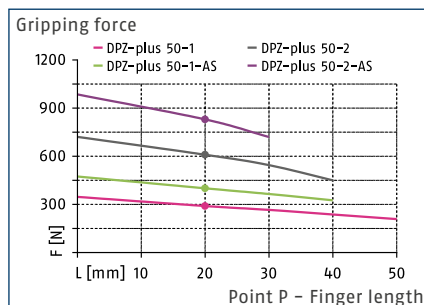
Description		DPZ-plus 40	DPZ-plus 40-AS	DPZ-plus 40-IS
ID		0304501	0304503	0304505
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	230/250	320/-	-/335
Min. spring force	[N]		90	105
Weight	[kg]	0.2	0.25	0.25
Recommended workpiece weight	[kg]	1.15	1.15	1.15
Fluid consumption double stroke	[cm ³]	5	9	9
Min./nom./max. operating pressure	[bar]	2.5/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.03/0.03	0.03/0.05	0.03/0.05
Max. permissible finger length	[mm]	40	30	30
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	63 x 34	63 x 44.1	63 x 44.1

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

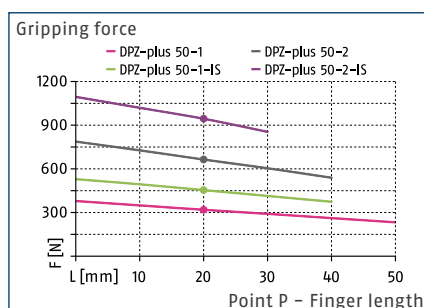
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/dpz-plus



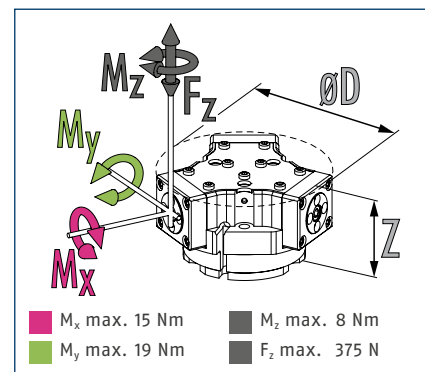
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPZ-plus 50-1	DPZ-plus 50-2	DPZ-plus 50-1-AS	DPZ-plus 50-2-AS	DPZ-plus 50-1-IS	DPZ-plus 50-2-IS
ID		0304401	0304402	0304403	0304404	0304405	0304406
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	290/320	610/665	400/-	830/-	-/455	-/945
Min. spring force	[N]			110	220	135	280
Weight	[kg]	0.37	0.37	0.45	0.45	0.45	0.45
Recommended workpiece weight	[kg]	1.45	3.06	1.45	3.06	1.45	3.06
Fluid consumption double stroke	[cm ³]	9	9	18	18	18	18
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Max. permissible finger length	[mm]	50	40	40	30	40	30
Max. permissible mass per finger	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	80.6 x 40.5	80.6 x 40.5	80.6 x 50.9	80.6 x 50.9	80.6 x 50.9	80.6 x 50.9

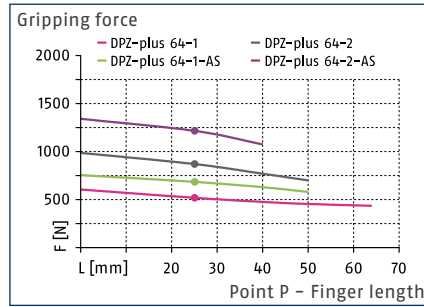
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual.
 It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPZ-plus 64

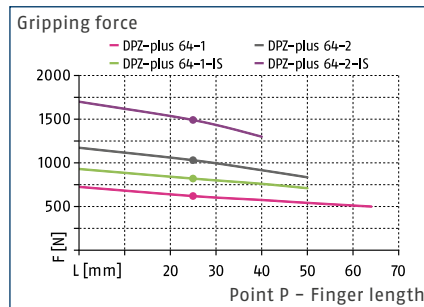
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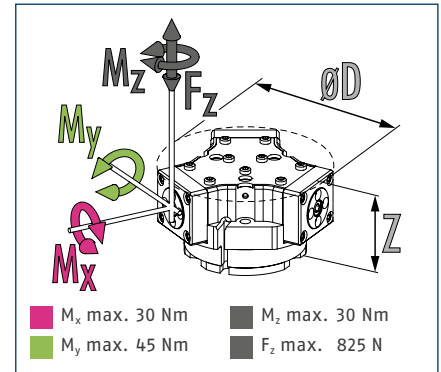
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

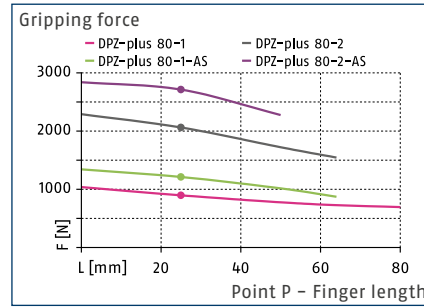
Description		DPZ-plus 64-1	DPZ-plus 64-2	DPZ-plus 64-1-AS	DPZ-plus 64-2-AS	DPZ-plus 64-1-IS	DPZ-plus 64-2-IS
ID		0304411	0304412	0304413	0304414	0304415	0304416
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	520/620	870/1030	685/-	1215/-	-/820	-/1490
Min. spring force	[N]			165	345	200	460
Weight	[kg]	0.62	0.62	0.75	0.75	0.75	0.75
Recommended workpiece weight	[kg]	2.6	4.35	2.6	4.35	2.6	4.35
Fluid consumption double stroke	[cm ³]	25	25	48	48	48	48
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Max. permissible finger length	[mm]	64	50	50	40	50	40
Max. permissible mass per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	93.6 x 49.2	93.6 x 49.2	93.6 x 62.7	93.6 x 62.7	93.6 x 62.7	93.6 x 62.7
Options and their characteristics							
Force intensified version, ID		0304417					
Closing/opening force	[N]	935/1040					
Weight	[kg]	0.92					
Maximum pressure	[bar]	6					
Max. permissible finger length	[mm]	40					

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

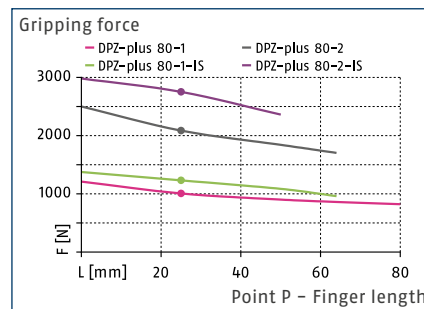
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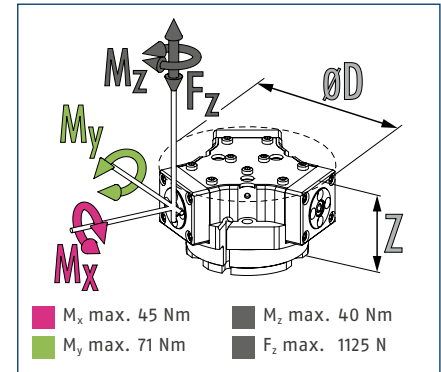
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPZ-plus 80-1	DPZ-plus 80-2	DPZ-plus 80-1-AS	DPZ-plus 80-2-AS	DPZ-plus 80-1-IS	DPZ-plus 80-2-IS
ID		0304421	0304422	0304423	0304424	0304425	0304426
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	900/1005	2070/2085	1215/-	2725/-	-/1330	-/2765
Min. spring force	[N]			315	655	330	680
Weight	[kg]	1.3	1.3	1.45	1.45	1.45	1.45
Recommended workpiece weight	[kg]	4.5	10.35	4.5	10.35	4.5	10.35
Fluid consumption double stroke	[cm ³]	60	60	108	108	108	108
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.07/0.07	0.07/0.07	0.05/0.08	0.05/0.08	0.08/0.05	0.08/0.05
Max. permissible finger length	[mm]	80	64	64	50	64	50
Max. permissible mass per finger	[kg]	0.5	0.5	0.5	0.5	0.5	0.5
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	112 x 56.2	112 x 56.2	112 x 71.2	112 x 71.2	112 x 71.2	112 x 71.2
Options and their characteristics							
Force intensified version, ID		0304427					
Closing/opening force	[N]	1620/1750					
Weight	[kg]	1.6					
Maximum pressure	[bar]	6					
Max. permissible finger length	[mm]	50					

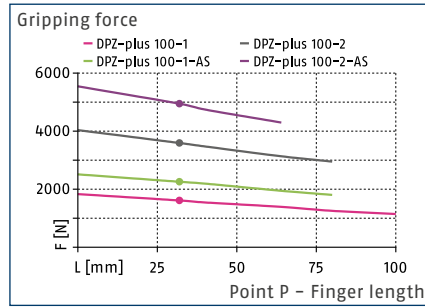
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPZ-plus 100

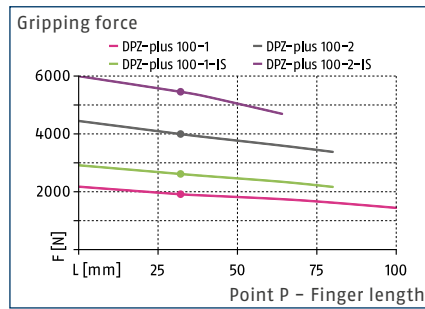
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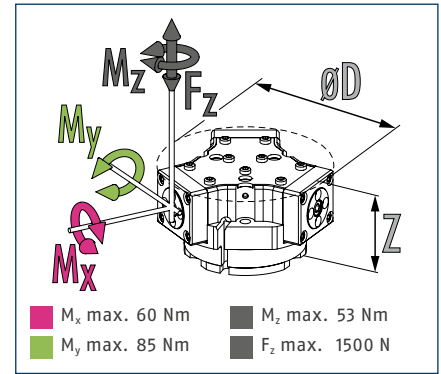
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

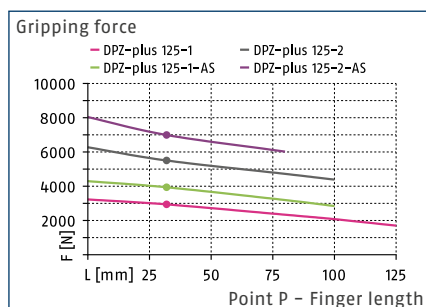
Description		DPZ-plus 100-1	DPZ-plus 100-2	DPZ-plus 100-1-AS	DPZ-plus 100-2-AS	DPZ-plus 100-1-IS	DPZ-plus 100-2-IS
ID		0304431	0304432	0304433	0304434	0304435	0304436
Stroke per jaw	[mm]	10	5	10	5	10	5
Closing/opening force	[N]	1620/1925	3600/4000	2265/-	4950/-	-/2620	-/5460
Min. spring force	[N]			645	1350	700	1460
Weight	[kg]	1.9	1.9	2.3	2.3	2.3	2.3
Recommended workpiece weight	[kg]	8.1	18	8.1	18	8.1	18
Fluid consumption double stroke	[cm ³]	120	120	210	210	210	210
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.13/0.13	0.13/0.13	0.13/0.25	0.13/0.25	0.25/0.13	0.25/0.13
Max. permissible finger length	[mm]	100	80	80	64	80	64
Max. permissible mass per finger	[kg]	0.95	0.95	0.95	0.95	0.95	0.95
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions $\varnothing D \times Z$	[mm]	137.8 x 67.2	137.8 x 67.2	137.8 x 87.2	137.8 x 87.2	137.8 x 87.2	137.8 x 87.2

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

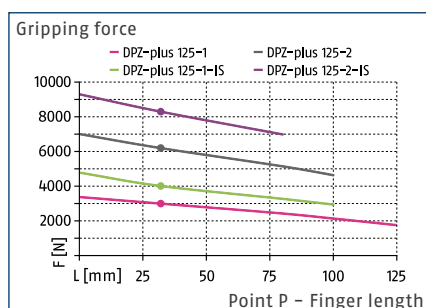
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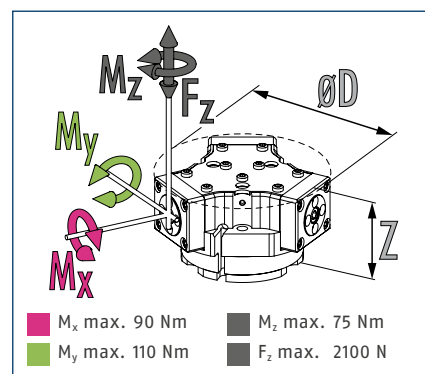
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

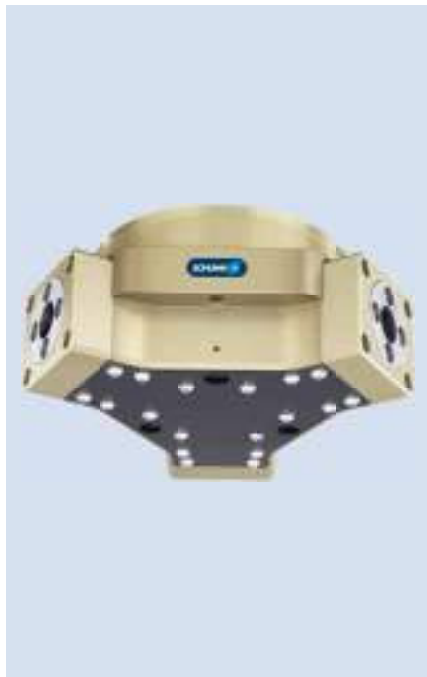
Technical data

Description		DPZ-plus 125-1	DPZ-plus 125-2	DPZ-plus 125-1-AS	DPZ-plus 125-2-AS	DPZ-plus 125-1-IS	DPZ-plus 125-2-IS
ID		0304441	0304442	0304443	0304444	0304445	0304446
Stroke per jaw	[mm]	13	6	13	6	13	6
Closing/opening force	[N]	2945/3000	5510/6225	3940/-	7000/-	-/4015	-/8300
Min. spring force	[N]			995	1490	1015	2100
Weight	[kg]	3.5	3.5	4.7	4.7	4.7	4.7
Recommended workpiece weight	[kg]	14.7	27.5	14.7	27.5	14.7	27.5
Fluid consumption double stroke	[cm ³]	230	230	383	383	383	383
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.25/0.25	0.25/0.25	0.22/0.45	0.22/0.45	0.45/0.22	0.45/0.22
Max. permissible finger length	[mm]	125	100	100	80	100	80
Max. permissible mass per finger	[kg]	1.75	1.75	1.75	1.75	1.75	1.75
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	172.2 x 76.2	172.2 x 76.2	172.2 x 101.15	172.2 x 101.15	172.2 x 101.15	172.2 x 101.15

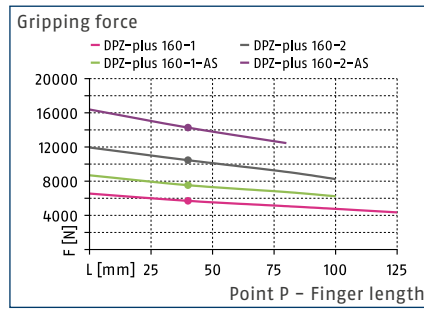
① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

DPZ-plus 160

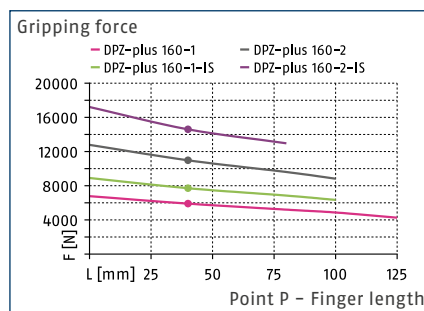
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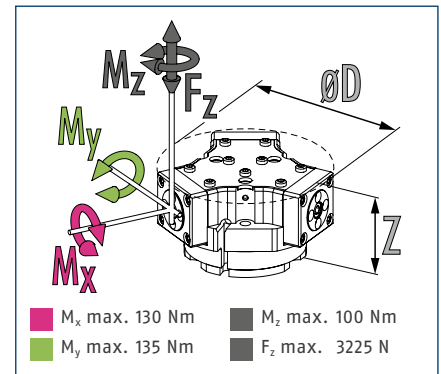
Gripping force O.D. gripping



Gripping force O.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

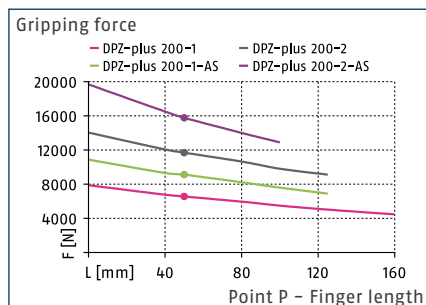
Description		DPZ-plus 160-1	DPZ-plus 160-2	DPZ-plus 160-1-AS	DPZ-plus 160-2-AS	DPZ-plus 160-1-IS	DPZ-plus 160-2-IS
ID		0304451	0304452	0304453	0304454	0304455	0304456
Stroke per jaw	[mm]	16	8	16	8	16	8
Closing/opening force	[N]	5700/5880	10450/10950	7530/-	14260/-	-/7865	-/15070
Min. spring force	[N]			1830	3810	1985	4120
Weight	[kg]	7.9	7.9	9.7	9.7	9.7	9.7
Recommended workpiece weight	[kg]	28.5	52	28.5	52	28.5	52
Fluid consumption double stroke	[cm ³]	520	520	875	875	875	875
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	0.6/0.6	0.6/0.6	0.5/1	0.5/1	1/0.5	1/0.5
Max. permissible finger length	[mm]	125	100	100	80	100	80
Max. permissible mass per finger	[kg]	3	3	3	3	3	3
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	238.6 x 92.9	238.6 x 92.9	238.6 x 122.9	238.6 x 122.9	238.6 x 122.9	238.6 x 122.9

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

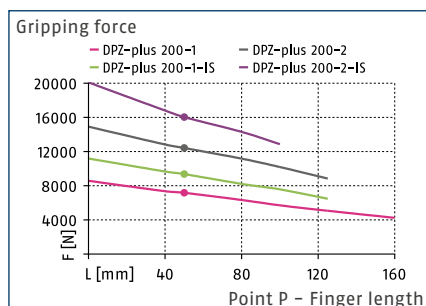
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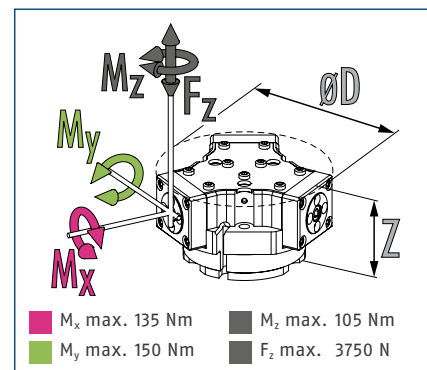
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		DPZ-plus 200-1	DPZ-plus 200-2	DPZ-plus 200-1-AS	DPZ-plus 200-2-AS	DPZ-plus 200-1-IS	DPZ-plus 200-2-IS
ID		0304461	0304462	0304463	0304464	0304465	0304466
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	6540/7160	11680/12410	9110/-	15765/-	-/9910	-/16380
Min. spring force	[N]			2550	4440	2750	4740
Weight	[kg]	15.6	15.6	20.1	20.1	20.1	20.1
Recommended workpiece weight	[kg]	33.5	60	33.5	60	33.5	60
Fluid consumption double stroke	[cm ³]	1040	1040	1725	1725	1725	1725
Min./nom./max. operating pressure	[bar]	2.5/6/8	2.5/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5	0.2/0.5
Closing/opening time	[s]	1.5/1.5	1.5/1.5	1.2/1.8	1.2/1.8	1.8/1.2	1.8/1.2
Max. permissible finger length	[mm]	160	125	125	100	125	100
Max. permissible mass per finger	[kg]	5.5	5.5	5.5	5.5	5.5	5.5
Protection class IP		67	67	67	67	67	67
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Cleanroom class ISO 14644-1		5	5	5	5	5	5
Dimensions Ø D x Z	[mm]	295.3 x 110.9	295.3 x 110.9	295.3 x 146.9	295.3 x 146.9	295.3 x 146.9	295.3 x 146.9

① Please note that the gripper must utilize another hose for ventilation or for a switchable air purge connection, altogether three hoses are needed. For detailed information, please refer to the assembly and operating manual. It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Loadable. Reliable. Compact. Universal Gripper JGZ

Universal 3-finger centric gripper of the compact class with T-slot guidance and best cost-performance ratio

Field of Application

Optimum standard solution for many fields of application. Universal application in clean and slightly dirty surroundings in machine building and plant building industry, assembly and handling as well as automotive industry.

Advantages – Your benefits

A firm focus on the essentials for maximum profitability

Sturdy T-slot guidance for the precise handling of different workpieces

Compact dimensions and low weight for minimum interfering contours in handling

High maximum moments possible suitable for using long gripper fingers

Wedge-hook principle for high power transmission and synchronized gripping

Comprehensive sensor accessories for monitoring and control of the stroke position

Fastening at one gripper side in two screw directions for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

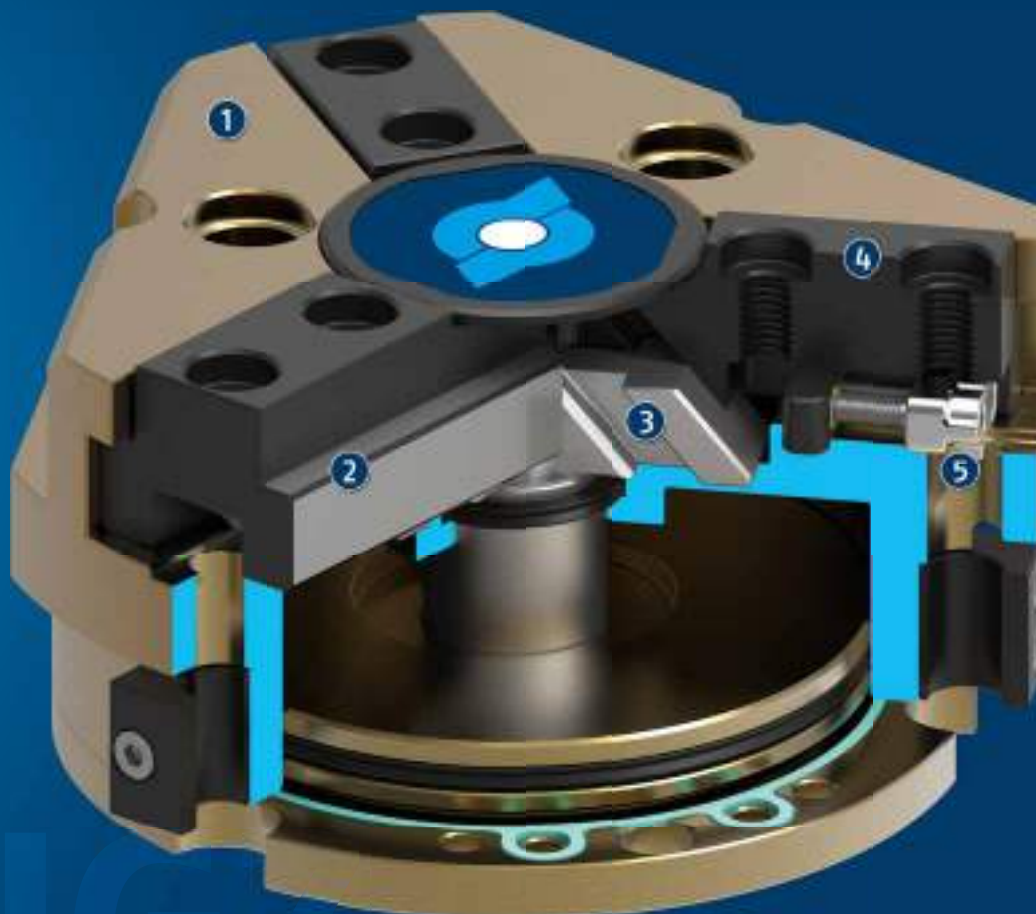


 <p>Sizes Quantity: 7</p>	 <p>Weight 0.12 .. 8 kg</p>	 <p>Gripping force 255 .. 7990 N</p>	 <p>Stroke per jaw 2.5 .. 16 mm</p>	 <p>Workpiece weight 1.25 .. 30 kg</p>
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Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **T-slot guidance**
Loadable, robust base jaw guidance for extremely long gripper fingers
- ③ **Wedge-hook principle**
For high force transmission and centric gripping
- ④ **Base jaw**
For the connection of workpiece-specific gripper fingers
- ⑤ **Sensor system**
Proximity switch can be assembled without mounting kit

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Tactile assembly of insertion aids in cylinder heads.

- ❶ 3-finger centric gripper JGZ with workpiece-specific gripper fingers
- ❷ Compensation unit AGE-F



SCHUNK offers more ...

The following components make the product JGZ even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Tolerance compensation unit



Pressure maintenance valve



Universal intermediate jaw



Flexible position sensor



Analog position sensor



Finger blank



Jaw quick-change system



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

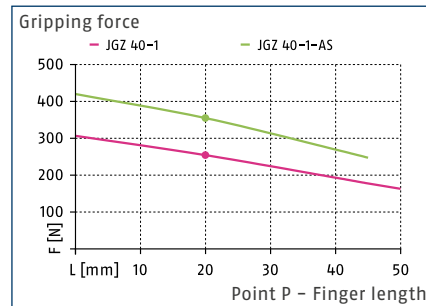
Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

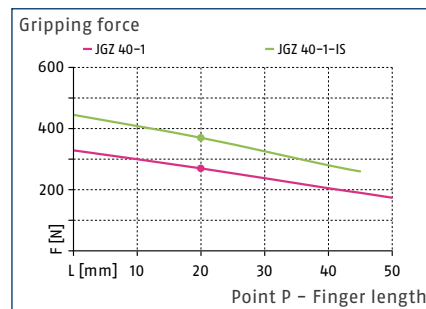
The JGZ series is especially suitable for economic handling solutions and distinguishes by its high cost-benefit ratio.



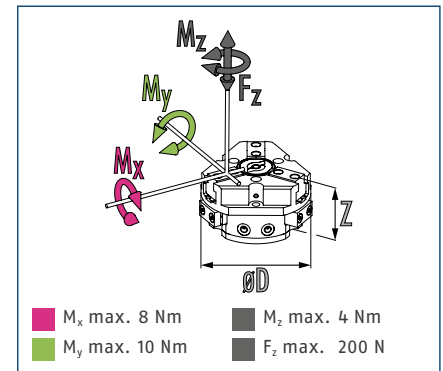
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

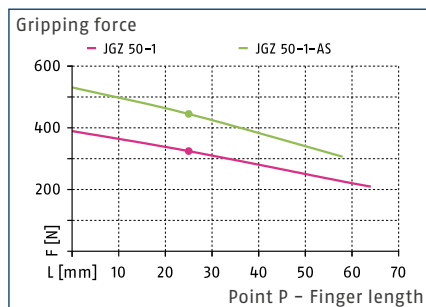
Description		JGZ 40-1	JGZ 40-1-AS	JGZ 40-1-IS
ID		0308900	0308901	0308902
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	255/270	355/-	-/370
Min. spring force	[N]		100	100
Weight	[kg]	0.12	0.15	0.15
Recommended workpiece weight	[kg]	1.25	1.25	1.25
Fluid consumption double stroke	[cm ³]	5	9	9
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.02/0.03	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.05	0.05
Max. permissible finger length	[mm]	50	45	45
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	51 x 27.2	51 x 35.2	51 x 35.2

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

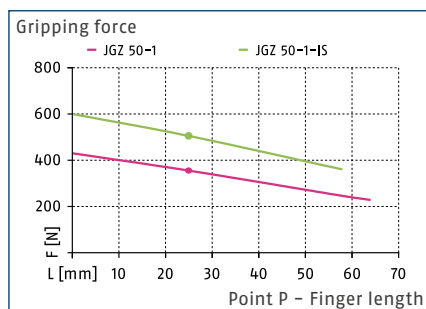
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/jgz



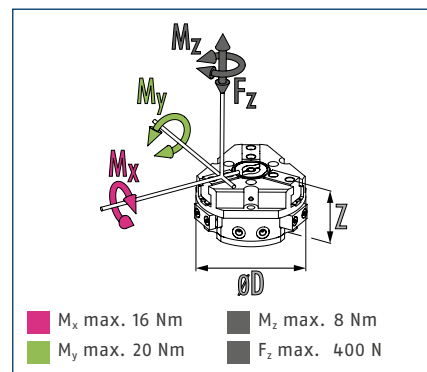
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

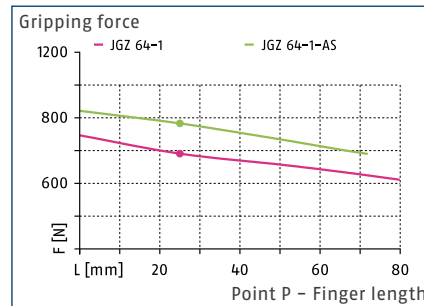
Technical data

Description		JGZ 50-1	JGZ 50-1-AS	JGZ 50-1-IS
ID		0308910	0308911	0308912
Stroke per jaw	[mm]	4	4	4
Closing/opening force	[N]	325/355	445/-	-/505
Min. spring force	[N]		120	150
Weight	[kg]	0.25	0.3	0.3
Recommended workpiece weight	[kg]	1.6	1.6	1.6
Fluid consumption double stroke	[cm ³]	9	18	18
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.05	0.05
Max. permissible finger length	[mm]	64	58	58
Max. permissible mass per finger	[kg]	0.18	0.18	0.18
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	64 x 34	64 x 44.5	64 x 44.5

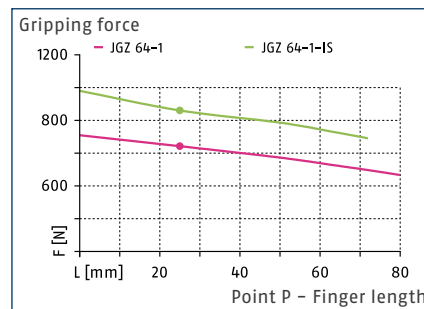
ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



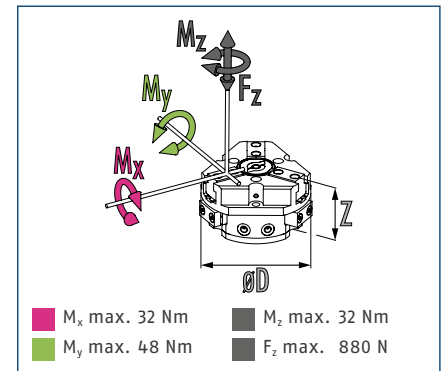
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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Technical data

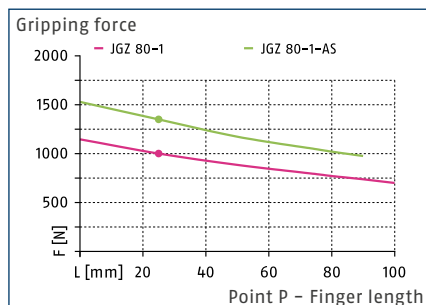
Description		JGZ 64-1	JGZ 64-1-AS	JGZ 64-1-IS
ID		0308920	0308921	0308922
Stroke per jaw	[mm]	6	6	6
Closing/opening force	[N]	580/640	765/-	-/860
Min. spring force	[N]		185	220
Weight	[kg]	0.43	0.54	0.54
Recommended workpiece weight	[kg]	2.9	2.9	2.9
Fluid consumption double stroke	[cm ³]	25	25	25
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.08	0.08
Max. permissible finger length	[mm]	80	72	72
Max. permissible mass per finger	[kg]	0.35	0.35	0.35
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	75 x 43.3	75 x 56.8	75 x 56.8

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

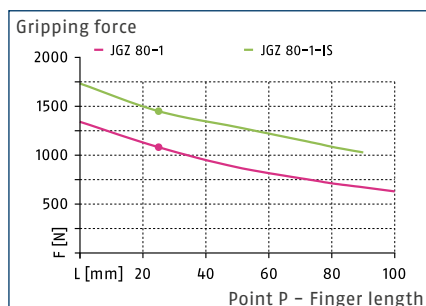
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/jgz



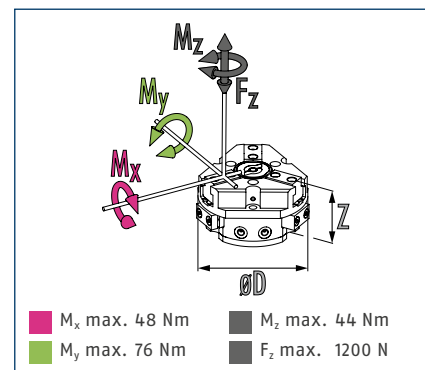
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

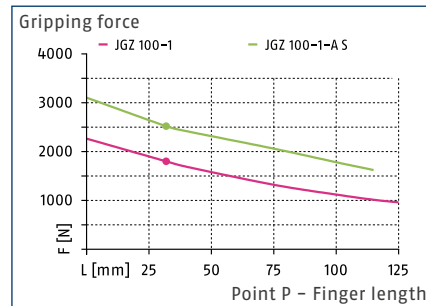
Technical data

Description		JGZ 80-1	JGZ 80-1-AS	JGZ 80-1-IS
ID		0308930	0308931	0308932
Stroke per jaw	[mm]	8	8	8
Closing/opening force	[N]	1000/1080	1350/-	-/1450
Min. spring force	[N]		350	370
Weight	[kg]	0.79	0.96	0.96
Recommended workpiece weight	[kg]	5	5	5
Fluid consumption double stroke	[cm ³]	60	60	60
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.05/0.05	0.03/0.05	0.06/0.04
Closing/opening time with spring	[s]		0.19	0.19
Max. permissible finger length	[mm]	100	90	90
Max. permissible mass per finger	[kg]	0.6	0.6	0.6
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	95 x 49.3	95 x 64.3	95 x 64.3

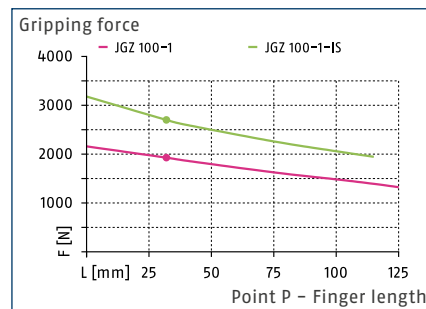
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



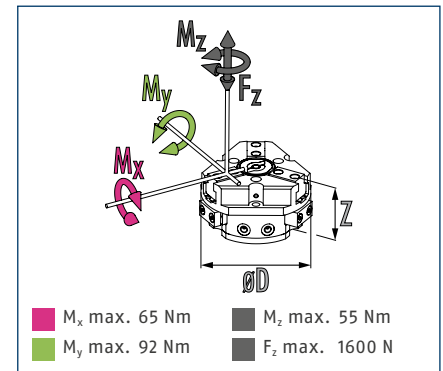
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

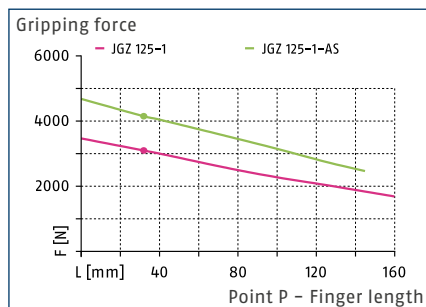
Description		JGZ 100-1	JGZ 100-1-AS	JGZ 100-1-IS
ID		0308940	0308941	0308942
Stroke per jaw	[mm]	10	10	10
Closing/opening force	[N]	1800/1920	2520/-	-/2700
Min. spring force	[N]		720	780
Weight	[kg]	1.41	1.95	1.95
Recommended workpiece weight	[kg]	9	9	9
Fluid consumption double stroke	[cm ³]	120	120	120
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.2	0.2/0.1
Closing/opening time with spring	[s]		0.25	0.25
Max. permissible finger length	[mm]	125	115	115
Max. permissible mass per finger	[kg]	1.1	1.1	1.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	115 x 59.3	115 x 79.3	115 x 79.3

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

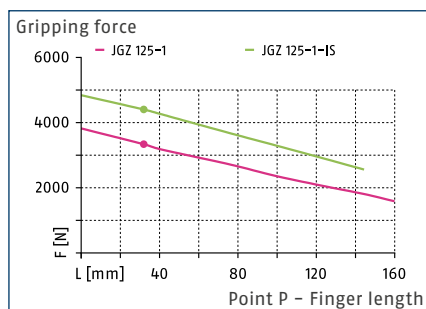
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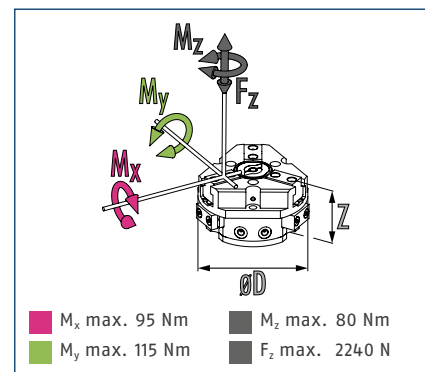
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



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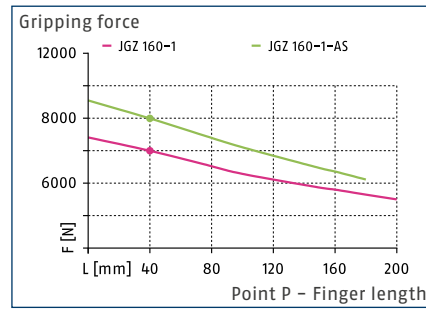
Technical data

Description		JGZ 125-1	JGZ 125-1-AS	JGZ 125-1-IS
ID		0308950	0308951	0308952
Stroke per jaw	[mm]	13	13	13
Closing/opening force	[N]	3100/3330	4150/-	-/4400
Min. spring force	[N]		1050	1070
Weight	[kg]	2.8	3.6	3.6
Recommended workpiece weight	[kg]	15.5	15.5	15.5
Fluid consumption double stroke	[cm ³]	230	230	230
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.2/0.2	0.17/0.35	0.35/0.17
Closing/opening time with spring	[s]		0.40	0.40
Max. permissible finger length	[mm]	160	145	145
Max. permissible mass per finger	[kg]	2.1	2.1	2.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	140 x 67	140 x 91.5	140 x 91.5

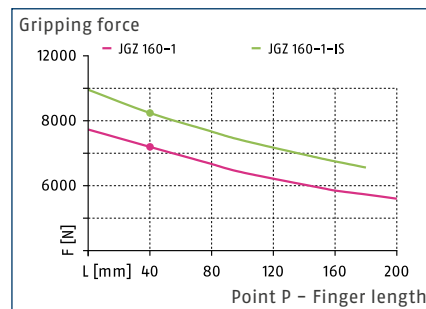
ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.



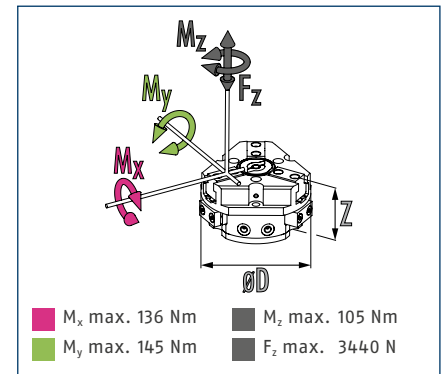
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



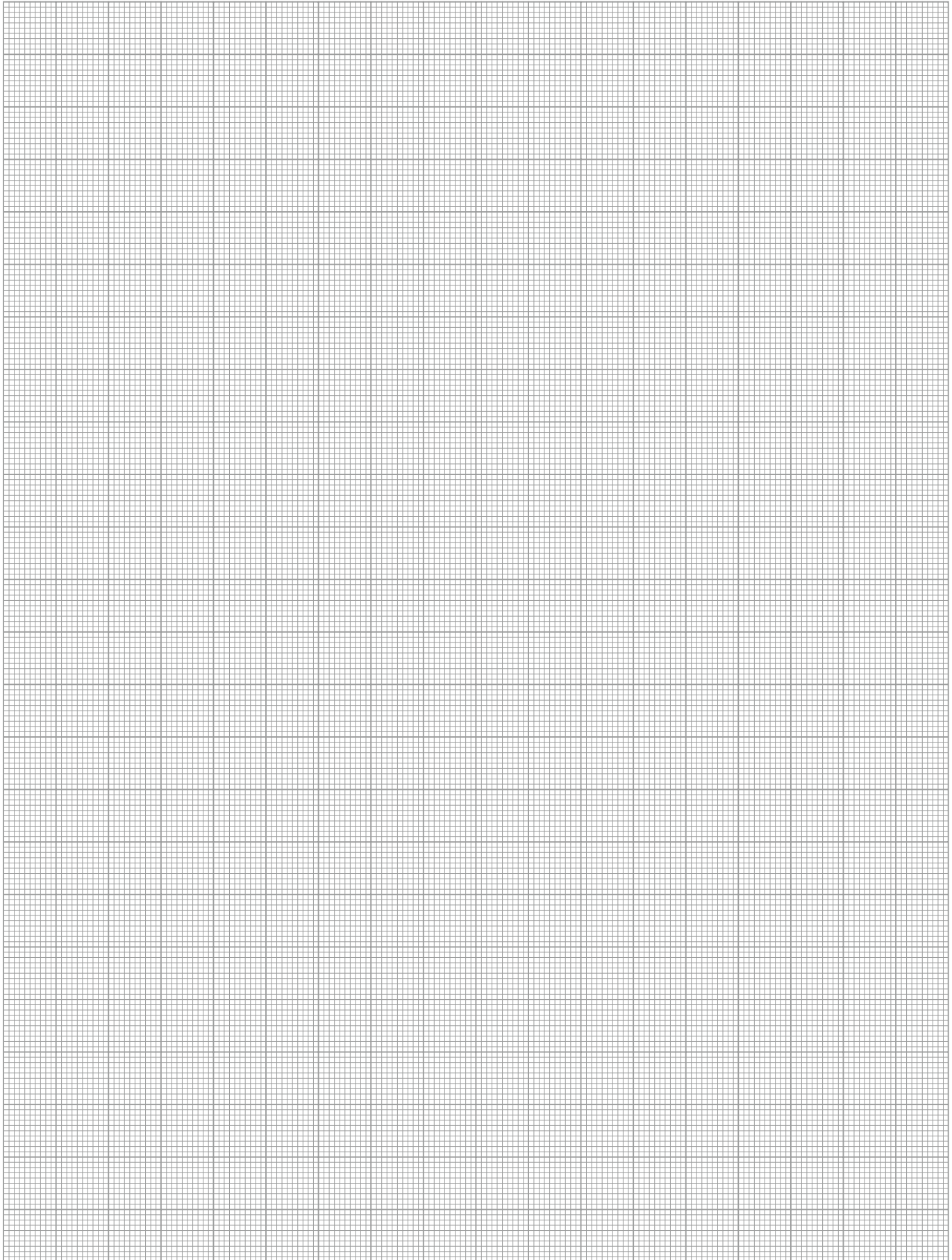
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		JGZ 160-1	JGZ 160-1-AS	JGZ 160-1-IS
ID		0308960	0308961	0308962
Stroke per jaw	[mm]	16	16	16
Closing/opening force	[N]	6000/6390	7990/-	-/8480
Min. spring force	[N]		1990	2090
Weight	[kg]	5.6	8	8
Recommended workpiece weight	[kg]	30	30	30
Fluid consumption double stroke	[cm ³]	520	520	520
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.5/0.5	0.4/0.8	0.8/0.4
Closing/opening time with spring	[s]		0.80	0.80
Max. permissible finger length	[mm]	200	180	180
Max. permissible mass per finger	[kg]	3.5	3.5	3.5
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Cleanroom class ISO 14644-1		5	5	5
Dimensions Ø D x Z	[mm]	180 x 81	180 x 111	180 x 111

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/jgz



PZH-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Long-stroke Gripper

Flexible. Robust. Flat.

Long-stroke Gripper PZH-plus

Universal gripper with long stroke and high maximum moment due to multi-tooth guidance

Field of Application

Multi-purpose due to a diverse range of accessories. Can also be used in fields of application with special requirements to the gripper (temperature, chemical resistance, dirt, and many more).

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Sensitive gripping for handling or large, sensitive workpieces

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Long stroke for a flexible range of parts

Flat design for less interfering contours

Center through-hole for feed-through of workpieces, supply hoses, sensor systems, optical workpiece recognition systems, etc.



Sizes
Quantity: 4



Weight
1.5 .. 33 kg



Gripping force
375 .. 4200 N



Stroke per jaw
20 .. 75 mm



Workpiece weight
1.9 .. 22 kg



Functional Description

The base jaws form the moving cylinder housing while the oval cylinder pistons are fixed. The piston areas are actuated with compressed air so that they are opened or closed. The base jaws are synchronized by a toothed belt which is connected to one carrier per jaw.



① Multi-tooth guidance

Highly loadable, nearly backlash-free base jaw guidance for long finger lengths

② Base jaws

For the connection of workpiece-specific gripper fingers

③ Housing

Is weight-optimized due to the use of high-strength aluminum alloy

④ Toothed belt for synchronization

For centric gripping

⑤ Drive

Pneumatic oval piston for maximum driving force

PZH-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Long-stroke Gripper

General Notes about the Series

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

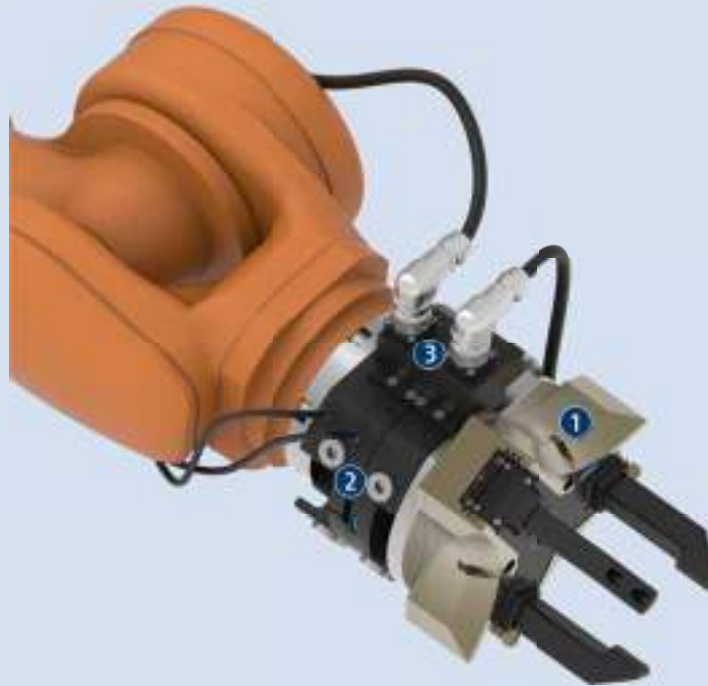
Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

SCHUNK End-of-Arm competence. Assembly unit for large, thin-walled, rotationally symmetric components.

- ❶ 3-finger centric gripper PZH-plus
- ❷ Quick-change system SWS
- ❸ Electric feed-throughs

SCHUNK offers more ...

The following components make the product PZH-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Quick-change system



Universal swivel unit



Compensation unit



Linear module



Inductive proximity switch



Magnetic switch



Pressure maintenance valve

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

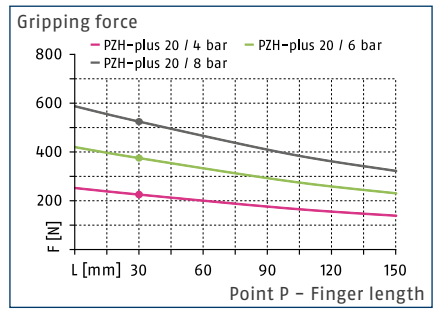
Please note that the weight of the gripper fingers should be as low as possible for long-stroke grippers.

PZH-plus 20

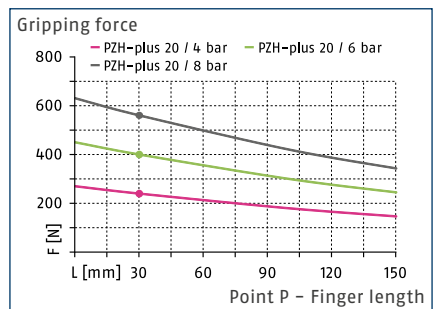
Pneumatic Grippers | 3-Finger Centric Grippers | Long-stroke Gripper



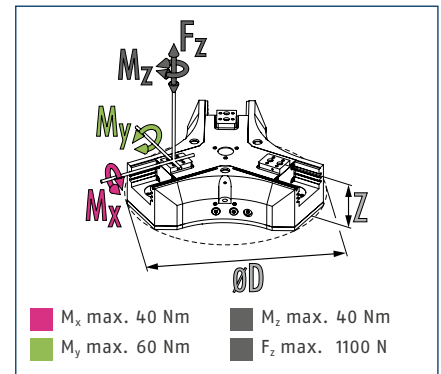
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

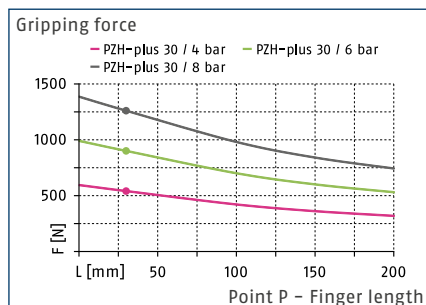
Description		PZH-plus 20
ID		0305360
Stroke per jaw	[mm]	20
Closing/opening force	[N]	375/400
Weight	[kg]	1.5
Recommended workpiece weight	[kg]	1.9
Fluid consumption double stroke	[cm ³]	65
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.25/0.2
Max. permissible finger length	[mm]	150
Max. permissible mass per finger	[kg]	0.9
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Cleanroom class ISO 14644-1		5
Dimensions Ø D x Z	[mm]	176.6 x 55.1

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

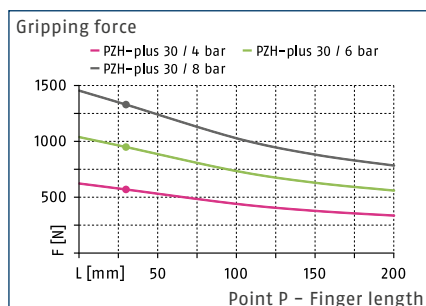
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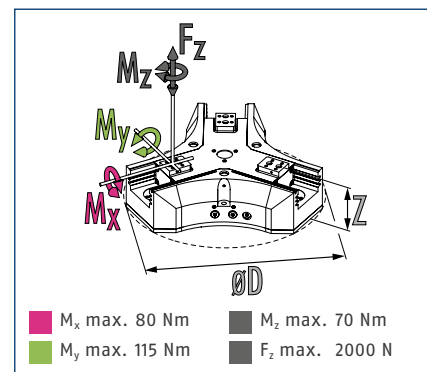
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZH-plus 30
ID		0305370
Stroke per jaw	[mm]	30
Closing/opening force	[N]	900/950
Weight	[kg]	3.9
Recommended workpiece weight	[kg]	4.5
Fluid consumption double stroke	[cm ³]	175
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.25/0.2
Max. permissible finger length	[mm]	200
Max. permissible mass per finger	[kg]	1.9
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Cleanroom class ISO 14644-1		5
Dimensions Ø D x Z	[mm]	229.5 x 72.5

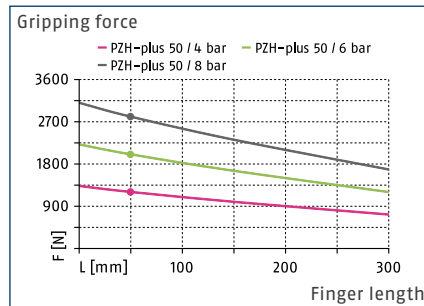
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZH-plus 50

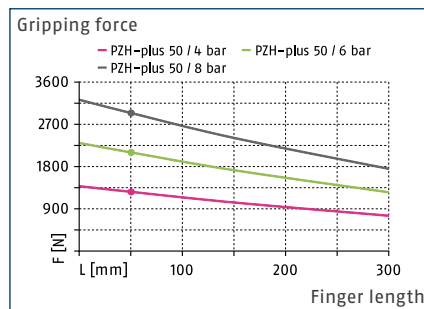
Pneumatic Grippers | 3-Finger Centric Grippers | Long-stroke Gripper



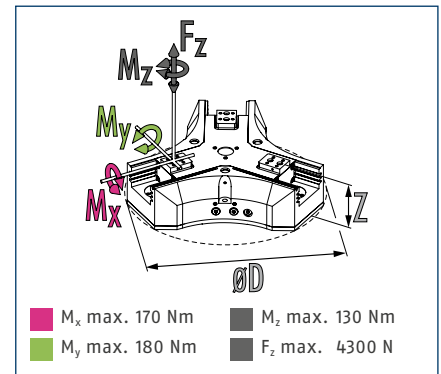
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

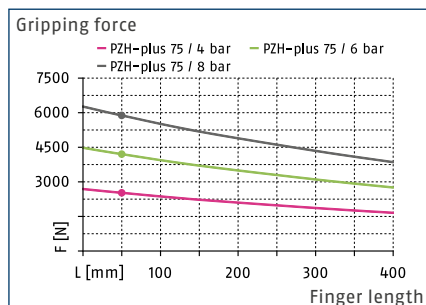
Description		PZH-plus 50
ID		0305380
Stroke per jaw	[mm]	50
Closing/opening force	[N]	2000/2100
Weight	[kg]	12.5
Recommended workpiece weight	[kg]	10
Fluid consumption double stroke	[cm ³]	580
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.55/0.45
Max. permissible finger length	[mm]	300
Max. permissible mass per finger	[kg]	5
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Cleanroom class ISO 14644-1		5
Dimensions Ø D x Z	[mm]	360.2 x 95.9

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

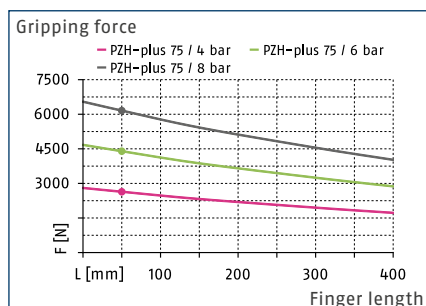
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzh-plus



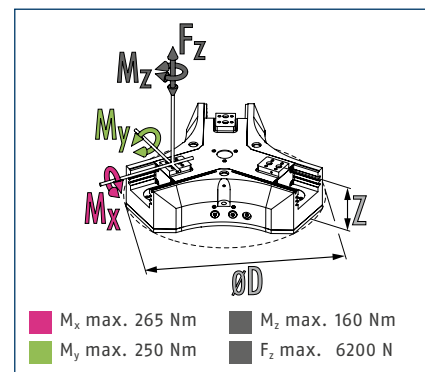
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZH-plus 75
ID		0305390
Stroke per jaw	[mm]	75
Closing/opening force	[N]	4200/4400
Weight	[kg]	33
Recommended workpiece weight	[kg]	22
Fluid consumption double stroke	[cm ³]	1860
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	1.05/0.85
Max. permissible finger length	[mm]	400
Max. permissible mass per finger	[kg]	8.5
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Cleanroom class ISO 14644-1		5
Dimensions Ø D x Z	[mm]	517.6 x 140.7

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZB-plus

Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper

Robust. Flexible. Precise. Universal Gripper PZB-plus

Universal 3-finger centric gripper with high gripping force, high maximum moments per finger and a center bore

Field of Application

For universal use in clean and slightly dirty environments. Suitable for applications that require a center bore, e.g. for workpiece feeding, special sensor systems or optical recognition systems.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

High gripping forces achievable for a wide range of applications

Center through-hole available with fitting and female thread, which facilitates assembly of customer attachments. Moreover, the center bore is used for feed-through of supply hoses and others

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Manifold options optional with mechanic gripping force maintenance



Sizes
Quantity: 9



Weight
0.26 .. 53 kg



Gripping force
330 .. 27400 N



Stroke per jaw
2 .. 35 mm



Workpiece weight
1.7 .. 100 kg



Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



- ① **Base jaw**
For connection of workpiece-specific gripper fingers
- ② **Center bore**
For workpiece feeding, for sensor systems, actuators (ejectors) or optical workpiece recognition
- ③ **Wedge-hook principle**
For high force transmission and centric gripping
- ④ **Multi-tooth guidance**
Precise gripping through base jaw guidance with a high load capacity and a minimum play
- ⑤ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Assembly unit for long shafts. Feeding is done space-saving via the center bores of gripper and rotary feed-through.

- 1 3-finger centric gripper PZB-plus
- 2 Modified rotary feed-through DDF with center bore



SCHUNK offers more ...

The following components make the product PZB-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Pressure maintenance valve



Universal intermediate jaw



Jaw quick-change system



Magnetic switch



Flexible position sensor



Analog position sensor



Finger blank



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

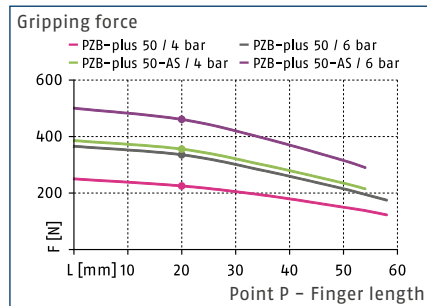
Due to the center bore, the PZB-plus series is the optimum standard solution for many fields of application.

PZB-plus 50

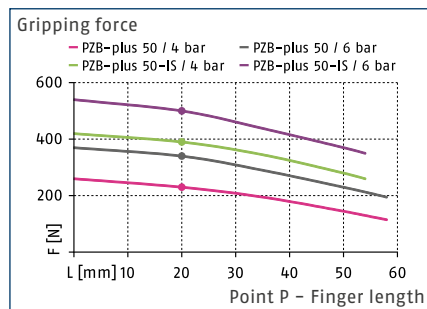
Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper



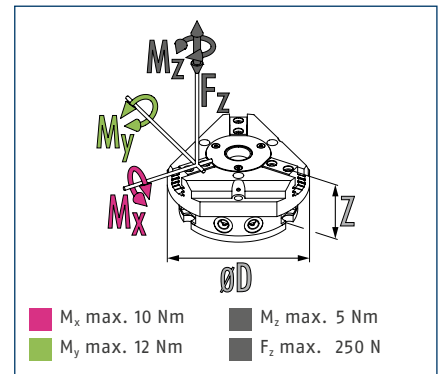
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

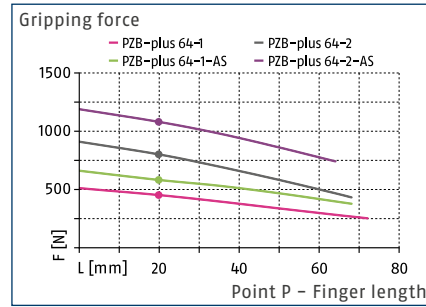
Description		PZB-plus 50-1	PZB-plus 50-1-AS	PZB-plus 50-1-IS
ID		0305140	0305142	0305144
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing/opening force	[N]	330/340	460/-	-/500
Min. spring force	[N]		120	140
Weight	[kg]	0.26	0.36	0.36
Recommended workpiece weight	[kg]	1.7	1.7	1.7
Fluid consumption double stroke	[cm ³]	10.5	15	15
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.02/0.04	0.04/0.02
Closing/opening time with spring	[s]		0.08	0.08
Max. permissible finger length	[mm]	58	54	54
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01
Diameter of center bore	[mm]	6	6	6
Dimensions Ø D x Z	[mm]	36 x 65	45.7 x 65	45.7 x 65

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

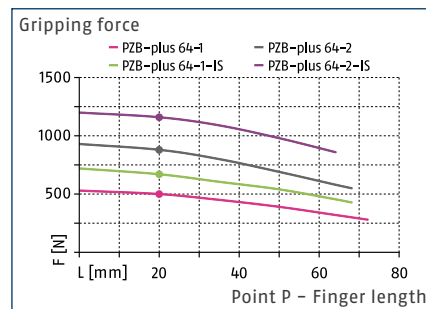
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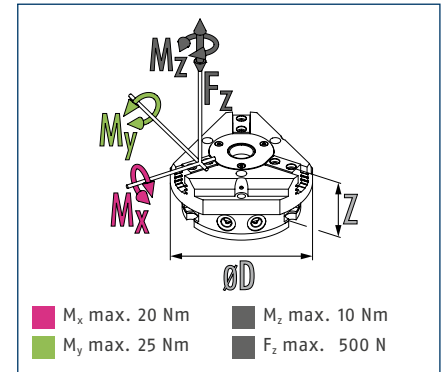
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZB-plus 64-1	PZB-plus 64-2	PZB-plus 64-1-AS	PZB-plus 64-2-AS	PZB-plus 64-1-IS	PZB-plus 64-2-IS
ID		0305150	0305151	0305152	0305153	0305154	0305155
Stroke per jaw	[mm]	4	2	4	2	4	2
Closing/opening force	[N]	450/500	800/880	580/-	1080/-	-/670	-/1160
Min. spring force	[N]			130	280	170	280
Weight	[kg]	0.51	0.51	0.63	0.63	0.63	0.63
Recommended workpiece weight	[kg]	2.2	5	2.2	5	2.2	5
Fluid consumption double stroke	[cm ³]	19.5	19.5	35	35	35	35
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.02/0.04	0.02/0.04	0.04/0.02	0.04/0.02
Closing/opening time with spring	[s]			0.08	0.08	0.08	0.08
Max. permissible finger length	[mm]	72	68	68	64	68	64
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Diameter of center bore	[mm]	8	8	8	8	8	8
Dimensions Ø D x Z	[mm]	76 x 40	76 x 40	76 x 52.8	76 x 52.8	76 x 52.8	76 x 52.8

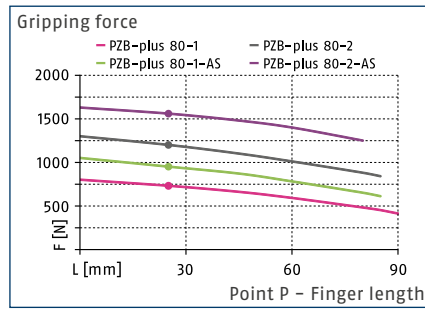
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZB-plus 80

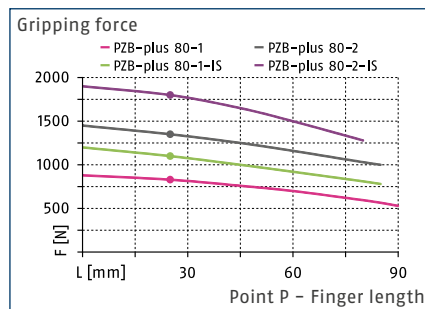
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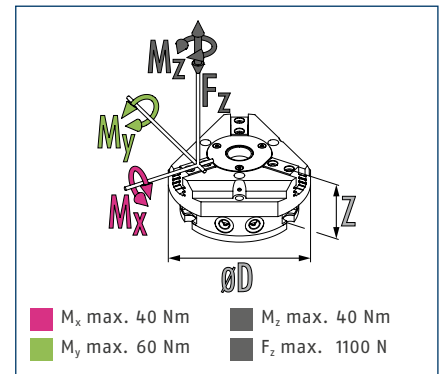
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

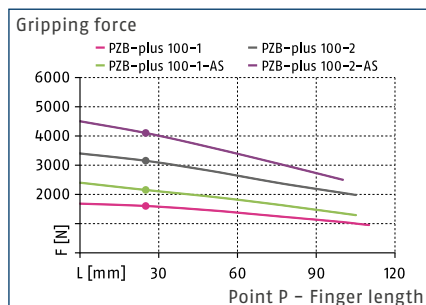
Description		PZB-plus 80-1	PZB-plus 80-2	PZB-plus 80-1-AS	PZB-plus 80-2-AS	PZB-plus 80-1-IS	PZB-plus 80-2-IS
ID		0305160	0305161	0305162	0305163	0305164	0305165
Stroke per jaw	[mm]	6	3	6	3	6	3
Closing/opening force	[N]	730/830	1200/1350	950/-	1560/-	-/1100	-/1800
Min. spring force	[N]			220	360	200	400
Weight	[kg]	0.8	0.8	1.1	1.1	1.1	1.1
Recommended workpiece weight	[kg]	3.6	6	3.6	6	3.6	6
Fluid consumption double stroke	[cm ³]	42	42	75	75	75	75
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.03/0.05	0.03/0.05	0.06/0.04	0.06/0.04
Closing/opening time with spring	[s]			0.19	0.19	0.19	0.19
Max. permissible finger length	[mm]	90	85	85	80	85	80
Max. permissible mass per finger	[kg]	0.35	0.35	0.35	0.35	0.35	0.35
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Diameter of center bore	[mm]	15	15	15	15	15	15
Dimensions Ø D x Z	[mm]	96 x 48.3	96 x 48.3	96 x 63	96 x 63	96 x 63	96 x 63

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

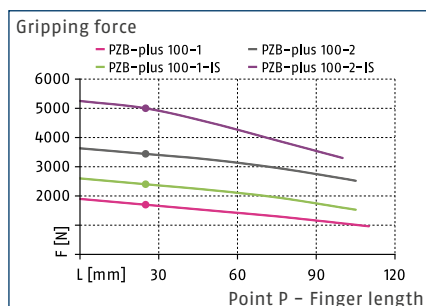
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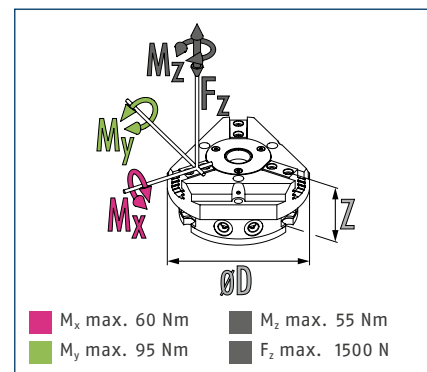
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZB-plus 100-1	PZB-plus 100-2	PZB-plus 100-1-AS	PZB-plus 100-2-AS	PZB-plus 100-1-IS	PZB-plus 100-2-IS
ID		0305170	0305171	0305172	0305173	0305174	0305175
Stroke per jaw	[mm]	8	4	8	4	8	4
Closing/opening force	[N]	1600/1700	3150/3440	2150/-	4100/-	-/2400	-/5000
Min. spring force	[N]			500	900	680	1500
Weight	[kg]	1.5	1.5	2.3	2.3	2.3	2.3
Recommended workpiece weight	[kg]	8	15	8	15	8	15
Fluid consumption double stroke	[cm ³]	92	92	185	185	185	185
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.1/0.1	0.1/0.1	0.1/0.2	0.1/0.2	0.2/0.1	0.2/0.1
Closing/opening time with spring	[s]			0.25	0.25	0.25	0.25
Max. permissible finger length	[mm]	110	105	105	100	105	100
Max. permissible mass per finger	[kg]	0.6	0.6	0.6	0.6	0.6	0.6
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01
Diameter of center bore	[mm]	20	20	20	20	20	20
Dimensions Ø D x Z	[mm]	120 x 57.3	120 x 57.3	120 x 78.3	120 x 78.3	120 x 78.3	120 x 78.3

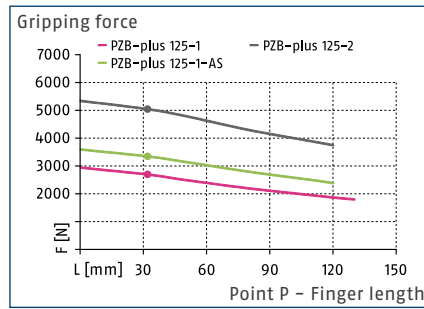
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZB-plus 125

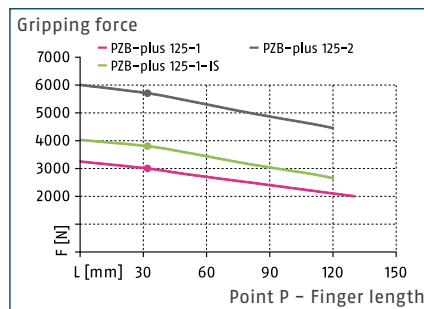
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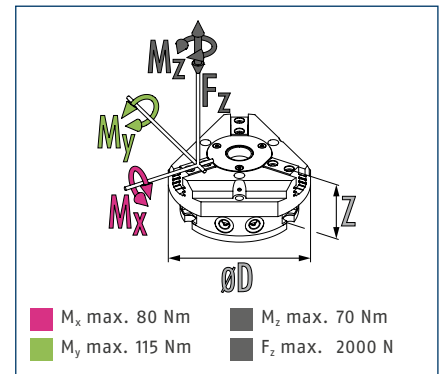
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

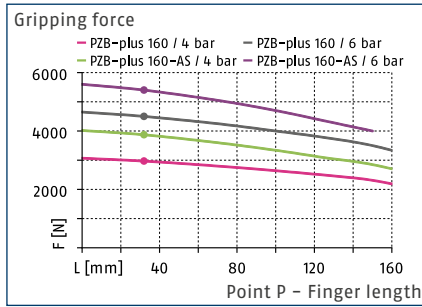
Description		PZB-plus 125-1	PZB-plus 125-2	PZB-plus 125-1-AS	PZB-plus 125-1-IS
ID		0305180	0305181	0305182	0305184
Stroke per jaw	[mm]	10	5	10	10
Closing/opening force	[N]	2700/3000	5050/5700	3350/-	-/3800
Min. spring force	[N]			650	750
Weight	[kg]	2.5	2.5	4	4
Recommended workpiece weight	[kg]	13	25	13	13
Fluid consumption double stroke	[cm ³]	65	65	300	300
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.2/0.2	0.2/0.2	0.17/0.35	0.35/0.17
Closing/opening time with spring	[s]			0.40	0.40
Max. permissible finger length	[mm]	130	120	120	120
Max. permissible mass per finger	[kg]	1.1	1.1	1.1	1.1
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01
Diameter of center bore	[mm]	25	25	25	25
Dimensions Ø D x Z	[mm]	150 x 64	150 x 64	150 x 90.5	150 x 90.5

ⓘ It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

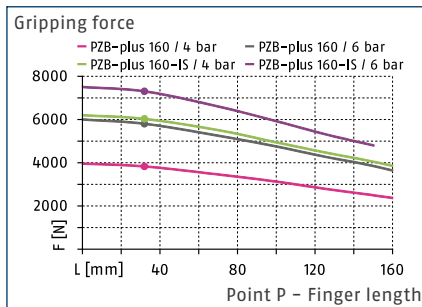
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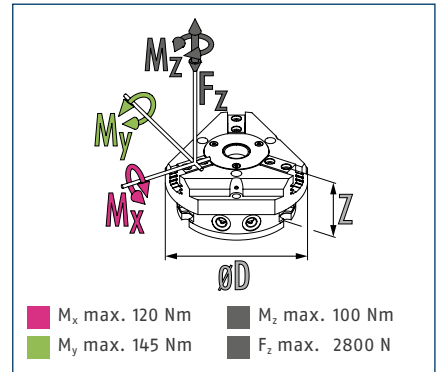
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZB-plus 160-1	PZB-plus 160-1-AS	PZB-plus 160-1-IS
ID		0305190	0305192	0305194
Stroke per jaw	[mm]	13	13	13
Closing/opening force	[N]	4500/5800	5400/-	-/7300
Min. spring force	[N]		900	1500
Weight	[kg]	4.8	7.3	7.3
Recommended workpiece weight	[kg]	22	22	22
Fluid consumption double stroke	[cm ³]	360	620	620
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.5/0.5	0.4/0.8	0.8/0.4
Closing/opening time with spring	[s]		0.80	0.80
Max. permissible finger length	[mm]	160	135	135
Max. permissible mass per finger	[kg]	2.1	2.1	2.1
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Diameter of center bore	[mm]	34	34	34
Dimensions Ø D x Z	[mm]	190 x 74	190 x 101.5	190 x 101.5

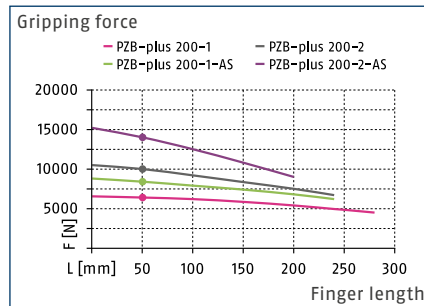
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZB-plus 200

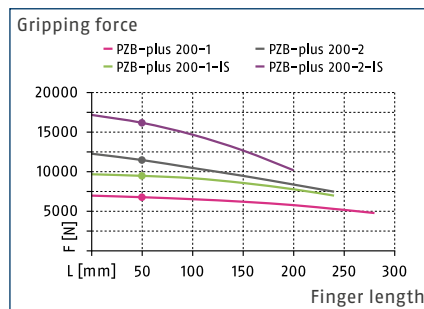
Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper



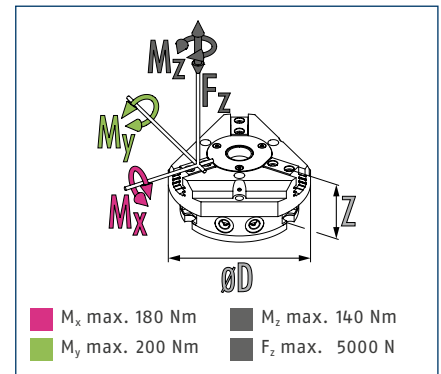
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



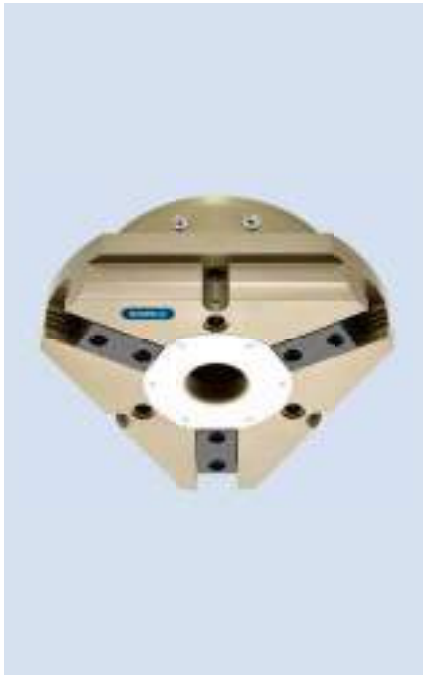
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

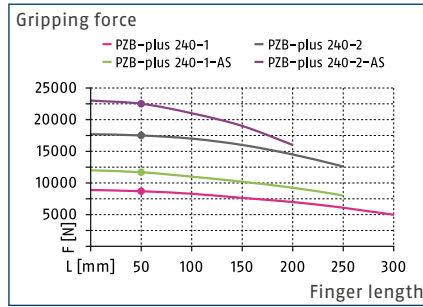
Description		PZB-plus 200-1	PZB-plus 200-2	PZB-plus 200-1-AS	PZB-plus 200-2-AS	PZB-plus 200-1-IS	PZB-plus 200-2-IS
ID		0304950	0304951	0304952	0304953	0304954	0304955
Stroke per jaw	[mm]	25	14	25	14	25	14
Closing/opening force	[N]	6400/6800	10000/11500	8400/-	14000/-	-/9500	-/16200
Min. spring force	[N]			2000	3950	2700	4700
Weight	[kg]	11.5	11.9	15.6	15.8	15.2	15.4
Recommended workpiece weight	[kg]	32	55	32	55	32	55
Fluid consumption double stroke	[cm ³]	920	920	1550	1550	1550	1550
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.7/0.7	0.7/0.7	0.6/1	0.6/1	1/0.6	1/0.6
Max. permissible finger length	[mm]	280	240	240	200	240	200
Max. permissible mass per finger	[kg]	6.5	6.5	6.5	6.5	6.5	6.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Diameter of center bore	[mm]	44	44	44	44	44	44
Dimensions Ø D x Z	[mm]	285 x 100	285 x 100	285 x 136	285 x 136	285 x 136	285 x 136

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

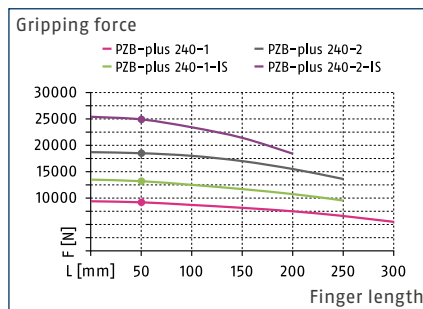
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzb-plus



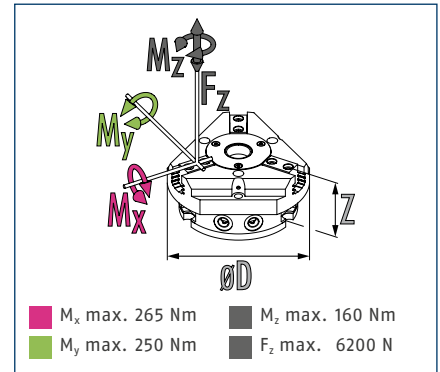
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZB-plus 240-1	PZB-plus 240-2	PZB-plus 240-1-AS	PZB-plus 240-2-AS	PZB-plus 240-1-IS	PZB-plus 240-2-IS
ID		0304960	0304961	0304962	0304963	0304964	0304965
Stroke per jaw	[mm]	30	17	30	17	30	17
Closing/opening force	[N]	8700/9200	17500/18500	11700/-	22500/-	-/13200	-/24900
Min. spring force	[N]			3000	5000	3950	6400
Weight	[kg]	20.5	21	24	24	24	24
Recommended workpiece weight	[kg]	45	90	45	90	45	90
Fluid consumption double stroke	[cm ³]	1650	1650	2700	2700	3050	3050
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	0.9/0.9	0.9/0.9	0.8/1.4	0.8/1.4	1.7/0.8	1.7/0.8
Max. permissible finger length	[mm]	300	250	250	200	250	200
Max. permissible mass per finger	[kg]	8.5	8.5	8.5	8.5	8.5	8.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Diameter of center bore	[mm]	54	54	54	54	54	54
Dimensions Ø D x Z	[mm]	336 x 128	336 x 128	336 x 172	336 x 172	336 x 172	336 x 172

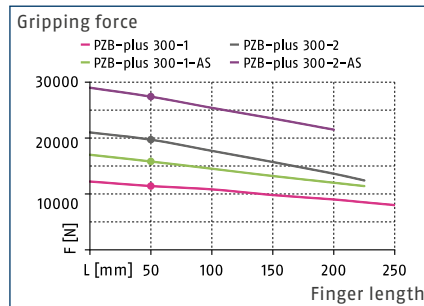
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZB-plus 300

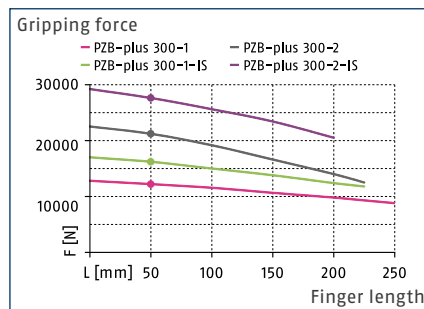
Pneumatic Grippers | 3-Finger Centric Grippers | Universal Gripper



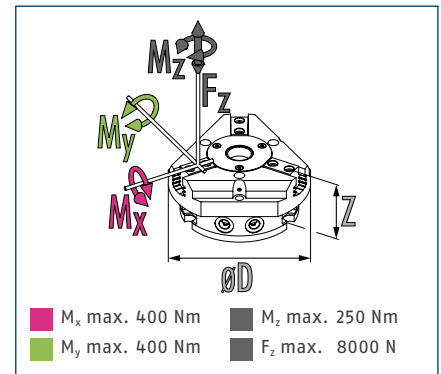
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



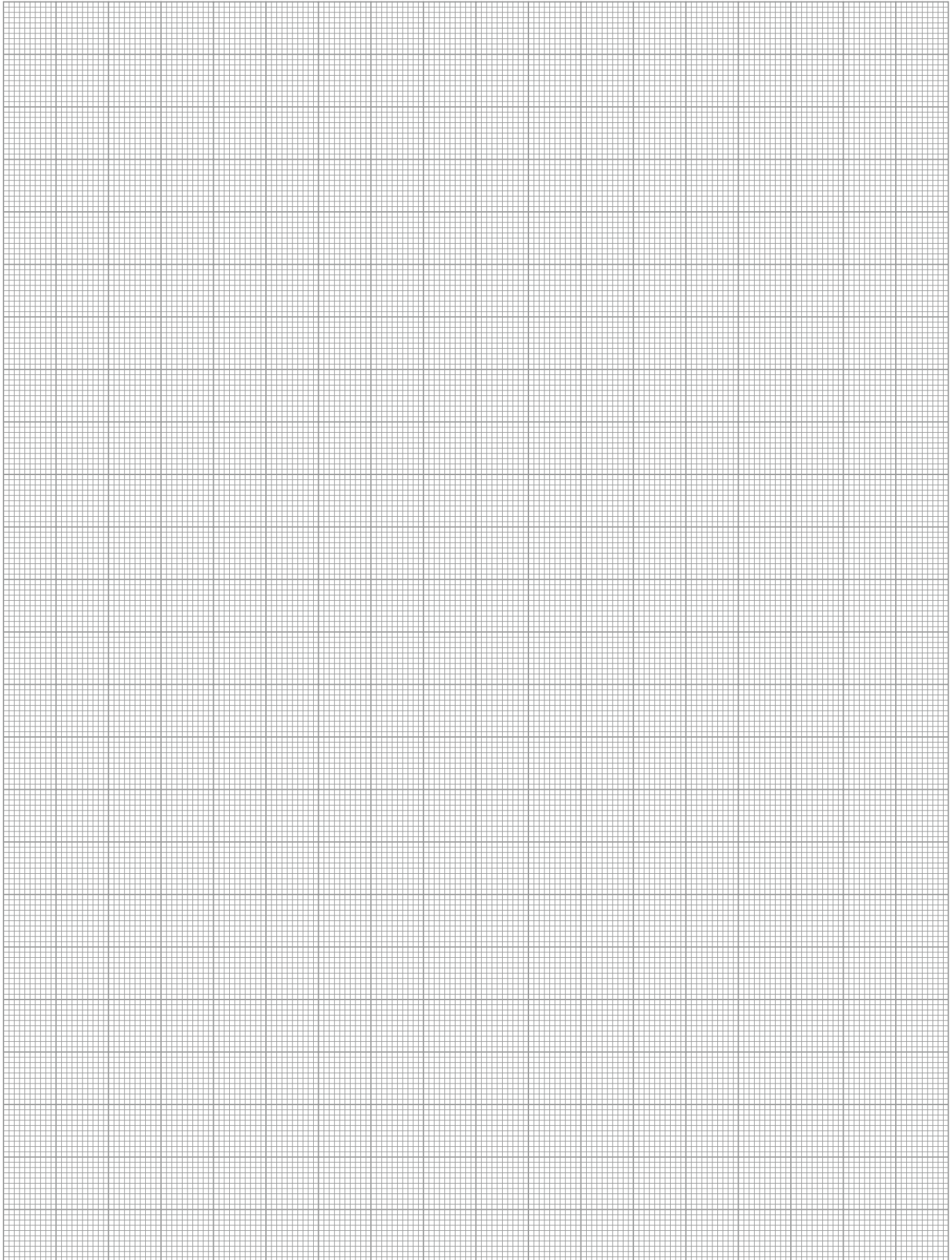
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZB-plus 300-1	PZB-plus 300-2	PZB-plus 300-1-AS	PZB-plus 300-2-AS	PZB-plus 300-1-IS	PZB-plus 300-2-IS
ID		0304970	0304971	0304972	0304973	0304974	0304975
Stroke per jaw	[mm]	35	20	35	20	35	20
Closing/opening force	[N]	11400/12200	19700/21200	15800/-	27400/-	-/16200	-/27600
Min. spring force	[N]			4400	7700	3600	6300
Weight	[kg]	38	38	53	53	53	53
Recommended workpiece weight	[kg]	57	100	57	100	57	100
Fluid consumption double stroke	[cm ³]	2600	2600	3600	3600	4500	4500
Min./nom./max. operating pressure	[bar]	2/6/8	2/6/8	4/6/6.5	4/6/6.5	4/6/6.5	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1	0.5/1
Closing/opening time	[s]	1.3/1.3	1.3/1.3	1.2/2.5	1.2/2.5	2.5/1.2	2.5/1.2
Max. permissible finger length	[mm]	250	225	225	200	225	200
Max. permissible mass per finger	[kg]	11.5	11.5	11.5	11.5	11.5	11.5
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Diameter of center bore	[mm]	64	64	64	64	64	64
Dimensions Ø D x Z	[mm]	390 x 146	390 x 146	390 x 196	390 x 196	390 x 196	390 x 196

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzb-plus



PZH-SF-mini

Pneumatic Grippers | 3-Finger Centric Grippers | Swivel Finger Gripper

Flexible. Compact. Fully encapsulated.

Swivel Finger Gripper PZH-SF-mini

Universal 3-finger centric gripper with large, rotating jaw stroke for a large spectrum of parts and dirt-resistant round guides

Field of Application

Clean to slightly dirty environments.

Advantages – Your benefits

Low-wear steep taper spindle for a long stroke with a large range of parts or for undercut sections

Direct drive for high force transmission and synchronized gripping

Base jaws with flange connection for customized top jaws

Universally applicable for internal and external gripping

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control



Sizes
Quantity: 1



Weight
3.3 kg



Gripping moment
70 Nm



Angle per jaw
100°



Workpiece weight
9.8 kg



Functional Description

The drive piston moves in the vertical direction when pressure is applied. This also moves the spindle nuts vertically. In addition to force transmission to the steep taper spindle, they also synchronize the base jaws.



- ① **Rotary flange**
For the connection of workpiece-specific gripper fingers
- ② **Dust cover**
For the use in dirty environment
- ③ **Drive**
Double acting pneumatic piston
- ④ **Bearing**
High-precision bearing due to the use of high-quality rolling bearings
- ⑤ **Steep-threaded spindle**
For translating the linear piston movement into the rotatory finger movement
- ⑥ **Spindle nut**
For high force transmission and centric gripping

PZH-SF-mini

Pneumatic Grippers | 3-Finger Centric Grippers | Swivel Finger Gripper

General Notes about the Series

Operating principle: Double-acting piston with high helix transmission

Housing material: Hard-anodized, high strength aluminum

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 of the specified base jaw length and workpiece dimension, and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

- 1 3-finger centric gripper PZH-SF
- 2 Tolerance compensation unit TCU-Z
- 3 Rotary feed-through DDF 2



SCHUNK offers more ...

The following components make the product PZH-SF-mini even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary feed-through



Compensation unit



Tolerance compensation unit



Magnetic switch



Inductive proximity switch

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

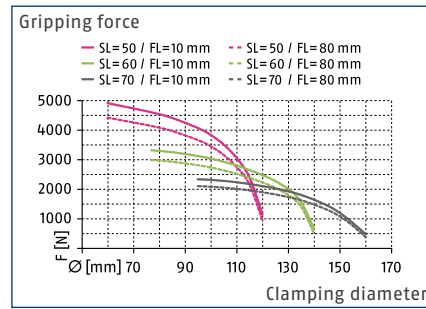
Workpiece dimensions and workpiece weights: Through the design of the base jaws, the workpiece measurements and workpiece weights refer to the required gripping force and jaw stroke. This allows for the ideal gripper for virtually any application. We will gladly assist you with any questions.

PZH-SF-mini 125

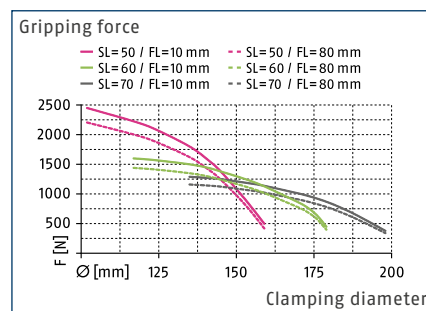
Pneumatic Grippers | 3-Finger Centric Grippers | Swivel Finger Gripper



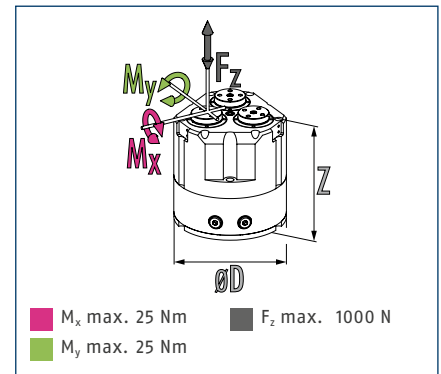
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

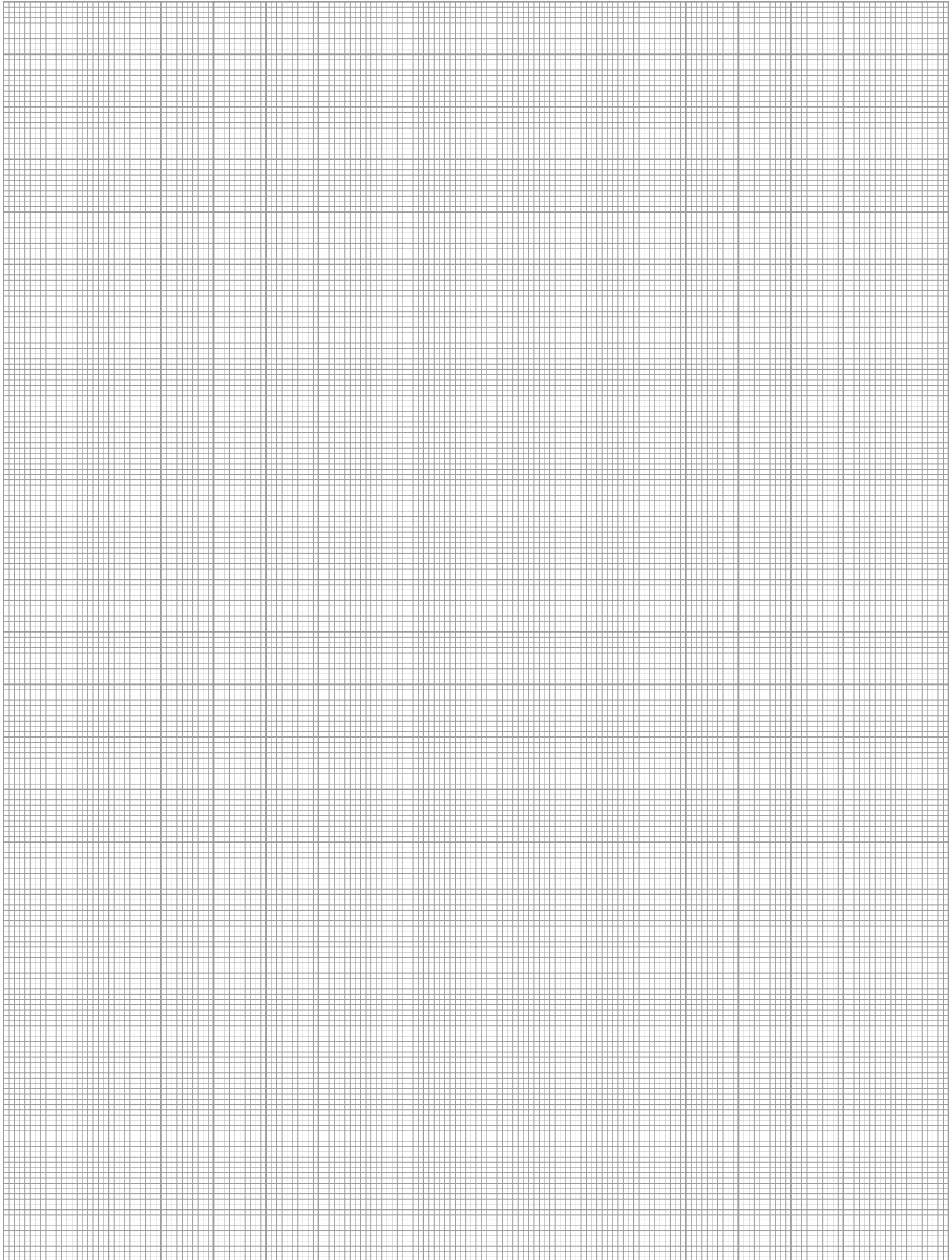
Technical data

Description		PZH-SF 125
ID		0370410
Opening angle per jaw	[°]	100
Closing moment	[Nm]	70
Opening moment	[Nm]	75
Weight	[kg]	3.3
Recommended workpiece weight*	[kg]	9.8
Fluid consumption double stroke	[cm ³]	390
Min./nom./max. operating pressure	[bar]	2/6/6.5
Closing/opening time	[s]	0.5/0.5
Max. permissible finger length	[mm]	80
Max. permissible mass per finger	[kg]	1
Protection class IP		64
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions Ø D x Z	[mm]	125 x 134.5

* The recommended workpiece weight is calculated for force-fit clamping with a coefficient of static friction of 0.1 of the specified base jaw length of 50 mm and workpiece dimension of 125 mm, and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit clamping the permissible workpiece weights are significantly higher.

① The gripping force is determined based on the swing length (SL), the gripped workpiece diameter, and the finger length (FL). The finger length is measured from the upper edge of the housing to the point of application, where the gripping force acts.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzh-sf-mini



PZH-SF

Pneumatic Grippers | 3-Finger Centric Grippers | Swivel Finger Gripper

Flat. Flexible. Fully encapsulated.

Swivel Finger Gripper PZH-SF

Universal 3-finger centric gripper with large, rotating jaw stroke for a large spectrum of parts and dirt-resistant round guides

Field of Application

Clean to slightly dirty working environments, particularly suitable for handling of car rims.



Advantages – Your benefits

Swiveling finger for a long stroke with a large range of parts or for undercut sections

Rack and pinion principle for high power transmission and synchronized gripping

Easy top jaw connection for customized top jaws

Universally applicable for internal and external gripping

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Available for standard robot adaptations according to ISO 9409



Sizes
Quantity: 1



Weight
20 kg



Gripping moment
182 Nm



Angle per jaw
59.7°



Workpiece weight
8 kg



Functional Description

With the application of pressure of the opposite pistons, serrated segments connected to the base jaws are driven via a rack and pinion principle. This method also synchronizes the base jaws.



- ① **Base fingers**
For the connection of workpiece-specific gripper fingers
- ② **Drive principle of pinions and racks**
For high force transmission and centric gripping
- ③ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ④ **Robust bearing**
For precise gripping with minimum play at a high load capacity

General Notes about the Series

Operating principle: Double acting piston with geared transmission

Housing material: Hard-anodized, high strength aluminum

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 of the specified base jaw length and workpiece dimension, and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Gripping application with line gantry comprising linear modules and centric grippers for handling of flat, round workpieces.

- ① 3-finger centric gripper PZH-SF 350
- ② Gantry linear unit Gamma
- ③ Gantry linear unit Gamma

SCHUNK offers more ...

The following components make the product PZH-SF even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Pressure maintenance valve



Magnetic switch



Inductive proximity switch

① Further information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com). Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

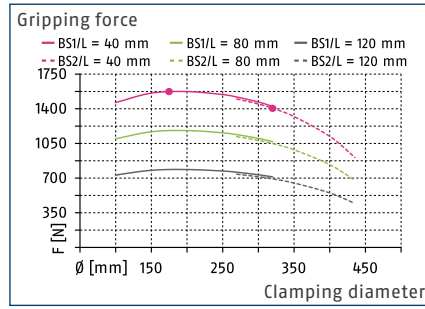
Workpiece dimensions and workpiece weights: By having indexable gripper finger positions, the gripper is extremely flexible and able to handle a wide range of workpiece sizes. In addition, different base jaw lengths and finger diameters with respect to the required grip force and workpiece dimensions can be adapted. Please contact us for further details.

PZH-SF 350

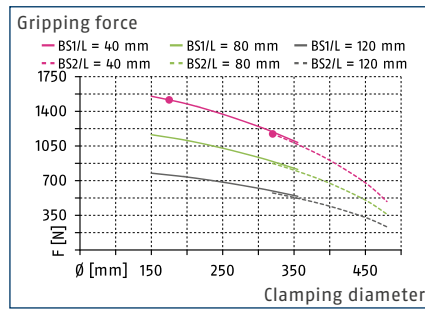
Pneumatic Grippers | 3-Finger Centric Grippers | Swivel Finger Gripper



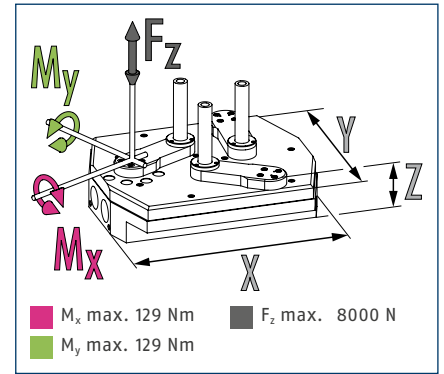
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

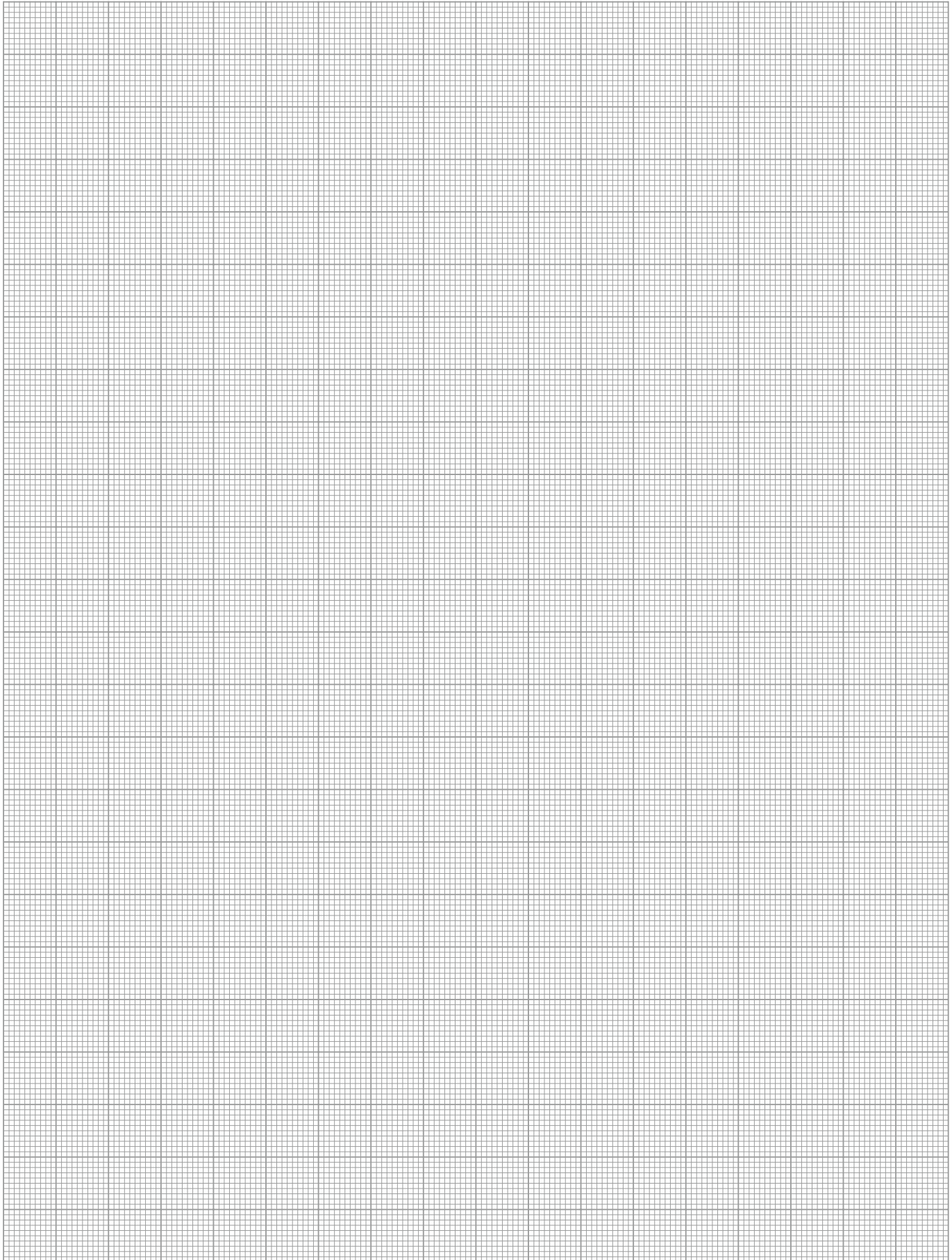
Technical data

Description		PZH-SF 350
ID		0300570
Closing/opening force	[N]	1575/1515
Opening angle per jaw	[°]	59.7
Closing moment	[Nm]	182
Opening moment	[Nm]	175
Weight	[kg]	20
Recommended workpiece weight*	[kg]	8
Fluid consumption double stroke	[cm ³]	675
Min./nom./max. operating pressure	[bar]	2.5/6/9
Closing/opening time	[s]	0.5/0.5
Max. permissible finger length	[mm]	140
Max. permissible mass per finger	[kg]	1.5
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Dimensions X x Y x Z	[mm]	376.5 x 314 x 109.3

* The recommended workpiece weight is calculated for force-fit clamping with a coefficient of static friction of 0.1 of the specified base jaw length of 116 mm and workpiece dimension of 175 mm, and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit clamping, there permissible workpiece weights are significantly higher.

① The gripping force depends on the base jaw position (BS1/BS2 of the gripped workpiece diameter and the finger length L. The finger length is measured from the upper edge of the housing to the point of application, where the gripping force acts.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzh-sf



Loadable. Precise. Reliable.

Centric Gripper PZV

The multi-finger gripper for applications, in which two or three fingers are insufficient

Field of Application

4-finger centric grippers have advantages over the usual centric grippers, for example when cylindrical workpieces are being stored in tablets. The PZV handles the workpieces in a controlled, process-reliable manner despite the interfering contours.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

Wedge-hook principle for high power transmission and synchronized gripping

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Comprehensive sensor accessory program for versatile querying possibilities and stroke position control

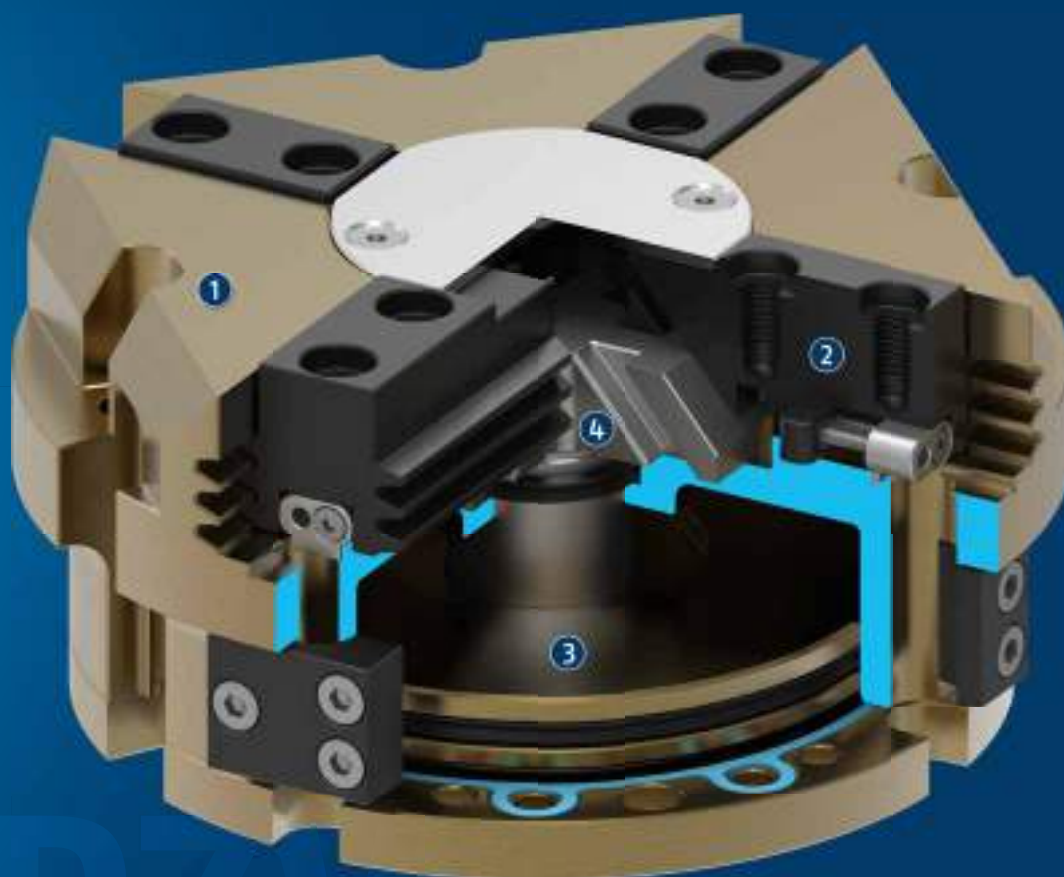


 <p>Sizes Quantity: 5</p>	 <p>Weight 0.5 .. 10 kg</p>	 <p>Gripping force 570 .. 6900 N</p>	 <p>Stroke per jaw 4 .. 16 mm</p>	 <p>Workpiece weight 2.8 .. 34.5 kg</p>
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Functional Description

The piston is moved up and down by compressed air.
The angled active surfaces of the wedge-hook produce a synchronized, centric jaw movement.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **Multi-tooth guidance**
For mounting high loads onto the base jaw
- ③ **Drive**
Through pneumatic double piston system
- ④ **Wedge-hook principle**
For high force transmission and centric gripping

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 36 months

Longlife: 30 years functional warranty (details can be found online)

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible with pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Centering and rotary unit for the precise picking up, orientation, and subsequent joining of square materials.

- ① Multi-finger gripper PZV
- ② Collision sensor OPS
- ③ Swivel unit SRU-plus
- ④ Universal linear module Beta



SCHUNK offers more ...

The following components make the product PZV even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary feed-through



Tolerance compensation unit



Pressure maintenance valve



Jaw quick-change system



Inductive proximity switch



Magnetic switch



Flexible position sensor



Finger blank

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Intermediate sizes are available on request. Please note that the four-finger grip is an umbrella term, and may lead to a two or three-finger grip in certain cases.

Pressure reduction in case of a two-finger application of the PZV 160 and 200: The operating pressure must be reduced to a maximum of 5 bar when using the 4-finger centric gripper PZV 160 and 200 as a (double) 2-finger parallel gripper.

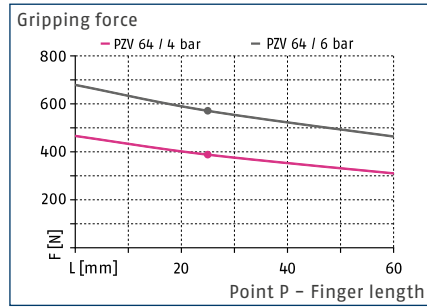
Integrated air purge connection: Impedes the ingress of dirt into the inside of the gripper

PZV 64

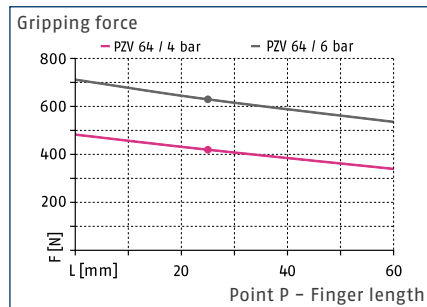
Pneumatic Grippers | Multi-Finger Centric Grippers | 4-Finger Centric Gripper



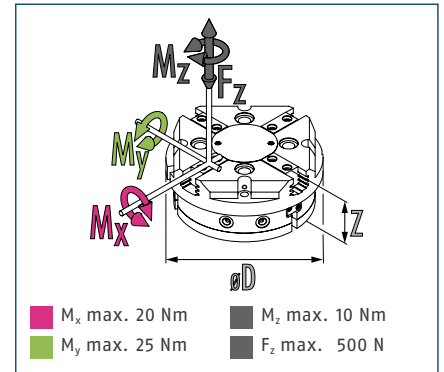
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

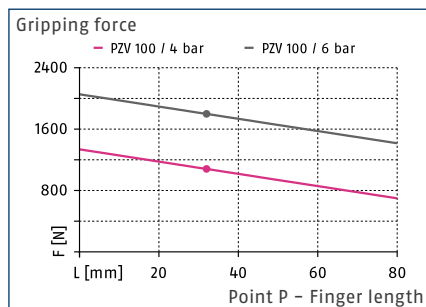
Description		PZV 64
ID		0304000
Stroke per jaw	[mm]	4
Closing/opening force	[N]	570/630
Weight	[kg]	0.5
Recommended workpiece weight	[kg]	2.8
Fluid consumption double stroke	[cm ³]	25
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.02/0.02
Max. permissible finger length	[mm]	64
Max. permissible mass per finger	[kg]	0.18
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Dimensions $\varnothing D \times Z$	[mm]	76 x 41.3

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

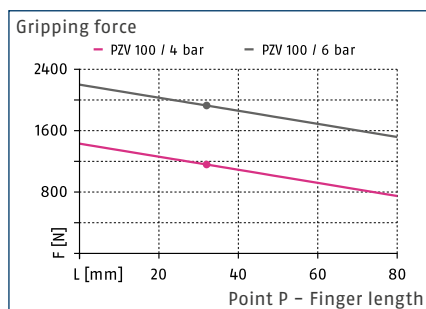
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzv



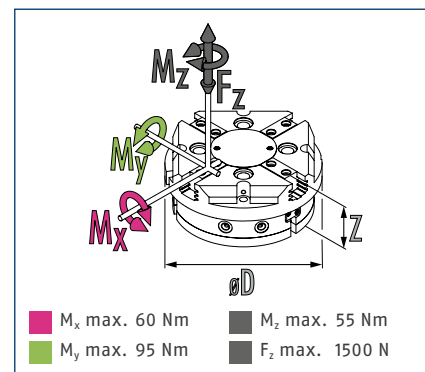
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZV 100
ID		0304002
Stroke per jaw	[mm]	8
Closing/opening force	[N]	1800/1900
Weight	[kg]	1.6
Recommended workpiece weight	[kg]	9
Fluid consumption double stroke	[cm ³]	120
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.04/0.04
Max. permissible finger length	[mm]	80
Max. permissible mass per finger	[kg]	0.6
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Dimensions $\varnothing D \times Z$	[mm]	112 x 55

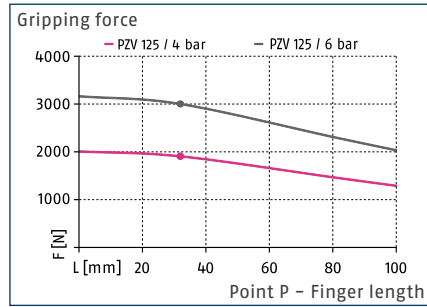
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

PZV 125

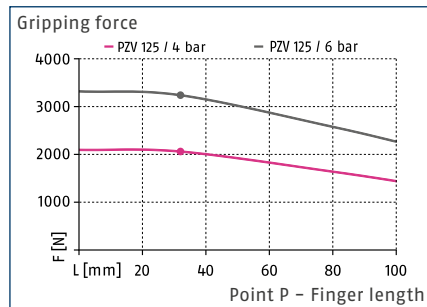
Pneumatic Grippers | Multi-Finger Centric Grippers | 4-Finger Centric Gripper



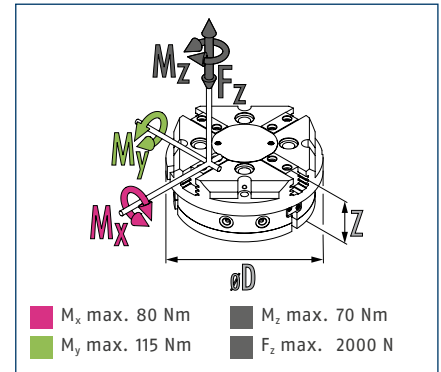
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

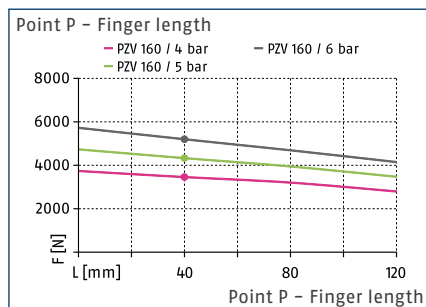
Description		PZV 125
ID		0304003
Stroke per jaw	[mm]	10
Closing/opening force	[N]	3000/3230
Weight	[kg]	2.3
Recommended workpiece weight	[kg]	15
Fluid consumption double stroke	[cm ³]	230
Min./nom./max. operating pressure	[bar]	2/6/8
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.1/0.1
Max. permissible finger length	[mm]	100
Max. permissible mass per finger	[kg]	1.1
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Dimensions $\varnothing D \times Z$	[mm]	144 x 63

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

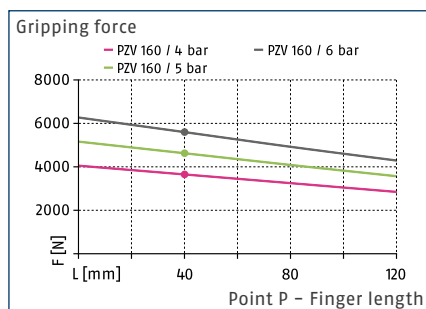
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzv



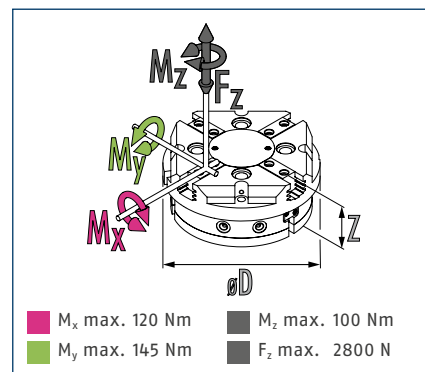
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZV 160
ID		0304004
Stroke per jaw	[mm]	13
Closing/opening force	[N]	5200/5600
Weight	[kg]	5.5
Recommended workpiece weight	[kg]	26
Fluid consumption double stroke	[cm ³]	520
Min./nom./max. operating pressure	[bar]	2/6/6
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.1/0.1
Max. permissible finger length	[mm]	120
Max. permissible mass per finger	[kg]	2.1
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.01
Dimensions $\varnothing D \times Z$	[mm]	178 x 80.7

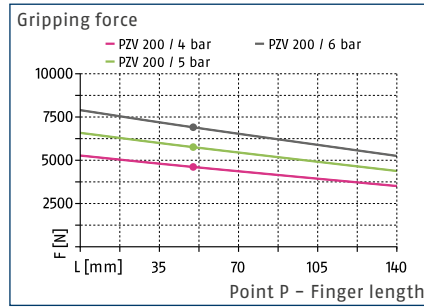
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available. The operating pressure must be reduced to a maximum of 5 bar when using the 4-finger centric gripper PZV 160 and 200 as a (double) 2-finger parallel gripper.

PZV 200

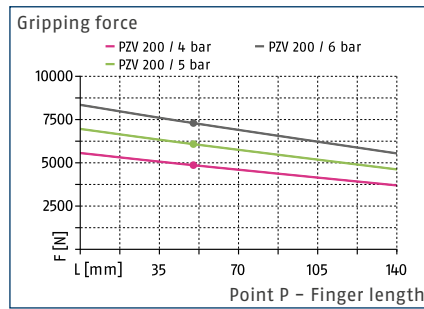
Pneumatic Grippers | Multi-Finger Centric Grippers | 4-Finger Centric Gripper



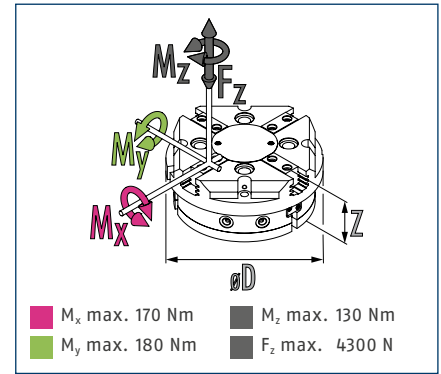
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



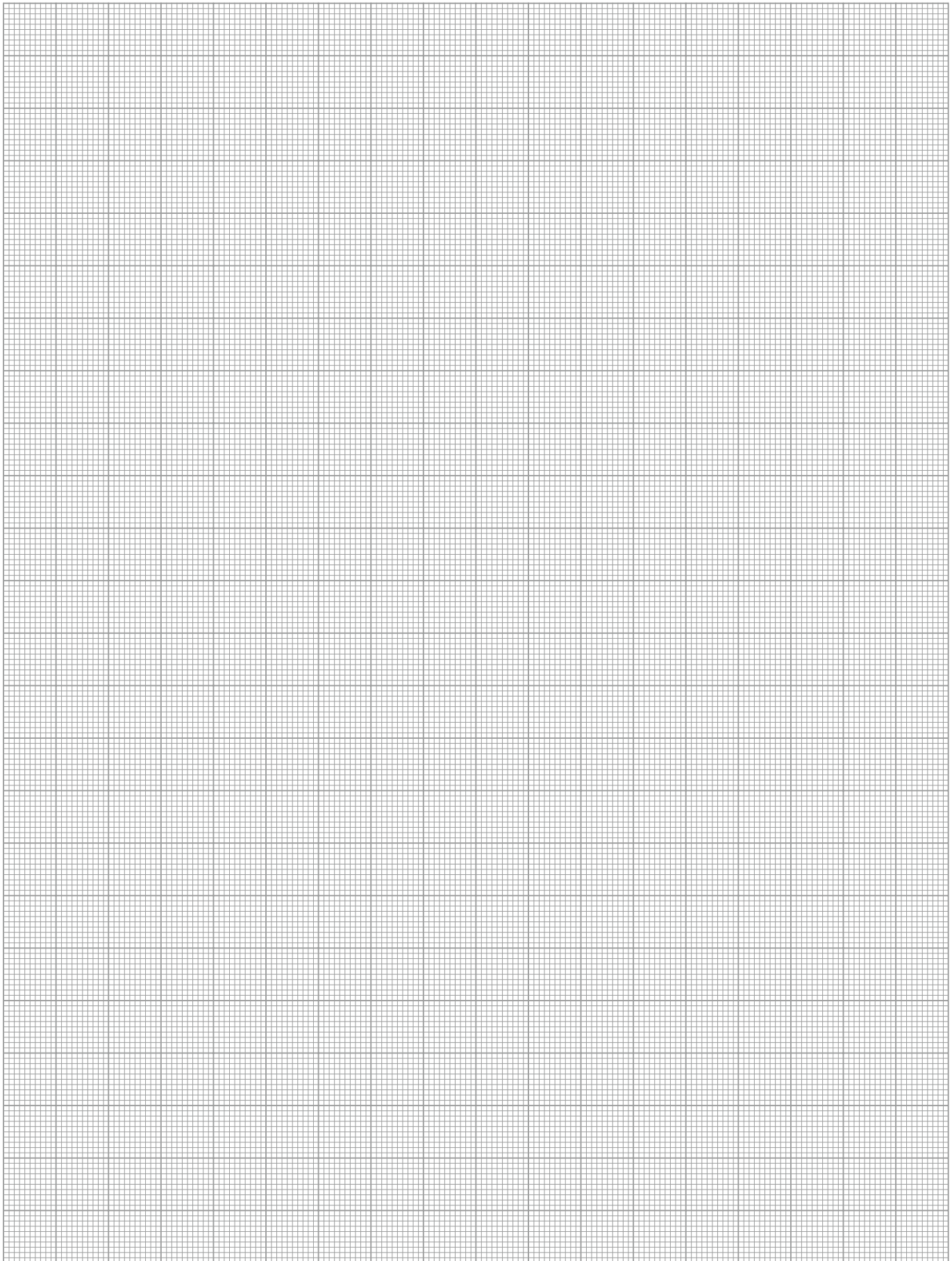
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PZV 200
ID		0304005
Stroke per jaw	[mm]	16
Closing/opening force	[N]	6900/7300
Weight	[kg]	10
Recommended workpiece weight	[kg]	34.5
Fluid consumption double stroke	[cm ³]	1040
Min./nom./max. operating pressure	[bar]	2/6/6
Min./max. air purge pressure	[bar]	0.5/1
Closing/opening time	[s]	0.15/0.15
Max. permissible finger length	[mm]	140
Max. permissible mass per finger	[kg]	3.5
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions $\varnothing D \times Z$	[mm]	217 x 96




① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available. The operating pressure must be reduced to a maximum of 5 bar when using the 4-finger centric gripper PZV 160 and 200 as a (double) 2-finger parallel gripper.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pzv



Pneumatic Grippers

Product Quickfinder

	Page	Image	Opening angle [°]		Gripping moment [Nm]		
			0 – 100	100 – 200	0 – 10	10 – 100	100 – 1000
2-finger angular gripper							
Angular gripper SGB <ul style="list-style-type: none"> Plastic housing Spring reset 	290		8		0.9 – 4.95		
Angular gripper, SWG <ul style="list-style-type: none"> For small and light parts 	298		15		0.01 – 2.8		
Angular gripper PWG-plus <ul style="list-style-type: none"> Integrated gripping force maintenance 	310		15				3.3 – 1025



	Ambient conditions					Cleanroom	Variant variety	Variety of sensor systems
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C			
	●	○				○	+	+
	●	○			●	○	+	+
	●	●	○	○	●	○	++	++

● = Very highly suitable ○ = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection

SGB

Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper

Light. Slim. Fast.

Gripper for Small Components SGB

Small, simple pressurized plastic angular gripper with spring reset

Field of Application

Universal application in clean and slightly dirty environments, with special requirements on corrosion resistance and anti-static properties of the gripping unit.

Advantages – Your benefits

Housing made from glass fiber reinforced plastic making the gripper extremely light and free from corrosion

One-way acting double piston drive with lever gear drive for high power transmission and synchronized gripping

Basic version generally equipped with a pressure piece for the spring-supported pressing of workpieces

Favorable in price especially suitable for low-budget applications



Sizes
Quantity: 3



Weight
0.04 .. 0.06 kg



Gripping moment
0.9 .. 4.95 Nm



Angle per jaw
8°



Workpiece weight
0.2 .. 0.8 kg

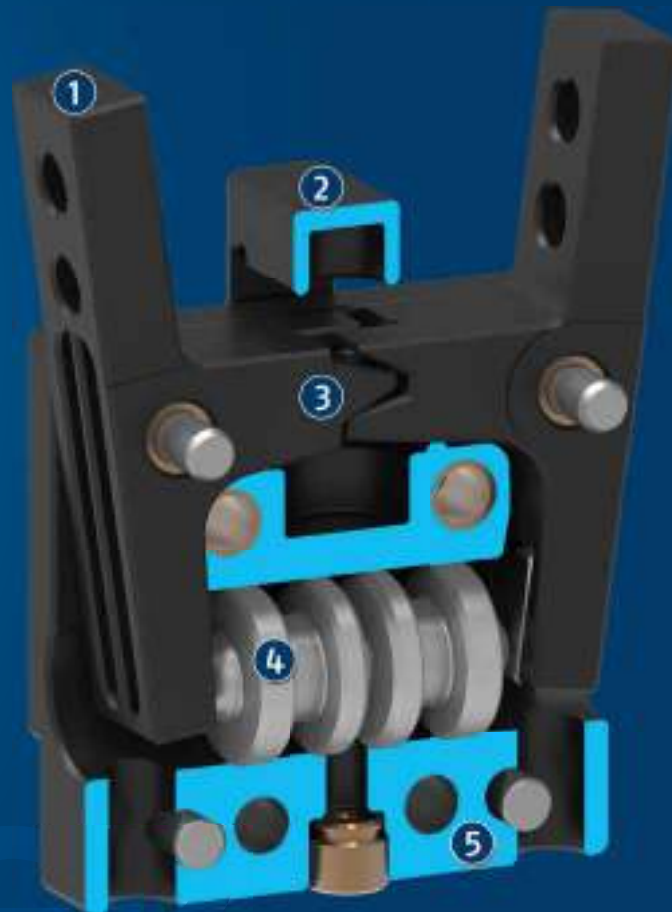


Functional Description

The horizontally arranged pistons are pressed away from each other by compressed air.

The base jaws are opened at an angle and in a synchronized fashion by the bearing-mounted lever mechanism.

Reset is done by pressure spring.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Pressure piece**
Spring-loaded, for pressing workpieces into place
- ③ **Lever mechanism**
For precise and synchronized gripping
- ④ **Drive**
Single-acting double piston system with spring reset
- ⑤ **Housing**
Weight-optimized due to the use of plastics

General Notes about the Series

Operating principle: Single-acting cylinder piston with lever gear drive and spring reset

Housing material: Plastic with metal functional components

Base jaw material: Plastic

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Integrated spring-loaded press-on bar, assembly instructions (operating manual with declaration of incorporation available online)

Gripping force maintenance: Not possible

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Rotary unit for simultaneous rotation of two small components by 90°.

① 2-finger angular gripper SGB

② Miniature swivel unit SRU-mini

SCHUNK offers more ...

The following components make the product SGB even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Manual change system



Pressure maintenance valve



Inductive proximity switch

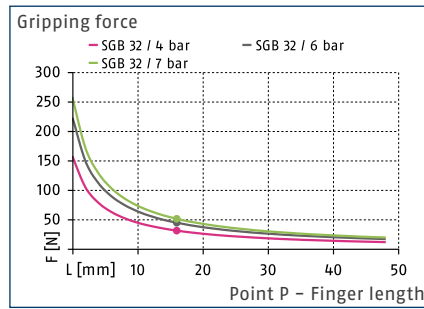
① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

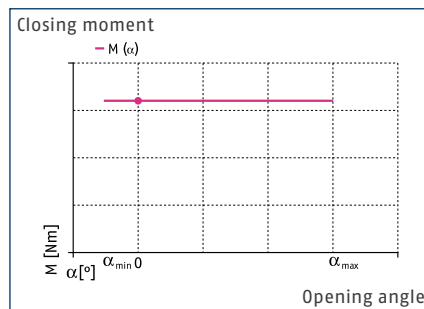
Due to the use of plastics, this gripper is characterized by a low weight.



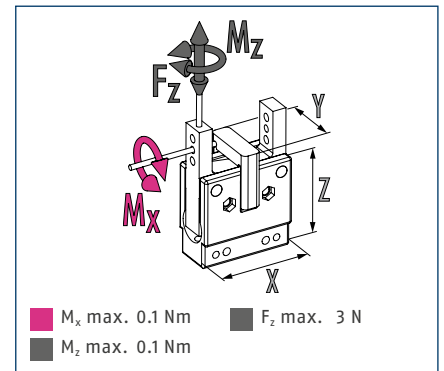
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

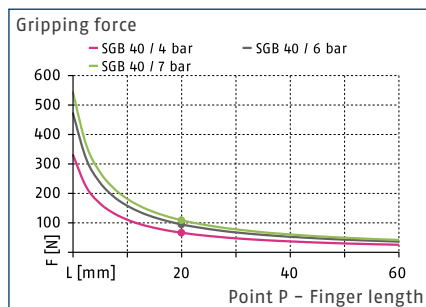
Technical data

Description		SGB 32
ID		0305199
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	0.9
Weight	[kg]	0.04
Recommended workpiece weight	[kg]	0.2
Fluid consumption double stroke	[cm ³]	0.5
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.06/0.04
Max. permissible finger length	[mm]	32
Max. permissible mass per finger	[kg]	0.03
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Min. pressing on force	[N]	2
Pressure stroke	[mm]	3.2
Dimensions X x Y x Z	[mm]	32 x 20 x 32

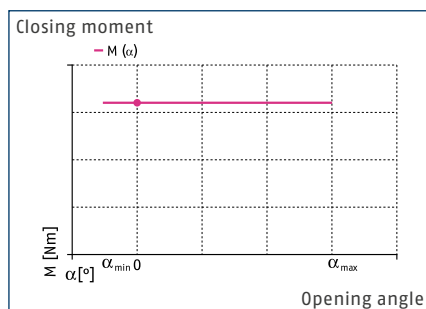
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/sgb



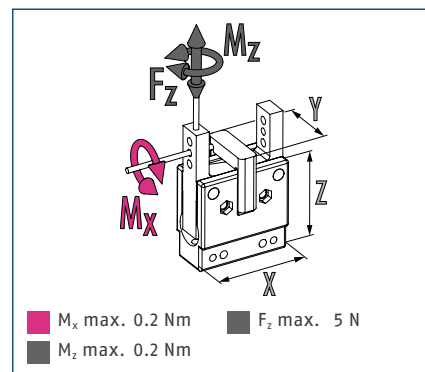
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

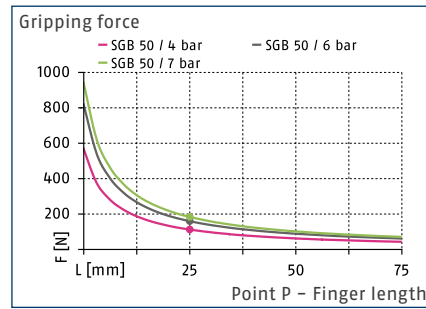
Description		SGB 40
ID		0305200
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	2.37
Weight	[kg]	0.05
Recommended workpiece weight	[kg]	0.4
Fluid consumption double stroke	[cm ³]	1
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.08/0.05
Max. permissible finger length	[mm]	40
Max. permissible mass per finger	[kg]	0.05
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Min. pressing on force	[N]	4
Pressure stroke	[mm]	4
Dimensions X x Y x Z	[mm]	40 x 25 x 40

SGB 50

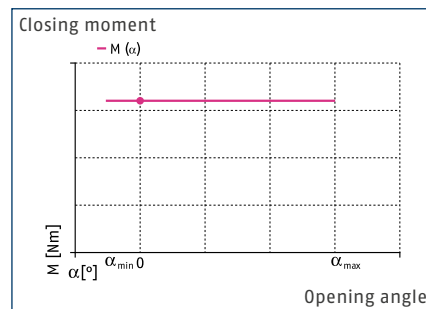
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



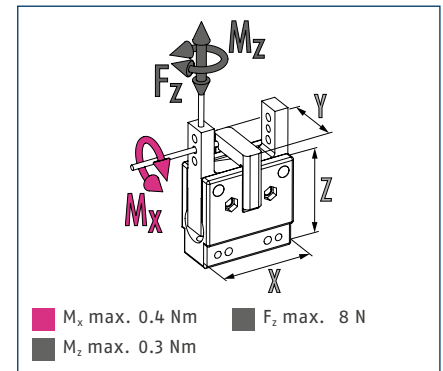
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads

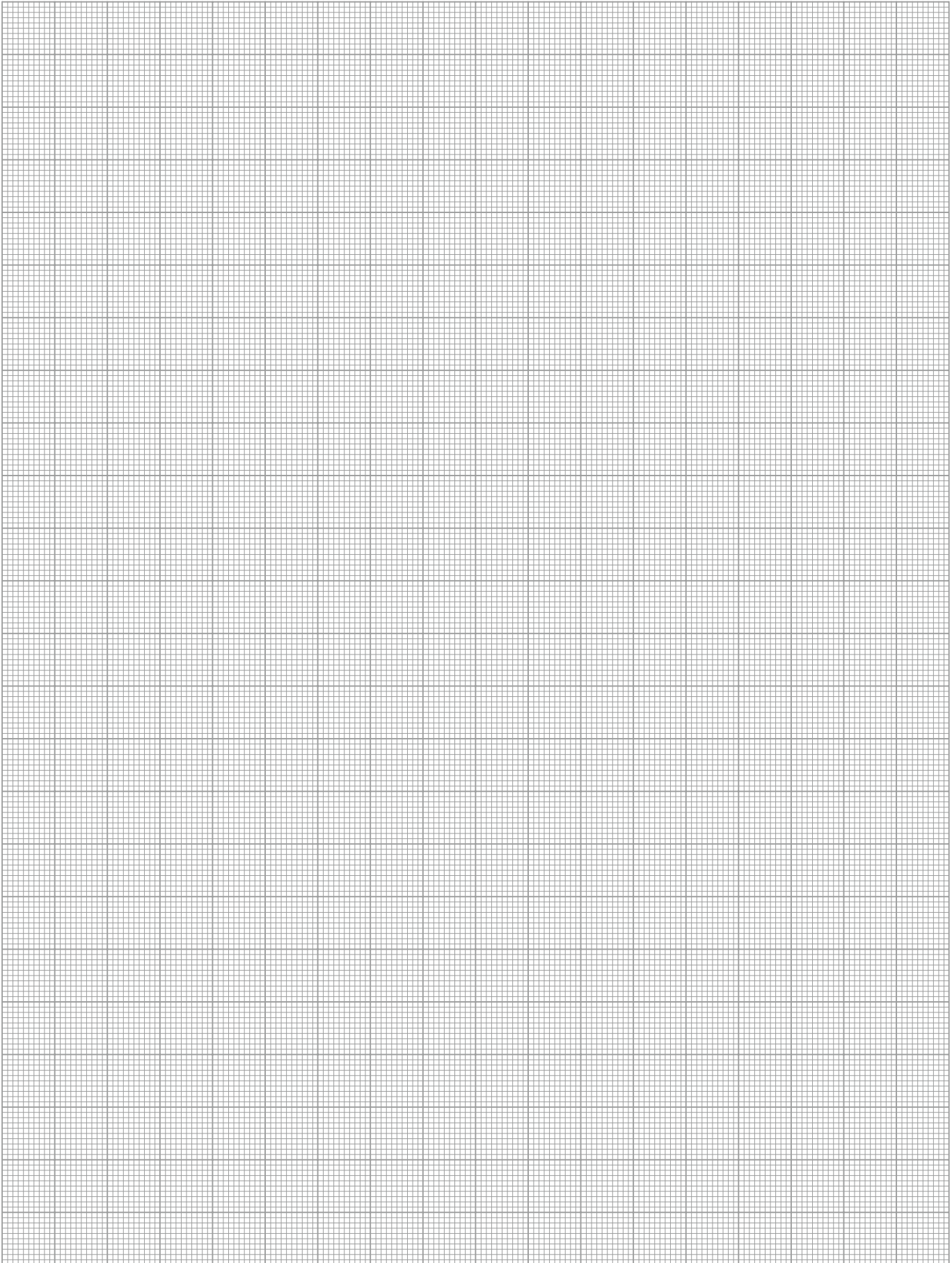


① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		SGB 50
ID		0305201
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	4.95
Weight	[kg]	0.06
Recommended workpiece weight	[kg]	0.8
Fluid consumption double stroke	[cm ³]	1.8
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.08/0.05
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.07
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Min. pressing on force	[N]	4
Pressure stroke	[mm]	5
Dimensions X x Y x Z	[mm]	50 x 31.2 x 50

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/sgb



Slim. Reliable. Fast.

Gripper for Small Components SWG

Narrow double-acting 2-finger angular gripper

Field of Application

For universal use in clean and slightly dirty environments. Suitable for applications which require a space-optimized gripper arrangement.

Advantages – Your benefits

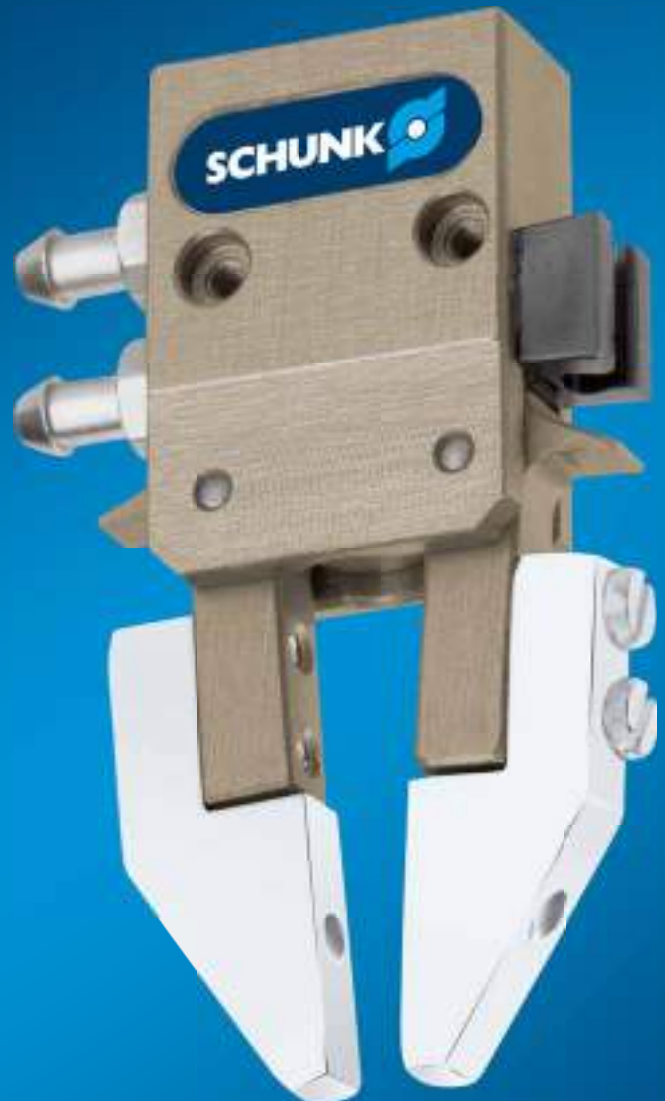
Slim design allowing the grippers to be arranged in a row






Spring-supported gripping force maintenance holds the workpiece even in case of a loss of pressure

Wedge-hook principle for high power transmission and synchronized gripping

Light and compact design for space-saving handling without interfering contours

Monitoring via electronic magnetic switches a space-saving feature in a slot in the housing



 <p>Sizes Quantity: 8</p>	 <p>Weight 0.0025 .. 0.213 kg</p>	 <p>Gripping moment 0.01 .. 2.8 Nm</p>	 <p>Angle per jaw 15°</p>	 <p>Workpiece weight 0.007 .. 0.46 kg</p>
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Functional Description

The piston is moved up and down by compressed air. The kinematics transforms this vertical motion into a synchronous and rotatory motion of the base jaws.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **Base fingers**
For adaption of workpiece-specific gripper fingers
- ③ **Kinematics**
Precise gear for centric gripping
- ④ **Sensor system**
Electronic magnetic switch, space-saving integration in the groove of the housing
- ⑤ **Gripping force maintenance**
Mechanic gripping force maintenance for O.D. gripping

General Notes about the Series

Operating principle: Double-acting, guided kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Aluminum alloy, anodized

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Always integrated by using springs, and also possible via pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Triple transfer unit for packaging with small boxboards.

- ① 2-finger angular gripper SWG
- ② Collision sensor OPR



SCHUNK offers more ...

The following components make the product SWG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Pick & Place unit



Compensation unit



Programmable magnetic switch



Magnetic switch



Optical proximity switch



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

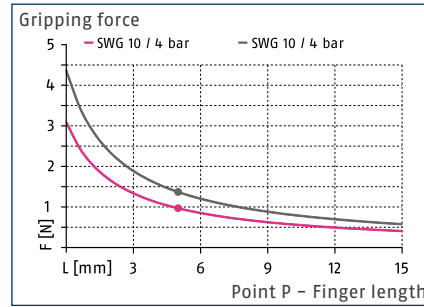
The angular gripper SWG can be directly mounted in a row to reduce interfering contours.

SWG 10

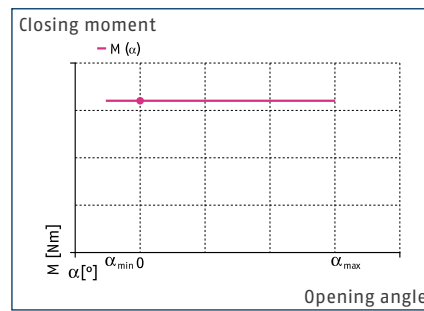
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



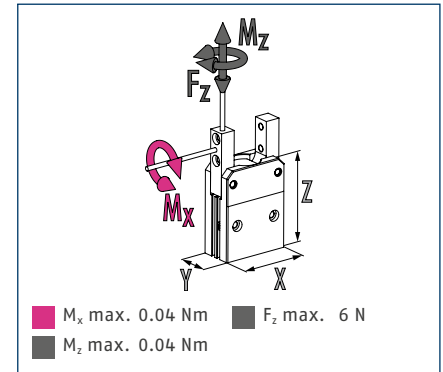
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

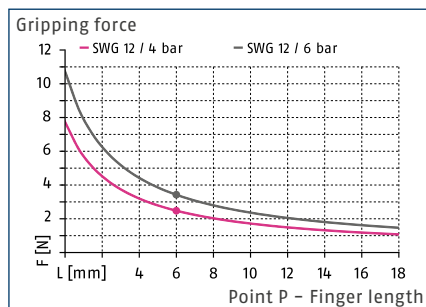
Technical data

Description		SWG 10
ID		0305116
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.01
Closing moment generated by spring	[Nm]	0.0027
Weight	[kg]	0.0025
Recommended workpiece weight	[kg]	0.007
Fluid consumption double stroke	[cm ³]	0.055
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.015/0.02
Max. permissible finger length	[mm]	10
Max. permissible mass per finger	[kg]	0.003
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	10.5 x 5 x 15

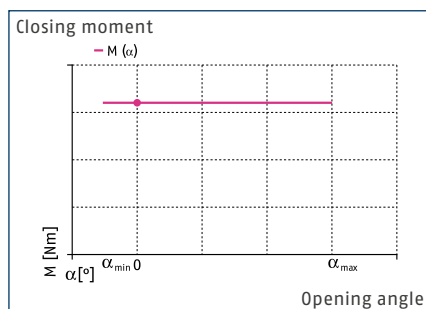
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/swg



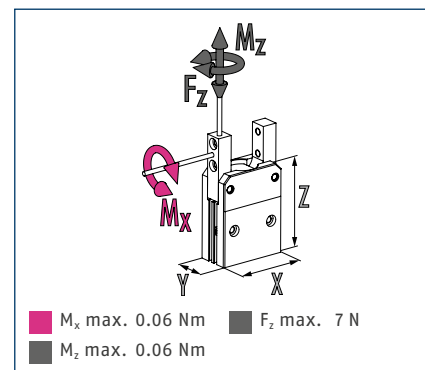
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

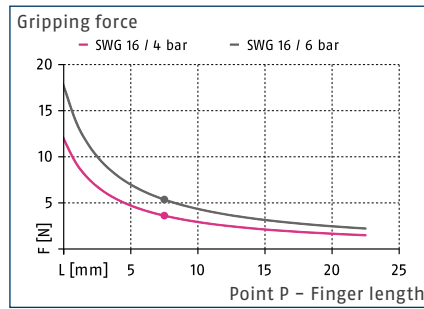
Description		SWG 12
ID		0305115
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.03
Closing moment generated by spring	[Nm]	0.009
Weight	[kg]	0.0048
Recommended workpiece weight	[kg]	0.017
Fluid consumption double stroke	[cm ³]	0.07
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.015/0.02
Max. permissible finger length	[mm]	12
Max. permissible mass per finger	[kg]	0.006
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	13 x 6.5 x 18.5

SWG 16

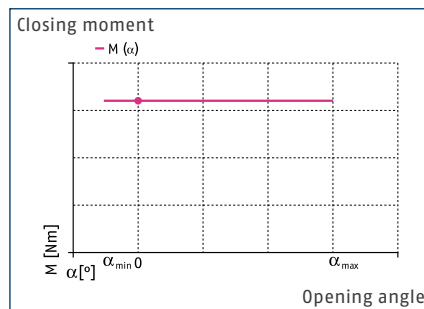
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



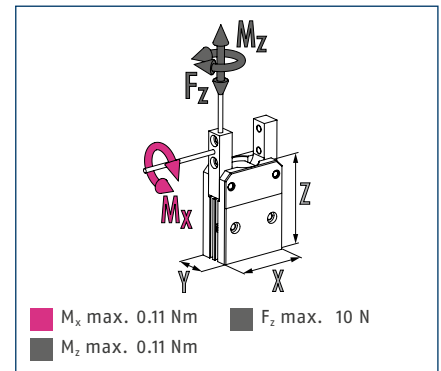
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

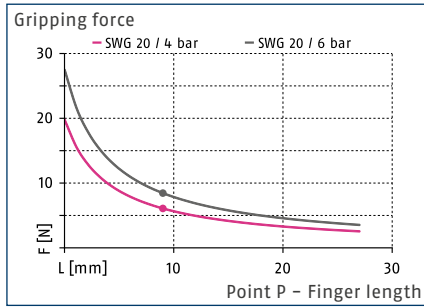
Technical data

Description		SWG 16
ID		0305104
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.058
Closing moment generated by spring	[Nm]	0.017
Weight	[kg]	0.011
Recommended workpiece weight	[kg]	0.027
Fluid consumption double stroke	[cm³]	0.12
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.015/0.02
Max. permissible finger length	[mm]	15
Max. permissible mass per finger	[kg]	0.012
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	19 x 8 x 28.5

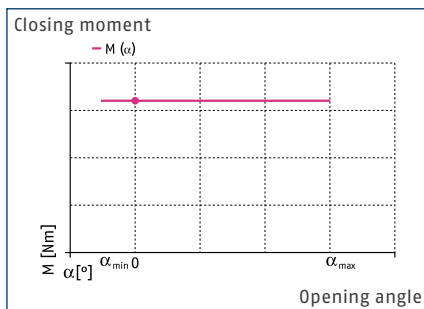
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/swg



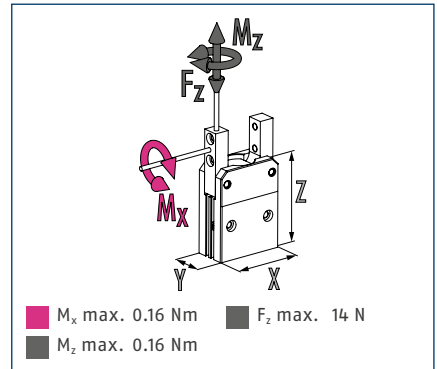
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

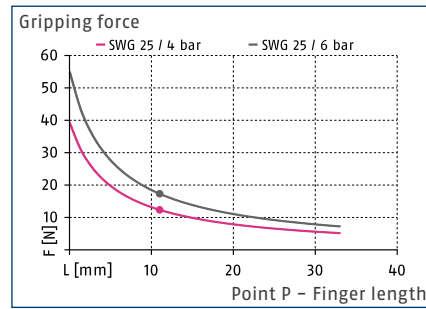
Description		SWG 20
ID		0305105
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.11
Closing moment generated by spring	[Nm]	0.033
Weight	[kg]	0.019
Recommended workpiece weight	[kg]	0.043
Fluid consumption double stroke	[cm³]	0.25
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.015/0.02
Max. permissible finger length	[mm]	18
Max. permissible mass per finger	[kg]	0.02
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	23.5 x 10 x 35

SWG 25

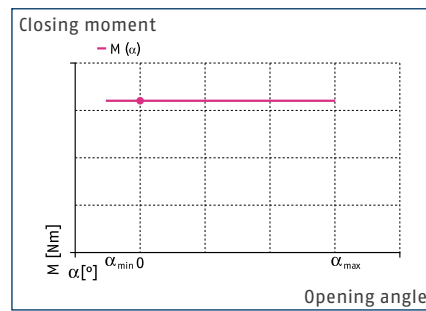
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



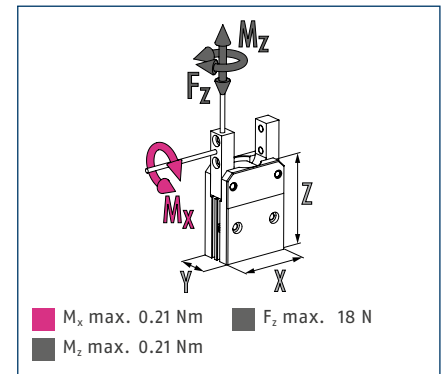
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

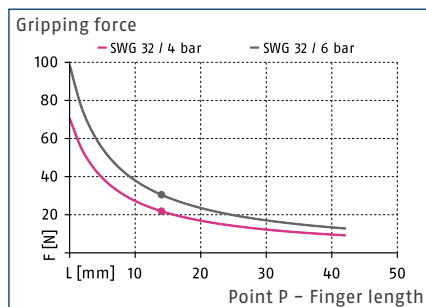
Technical data

Description		SWG 25
ID		0305106
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.28
Closing moment generated by spring	[Nm]	0.08
Weight	[kg]	0.035
Recommended workpiece weight	[kg]	0.09
Fluid consumption double stroke	[cm ³]	0.4
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.015/0.02
Max. permissible finger length	[mm]	22
Max. permissible mass per finger	[kg]	0.028
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	28 x 12 x 42

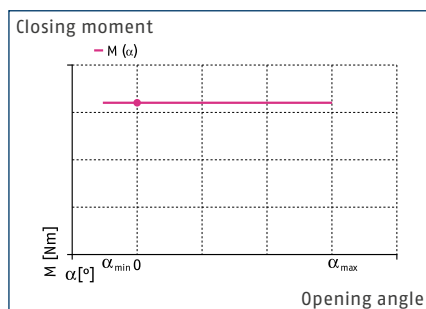
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/swg



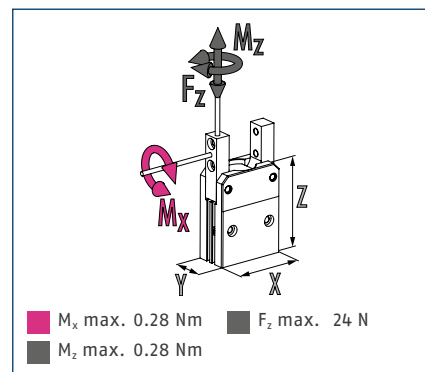
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

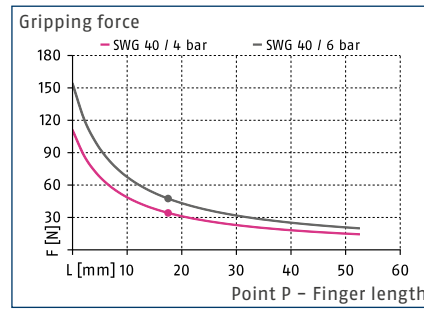
Description		SWG 32
ID		0305107
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	0.62
Closing moment generated by spring	[Nm]	0.18
Weight	[kg]	0.069
Recommended workpiece weight	[kg]	0.156
Fluid consumption double stroke	[cm³]	0.85
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.02/0.025
Max. permissible finger length	[mm]	28
Max. permissible mass per finger	[kg]	0.036
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	35 x 16 x 48

SWG 40

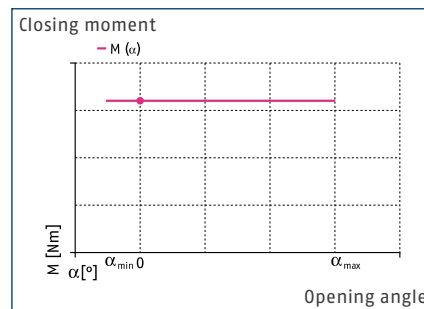
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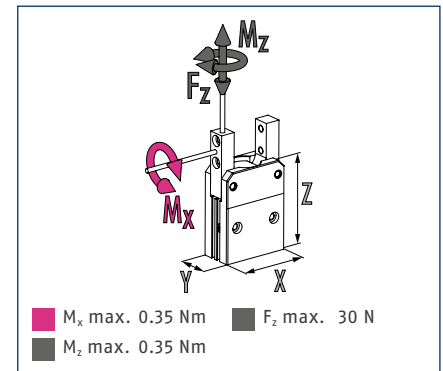
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

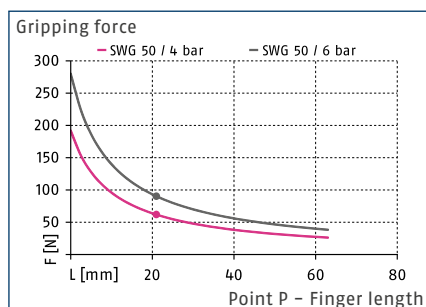
Technical data

Description		SWG 40
ID		0305108
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	1.2
Closing moment generated by spring	[Nm]	0.36
Weight	[kg]	0.106
Recommended workpiece weight	[kg]	0.24
Fluid consumption double stroke	[cm³]	1.6
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.025/0.03
Max. permissible finger length	[mm]	35
Max. permissible mass per finger	[kg]	0.05
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	40 x 20 x 52

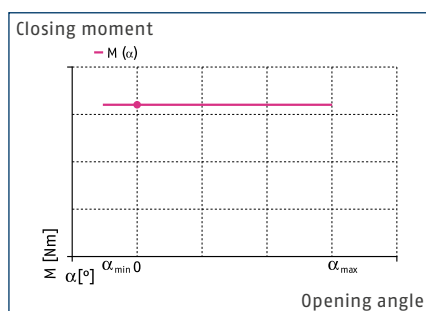
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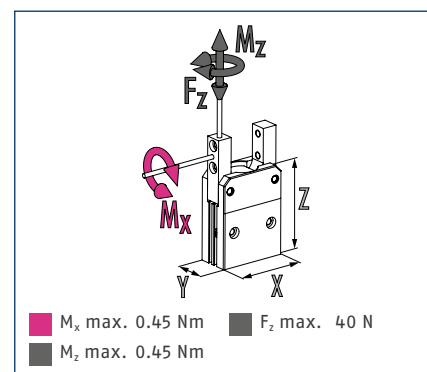
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		SWG 50
ID		0305109
Opening angle per jaw	[°]	15
Closed angle per jaw up to	[°]	7
Closing moment	[Nm]	2.8
Closing moment generated by spring	[Nm]	0.6
Weight	[kg]	0.213
Recommended workpiece weight	[kg]	0.46
Fluid consumption double stroke	[cm³]	3.8
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.03/0.06
Max. permissible finger length	[mm]	42
Max. permissible mass per finger	[kg]	0.08
Protection class IP		30
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.05
Dimensions X x Y x Z	[mm]	50 x 25 x 66

PWG-plus

Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper

Reliable. Robust. Compact. Universal Gripper PWG-plus

Robust 2-finger angular gripper with oval piston and bone drive

Field of Application

For universal use in clean and slightly dirty environments.

Advantages – Your benefits

Variable top jaw design since grippers are available in jaw version, but also in finger version via intermediate jaws

Gripping force maintenance for a high process reliability

Stroke limitation while opening optional available for confined spaces and short cycle times

Can be used in tough environments due to the gripper's sturdy set-up



Sizes
Quantity: 8



Weight
0.13 .. 13.6 kg



Gripping moment
3.32 .. 1025 Nm



Angle per jaw
15°



Workpiece weight
0.4 .. 23.13 kg



Functional Description

The kinematics transforms this vertical motion into a synchronous and rotatory gripping motion of the base jaws.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ③ **Drive**
Pneumatic oval piston for maximum driving force
- ④ **Lever mechanism**
For precise and synchronized gripping

General Notes about the Series

Operating principle: Force-guided lever gear

Housing material: Aluminum

Base jaw material: Hard-anodized, high strength aluminum

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering elements, O-rings for direct connection, fixed throttle (for sizes 50-200), assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

The indicated closing moment will be reached at an opening angle of 0°. A detailed closing moment course depending on the opening angle can be taken out of the diagram "closing moment course".

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Cross gantry for light to medium-weight components.

① Pneumatic line gantry LPP

② 2-finger angular gripper PWG-plus

SCHUNK offers more ...

The following components make the product PWG-plus even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Compensation unit



Manual change system



Tolerance compensation unit



Pressure maintenance valve



Flexible position sensor



Magnetic switch



Inductive proximity switch

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

High-temperature version V/HT: For use in hot environments

Force intensified version KVZ: If higher gripping forces are required

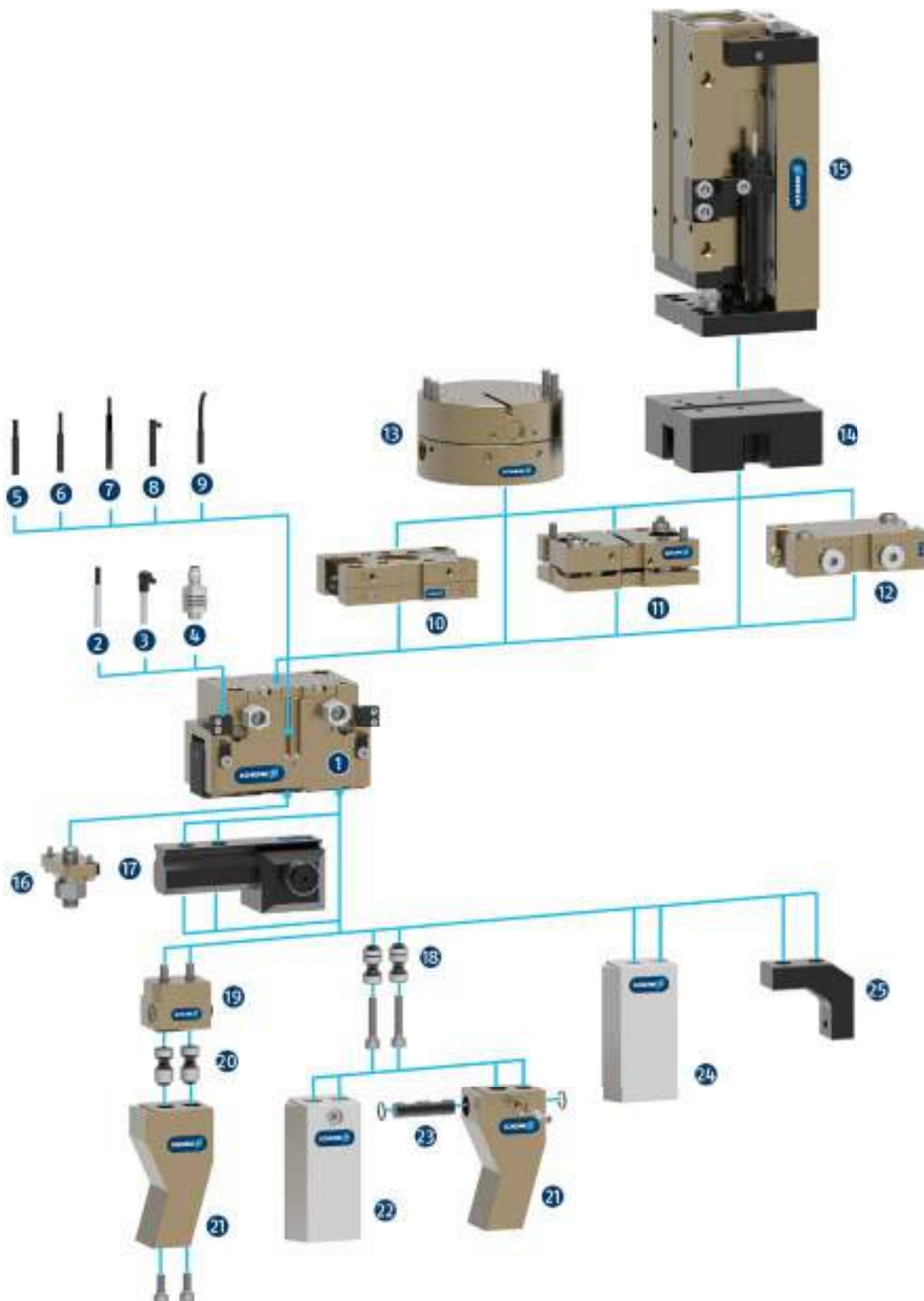
Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!

PWG-plus

Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper

SCHUNK Gripper PWG-plus

Overview Accessories



- 1 **PWG-plus**
Universal 2-finger angular gripper with a high gripping force

Sensor systems

- 2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet
- 3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet
- 4 **IN-C 80**
Inductive proximity switch, directly pluggable
- 5 **MMS 22**
Magnetic switch with straight cable outlet for monitoring a position

MMS 22-PI1
Magnetic switch with straight cable outlet for monitoring a freely programmable position
- 6 **MMS 22-PI2**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions
- 7 **MMS 22-PI1-HD**
MMS 22-PI1 in robust design

MMS 22-PI2-HD
MMS 22-PI2 in robust design
- 8 **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
- 9 **MMS-P**
Magnetic switch with straight cable outlet for monitoring two freely programmable positions

Complementary products

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

- 13 **AGE**
Compensation unit for compensation of large tolerances along the X and Y axes
- 14 **ASG**
Adapter plate for combining various automation components in the modular system
- 15 **CLM**
Linear module with pneumatic drive and scope-free pre-loaded junction rollers
- 16 **HVE**
Attachment kit for opening angle limitation

Finger accessory parts

- 17 **UZZ**
The universal intermediate jaw allows fast tool-free and safe plugging and shifting of top jaws on the gripper.
- 18 **BSWS-AR**
Adapter coupling of jaw quick-change system for fast, manual change of top jaws
- 19 **BSWS-B**
Locking mechanism of the jaw quick-change system for fast, manual exchange of top jaws
- 20 **BSWS-A**
Adapter coupling of the jaw quick-change system for adaptation to the customized finger
- 21 **Customized fingers**
- 22 **BSWS-ABR**
Finger blank made of aluminum with interface to the jaw quick-change system

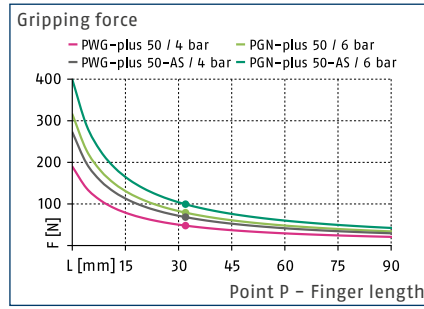
BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system
- 23 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers
- 24 **ABR/SBR**
Finger blanks made of steel or aluminum with standardized screw connection diagram
- 25 **ZBA**
Intermediate jaws for reorientation of the mounting surface

PWG-plus 50

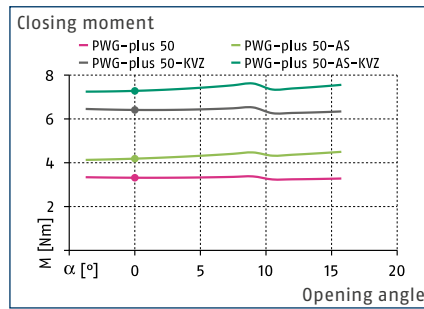
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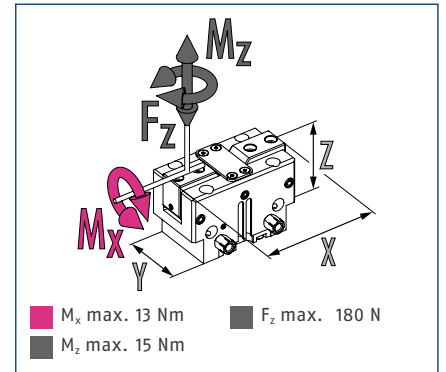
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

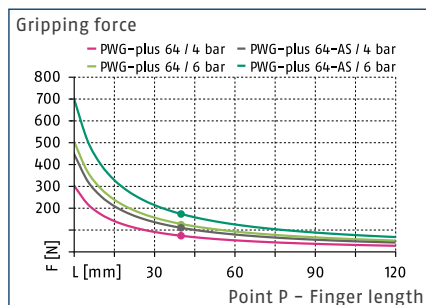
Technical data

Description		PWG-plus 50	PWG-plus 50-AS
ID		0311610	0311611
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	3.32	4.19
Closing moment generated by spring	[Nm]		0.87
Weight	[kg]	0.13	0.17
Recommended workpiece weight	[kg]	0.4	0.4
Fluid consumption double stroke	[cm³]	5.5	9
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.06/0.06	0.06/0.1
Max. permissible finger length	[mm]	64	64
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	5.3	5.3
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	56 x 30 x 38.5	56 x 30 x 54.5
Options and their characteristics			
High-temperature version, ID		39311610	39311611
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311615	0311616
Closing moment	[Nm]	6.41	7.28
Closing moment generated by spring	[Nm]		0.87
Weight	[kg]	0.17	0.22
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	64	64

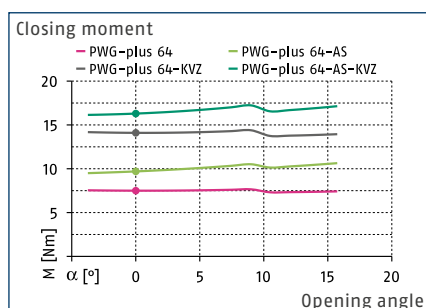
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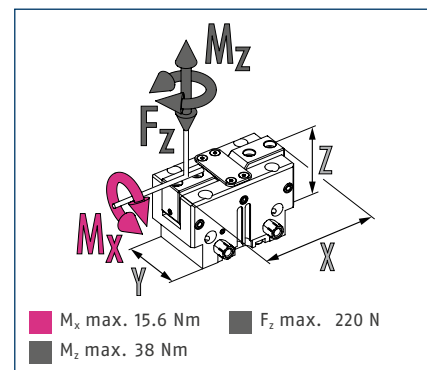
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

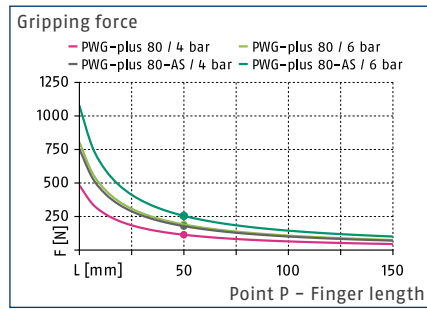
Description		PWG-plus 64	PWG-plus 64-AS
ID		0311620	0311621
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	6.8	9.4
Closing moment generated by spring	[Nm]		2.6
Weight	[kg]	0.24	0.33
Recommended workpiece weight	[kg]	0.65	0.65
Fluid consumption double stroke	[cm ³]	10	17
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.07/0.07	0.07/0.13
Max. permissible finger length	[mm]	80	80
Max. permissible mass moment of inertia per chuck jaw	[kgcm ²]	15	15
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	67 x 36 x 44.7	67 x 36 x 62.7
Options and their characteristics			
High-temperature version, ID		39311620	39311621
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311625	0311626
Closing moment	[Nm]	13.5	16.1
Closing moment generated by spring	[Nm]		2.6
Weight	[kg]	0.31	0.39
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	80	80

PWG-plus 80

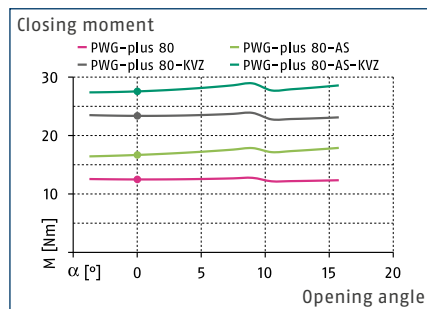
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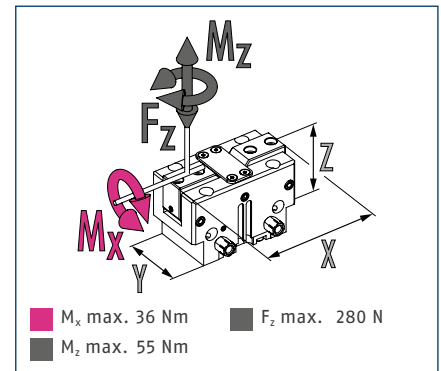
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

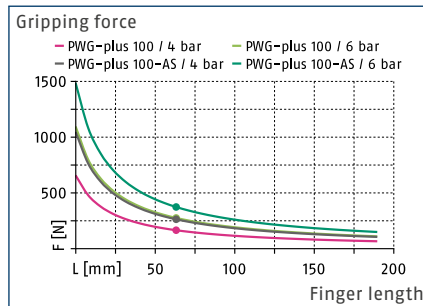
Technical data

Description		PWG-plus 80	PWG-plus 80-AS
ID		0311630	0311631
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	12.5	16.7
Closing moment generated by spring	[Nm]		4.2
Weight	[kg]	0.39	0.49
Recommended workpiece weight	[kg]	0.97	0.97
Fluid consumption double stroke	[cm³]	20	33.5
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.08/0.08	0.08/0.15
Max. permissible finger length	[mm]	100	100
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	37.3	37.3
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	80 x 42 x 53.5	80 x 42 x 71.5
Options and their characteristics			
High-temperature version, ID		39311630	39311631
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311635	0311636
Closing moment	[Nm]	23.4	27.6
Closing moment generated by spring	[Nm]		4.2
Weight	[kg]	0.54	0.64
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	100	100

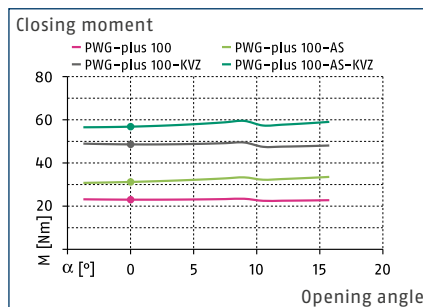
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pwg-plus



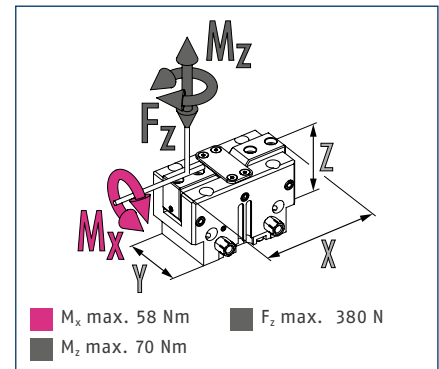
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

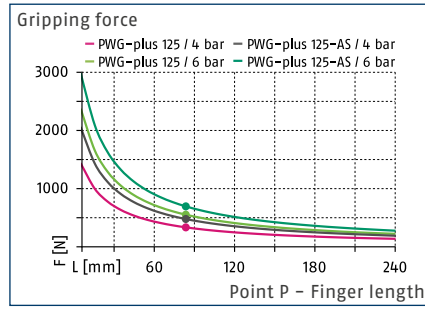
Description		PWG-plus 100	PWG-plus 100-AS
ID		0311640	0311641
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	23	31.2
Closing moment generated by spring	[Nm]		8.2
Weight	[kg]	0.76	0.95
Recommended workpiece weight	[kg]	1.4	1.4
Fluid consumption double stroke	[cm³]	40.5	74
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.12/0.12	0.12/0.18
Max. permissible finger length	[mm]	125	125
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	74.7	74.7
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	100 x 50 x 65	100 x 50 x 91
Options and their characteristics			
High-temperature version, ID		39311640	39311641
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311645	0311646
Closing moment	[Nm]	48.6	56.8
Closing moment generated by spring	[Nm]		8.2
Weight	[kg]	1	1.25
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	125	125

PWG-plus 125

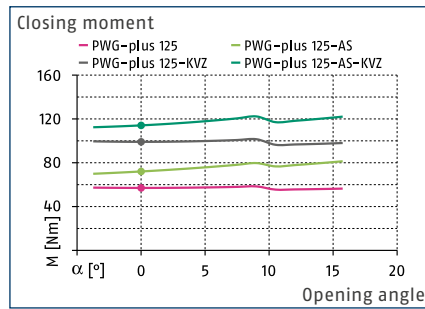
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



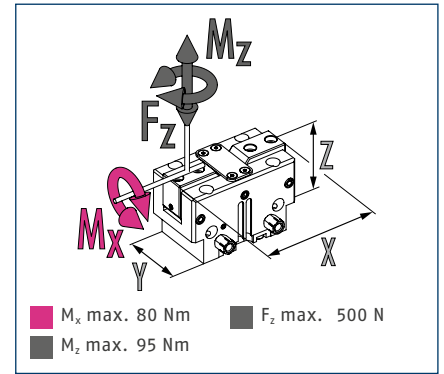
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

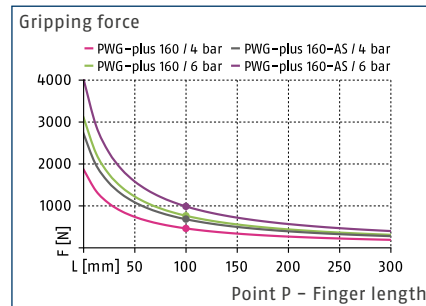
Technical data

Description		PWG-plus 125	PWG-plus 125-AS
ID		0311650	0311651
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	57	72
Closing moment generated by spring	[Nm]		15
Weight	[kg]	1.35	1.85
Recommended workpiece weight	[kg]	2.78	2.78
Fluid consumption double stroke	[cm³]	75.5	107
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.14/0.14	0.12/0.2
Max. permissible finger length	[mm]	160	160
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	203.9	203.9
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	125 x 60 x 80	125 x 60 x 110
Options and their characteristics			
High-temperature version, ID		39311650	39311651
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311655	0311656
Closing moment	[Nm]	99	114
Closing moment generated by spring	[Nm]		15
Weight	[kg]	1.85	2.3
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	160	160

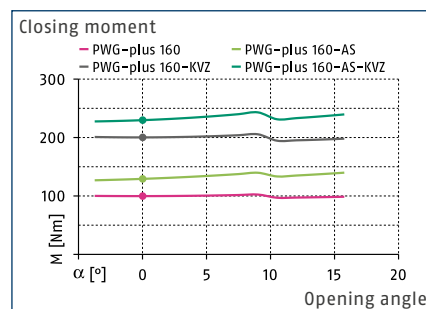
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pwg-plus



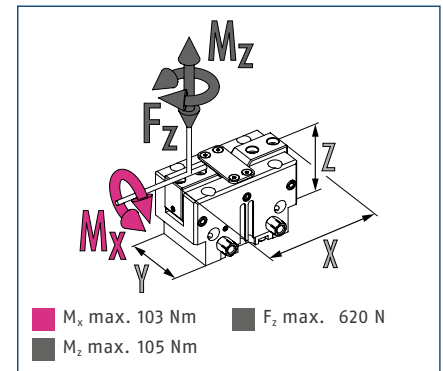
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

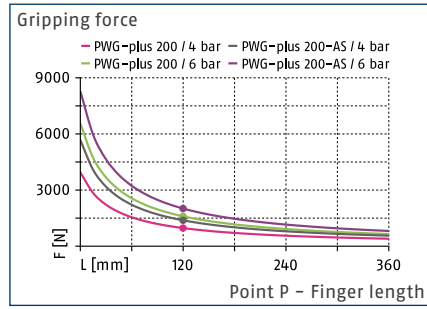
Description		PWG-plus 160	PWG-plus 160-AS
ID		0311660	0311661
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	100	129.5
Closing moment generated by spring	[Nm]		29.5
Weight	[kg]	2.12	3.12
Recommended workpiece weight	[kg]	3.86	3.86
Fluid consumption double stroke	[cm³]	135	178
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.16/0.13	0.13/0.21
Max. permissible finger length	[mm]	200	200
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	560.7	560.7
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	152 x 72 x 87.5	152 x 72 x 127.5
Options and their characteristics			
High-temperature version, ID		39311660	39311661
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311665	0311666
Closing moment	[Nm]	200	229.5
Closing moment generated by spring	[Nm]		29.5
Weight	[kg]	2.92	3.92
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	200	200

PWG-plus 200

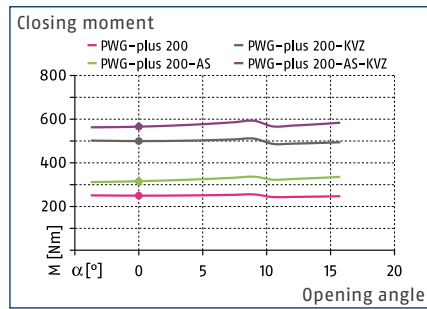
Pneumatic Grippers | 2-Finger Angular Grippers | Angular Gripper



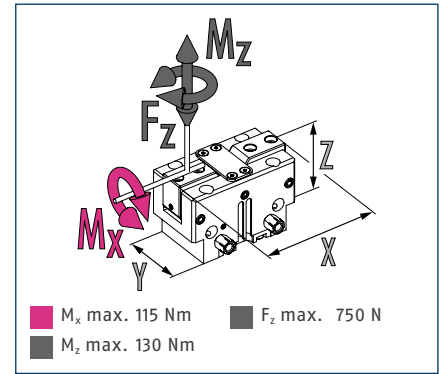
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

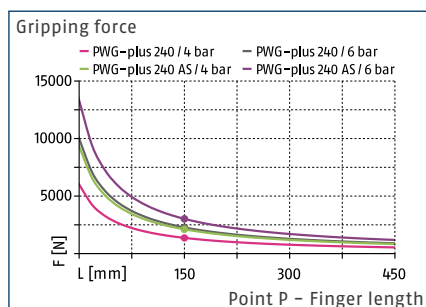
Technical data

Description		PWG-plus 200	PWG-plus 200-AS
ID		0311670	0311671
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	250	316
Closing moment generated by spring	[Nm]		66
Weight	[kg]	4.9	7
Recommended workpiece weight	[kg]	8.06	8.06
Fluid consumption double stroke	[cm³]	338	442
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.32/0.25	0.2/0.32
Max. permissible finger length	[mm]	240	240
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	1228.1	1228.1
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	193 x 100 x 114.9	193 x 100 x 164.9
Options and their characteristics			
High-temperature version, ID		39311670	39311671
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311675	0311676
Closing moment	[Nm]	500	566
Closing moment generated by spring	[Nm]		66
Weight	[kg]	6.3	8.5
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	240	240

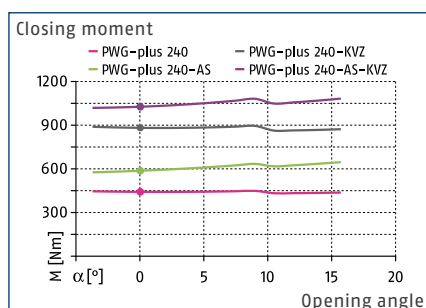
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pwg-plus



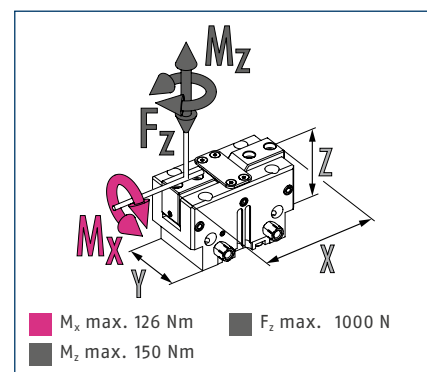
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		PWG-plus 240	PWG-plus 240-AS
ID		0311680	0311681
Opening angle per jaw	[°]	15	15
Closed angle per jaw	[°]	3	3
Closing moment	[Nm]	440	585
Closing moment generated by spring	[Nm]		145
Weight	[kg]	7.8	11.3
Recommended workpiece weight	[kg]	11.57	11.57
Fluid consumption double stroke	[cm ³]	556	726
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.32/0.25	0.25/0.46
Max. permissible finger length	[mm]	300	300
Max. permissible mass moment of inertia per chuck jaw	[kgcm ²]	3113.3	3113.3
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02
Dimensions X x Y x Z	[mm]	236 x 115 x 134.1	236 x 115 x 190.6
Options and their characteristics			
High-temperature version, ID		39311680	39311681
Min./max. ambient temperature	[°C]	5/130	5/130
Force intensified version, ID		0311685	0311686
Closing moment	[Nm]	880	1025
Closing moment generated by spring	[Nm]		145
Weight	[kg]	10.1	13.6
Maximum pressure	[bar]	6	6
Max. permissible finger length	[mm]	300	300

SGW

Pneumatic Grippers | 3-Finger Angular Grippers | Angular Gripper

Light. Fast. Flexible.

Gripper for Small Components SGW

Small, simple pressurized plastic angular gripper with spring reset

Field of Application

Universal application in clean and slightly dirty environments, with special requirements on corrosion resistance and anti-static properties of the gripping unit.

Advantages – Your benefits

Housing made of plastic making the gripper extremely light and free from corrosion

One-way acting 3-fold piston drive with lever gear for high power transmission and synchronized gripping

Spring-loaded pressure piece for optional pressing and separating of workpieces

Favorable in price especially suitable for low-budget applications



Sizes
Quantity: 3



Weight
0.05 .. 0.17 kg



Gripping moment
1.35 .. 7.45 Nm



Angle per jaw
8°



Workpiece weight
0.3 .. 1.3 kg



Functional Description

The horizontally arranged pistons are pressed away from each other by compressed air.

The base jaws are opened at an angle and in a synchronized fashion by the bearing-mounted lever mechanism.

Reset is done by pressure spring.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Lever mechanism**
For precise and synchronized gripping
- ③ **Drive**
Single-acting double piston system with spring reset
- ④ **Housing**
Weight-optimized due to the use of plastics

General Notes about the Series

Operating principle: One-way acting 3-fold piston with lever gear and spring reset

Housing material: Plastic with metal functional components

Base jaw material: Plastic

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering pins, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Not possible

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Robot handling with gripper unit for loading and unloading of round plastic sleeves, are weight-optimized due to the use of plastic components.

- ① 3-finger angular gripper SGW



SCHUNK offers more ...

The following components make the product SGW even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Pressure maintenance valve



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

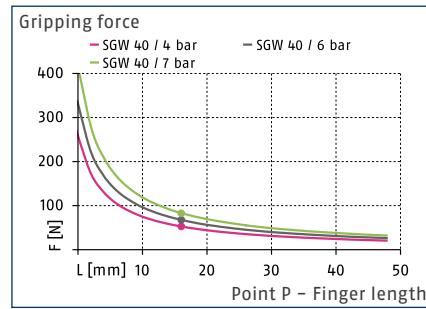
Due to the use of plastics, this gripper is characterized by a low weight.

SGW 40

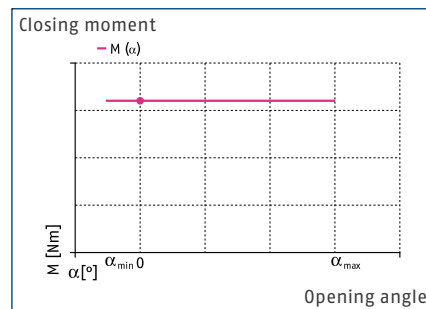
Pneumatic Grippers | 3-Finger Angular Grippers | Angular Gripper



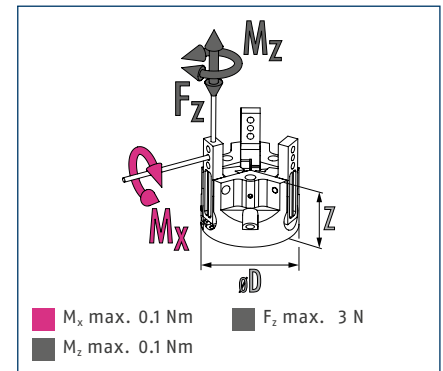
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

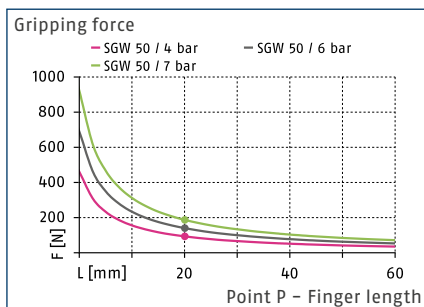
Technical data

Description		SGW 40
ID		0305204
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	1.35
Weight	[kg]	0.05
Recommended workpiece weight	[kg]	0.3
Fluid consumption double stroke	[cm ³]	0.5
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.02/0.03
Max. permissible finger length	[mm]	32
Max. permissible mass per finger	[kg]	0.03
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions $\emptyset D \times Z$	[mm]	40.5 x 28

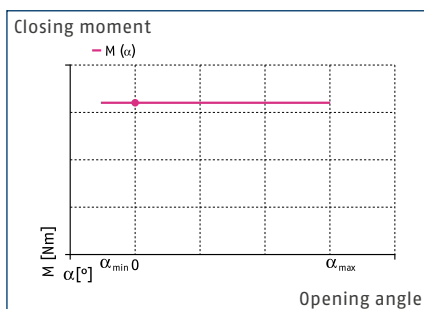
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/sgw



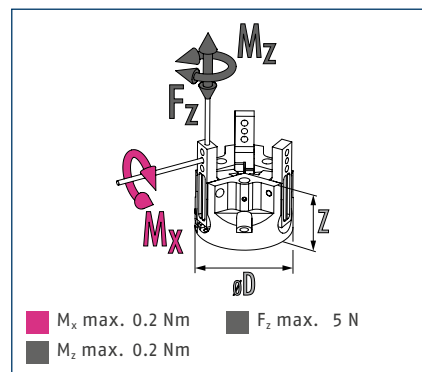
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



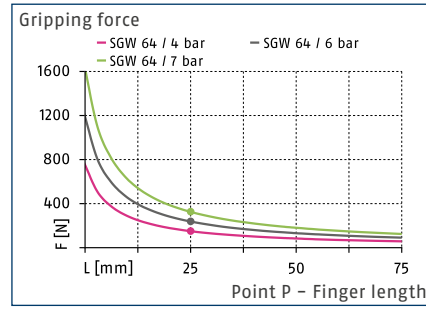
① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

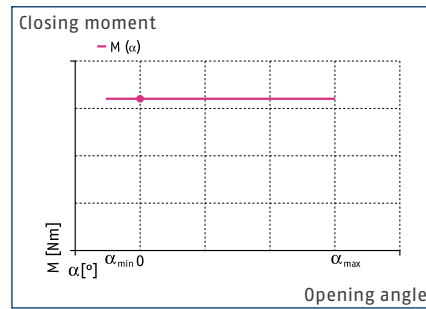
Description		SGW 50
ID		0305205
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	3.55
Weight	[kg]	0.09
Recommended workpiece weight	[kg]	0.6
Fluid consumption double stroke	[cm ³]	1
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.02/0.03
Max. permissible finger length	[mm]	40
Max. permissible mass per finger	[kg]	0.05
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions Ø D x Z	[mm]	50 x 35



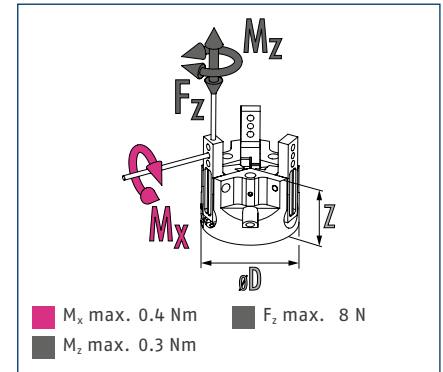
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads

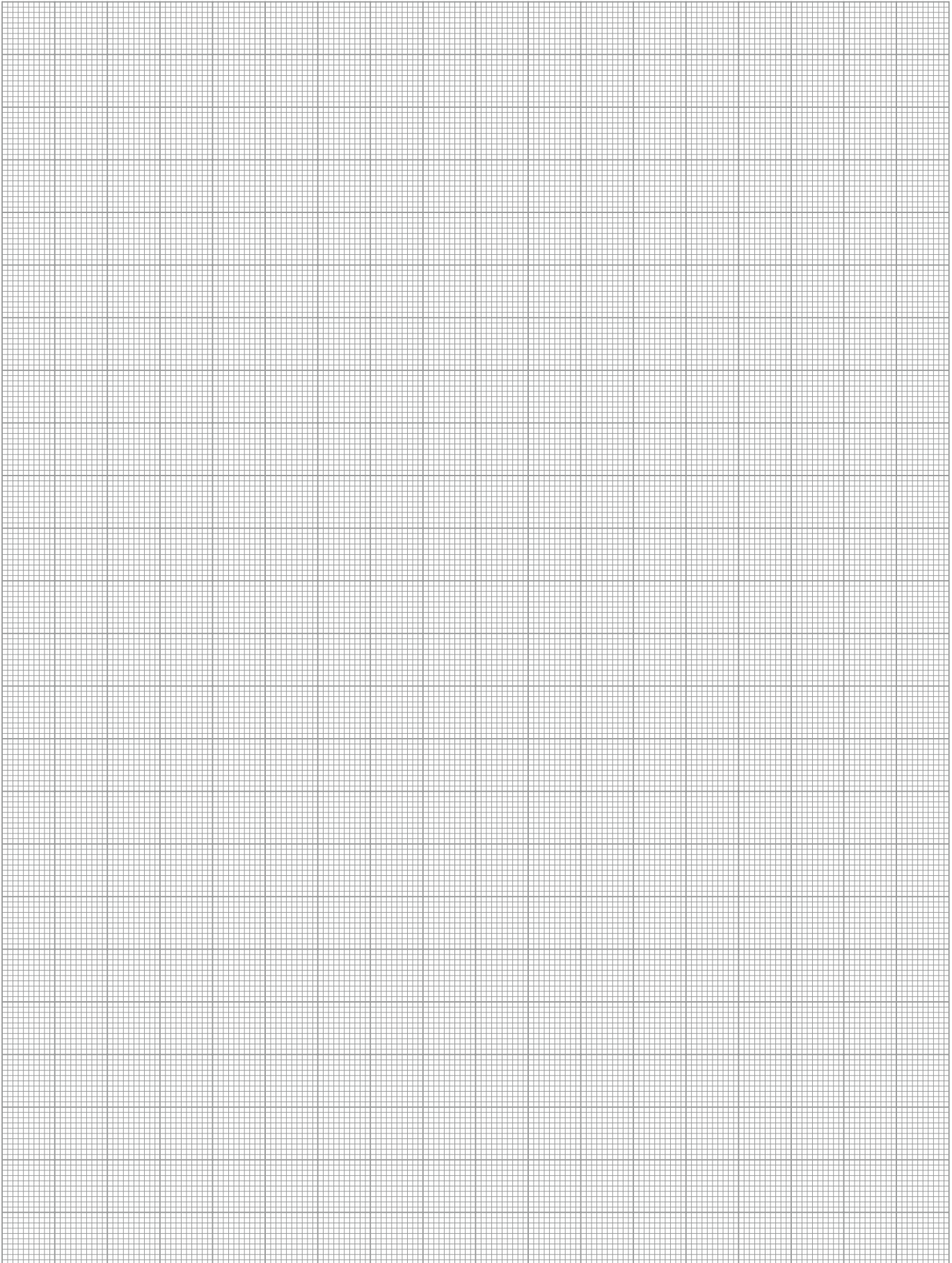


① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data




Description		SGW 64
ID		0305206
Opening angle per jaw	[°]	8
Closed angle per jaw up to	[°]	2
Closing moment	[Nm]	7.45
Weight	[kg]	0.17
Recommended workpiece weight	[kg]	1.3
Fluid consumption double stroke	[cm ³]	1.8
Min./nom./max. operating pressure	[bar]	4/6/7
Closing/opening time	[s]	0.02/0.03
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.07
Protection class IP		20
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions $\varnothing D \times Z$	[mm]	64 x 44

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/sgw



Pneumatic Grippers

Product Quickfinder

	Page	Image	Opening angle [°]		Gripping moment [Nm]		
			1 – 100	100 – 200	0 – 10	10 – 100	100 – 1000
2-finger radial gripper							
Radial gripper PRG • Integrated damping	334		█	30 – 90	█	█	2 – 265
Radial gripper DRG • Sealed gripper	346		█	10 – 90	█	█	8.2 – 143
Angular parallel gripper GAP	356		█	30 – 90	█	█	92 – 430

	Ambient conditions					Cleanroom	Variant variety	Variety of sensor systems
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C			
	●	○				○	++	++
	●	●	●	●	●	○	++	++
	●	○				○	++	+

● = Very highly suitable ● = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection



Flexible. Powerful. Narrow.

Universal Gripper PRG

180° radial gripper with powerful 1-shift slotted link gear and oval piston

Field of Application

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.

Advantages – Your benefits

Kinematics the 1-shift slotted link gear ensures a constant closing moment from -5° to $+7^\circ$.

Optimized cycle time due to innovative damping directly integrated drive chain

Maximum compact performance for higher closing moments, longer and stable gripper fingers

Many options ensure a higher degree of flexibility adjusted to the individual application, the PRG is also available with a mechanic gripping force maintenance, as a high-temperature version, and with three opening angle versions $30^\circ/60^\circ/90^\circ$

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



 <p>Sizes Quantity: 8</p>	 <p>Weight 0.13 .. 6.72 kg</p>	 <p>Gripping moment 2 .. 265 Nm</p>	 <p>Angle per jaw 30 .. 90°</p>	 <p>Workpiece weight 0.3 .. 6.96 kg</p>
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Functional Description

The patented "1-shift slotted link gear" converts the movement into a powerful closing moment. The closing moment is additionally reinforced by the curved shape of the guidance.

In addition to a rapid stroke behaviour the slotted link also ensures a nearly constant closing moment over a large closing angle range.



- ① **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ② **Base jaw**
For the connection of workpiece-specific gripper fingers
- ③ **Kinematics**
Slotted link gear for very high gripping forces when the workpiece is contacted
- ④ **Damping**
Decouples the drive, for shorter cycle times
- ⑤ **Monitoring**
Integrated end position monitoring with magnetic switches

General Notes about the Series

Operating principle: Slotted link gear

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

The indicated closing moment will be reached at an opening angle of 0°. A detailed closing moment course depending on the opening angle can be taken out of the diagram "closing moment course".

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Gripper/swivel combination for handling of small shafts. The 180° opening angle of the gripper replaces a stroke unit which otherwise would be necessary.

- ① 2-finger radial gripper PRG
- ② Swivel unit SRU-plus
- ③ Universal linear module Beta



SCHUNK offers more ...

The following components make the product PRG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Universal swivel unit



Linear module



Quick-change system



Rotary feed-through



Inductive proximity switch



Magnetic switch



Programmable magnetic switch



Pressure maintenance valve switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

180° radial grippers are advantageous since further stroke motions are no more necessary. Since every jaw swivels away by 90°, the gripper is outside of the working area, and a stroke motion back of the whole gripper is no more necessary.

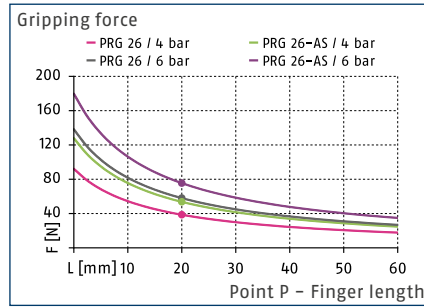
Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

High-temperature version V/HT: For use in hot environments

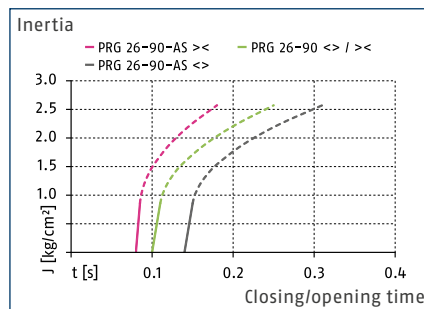
Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!



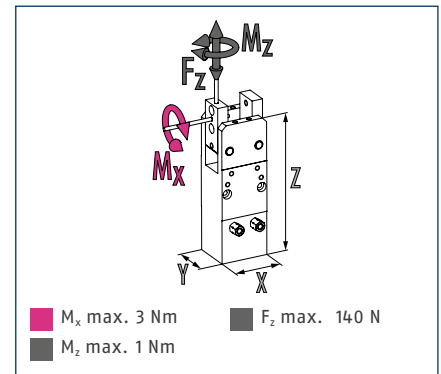
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

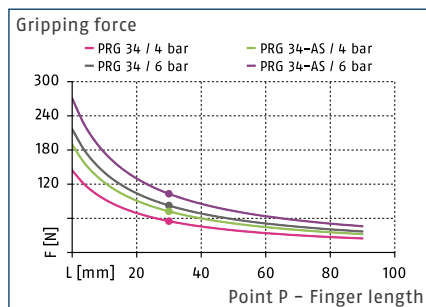
Description		PRG 26-30	PRG 26-30-AS	PRG 26-60	PRG 26-60-AS	PRG 26-90	PRG 26-90-AS
ID		0303651	0303661	0303691	0303701	0303671	0303681
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	2	2.6	2	2.6	2	2.6
Closing moment generated by spring	[Nm]		0.6		0.6		0.6
Weight	[kg]	0.13	0.135	0.13	0.135	0.13	0.135
Recommended workpiece weight	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Fluid consumption double stroke	[cm³]	6.5	6.5	7.5	7.5	9	9
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.06/0.06	0.06/0.08	0.08/0.08	0.08/0.11	0.1/0.1	0.09/0.14
Closing time with spring only	[s]		0.05		0.10		0.13
Max. permissible finger length	[mm]	40	40	40	40	40	40
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	0.86	0.86	0.86	0.86	0.86	0.86
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	26 x 22 x 76	26 x 22 x 76	26 x 22 x 76	26 x 22 x 76	26 x 22 x 76	26 x 22 x 76
Options and their characteristics							
High-temperature version, ID		39303651	39303661	39303691	39303701	39303671	39303681
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.

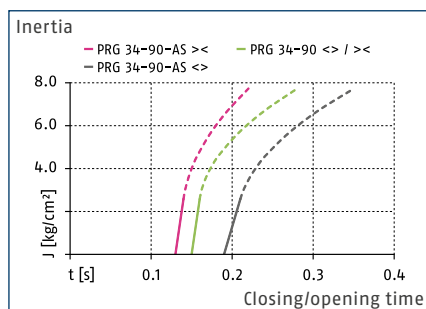
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/prg



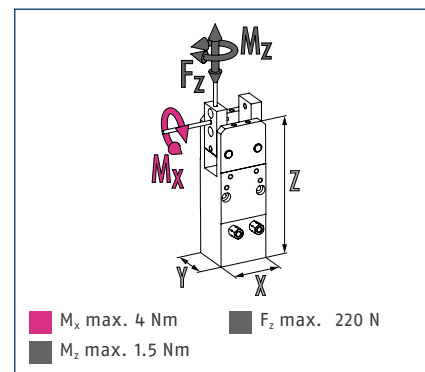
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

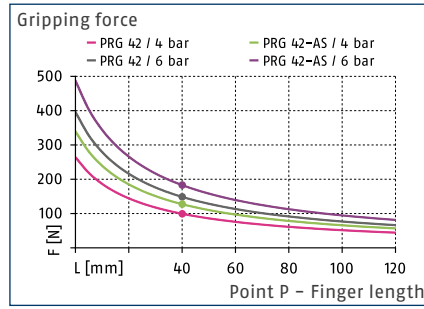
Technical data

Description		PRG 34-30	PRG 34-30-AS	PRG 34-60	PRG 34-60-AS	PRG 34-90	PRG 34-90-AS
ID		0303652	0303662	0303692	0303702	0303672	0303682
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	4	5	4	5	4	5
Closing moment generated by spring	[Nm]		1		1		1
Weight	[kg]	0.24	0.25	0.24	0.25	0.24	0.25
Recommended workpiece weight	[kg]	0.42	0.42	0.42	0.42	0.42	0.42
Fluid consumption double stroke	[cm³]	12	12	14.5	14.5	17.5	17.5
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.08/0.08	0.08/0.13	0.12/0.12	0.11/0.16	0.15/0.15	0.13/0.19
Closing time with spring only	[s]		0.07		0.14		0.21
Max. permissible finger length	[mm]	60	60	60	60	60	60
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	2.58	2.58	2.58	2.58	2.58	2.58
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	34 x 26 x 93	34 x 26 x 93	34 x 26 x 93	34 x 26 x 93	34 x 26 x 93	34 x 26 x 93
Options and their characteristics							
High-temperature version, ID		39303652	39303662	39303692	39303702	39303672	39303682
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

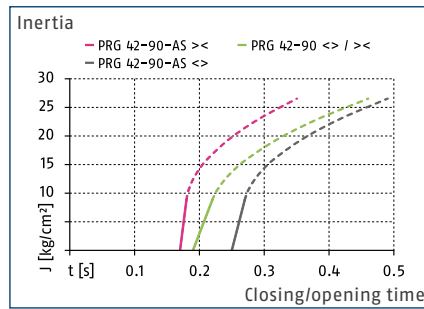
* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.



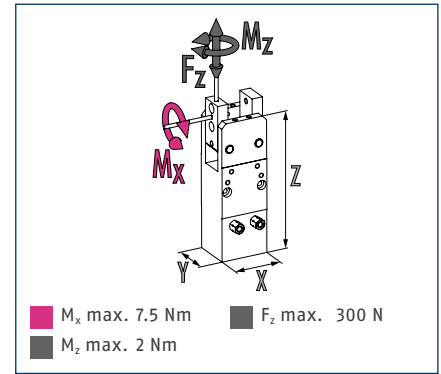
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

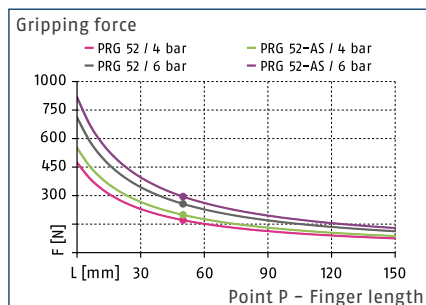
Description		PRG 42-30	PRG 42-30-AS	PRG 42-60	PRG 42-60-AS	PRG 42-90	PRG 42-90-AS
ID		0303653	0303663	0303693	0303703	0303673	0303683
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	9.5	11.7	9.5	11.7	9.5	11.7
Closing moment generated by spring	[Nm]		2.2		2.2		2.2
Weight	[kg]	0.41	0.43	0.41	0.43	0.41	0.43
Recommended workpiece weight	[kg]	0.76	0.76	0.76	0.76	0.76	0.76
Fluid consumption double stroke	[cm³]	29	29	34	34	39	39
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.1/0.1	0.1/0.15	0.13/0.13	0.11/0.17	0.19/0.19	0.17/0.25
Closing time with spring only	[s]		0.10		0.21		0.32
Max. permissible finger length	[mm]	80	80	80	80	80	80
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	8.85	8.85	8.85	8.85	8.85	8.85
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	42 x 30 x 116	42 x 30 x 116	42 x 30 x 116	42 x 30 x 116	42 x 30 x 116	42 x 30 x 116
Options and their characteristics							
High-temperature version, ID		39303653	39303663	39303693	39303703	39303673	39303683
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible.
The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.

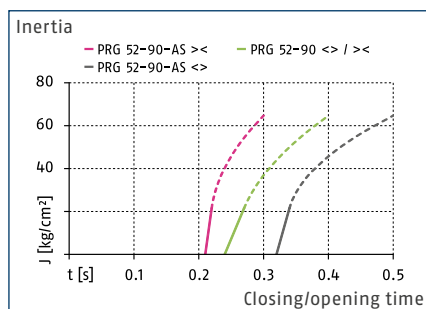
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/prg



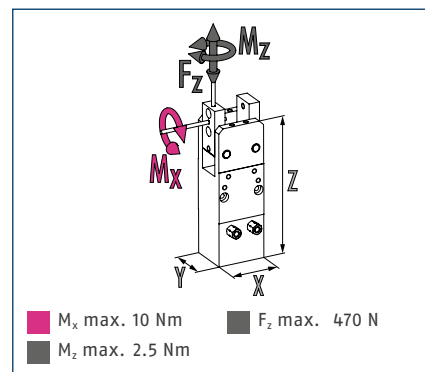
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

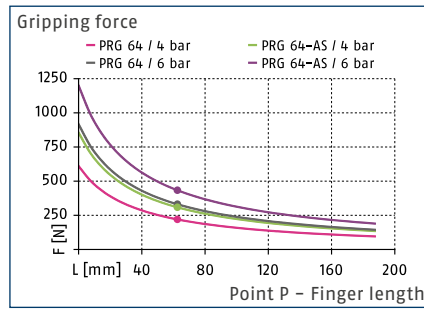
Technical data

Description		PRG 52-30	PRG 52-30-AS	PRG 52-60	PRG 52-60-AS	PRG 52-90	PRG 52-90-AS
ID		0303654	0303664	0303694	0303704	0303674	0303684
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	20	23	20	23	20	23
Closing moment generated by spring	[Nm]		3		3		3
Weight	[kg]	0.77	0.8	0.76	0.8	0.75	0.79
Recommended workpiece weight	[kg]	1.3	1.3	1.3	1.3	1.3	1.3
Fluid consumption double stroke	[cm³]	52	52	61	61	72	72
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.11/0.11	0.12/0.18	0.19/0.19	0.19/0.25	0.24/0.24	0.21/0.32
Closing time with spring only	[s]		0.13		0.25		0.37
Max. permissible finger length	[mm]	100	100	100	100	100	100
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	21.55	21.55	21.55	21.55	21.55	21.55
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	52 x 36 x 138	52 x 36 x 138	52 x 36 x 138	52 x 36 x 138	52 x 36 x 138	52 x 36 x 138
Options and their characteristics							
High-temperature version, ID		39303654	39303664	39303694	39303704	39303674	39303684
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

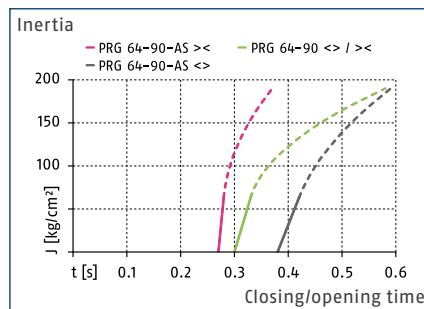
* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.



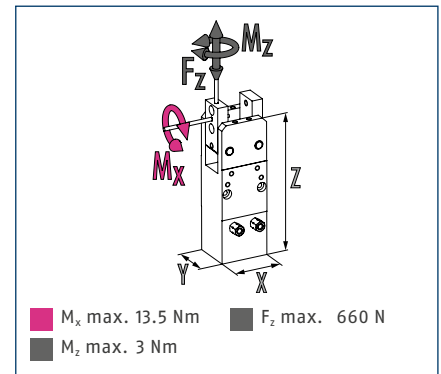
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

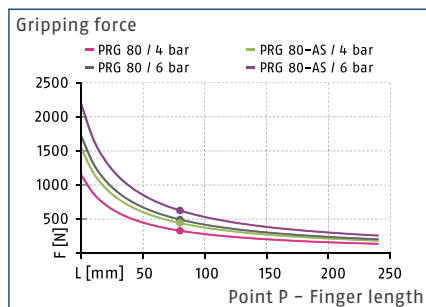
Description		PRG 64-30	PRG 64-30-AS	PRG 64-60	PRG 64-60-AS	PRG 64-90	PRG 64-90-AS
ID		0303655	0303665	0303695	0303705	0303675	0303685
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	32.5	42.5	32.5	42.5	32.5	42.5
Closing moment generated by spring	[Nm]		10		10		10
Weight	[kg]	1.35	1.42	1.34	1.41	1.33	1.4
Recommended workpiece weight	[kg]	1.69	1.69	1.69	1.69	1.69	1.69
Fluid consumption double stroke	[cm³]	88	88	102	102	120	120
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.22/0.22	0.21/0.29	0.3/0.3	0.27/0.38	0.38/0.38	0.37/0.47
Closing time with spring only	[s]		0.14		0.28		0.42
Max. permissible finger length	[mm]	125	125	125	125	125	125
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	63.37	63.37	63.37	63.37	63.37	63.37
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	64 x 42 x 170	64 x 42 x 170	64 x 42 x 170	64 x 42 x 170	64 x 42 x 170	64 x 42 x 170
Options and their characteristics							
High-temperature version, ID		39303655	39303665	39303695	39303705	39303675	39303685
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.

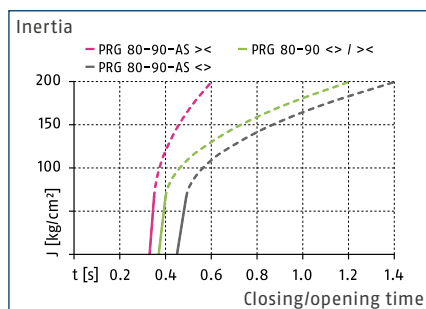
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/prg



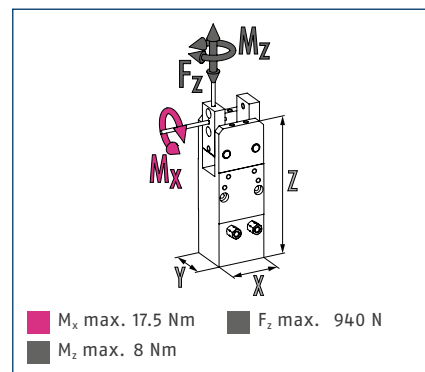
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

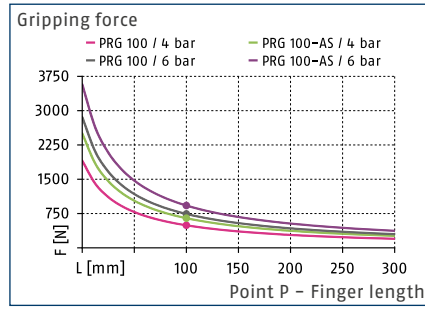
Technical data

Description		PRG 80-30	PRG 80-30-AS	PRG 80-60	PRG 80-60-AS	PRG 80-90	PRG 80-90-AS
ID		0303656	0303666	0303696	0303706	0303676	0303686
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	55	70	55	70	55	70
Closing moment generated by spring	[Nm]		15		15		15
Weight	[kg]	2.17	2.26	2.16	2.25	2.15	2.24
Recommended workpiece weight	[kg]	2.5	2.5	2.5	2.5	2.5	2.5
Fluid consumption double stroke	[cm³]	128	128	143	143	160	160
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.17/0.17	0.17/0.25	0.27/0.27	0.24/0.34	0.37/0.37	0.33/0.45
Closing time with spring only	[s]		0.18		0.35		0.52
Max. permissible finger length	[mm]	160	160	160	160	160	160
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	66.44	66.44	66.44	66.44	66.44	66.44
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	80 x 50 x 166	80 x 50 x 166	80 x 50 x 166	80 x 50 x 166	80 x 50 x 166	80 x 50 x 166
Options and their characteristics							
High-temperature version, ID		39303656	39303666	39303696	39303706	39303676	39303686
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

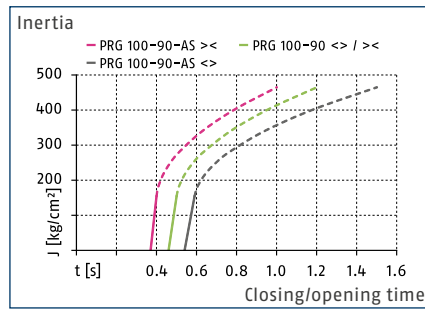
* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.



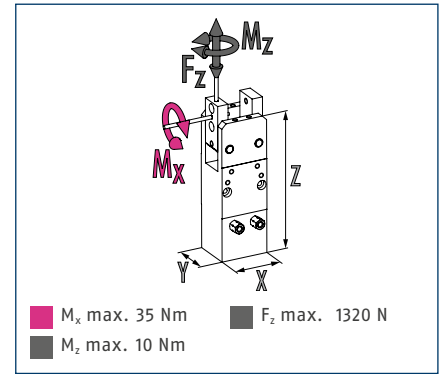
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

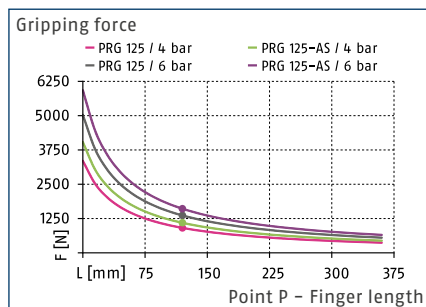
Description		PRG 100-30	PRG 100-30-AS	PRG 100-60	PRG 100-60-AS	PRG 100-90	PRG 100-90-AS
ID		0303657	0303667	0303697	0303707	0303677	0303687
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	100	125	100	125	100	125
Closing moment generated by spring	[Nm]		25		25		25
Weight	[kg]	3.67	3.81	3.66	3.8	3.64	3.78
Recommended workpiece weight	[kg]	3.78	3.78	3.78	3.78	3.78	3.78
Fluid consumption double stroke	[cm³]	230	230	260	260	290	290
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.23/0.23	0.21/0.33	0.34/0.34	0.29/0.42	0.46/0.46	0.37/0.54
Closing time with spring only	[s]		0.20		0.40		0.60
Max. permissible finger length	[mm]	200	200	200	200	200	200
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	155.2	155.2	155.2	155.2	155.2	155.2
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	100 x 60 x 185	100 x 60 x 185	100 x 60 x 185	100 x 60 x 185	100 x 60 x 185	100 x 60 x 185
Options and their characteristics							
High-temperature version, ID		39303657	39303667	39303697	39303707	39303677	39303687
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.

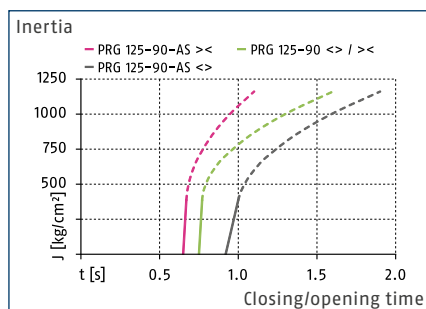
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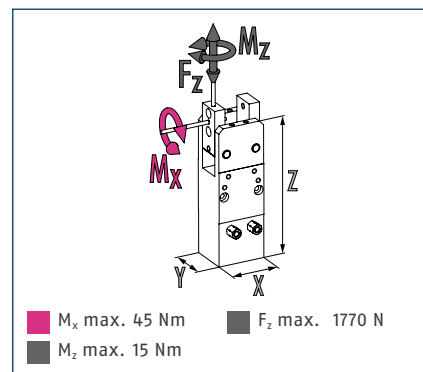
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		PRG 125-30	PRG 125-30-AS	PRG 125-60	PRG 125-60-AS	PRG 125-90	PRG 125-90-AS
ID		0303658	0303668	0303698	0303708	0303678	0303688
Opening angle per jaw	[°]	30	30	60	60	90	90
Closed angle per jaw	[°]	3	3	3	3	3	3
Closing moment	[Nm]	225	265	225	265	225	265
Closing moment generated by spring	[Nm]		70		70		70
Weight	[kg]	6.49	6.72	6.48	6.71	6.46	6.69
Recommended workpiece weight	[kg]	6.96	6.96	6.96	6.96	6.96	6.96
Fluid consumption double stroke	[cm³]	475	475	520	520	580	580
Min./nom./max. operating pressure	[bar]	2/6/8	4/6/6.5	2/6/8	4/6/6.5	2/6/8	4/6/6.5
Closing/opening time	[s]	0.4/0.4	0.39/0.62	0.58/0.58	0.54/0.79	0.75/0.75	0.65/0.92
Closing time with spring only	[s]		0.35		0.70		1.00
Max. permissible finger length	[mm]	240	240	240	240	240	240
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	386.8	386.8	386.8	386.8	386.8	386.8
Protection class IP		20	20	20	20	20	20
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy	[mm]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	125 x 72 x 220	125 x 72 x 220	125 x 72 x 220	125 x 72 x 220	125 x 72 x 220	125 x 72 x 220
Options and their characteristics							
High-temperature version, ID		39303658	39303668	39303698	39303708	39303678	39303688
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible. The curve applies for 90° versions. For other versions the curve must be parallelly off-set according to the opening and closing times.

DRG

Pneumatic Grippers | 2-Finger Radial Grippers | Sealed Gripper

Fully encapsulated. Narrow. Flexible.

Sealed Gripper DRG

Sealed 180° angular gripper for the use in contaminated environments

Field of Application

For applications requiring a large opening range. Particularly suitable for the use in dirty environments.

Advantages – Your benefits

Completely sealed gripper version allows applications in dirty environments

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems

Equipped with gripping force maintenance device ensuring that the workpiece stays gripped in case of power drop

Opening angle adjustable from 20° to 180° for a versatile field of applications

Kinematics slotted link gear for centric gripping with large opening/closing movements



Sizes
Quantity: 5



Weight
0.5 .. 4.46 kg



Gripping moment
8.2 .. 144.4 Nm



Angle per jaw
90°



Workpiece weight
0.9 .. 7.2 kg

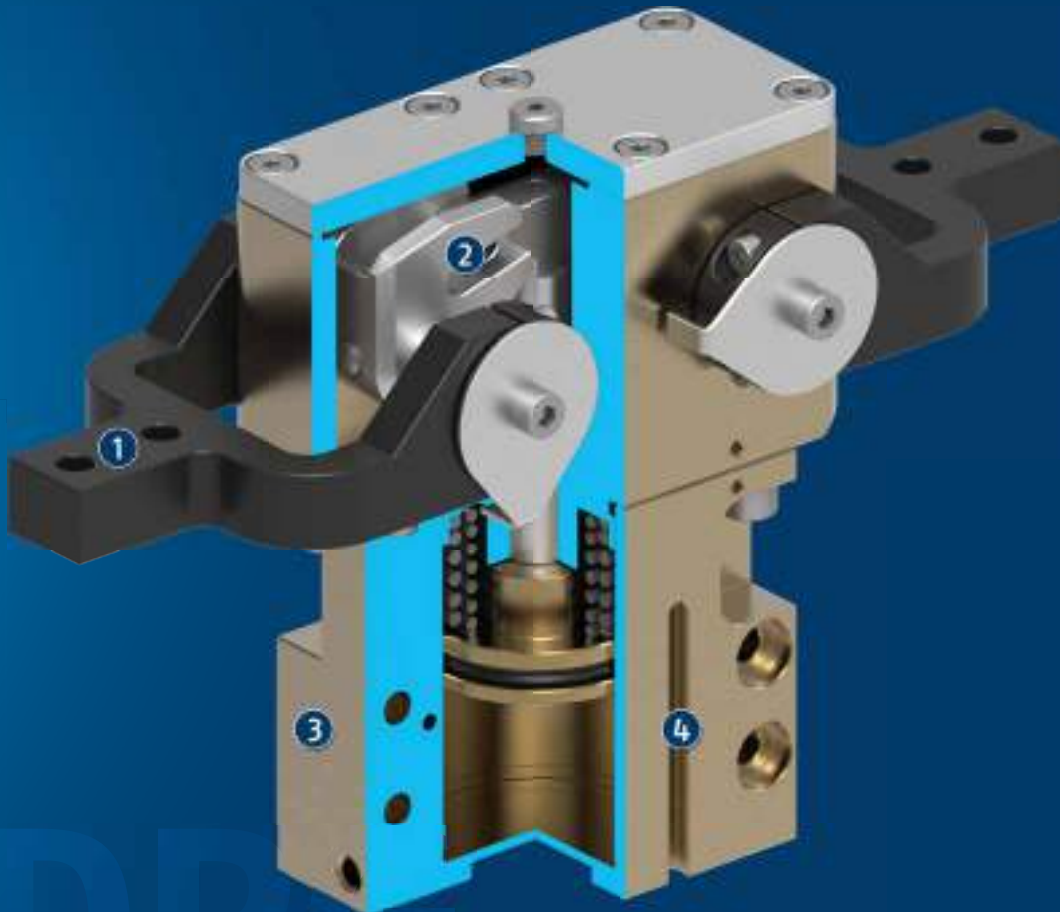


Functional Description

The round piston is pushed upwards or downwards with compressed air.

In the process, the two pins of the slotted link gear move in unison and relative to the groove in the top jaws. In the

gripping moment, these two pins reach the largest lever arm.



① **Base fingers**

For the connection of workpiece-specific gripper fingers

② **Kinematics**

Slotted link gear for centric gripping with large opening/closing movements

③ **Housing**

Is weight-optimized due to the use of high-strength aluminum alloy

④ **Position monitoring**

Via C-slot switch

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Brackets for proximity switches, centering sleeves, O-rings for direct connection, exhaust throttles, assembly instructions (operating manual with declaration of incorporation available online)

Gripping force maintenance: Always integrated by using springs, and also possible via pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

The indicated closing moment will be reached at an opening angle of 0°. A detailed closing moment course depending on the opening angle can be taken out of the diagram "closing moment course".

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

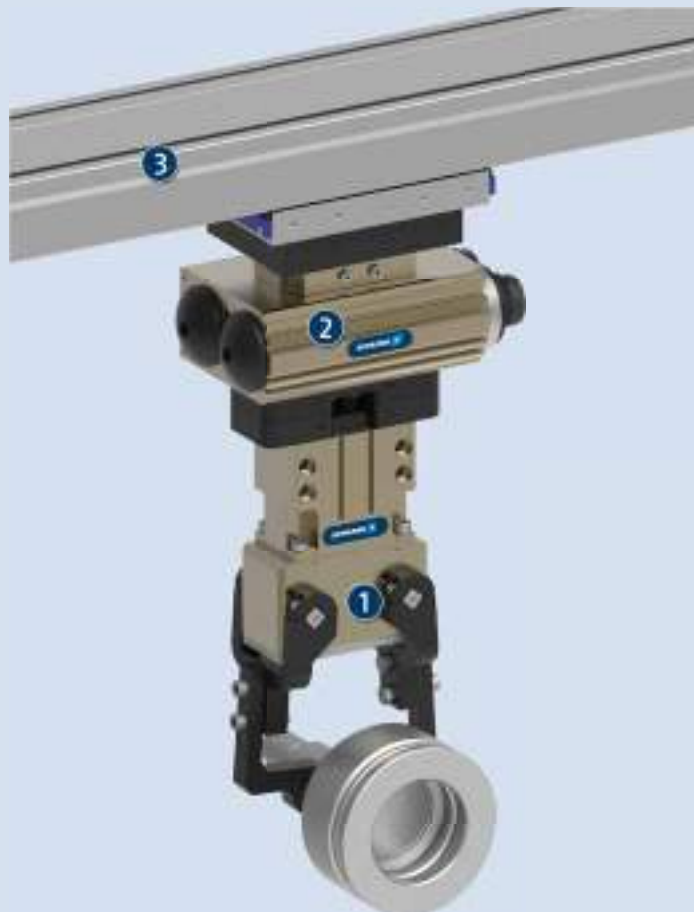
Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

Loading unit for gripping and swiveling round workpieces. No vertical stroke is required due to the radial movement of the gripper fingers.

- ① Sealed 2-finger radial gripper DRG
- ② Swivel unit SRU-plus
- ③ Flat linear module Delta



SCHUNK offers more ...

The following components make the product DRG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Universal swivel unit



Linear module



Quick-change system



Compensation unit



Inductive proximity switch



Magnetic switch



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

180° radial grippers are advantageous since further stroke motions are no more necessary. Since every jaw swivels away by 90°, the gripper is outside of the working area, and a stroke motion back of the whole gripper is no more necessary.

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

High-temperature version V/HT: For use in hot environments

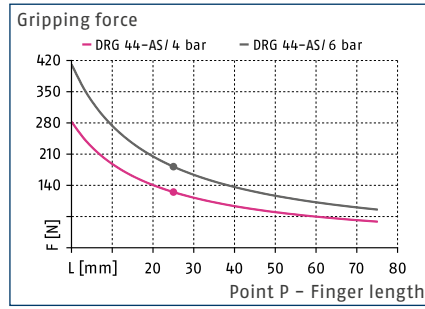
Additional versions: Various options can be combined with each other. Numerous additional options are also available – just tell us what your task is!

DRG 44

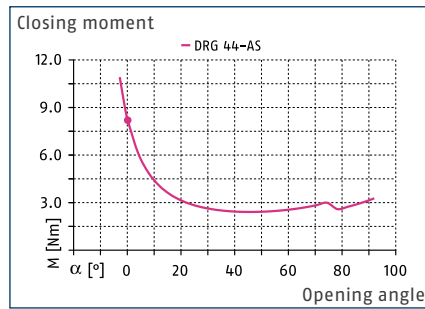
Pneumatic Grippers | 2-Finger Radial Grippers | Sealed Gripper



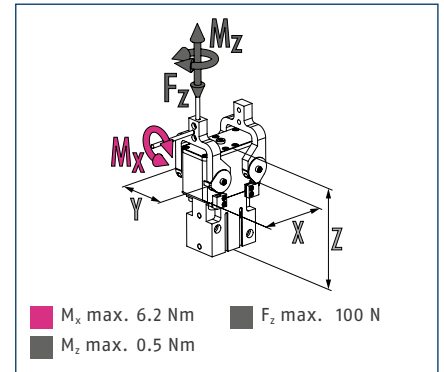
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

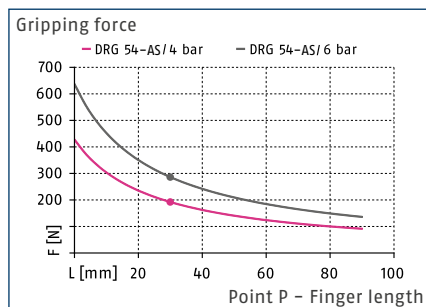
Description		DRG 44-90-AS
ID		0307106
Opening angle per jaw	[°]	90
Closed angle per jaw	[°]	1.5
Closing moment	[Nm]	8.2
Closing moment generated by spring	[Nm]	1.8
Weight	[kg]	0.5
Recommended workpiece weight	[kg]	0.9
Fluid consumption double stroke	[cm ³]	16
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.4/0.5
Closing time with spring only	[s]	0.45
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.09
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	60 x 45.4 x 86.5
Options and their characteristics		
High-temperature version, ID		39307106
Min./max. ambient temperature	[°C]	5/130

① The opening angle of the base jaws can be limited.

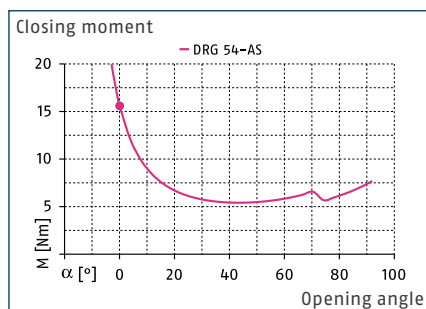
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/drg



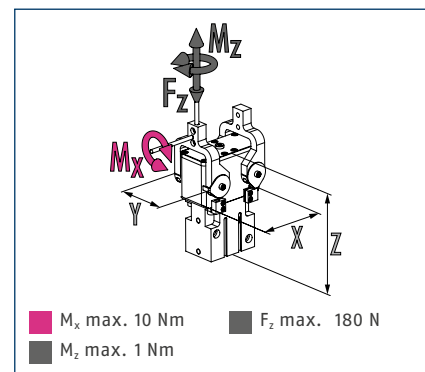
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		DRG 54-90-AS
ID		0307107
Opening angle per jaw	[°]	90
Closed angle per jaw	[°]	1.5
Closing moment	[Nm]	15.6
Closing moment generated by spring	[Nm]	2.8
Weight	[kg]	0.77
Recommended workpiece weight	[kg]	1.5
Fluid consumption double stroke	[cm ³]	36
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.4/0.5
Closing time with spring only	[s]	0.60
Max. permissible finger length	[mm]	60
Max. permissible mass per finger	[kg]	0.15
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	70 x 52.4 x 101.5
Options and their characteristics		
High-temperature version, ID		39307107
Min./max. ambient temperature	[°C]	5/130

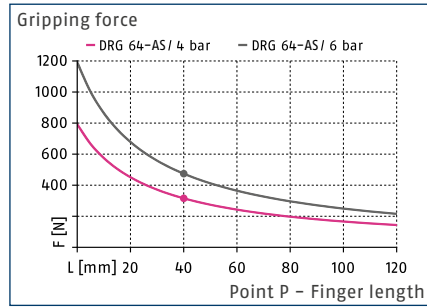
① The opening angle of the base jaws can be limited.

DRG 64

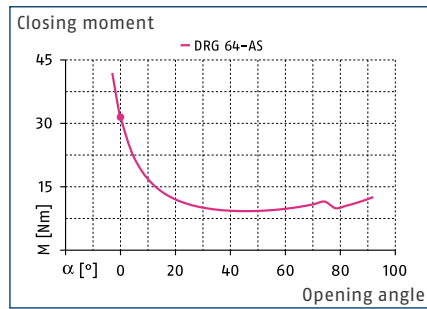
Pneumatic Grippers | 2-Finger Radial Grippers | Sealed Gripper



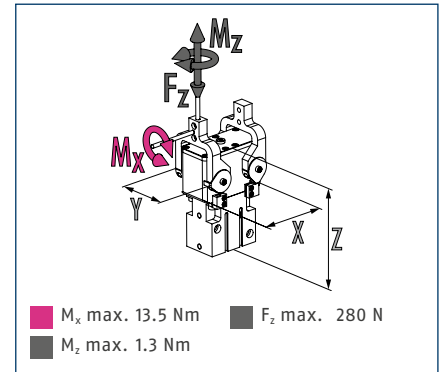
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

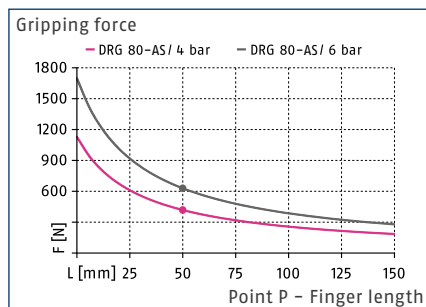
Description		DRG 64-90-AS
ID		0307108
Opening angle per jaw	[°]	90
Closed angle per jaw	[°]	1.5
Closing moment	[Nm]	31.5
Closing moment generated by spring	[Nm]	5.1
Weight	[kg]	1.15
Recommended workpiece weight	[kg]	2.4
Fluid consumption double stroke	[cm ³]	57
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.4/0.8
Closing time with spring only	[s]	0.60
Max. permissible finger length	[mm]	80
Max. permissible mass per finger	[kg]	0.26
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	84 x 57.5 x 115.5
Options and their characteristics		
High-temperature version, ID		39307108
Min./max. ambient temperature	[°C]	5/130

① The opening angle of the base jaws can be limited.

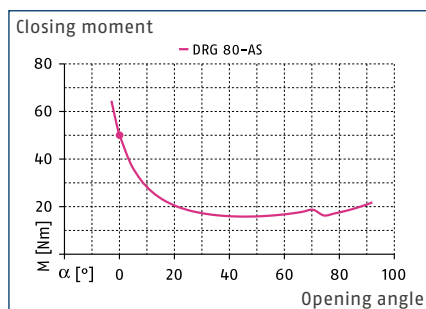
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/drg



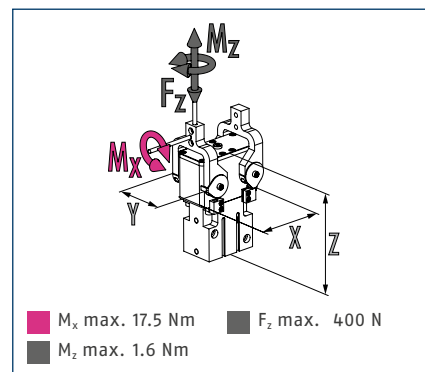
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		DRG 80-90-AS
ID		0307109
Opening angle per jaw	[°]	90
Closed angle per jaw	[°]	1.5
Closing moment	[Nm]	50
Closing moment generated by spring	[Nm]	8.1
Weight	[kg]	2
Recommended workpiece weight	[kg]	3.2
Fluid consumption double stroke	[cm ³]	110
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.5/0.6
Closing time with spring only	[s]	0.70
Max. permissible finger length	[mm]	100
Max. permissible mass per finger	[kg]	0.5
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	100 x 71.6 x 135.5
Options and their characteristics		
High-temperature version, ID		39307109
Min./max. ambient temperature	[°C]	5/130

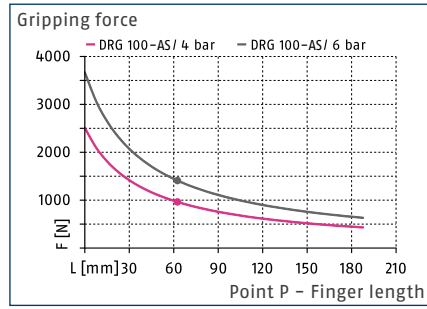
① The opening angle of the base jaws can be limited.

DRG 100

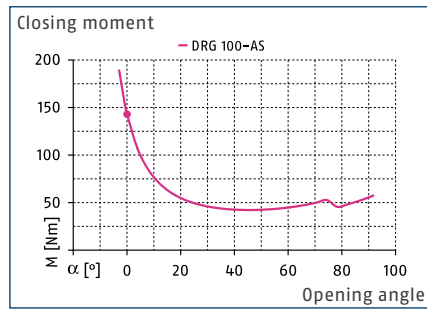
Pneumatic Grippers | 2-Finger Radial Grippers | Sealed Gripper



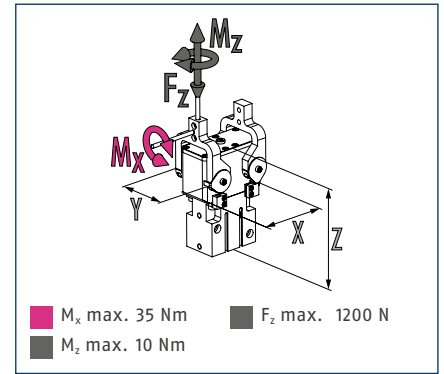
Gripping force O.D. gripping



Closing moment curve



Dimensions and maximum loads



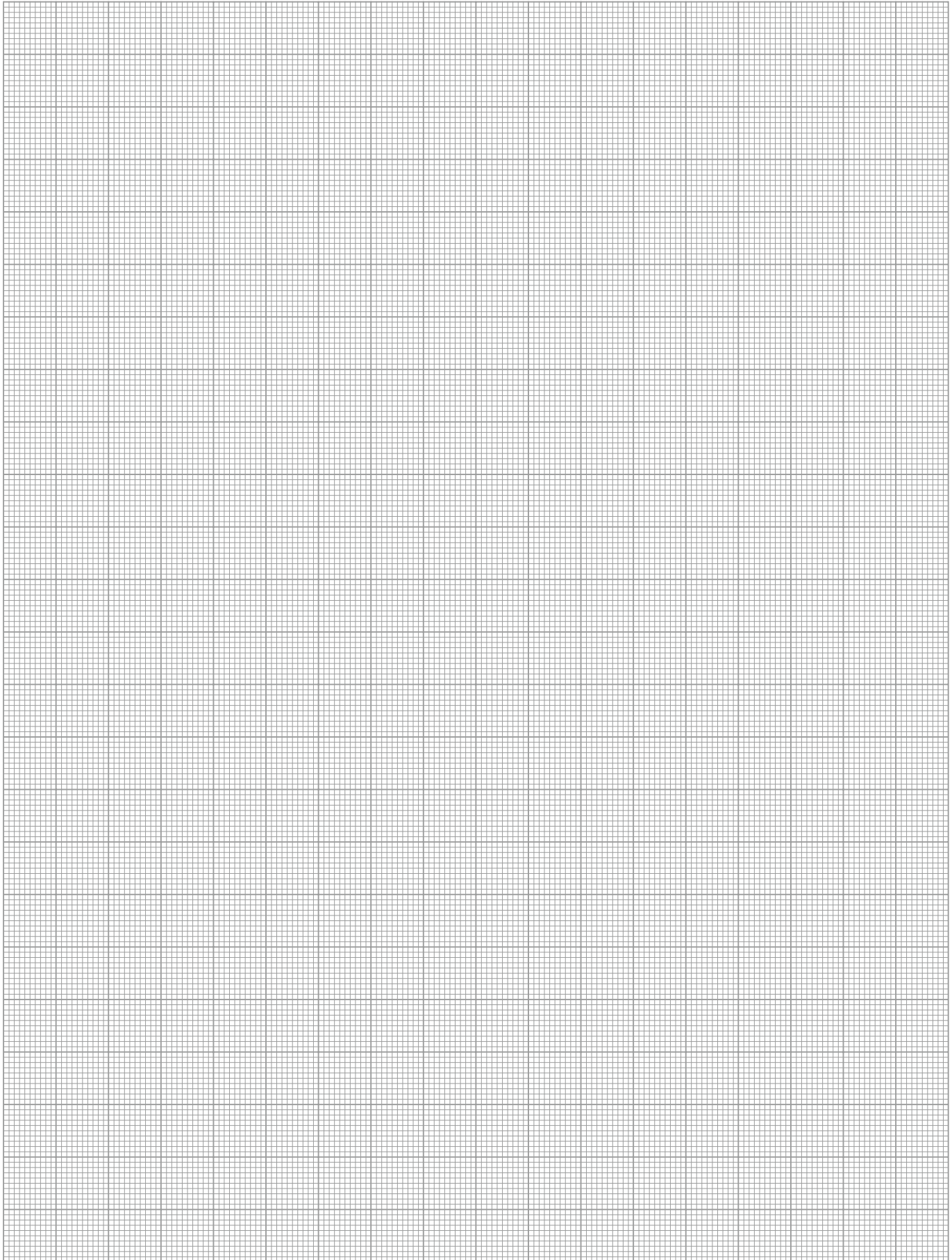
① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		DRG 100-90-AS
ID		0307110
Opening angle per jaw	[°]	90
Closed angle per jaw	[°]	1.5
Closing moment	[Nm]	144.4
Closing moment generated by spring	[Nm]	30
Weight	[kg]	4.46
Recommended workpiece weight	[kg]	7.2
Fluid consumption double stroke	[cm ³]	217
Min./nom./max. operating pressure	[bar]	4/6/6.5
Closing/opening time	[s]	0.3/0.6
Closing time with spring only	[s]	0.75
Max. permissible finger length	[mm]	125
Max. permissible mass per finger	[kg]	1
Protection class IP		67
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.1
Dimensions X x Y x Z	[mm]	130 x 90 x 179
Options and their characteristics		
High-temperature version, ID		39307110
Min./max. ambient temperature	[°C]	5/130

① The opening angle of the base jaws can be limited.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/drg



GAP

Pneumatic Grippers | 2-Finger Radial Grippers | Angular Parallel Gripper

Flexible. Productive. Narrow. Angular Parallel Gripper GAP

2-finger angular parallel gripper for parallel outside gripping after gripper finger actuation of up to 90° per jaw

Field of Application

Gripping and moving small to medium-sized workpieces in low contamination environments.

Advantages – Your benefits

Positively driven angled and parallel stroke in one functional unit

Absolutely gripping in parallel stroke for highest positioning accuracy

Stable kinematics for high power transmission and synchronized gripping

High gripping force in parallel stroke

Opening angle of jaws up to 180° for maximum flexibility in applications

Integration of a gripping force maintenance is optional for firm grip even in the event of power failure

End-position monitoring with optional standardized monitoring sets

Standardized mounting bores for numerous combinations with other components from the modular system



Sizes
Quantity: 3



Weight
0.3 .. 1.33 kg



Gripping force
92 .. 430 N



Stroke per jaw
1 .. 2 mm



Workpiece weight
0.46 .. 1.25 kg



Functional Description

The piston is moved up or down with compressed air. The base jaws are first put into a rotating and then into a parallel movement via the toggle-lever kinematics.



- ① **Drive**
Double-acting piston drive system
- ② **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy
- ③ **Base jaw seated**
For rotary movement over hardened cylindrical pivot pins
- ④ **Kinematics**
Positively driven toggle-joint kinematics for rotating and parallel movement
- ⑤ **Base jaws**
For adaption of workpiece-specific gripper fingers

General Notes about the Series

Operating principle: Positively driven toggle-joint kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Electric line gantry to center or reposition small components.

- ❶ Compact linear module ELS
- ❷ 2-finger angular parallel gripper GAP
- ❸ Flat linear module Delta with toothed belt drive

SCHUNK offers more ...

The following components make the product GAP even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Miniature swivel unit



Linear module



Pick & Place unit



Line gantry



Magnetic switch



Pressure maintenance valve



Pillar assembly system

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS: The mechanical gripping force maintenance ensures that a minimum clamping force will be applied even in case of pressure drop. This acts as closing force in the AS version. Besides this, the gripping force maintenance can be used to increase gripping force or for single actuated gripping.

Shock absorber version: A shock absorber version is available for particularly damping-intensive movements. Please ask for details.

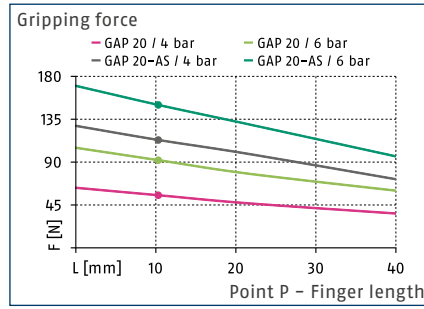
As standard, this module can be combined with numerous components from the modular system. We would be happy to assist you.

GAP 20

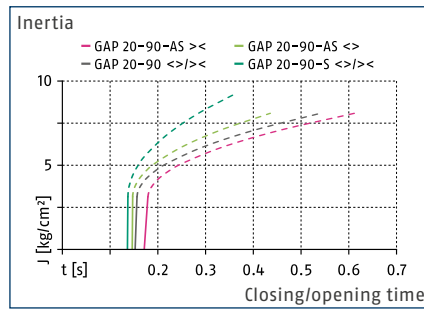
Pneumatic Grippers | 2-Finger Radial Grippers | Angular Parallel Gripper



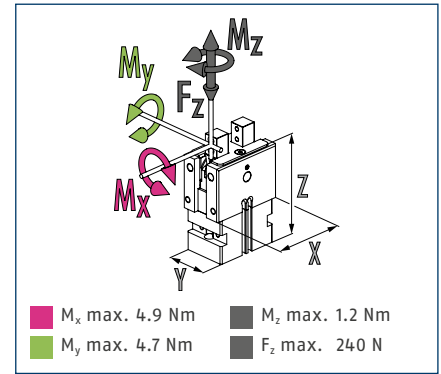
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

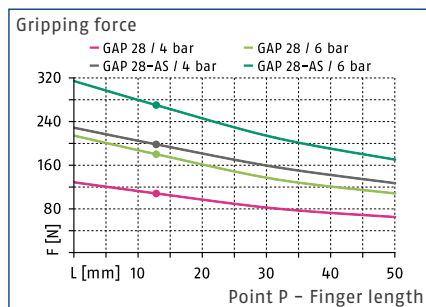
Description		GAP 20-030	GAP 20-060	GAP 20-090
ID		0314600	0314601	0314602
Stroke per jaw	[mm]	1	1	1
Closing/opening force	[N]	92/-	92/-	92/-
Opening angle per jaw	[°]	30	60	90
Weight	[kg]	0.3	0.3	0.3
Recommended workpiece weight	[kg]	0.46	0.46	0.46
Fluid consumption double stroke	[cm³]	3	5	7
Min./nom./max. operating pressure	[bar]	2.5/6/7	2.5/6/7	2.5/6/7
Closing/opening time	[s]	0.09/0.09	0.12/0.12	0.15/0.15
Max. permissible finger length	[mm]	40	40	40
Max. permissible mass per finger	[kg]	0.1	0.1	0.1
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	3.12	3.12	3.12
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	50 x 30 x 66.7	50 x 30 x 66.7	50 x 30 x 66.7
Options and their characteristics				
Gripping force maintenance version		GAP 20-030-AS	GAP 20-060-AS	GAP 20-090-AS
ID		0314603	0314604	0314605
Closing/opening force	[N]	150/-	150/-	150/-
Min. spring force	[N]	58	58	58
Weight	[kg]	0.39	0.39	0.39
Fluid consumption double stroke	[cm³]	4	7	10
Min./max. operating pressure	[bar]	4.5/6.5	4.5/6.5	4.5/6.5
Closing/opening time	[s]	0.12/0.08	0.15/0.11	0.17/0.14
Shock absorber version		GAP 20-030-S	GAP 20-060-S	GAP 20-090-S
ID		0314606	0314607	0314608
Weight	[kg]	0.33	0.33	0.33
Closing/opening time	[s]	0.07/0.07	0.1/0.1	0.13/0.13

* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible.

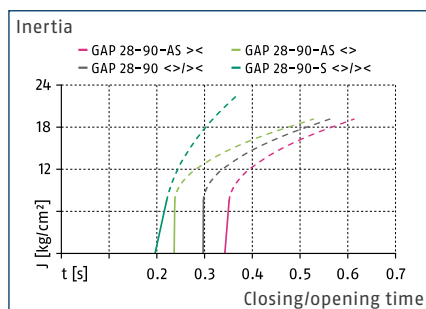
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gap



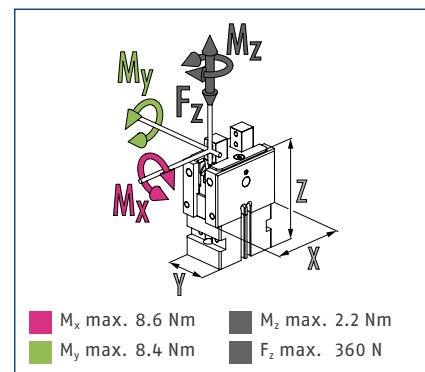
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

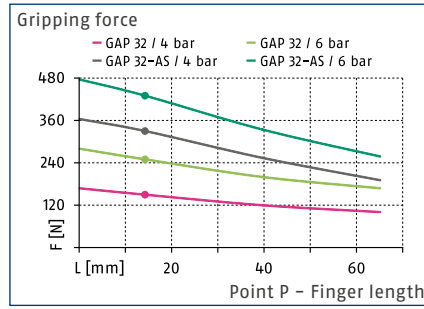
Technical data

Description		GAP 28-030	GAP 28-060	GAP 28-090
ID		0314610	0314611	0314612
Stroke per jaw	[mm]	1.5	1.5	1.5
Closing/opening force	[N]	180/-	180/-	180/-
Opening angle per jaw	[°]	30	60	90
Weight	[kg]	0.54	0.54	0.54
Recommended workpiece weight	[kg]	0.9	0.9	0.9
Fluid consumption double stroke	[cm³]	6.5	10.5	15
Min./nom./max. operating pressure	[bar]	2.5/6/7	2.5/6/7	2.5/6/7
Closing/opening time	[s]	0.17/0.17	0.23/0.23	0.3/0.3
Max. permissible finger length	[mm]	50	50	50
Max. permissible mass per finger	[kg]	0.17	0.17	0.17
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	7.45	7.45	7.45
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	60 x 37 x 80.2	60 x 37 x 80.2	60 x 37 x 80.2
Options and their characteristics				
Gripping force maintenance version		GAP 28-030-AS	GAP 28-060-AS	GAP 28-090-AS
ID		0314613	0314614	0314615
Closing/opening force	[N]	270/-	270/-	270/-
Min. spring force	[N]	90	90	90
Weight	[kg]	0.7	0.7	0.7
Fluid consumption double stroke	[cm³]	9	15.5	22
Min./max. operating pressure	[bar]	4.5/6.5	4.5/6.5	4.5/6.5
Closing/opening time	[s]	0.2/0.16	0.26/0.2	0.35/0.24
Shock absorber version		GAP 28-030-S	GAP 28-060-S	GAP 28-090-S
ID		0314616	0314617	0314618
Weight	[kg]	0.58	0.58	0.58
Closing/opening time	[s]	0.13/0.13	0.15/0.15	0.2/0.2

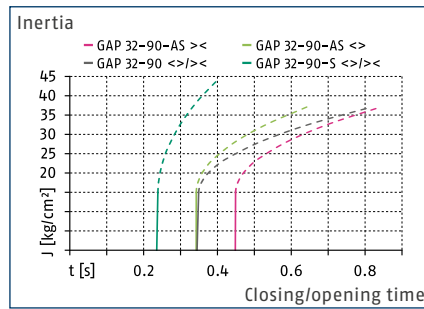
* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible.



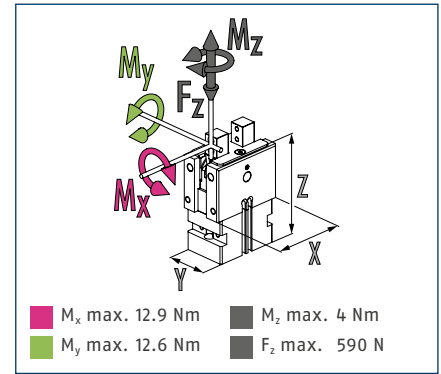
Gripping force O.D. gripping



Max. permissible inertia J*



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

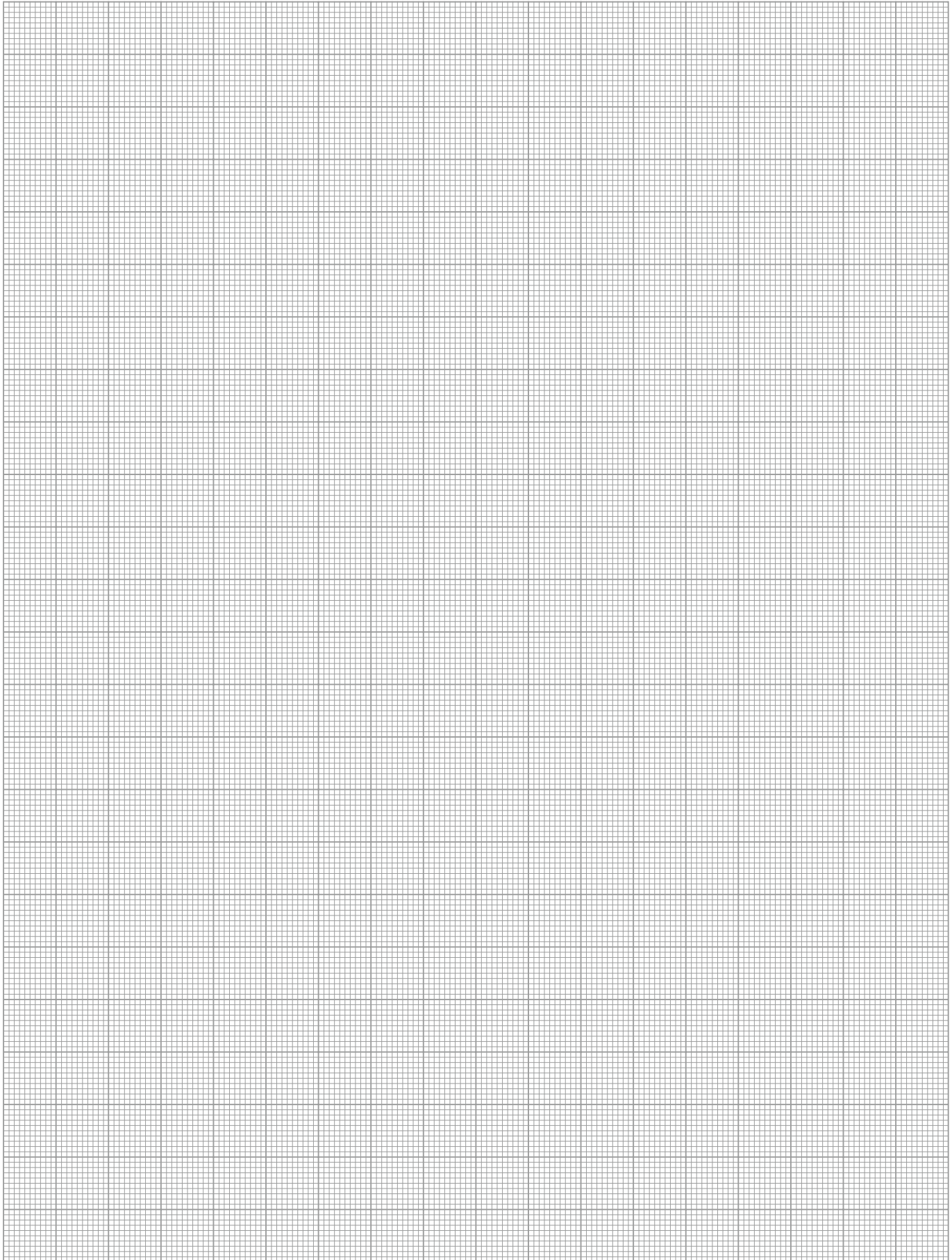
Description		GAP 32-030	GAP 32-060	GAP 32-090
ID		0314620	0314621	0314622
Stroke per jaw	[mm]	2	2	2
Closing/opening force	[N]	250/-	250/-	250/-
Opening angle per jaw	[°]	30	60	90
Weight	[kg]	1.03	1.03	1.03
Recommended workpiece weight	[kg]	1.25	1.25	1.25
Fluid consumption double stroke	[cm³]	11	18	25
Min./nom./max. operating pressure	[bar]	2.5/6/7	2.5/6/7	2.5/6/7
Closing/opening time	[s]	0.22/0.22	0.28/0.28	0.35/0.35
Max. permissible finger length	[mm]	65	65	65
Max. permissible mass per finger	[kg]	0.25	0.25	0.25
Max. permissible mass moment of inertia per chuck jaw	[kgcm²]	14.87	14.87	14.87
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy	[mm]	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	75 x 45 x 99.3	75 x 45 x 99.3	75 x 45 x 99.3

Options and their characteristics

		GAP 32-030-AS	GAP 32-060-AS	GAP 32-090-AS
Gripping force maintenance version				
ID		0314623	0314624	0314625
Closing/opening force	[N]	430/-	430/-	430/-
Min. spring force	[N]	180	180	180
Weight	[kg]	1.33	1.33	1.33
Fluid consumption double stroke	[cm³]	16	26	36.5
Min./max. operating pressure	[bar]	4.5/6.5	4.5/6.5	4.5/6.5
Closing/opening time	[s]	0.25/0.2	0.35/0.27	0.45/0.34
Shock absorber version				
ID		0314626	0314627	0314628
Weight	[kg]	1.1	1.1	1.1
Closing/opening time	[s]	0.14/0.14	0.21/0.21	0.24/0.24






* The unit can be actuated without an external customized throttling at the given value of max. mass moment of inertia per jaw. In case of higher mass moments of inertia, an additional throttling is possible.



More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gap



Pneumatic Grippers

Product Quickfinder

	Page		Stroke per finger [mm]			Gripping force [N]			
			0 - 10	10 - 100	100 - 1000	0 - 100	100 - 1000	1000 - 10000	10000 - 100000
Gripper/swivel module									
Gripper/swivel module with parallel gripper RMPG • For small and light parts	366		1.2 - 2			8 - 28			
Gripper/swivel module with parallel gripper GSM-P • Rotor drive	376			4 - 10		33 - 162			
Gripper/swivel module with parallel gripper RP • Double piston rotary drive	390			2.5 - 8		50 - 420			
Gripper/swivel module with centric gripper RC • Double piston rotary drive	400			2.5 - 8		50 - 420			

	Page		Opening angle [°]		Gripping moment [Nm]		
			0 - 100	100 - 200	0 - 10	10 - 100	100 - 1000
Gripper/swivel module with angular gripper RW • Double piston rotary drive	410		-16 - 16		0.6 - 2.5		



Ambient conditions							Variant variety	Variety of sensor systems
Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom			
●						○	++	+
●						○	++	+
●						○	++	+
●						○	++	+

Ambient conditions							Variant variety	Variety of sensor systems
Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom			
●						○	++	+

● = Very highly suitable ○ = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection

RMPG

Pneumatic Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper

Light. Compact. Modular. Gripper/Swivel Module RMPG

Gripper/swivel combination, consisting of a swivel module and a 2-finger parallel gripper

Field of Application

Gripping and moving of small workpieces in clean environments such as assembly, testing, laboratory or pharmacy.



Advantages – Your benefits

Gripping and turning without rotary power lines for a maximized process reliability

Cross roller guidance for precise gripping through due to a scope-free base jaw guidance

Double piston principle in the swivel unit for scope-free end positions and high repeat accuracy

Continuous angle of rotation adjustment over the entire swivel range

Space-saving as the rotary drive, end-position damping unit and gripper are merged in one compact module

Standardized mounting bores for numerous combinations with other components from the modular system



Sizes
Quantity: 5



Weight
0.054 .. 0.223 kg



Gripping force
10 .. 28 N



Stroke per jaw
1.2 .. 2 mm



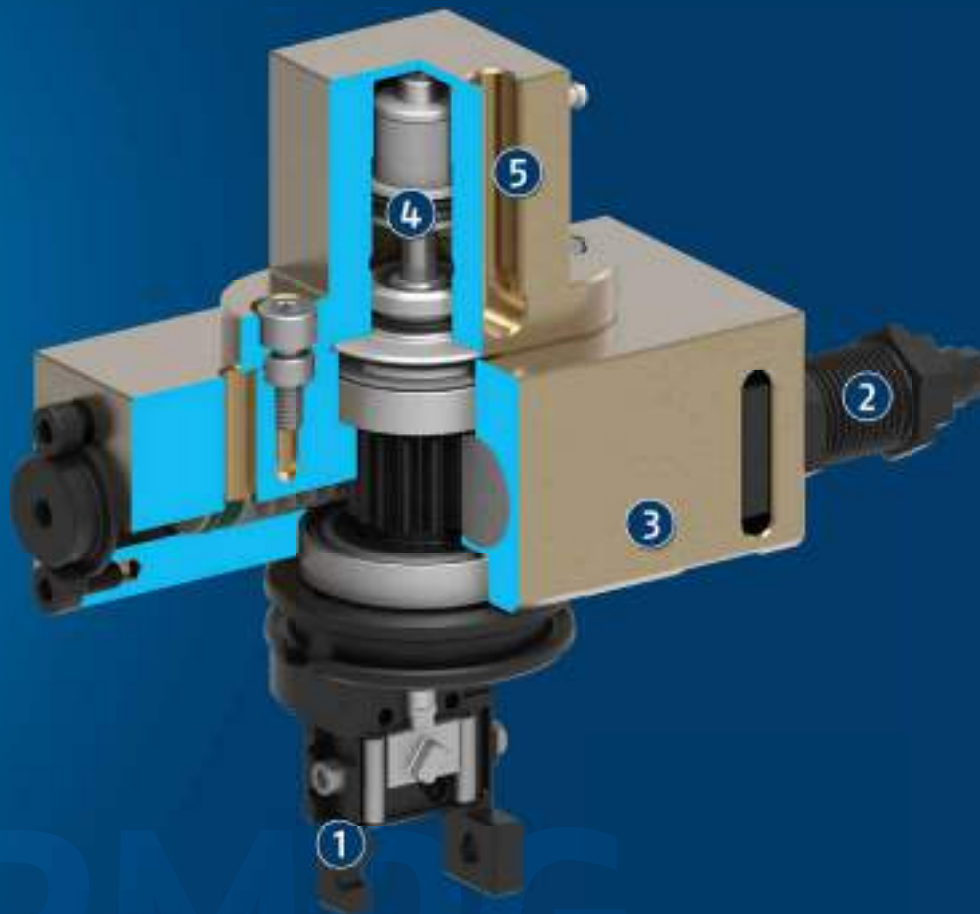
Torque
0.05 .. 0.224 Nm



Functional Description

The rotary movement is done by the two pneumatic pistons when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion via its lateral serration. For the gripping movement, the piston is moved up or

down using compressed air. Together with the cross roller guides of the base jaws, the diagonal pull converts the piston movement into synchronized opening and closing.



① **Base jaw**

For the connection of workpiece-specific gripper fingers

② **Swivel angle adjustment**

For a flexible end position, with hydraulic shock absorber

③ **Housing**

Is weight-optimized due to the use of high-strength aluminum alloy

④ **Drive, gripping**

Through pneumatic double piston system

⑤ **Monitoring groove**

Integrated end position monitoring with magnetic switches

General Notes about the Series

Operating principle: Interior wedge-hook kinematics

Guidance: Cross roller guidance

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Completely ready for operation without bracket for proximity switch and without proximity switch

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw.

Pinion position: Is always shown in the left end position. The pinion rotates from here to the right in clockwise direction. The arrow makes the direction of rotation clear.

Pinion screw connection diagram: When setting a swivel angle smaller than 90°, the left end stop must be completely turned in. This means that the left end position has a screw connection diagram on the pinion which is clockwise turned by 90° compared to the main view, which shows a swivel angle of 180°.

Finger length: Measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Layout or control calculation: For configuration or control calculation of the units, we recommend to use our Toolbox software, which is available online. Verifying the sizing of the selected unit is absolutely necessary, as otherwise overloading may occur.



Application Example

Pneumatic line gantry with gripper/swivel module for simultaneously shifting and rotating very small workpieces.

- ① Gripper/swivel module RMPG
- ② Linear module CLM

- ③ Pillar assembly system
- ④ Linear module LM

SCHUNK offers more ...

The following components make the product RMPG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Gripper for small components



Miniature swivel unit



Pick & Place unit



Magnetic switch



Micro valve



Pressure maintenance valve



Finger blank



Inductive proximity switch

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

As standard, this module can be combined with numerous components from the modular system. We would be happy to assist you.

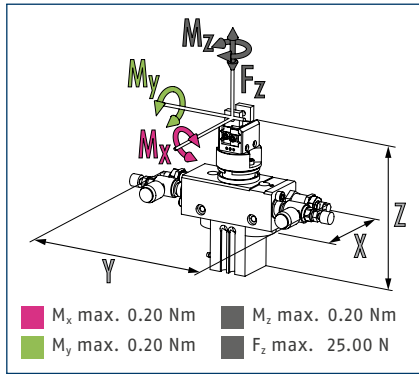
Version 90 with turned gripper head: Each version of the gripper-swivel module is also available with a gripper head that is turned by 90°.

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/IS version this acts as a closing force, in the IS version as an opening force.

RMPG 0612

Pneumatic Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper

Dimensions and maximum loads



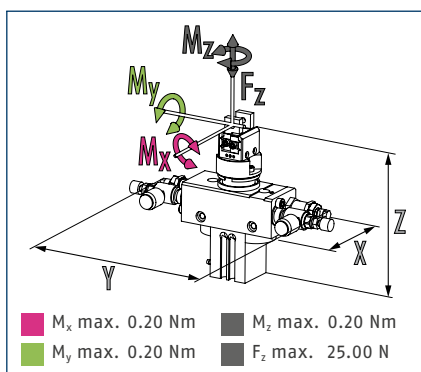
ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		RMPG 0612-0	RMPG 0612-90
ID		0313581	0313582
Stroke per jaw	[mm]	1.2	1.2
Closing/opening force	[N]	10/8	10/8
Torque	[Nm]	0.05	0.05
Angle of rotation	[°]	185	185
Recommended workpiece weight	[kg]	0.05	0.05
Air consumption for gripping	[cm ³]	0.2	0.2
Air consumption for swiveling	[cm ³]	0.656	0.656
Weight	[kg]	0.054	0.054
Nominal operating pressure	[bar]	6	6
Max. operating pressure	[bar]	8	8
Min. operating pressure for gripping	[bar]	3	3
Min. operating pressure for swiveling	[bar]	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01
Max. permissible finger length	[mm]	12	12
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02
Repeat accuracy for swiveling	[°]	0.041	0.041
Dimensions X x Y x Z	[mm]	77.6 x 18 x 56.6	77.6 x 18 x 56.6

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rmpg

Dimensions and maximum loads



ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

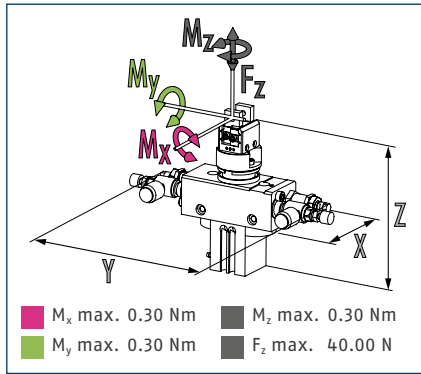
Technical data

Description		RMPG 0812-0	RMPG 0812-90
ID		0313583	0313584
Stroke per jaw	[mm]	1.2	1.2
Closing/opening force	[N]	10/8	10/8
Torque	[Nm]	0.107	0.107
Angle of rotation	[°]	185	185
Recommended workpiece weight	[kg]	0.05	0.05
Air consumption for gripping	[cm ³]	0.2	0.2
Air consumption for swiveling	[cm ³]	1.4	1.4
Weight	[kg]	0.099	0.099
Nominal operating pressure	[bar]	6	6
Max. operating pressure	[bar]	8	8
Min. operating pressure for gripping	[bar]	3	3
Min. operating pressure for swiveling	[bar]	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01
Max. permissible finger length	[mm]	12	12
Protection class IP		30	30
Min./max. ambient temperature	[°C]	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02
Repeat accuracy for swiveling	[°]	0.042	0.042
Dimensions X x Y x Z	[mm]	90.6 x 22 x 63.1	90.6 x 22 x 63.1

RMPG 0816

Pneumatic Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper

Dimensions and maximum loads



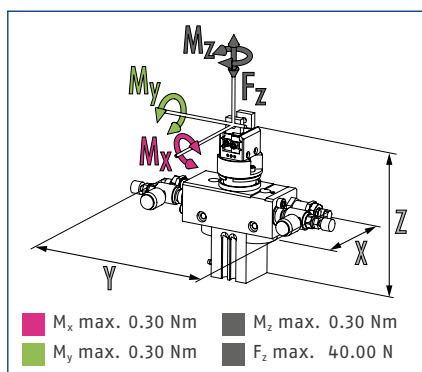
ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		RMPG 0816-0	RMPG 0816-0-AS	RMPG 0816-0-IS	RMPG 0816-90	RMPG 0816-90-AS	RMPG 0816-90-IS
ID		0313585	0313586	0313587	0313588	0313589	0313590
Stroke per jaw	[mm]	1.5	1.5	1.5	1.5	1.5	1.5
Closing/opening force	[N]	25/22	25/22	25/22	25/22	25/22	25/22
Torque	[Nm]	0.107	0.107	0.107	0.107	0.107	0.107
Angle of rotation	[°]	185	185	185	185	185	185
Recommended workpiece weight	[kg]	0.12	0.12	0.12	0.12	0.12	0.12
Air consumption for gripping	[cm ³]	0.35	0.35	0.35	0.35	0.35	0.35
Air consumption for swiveling	[cm ³]	1.4	1.4	1.4	1.4	1.4	1.4
Weight	[kg]	0.116	0.119	0.119	0.116	0.119	0.119
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	3	3	3	3
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01
Max. permissible finger length	[mm]	16	16	16	16	16	16
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.042	0.042	0.042	0.042	0.042	0.042
Dimensions X x Y x Z	[mm]	90.6 x 22 x 71.3	90.6 x 22 x 74.25	90.6 x 22 x 74.25	90.6 x 22 x 71.3	90.6 x 22 x 74.25	90.6 x 22 x 74.25

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rmpg

Dimensions and maximum loads



ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

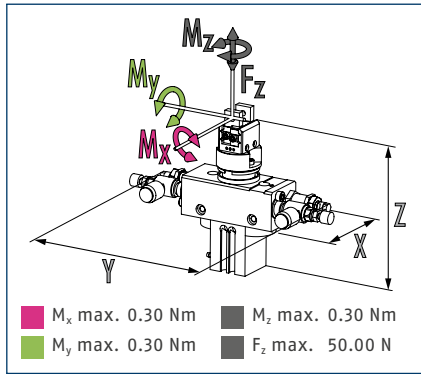
Technical data

Description		RMPG 1016-0	RMPG 1016-0-AS	RMPG 1016-0-IS	RMPG 1016-90	RMPG 1016-90-AS	RMPG 1016-90-IS
ID		0313591	0313592	0313593	0313594	0313595	0313596
Stroke per jaw	[mm]	1.5	1.5	1.5	1.5	1.5	1.5
Closing/opening force	[N]	25/22	25/22	25/22	25/22	25/22	25/22
Torque	[Nm]	0.224	0.224	0.224	0.224	0.224	0.224
Angle of rotation	[°]	185	185	185	185	185	185
Recommended workpiece weight	[kg]	0.12	0.12	0.12	0.12	0.12	0.12
Air consumption for gripping	[cm ³]	0.35	0.35	0.35	0.35	0.35	0.35
Air consumption for swiveling	[cm ³]	2.9	2.9	2.9	2.9	2.9	2.9
Weight	[kg]	0.203	0.206	0.206	0.203	0.206	0.206
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	3	3	3	3
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01	0.01/0.01
Max. permissible finger length	[mm]	16	16	16	16	16	16
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	106 x 30 x 70.3	106 x 30 x 73.25	106 x 30 x 73.25	106 x 30 x 70.3	106 x 30 x 73.25	106 x 30 x 73.25

RMPG 1020

Pneumatic Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper

Dimensions and maximum loads

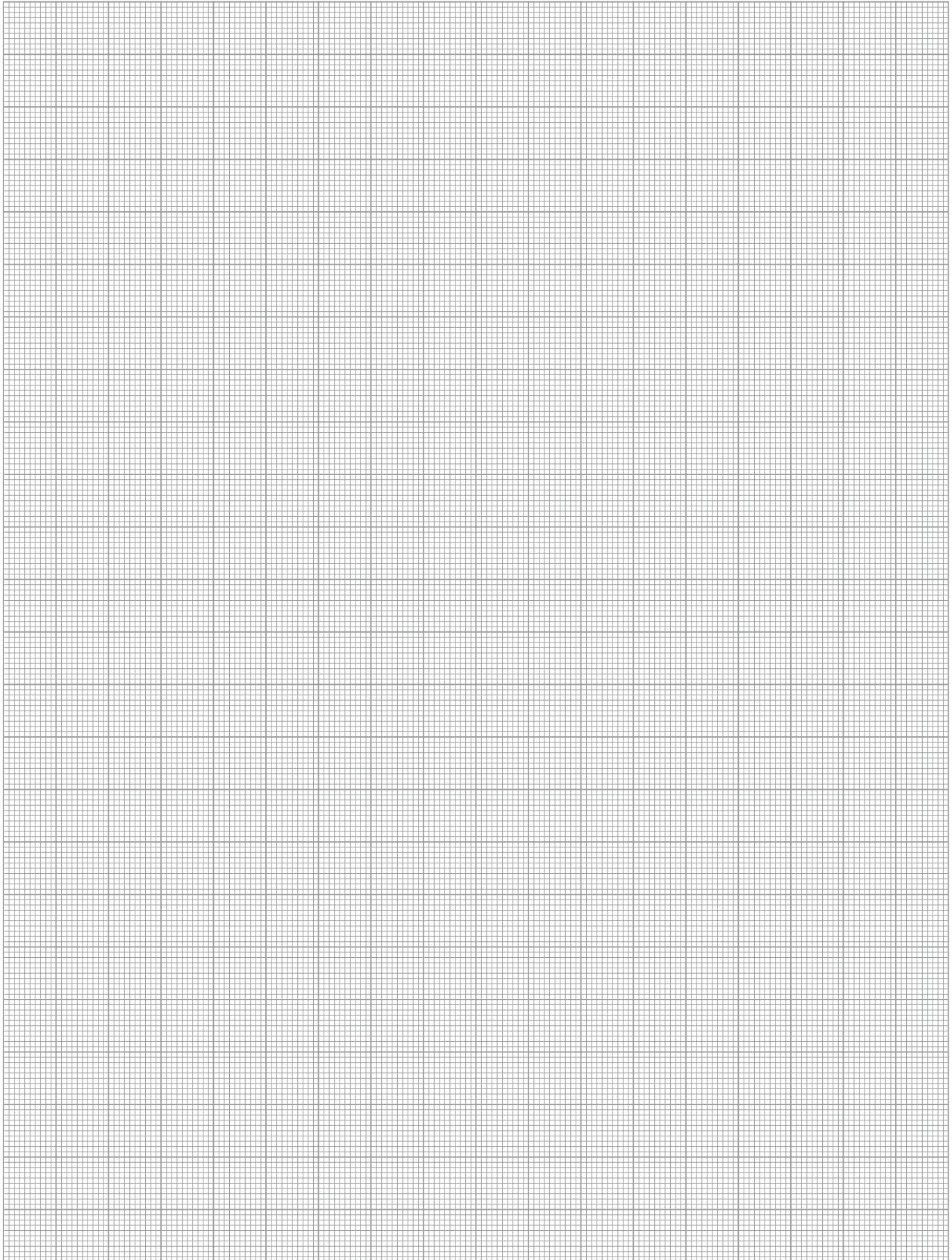


ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Description		RMPG 1020-0	RMPG 1020-0-AS	RMPG 1020-0-IS	RMPG 1020-90	RMPG 1020-90-AS	RMPG 1020-90-IS
ID		0313597	0313598	0313599	0313600	0313601	0313602
Stroke per jaw	[mm]	2	2	2	2	2	2
Closing/opening force	[N]	28/24	28/24	28/24	28/24	28/24	28/24
Torque	[Nm]	0.224	0.224	0.224	0.224	0.224	0.224
Angle of rotation	[°]	185	185	185	185	185	185
Recommended workpiece weight	[kg]	0.14	0.14	0.14	0.14	0.14	0.14
Air consumption for gripping	[cm ³]	0.35	0.35	0.14	0.14	0.14	0.14
Air consumption for swiveling	[cm ³]	2.9	2.9	2.9	2.9	2.9	2.9
Weight	[kg]	0.216	0.223	0.223	0.216	0.223	0.223
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	3	3	3	3
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.03/0.03	0.03/0.03	0.03/0.03	0.03/0.03
Max. permissible finger length	[mm]	20	20	20	20	20	20
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	106 x 30 x 73.6	106 x 30 x 80.05	106 x 30 x 80.05	106 x 30 x 73.6	106 x 30 x 80.05	106 x 30 x 80.05

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rmpg



Flexible. Energy-efficient. Compact. Gripper/Swivel Module GSM-P

Compact gripper/swivel combination, consisting of a powerful rotor drive, an end position and damping device as well as a 2-finger parallel gripper

Field of Application

Gripping and swiveling combined in a single compact module, for automated assembly in places with a restricted amount of available space.

Advantages – Your benefits

- Space-saving** as the rotary drive, end-position damping unit and gripper are merged in one compact module
- Cost-saving** due to the omission of adapter plates and the costs associated with project planning, and engineering design
- Powerful** for even greater masses and inertias due to the variant with hydraulic shock absorbers
- Flexible** through several mounting options, infinitely adjustable swiveling angle and numerous product versions
- Cross roller guidance** for precise gripping through due to a scope-free base jaw guidance
- Process reliable** as moving cables and hoses are replaced by integrated feed-throughs
- Mounting on three gripper sides in five screwing directions** for universal and flexible assembly of the gripper/swivel module
- Air supply via hose-free direct connection or screw connections** for the specific adaption of the gripper/swivel module in all automation solutions
- Comprehensive accessories** due to the use of existing gripper components



 Sizes Quantity: 4	 Weight 0.37 .. 1.51 kg	 Gripping force 39 .. 162 N	 Stroke per jaw 4 .. 10 mm	 Torque 0.3 .. 2.9 Nm
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Functional Description

The rotor drive turns the integrated gripper by applying pressure from a rotor. It is driven by its own piston. The piston motion is subsequently transformed into a synchronized gripping motion.



- ① **Pre-adjustment of rotating angle**
Using steel balls for any desired angle of rotation
- ② **Gripper drive**
Double-acting piston drive system with wedge-hook
- ③ **Base jaw**
For adaption of workpiece-specific gripper fingers
- ④ **Stop damping assembly**
For end-position adjustment and damping
- ⑤ **Rotor**
As a compact, powerful drive
- ⑥ **Hydraulic shock absorber**
To increase the damping performance

General Notes about the Series

Operating principle: Combined rotor and piston drive

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, O-rings for direct connection, screws for lateral fastening, steel balls for adjustment of the swiveling angle, assembly and operation manual with declaration of incorporation

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Closing, opening and swiveling times: Closing and opening times are movement times of the base jaws or fingers only. Swivel times are the pure movement times of the rotating part. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Middle attached load: Intended to represent a typical load. It is defined as the half of the max. possible mass moment of inertia that can be swiveled without restriction, bouncing or hitting, with a centric load and a vertical rotating axis.



Application Example

The three-axis cantilever (X-Y-Z) with gripper/swivel combination is employed to insert various products individually in outer packaging whilst rotating them if necessary.

- ❶ Gripper/swivel module GSM-P
- ❷ Linear module CLM

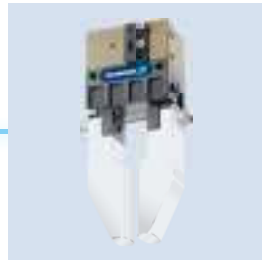
- ❸ Gantry module PMP

SCHUNK offers more ...

The following components make the product GSM-P even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Gripper for small components



Miniature swivel unit



Pick & Place unit



Inductive proximity switch



Programmable magnetic switch



Pressure maintenance valve



Finger blank

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version AS/IS: The mechanical gripping force maintenance version ensures minimum gripping force even in the event of a pressure drop. In the AS/S version this acts as a closing force, in the IS version as an opening force.

Modular system: As standard, this module can be combined with numerous components from the modular system. We would be happy to assist you.

Ordering Example

GSM-P 32 - AS - E - 090

Description

GSM-P

Size

32/40/50/64

Gripping force maintenance

- = Without gripping force maintenance

AS = Effect as closing force

IS = Effect as opening force

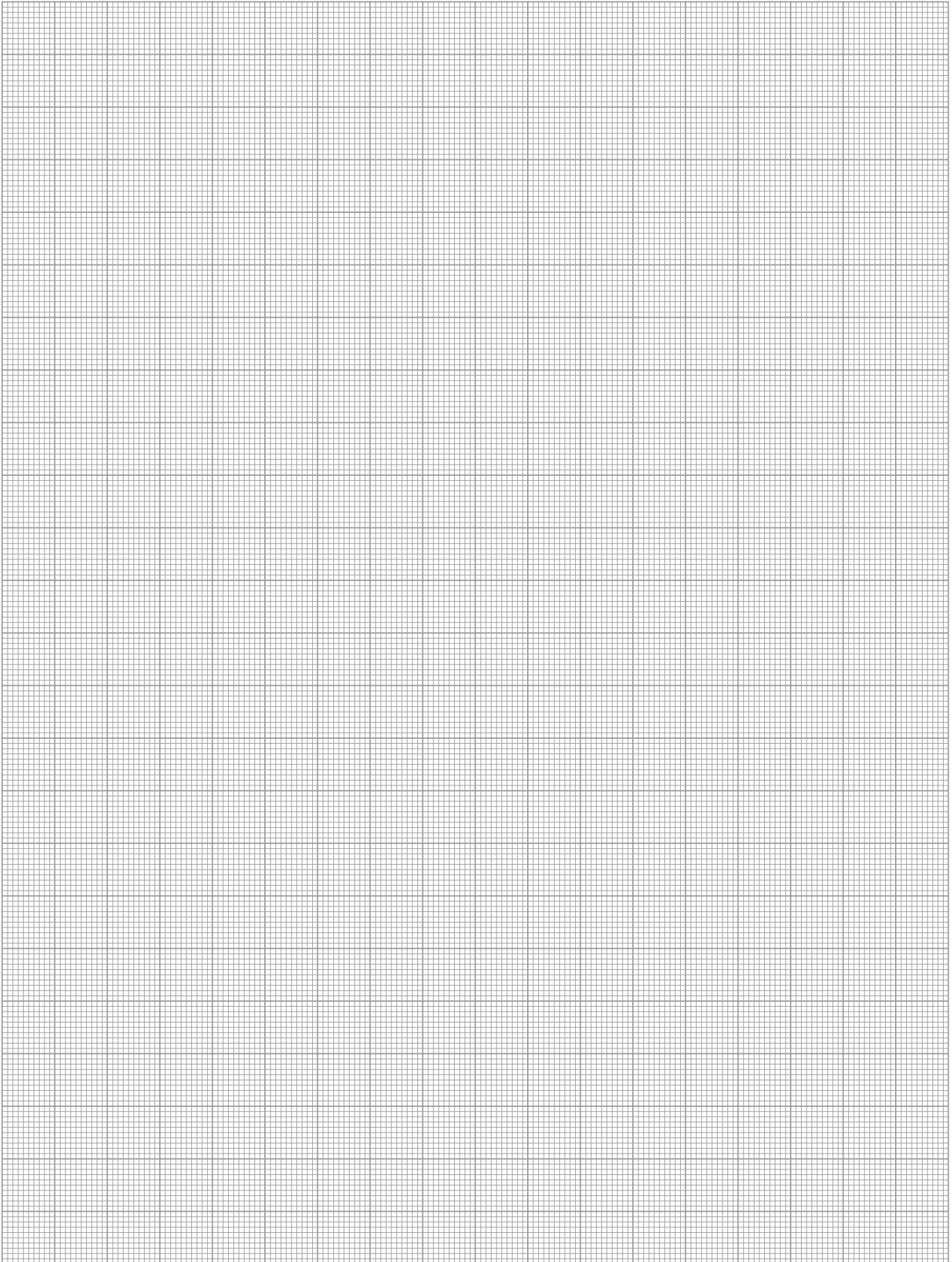
Type of damping method

E = Elastomer

S = Shock absorber

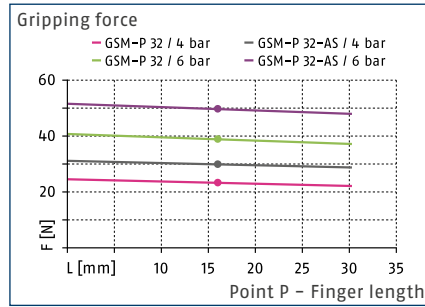
Swivel angle

90°/180°

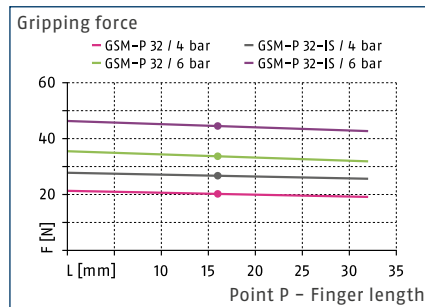




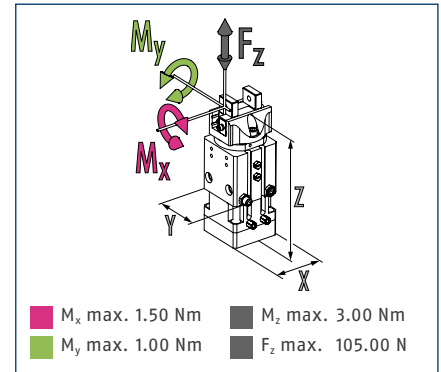
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		GSM-P 32-E-090	GSM-P 32-E-180	GSM-P 32-AS-E-090	GSM-P 32-AS-E-180	GSM-P 32-IS-E-090	GSM-P 32-IS-E-180
ID		0304630	0303830	0304631	0303831	0304632	0303832
Stroke per jaw	[mm]	4	4	4	4	4	4
Closing/opening force	[N]	39/33	39/33	51/-	51/-	-/48	-/48
Min. spring force	[N]			12	12	15	15
Torque	[Nm]	0.35	0.35	0.35	0.35	0.35	0.35
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Elastomer	Elastomer	Elastomer	Elastomer	Elastomer	Elastomer
Recommended workpiece weight	[kg]	0.2	0.2	0.2	0.2	0.2	0.2
Air consumption for gripping	[cm³]	4	4	4	4	4	4
Air consumption for swiveling	[cm³]	9	15	9	15	9	15
Weight	[kg]	0.37	0.37	0.42	0.42	0.42	0.42
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3.5	3.5	3.5	3.5	3.5	3.5
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.04	0.03/0.04	0.04/0.03	0.04/0.03
Swiveling time with middle attached load*	[s]	0.12	0.18	0.12	0.18	0.12	0.18
Max. permissible finger length	[mm]	32	32	32	32	32	32
Max. permissible mass per finger	[kg]	0.04	0.04	0.04	0.04	0.04	0.04
Max. permissible mass moment of inertia of the payload	[kgmm²]	66	66	65	65	65	65
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	40 x 47 x 101	40 x 47 x 101	40 x 47 x 112.5	40 x 47 x 112.5	40 x 47 x 112.5	40 x 47 x 112.5

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsm-p

Technical data

Description		GSM-P 32-S-090	GSM-P 32-S-180	GSM-P 32-AS-S-090	GSM-P 32-AS-S-180	GSM-P 32-IS-S-090	GSM-P 32-IS-S-180
ID		0304730	0303930	0304731	0303931	0304732	0303932
Stroke per jaw	[mm]	4	4	4	4	4	4
Closing/opening force	[N]	39/33	39/33	51/-	51/-	-/48	-/48
Min. spring force	[N]			12	12	15	15
Torque	[Nm]	0.35	0.35	0.35	0.35	0.35	0.35
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper
Recommended workpiece weight	[kg]	0.2	0.2	0.2	0.2	0.2	0.2
Air consumption for gripping	[cm ³]	4	4	4	4	4	4
Air consumption for swiveling	[cm ³]	9	15	9	15	9	15
Weight	[kg]	0.37	0.37	0.42	0.42	0.42	0.42
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3.5	3.5	3.5	3.5	3.5	3.5
Closing/opening time	[s]	0.04/0.04	0.04/0.04	0.03/0.04	0.03/0.04	0.04/0.03	0.04/0.03
Swiveling time with middle attached load*	[s]	0.12	0.18	0.12	0.18	0.12	0.18
Max. permissible finger length	[mm]	32	32	32	32	32	32
Max. permissible mass per finger	[kg]	0.04	0.04	0.04	0.04	0.04	0.04
Max. permissible mass moment of inertia of the payload	[kgmm ²]	141	141	140	140	140	140
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	40 x 63.5 x 101	40 x 63.5 x 101	40 x 63.5 x 112.5	40 x 63.5 x 112.5	40 x 63.5 x 112.5	40 x 63.5 x 112.5

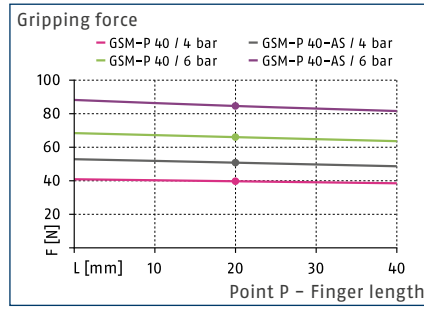
* Swiveling time at average attachment load, which is equivalent to half of the max. perm. mass moment of inertia of the design. It can be run without throttling for the rotary movement.

GSM-P 40

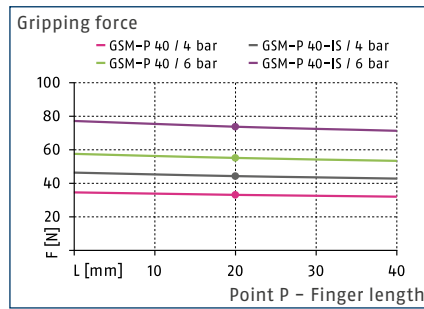
Pneumatic Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper



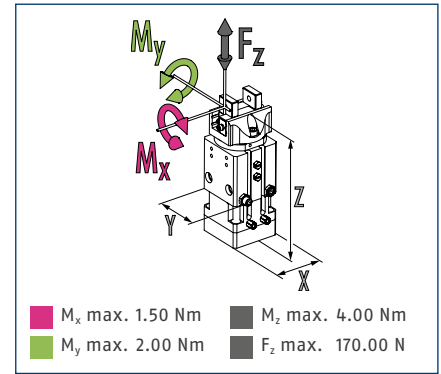
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		GSM-P 40-E-090	GSM-P 40-E-180	GSM-P 40-AS-E-090	GSM-P 40-AS-E-180	GSM-P 40-IS-E-090	GSM-P 40-IS-E-180
ID		0304640	0303840	0304641	0303841	0304642	0303842
Stroke per jaw	[mm]	6	6	6	6	6	6
Closing/opening force	[N]	66/54	66/54	87/-	87/-	-/69	-/69
Min. spring force	[N]			21	21	15	15
Torque	[Nm]	0.3	0.3	0.3	0.3	0.3	0.3
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Elastomer	Elastomer	Elastomer	Elastomer	Elastomer	Elastomer
Recommended workpiece weight	[kg]	0.33	0.33	0.33	0.33	0.33	0.33
Air consumption for gripping	[cm ³]	5.97	5.97	5.97	5.97	5.97	5.97
Air consumption for swiveling	[cm ³]	9	15	9	15	9	15
Weight	[kg]	0.43	0.43	0.5	0.5	0.5	0.5
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	4	4	4	4	4	4
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Swiveling time with middle attached load*	[s]	0.14	0.22	0.14	0.22	0.14	0.22
Max. permissible finger length	[mm]	40	40	40	40	40	40
Max. permissible mass per finger	[kg]	0.08	0.08	0.08	0.08	0.08	0.08
Max. permissible mass moment of inertia of the payload	[kgmm ²]	52	52	50	50	50	50
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	40 x 47 x 104	40 x 47 x 104	40 x 47 x 123.4	40 x 47 x 123.4	40 x 47 x 123.4	40 x 47 x 123.4

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsm-p

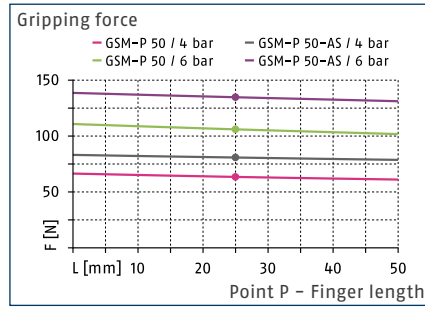
Technical data

Description		GSM-P 40-S-090	GSM-P 40-S-180	GSM-P 40-AS-S-090	GSM-P 40-AS-S-180	GSM-P 40-IS-S-090	GSM-P 40-IS-S-180
ID		0304740	0303940	0304741	0303941	0304742	0303942
Stroke per jaw	[mm]	6	6	6	6	6	6
Closing/opening force	[N]	66/54	66/54	87/-	87/-	-/69	-/69
Min. spring force	[N]			21	21	15	15
Torque	[Nm]	0.3	0.3	0.3	0.3	0.3	0.3
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper
Recommended workpiece weight	[kg]	0.33	0.33	0.33	0.33	0.33	0.33
Air consumption for gripping	[cm ³]	5.97	5.97	5.97	5.97	5.97	5.97
Air consumption for swiveling	[cm ³]	9	15	9	15	9	15
Weight	[kg]	0.43	0.43	0.5	0.5	0.5	0.5
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	4	4	4	4	4	4
Closing/opening time	[s]	0.05/0.05	0.05/0.05	0.03/0.05	0.03/0.05	0.05/0.03	0.05/0.03
Swiveling time with middle attached load*	[s]	0.14	0.22	0.14	0.22	0.14	0.22
Max. permissible finger length	[mm]	40	40	40	40	40	40
Max. permissible mass per finger	[kg]	0.08	0.08	0.08	0.08	0.08	0.08
Max. permissible mass moment of inertia of the payload	[kgmm ²]	127	127	125	125	125	125
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	40 x 63.5 x 104	40 x 63.5 x 104	40 x 63.5 x 123.4	40 x 63.5 x 123.4	40 x 63.5 x 123.4	40 x 63.5 x 123.4

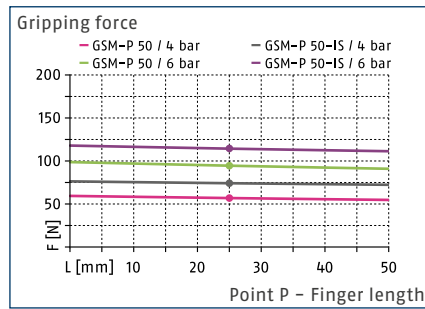
* Swiveling time at average attachment load, which is equivalent to half of the max. perm. mass moment of inertia of the design. It can be run without throttling for the rotary movement.



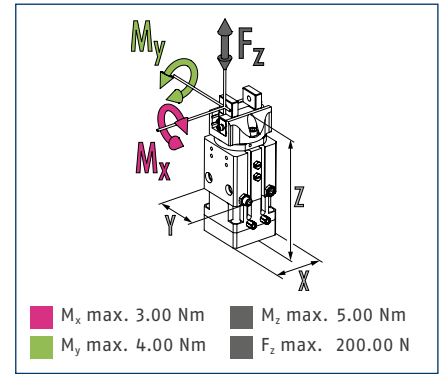
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		GSM-P 50-E-090	GSM-P 50-E-180	GSM-P 50-AS-E-090	GSM-P 50-AS-E-180	GSM-P 50-IS-E-090	GSM-P 50-IS-E-180
ID		0304650	0303850	0304651	0303851	0304652	0303852
Stroke per jaw	[mm]	8	8	8	8	8	8
Closing/opening force	[N]	105/93	105/93	135/-	135/-	-/114	-/114
Min. spring force	[N]			30	30	21	21
Torque	[Nm]	2.9	2.9	2.9	2.9	2.9	2.9
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Elastomer	Elastomer	Elastomer	Elastomer	Elastomer	Elastomer
Recommended workpiece weight	[kg]	0.52	0.52	0.52	0.52	0.52	0.52
Air consumption for gripping	[cm³]	10.84	10.84	10.84	10.84	10.84	10.84
Air consumption for swiveling	[cm³]	51	85	51	85	51	85
Weight	[kg]	1.19	1.19	1.19	1.19	1.2	1.2
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.02	0.01/0.02	0.02/0.01	0.02/0.01
Swiveling time with middle attached load*	[s]	0.14	0.24	0.14	0.24	0.14	0.24
Max. permissible finger length	[mm]	50	50	50	50	50	50
Max. permissible mass per finger	[kg]	0.14	0.14	0.14	0.14	0.14	0.14
Max. permissible mass moment of inertia of the payload	[kgmm²]	180	180	176	176	176	176
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	64 x 73.5 x 142.5	64 x 73.5 x 142.5	64 x 73.5 x 161	64 x 73.5 x 161	64 x 73.5 x 161	64 x 73.5 x 161

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsm-p

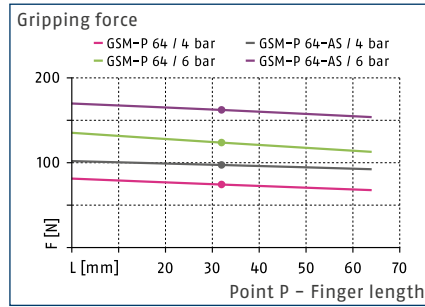
Technical data

Description		GSM-P 50-S-090	GSM-P 50-S-180	GSM-P 50-AS-S-090	GSM-P 50-AS-S-180	GSM-P 50-IS-S-090	GSM-P 50-IS-S-180
ID		0304750	0303950	0304751	0303951	0304752	0303952
Stroke per jaw	[mm]	8	8	8	8	8	8
Closing/opening force	[N]	105/93	105/93	135/-	135/-	-/114	-/114
Min. spring force	[N]			30	30	21	21
Torque	[Nm]	2.9	2.9	2.9	2.9	2.9	2.9
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper
Recommended workpiece weight	[kg]	0.52	0.52	0.52	0.52	0.52	0.52
Air consumption for gripping	[cm ³]	10.84	10.84	10.84	10.84	10.84	10.84
Air consumption for swiveling	[cm ³]	51	85	51	85	51	85
Weight	[kg]	1.19	1.19	1.19	1.19	1.2	1.2
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.02	0.01/0.02	0.02/0.01	0.02/0.01
Swiveling time with middle attached load*	[s]	0.14	0.24	0.14	0.24	0.14	0.24
Max. permissible finger length	[mm]	50	50	50	50	50	50
Max. permissible mass per finger	[kg]	0.14	0.14	0.14	0.14	0.14	0.14
Max. permissible mass moment of inertia of the payload	[kgmm ²]	430	430	426	426	426	426
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	64 x 97 x 142.5	64 x 97 x 142.5	64 x 97 x 161	64 x 97 x 161	64 x 97 x 161	64 x 97 x 161

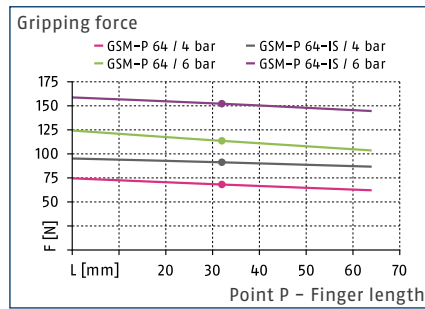
* Swiveling time at average attachment load, which is equivalent to half of the max. perm. mass moment of inertia of the design. It can be run without throttling for the rotary movement.



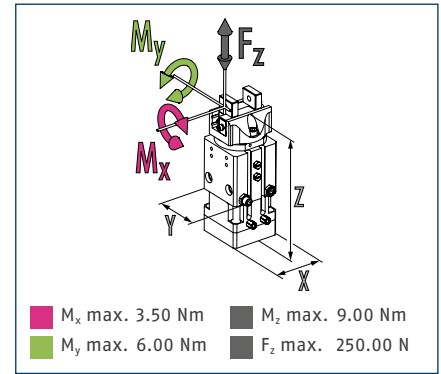
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		GSM-P 64-E-090	GSM-P 64-E-180	GSM-P 64-AS-E-090	GSM-P 64-AS-E-180	GSM-P 64-IS-E-090	GSM-P 64-IS-E-180
ID		0304660	0303860	0304661	0303861	0304662	0303862
Stroke per jaw	[mm]	10	10	10	10	10	10
Closing/opening force	[N]	120/114	120/114	162/-	162/-	-/147	-/147
Min. spring force	[N]			42	42	33	33
Torque	[Nm]	2.7	2.7	2.7	2.7	2.7	2.7
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Elastomer	Elastomer	Elastomer	Elastomer	Elastomer	Elastomer
Recommended workpiece weight	[kg]	0.61	0.61	0.61	0.61	0.61	0.61
Air consumption for gripping	[cm³]	15.81	15.81	15.81	15.81	15.81	15.81
Air consumption for swiveling	[cm³]	51	85	51	85	51	85
Weight	[kg]	1.39	1.39	1.51	1.51	1.51	1.51
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.02	0.01/0.02	0.02/0.01	0.02/0.01
Swiveling time with middle attached load*	[s]	0.14	0.24	0.14	0.24	0.14	0.24
Max. permissible finger length	[mm]	64	64	64	64	64	64
Max. permissible mass per finger	[kg]	0.24	0.24	0.24	0.24	0.24	0.24
Max. permissible mass moment of inertia of the payload	[kgmm²]	90	90	91	91	91	91
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90	5/90
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	64 x 73.5 x 142.5	64 x 73.5 x 142.5	64 x 73.5 x 152	64 x 73.5 x 152	64 x 73.5 x 152	64 x 73.5 x 152

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsm-p

Technical data

Description		GSM-P 64-S-090	GSM-P 64-S-180	GSM-P 64-AS-S-090	GSM-P 64-AS-S-180	GSM-P 64-IS-S-090	GSM-P 64-IS-S-180
ID		0304760	0303960	0304761	0303961	0304762	0303962
Stroke per jaw	[mm]	10	10	10	10	10	10
Closing/opening force	[N]	120/114	120/114	162/-	162/-	-/147	-/147
Min. spring force	[N]			42	42	33	33
Torque	[Nm]	2.7	2.7	2.7	2.7	2.7	2.7
Angle of rotation	[°]	90	180	90	180	90	180
End position adjustability	[°]	90	180	90	180	90	180
Damping for swiveling		Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper	Hydr. damper
Recommended workpiece weight	[kg]	0.61	0.61	0.61	0.61	0.61	0.61
Air consumption for gripping	[cm ³]	15.81	15.81	15.81	15.81	15.81	15.81
Air consumption for swiveling	[cm ³]	51	85	51	85	51	85
Weight	[kg]	1.39	1.39	1.51	1.51	1.51	1.51
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	6.5	6.5	6.5	6.5	6.5	6.5
Min. operating pressure for gripping	[bar]	2	2	4	4	4	4
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.01/0.01	0.01/0.01	0.01/0.02	0.01/0.02	0.02/0.01	0.02/0.01
Swiveling time with middle attached load*	[s]	0.14	0.24	0.14	0.24	0.14	0.24
Max. permissible finger length	[mm]	64	64	64	64	64	64
Max. permissible mass per finger	[kg]	0.24	0.24	0.24	0.24	0.24	0.24
Max. permissible mass moment of inertia of the payload	[kgmm ²]	340	340	341	341	341	341
Protection class IP		30	30	30	30	30	30
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.1	0.1	0.1	0.1	0.1	0.1
Dimensions X x Y x Z	[mm]	64 x 97 x 142.5	64 x 97 x 142.5	64 x 97 x 152	64 x 97 x 152	64 x 97 x 152	64 x 97 x 152

* Swiveling time at average attachment load, which is equivalent to half of the max. perm. mass moment of inertia of the design. It can be run without throttling for the rotary movement.

Flexible. Modular. Compact.

Gripper/Swivel Module RP

Gripper/swivel combination, consisting of a swivel module and a 2-finger parallel gripper

Field of Application

Gripping and swiveling combined in one module for small to medium-sized workpieces in low contaminated environments. Also for places with limited space.



Advantages – Your benefits

T-slot guidance for precise gripping at high moment loads

Gripping and turning without rotary power lines for a maximized process reliability

Double piston principle in the swivel unit for scope-free end positions and high repeat accuracy

Continuous angle of rotation adjustment over the entire swivel range.

Various shock absorber variants, optional for optimum adaption to various fields of application

Integration of a gripping force maintenance is optional for firm grip even in the event of power failure

Available as an option with rotation adapter for the gripping module for infinitely variable twisting of the gripper head relative to the drive unit

“Continuously adjustable intermediate position” option can be done using an intermediate stop which can be integrated

Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring

Standardized mounting bores for numerous combinations with other components from the modular system

 <p>Sizes Quantity: 5</p>	 <p>Weight 0.5 .. 2.02 kg</p>	 <p>Gripping force 50 .. 420 N</p>	 <p>Stroke per jaw 2.5 .. 8 mm</p>	 <p>Torque 0.38 .. 1.9 Nm</p>
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Functional Description

The rotary movement is done by the two pneumatic pistons when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks.

For the gripping movement, the piston is moved up or down using compressed air. Together with the guidance of the base jaws, the diagonal pull turns the piston movement into a synchronized opening and closing.



- ① **Drive, turning**
Pneumatic, rack and pinion principle
- ② **Kinematics**
Internal, power transmission via line contact
- ③ **Mounting pattern**
Completely integrated in the module system
- ④ **Drive, gripping**
Double-acting piston drive system
- ⑤ **Swivel angle adjustment**
For a flexible end position, with hydraulic shock absorber
- ⑥ **Base jaws**
For adaption of workpiece-specific gripper fingers

General Notes about the Series

Operating principle: Combination of rack and pinion with double piston drive

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Completely ready for operation without bracket for proximity switch and without proximity switch

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw.

Pinion position: Is always shown in the left end position. The pinion rotates from here to the right in clockwise direction. The arrow makes the direction of rotation clear.

Pinion screw connection diagram: When setting a swivel angle smaller than 90°, the left end stop must be completely turned in. This means that the left end position has a screw connection diagram on the pinion which is clockwise turned by 90° compared to the main view, which shows a swivel angle of 180°.

Finger length: Measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Layout or control calculation: For configuration or control calculation of the units, we recommend to use our Toolbox software, which is available online. Verifying the sizing of the selected unit is absolutely necessary, as otherwise overloading may occur.



Application Example

Modularly designed complete unit for relocating and turning small components.

- ① Gripper/swivel module RP
- ② Linear module KLM

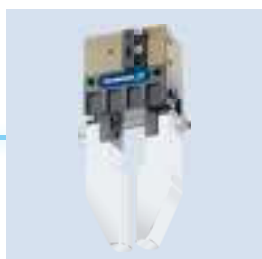
- ③ Swivel vane RM-W

SCHUNK offers more ...

The following components make the product RP even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Gripper for small components



Miniature swivel unit



Pick & Place unit



Magnetic switch



Inductive proximity switch



Intermediate stop



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version K/S: The mechanical gripping force maintenance version ensures a minimum gripping force also in the case of a pressure drop. This acts as closing force for the K version and as opening force for the S version.

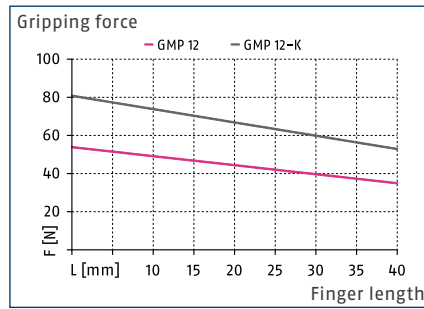
Rotation adapter version: The gripper head can be continuously adjusted and indexed in relation to the drive.

Version with a combination of gripping force maintenance and rotation adapter Z/X: This variant combines the functions of the gripping force maintenance with the one of the rotation adapter. The gripping force maintenance acts as a closing force for the Z-variant and as an opening force for the X-variant.

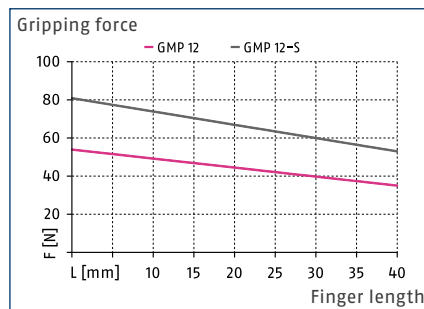
Version with intermediate position RZ: By mounting two pneumatically actuated cylinders, an intermediate position can be implemented, which can be flexibly adjusted over the entire swivel range.



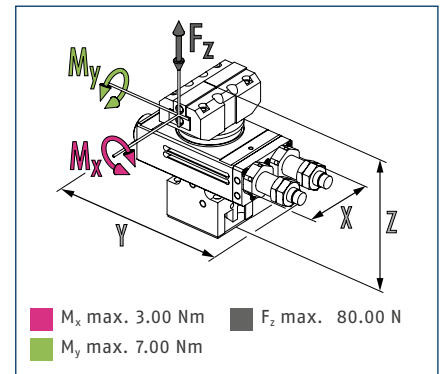
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

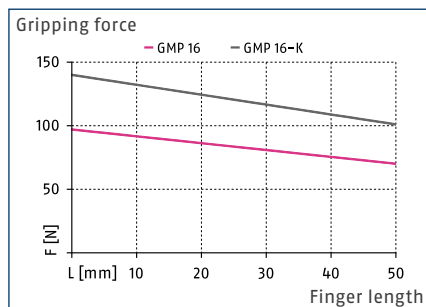
Technical data

Description		RP 1212-W	RP 1212-H	RP 1212-K-W	RP 1212-K-H	RP 1212-S-W	RP 1212-S-H
ID		1347867	0313220	1347870	0313222	1347873	0313221
Stroke per jaw	[mm]	2.5	2.5	2.5	2.5	2.5	2.5
Closing/opening force	[N]	50/50	50/50	75/-	75/-	-/75	-/75
Min. spring force	[N]			25	25	25	25
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.25	0.25	0.25	0.25	0.25	0.25
Air consumption for gripping	[cm ³]	0.87	0.87	0.87	0.87	0.87	0.87
Air consumption for swiveling	[cm ³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.5	0.5	0.52	0.52	0.52	0.52
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	40	40	40	40	40	40
Max. permissible mass per finger	[kg]	0.06	0.06	0.06	0.06	0.06	0.06
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 43 x 86.5	117 x 43 x 86.5	117 x 43 x 107	117 x 43 x 107	117 x 43 x 107	117 x 43 x 107
Options and their characteristics							
Rotation adapter version		RP 1212-D-W	RP 1212-D-H	RP 1212-Z-W	RP 1212-Z-H	RP 1212-X-W	RP 1212-X-H
ID		1347874	0313223	1347876	0313225	1347880	0313224
Weight	[kg]	0.52	0.52	0.54	0.54	0.54	0.54

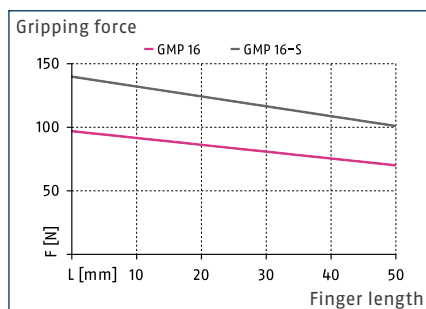
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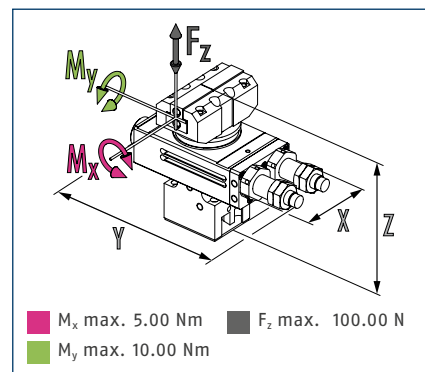
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



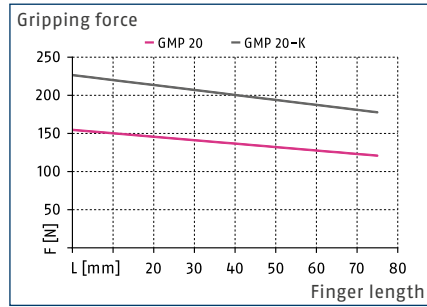
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself.

Technical data

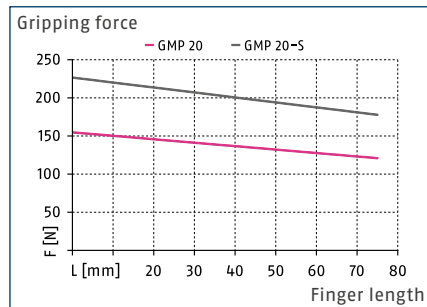
Description		RP 1216-W	RP 1216-H	RP 1216-K-W	RP 1216-K-H	RP 1216-S-W	RP 1216-S-H
ID		1347882	0313242	1347885	0313244	1347888	0313243
Stroke per jaw	[mm]	3	3	3	3	3	3
Closing/opening force	[N]	90/90	90/90	130/-	130/-	-/130	-/130
Min. spring force	[N]			40	40	40	40
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.45	0.45	0.45	0.45	0.45	0.45
Air consumption for gripping	[cm³]	1.1	1.1	1.1	1.1	1.1	1.1
Air consumption for swiveling	[cm³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.56	0.56	0.62	0.62	0.62	0.62
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	50	50	50	50	50	50
Max. permissible mass per finger	[kg]	0.1	0.1	0.1	0.1	0.1	0.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 43 x 91.5	117 x 43 x 91.5	117 x 43 x 112	117 x 43 x 112	117 x 43 x 112	117 x 43 x 112
Options and their characteristics							
Rotation adapter version		RP 1216-D-W	RP 1216-D-H	RP 1216-Z-W	RP 1216-Z-H	RP 1216-X-W	RP 1216-X-H
ID		1347894	0313245	1347905	0313247	1347907	0313246
Weight	[kg]	0.6	0.6	0.64	0.64	0.64	0.64



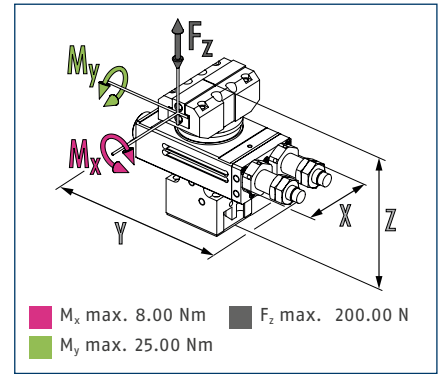
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

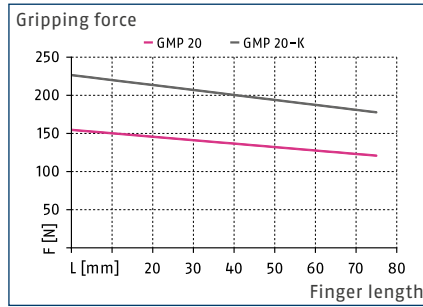
Technical data

Description		RP 1520-W	RP 1520-H	RP 1520-K-W	RP 1520-K-H	RP 1520-S-W	RP 1520-S-H
ID		0314978	0313264	0314980	0313266	0314979	0313265
Stroke per jaw	[mm]	5	5	5	5	5	5
Closing/opening force	[N]	150/150	150/150	220/-	220/-	-/220	-/220
Min. spring force	[N]			70	70	70	70
Torque	[Nm]	0.76	0.76	0.76	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.75	0.75	0.75	0.75	0.75	0.75
Air consumption for gripping	[cm ³]	2.86	2.86	2.86	2.86	2.86	2.86
Air consumption for swiveling	[cm ³]	9.6	9.6	9.6	9.6	9.6	9.6
Weight	[kg]	0.92	0.92	1	1	1	1
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.025/0.04	0.025/0.04	0.04/0.025	0.04/0.025
Max. permissible finger length	[mm]	75	75	75	75	75	75
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	144 x 52 x 104	144 x 52 x 104	144 x 52 x 126.5	144 x 52 x 126.5	144 x 52 x 126.5	144 x 52 x 126.5
Options and their characteristics							
Rotation adapter version		RP 1520-D-W	RP 1520-D-H	RP 1520-Z-W	RP 1520-Z-H	RP 1520-X-W	RP 1520-X-H
ID		0314981	0313267	0314983	0313269	0314982	0313268
Weight	[kg]	0.98	0.98	1.06	1.06	1.06	1.06

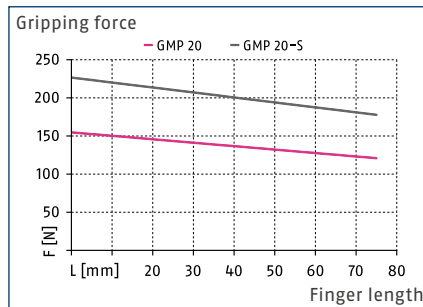
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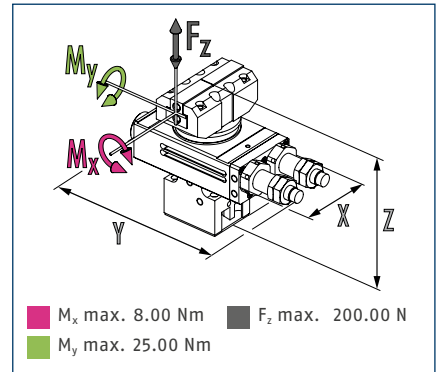
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



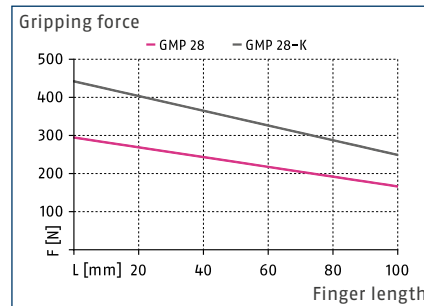
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

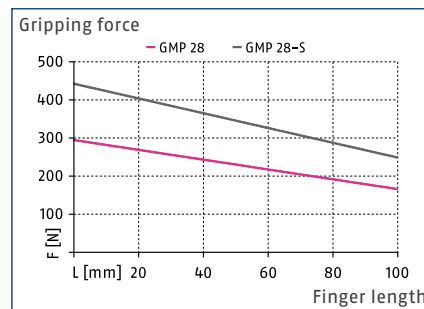
Description		RP 2120-W	RP 2120-K-W	RP 2120-S-W
ID		0313286	0313288	0313287
Stroke per jaw	[mm]	5	5	5
Closing/opening force	[N]	150/150	220/-	-/220
Min. spring force	[N]		70	70
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Air consumption for gripping	[cm³]	2.86	2.86	2.86
Air consumption for swiveling	[cm³]	23.8	23.8	23.8
Weight	[kg]	1.5	1.58	1.58
Nominal operating pressure	[bar]	6	6	6
Max. operating pressure	[bar]	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3
Closing/opening time	[s]	0.03/0.03	0.025/0.04	0.04/0.025
Max. permissible finger length	[mm]	75	75	75
Max. permissible mass per finger	[kg]	0.18	0.18	0.18
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 65 x 114	183 x 65 x 138.5	183 x 65 x 138.5
Options and their characteristics				
Rotation adapter version		RP 2120-D-W	RP 2120-Z-W	RP 2120-X-W
ID		0313289	0313291	0313290
Weight	[kg]	1.56	1.64	1.64



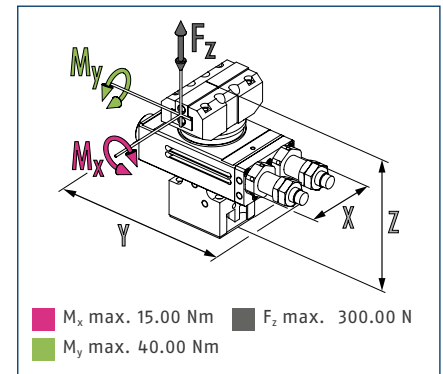
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads

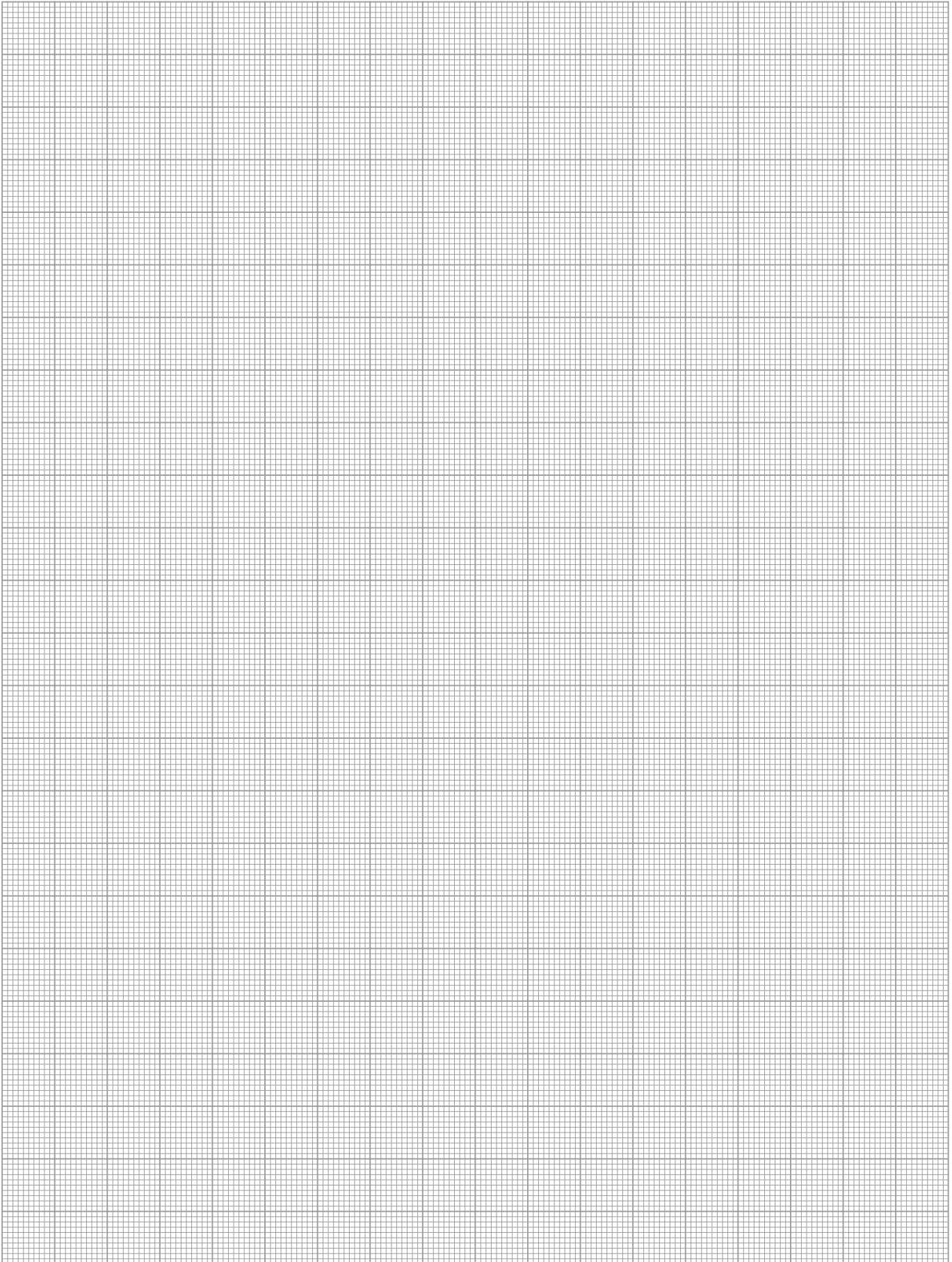


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		RP 2128-W	RP 2128-K-W	RP 2128-S-W
ID		0313308	0313310	0313309
Stroke per jaw	[mm]	8	8	8
Closing/opening force	[N]	280/280	420/-	-/420
Min. spring force	[N]		140	140
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
Recommended workpiece weight	[kg]	1.4	1.4	1.4
Air consumption for gripping	[cm ³]	9.05	9.05	9.05
Air consumption for swiveling	[cm ³]	23.8	23.8	23.8
Weight	[kg]	1.78	1.94	1.94
Nominal operating pressure	[bar]	6	6	6
Max. operating pressure	[bar]	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3
Closing/opening time	[s]	0.05/0.05	0.04/0.06	0.06/0.04
Max. permissible finger length	[mm]	100	100	100
Max. permissible mass per finger	[kg]	0.35	0.35	0.35
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 65 x 130.5	183 x 65 x 165.5	183 x 65 x 165.5
Options and their characteristics				
Rotation adapter version		RP 2128-D-W	RP 2128-Z-W	RP 2128-X-W
ID		0313311	0313313	0313312
Weight	[kg]	1.84	2.02	2.02

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rp



Flexible. Modular. Compact.

Gripper/Swivel Module RC

Gripper/swivel combination, consisting of a swivel module and a 3-finger centric gripper

Field of Application

Gripping and swiveling combined in one module for small to medium-sized workpieces in low contaminated environments. Also for places with limited space.

Advantages – Your benefits

T-slot guidance for precise gripping at high moment loads

Gripping and turning without rotary power lines for a maximized process reliability

Double piston principle in the swivel unit for scope-free end positions and high repeat accuracy

Continuous angle of rotation adjustment over the entire swivel range

Various shock absorber variants, optional for optimum adaption to various fields of application

Integration of a gripping force maintenance is optional for firm grip even in the event of power failure

Available as an option with rotation adapter for the gripping module for infinitely variable twisting of the gripper head relative to the drive unit

“Continuously adjustable intermediate position” option can be done using an intermediate stop which can be integrated

Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring

Standardized mounting bores for numerous combinations with other components from the modular system



Sizes
Quantity: 5



Weight
0.54 .. 2.33 kg



Gripping force
50 .. 420 N



Stroke per jaw
2.5 .. 8 mm



Torque
0.38 .. 1.9 Nm



Functional Description

The rotary movement is done by the two pneumatic pistons when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks.

For the gripping movement, the piston is moved up or down using compressed air. Together with the guidance of the base jaws, the diagonal pull turns the piston movement into a synchronized opening and closing.



- ① **Drive, turning**
Pneumatic, rack and pinion principle
- ② **Kinematics**
Internal, power transmission via line contact
- ③ **Mounting pattern**
Completely integrated in the module system
- ④ **Drive, gripping**
Double-acting piston drive system
- ⑤ **Swivel angle adjustment**
For a flexible end position, with hydraulic shock absorber
- ⑥ **Base jaws**
For the connection of workpiece-specific gripper fingers

General Notes about the Series

Operating principle: Combination of rack and pinion with double piston drive

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Completely ready for operation without bracket for proximity switch and without proximity switch

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Gripping force: Is the arithmetic sum of the individual force applied to each jaw.

Pinion position: Is always shown in the left end position. The pinion rotates from here to the right in clockwise direction. The arrow makes the direction of rotation clear.

Pinion screw connection diagram: When setting a swivel angle smaller than 90°, the left end stop must be completely turned in. This means that the left end position has a screw connection diagram on the pinion which is clockwise turned by 90° compared to the main view, which shows a swivel angle of 180°.

Finger length: Measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Layout or control calculation: For configuration or control calculation of the units, we recommend to use our Toolbox software, which is available online. Verifying the sizing of the selected unit is absolutely necessary, as otherwise overloading may occur.

Application Example

Pneumatically powered Pick & Place unit with gripper/swivel module for centric gripping, turning, and repositioning of small workpieces.

- ① Gripper/swivel module RC
- ② Linear module CLM
- ③ Pillar assembly system

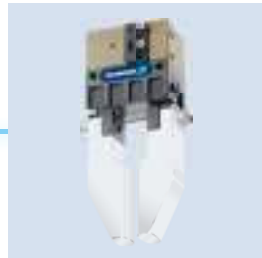


SCHUNK offers more ...

The following components make the product RC even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Gripper for small components



Miniature swivel unit



Pick & Place unit



Magnetic switch



Inductive proximity switch



Intermediate stop



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version K/S: The mechanical gripping force maintenance version ensures a minimum gripping force also in the case of a pressure drop. This acts as closing force for the K version and as opening force for the S version.

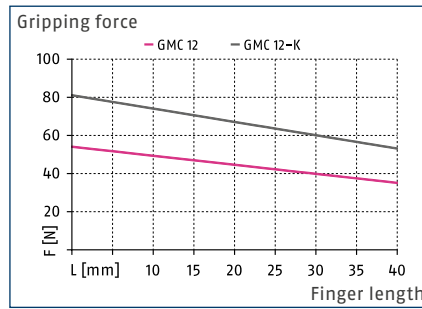
Rotation adapter version: The gripper head can be continuously adjusted and indexed in relation to the drive.

Version with a combination of gripping force maintenance and rotation adapter Z/X: This variant combines the functions of the gripping force maintenance with the one of the rotation adapter. The gripping force maintenance acts as a closing force for the Z-variant and as an opening force for the X-variant.

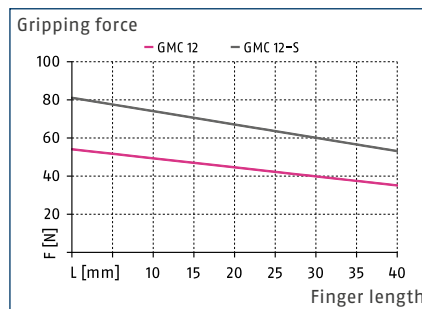
Version with intermediate position RZ: By mounting two pneumatically actuated cylinders, an intermediate position can be implemented, which can be flexibly adjusted over the entire swivel range.



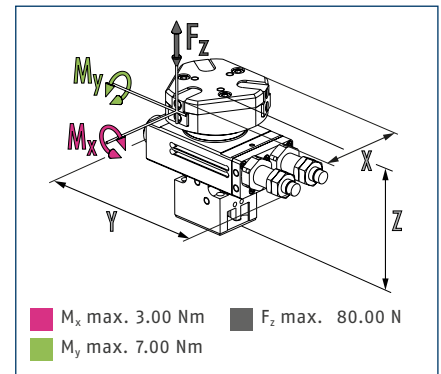
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

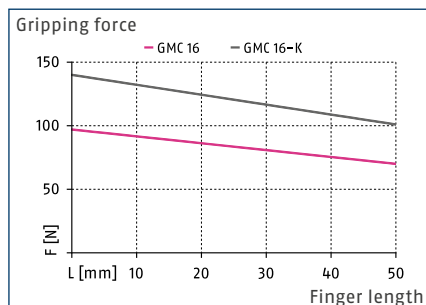
Technical data

Description		RC 1212-W	RC 1212-H	RC 1212-K-W	RC 1212-K-H	RC 1212-S-W	RC 1212-S-H
ID		1347970	0313236	1347972	0313238	1347974	0313237
Stroke per jaw	[mm]	2.5	2.5	2.5	2.5	2.5	2.5
Closing/opening force	[N]	50/50	50/50	75/-	75/-	-/75	-/75
Min. spring force	[N]			25	25	25	25
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.25	0.25	0.25	0.25	0.25	0.25
Air consumption for gripping	[cm³]	0.87	0.87	0.87	0.87	0.87	0.87
Air consumption for swiveling	[cm³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.54	0.54	0.56	0.56	0.56	0.56
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	40	40	40	40	40	40
Max. permissible mass per finger	[kg]	0.06	0.06	0.06	0.06	0.06	0.06
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 48 x 88	117 x 48 x 88	117 x 48 x 108.5	117 x 48 x 108.5	117 x 48 x 108.5	117 x 48 x 108.5
Options and their characteristics							
Rotation adapter version		RC 1212-D-W	RC 1212-D-H	RC 1212-Z-W	RC 1212-Z-H	RC 1212-X-W	RC 1212-X-H
ID		1347978	0313239	1347979	0313241	1347981	0313240
Weight	[kg]	0.56	0.56	0.58	0.58	0.58	0.58

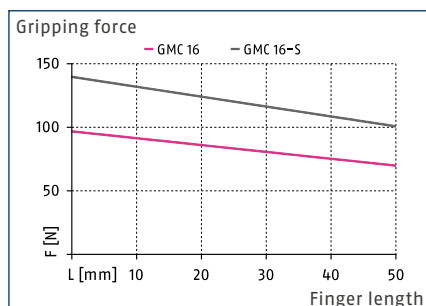
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rc



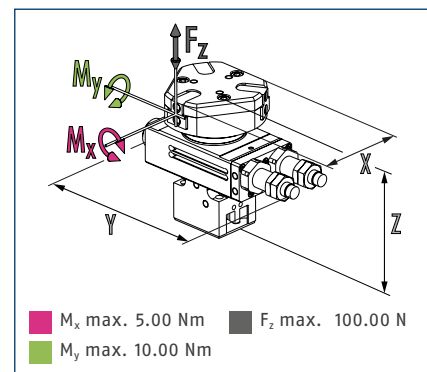
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



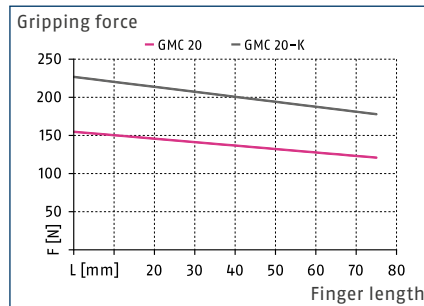
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

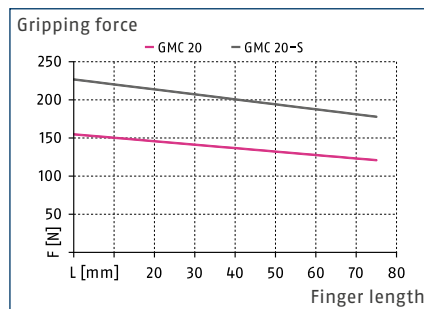
Description		RC 1216-W	RC 1216-H	RC 1216-K-W	RC 1216-K-H	RC 1216-S-W	RC 1216-S-H
ID		1347983	0313258	1347986	0313260	1347987	0313259
Stroke per jaw	[mm]	3	3	3	3	3	3
Closing/opening force	[N]	90/90	90/90	130/-	130/-	-/130	-/130
Min. spring force	[N]			40	40	40	40
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.45	0.45	0.45	0.45	0.45	0.45
Air consumption for gripping	[cm ³]	1.1	1.1	1.1	1.1	1.1	1.1
Air consumption for swiveling	[cm ³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.65	0.65	0.71	0.71	0.71	0.71
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	50	50	50	50	50	50
Max. permissible mass per finger	[kg]	0.1	0.1	0.1	0.1	0.1	0.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 58 x 93	117 x 58 x 93	117 x 58 x 112	117 x 58 x 112	117 x 58 x 112	117 x 58 x 112
Options and their characteristics							
Rotation adapter version		RC 1216-D-W	RC 1216-D-H	RC 1216-Z-W	RC 1216-Z-H	RC 1216-X-W	RC 1216-X-H
ID		1347992	0313261	1347993	0313263	1347996	0313262
Weight	[kg]	0.69	0.69	0.73	0.73	0.73	0.73



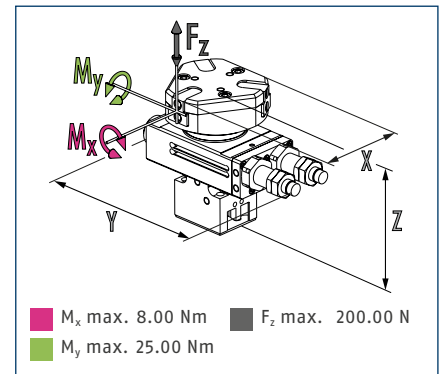
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

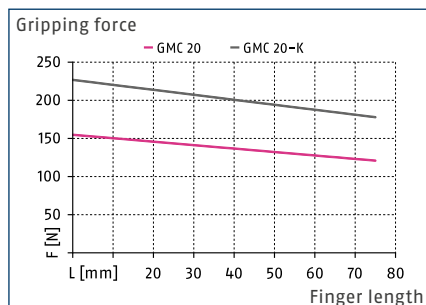
Technical data

Description		RC 1520-W	RC 1520-H	RC 1520-K-W	RC 1520-K-H	RC 1520-S-W	RC 1520-S-H
ID		0314994	0313280	0314996	0313282	0314995	0313281
Stroke per jaw	[mm]	5	5	5	5	5	5
Closing/opening force	[N]	150/150	150/150	220/-	220/-	-/220	-/220
Min. spring force	[N]			70	70	70	70
Torque	[Nm]	0.76	0.76	0.76	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190	190	190	190
Recommended workpiece weight	[kg]	0.75	0.75	0.75	0.75	0.75	0.75
Air consumption for gripping	[cm ³]	2.86	2.86	2.86	2.86	2.86	2.86
Air consumption for swiveling	[cm ³]	9.6	9.6	9.6	9.6	9.6	9.6
Weight	[kg]	1.08	1.08	1.16	1.16	1.16	1.16
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.025/0.04	0.025/0.04	0.04/0.025	0.04/0.025
Max. permissible finger length	[mm]	75	75	75	75	75	75
Max. permissible mass per finger	[kg]	0.18	0.18	0.18	0.18	0.18	0.18
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	144 x 74 x 105.5	144 x 74 x 105.5	144 x 74 x 130	144 x 74 x 130	144 x 74 x 130	144 x 74 x 130
Options and their characteristics							
Rotation adapter version		RC 1520-D-W	RC 1520-D-H	RC 1520-Z-W	RC 1520-Z-H	RC 1520-X-W	RC 1520-X-H
ID		0314997	0313283	0314999	0313285	0314998	0313284
Weight	[kg]	1.14	1.14	1.22	1.22	1.22	1.22

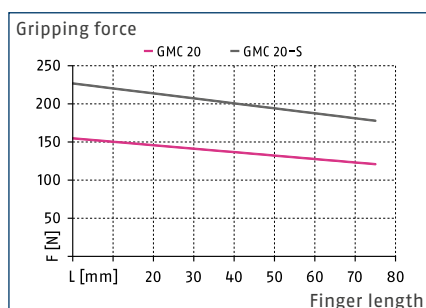
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rc



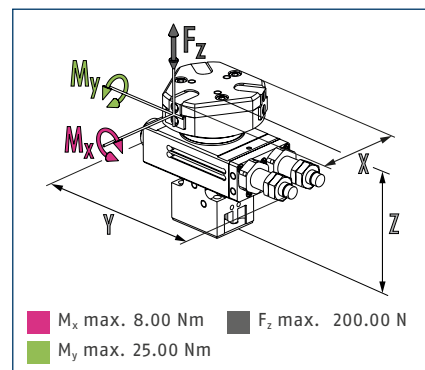
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



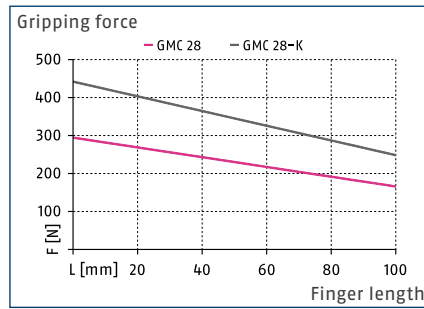
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

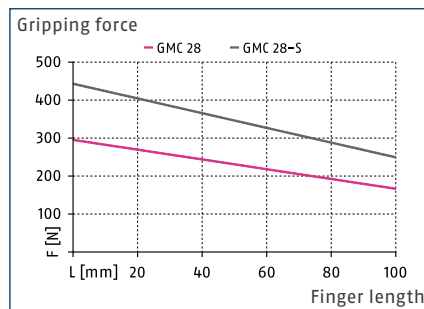
Description		RC 2120-W	RC 2120-K-W	RC 2120-S-W
ID		0313302	0313304	0313303
Stroke per jaw	[mm]	5	5	5
Closing/opening force	[N]	150/150	220/-	-/220
Min. spring force	[N]		70	70
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Air consumption for gripping	[cm ³]	2.86	2.86	2.86
Air consumption for swiveling	[cm ³]	23.8	23.8	23.8
Weight	[kg]	1.5	1.58	1.58
Nominal operating pressure	[bar]	6	6	6
Max. operating pressure	[bar]	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3
Closing/opening time	[s]	0.03/0.03	0.025/0.04	0.04/0.025
Max. permissible finger length	[mm]	75	75	75
Max. permissible mass per finger	[kg]	0.18	0.18	0.18
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 74 x 115.5	183 x 74 x 140	183 x 74 x 140
Options and their characteristics				
Rotation adapter version		RC 2120-D-W	RC 2120-Z-W	RC 2120-X-W
ID		0313305	0313307	0313306
Weight	[kg]	1.56	1.64	1.64



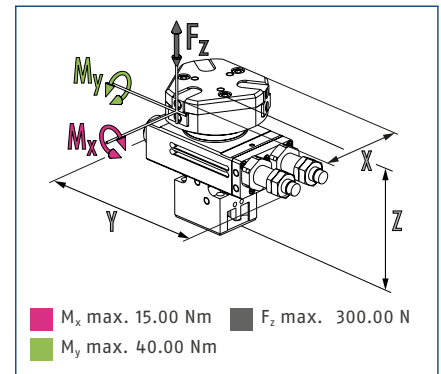
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads

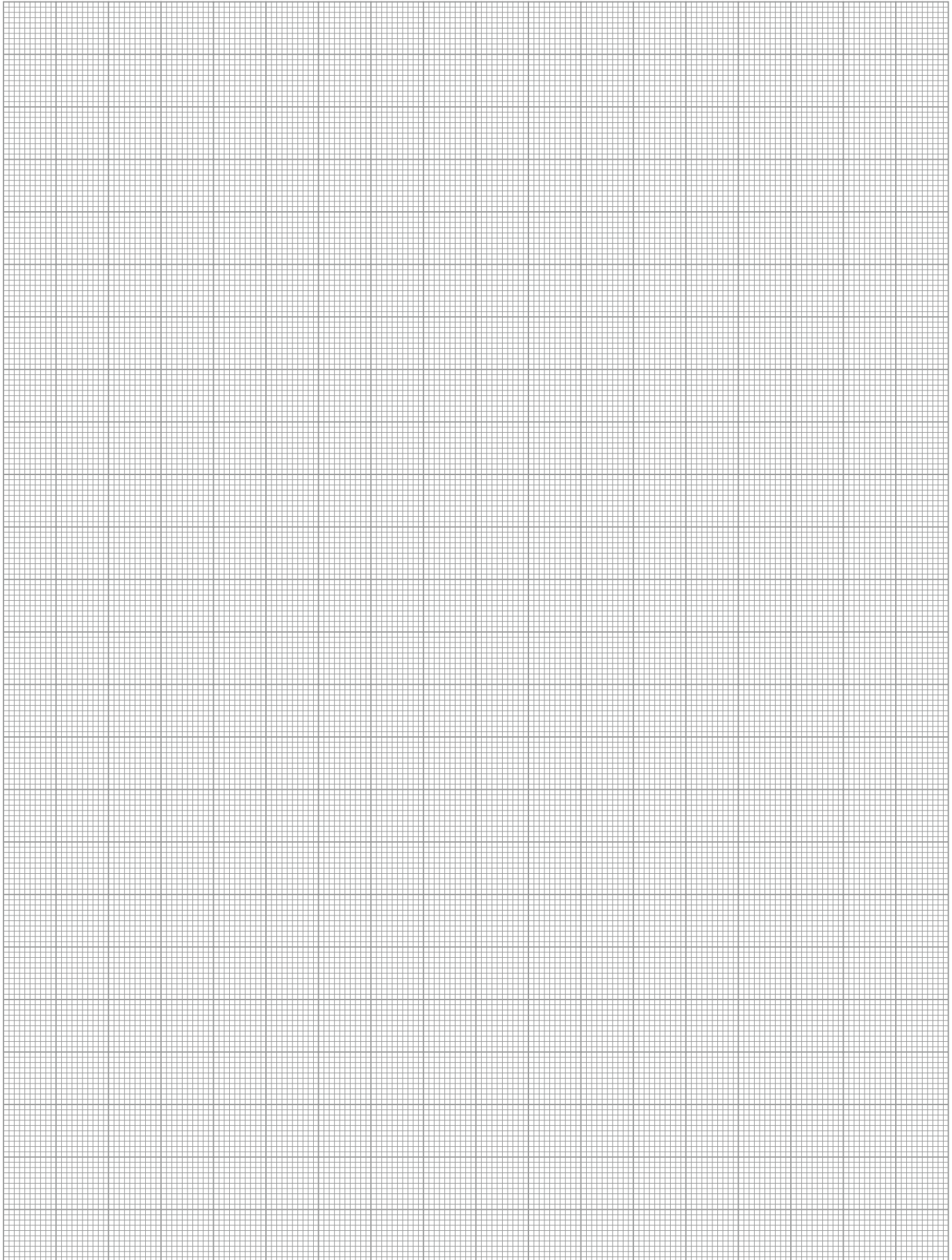


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		RC 2128-W	RC 2128-K-W	RC 2128-S-W
ID		0313320	0313322	0313321
Stroke per jaw	[mm]	8	8	8
Closing/opening force	[N]	280/280	420/-	-/420
Min. spring force	[N]		140	140
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
Recommended workpiece weight	[kg]	1.4	1.4	1.4
Air consumption for gripping	[cm ³]	9.05	9.05	9.05
Air consumption for swiveling	[cm ³]	23.8	23.8	23.8
Weight	[kg]	2.09	2.25	2.25
Nominal operating pressure	[bar]	6	6	6
Max. operating pressure	[bar]	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3
Closing/opening time	[s]	0.05/0.05	0.04/0.06	0.06/0.04
Max. permissible finger length	[mm]	100	100	100
Max. permissible mass per finger	[kg]	0.35	0.35	0.35
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 92 x 132	183 x 92 x 179	183 x 92 x 179
Options and their characteristics				
Rotation adapter version		RC 2128-D-W	RC 2128-Z-W	RC 2128-X-W
ID		0313323	0313325	0313324
Weight	[kg]	2.15	2.33	2.33

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rc



Flexible. Modular. Compact.

Gripper/Swivel Module RW

Gripper/swivel combination, consisting of a swivel module and a 2-finger angular gripper

Field of Application

Gripping and swiveling combined in a single compact module, for automated assembly in places with a restricted amount of available space.



Advantages – Your benefits

Gripping and turning without rotary power lines for a maximized process reliability

Double piston principle in the swivel unit for scope-free end positions and high repeat accuracy

Continuous angle of rotation adjustment over the entire swivel range

Various shock absorber variants, optional for optimum adaption to various fields of application

Integration of a gripping force maintenance is optional for firm grip even in the event of power failure

Available as an option with rotation adapter for the gripping module for infinitely variable twisting of the gripper head relative to the drive unit

“Continuously adjustable intermediate position” option can be done using an intermediate stop which can be integrated

Choice of electronic magnetic sensors or inductive proximity sensors for absolute variability of position monitoring

Standardized mounting bores for numerous combinations with other components from the modular system



Sizes
Quantity: 5



Weight
0.5 .. 1.92 kg



Gripping moment
0.6 .. 6 Nm



Opening angle per
finger
3 .. 16°



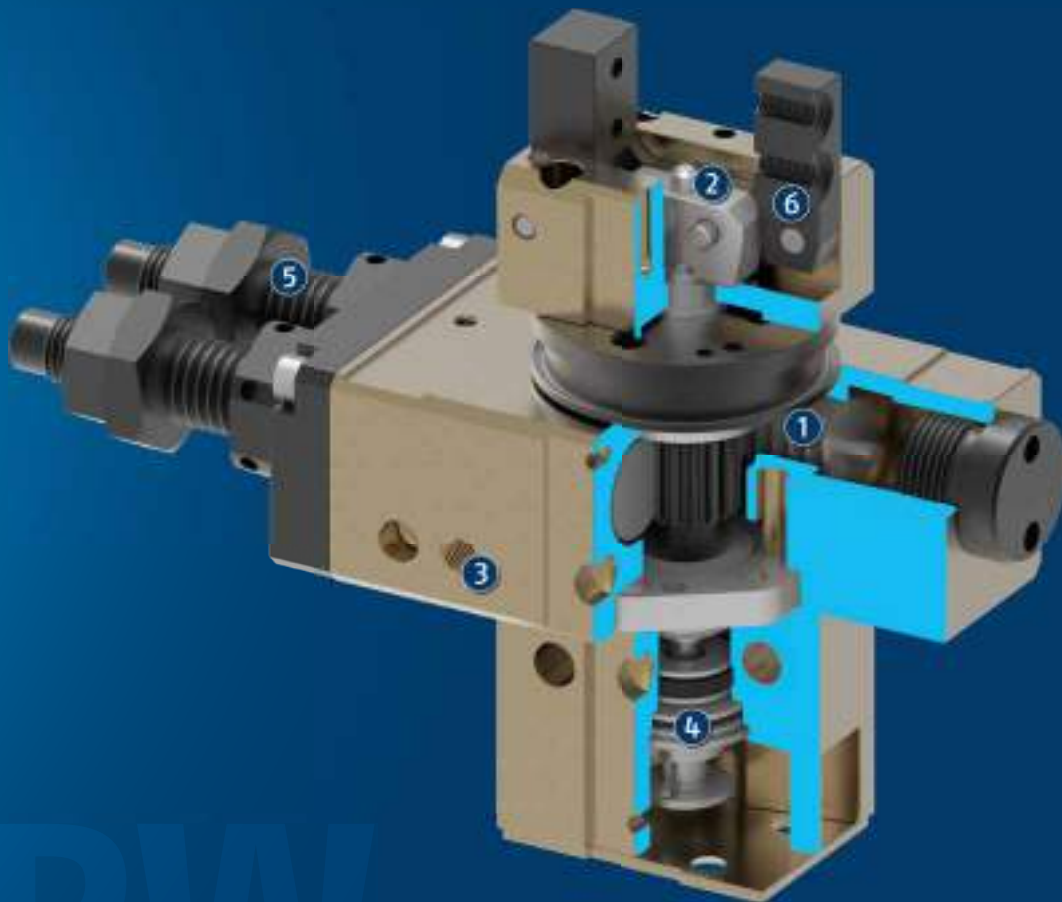
Torque
0.38 .. 1.9 Nm



Functional Description

The rotary movement is done by the two pneumatic pistons when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks.

For the gripping movement, the piston is moved up or down using compressed air. Together with the bolt bearings of the base jaws, the lever kinematics guides the piston movement into a synchronized, rotatory opening and closing movement.



- ① **Drive, turning**
Pneumatic, rack and pinion principle
- ② **Kinematics**
Synchronization by lever principle for centric gripping
- ③ **Mounting pattern**
Completely integrated in the module system
- ④ **Drive, gripping**
Double-acting piston drive system
- ⑤ **Swivel angle adjustment**
For a flexible end position, with hydraulic shock absorber
- ⑥ **Base jaws**
For the connection of workpiece-specific gripper fingers

General Notes about the Series

Operating principle: Combination of rack and pinion with double piston drive

Housing material: Aluminum alloy, anodized

Base jaw material: Steel

Guidance: Round guide, ground and hardened

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Completely ready for operation without bracket for proximity switch and without proximity switch

Gripping force maintenance: Possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

Closing moment: Is the arithmetic sum of the individual moment applied to each jaw.

Pinion position: Is always shown in the left end position. The pinion rotates from here to the right in clockwise direction. The arrow makes the direction of rotation clear.

Pinion screw connection diagram: When setting a swivel angle smaller than 90°, the left end stop must be completely turned in. This means that the left end position has a screw connection diagram on the pinion which is clockwise turned by 90° compared to the main view, which shows a swivel angle of 180°.

Finger length: Is measured from the upper edge of the gripper housing in the direction of the main axis.

Layout or control calculation: For configuration or control calculation of the units, we recommend to use our Toolbox software, which is available online. Verifying the sizing of the selected unit is absolutely necessary, as otherwise overloading may occur.

Application Example

Pneumatic conversion station with additional rotational axis for fast workpiece turning and pillar assembly.

- ① Gripper/swivel module RW
- ② Linear module CLM
- ③ Linear module LM
- ④ Pillar assembly system

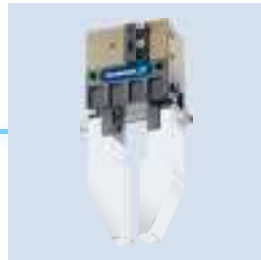


SCHUNK offers more ...

The following components make the product RW even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Gripper for small components



Miniature swivel unit



Pick & Place unit



Magnetic switch



Inductive proximity switch



Intermediate stop



Pressure maintenance valve

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Gripping force maintenance version K/S: The mechanical gripping force maintenance version ensures a minimum gripping force also in the case of a pressure drop. This acts as closing force for the K version and as opening force for the S version.

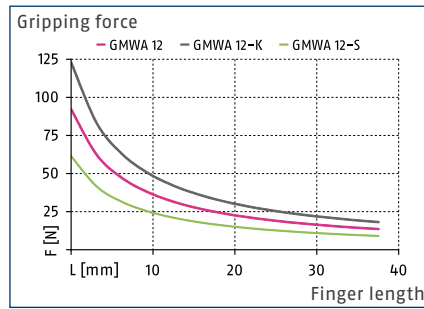
Rotation adapter version: The gripper head can be continuously adjusted and indexed in relation to the drive.

Version with a combination of gripping force maintenance and rotation adapter Z/X: This variant combines the functions of the gripping force maintenance with the one of the rotation adapter. The gripping force maintenance acts as a closing force for the Z-variant and as an opening force for the X-variant.

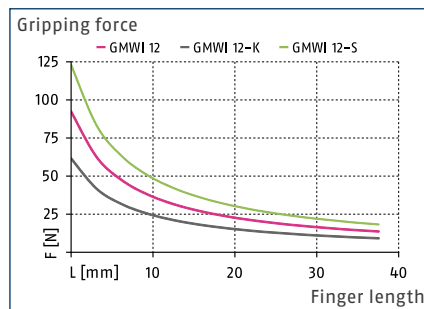
Version with intermediate position RZ: By mounting two pneumatically actuated cylinders, an intermediate position can be implemented, which can be flexibly adjusted over the entire swivel range.



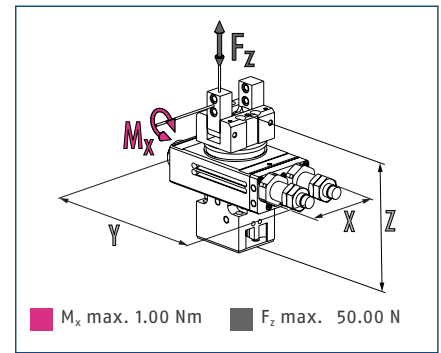
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

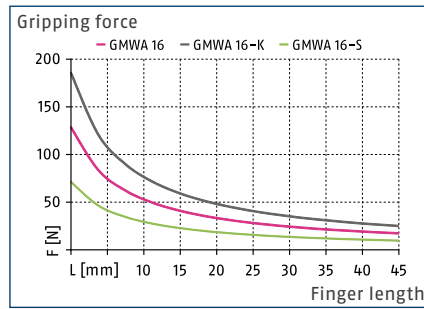
Description		RWA 1212-W	RWA 1212-H	RWA 1212-K-W	RWA 1212-K-H	RWA 1212-S-W	RWA 1212-S-H
ID		1347909	0313226	1347912	0313228	1347913	0313227
Closing angle per jaw		3	3	3	3	3	3
Opening angle per jaw	[°]	16	16	16	16	16	16
Closing moment	[Nm]	0.6	0.6	0.8	0.8		
Opening moment		0.6	0.6			0.8	0.8
Min. closing moment by spring	[Nm]			0.2	0.2		
Min. opening moment by spring						0.2	0.2
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Air consumption for gripping	[cm³]	0.87	0.87	0.87	0.87	0.87	0.87
Air consumption for swiveling	[cm³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.5	0.5	0.52	0.52	0.52	0.52
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	25	25	25	25	25	25
Max. permissible mass per finger	[kg]	0.05	0.05	0.05	0.05	0.05	0.05
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 43 x 83.5	117 x 43 x 83.5	117 x 43 x 104	117 x 43 x 104	117 x 43 x 104	117 x 43 x 104
Options and their characteristics							
Rotation adapter version		RWA 1212-D-W	RWA 1212-D-H	RWA 1212-Z-W	RWA 1212-Z-H	RWA 1212-X-W	RWA 1212-X-H
ID		1347924	0313229	1347926	0313231	1347928	0313230
Weight	[kg]	0.52	0.52	0.54	0.54	0.54	0.54

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rw

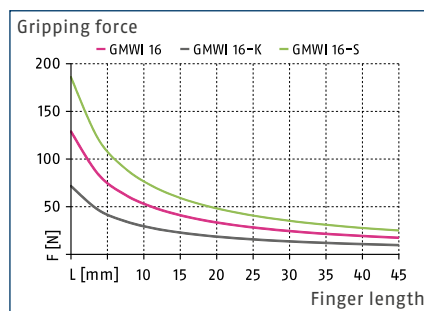
Description		RWI 1212-W	RWI 1212-H	RWI 1212-S-W	RWI 1212-S-H
ID		1347916	0313232	1347920	0313233
Closing angle per jaw		16	16	16	16
Opening angle per jaw	[°]	3	3	3	3
Opening moment		0.6	0.6	0.8	0.8
Min. opening moment by spring				0.2	0.2
Torque	[Nm]	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190
Air consumption for gripping	[cm ³]	0.87	0.87	0.87	0.87
Air consumption for swiveling	[cm ³]	4.8	4.8	4.8	4.8
Weight	[kg]	0.5	0.5	0.52	0.52
Nominal operating pressure	[bar]	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	25	25	25	25
Max. permissible mass per finger	[kg]	0.05	0.05	0.05	0.05
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	117 x 43 x 83.5	117 x 43 x 83.5	117 x 43 x 104	117 x 43 x 104
Options and their characteristics					
Rotation adapter version		RWI 1212-D-W	RWI 1212-D-H	RWI 1212-X-W	RWI 1212-X-H
ID		1347933	0313234	1347937	0313235
Weight	[kg]	0.52	0.52	0.54	0.54



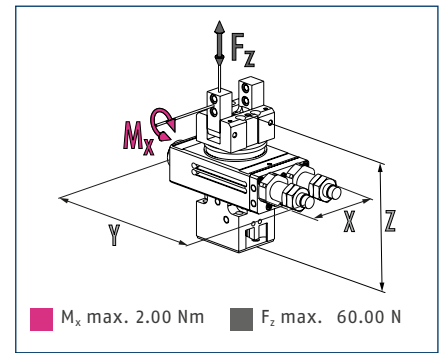
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

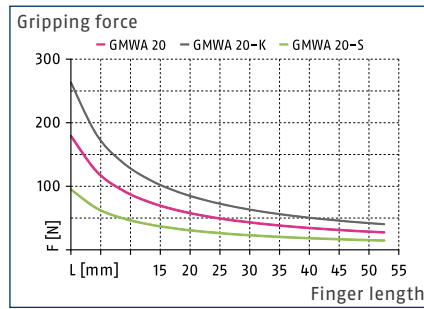
Description		RWA 1216-W	RWA 1216-H	RWA 1216-K-W	RWA 1216-K-H	RWA 1216-S-W	RWA 1216-S-H
ID		1347949	0313248	1347945	0313250	1347947	0313249
Closing angle per jaw		3	3	3	3	3	3
Opening angle per jaw	[°]	14	14	14	14	14	14
Closing moment	[Nm]	0.9	0.9	1.3	1.3		
Opening moment		0.9	0.9			1.3	1.3
Min. closing moment by spring	[Nm]			0.4	0.4		
Min. opening moment by spring						0.4	0.4
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190	190
Air consumption for gripping	[cm³]	1.1	1.1	1.1	1.1	1.1	1.1
Air consumption for swiveling	[cm³]	4.8	4.8	4.8	4.8	4.8	4.8
Weight	[kg]	0.56	0.56	0.62	0.62	0.62	0.62
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	30	30	30	30	30	30
Max. permissible mass per finger	[kg]	0.075	0.075	0.075	0.075	0.075	0.075
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	74 x 43 x 88.5	74 x 43 x 88.5	74 x 43 x 109	74 x 43 x 109	74 x 43 x 109	74 x 43 x 109
Options and their characteristics							
Rotation adapter version		RWA 1216-D-W	RWA 1216-D-H	RWA 1216-Z-W	RWA 1216-Z-H	RWA 1216-X-W	RWA 1216-X-H
ID		1347956	0313251	1347961	0313253	1347964	0313252
Weight	[kg]	0.6	0.6	0.64	0.64	0.64	0.64

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rw

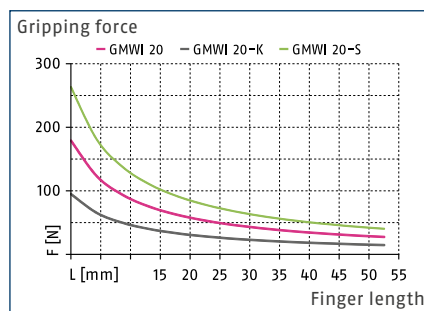
Description		RWI 1216-W	RWI 1216-H	RWI 1216-S-W	RWI 1216-S-H
ID		1347949	0313254	1347951	0313255
Closing angle per jaw		14	14	14	14
Opening angle per jaw	[°]	3	3	3	3
Opening moment		0.9	0.9	1.3	1.3
Min. opening moment by spring				0.4	0.4
Torque	[Nm]	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190
Air consumption for gripping	[cm ³]	1.1	1.1	1.1	1.1
Air consumption for swiveling	[cm ³]	4.8	4.8	4.8	4.8
Weight	[kg]	0.56	0.56	0.62	0.62
Nominal operating pressure	[bar]	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3
Closing/opening time	[s]	0.02/0.02	0.02/0.02	0.025/0.015	0.025/0.015
Max. permissible finger length	[mm]	30	30	30	30
Max. permissible mass per finger	[kg]	0.075	0.075	0.075	0.075
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.049	0.049	0.049	0.049
Dimensions X x Y x Z	[mm]	74 x 43 x 88.5	74 x 43 x 88.5	74 x 43 x 109	74 x 43 x 109
Options and their characteristics					
Rotation adapter version		RWI 1216-D-W	RWI 1216-D-H	RWI 1216-X-W	RWI 1216-X-H
ID		1347966	0313256	1347967	0313257
Weight	[kg]	0.6	0.6	0.64	0.64



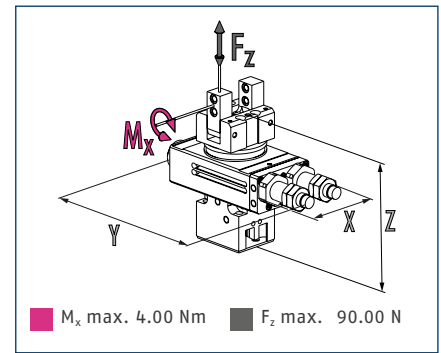
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

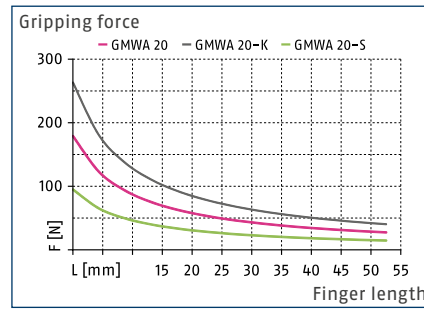
Description		RWA 1520-W	RWA 1520-H	RWA 1520-K-W	RWA 1520-K-H	RWA 1520-S-W	RWA 1520-S-H
ID		0314984	0313270	0314986	0313272	0314985	0313271
Closing angle per jaw		7	7	7	7	7	7
Opening angle per jaw	[°]	16	16	16	16	16	16
Closing moment	[Nm]	1.7	1.7	2.5	2.5		
Opening moment		1.7	1.7			2.5	2.5
Min. closing moment by spring	[Nm]			0.8	0.8		
Min. opening moment by spring						0.8	0.8
Torque	[Nm]	0.76	0.76	0.76	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190	190	190	190
Air consumption for gripping	[cm³]	2.86	2.86	2.86	2.86	2.86	2.86
Air consumption for swiveling	[cm³]	9.6	9.6	9.6	9.6	9.6	9.6
Weight	[kg]	0.88	0.88	0.96	0.96	0.96	0.96
Nominal operating pressure	[bar]	6	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.025/0.04	0.025/0.04	0.04/0.025	0.04/0.025
Max. permissible finger length	[mm]	35	35	35	35	35	35
Max. permissible mass per finger	[kg]	0.1	0.1	0.1	0.1	0.1	0.1
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.05	0.05	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	144 x 52 x 100	144 x 52 x 100	144 x 52 x 124.5	144 x 52 x 124.5	144 x 52 x 124.5	144 x 52 x 124.5
Options and their characteristics							
Rotation adapter version		RWA 1520-D-W	RWA 1520-D-H	RWA 1520-Z-W	RWA 1520-Z-H	RWA 1520-X-W	RWA 1520-X-H
ID		0314987	0313273	0314989	0313275	0314988	0313274
Weight	[kg]	0.94	0.94	1.02	1.02	1.02	1.02

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rw

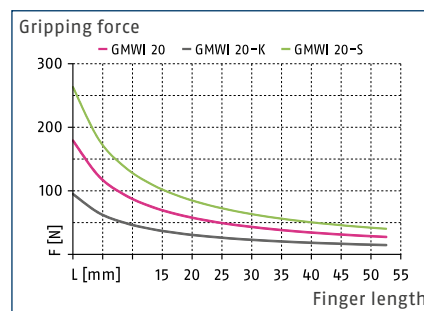
Description		RWI 1520-W	RWI 1520-H	RWI 1520-S-W	RWI 1520-S-H
ID		0314990	0313276	0314991	0313277
Closing angle per jaw		16	16	16	16
Opening angle per jaw	[°]	7	7	7	7
Opening moment		1.7	1.7	2.5	2.5
Min. opening moment by spring				0.8	0.8
Torque	[Nm]	0.76	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190	190
Air consumption for gripping	[cm ³]	2.86	2.86	2.86	2.86
Air consumption for swiveling	[cm ³]	9.6	9.6	9.6	9.6
Weight	[kg]	0.88	0.88	0.96	0.96
Nominal operating pressure	[bar]	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8
Min. operating pressure for gripping	[bar]	3	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.03/0.03	0.04/0.025	0.04/0.025
Max. permissible finger length	[mm]	35	35	35	35
Max. permissible mass per finger	[kg]	0.1	0.1	0.1	0.1
Protection class IP		40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.05	0.05	0.05	0.05
Dimensions X x Y x Z	[mm]	144 x 52 x 100	144 x 52 x 100	144 x 52 x 124.5	144 x 52 x 124.5
Options and their characteristics					
Rotation adapter version		RWI 1520-D-W	RWI 1520-D-H	RWI 1520-X-W	RWI 1520-X-H
ID		0314992	0313278	0314993	0313279
Weight	[kg]	0.94	0.94	1.02	1.02



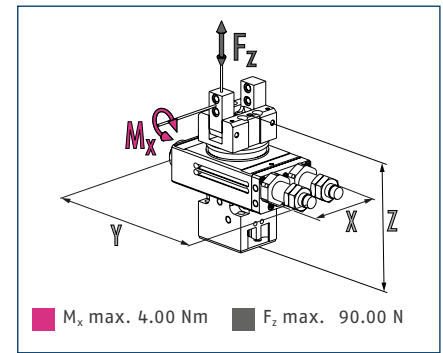
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

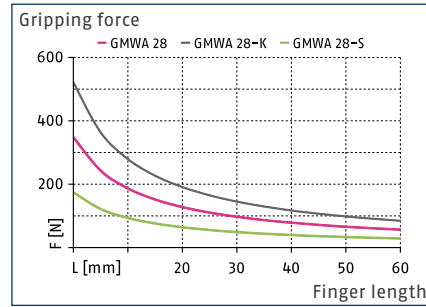
Technical data

Description		RWA 2120-W	RWA 2120-K-W	RWA 2120-S-W	RWI 2120-W	RWI 2120-S-W
ID		0313292	0313294	0313293	0313298	0313299
Closing angle per jaw		7	7	7	16	16
Opening angle per jaw	[°]	16	16	16	7	7
Closing moment	[Nm]	1.7	2.5			
Opening moment		1.7		2.5	1.7	2.5
Min. closing moment by spring	[Nm]		0.8			
Min. opening moment by spring				0.8		0.8
Torque	[Nm]	1.9	1.9	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190	190	190
Air consumption for gripping	[cm³]	2.86	2.86	2.86	2.86	2.86
Air consumption for swiveling	[cm³]	23.8	23.8	23.8	23.8	23.8
Weight	[kg]	1.46	1.54	1.54	1.46	1.54
Nominal operating pressure	[bar]	6	6	6	6	6
Max. operating pressure	[bar]	8	8	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5	3	5
Min. operating pressure for swiveling	[bar]	3	3	3	3	3
Closing/opening time	[s]	0.03/0.03	0.025/0.04	0.04/0.025	0.03/0.03	0.04/0.025
Max. permissible finger length	[mm]	35	35	35	35	35
Max. permissible mass per finger	[kg]	0.1	0.1	0.1	0.1	0.1
Protection class IP		40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 65 x 110	183 x 65 x 134.5	183 x 65 x 134.5	183 x 65 x 110	183 x 65 x 134.5
Options and their characteristics						
Rotation adapter version		RWA 2120-D-W	RWA 2120-Z-W	RWA 2120-X-W	RWI 2120-D-W	RWI 2120-X-W
ID		0313295	0313297	0313296	0313300	0313301
Weight	[kg]	1.52	1.6	1.6	1.52	1.6

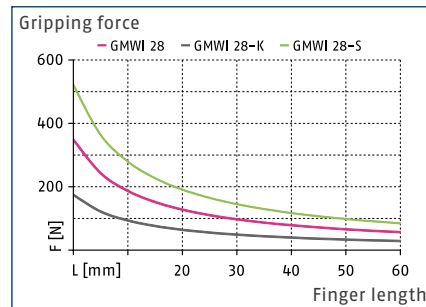
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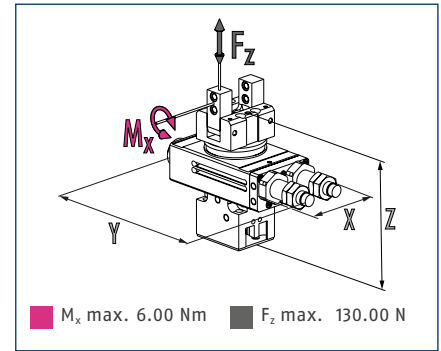
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		RWM 2128-W	RWM 2128-K-W	RWM 2128-S-W
ID		0313314	0313316	0313315
Closing angle per jaw		16	16	16
Opening angle per jaw	[°]	16	16	16
Closing moment	[Nm]	4	6	
Opening moment		4		6
Min. closing moment by spring	[Nm]		2	
Min. opening moment by spring				2
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
Air consumption for gripping	[cm³]	9.05	9.05	9.05
Air consumption for swiveling	[cm³]	23.8	23.8	23.8
Weight	[kg]	1.68	1.84	1.84
Nominal operating pressure	[bar]	6	6	6
Max. operating pressure	[bar]	8	8	8
Min. operating pressure for gripping	[bar]	3	5	5
Min. operating pressure for swiveling	[bar]	3	3	3
Closing/opening time	[s]	0.05/0.05	0.04/0.06	0.06/0.04
Max. permissible finger length	[mm]	40	40	40
Max. permissible mass per finger	[kg]	0.13	0.13	0.13
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Repeat accuracy for gripping	[mm]	0.02	0.02	0.02
Repeat accuracy for swiveling	[°]	0.044	0.044	0.044
Dimensions X x Y x Z	[mm]	183 x 65 x 125.5	183 x 65 x 160.5	183 x 65 x 160.5
Options and their characteristics				
Rotation adapter version		RWM 2128-D-W	RWM 2128-Z-W	RWM 2128-X-W
ID		0313317	0313319	0313318
Weight	[kg]	1.74	1.92	1.92

Electric Grippers

Product Quickfinder

	Page		Stroke per finger [mm]			Gripping force [N]			
			0 – 10	10 – 100	100 – 1000	0 – 100	100 – 1000	1000 – 10000	10000 – 100000
2-finger parallel gripper									
Gripper for small components EGP • Control with digital I/O	424		█ 3 – 10			█ 12 – 300			
Gripper for small components MEG • Control via controller	432		█ 6 – 10			█ 35 – 140			
Universal gripper PGN-plus-E • Multi-tooth guidance with permanent lubrication • Use of long gripper fingers possible	440		█ 8 – 10			█ 110 – 810			
Universal gripper EGN • Multi-tooth guidance	446		█ 8 – 16			█ 170 – 1000			
Universal gripper EVG • Long stroke	454			█ 20 – 50		█ 5 – 57			
Universal gripper EGL • Robust and versatile • PROFINET certification	460			42.5		█ 50 – 600			
Universal gripper WSG • Sensitive • Force measuring finger	466			█ 32 – 105		█ 5 – 80			
Universal gripper PG • Sensitive	474			34		█ 30 – 200			
Long-stroke gripper PEH • Long stroke • High gripping force	480			█ 60 – 100		█ 150 – 1800			
Long-stroke gripper EGA • With profiled rail guide • Adaptable servomotor	488			█ 30 – 100		█ 150 – 1300			
Long-stroke gripper LEG • Easy-to-move double-profiled rail guide • Adaptable servomotor	494				█ 101 – 281	█ 300 – 1500			

	Ambient conditions						Variant variety	Variety of sensor systems	Motor	Motor controller	Controller	
	Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom					SCHUNK	Motor-dependent
	●	○				○	++	+	integrated	integrated		
	●	○				○	+		integrated	external	x	
	●	●	⦿	⦿		○	++	++	integrated	integrated		
	●	●	⦿	⦿		○	++		integrated	external		
	●					○	+		integrated	external	x	
	●	⦿	○				+		integrated	Internal		
	●					○	++		integrated	integrated		
	●					○	+		integrated	integrated		
	●	○					+		integrated	integrated		
	●	⦿	○				++		adaptable	external		x
	●	○				○	++		adaptable	external		x

● = Very highly suitable ⦿ = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection



High Performance. Fast. Compact. Gripper for Small Components EGP

Electric 2-finger parallel gripper with smooth-running base jaws guided on roller bearings

Field of Application

Gripping and moving of small to medium-sized workpieces with flexible force and high speed in clean environments, such as assembly, testing, laboratory and pharmaceutical industry.

Advantages – Your benefits

High performance for the use of smaller grippers sizes

Control via digital I/O for easy commissioning and rapid integration into existing systems

Two to four stage adjustable gripping force for simple adaption to sensitive workpieces

Backlash-free, pre-loaded cross roller guide for precise gripping with nearly constant force for all permissible finger lengths

Very high maximum cycles per minute for highest productivity

Compact dimensions for minimum interfering contours in the application

Proven a thousand times MPG-plus basis for equal gripping forces and strokes with identically high efficiency

Brushless DC servomotor for almost wear-free use and a long service life

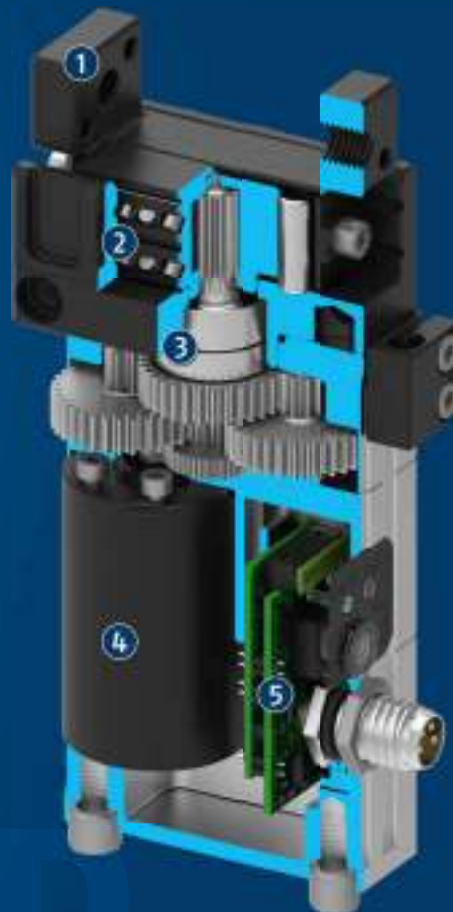


 <p>Sizes Quantity: 4</p>	 <p>Weight 0.11 .. 0.8 kg</p>	 <p>Gripping force 12 .. 300 N</p>	 <p>Stroke per jaw 3 .. 10 mm</p>	 <p>Workpiece weight 0.07 .. 1.25 kg</p>
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Functional Description

The brushless servomotor drives the base jaw via the gear mechanism.

The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Cross roller guidance**
Precise gripping due to backlash-free base jaw guidance
- ③ **Gear**
Rack and pinion principle for centric gripping
- ④ **Drive**
Brushless DC servomotor
- ⑤ **Control electronics**
Integrated control and power electronics for decentralized control of the servomotor

General Notes about the Series

Operating principle: Rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: Enclosed pack with centering sleeves, mount for proximity switch, assembly and operating manual with declaration of incorporation.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. PLC reaction times are not included in the above-mentioned times and must be taken into consideration when determining cycle times.

Nominal current: Current consumption in blocked or gripped state and on the active command "open gripper" or "close gripper" at the highest gripping force level.

Max. current: Is the maximum current consumption in the acceleration phase



Application Example

Pick & Place unit driven by linear motor for dynamic movements.

- ① Pillar assembly system
- ② Electric linear module ELP

- ③ Electric 2-finger parallel gripper EGP

SCHUNK offers more ...

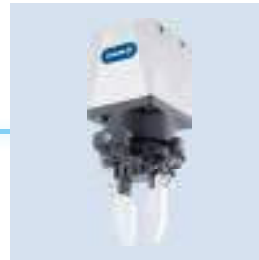
The following components make the product EGP even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Rotary module



Gripper/swivel module



Pick & Place unit



Inductive proximity switch



Flexible position sensor



Adapter plate



Finger blank



Connection cable

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Manually adjustable gripping force: With an integrated rotary switch, the gripping force can be adjusted in two stages for the EGP 25 – 100% and 50%, and in four stages for EGP 40, 50 and 64 – 100%, 75%, 50%, and 25%.

Optional status monitoring via external sensor system: The status of the gripper can be monitored by external sensors.

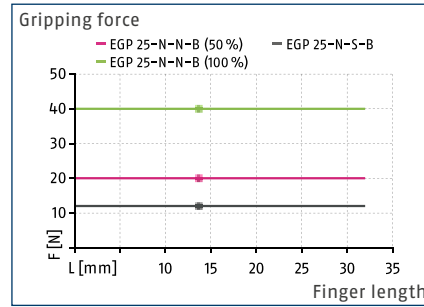
Optional adapter plates: Space saving, front-end fastening of the gripper is enabled by optional adapter plates.

Connection cable KA: Connection cables with an angled or a straight female connector can be ordered in various lengths to connect the gripper with the power supply and higher-level control system.

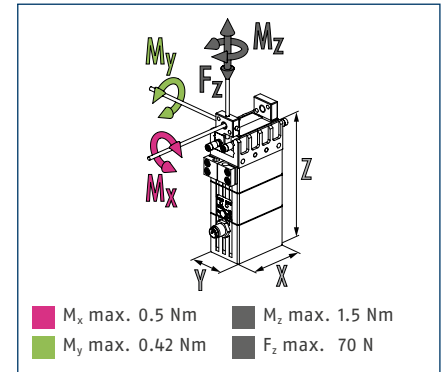
Speed version S: For faster closing and opening times due to the use of a different gear ratio. The option of a gripping force adjustment is no longer available.



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

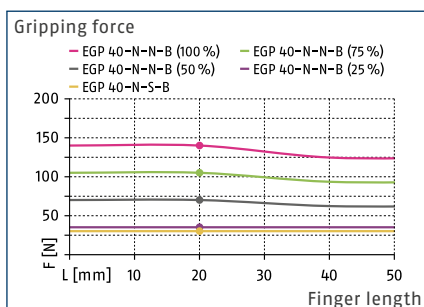
Technical data

Description		EGP 25-N-N-B	EGP 25-N-S-B
ID		0310900	0310902
General operating data			
Stroke per jaw	[mm]	3	3
Min./max. gripping force	[N]	20/40	12/12
Recommended workpiece weight	[kg]	0.2	0.07
Max. permissible finger length	[mm]	32	32
Max. permissible mass per finger	[kg]	0.02	0.02
Repeat accuracy	[mm]	0.02	0.02
Closing/opening time	[s]	0.09/0.09	0.03/0.03
Weight	[kg]	0.11	0.12
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		30	30
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	26.5 x 18 x 72.7	27 x 18 x 72.7
Electrical operating data			
Nominal voltage	[V]	24	24
Nominal current	[A]	0.14	0.14
Max. current	[A]	1	1
Controller electronics		Integrated	Integrated
Communication interface		Digital inputs	Digital inputs
Number of digital I/O		2/-	2/-

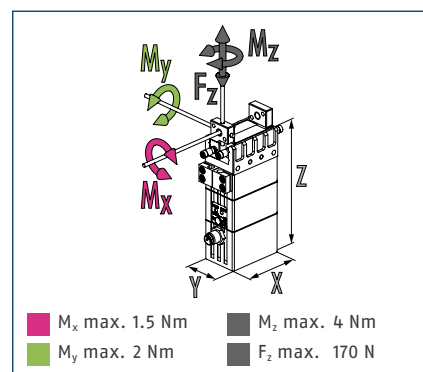
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egp



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

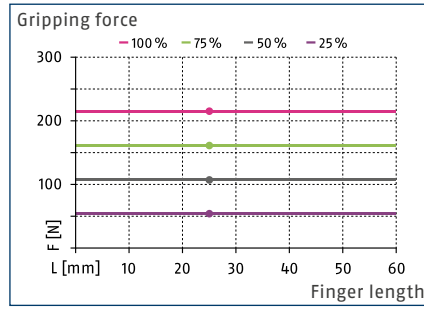
Description		EGP 40-N-N-B	EGP 40-N-S-B
ID		0310940	0310942
General operating data			
Stroke per jaw	[mm]	6	6
Min./max. gripping force	[N]	35/140	30/30
Recommended workpiece weight	[kg]	0.7	0.15
Max. permissible finger length	[mm]	50	50
Max. permissible mass per finger	[kg]	0.08	0.08
Repeat accuracy	[mm]	0.02	0.02
Closing/opening time	[s]	0.2/0.2	0.06/0.06
Weight	[kg]	0.32	0.3
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		30	30
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	40 x 26 x 88.4	40 x 26 x 88.4
Electrical operating data			
Nominal voltage	[V]	24	24
Nominal current	[A]	0.2	0.2
Max. current	[A]	2	2
Controller electronics		Integrated	Integrated
Communication interface		Digital inputs	Digital inputs
Number of digital I/O		2/-	2/-

EGP 50

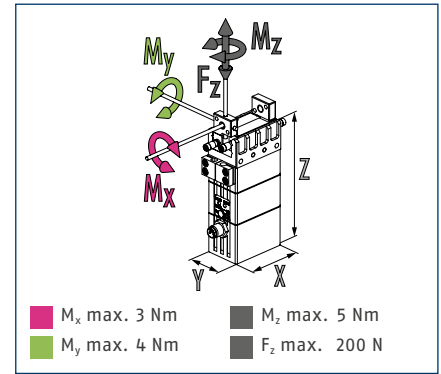
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Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

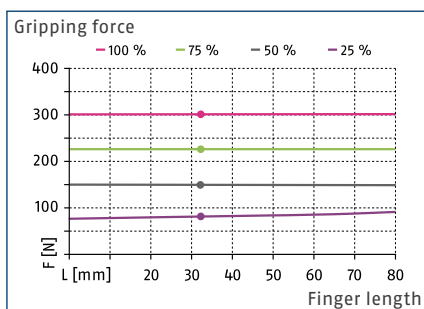
Technical data

Description		EGP 50-N-N-B
ID		0310960
General operating data		
Stroke per jaw	[mm]	8
Min./max. gripping force	[N]	54/215
Recommended workpiece weight	[kg]	1.05
Max. permissible finger length	[mm]	64
Max. permissible mass per finger	[kg]	0.14
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.21/0.21
Weight	[kg]	0.51
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Noise emission	[dB(A)]	<70
Dimensions X x Y x Z	[mm]	50 x 30 x 104.4
Electrical operating data		
Nominal voltage	[V]	24
Nominal current	[A]	0.3
Max. current	[A]	2
Controller electronics		Integrated
Communication interface		Digital inputs
Number of digital I/O		2/-

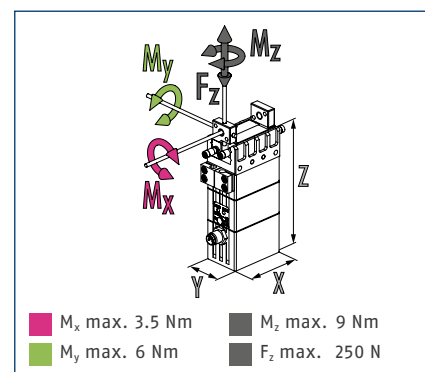
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egp



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		EGP 64-N-N-B
ID		0310980
General operating data		
Stroke per jaw	[mm]	10
Min./max. gripping force	[N]	75/300
Recommended workpiece weight	[kg]	1.25
Max. permissible finger length	[mm]	80
Max. permissible mass per finger	[kg]	0.24
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.49/0.49
Weight	[kg]	0.8
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Noise emission	[dB(A)]	<70
Dimensions X x Y x Z	[mm]	64 x 35 x 114.7
Electrical operating data		
Nominal voltage	[V]	24
Nominal current	[A]	0.15
Max. current	[A]	2
Controller electronics		Integrated
Communication interface		Digital inputs
Number of digital I/O		2/-

MEG

Electric Grippers | 2-Finger Parallel Grippers | Gripper for Small Components

Flexible. Compact. High Performance. Gripper for Small Components MEG

Electric 2-finger parallel gripper with smooth-running base jaws guided on roller bearings

Field of Application

Gripping and moving of small to medium-sized workpieces with flexible force, stroke, and speed in low contaminated environments.

Advantages – Your benefits

Drive concept step motor for independent actuation without pneumatics or hydraulics

External electronic system for control-intensive handling tasks with pre-positioning capability

Cross roller guidance for precise gripping through due to a scope-free base jaw guidance

Base jaws guided on double roller bearings for low friction and smooth running

Mounting from two sides in three screw directions for universal and flexible gripper assembly



Sizes
Quantity: 3



Weight
0.47 .. 1.42 kg



Gripping force
40 .. 140 N



Stroke per jaw
6 .. 10 mm

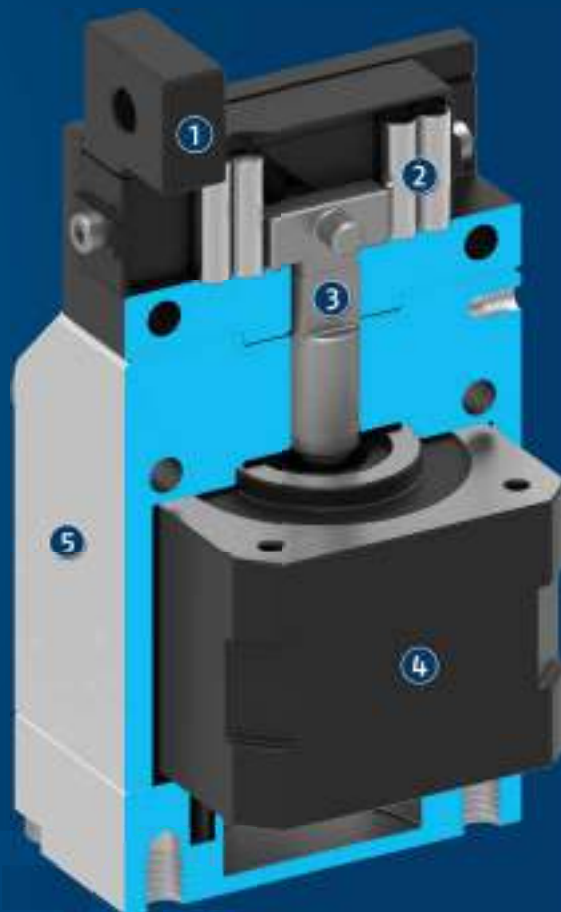


Workpiece weight
0.2 .. 0.7 kg

Functional Description

The spindle is moved upwards or downwards via a step motor drive.

The lateral hooks on top of the spindle guide the angled groove of both base jaws, and this motion transfers into a synchronized opening or closing of the base fingers.



- ① **Base jaw**
For adaption of workpiece-specific gripper fingers
- ② **Cross roller guidance**
Precise gripping due to backlash-free base jaw guidance
- ③ **Wedge-hook principle**
For high force transmission and centric gripping

- ④ **Drive**
Step motor with spindle
- ⑤ **Housing**
Is weight-optimized due to the use of high-strength aluminum alloy



General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Electrically, via step motor or spindle

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeves, assembly and operating manual with installation instructions. An external MEG-C controller and a connection cable KA or similar are required for operation of the MEG gripper. These are optionally available and are not include in the scope of delivery.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.



Application Example

Compact dual 3-axis system, electrically driven, as an automatic loading unit for small components.

- ① Universal linear module LDM
- ② Universal linear module LDT

- ③ Universal linear module LDN
- ④ Electric 2-finger parallel gripper MEG

SCHUNK offers more ...

The following components make the product MEG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Rotary unit



Gripper/swivel module



Pick & Place unit



Connection cable



Control unit



Finger blank

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

External electronic system: The control of the gripper MEG-EC takes place via the separately available external Controller MEG-C.

Easy control: Via digital and analog inputs the gripper parameters force, position, and speed as well as the various operating modes are predefined. The status of the gripper can be monitored via digital and analog outputs.

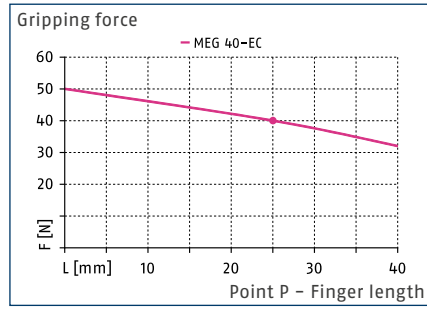
Connection cable KA: Connection cables in various lengths with angled or straight sleeves can be ordered for the connection of gripper and controller.

MEG 40

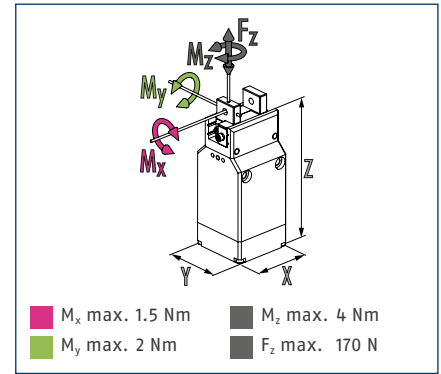
Electric Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

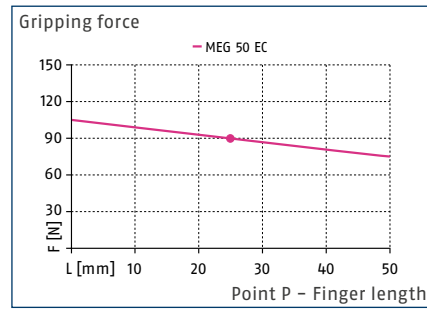
Technical data

Description		MEG 40 EC
ID		0306008
General operating data		
Stroke per jaw	[mm]	6
Min./max. gripping force	[N]	35/40
Recommended workpiece weight	[kg]	0.2
Max. permissible finger length	[mm]	40
Max. permissible mass per finger	[kg]	0.08
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.62/0.62
Max. speed	[mm/s]	9.5
Weight	[kg]	0.47
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Dimensions X x Y x Z	[mm]	40 x 40 x 90
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	0.6
Max. current	[A]	1.5
Controller electronics		External
Controller type		MEG-C 040
Communication interface		Digital and analog I/O
Number of digital I/O		2/2
Number of analog inputs/outputs		3/3

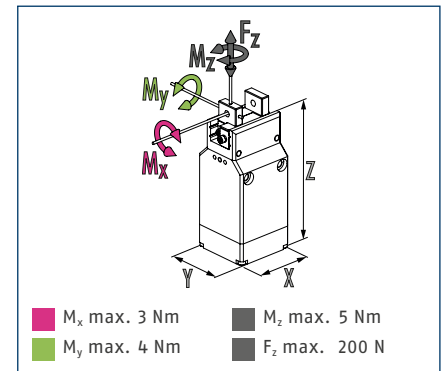
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/meg



Gripping force I.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

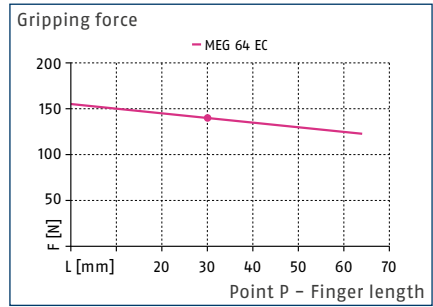
Description		MEG 50 EC
ID		0306010
General operating data		
Stroke per jaw	[mm]	8
Min./max. gripping force	[N]	60/90
Recommended workpiece weight	[kg]	0.45
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.14
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.3/0.3
Max. speed	[mm/s]	35
Weight	[kg]	0.71
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Dimensions X x Y x Z	[mm]	50 x 50 x 90.5
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	0.9
Max. current	[A]	1.5
Controller electronics		External
Controller type		MEG-C 050
Communication interface		Digital and analog I/O
Number of digital I/O		2/2
Number of analog inputs/outputs		3/3

MEG 64

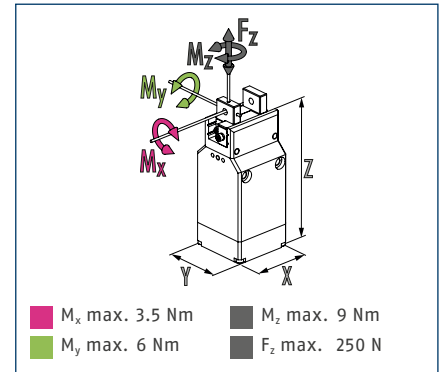
Electric Grippers | 2-Finger Parallel Grippers | Gripper for Small Components



Gripping force



Dimensions and maximum loads

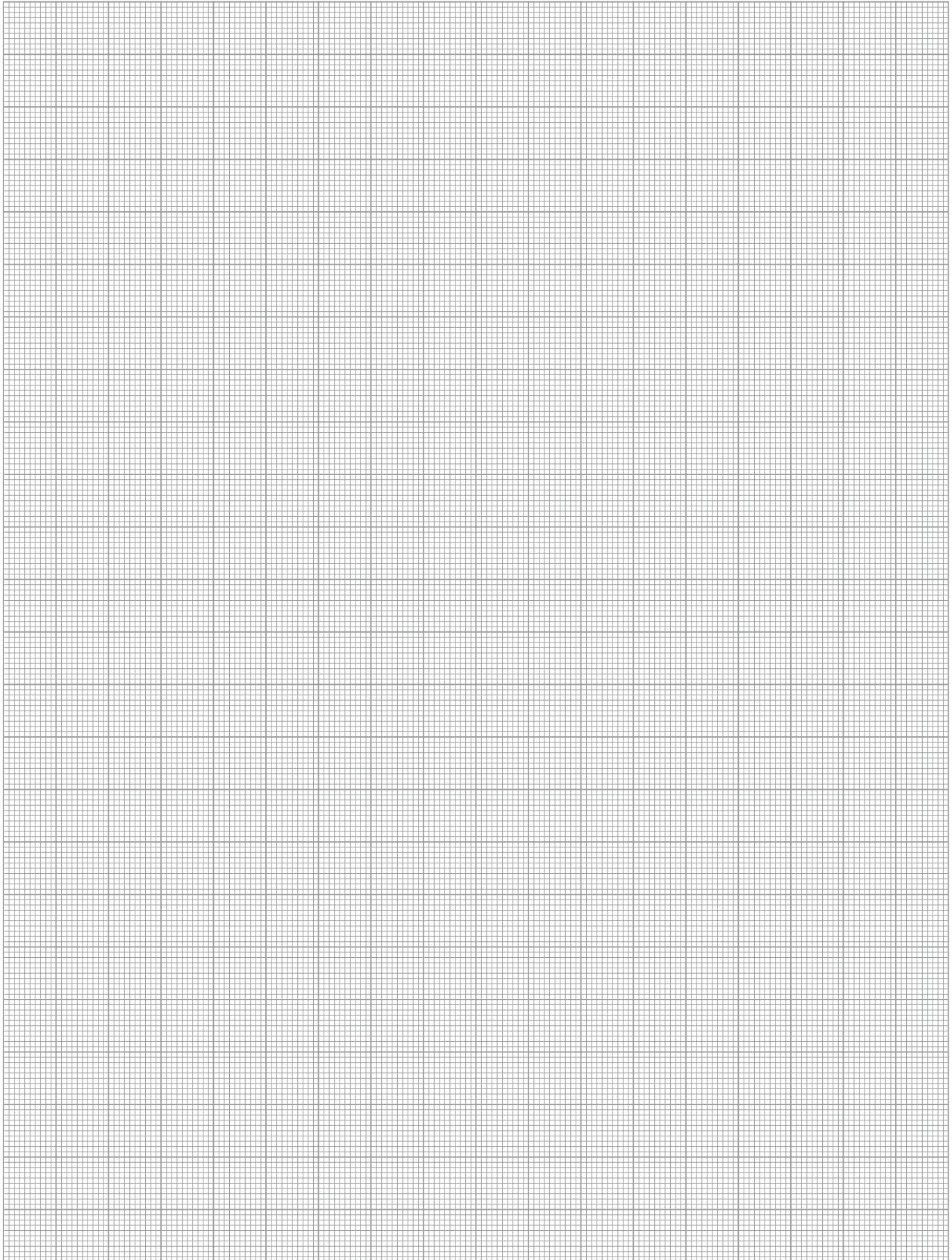


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		MEG 64 EC
ID		0306012
General operating data		
Stroke per jaw	[mm]	10
Min./max. gripping force	[N]	40/140
Recommended workpiece weight	[kg]	0.7
Max. permissible finger length	[mm]	64
Max. permissible mass per finger	[kg]	0.24
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.6/0.6
Max. speed	[mm/s]	17
Weight	[kg]	1.42
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Dimensions X x Y x Z	[mm]	64 x 64 x 116
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	1.3
Max. current	[A]	1.5
Controller electronics		External
Controller type		MEG-C 064
Communication interface		Digital and analog I/O
Number of digital I/O		2/2
Number of analog inputs/outputs		3/3

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/meg



PGN-plus-E

Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper

Reliable. Robust. Flexible.

Universal Gripper PGN-plus-E

Universal electric 2-finger parallel gripper with permanent lubrication, high gripping force, and a high maximum moment due to the use of a multi-tooth guidance

Field of Application

Optimum standard solution for many fields of application. For universal use in clean to slightly dirty environments.

Advantages – Your benefits

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Lubricant pockets in the multi-tooth guidance ensure process reliability and extended maintenance intervals

Brushless DC servomotor for almost wear-free use and a long service life

Control via digital I/O for easy commissioning and rapid integration into existing systems

Four-step adjustable gripping force for simple adaption to sensitive workpieces

Mounting from two sides in three screw directions for universal and flexible gripper assembly

Integrated sensor system and comprehensive sensor accessory program for versatile querying possibilities and stroke position control

Control via IO-Link enables the prepositioning of the gripper finger and the evaluation of the gripper condition



Sizes
Quantity: 2



Weight
1.01 .. 1.85 kg



Gripping force
530 .. 810 N



Stroke per jaw
8 .. 10 mm



Workpiece weight
2.85 .. 4.05 kg



Functional Description

The brushless servomotor drives the wedge-hook up or down via a ball-and-screw spindle drive.

Through its angled active surfaces, the wedge-hook transforms this motion into the horizontal, synchronous movement of the base jaws.



① 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

② Base jaw

With standardized screw connection diagram for the connection of the workpiece-specific gripper fingers

③ Sensor system

Integrated proximity switches and adjustable control cams in the housing

④ Housing

Is weight-optimized due to the use of high-strength aluminum alloy

⑤ Centering and mounting possibilities

For universal assembly of the gripper

⑥ Wedge-hook principle

For high power transmission and minimum wear as a result of larger diagonal pull surfaces

⑦ Spindle nut

Transforms the rotational movement into the axial movement of the wedge-hook

⑧ Drive

Brushless DC servomotor

⑨ Control electronics

Integrated control and power electronics for decentralized control of the servomotor

PGN-plus-E

Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: Accessory pack with centering bushings, assembly instructions

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy (gripping): Defined as the spread of the actual position at 100 consecutive closing or opening movements on a rigid workpiece or a fixed workpiece stop under constant conditions.

Repeat accuracy (positioning, unidirectional): Defined as the spread of the actual position of the base jaws after 100 consecutive movements to a target position from the same direction under constant conditions.

Repeat accuracy (positioning, bidirectional): Defined as the spread of the actual position of the base jaws after 100 consecutive movements to a target position from both directions under constant conditions.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. PLC reaction times are not included in the above-mentioned times and must be taken into consideration when determining cycle times.



Application Example

Handling tool for loading and unloading of raw and finish machined parts with a change system for the grippers. For storing the adapter there are storage racks in use.

❶ 2-finger parallel gripper PGN-plus-E for handling of raw material

❷ 2-finger parallel gripper PGN-plus-E for processed workpieces

❸ Electric tool change system EWS

❹ Storage rack SWM for tool changer

SCHUNK offers more ...

The following components make the product PGN-plus-E even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Quick-change system



Rotary unit



Linear module



Pillar assembly system



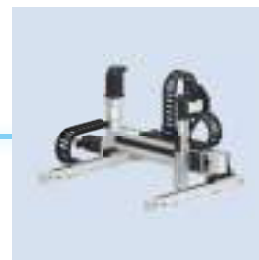
Magnetic switch



Finger blank



Jaw quick-change system



Room gantry

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Manually adjustable gripping force: With an integrated rotary switch, the gripping force can be adjusted in four stages – 100%, 75%, 50%, and 25%.

Integrated sensor system: Two end positions can be monitored via integrated inductive proximity switches.

Optional status monitoring via external sensor system: The status of the gripper can also be monitored by optional external sensors.

Connection cable KA: Connection cables with an angled or a straight female connector can be ordered to connect the gripper with the power supply and higher-level control system.

IO-Link: Version for positioning the gripper fingers and positional feedback over the entire stroke.

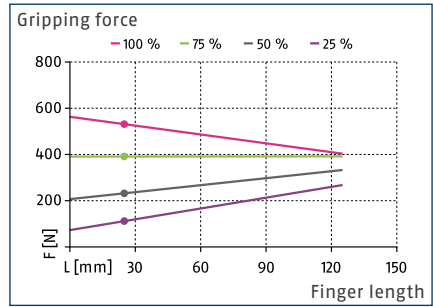
Digital I/O: Version for opening/closing of gripper with integrated proximity switches for detecting the two positions.

PGN-plus-E 80

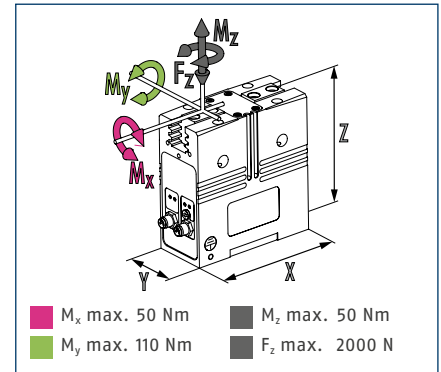
Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

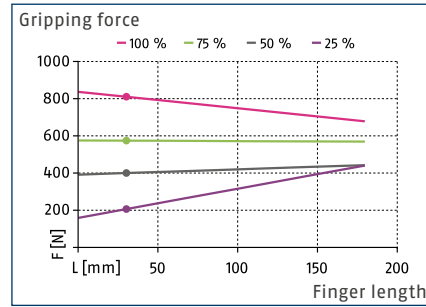
Technical data

Description		PGN-plus-E 80-1	PGN-plus-E 80-1-SD
ID		0318832	1358026
General operating data			
Stroke per jaw	[mm]	8	8
Min./max. gripping force	[N]	110/530	110/530
Recommended workpiece weight	[kg]	2.85	2.85
Max. permissible finger length	[mm]	125	125
Max. permissible mass per finger	[kg]	0.6	0.6
Repeat accuracy (gripping)	[mm]	0.01	0.01
Closing/opening time	[s]	0.26/0.26	0.26/0.26
Weight	[kg]	1.01	1.08
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		40	64
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	96 x 42 x 103	116.5 x 42 x 108.5
Electrical operating data			
Nominal voltage	[V]	24	24
Nominal current	[A]	0.7	0.7
Max. current	[A]	1.5	1.5
Controller electronics		Integrated	Integrated
Communication interface		Digital I/O	Digital I/O
Number of digital I/O		2/2	2/2
Options and their characteristics			
Version with IO-Link		1327621	1358027
Specification:		V1.1	V1.1
Transmission rate		COM2	COM2
Port		Class B	Class B
Repeat accuracy (positioning, unidirectional)	[mm]	0.01	0.01
Repeat accuracy (positioning, bidirectional)	[mm]	0.15	0.15

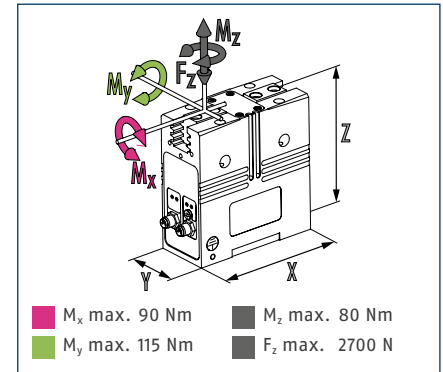
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pgn-plus-e



Gripping force O.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PGN-plus-E 100-1	PGN-plus-E 100-1-SD
ID		0318856	1358031
General operating data			
Stroke per jaw	[mm]	10	10
Min./max. gripping force	[N]	200/810	200/810
Recommended workpiece weight	[kg]	4.05	4.05
Max. permissible finger length	[mm]	160	160
Max. permissible mass per finger	[kg]	1.1	1.1
Repeat accuracy (gripping)	[mm]	0.01	0.01
Closing/opening time	[s]	0.29/0.29	0.29/0.29
Weight	[kg]	1.73	1.85
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		40	64
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	120 x 50 x 123	146 x 50 x 129.5
Electrical operating data			
Nominal voltage	[V]	24	24
Nominal current	[A]	0.7	0.7
Max. current	[A]	1.5	1.5
Controller electronics		Integrated	Integrated
Communication interface		Digital I/O	Digital I/O
Number of digital I/O		2/2	2/2
Options and their characteristics			
Version with IO-Link		1355485	1358033
Specification:		V1.1	V1.1
Transmission rate		COM2	COM2
Port		Class B	Class B
Repeat accuracy (positioning, unidirectional)	[mm]	0.01	0.01
Repeat accuracy (positioning, bidirectional)	[mm]	0.15	0.15

EGN

Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper

Robust. Flexible. Strong. Universal Gripper EGN

Servo-electric 2-finger parallel gripper with high gripping force and moment loads due to the use of a multi-tooth guidance

Field of Application

Optimum standard solution for many areas of application; flexible use due to controllable gripping force, position, and speed.

Advantages – Your benefits

Drive design of servomotor for flexible use

With external electronics for simple integration into existing servo-controlled concepts via PROFINET, PROFIBUS or CAN

Pre-positioning capability to reduce cycle times through a short working stroke

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Mounting from two sides in three screw directions for universal and flexible gripper assembly



Sizes
Quantity: 3



Weight
0.84 .. 3.4 kg



Gripping force
400 .. 1000 N



Stroke per jaw
8 .. 16 mm



Workpiece weight
2 .. 5 kg



Functional Description

The spindle nut which is mounted on bearings, transfers the rotary motion of the servomotor into an axial motion. The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



① **Wedge-hook principle**

For high force transmission and centric gripping

② **Multi-tooth guidance**

Precise gripping even with longer gripper fingers due to a heavy-duty base jaw guidance with minimum play

③ **Housing**

Is weight-optimized due to the use of high-strength aluminum alloy

④ **Spindle nut**

Transforms the rotational movement into the axial movement of the wedge-hook

⑤ **Drive**

DC servomotor with resolver

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor and spindle drive

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeves, assembly and operating manual with declaration of incorporation. An external controller ECM is required for operating the gripper EGN. Connection cables are also required for the plug version EGN-S. The controller and the connecting cables are not included in the scope of delivery and have to be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Application Example

Completely electrically driven axis gantry for loading and unloading pallets with various greatly differing components.

- 1 Servo-electric 2-finger parallel gripper EGN
- 2 Vertical axis with spindle drive Beta
- 3 Belt-driven axes Beta
- 4 Jaw quick-change system BSWS



SCHUNK offers more ...

The following components make the product EGN even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Controller



Jaw quick-change system



Finger blank



Protection cover

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

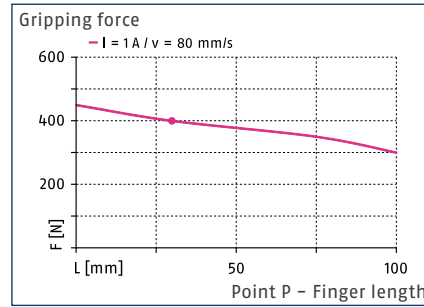
Control via external controller ECM: The electrical control of the gripper takes place via the separately available controller ECM. Integration of the controller into the higher-level control concept is either via PROFINET, PROFIBUS-DP or CAN. Both communication interfaces ensure simple integration into the higher level control system and enable the design of industrial bus topologies.

Plug version EGN-S: Plug version EGN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

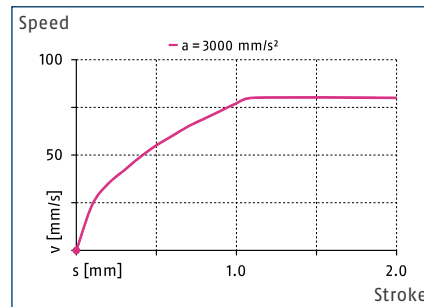
Dust-tight version SD: Absolutely dust-tight, increased degree of protection against ingress of materials.



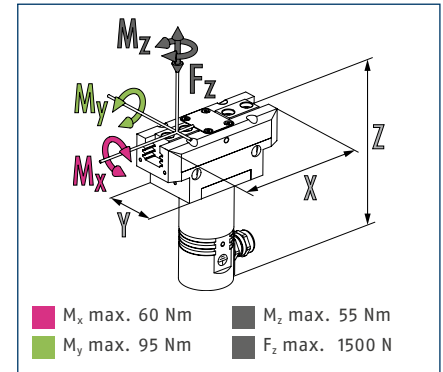
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

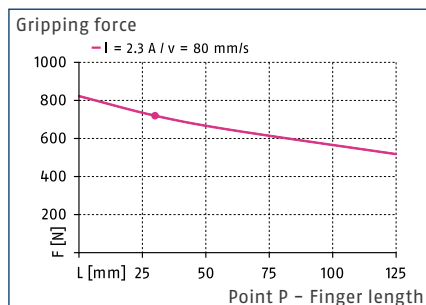
Description	EGN 80	EGN 80-S
ID	0306100	0306104
General operating data		
Stroke per jaw	[mm] 8	8
Min./max. gripping force	[N] 170/400	170/400
Recommended workpiece weight	[kg] 2	2
Max. permissible finger length	[mm] 100	100
Max. permissible mass per finger	[kg] 0.6	0.6
Repeat accuracy	[mm] ±0.01	±0.01
Min./max. air purge pressure	[bar] 0.5/1	0.5/1
Closing/opening time	[s] 0.35/0.35	0.35/0.35
Max. speed	[mm/s] 80	80
Max. acceleration	[mm/s²] 3000	3000
Weight	[kg] 0.84	0.84
Min./max. ambient temperature	[°C] 5/55	5/55
Protection class IP	41	41
Dimensions X x Y x Z	[mm] 96 x 42 x 141.9	96 x 42 x 141.9
Electrical operating data		
Nominal voltage	[V DC] 24	24
Nominal current	[A] 1	1
Max. current	[A] 4	4
Controller electronics	External	External
Controller type	ECM-EGN080	ECM-EGN080
Communication interface	See controller ECM	See controller ECM
Options and their characteristics		
Dust-tight version, ID	37306100	37306104
Protection class IP	64	64
Weight	[kg] 0.94	0.94

① Plug version EGN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

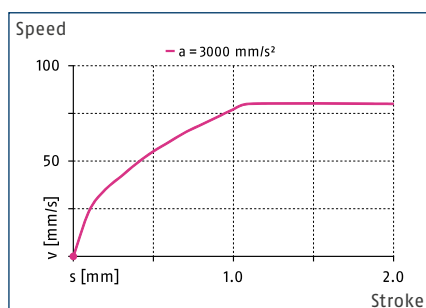
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egn



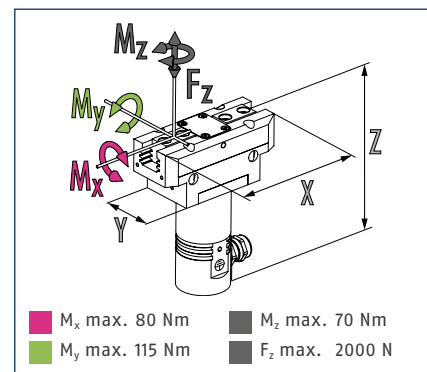
Gripping force



Speed



Dimensions and maximum loads



ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

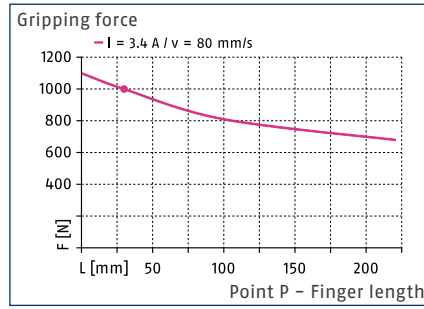
Technical data

Description		EGN 100	EGN 100-S
ID		0306101	0306105
General operating data			
Stroke per jaw	[mm]	10	10
Min./max. gripping force	[N]	170/720	170/720
Recommended workpiece weight	[kg]	3.6	3.6
Max. permissible finger length	[mm]	125	125
Max. permissible mass per finger	[kg]	1.1	1.1
Repeat accuracy	[mm]	±0.01	±0.01
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.35/0.35	0.35/0.35
Max. speed	[mm/s]	80	80
Max. acceleration	[mm/s ²]	3000	3000
Weight	[kg]	1.35	1.35
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Dimensions X x Y x Z	[mm]	120 x 50 x 148	120 x 50 x 148
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	1.8	1.8
Max. current	[A]	4	4
Controller electronics		External	External
Controller type		ECM-EGN100	ECM-EGN100
Communication interface		See controller ECM	See controller ECM
Options and their characteristics			
Dust-tight version, ID		37306101	37306105
Protection class IP		64	64
Weight	[kg]	1.53	1.53

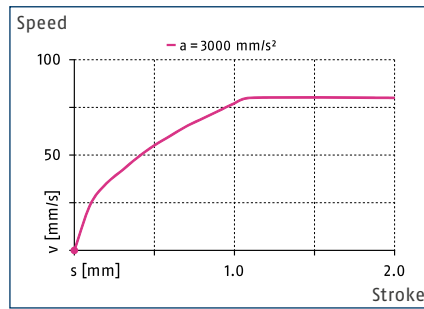
ⓘ Plug version EGN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.



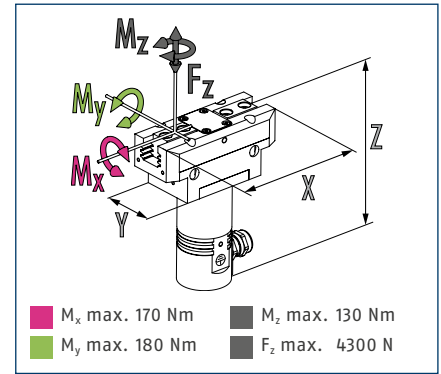
Gripping force



Speed



Dimensions and maximum loads



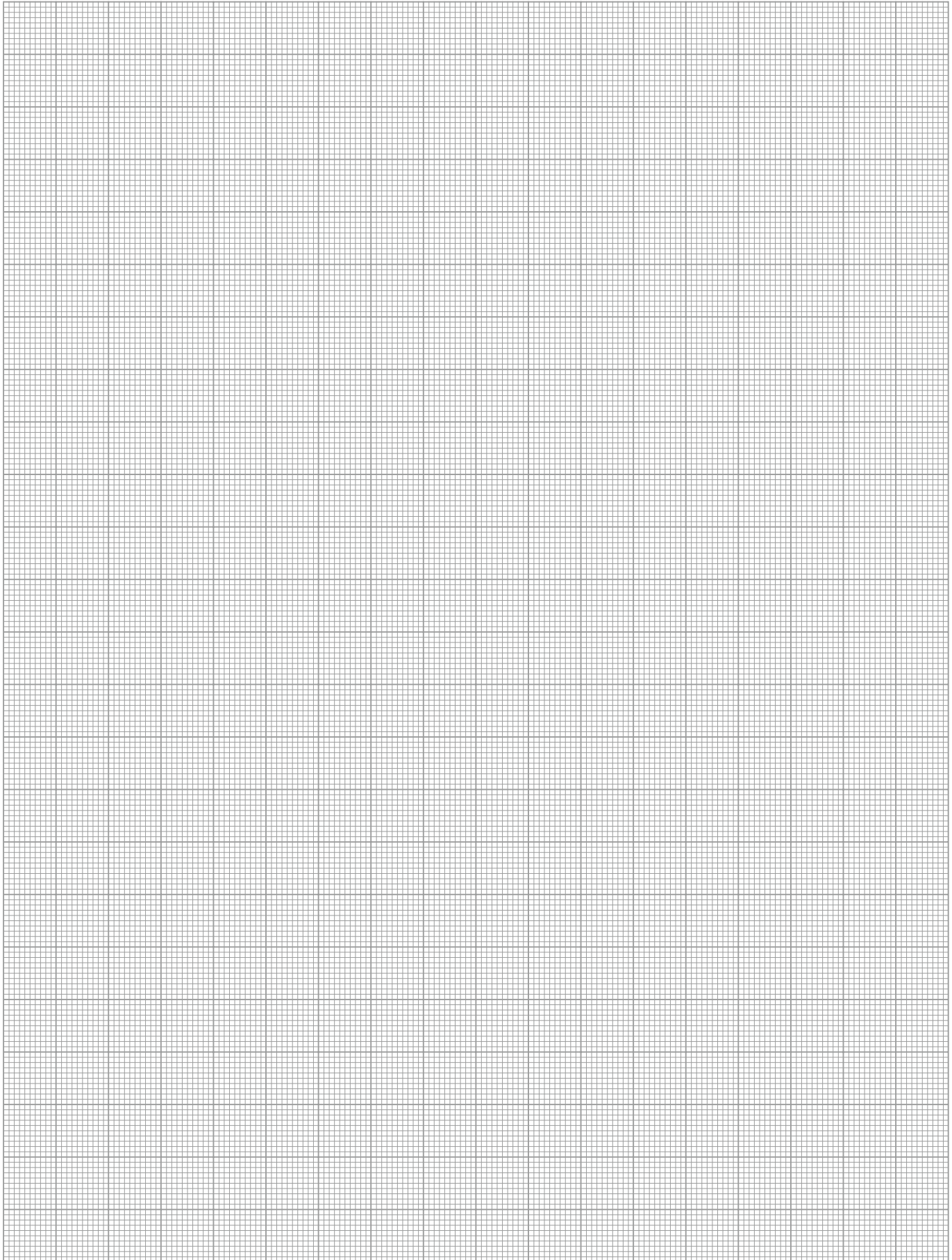
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		EGN 160	EGN 160-S
ID		0306103	0306106
General operating data			
Stroke per jaw	[mm]	16	16
Min./max. gripping force	[N]	250/1000	250/1000
Recommended workpiece weight	[kg]	5	5
Max. permissible finger length	[mm]	220	220
Max. permissible mass per finger	[kg]	3.5	3.5
Repeat accuracy	[mm]	±0.01	±0.01
Closing/opening time	[s]	0.5/0.5	0.5/0.5
Max. speed	[mm/s]	80	80
Max. acceleration	[mm/s²]	3000	3000
Weight	[kg]	3	3
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Dimensions X x Y x Z	[mm]	192 x 72 x 169.9	192 x 72 x 169.9
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	2.6	2.6
Max. current	[A]	4	4
Controller electronics		External	External
Controller type		ECM-EGN160	ECM-EGN160
Communication interface		See controller ECM	See controller ECM
Options and their characteristics			
Dust-tight version, ID		37306103	37306106
Protection class IP		64	64
Weight	[kg]	3.4	3.4

① Plug version EGN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egn



EVG

Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper

Smoothly running. Narrow. Flexible.

Universal Gripper EVG

Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke

Field of Application

Versatile, highly flexible gripper for great part variety and sensitive components in clean environments.

Advantages – Your benefits

Gripping force control in the range of 24 N – 57 N for the delicate gripping of sensitive workpieces

Long stroke of 50 mm for flexible workpiece handling

Pre-positioning capability to reduce cycle times through a short working stroke

With external electronics for simple integration into existing control concepts via PROFIBUS-DP, or CAN

Profiled rail guide for the precise handling of different workpieces



Sizes
Quantity: 2



Weight
0.79 .. 1.1 kg



Gripping force
24 .. 57 N



Stroke per jaw
20 .. 50 mm

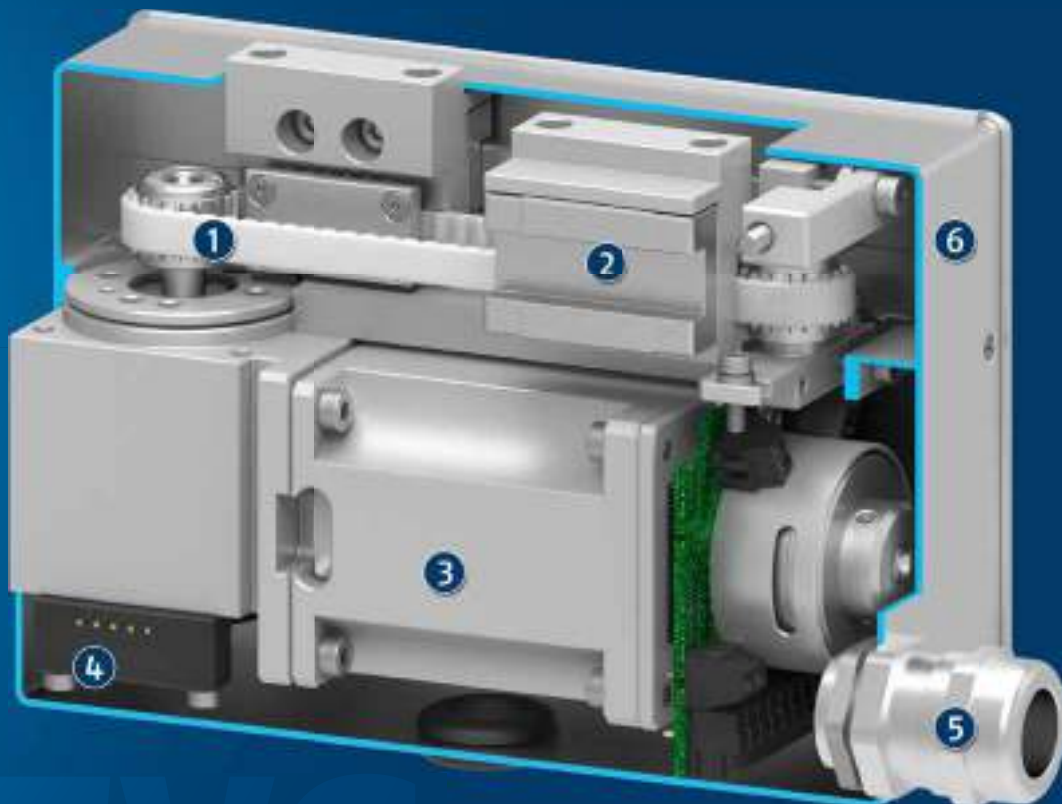


Workpiece weight
0.12 .. 0.28 kg



Functional Description

The brushless servomotor drives the toothed belt drive via the bevel gear. The base jaws mounted on the profiled rail guides are connected to the toothed belt. The rotary movement is transferred into a linear movement of the base jaws via the gear and the toothed belt.



① Kinematics

Scope-free, robust toothed belt drive with steel reinforcement

② Profiled rail guide

For precise gripping with minimum play, smooth running gripping and low frictional loss

③ Drive

Brushless DC servomotor with hall sensors and bevel gear, incl. holding brake (only stroke variant 100)

④ Encoder

For gripper positioning and position evaluation

⑤ Cable outlet

With connection cable to controller MCS-06

⑥ Housing

Is weight-optimized due to the use of high-strength aluminum alloy

General Notes about the Series

Operating principle: Belt drive

Housing material: Aluminum alloy, coated

Base jaw material: Aluminum alloy, anodized

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeve, assembly and operating manual with declaration of incorporation. An external controller MCS-06 is required for operating the gripper EVG. The connection cable with a length of 3 meters is attached to the gripper. The controller is optionally available and is not included in the scope of not included.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Electrical brake: The built-in, electric holding break is used for fixing and holding the position of the gripper jaws in the event of a power failure. It cannot cover all of the security or gripping force maintenance functions.

Application Example

Rotary gripper combination with two sensitive servo-electric parallel grippers for flexible handling of sensitive workpieces.

- ① Servo-electric rotary module PRH
- ② Servo-electric 2-finger parallel gripper EVG



SCHUNK offers more ...

The following components make the product EVG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary module



Rotary pan-tilt actuator



Linear module



Quick-change system



Controller

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

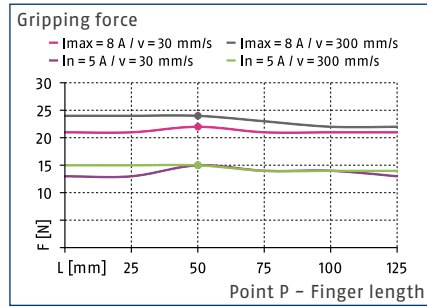
Control via external controller MCS-06: The electrical control of the gripper takes place via the separately available controller MCS. Integration of the controller into the higher level control concept is done via PROFIBUS-DP or CAN. Both communication interfaces ensure simple integration into the higher level control system and enable the design of industrial bus topologies.

EVG 55-40

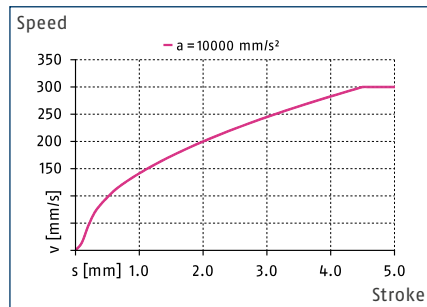
Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper



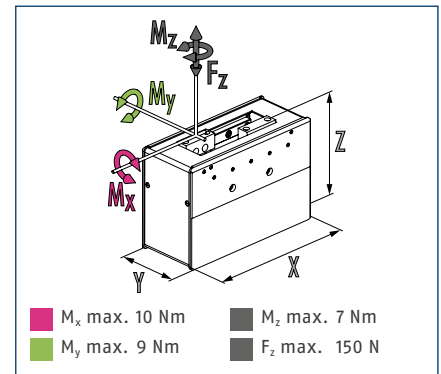
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

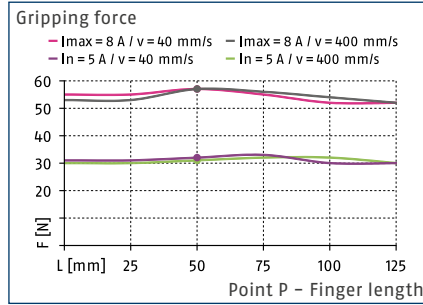
Technical data

Description		EVG 55-40
ID		0306020
General operating data		
Stroke per jaw	[mm]	20
Min./max. gripping force	[N]	5/24
Recommended workpiece weight	[kg]	0.12
Max. permissible finger length	[mm]	125
Max. permissible mass per finger	[kg]	0.1
Repeat accuracy	[mm]	±0.05
Closing/opening time	[s]	0.6/0.6
Max. speed	[mm/s]	300
Max. acceleration	[mm/s²]	10000
Weight	[kg]	0.79
Min./max. ambient temperature	[°C]	5/55
Protection class IP		20
Dimensions X x Y x Z	[mm]	100 x 55 x 89.2
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	4
Max. current	[A]	8
Controller electronics		External
Controller type		MCS-06
Communication interface		See controller MCS

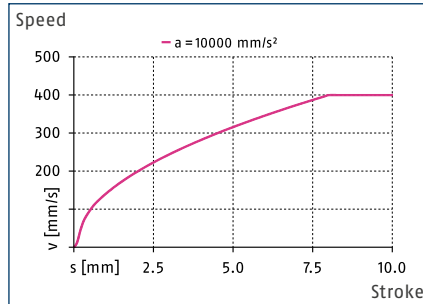
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/evg



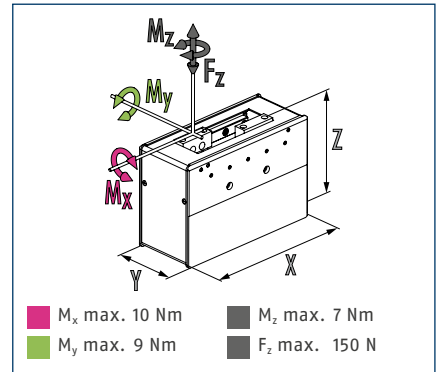
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		EVG 55-100
ID		0306025
General operating data		
Stroke per jaw	[mm]	50
Min./max. gripping force	[N]	5/57
Recommended workpiece weight	[kg]	0.28
Max. permissible finger length	[mm]	125
Max. permissible mass per finger	[kg]	0.1
Repeat accuracy	[mm]	±0.05
Closing/opening time	[s]	1.5/1.5
Max. speed	[mm/s]	400
Max. acceleration	[mm/s²]	10000
Weight	[kg]	1.1
Min./max. ambient temperature	[°C]	5/55
Protection class IP		20
Dimensions X x Y x Z	[mm]	130 x 55 x 89.2
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	5
Max. current	[A]	8
Controller electronics		External
Controller type		MCS-06
Communication interface		See controller MCS

Flexible. Robust. Bus capable.

Universal Gripper EGL

Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke

Field of Application

Universally applicable, highly flexible electric 2-finger parallel gripper for a wide range of parts in clean to harsh ambient conditions.

Advantages – Your benefits

Current-controlled gripping force adjustment of a huge force range for the sensitive or powerful gripping of different workpieces

Long and freely programmable stroke for flexible workpiece handling

Fully integrated control and power electronics for creating a decentralized control system

Versatile actuation options for simple integration into existing servo-controlled concepts via PROFINET, PROFIBUS or CAN

Connectors in industrial standard for easy electrical connection

Service interface: USB host and USB device for comfortable parameter setting and firmware updates by USB flash drive or PC

Rotary encoding switch and DIP switch for manual fieldbus addressing, baud rate setting and service functions



Sizes
Quantity: 1



Weight
1.8 kg



Gripping force
600 N



Stroke per jaw
42.5 mm



Workpiece weight
3 kg



Functional Description

The DC servomotor drives the base jaw gear racks via the gear mechanism. The position is sensed by an encoder. The rotational movement is transformed into the linear movement of the base jaw by base jaws mounted on the spindle nuts.



① Control electronics

Integrated control and power electronics for decentralized control of the servomotor

② Encoder

For position detection and positioning of the gripper

③ Electrical brake

For maintaining position at an emergency stop and power failure

④ Drive

DC servomotor with planet gear

⑤ Kinematics

Rack and pinion principle with profiled rail guide for self-centering clamping

⑥ Service window

With customer interface for service functions, altering bus address, USB connection and LED status indicator

General Notes about the Series

Operating principle: Rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: DVD with SCHUNK software and assistant for commissioning, includes assembly- and operation manual, declaration of incorporation, enclosed pack with centering sleeves, functional module for control via Siemens S7-300/400. Finger blanks, and power and data cables are not included.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Electrical brake: The built-in, electric holding brake is used for fixing and holding the position of the gripper jaws in the event of a power failure. It cannot cover all of the security or gripping force maintenance functions.



Application Example

Highly flexible handling unit for gripping and transporting various workpieces with random position orientation.

- ① Universal gripper EGL
- ② Servo-electric rotary pan-tilt actuator PW
- ③ Servo-electric rotary module PR 2
- ④ Servo-electric drive PDU 2
- ⑤ Linear module Beta with toothed belt drive

SCHUNK offers more ...

The following components make the product EGL even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary unit



Linear module



Quick-change system



Force/torque sensor



Power cable



Jaw quick-change system



Finger blank



Intermediate jaw



Communication cable

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

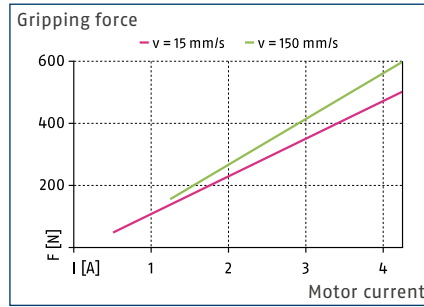
Options and special Information

The electrical control of the gripper is carried out by the fully integrated control and power electronics. Hence, the module does not require any additional external control units.

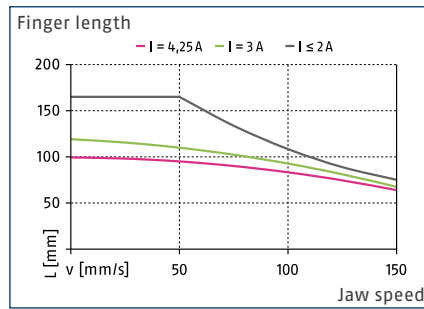
A wide range of interfaces are available for communication, such as PROFINET, PROFIBUS-DP or CAN. This enables the assembly of industrial bus networks and ensures easy integration into existing control concepts. For transmission of power supply and data communications, we offer various cables.



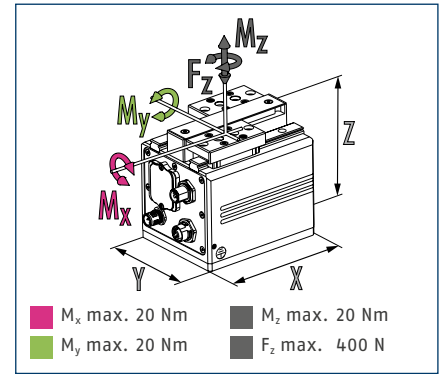
Gripping force



Finger length



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

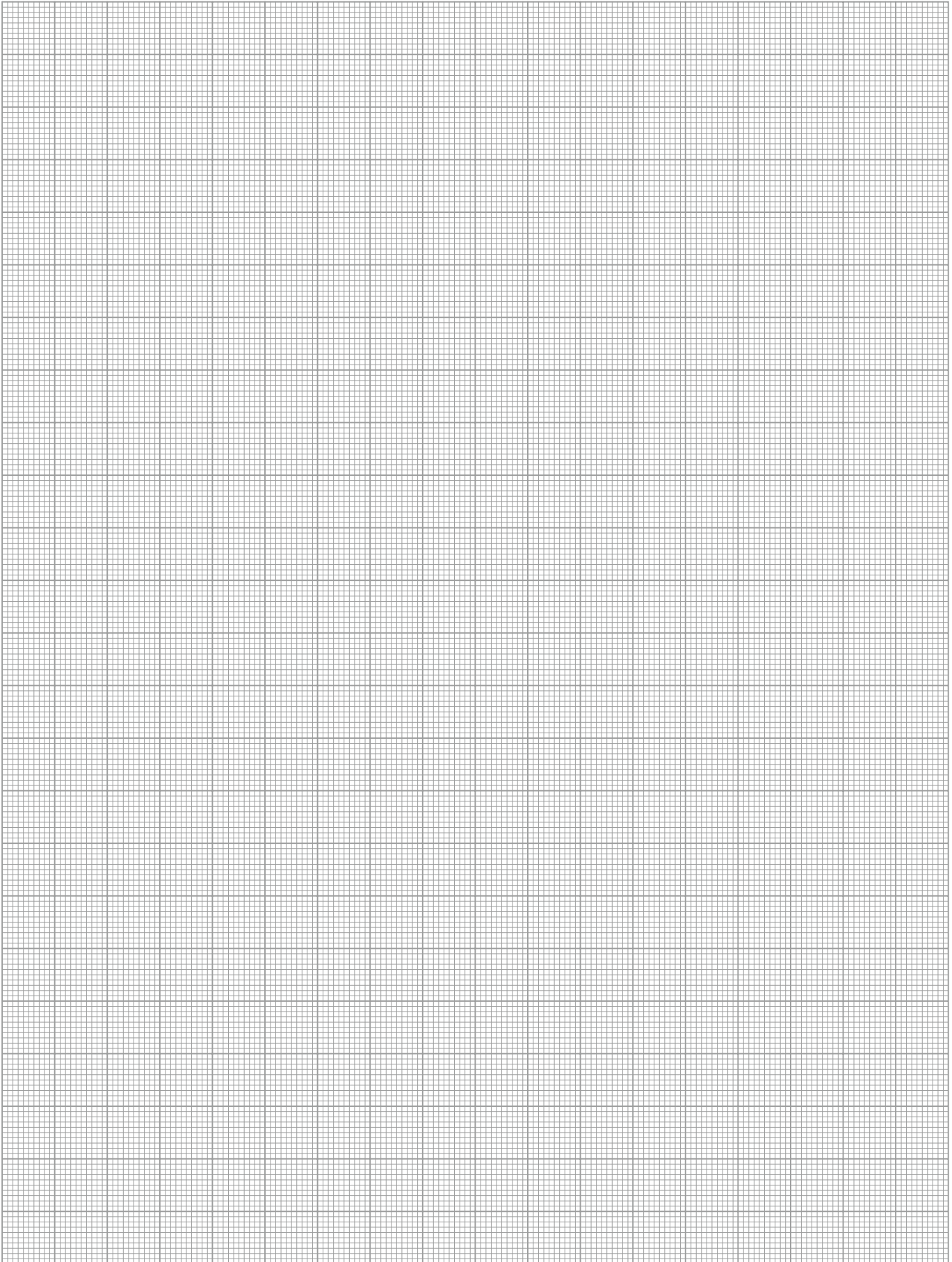
Technical data

Description		EGL 90-PN
ID		1302877
General operating data		
Stroke per jaw	[mm]	42.5
Min./max. gripping force	[N]	50/600
Recommended workpiece weight	[kg]	3
Max. permissible finger length	[mm]	165
Max. permissible mass per finger	[kg]	0.5
Repeat accuracy	[mm]	0.05
Closing/opening time	[s]	0.7/0.7
Max. speed	[mm/s]	150
Max. acceleration	[mm/s ²]	2500
Weight	[kg]	1.8
Min./max. ambient temperature	[°C]	5/55
Protection class IP		46
Dimensions X x Y x Z	[mm]	112 x 90 x 108
Electrical operating data		
Nominal voltage	[V DC]	24
Communication interface		PROFINET
Data rate	[Mbit/s]	100
Parametrized interface		USB
Max. current power	[A]	2.5
Max. current logic	[A]	0.5
Options and their characteristics		
PROFIBUS variant		EGL 90-PB
ID		1325751
Data rate	[Mbit/s]	12
CAN version		EGL 90-CN
ID		1325754
Data rate	[Mbit/s]	1

① The maximum current specified in the technical data table refers to the current drawn from the power supply. The graphs gripping force and finger length refer to the motor current, which is specified in the PLC program.

① The finger length diagram shows the maximum permissible finger length based on the actuated jaw speed for defined motor currents.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egl



WSG

Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper

Bus capable. Compact. Flexible.

Universal Gripper WSG

Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke

Field of Application

Versatile, highly flexible gripper for great part variety and sensitive components in clean environments.

Advantages – Your benefits

Gripping force control for the delicate gripping of sensitive workpieces

Long stroke for flexible workpiece handling

Fully integrated control and power electronics for creating a decentralized control system

Versatile actuation options for simple integration into existing control concepts via EtherNet TCP/IP, PROFIBUS-DP or PROFINET

Integrated plug connector in the base jaws for connection of the optionally available top fingers with integrated strain gauges for direct internal force regulation

Integrated web server for parameterization and diagnostics with any standard web browser

Integrated memory card for storage of parameters, documentation, and value adoption for gripper exchange, available for sizes 32 and 50



Sizes
Quantity: 3



Weight
0.32 .. 1.6 kg



Gripping force
20 .. 80 N



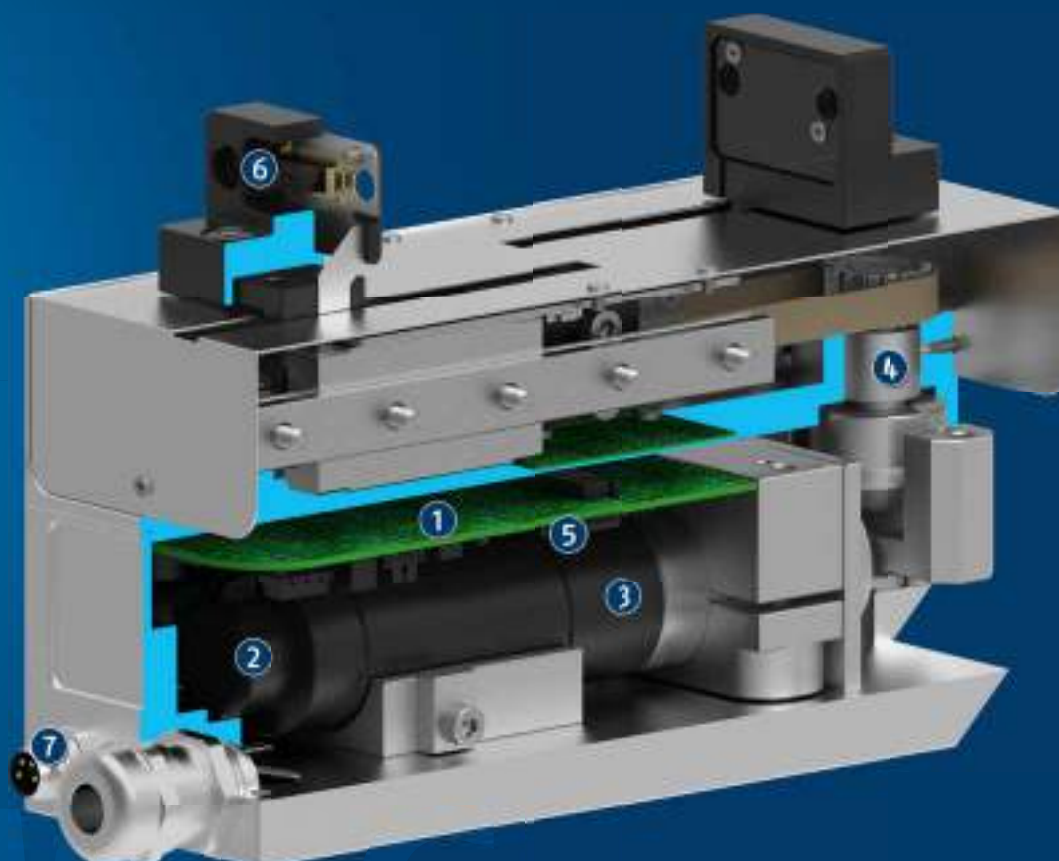
Stroke per jaw
32 .. 105 mm



Workpiece weight
0.1 .. 0.4 kg

Functional Description

The brushless servomotor drives the toothed belt drive via the bevel gear. The base jaws mounted on the profiled rail guides are connected to the toothed belt. The rotary movement is transferred into a linear movement of the base jaws via the gear and the toothed belt.



- ① **Integrated electronics**
Integrated control and power electronics for decentralized control of the servomotor
- ② **Encoder**
For position detection and positioning of the gripper
- ③ **Drive**
DC servomotor
- ④ **Belt drive**
Force transmission from the servomotor to the toothed belt
- ⑤ **Micro SD card**
For storing documentations and parameters
- ⑥ **Integrated plug connector**
For connection of attachment fingers with integrated sensor electronics
- ⑦ **Electrical connection**
For connection of power supply and communication

General Notes about the Series

Operating principle: Linear guidance with belt drive

Housing material: Aluminum alloy, coated

Base jaw material: Aluminum alloy, anodized

Warranty: 24 months

Scope of delivery: DVD with assembly and operating manual, and declaration of incorporation. The WSG 25 is supplied with a hybrid cable that transmits the power supply and communication. The power supply is connected via open wires, communication via RJ45 connectors. The WSG 32 and 50 each include a built-in memory card and a programming cable with RJ45 connector. A power cable is required for the voltage supply for operation of the gripper in sizes 32 and 50. This is not included and has to be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.



Application Example

Electrically driven high-speed gantry for palletizing and depalletizing and re-orientation of different and sensitive components.

- ① Universal rotary module ERS
- ② Universal gripper WSG
- ③ Universal linear module LDT

- ④ Universal linear module LDM
- ⑤ Universal linear module LDN

SCHUNK offers more ...

The following components make the product WSG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary unit



Linear module



Quick-change system



Fingers for WSG



Power cable

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

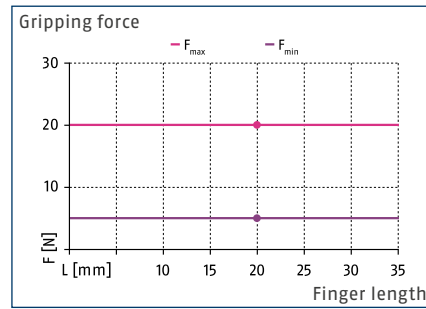
Options and special Information

Integrated electronics: The electric actuation of the WSG gripper is carried out by the fully integrated control and power electronics. Hence, the module does not require any additional external control units.

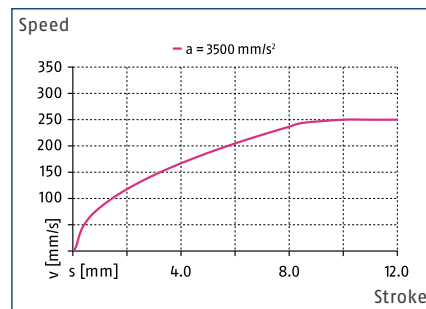
Versatile actuation options: A wide range of interfaces are available for communication such as EtherNet TCP/IP, PROFIBUS/DP or PROFINET. This enables the assembly of industrial bus networks and ensures simple integration into existing control concepts. We offer various cables for transmission of power supply and data communications.



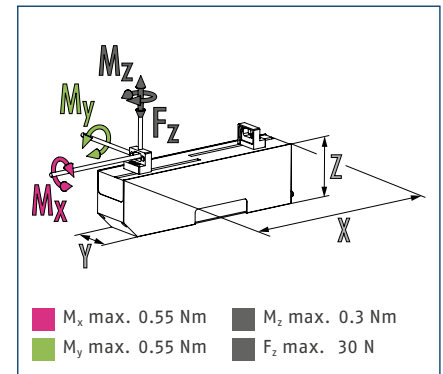
Gripping force O.D. gripping



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

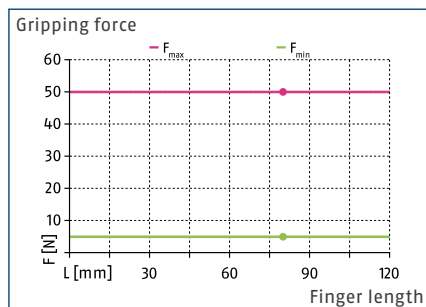
Technical data

Description		WSG 025-64-B
ID		0306170
General operating data		
Stroke per jaw	[mm]	32
Min./max. gripping force	[N]	5/20
Recommended workpiece weight	[kg]	0.1
Max. permissible finger length	[mm]	40
Max. permissible mass per finger	[kg]	0.022
Repeat accuracy	[mm]	±0.03
Max. speed	[mm/s]	250
Max. acceleration	[mm/s ²]	3500
Weight	[kg]	0.32
Min./max. ambient temperature	[°C]	5/50
Protection class IP		20
Dimensions X x Y x Z	[mm]	100 x 25 x 57
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	0.3
Max. current	[A]	0.7
Controller electronics		Integrated
Communication interface		EtherNet TCP/IP
Parametrized interface		EtherNet TCP/IP

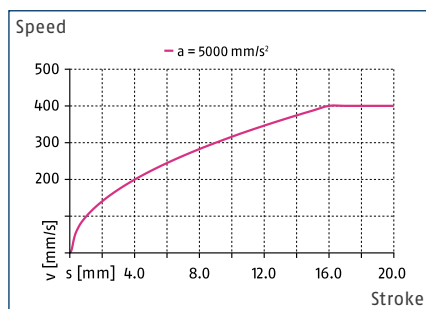
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/wsg



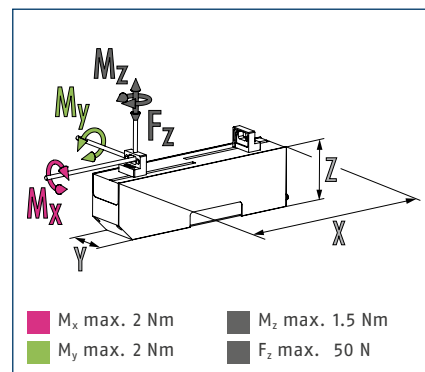
Gripping force O.D. gripping



Speed



Dimensions and maximum loads



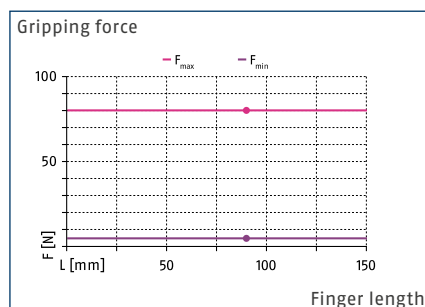
The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

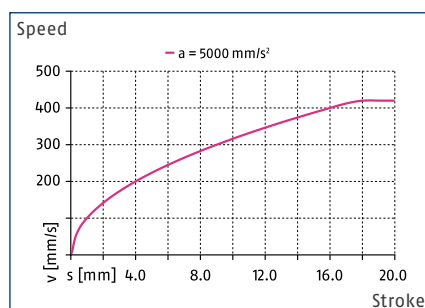
Description	WSG 032-068-B	WSG 032-068-P
ID	0306130	0306132
General operating data		
Stroke per jaw	[mm] 34	34
Min./max. gripping force	[N] 5/50	5/50
Recommended workpiece weight	[kg] 0.175	0.175
Max. permissible finger length	[mm] 120	120
Max. permissible mass per finger	[kg] 0.1	0.1
Repeat accuracy	[mm] ± 0.03	± 0.03
Max. speed	[mm/s] 400	400
Max. acceleration	[mm/s ²] 5000	5000
Weight	[kg] 0.55	0.55
Min./max. ambient temperature	[°C] 5/50	5/50
Protection class IP	40	40
Dimensions X x Y x Z	[mm] 118 x 32 x 60.5	118 x 32 x 60.5
Electrical operating data		
Nominal voltage	[V DC] 24	24
Nominal current	[A] 0.75	0.75
Max. current	[A] 1.6	1.6
Controller electronics	Integrated	Integrated
Communication interface	EtherNet TCP/IP	EtherNet TCP/IP, PROFINET
Parametrized interface	EtherNet TCP/IP	EtherNet TCP/IP



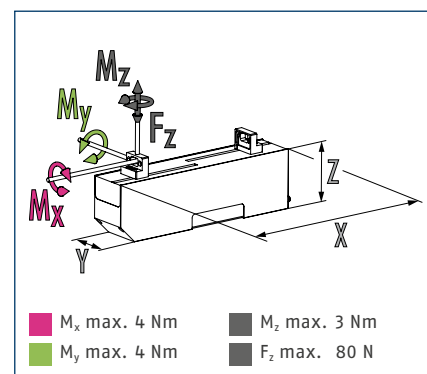
Gripping force



Speed



Dimensions and maximum loads

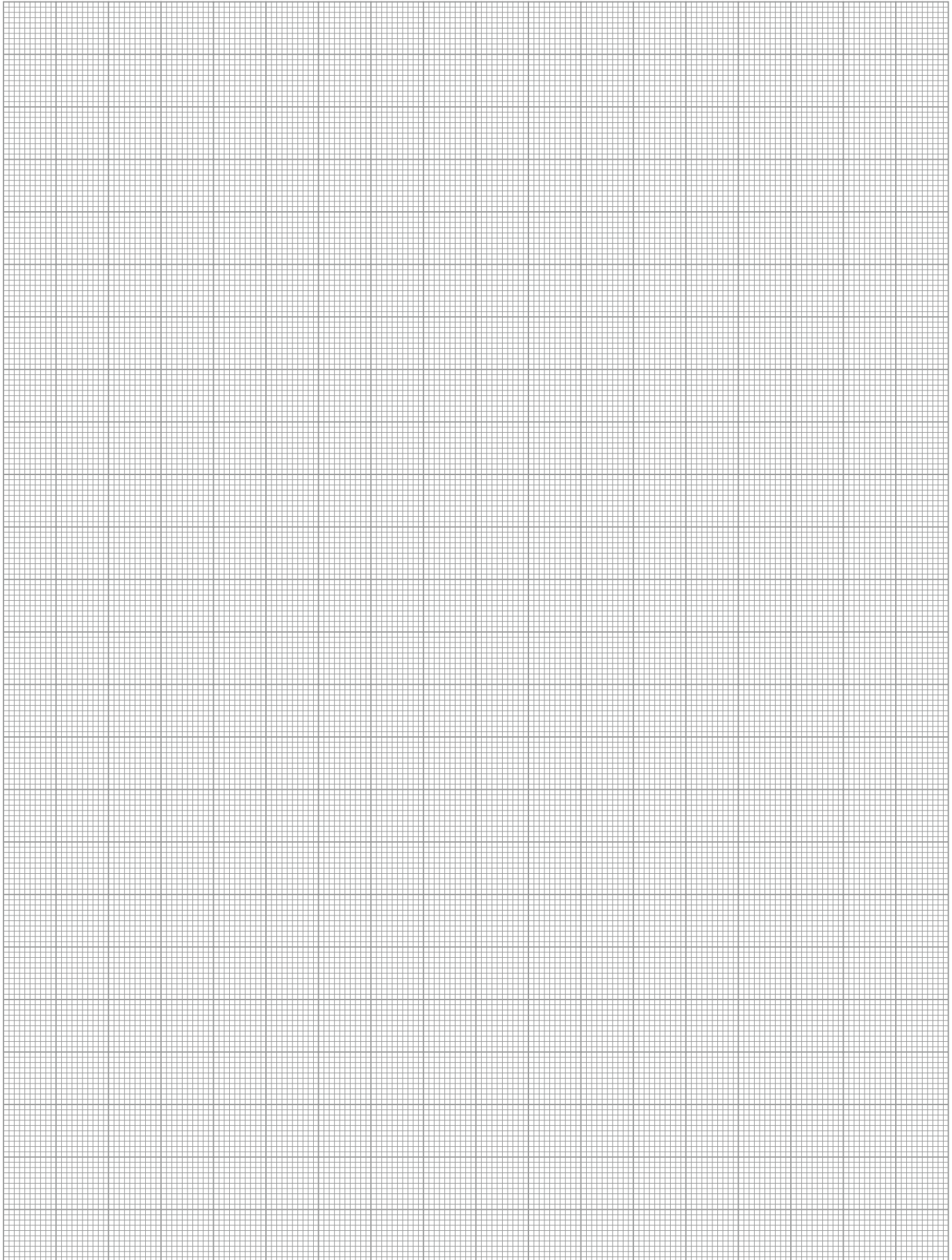


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		WSG 050-110-B	WSG 050-110-P	WSG 050-210-B	WSG 050-210-P
ID		0306120	0306122	0306125	0306127
General operating data					
Stroke per jaw	[mm]	55	55	105	105
Min./max. gripping force	[N]	5/80	5/80	5/80	5/80
Recommended workpiece weight	[kg]	0.4	0.4	0.4	0.4
Max. permissible finger length	[mm]	170	170	170	170
Max. permissible mass per finger	[kg]	0.3	0.3	0.3	0.3
Repeat accuracy	[mm]	±0.03	±0.03	±0.03	±0.03
Max. speed	[mm/s]	420	420	420	420
Max. acceleration	[mm/s²]	5000	5000	5000	5000
Weight	[kg]	1.2	1.2	1.6	1.6
Min./max. ambient temperature	[°C]	5/50	5/50	5/50	5/50
Protection class IP		20	20	20	20
Dimensions X x Y x Z	[mm]	146 x 50 x 72.5	146 x 50 x 72.5	246 x 50 x 72.5	246 x 50 x 72.5
Electrical operating data					
Nominal voltage	[V DC]	24	24	24	24
Nominal current	[A]	0.9	0.9	0.9	0.9
Max. current	[A]	2	2	2	2
Controller electronics		Integrated	Integrated	Integrated	Integrated
Communication interface		EtherNet TCP/IP, PROFIBUS, CAN	EtherNet TCP/IP, PROFINET	EtherNet TCP/IP, PROFIBUS, CAN	EtherNet TCP/IP, PROFINET
Data rate	[Mbit/s]	12		12	
Data rate	[Mbit/s]	1		1	
Parametrized interface		EtherNet TCP/IP	EtherNet TCP/IP	EtherNet TCP/IP	EtherNet TCP/IP

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/wsg



Bus capable. Flexible. High Performance.

Universal Gripper PG

Servo-electric 2-finger parallel gripper with sensitive gripping force control and long stroke

Field of Application

Versatile, highly flexible gripper for great part variety and sensitive components in clean environments.

Advantages – Your benefits

Electrically controlled gripper force adjustment for the delicate gripping of sensitive workpieces

Long stroke of 68 mm for flexible workpiece handling

Fully integrated control and power electronics for creating a decentralized control system

Versatile actuation options for simple integration into existing control concepts via PROFIBUS-DP, or CAN

Standard connecting elements and integrated control concept for extensive combination possibilities with other mechatronic modules



 <p>Sizes Quantity: 1</p>	 <p>Weight 1.4 kg</p>	 <p>Gripping force 200 N</p>	 <p>Stroke per jaw 34 mm</p>	 <p>Workpiece weight 1 kg</p>
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Functional Description

The brushless servomotor drives the ball screw via a toothed belt drive.

The rotational movement is transformed into the linear movement of the base jaw by base jaws mounted on the spindle nuts.



- ① **Control electronics**
Integrated control and power electronics for decentralized control of the servomotor
- ② **Encoder**
For position detection and positioning of the gripper
- ③ **Drive**
Brushless DC servomotor
- ④ **Electrical brake**
For maintaining position in case of an emergency stop and power failure
- ⑤ **Gear mechanism**
Force transmission from the servomotor to the drive spindle
- ⑥ **Spindle**
Transforms the rotational movement into a linear movement

General Notes about the Series

Operating principle: Spindle drive

Housing material: Aluminum alloy, coated

Base jaw material: Aluminum alloy, anodized

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: Accessory kit with centering sleeves, assembly and operating manual with declaration of incorporation, DVD with SCHUNK software and commissioning assistant, functional module for control via Siemens S7-300/400. A DMI or MMI electric connection cap is required for operating the gripper. It is not included in the scope of delivery and has to be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Electrical brake: The built-in, electric holding brake is used for fixing and holding the position of the gripper jaws in the event of a power failure. It cannot cover all of the security or gripping force maintenance functions.



Application Example

Electrically driven gripper solution with linear axis and rotary modules for handling of sensitive workpieces.

- ① Universal gripper PG
- ② Pan-tilt actuator PW
- ③ Rotary module PR, electric
- ④ Belt-drive axis Beta
- ⑤ Drive PDU

SCHUNK offers more ...

The following components make the product PG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary unit



Pan-tilt unit



Linear module



Drive



Power cable



Connection cap



Force/torque sensor



Quick-change system



Communication cable

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Integrated electronics: The electrical control of the gripper is carried out by the fully integrated control and power electronics. Hence, the module does not require any additional external control units.

Easy integration: There is a varied range of interfaces available, such as PROFIBUS DP or CAN as types of communication. This enables the assembly of industrial bus networks and ensures easy integration into existing control systems.

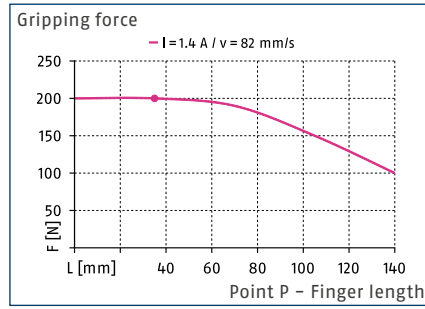
Connection caps DMI and MMI: The DMI or MMI connection caps are available for connection of the gripper to the voltage supply or superordinate control unit. They are not included in the scope of delivery and have to be ordered separately.

PG 70

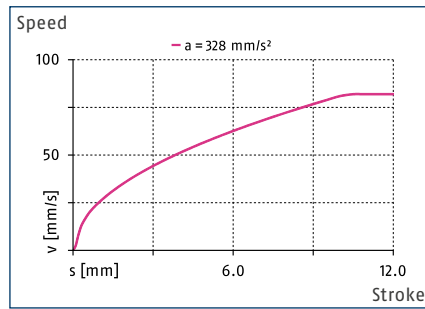
Electric Grippers | 2-Finger Parallel Grippers | Universal Gripper



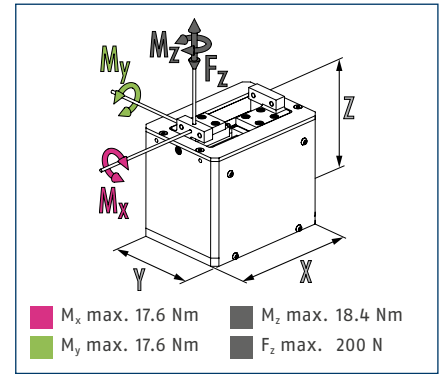
Gripping force



Speed



Dimensions and maximum loads

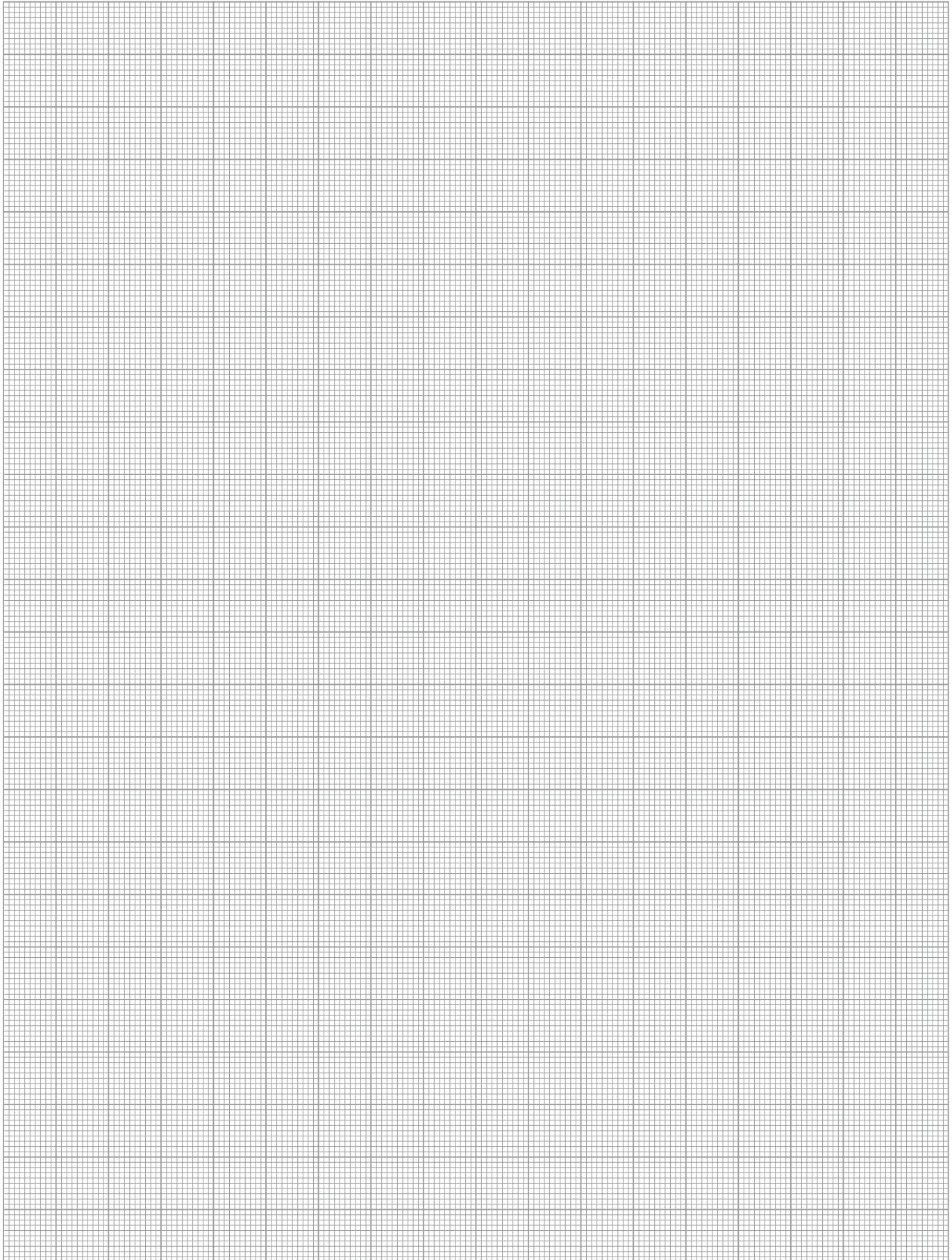


① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PG 70
ID		0306095
General operating data		
Stroke per jaw	[mm]	34
Min./max. gripping force	[N]	30/200
Recommended workpiece weight	[kg]	1
Max. permissible finger length	[mm]	140
Repeat accuracy	[mm]	0.05
Closing/opening time	[s]	1.1/1.1
Max. speed	[mm/s]	82
Max. acceleration	[mm/s ²]	328
Weight	[kg]	1.4
Min./max. ambient temperature	[°C]	5/55
Protection class IP		20
Dimensions X x Y x Z	[mm]	112 x 80 x 93
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	1.4
Max. current	[A]	1.8
Controller electronics		Integrated
Communication interface		PROFIBUS, CAN, digital I/O
Data rate	[Mbit/s]	1.5
Data rate	[Mbit/s]	1
Number of digital I/O		4/4
Parametrized interface		RS232

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/pg



PEH

Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper

Flexible. High Performance. Bus capable.

Long-stroke Gripper PEH

Servo-electric 2-finger parallel gripper with long jaw stroke for large parts and diverse parts spectrum

Field of Application

Versatile, highly flexible gripper for large diversity of parts in clean to slightly contaminated work environment.

Advantages – Your benefits

Gripping force control ranging from 100 N – 1,800 N for powerful gripping of a wide variety of workpieces

Long stroke of 200 mm for flexible workpiece handling

Fully integrated control and power electronics for creating a decentralized control system

Versatile actuation options for simple integration into existing control concepts via PROFIBUS-DP, or CAN

Robust sliding guide for the precise handling of different workpieces

High maximum moments possible suitable for using long gripper fingers

Mounting from two sides in three screw directions for universal and flexible gripper assembly



Sizes
Quantity: 3



Weight
5.4 .. 16.8 kg



Gripping force
750 .. 1800 N



Stroke per jaw
60 .. 100 mm



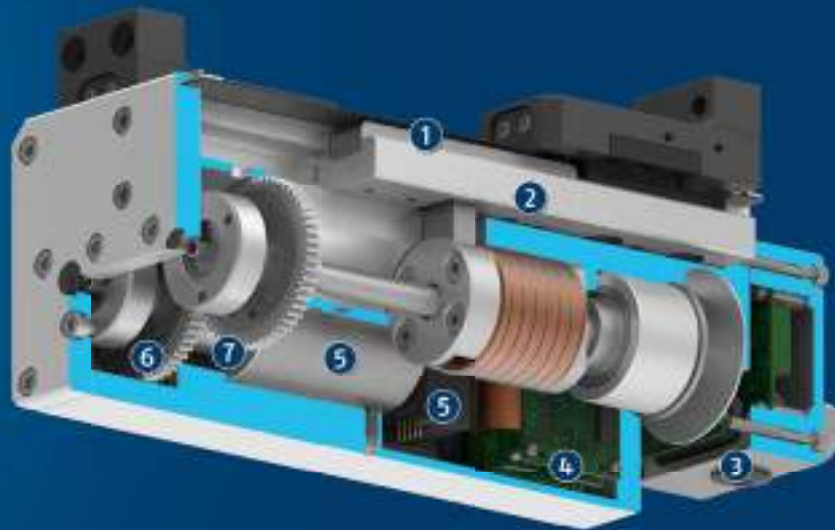
Workpiece weight
2 .. 9 kg



Functional Description

The brushless servomotor drives the ball screw via a toothed belt drive.

A base jaw is moved by means of a carrier on the spindle. The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Kinematics**
Rack and pinion principle for centric gripping
- ② **Sliding guide**
For precise gripping with minimum play at a high load capacity
- ③ **Connection cap DMI**
Electric connection for energy supply and communication
- ④ **Control electronics**
Integrated control and power electronics for decentralized control of the servomotor
- ⑤ **Drive**
Brushless DC servomotor with hall-effect sensors and encoder
- ⑥ **Gear mechanism**
Force transmission from the servomotor to the drive spindle
- ⑦ **Brake**
For maintaining position on shutdown and power failure

General Notes about the Series

Operating principle: Spindle drive, synchronized by rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor

Warranty: 24 months

Scope of delivery: Accessory kit with centering sleeves, assembly and operating manual with declaration of incorporation, DVD with SCHUNK software and commissioning assistant, functional module for control via Siemens S7-300/400. A DMI or MMI electric connection cap is required for operating the gripper. It is not included in the scope of delivery and has to be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

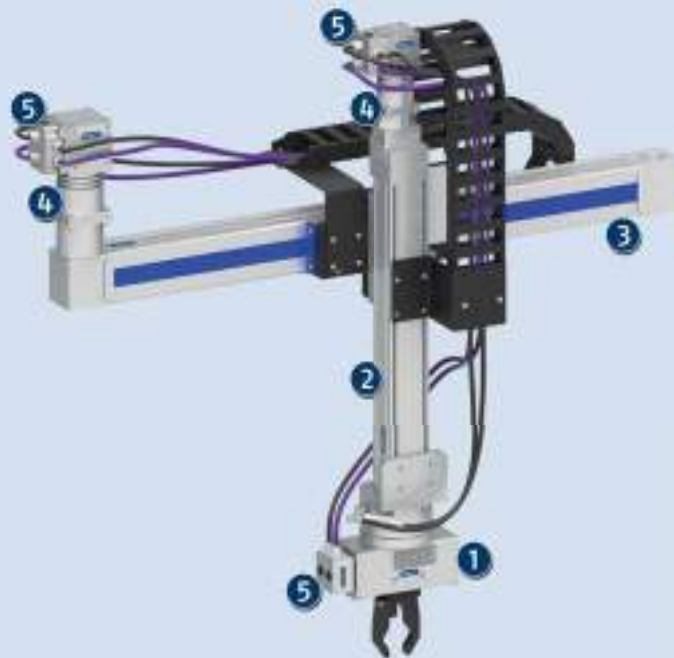
Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Electrical brake: The built-in, electric holding break is used for fixing and holding the position of the gripper jaws in the event of a power failure. It cannot cover all of the security or gripping force maintenance functions.



Application Example

Fully electrically driven gantry axis for loading and depalletizing of various components.

- ① Long-stroke gripper PEH
- ② Vertical axis with spindle drive Beta
- ③ Linear module Beta with toothed belt drive
- ④ Servo electric drive with gear PDU
- ⑤ Connection cap DMI
- ⑥ Universal rotary module ERS

SCHUNK offers more ...

The following components make the product PEH even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary unit



Pan-tilt unit



Linear module



Drive



Power cable



Connection cap



Force/torque sensor



Quick-change system



Communication cable

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Integrated electronics: The electrical control of the gripper is carried out by the fully integrated control and power electronics. Hence, the module does not require any additional external control units.

Easy integration: There is a varied range of interfaces available, such as PROFIBUS DP or CAN as types of communication. This enables the assembly of industrial bus networks and ensures easy integration into existing control systems.

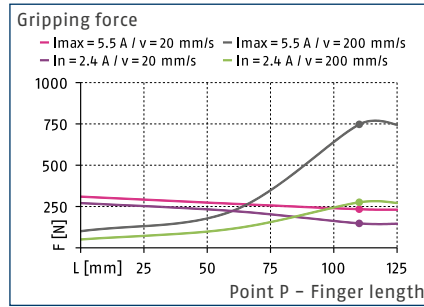
Connection caps DMI and MMI: The DMI or MMI connection caps are available for connection of the gripper to the voltage supply or superordinate control unit. They are not included in the scope of delivery and have to be ordered separately.

PEH 30

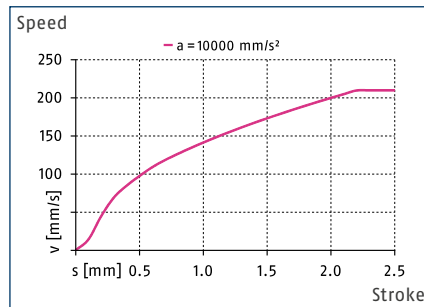
Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



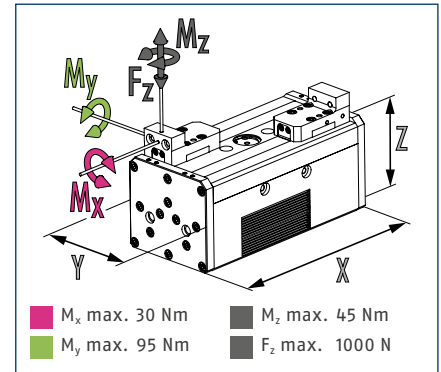
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

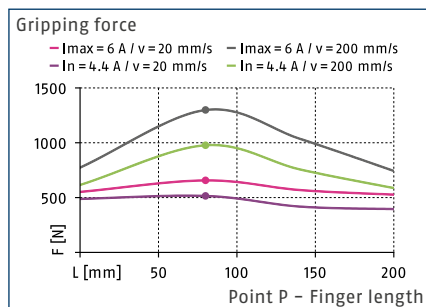
Description		PEH 30
ID		0306060
General operating data		
Stroke per jaw	[mm]	60
Min./max. gripping force	[N]	150/750
Recommended workpiece weight	[kg]	2
Max. permissible finger length	[mm]	125
Max. permissible mass per finger	[kg]	2
Repeat accuracy	[mm]	±0.05
Closing/opening time	[s]	1/1
Max. speed	[mm/s]	210
Max. acceleration	[mm/s²]	10000
Weight	[kg]	5.4
Min./max. ambient temperature	[°C]	5/45
Protection class IP		41
Dimensions X x Y x Z	[mm]	215 x 100 x 92.8
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	2.4
Max. current	[A]	8
Controller electronics		Integrated
Communication interface		PROFIBUS, CAN, digital I/O
Data rate	[Mbit/s]	1.5
Data rate	[Mbit/s]	1
Number of digital I/O		4/4
Parametrized interface		RS232

① The recommended workpiece weight has been calculated for the maximum gripping force. The maximum gripping force can be achieved at max. speed and with max. current, which may only be applied temporarily. Please contact SCHUNK technical sales for further enquiries.

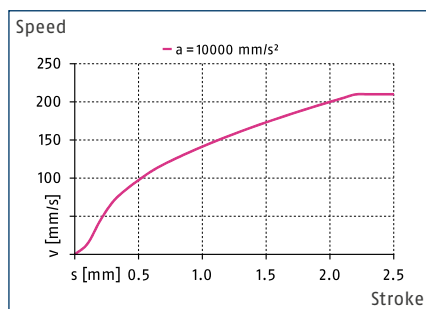
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/peh



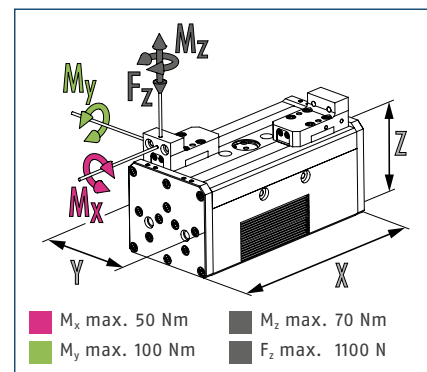
Gripping force O.D. gripping



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PEH 40
ID		0306062
General operating data		
Stroke per jaw	[mm]	60
Min./max. gripping force	[N]	150/1300
Recommended workpiece weight	[kg]	4
Max. permissible finger length	[mm]	200
Max. permissible mass per finger	[kg]	3
Repeat accuracy	[mm]	±0.05
Closing/opening time	[s]	1/1
Max. speed	[mm/s]	210
Max. acceleration	[mm/s²]	10000
Weight	[kg]	7.8
Min./max. ambient temperature	[°C]	5/55
Protection class IP		41
Dimensions X x Y x Z	[mm]	240 x 114 x 94.8
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	4.4
Max. current	[A]	12.4
Controller electronics		Integrated
Communication interface		PROFIBUS, CAN, digital I/O
Data rate	[Mbit/s]	1.5
Data rate	[Mbit/s]	1
Number of digital I/O		4/4
Parametrized interface		RS232

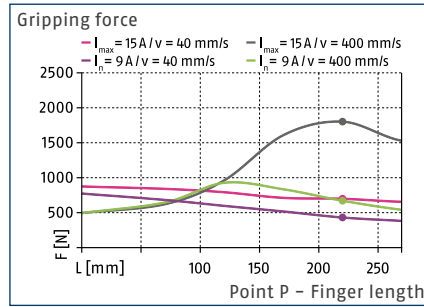
① The recommended workpiece weight has been calculated for the maximum gripping force. The maximum gripping force can be achieved at max. speed and with max. current, which may only be applied temporarily. Please contact SCHUNK technical sales for further enquiries.

PEH 50

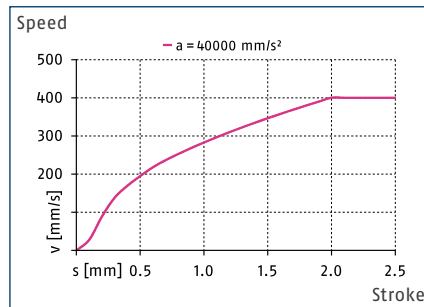
Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



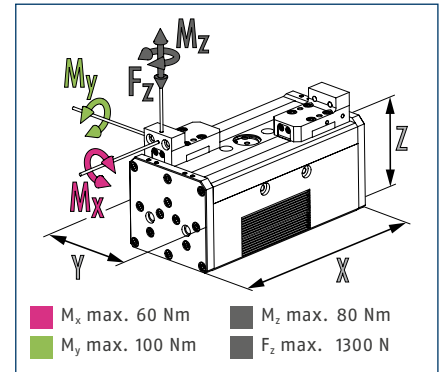
Gripping force O.D. gripping



Speed



Dimensions and maximum loads



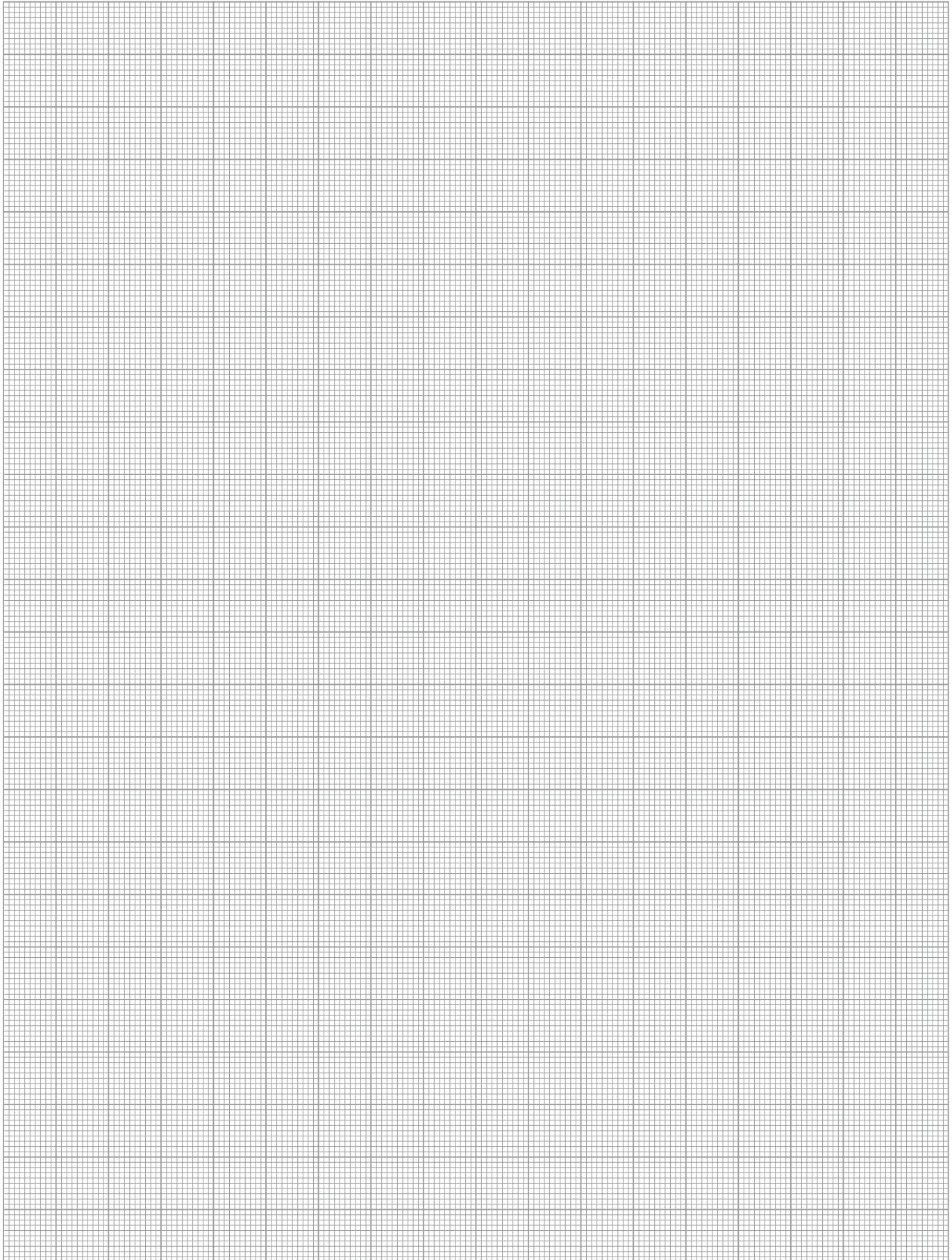
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		PEH 50
ID		0306064
General operating data		
Stroke per jaw	[mm]	100
Min./max. gripping force	[N]	150/1800
Recommended workpiece weight	[kg]	9
Max. permissible finger length	[mm]	270
Max. permissible mass per finger	[kg]	4
Repeat accuracy	[mm]	±0.05
Closing/opening time	[s]	1.5/1.5
Max. speed	[mm/s]	400
Max. acceleration	[mm/s ²]	40000
Weight	[kg]	16.8
Min./max. ambient temperature	[°C]	5/45
Protection class IP		41
Dimensions X x Y x Z	[mm]	331 x 150 x 117.8
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	10
Max. current	[A]	25
Controller electronics		Integrated
Communication interface		PROFIBUS, CAN, digital I/O
Data rate	[Mbit/s]	1.5
Data rate	[Mbit/s]	1
Number of digital I/O		4/4
Parametrized interface		RS232

① The recommended workpiece weight has been calculated for the maximum gripping force. The maximum gripping force can be achieved at max. speed and with max. current, which may only be applied temporarily. Please contact SCHUNK technical sales for further enquiries.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/peh



EGA

Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper

Flexible. Modular. Robust.

Long-stroke Gripper EGA

Electric 2-finger parallel gripper with smoothly running profile rail guide and adaptable servomotor

Field of Application

Optimum standard solution for applications with large workpiece geometries. Universal application in clean to slightly dirty environments, e.g. in the machine and plant building industry, assembly, and handling sectors as well as in the automotive industry.

Advantages – Your benefits

Large moment payloads due to double profiled rail guide suitable for using long gripper fingers

Extremely flat design for minimum interfering contours

Adaptable drive motor for versatile approach and easy integration into existing control concepts

Position and torque-controlled movement of the gripper for very flexible gripping of various geometries and types of components

Radial motor and parallel assembly for flexible adaptation to gantries or robots

Safety functions such as STO and SLS can be realized by the use of a suitable drive motor and controller



Sizes
Quantity: 2



Weight
1.8 .. 11.3 kg



Gripping force
500 .. 1300 N



Stroke per jaw
30 .. 100 mm



Workpiece weight
2.5 .. 6.5 kg



Functional Description

The adaptable servomotor drives the base jaw via the gear spindle mechanism.

The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Base jaw**
For the connection of workpiece-specific gripper fingers
- ② **Profiled rail guide**
Highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ③ **Special gear drive**
For two different motor attachment variants
- ④ **Drive**
Adaptable drive motor
- ⑤ **Housing**
With extremely flat design for low interfering contours

General Notes about the Series

Operating principle: Spindle drive, synchronized by rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: Hard-anodized, high strength aluminum

Actuation: Electrically via an adaptable servo drive

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeve, assembly and operating manual with declaration of incorporation. Depending on the variant, operation of the gripper requires a motor add-on kit, a servomotor, and a suitable controller. They are not included in the scope of delivery and must be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: When gripping, the speed must be adapted as described in the operating manual so that the closing and opening times can increase. The times specified are only the movement times of the base jaws at max. speed, max. acceleration without electrical restrictions, and observance of the maximum permissible masses per finger.

Motor torque: Required motor torque may be permanently applied to achieve the maximum gripping force.



Application Example

Completely electrically driven line gantry for loading and unloading pallets with various greatly differing components.

① Electric line gantry LPE

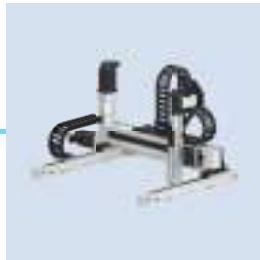
② Electric long-stroke gripper EGA

SCHUNK offers more ...

The following components make the product EGA even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Rotary unit



Room gantry



Quick-change system



Jaw quick-change system



Inductive proximity switch



Magnetic switch



Finger blank

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Flexible in motor and controller selection: The electrical control is carried out via an adaptable servo drive using common standard controller like Bosch or Siemens.

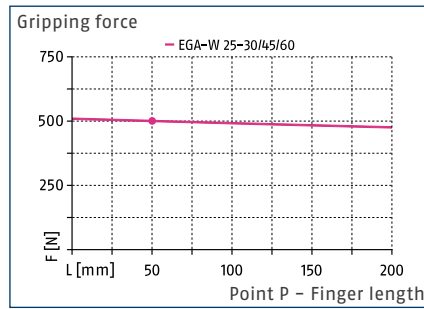
Easy integration: The easy integration into the control system is ensured by the possibility of attaching a common servomotor.

Identical control: Like a normal servo axis, the gripper can be directly controlled and interpolated with existing axes.

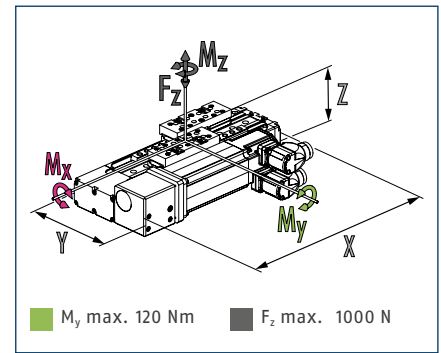
Complete solutions: On request, SCHUNK can supply complete drive solutions including motor, gears, controller, and cables.



Gripping force



Dimensions and maximum loads



① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

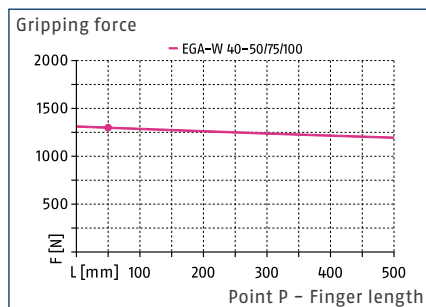
Basic version, parallel		EGA-W 25-030-P-N-B	EGA-W 25-045-P-N-B	EGA-W 25-060-P-N-B
ID		0332000	0332010	0332020
General operating data				
Stroke per jaw	[mm]	30	45	60
Min./max. gripping force	[N]	150/500	150/500	150/500
Closing/opening time	[s]	0.42/0.42	0.6/0.6	0.79/0.79
Max. permissible speed positioning operation	[mm/s]	80	80	80
Max. permissible speed power operation	[mm/s]	30	30	30
Recommended workpiece weight	[kg]	2.5	2.5	2.5
Repeat accuracy	[mm]	0.05	0.05	0.05
Max. permissible finger length	[mm]	200	200	200
Max. permissible mass per finger	[kg]	1	1	1
Motor moment required	[Nm]	0.28	0.28	0.28
Motor speed required	[1/min]	2200	2200	2200
Weight	[kg]	2.2	2.4	2.7
Min./max. ambient temperature	[°C]	5/55	5/55	5/55
Protection class IP		40	40	40
Dimensions X x Y x Z	[mm]	202.5 x 126.6 x 59.7	247.5 x 126.6 x 59.7	292.5 x 126.6 x 59.7
Moments M_x max./ M_z max.	[Nm]	25/27	29/33	33/46
Options and their characteristics				
Motor version parallel		EGA-W 25-030-P-N-MSK030B	EGA-W 25-045-P-N-MSK030B	EGA-W 25-060-P-N-MSK030B
ID		0332001	0332011	0332021
Weight	[kg]	3.9	4.1	4.4
Radial motor version		EGA-W 25-030-R-N-MSK030B	EGA-W 25-045-R-N-MSK030B	EGA-W 25-060-R-N-MSK030B
ID		0332006	0332016	0332026
Weight	[kg]	3.5	3.8	4
Radial basic version		EGA-W 25-030-R-N-B	EGA-W 25-045-R-N-B	EGA-W 25-060-R-N-B
ID		0332005	0332015	0332025
Weight	[kg]	1.8	2.1	2.3

① Motors are not included in the purchase price of the base variant. Please ask us for details about the integration of your motor type.

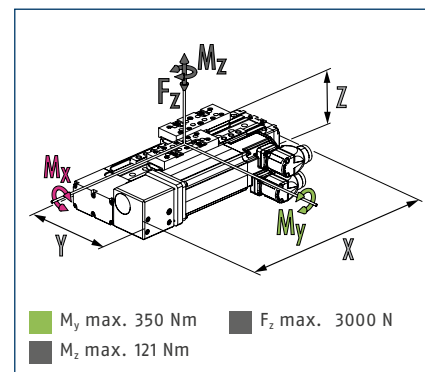
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/ega



Gripping force



Dimensions and maximum loads



ⓘ The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Basic version, parallel		EGA-W 40-050-P-N-B	EGA-W 40-075-P-N-B	EGA-W 40-100-P-N-B
ID		0332040	0332050	0332060
General operating data				
Stroke per jaw	[mm]	50	75	100
Min./max. gripping force	[N]	200/1300	200/1300	200/1300
Closing/opening time	[s]	0.65/0.65	0.96/0.96	1.28/1.28
Max. permissible speed positioning operation	[mm/s]	80	80	80
Max. permissible speed power operation	[mm/s]	30	30	30
Recommended workpiece weight	[kg]	6.5	6.5	6.5
Repeat accuracy	[mm]	0.05	0.05	0.05
Max. permissible finger length	[mm]	500	500	500
Max. permissible mass per finger	[kg]	5	5	5
Motor moment required	[Nm]	0.8	0.8	0.8
Motor speed required	[1/min]	1970	1970	1970
Weight	[kg]	7.47	8.29	9.1
Min./max. ambient temperature	[°C]	5/55	5/55	5/55
Protection class IP		40	40	40
Dimensions X x Y x Z	[mm]	306.5 x 179 x 90.2	379.5 x 179 x 90.2	454.5 x 179 x 90.2
Moments M_x max.	[Nm]	100	117	133
Options and their characteristics				
Motor version parallel		EGA-W 40-050-P-N-MSK030C	EGA-W 40-075-P-N-MSK030C	EGA-W 40-100-P-N-MSK030C
ID		0332041	0332051	0332061
Weight	[kg]	9.67	10.49	11.3
Radial motor version		EGA-W 40-050-R-N-MSK030C	EGA-W 40-075-R-N-MSK030C	EGA-W 40-100-R-N-MSK030C
ID		0332046	0332056	0332066
Weight	[kg]	8.77	9.59	10.4
Radial basic version		EGA-W 40-050-R-N-B	EGA-W 40-075-R-N-B	EGA-W 40-100-R-N-B
ID		0332045	0332055	0332065
Weight	[kg]	6.57	7.39	8.2

ⓘ Motors are not included in the purchase price of the base variant. Please ask us for details about the integration of your motor type.

LEG

Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper

Flexible. Light. Productive.

Long-stroke Gripper LEG

Electric 2-finger parallel gripper with smoothly running profile rail guide and adaptable servomotor

Field of Application

Light long-stroke gripper for flexible and highly dynamic handling of various components. Universal application in clean environments, e.g. in the machine and plant building industry, assembly and handling as well as in the automotive industry.



Advantages – Your benefits

Large moment payloads due to double profiled rail guide suitable for using long gripper fingers

Extremely narrow design for minimum interfering contours

Adaptable drive motor for versatile approach and easy integration into existing control concepts

Position and torque-controlled movement of the gripper for very flexible gripping of various geometries and types of components

Synchronized but also asynchronous moving of the fingers for various gripping applications

Safety functions such as STO and SLS can be realized by the use of a suitable drive motor and controller

Available for standard robot adaptations according to ISO 9409



Sizes
Quantity: 3



Weight
5.4 .. 11.4 kg



Gripping force
1050 .. 1500 N



Stroke per jaw
101 .. 281 mm



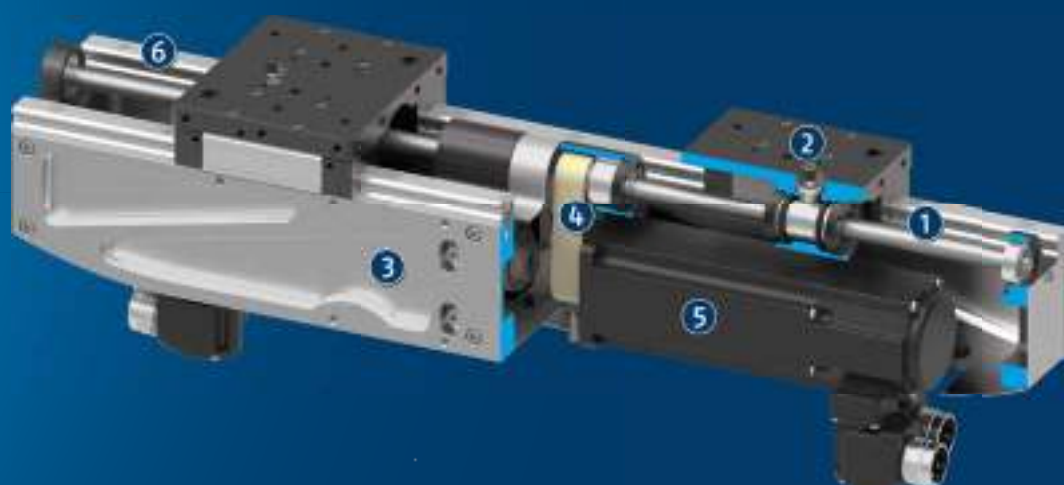
Workpiece weight
5.25 .. 7.5 kg

Functional Description

The two ball-screw spindle drives, which move the base jaw, are driven by one or two servomotors via a toothed belt.

With two drives every jaw can be moved individually from

each other. During the actuation with a servomotor, a coupling synchronizes the right-to-left and the left-to-right spindle with each other.



① Recirculating ball bearing guide

Precise gripping due to high-amperage smoothly running recirculating ball bearing guide

② Base jaw

For the connection of workpiece-specific gripper fingers

③ Housing

Weight-optimized due to FEM and topology examination

④ Kinematics

High moment payloads and accuracy due to the ball screw

⑤ Motor installation space

For various motors

⑥ Linear guide

Heavy-duty for high moment loads and long top jaws

Application Examples

Handling of cardboard packaging



Basic version of LEG

- 1 2-finger long-stroke gripper LEG
- 2 Gripper fingers

Gripping system solution for asynchronous handling of cardboard packaging



The LEG gripping system solution with two asynchronous grippers accommodates multiple cardboard packaging in successive sequences. The higher-level asynchronous gripper serves only for adjusting the inside micrometer.

- 1 2-finger long-stroke gripper LEG, asynchronous version
- 2 2-finger long-stroke gripper LEG, asynchronous version

Gripping system solution for synchronous handling of cardboard packaging



The LEG gripping system solution with two synchronous grippers is used for handling multiple cardboard packaging at the same time. The higher-level asynchronous gripper serves only for adjusting the inside micrometer.

- 1 2-finger long-stroke gripper LEG, asynchronous version
- 2 2-finger long-stroke gripper LEG, synchronous version



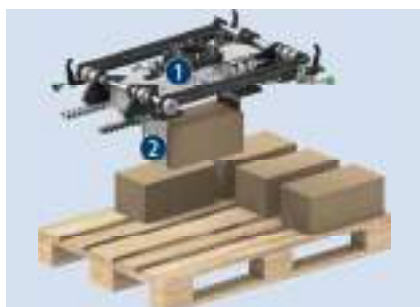
LEG with palletizing option – pallet handling



Gripping system solution with palletizing option for handling pallets, clipboards and cardboard packaging

- ❶ 2-finger long-stroke gripper LEG, synchronous version
- ❷ Swiveling arm for form-fit gripping of pallets

LEG with palletizing option – handling of cardboard boxes



- ❶ 2-finger long-stroke gripper LEG, synchronous version
- ❷ Gripper fingers

LEG with palletizing option – handling of clipboards



- ❶ 2-finger long-stroke gripper LEG, synchronous version
- ❷ Vacuum suction cup



General Notes about the Series

Operating principle: Spindle drive

Housing material: Aluminum alloy, coated

Base jaw material: Hard-anodized, high strength aluminum

Actuation: Electrically via an adaptable servo drive

Warranty: 24 months

Scope of delivery: Enclosed pack with centering sleeve and centering pins, assembly and operating manual with declaration of incorporation. Depending on the variant, operation of the gripper requires a motor add-on kit, a servomotor, and a suitable controller. They are not included in the scope of delivery and must be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g . For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: When gripping, the speed must be adapted as described in the operating manual so that the closing and opening times can increase. The times specified are only the movement times of the base jaws at max. speed, max. acceleration without electrical restrictions, and observance of the maximum permissible masses per finger.

Motor torque: Required motor torque may be permanently applied to achieve the maximum gripping force.



Application Example

Gripping system solution comprising three electric grippers for handling various workpieces.

- ① 2-finger long-stroke gripper LEG, asynchronous version
- ② 2-finger long-stroke gripper LEG, synchronous version
- ③ Adapter flange

SCHUNK offers more ...

The following components make the product LEG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Finger change system (on request)

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Flexible in motor and controller selection: The electrical control is carried out via an adaptable servo drive using common standard controller like Bosch or Siemens.

Easy integration: The easy integration into the control system is ensured by the possibility of attaching a common servomotor.

Identical control: Like a normal servo axis, the gripper can be directly controlled and interpolated with existing axes.

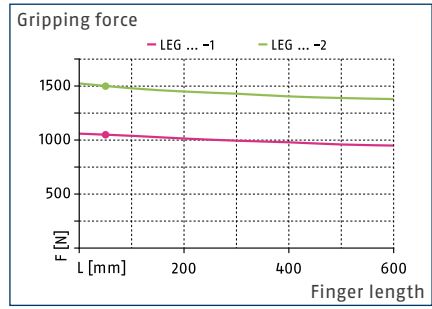
Complete solutions: On request, SCHUNK can supply complete drive solutions including motor, gears, controller, and cables.

LEG 400

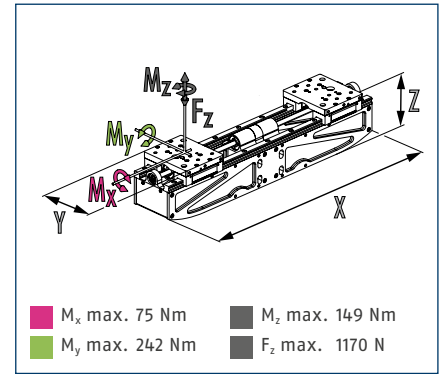
Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

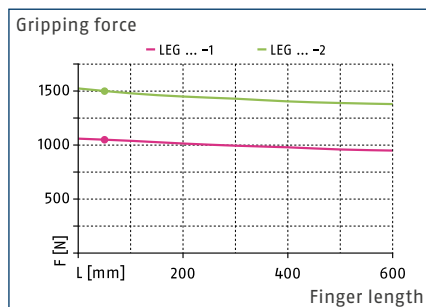
Description		LEG 400-1-15-2-10X3-B	LEG 400-2-15-2-10X3-B
ID		0308040	0308041
General operating data			
Stroke per jaw	[mm]	101	101
Min./max. gripping force	[N]	300/1050	300/1500
Closing/opening time	[s]	0.55/0.55	0.55/0.55
Max. permissible speed (positioning)	[mm/s]	276	276
Max. permissible speed (gripping)	[mm/s]	10	10
Recommended workpiece weight	[kg]	5.25	7.5
Repeat accuracy	[mm]	0.05	0.05
Max. permissible finger length	[mm]	600	600
Max. permissible mass per finger	[kg]	10	10
Motor moment required	[Nm]	1	0.75
Max. drive speed	[1/min]	4000	4000
Weight	[kg]	5.4	5.4
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		20	20
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	400 x 112 x 107.5	400 x 112 x 107.5
Options and their characteristics			
Version with a motor		LEG 400-1-15-2-10X3-MSM031B	LEG 400-2-15-2-10X3-MSM031B
ID		0308042	0308043
Weight	[kg]	6.9	8.3

① Motors are not included in the purchase price of the base variant. Please ask us for details about the integration of your motor type.

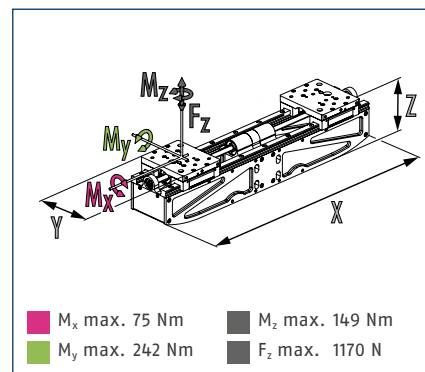
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/leg



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		LEG 520-1-15-2-10X3-B	LEG 520-2-15-2-10X3-B
ID		0308050	0308051
General operating data			
Stroke per jaw	[mm]	161	161
Min./max. gripping force	[N]	300/1050	300/1500
Closing/opening time	[s]	0.73/0.73	0.73/0.73
Max. permissible speed (positioning)	[mm/s]	276	276
Max. permissible speed (gripping)	[mm/s]	10	10
Recommended workpiece weight	[kg]	5.25	7.5
Repeat accuracy	[mm]	0.05	0.05
Max. permissible finger length	[mm]	600	600
Max. permissible mass per finger	[kg]	10	10
Motor moment required	[Nm]	1	0.75
Max. drive speed	[1/min]	4000	4000
Weight	[kg]	6.4	6.4
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		20	20
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	520 x 112 x 107.5	520 x 112 x 107.5
Options and their characteristics			
Version with a motor		LEG 520-1-15-2-10X3-MSK030B	LEG 520-2-15-2-10X3-MSK030B
ID		0308052	0308053
Weight	[kg]	8.2	9.9

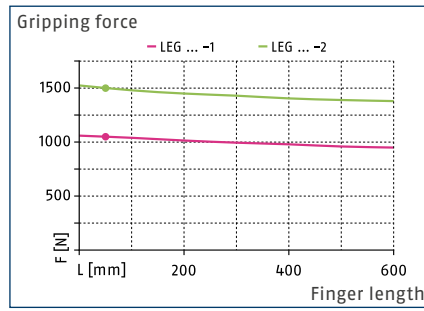
① Motors are not included in the purchase price of the base variant. Please ask us for details about the integration of your motor type.

LEG 760

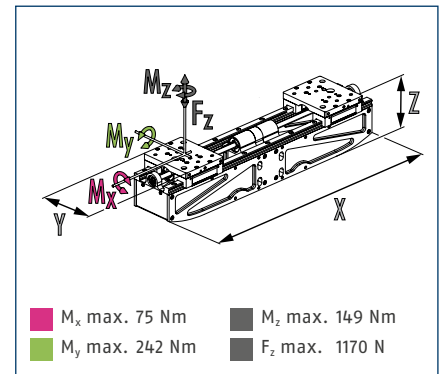
Electric Grippers | 2-Finger Parallel Grippers | Long-stroke Gripper



Gripping force



Dimensions and maximum loads



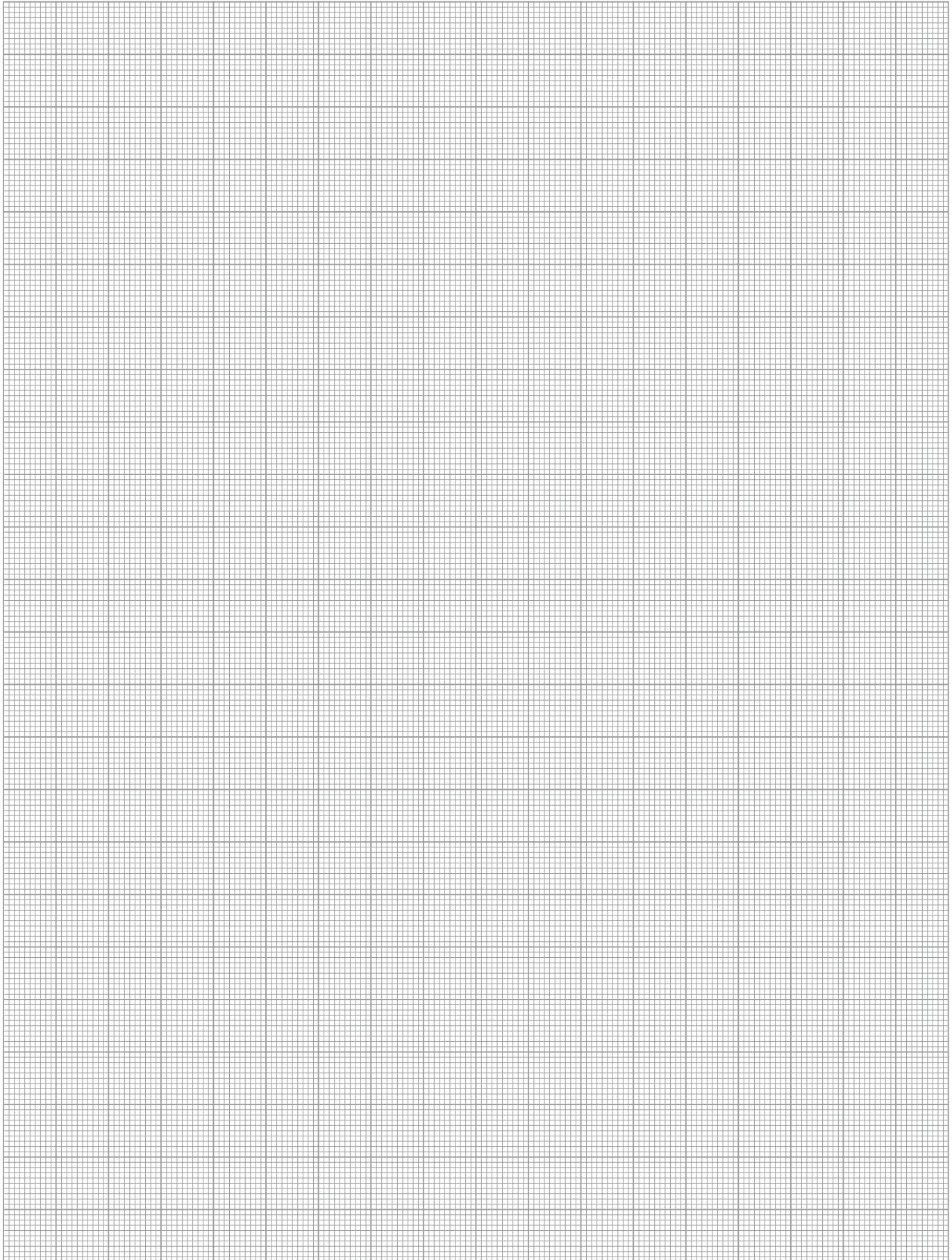
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		LEG 760-1-15-2-10X3-B	LEG 760-2-15-2-10X3-B
ID		0308060	0308061
General operating data			
Stroke per jaw	[mm]	281	281
Min./max. gripping force	[N]	300/1050	300/1500
Closing/opening time	[s]	1.2/1.2	1.2/1.2
Max. permissible speed (positioning)	[mm/s]	276	276
Max. permissible speed (gripping)	[mm/s]	10	10
Recommended workpiece weight	[kg]	5.25	7.5
Repeat accuracy	[mm]	0.05	0.05
Max. permissible finger length	[mm]	600	600
Max. permissible mass per finger	[kg]	10	10
Motor moment required	[Nm]	1	0.75
Max. drive speed	[1/min]	4000	4000
Weight	[kg]	7.9	7.9
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		20	20
Noise emission	[dB(A)]	<70	<70
Dimensions X x Y x Z	[mm]	760 x 112 x 107.5	760 x 112 x 107.5
Options and their characteristics			
Version with a motor		LEG 760-1-15-2-10x3-MSK030B	LEG 760-2-15-2-10x3-MSK030B
ID		0308062	0308063
Weight	[kg]	9.7	11.4

① Motors are not included in the purchase price of the base variant. Please ask us for details about the integration of your motor type.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/leg



Robust. Flexible. Strong.

Universal Gripper EZN

Servo-electric 3-finger centric gripper with high gripping force and high maximum moment due to the use of a multi-tooth guidance

Field of Application

Optimum standard solution for many areas of application; flexible use due to controllable gripping force, position, and speed.

Advantages – Your benefits

Drive design of servomotor for flexible use

With external electronics for simple integration into existing servo-controlled concepts via PROFINET, PROFIBUS or CAN

Pre-positioning capability to reduce cycle times through a short working stroke

Robust multi-tooth guidance for precise handling

High maximum moments possible suitable for using long gripper fingers

Fastening at one gripper side in two screw directions for universal and flexible gripper assembly



Sizes
Quantity: 2



Weight
0.98 .. 2.48 kg



Gripping force
500 .. 800 N



Stroke per jaw
6 .. 10 mm



Workpiece weight
2.5 .. 4 kg



Functional Description

The spindle nut which is mounted on bearings, transfers the rotary motion of the servomotor into an axial motion. The oblique surfaces of the wedge-hook generate a synchronous jaw movement.



① **Wedge-hook principle**

For high force transmission and centric gripping

② **Base jaw**

With multi-tooth guidance for precise gripping, even with long gripper fingers

③ **Housing**

Is weight-optimized due to the use of high-strength aluminum alloy

④ **Spindle nut**

Transforms the rotational movement into the axial movement of the wedge-hook

⑤ **Drive**

DC servomotor with resolver

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor and spindle drive

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeves and centering pin, assembly and operating manual with declaration of incorporation. An external controller is required for operating the gripper EZN ECM required. Connection cables are also required for the EZN-S plug version. The controller and the connection cables are not included in the scope of delivery and have to be ordered separately.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

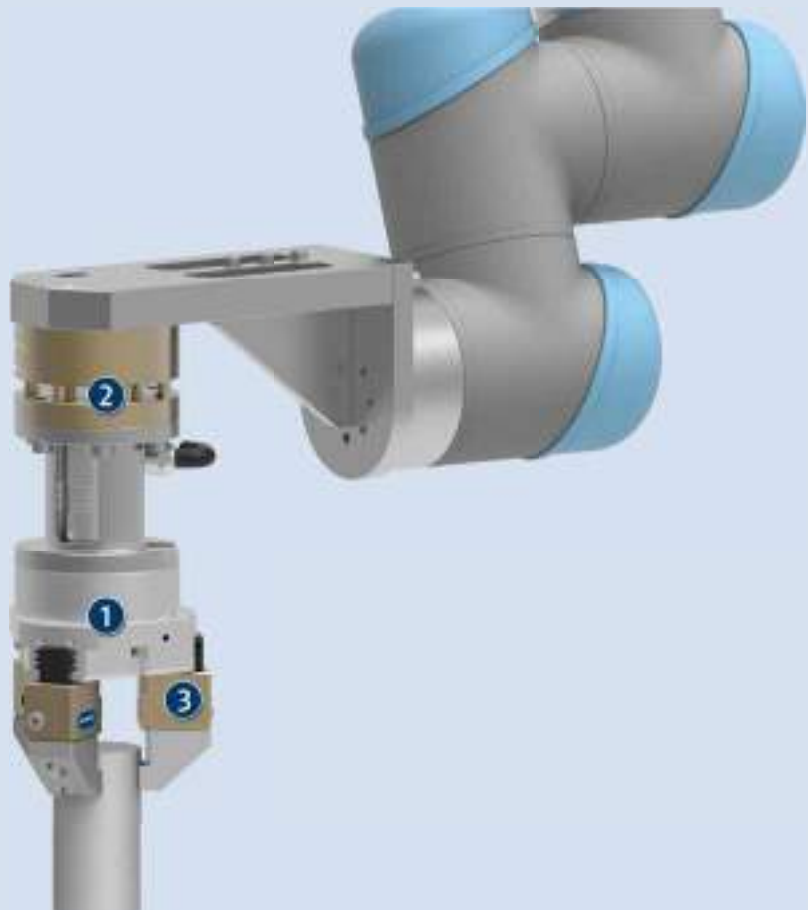
Closing and opening times: Minimum closing and opening times are merely the movement times of the base jaws or fingers at max. speed, max. acceleration, without current limitation (maximum current), and observance of the maximum permissible mass per finger.

Nominal currents: Can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

Application Example

Gripping unit for machine loading of raw material.

- 1 3-finger centric gripper EZN
- 2 Compensation unit AGE-Z
- 3 Jaw quick-change system BSWS



SCHUNK offers more ...

The following components make the product EZN even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Controller



Jaw quick-change system



Finger blank



Protection cover

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

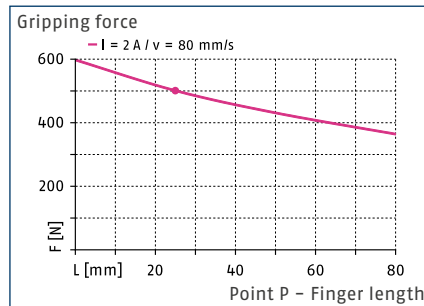
Control via external controller ECM: The electrical control of the gripper takes place via the separately available controller ECM. Integration of the controller into the higher-level control concept is either via PROFINET, PROFIBUS-DP or CAN. Both communication interfaces ensure simple integration into the higher level control system and enable the design of industrial bus topologies.

Plug version EZN-S: Plug version EZN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

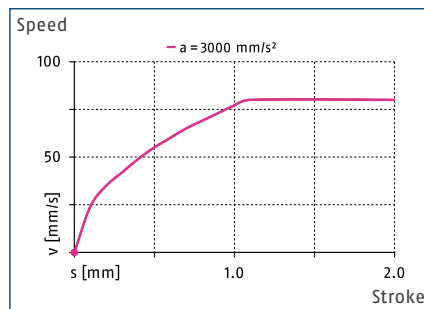
Dust-tight version SD: Absolutely dust-tight, increased degree of protection against ingress of materials.



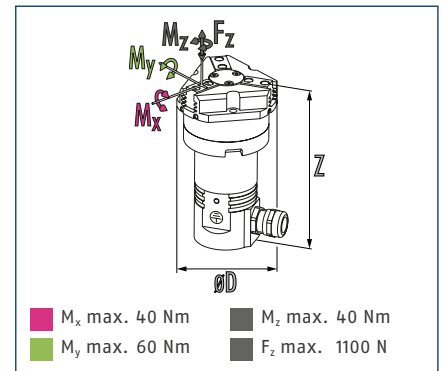
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

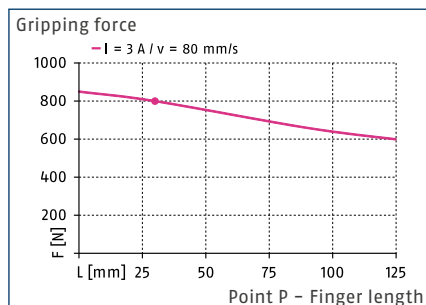
Description		EZN 64	EZN 64-S
ID		0306110	0306113
General operating data			
Stroke per jaw	[mm]	6	6
Min./max. gripping force	[N]	140/500	140/500
Recommended workpiece weight	[kg]	2.5	2.5
Max. permissible finger length	[mm]	80	80
Max. permissible mass per finger	[kg]	0.35	0.35
Repeat accuracy	[mm]	±0.01	±0.01
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.25/0.25	0.25/0.25
Max. speed	[mm/s]	80	80
Max. acceleration	[mm/s ²]	3000	3000
Weight	[kg]	0.98	0.98
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Dimensions Ø D x Z	[mm]	70.5 x 133.5	70.5 x 133.5
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	2	2
Max. current	[A]	4	4
Controller electronics		External	External
Controller type		ECM-EZN064	ECM-EZN064
Communication interface		See controller ECM	See controller ECM
Options and their characteristics			
Dust-tight version, ID		37306110	37306113
Protection class IP		64	64
Weight	[kg]	1.08	1.08

① Plug version EZN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

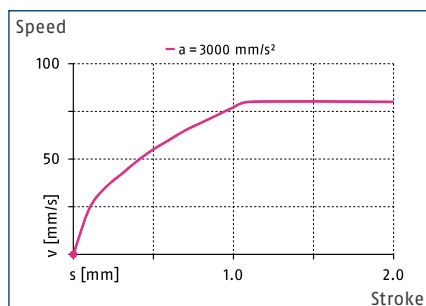
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/ezn



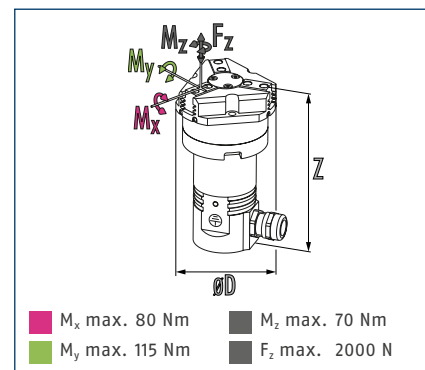
Gripping force



Speed



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		EZN 100	EZN 100-S
ID		0306112	0306114
General operating data			
Stroke per jaw	[mm]	10	10
Min./max. gripping force	[N]	300/800	300/800
Recommended workpiece weight	[kg]	4	4
Max. permissible finger length	[mm]	125	125
Max. permissible mass per finger	[kg]	1.1	1.1
Repeat accuracy	[mm]	±0.01	±0.01
Min./max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.4/0.4	0.4/0.4
Max. speed	[mm/s]	80	80
Max. acceleration	[mm/s ²]	3000	3000
Weight	[kg]	2.3	2.3
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Dimensions Ø D x Z	[mm]	110.5 x 147.5	110.5 x 147.5
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	3	3
Max. current	[A]	4	4
Controller electronics		External	External
Controller type		ECM-EZN100	ECM-EZN100
Communication interface		See controller ECM	See controller ECM
Options and their characteristics			
Dust-tight version, ID		37306112	37306114
Protection class IP		64	64
Weight	[kg]	2.48	2.48

① Plug version EZN-S is available for the controller ECM in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm long cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

EGM

Electric Grippers | Magnetic Gripper

Strong. Simple Control. Compact.

Magnetic Gripper EGM

Electric permanent magnetic gripper for energy-efficient handling of ferromagnetic workpieces

Field of Application

Universal compact gripper for large diversity of parts in clean to slightly contaminated work environment.



Advantages – Your benefits

High holding forces at lowest space for reliable part handling in compact machines

Low weight for high dynamics in challenging applications

Reliable holding force maintenance to ensure process-reliable operation even in scenarios with emergency stop

Energy efficiency: electricity is only required for magnetization and demagnetization for an economic and careful management of resources

Variable number of magnetic poles and adaptation possibilities to any common robot to ensure the optimum adaption to each application

Workpiece accessibility from five sides free from interfering contours by unnecessary gripper fingers



Sizes
Quantity: 4



Weight
1 .. 25 kg



Max. workpiece
weight
118 kg



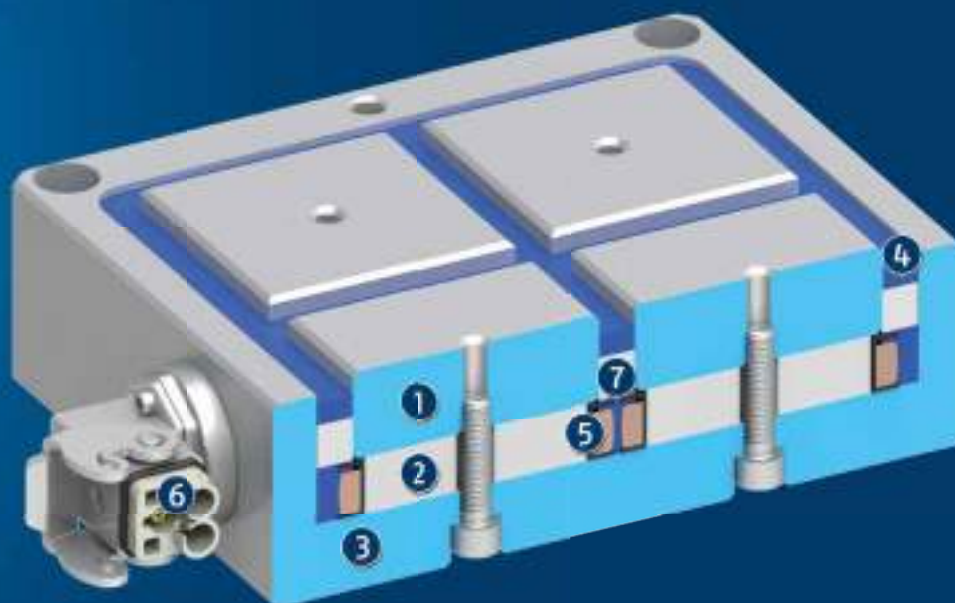
Max. magnetic
surface
196 cm²

Functional Description

The function of the magnetic gripper bases on the combination of AlNiCo and neodymium magnets. The magnetic flux of the AlNiCo magnets passes the neodymium magnet in the deactivated state, and closes the magnetic circuit over the gripper base body made of steel. To activate the system, an electric current pulse is conducted through the

coil, which reverses the polarity of the AlNiCo magnets accordingly.

The magnetic flux can not pass the Neodymium magnets anymore and has to pass via the workpiece into the opposite pole, creating a holding force.



① **Steel poles with bore**

For comfortable adaption of individualized pole extensions

② **Polarity reversible AlNiCo-magnet**

Surrounded by an electromagnetic coil

③ **One-piece base body made of steel**

For optimum guidance of the magnetic flux

④ **Potting compound of synthetic resin**

Prevents the penetration of coolant and chips

⑤ **Copper coil**

For pole reversal of the AlNiCo-magnets

⑥ **Cable connector of Harting**

Ensures safe connection

⑦ **Non-pole reversing neodymium permanent magnets**

Lead the magnetic flux via the workpiece

EGM

Detailed Functional Description

Gripping metal sheets or round components



The magnetic gripper EGM can be arranged or equipped as appropriate for the workpiece. The monopole grippers EGM-M are ideal for metal sheets, and are also suitable for handling larger sheets in multiple arrangements. Using pole extensions, the bipoles EGM-B can also handle round workpieces. The pole extensions are supplied with mounting materials.

- ① Magnetic gripper EGM-M
- ② Adapter plate (customized) for EGM
- ③ Magnetic gripper EGM-B
- ④ Pole extensions PVL
- ⑤ Workpiece

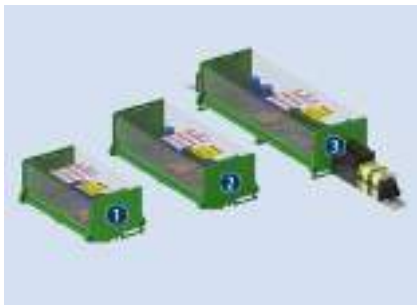
Plug-in connector for EGM



Magnetic grippers EGM are directly equipped with plug-in connectors. For the magnetic monopole grippers (EGM-M), these are attached to the gripper via a connection cable. This allows for flexible routing. For the bipole grippers EGM-B, the plug connectors are connected to the housing. The cable outlet can be turned in 90° increments.

- ① Magnetic gripper EGM-M
- ② Magnetic gripper EGM-B
- ③ Plug connector

Selecting the magnet controller



To control the magnetic gripper, three controllers are available each in two performance categories. The standard controller ECG-C is used to magnetize/demagnetize and can be actuated via digital I/O. For the controller ECG-R, the output of the magnetic gripper can be controlled with up to eight levels via digital signals. The controller ECG-W is particularly designed for applications in the direct welding area.

- ① Magnetic controller ECG-C
- ② Magnetic controller ECG-R
- ③ Magnetic controller ECG-W

Simultaneous actuation of several EGMs



The magnetic gripper EGM is controlled by a control unit ECG. A control unit can be used to control up to 32 magnetic grippers, depending on the size. A simple connection of up to eight magnets is possible using a junction box. This can be positioned freely in the field.

- ① Control unit ECG
- ② Distributor box JBOX
- ③ Magnetic gripper EGM

Ordering Example

EGM - M - Q - 8 - 1 - FX

Description

EGM

Magnet type

M = Monopole

B = Bipole (with threads for pole extension)

Pole form

Q = Square

L = Oblong

Pole width

8 mm

15 mm

30 mm

32 mm

50 mm

70 mm

Number of poles, pole arrangement

1 = One pole

1 x 2 = One row, two poles

1 x 4 = One row, four poles

2 x 2 = Two rows, two poles

Electrical interface

FX = Fixed cable outlet (30 cm long cable)

- = Connection plug on EGM



General Notes about the Series

Operating principle: Magnetization of permanent magnets

Housing material: Steel

Base jaw material: Steel

Actuation: Electrical current pulse for activation and deactivation of the system

Warranty: 24 months

Scope of delivery: Accessory kit with centering sleeves



Application Example

Electrically driven three-axis gantry with double gripper unit comprising electric magnetic gripper and pneumatic gripper, for handling of a wide variety of workpieces.

- ① Magnetic gripper EGM
- ② Swivel head SRH-plus
- ③ 2-finger parallel gripper PGN-plus

- ④ Compensation unit AGE-XY
- ⑤ Electric room gantry RPE

SCHUNK offers more ...

The following components make the product EGM even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Magnetic controller



Distributor box



Hand-held control unit



Gaussmeter



Power cable



Pole extension

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

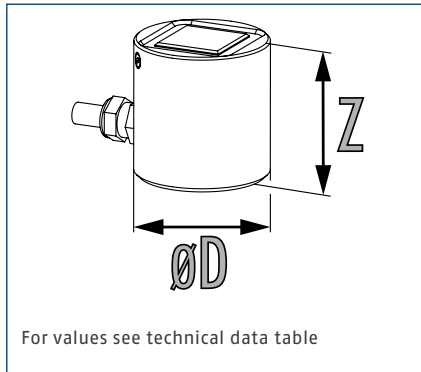
Options and special Information

Control via external controller: Electrical control of the gripper takes place via the controller, which is separately available on request. The interface to the control unit is provided by digital I/O.

EGM M-Q

Electric Grippers | Magnetic Gripper

Dimensions

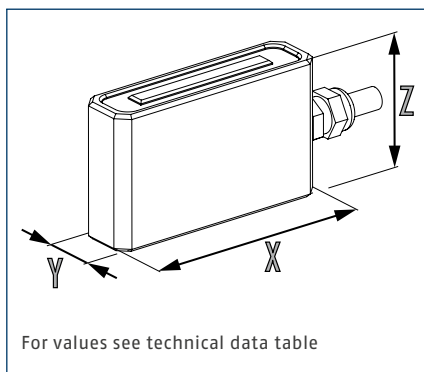


Technical data

Description		EGM-M-Q-30-1-FX	EGM-M-Q-50-1-FX	EGM-M-Q-70-1-FX
ID		0306350	0306351	0306352
Weight	[kg]	1.3	3.45	7.1
Number of poles		2	2	2
Magnetic surface	[cm ²]	18.4	50.4	98.1
Minimum workpiece thickness	[mm]	6	12	16
Payload for horizontal magnetic surface	[kg]	18	80	165
Payload for vertical magnetic surface	[kg]	7	32	65
Max. activations/minute	[1/min]	20	6	10
Module temperature increase in case of 5/15 activations/minute	[°C]	13/33	37/80	24/53
Protection class IP		54	54	54
Current consumption upon activation/deactivation	[A]	3	2.3	3.1
Cable length	[cm]	30	30	30
Dimensions Ø D x Z	[mm]	58 x 60	98 x 65	129.5 x 75
Magnet controller data				
Magnet controller type		ECG 01	ECG 02	ECG 02
Nominal voltage	[V AC]	400	400	400
Max. current	[A]	32	32	32
Max. number of modules per controller		28	26	19

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egm

Dimensions



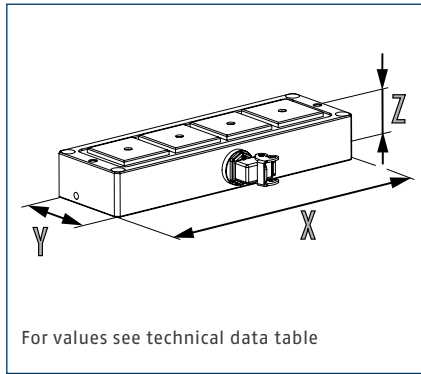
Technical data

Description		EGM-M-L-08-1-FX	EGM-M-L-15-1-FX	EGM-M-L-30-1-FX
ID		0306360	0306361	0306362
Weight	[kg]	1	2.1	3.1
Number of poles		2	2	2
Magnetic surface	[cm ²]	12	22.5	36.9
Minimum workpiece thickness	[mm]	3	5	10
Payload for horizontal magnetic surface	[kg]	10	22	60
Payload for vertical magnetic surface	[kg]	4	9	24
Max. activations/minute	[1/min]	16	16	12
Module temperature increase in case of 5/15 activations/minute	[°C]	18/39	15/40	22/49
Protection class IP		54	54	54
Current consumption upon activation/deactivation	[A]	3.7	2.6	2.2
Cable length	[cm]	30	30	30
Dimensions X x Y x Z	[mm]	98 x 56 x 58	105 x 47 x 79	96 x 66 x 71
Magnet controller data				
Magnet controller type		ECG 01	ECG 02	ECG 02
Nominal voltage	[V AC]	400	400	400
Max. current	[A]	32	32	32
Max. number of modules per controller		23	17	32

EGM B-Q

Electric Grippers | Magnetic Gripper

Dimensions

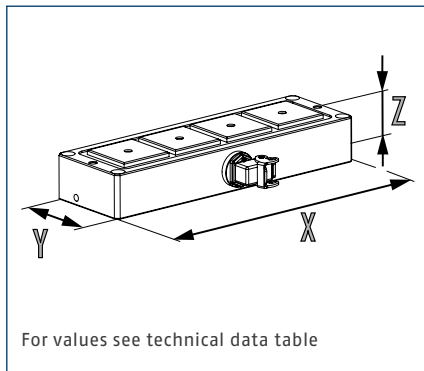


Technical data

Description		EGM-B-Q-50-1x2	EGM-B-Q-50-1x4	EGM-B-Q-50-2x2	EGM-B-Q-70-1x2	EGM-B-Q-70-1x4	EGM-B-Q-70-2x2
ID		0306370	0306372	0306371	0306380	0306382	0306381
Weight	[kg]	5.5	13	8.5	9	25	15
Number of poles		2	4	4	2	4	4
Magnetic surface	[cm ²]	50	100	100	98	196	196
Minimum workpiece thickness	[mm]	12	14	14	14	18	18
Payload for horizontal magnetic surface	[kg]	75	175	175	120	296	290
Payload for vertical magnetic surface	[kg]	30	70	70	48	118	115
Max. activations/minute	[1/min]	20	8	8	15	10	10
Module temperature increase in case of 5/15 activations/minute	[°C]	12/30	30/68	30/68	15/40	24/60	24/60
Protection class IP		54	54	54	54	54	54
Current consumption upon activation/deactivation	[A]	2.9	9.5	9.5	6.4	12.3	12.3
Dimensions X x Y x Z	[mm]	170 x 95 x 61	290 x 95 x 61	170 x 150 x 61	210 x 115 x 61	370 x 115 x 61	210 x 195 x 61
Magnet controller data							
Magnet controller type		ECG 02	ECG 02	ECG 02	ECG 02	ECG 02	ECG 02
Nominal voltage	[V AC]	400	400	400	400	400	400
Max. current	[A]	32	32	32	32	32	32
Max. number of modules per controller		25	7	7	9	4	5

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egm

Dimensions



Technical data

Description		EGM-B-L-30-1x2	EGM-B-L-30-1x4
ID		0306373	0306374
Weight	[kg]	6.5	11.5
Number of poles		2	4
Magnetic surface	[cm ²]	36	72
Minimum workpiece thickness	[mm]	8	8
Payload for horizontal magnetic surface	[kg]	60	110
Payload for vertical magnetic surface	[kg]	20	40
Max. activations/minute	[1/min]	15	20
Module temperature increase in case of 5/15 activations/minute	[°C]	15/35	12/32
Protection class IP		54	54
Current consumption upon activation/deactivation	[A]	3.1	6.5
Dimensions X x Y x Z	[mm]	190 x 75 x 61	330 x 75 x 61
Magnet controller data			
Magnet controller type		ECG 02	ECG 02
Nominal voltage	[V AC]	400	400
Max. current	[A]	32	32
Max. number of modules per controller		24	13

EGS

Electric Grippers | Gripper/Swivel Modules | Gripper/Swivel Module with Parallel Gripper

Easy. Fast. Compact. Gripper/Swivel Module EGS

Electric, 2-finger, parallel gripper/swivel module with smoothly running base jaws guidance on roller bearings

Field of Application

Gripping and moving of small to medium-sized workpieces with flexible force and high speed in clean environments, such as assembly, testing, laboratory and pharmaceutical industry.

Advantages – Your benefits

Control via digital I/O for easy commissioning and rapid integration into existing systems

Almost no wear parts for high machine uptime and low operating costs

Low space requirements as the rotary drive and gripper are merged in one compact module

Two to four stage adjustable gripping force for simple adaption to sensitive workpieces

Four stage adjustable rotational speed for high flexibility in cycle times

Very high maximum cycles per minute for highest productivity

Backlash-free, pre-loaded cross roller guide for precise gripping with nearly constant force for all permissible finger lengths

Standardized mounting bores for numerous combinations with other components from the modular system



Sizes
Quantity: 2



Weight
0.45 .. 1.2 kg



Gripping force
30 .. 140 N



Stroke per jaw
3 .. 6 mm



Torque
0.04 .. 0.115 Nm

Functional Description

The gripper/swivel module has two stationary brushless DC servomotors. The outer motor rotates the gripper. The inner motor drives the base jaw of the gripper. The jaw stroke is synchronized by a rack and pinion kinematics.



- | | |
|---|--|
| <p>① Base jaw
For the connection of workpiece-specific gripper fingers</p> <p>② Cross roller guidance
Precise gripping due to backlash-free base jaw guidance</p> <p>③ Sensor system
Inductive monitoring of swiveling and gripping movement</p> | <p>④ Drives
Brushless DC servomotors</p> <p>⑤ Control electronics
Integrated control and power electronics for decentralized actuation of the servomotors</p> <p>⑥ Patented gear coupling
Endless rotation without an electric feed-through</p> |
|---|--|

General Notes about the Series

Operating principle: Rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotors

Warranty: 24 months

Scope of delivery: Enclosed pack with centering sleeves, mount for proximity switch, assembly and operating manual with declaration of incorporation.

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing, opening and swiveling times: Are pure movement times of the module. PLC reaction times are not included and have to be considered when the cycle times are determined.



Application Example

Electrically driven Pick & Place unit with gripper/swivel module for simultaneous turning and shifting of electronic components.

- ① Pillar assembly system
- ② Electric linear module ELP
- ③ Electric gripper/swivel module EGS
- ④ Universal rotary module ERS

SCHUNK offers more ...

The following components make the product EGS even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Linear module



Pick & Place unit



Gripper for small components



Pillar assembly system



Connection cable



Inductive proximity switch



Finger blank

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Manually adjustable gripping force: With an integrated rotary switch, the gripping force can be adjusted in two stages for the EGS 25 – 100% and 50%, and in four stages for EGS 40 – 100%, 75%, 50%, and 25%.

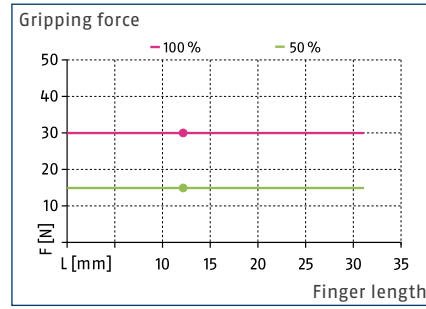
Manually adjustable rotational speed: With an integrated rotary switch, the rotational speed can be adjusted in four stages – 100%, 75%, 50%, and 25%.

Optional status monitoring via external sensor system: The status of the gripping and swiveling movements can be monitored by external sensors.

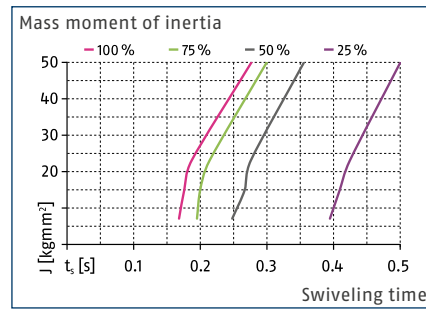
Connection cable KA: Connection cables with an angled or a straight female connector can be ordered in various lengths to connect the module with the power supply and higher-level control system.



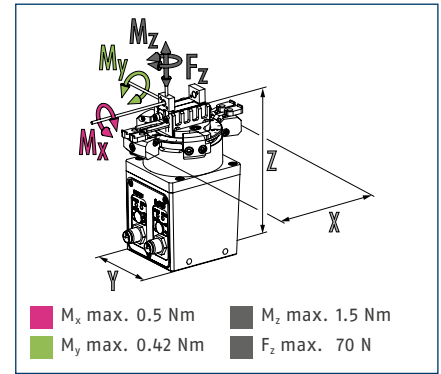
Gripping force



Swiveling time* 180°



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technische Daten

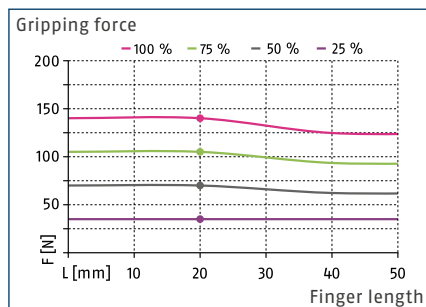
Description	EGS 25-N-N-B	
ID	0310820	
General operating data		
Stroke per jaw	[mm]	3
Min./max. gripping force	[N]	15/30
Nominal torque	[Nm]	0.04
Min./max. angle of rotation	[°]	30/270
Recommended workpiece weight	[kg]	0.15
Max. permissible finger length	[mm]	32
Max. permissible mass per finger	[kg]	0.02
Max. mass moment of inertia	[kgmm ²]	50
Repeat accuracy for gripping	[mm]	0.02
Repeat accuracy for swiveling	[°]	±0.5
Closing/opening time	[s]	0.05/0.05
Weight	[kg]	0.45
Min./max. ambient temperature	[°C]	5/55
Protection class IP	30	
Noise emission	[dB(A)]	<70
Dimensions X x Y x Z	[mm]	69.8 x 45 x 88.8
Electrical operating data		
Controller electronics	Integrated	
Nominal voltage	[V]	24
Nominal current	[A]	0.8
Max. current	[A]	1.2
Communication interface	Digital inputs	

* The diagram is valid for applications with vertical rotary axis or for absolutely centric loads with horizontal rotary axis. We will gladly support you in designing further applications.

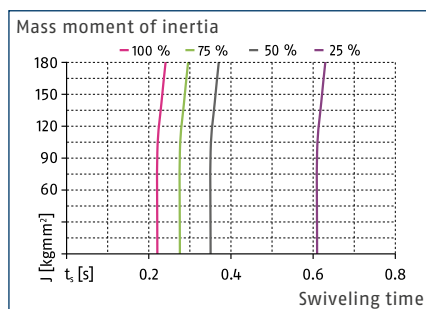
More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/egs



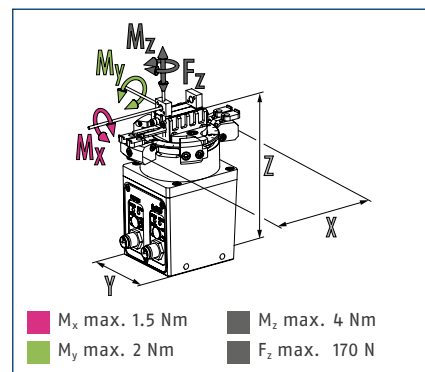
Gripping force



Swiveling time* 180°



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technische Daten

Description		EGS 40-N-N-B
ID		1321043
General operating data		
Stroke per jaw	[mm]	6
Min./max. gripping force	[N]	35/140
Nominal torque	[Nm]	0.115
Min./max. angle of rotation	[°]	30/270
Recommended workpiece weight	[kg]	0.55
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.08
Max. mass moment of inertia	[kgmm ²]	180
Repeat accuracy for gripping	[mm]	0.02
Repeat accuracy for swiveling	[°]	±0.5
Closing/opening time	[s]	0.16/0.16
Weight	[kg]	1.2
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Noise emission	[dB(A)]	<70
Dimensions X x Y x Z	[mm]	101.4 x 64 x 127.3
Electrical operating data		
Controller electronics		Integrated
Nominal voltage	[V]	24
Nominal current	[A]	1
Max. current	[A]	2
Communication interface		Digital inputs

* The diagram is valid for applications with vertical rotary axis or for absolutely centric loads with horizontal rotary axis. We will gladly support you in designing further applications.

Co-act EGP-C

Co-act Grippers | Collaborating Gripper for Small Components

Collaborative. Powerful. Certified.

Co-act EGP-C Gripper

Electric 2-finger parallel gripper certified for collaborative operation. Control via 24 V and digital I/O

Field of Application

Gripping and moving small and medium-sized workpieces with flexible force in collaborative operation in the areas of assembly, electronics and machine tool loading.

Advantages – Your benefits

Certified gripping unit saves effort for safety assessment of the application

Functional safety ensured due to inherent safety with current limitation

Pre-assembled gripping unit with robot interface for an easy and fast integration

Plug & Work on cobots from KUKA, FANUC and Universal Robots

Integrated status display to the visibility of the application state at the operator's eye level

Service flaps in the collision protection cover fitted to adjust the gripping force and the sensor system

Control via digital I/O for easy commissioning and rapid integration into existing systems

Brushless DC servomotor for almost wear-free use and a long service life

Attachment fingers available with three different inserts



Sizes
Quantity: 2



Weight
0.36 .. 0.86 kg



Gripping force
40 .. 140 N



Stroke per jaw
3 .. 6 mm



Workpiece weight
0.2 .. 0.7 kg

Functional Description

The Co-act EGP-C gripper is electrically driven and has an integrated current limitation and collision protective cover. The current limitation ensures that the gripping force does not exceed a defined value. The collision

protection cover serves for minimizing the risk of injury during the use in collaborative operations.



- ① **Collision protection cover**
- ② **Gripper for small components EGP**
- ③ **Flange**
With integrated electronics and cabling
- ④ **LED strip light**
For status display
- ⑤ **Integrated sensor system**
To monitor the jaw position
- ⑥ **Service flap sensor system**
For adjusting the sensor system
- ⑦ **Service flap gripping force**
For adjusting the gripping force



Detailed Functional Description

Observation of the gripping force in collaborative operation



The “gripping force” specification in the catalog refers to the arithmetic sum of the forces acting on each jaw individually at distance P (see illustration). For evaluation of the biomechanical limit values in accordance with ISO/TS 15066, only the gripping force acting on each gripper jaw must be used. Furthermore, the information in the operating manual is referred to.

- 1 Co-act EGP-C gripper
- 2 Gripper jaws (customized)
- 3 Gripping force applied to each gripper jaw
- 4 Workpiece

Simple assembly of the Co-act EGP-C



The Co-act EGP-C gripper has been developed for simple assembly on collaborative robots (cobots). During assembly, the enclosed adapter flange has to be fastened with the supplied fastening material to the flange of the cobot. Subsequently, the gripper can be fastened with the enclosed hexagon socket wrench to the adapter flange. Finally, the electric connection (not version -KETI) must be established.

- 1 Co-act EGP-C gripper
- 2 Hexagon socket wrench
- 3 Adapter flange
- 4 Mounting material
- 5 Flange of the cobot

Simple Plug & Work on several cobots



The standard Co-act EGP-C gripper is available in versions for the collaborative robots (cobots) from the manufacturers KUKA (LBR iiwa), Universal Robots, and FANUC (CR-7iA). The gripper has been pre-configured in a way that it can be mounted directly electrically and mechanically onto the cobots. Depending on the manufacturer, different versions are also available depending on the flange version.

- 1 Co-act-EGP-C gripper to KUKA LBR iiwa
- 2 Co-act EGP-C gripper to FANUC CR-7iA
- 3 Co-act EGP-C grippers to UR

Co-act EGP-C for Universal Robots



For the robots of the manufacturer Universal Robots, two versions of the Co-act EGP-C gripper are available. The -URID version uses the tool interface of the robot for feed-through of the signals to the robot controller. However, this version does not have a light band. The light band including the free actuation cannot be used for the version with external cable routing.

- 1 Co-act EGP-C to UR using the tool interface (version-URID)
- 2 Co-act EGP-C to UR with external cable routing (version-UREK)

Ordering Example Co-act EGP-C

	Co-act	EGP	C	40	N	N	KTOE
Co-act = Collaborative actuator							
Electric small parts gripper EGP							
C = DGUV-certified unit							
Size							
25							
40							
N = Not used							
N = Not used							
Robot and flange interface							
FCR7 = FANUC CR-7 iA connection via EE interface							
KETI = KUKA LBR iiwa Media flange inside, electrically							
KTOE = KUKA LBR iiwa Media flange touch, electrically							
URID = Universal Robots/with feed-through (electr. tool interface)							
UREK = Universal Robots/external cabling							

General Notes about the Series

Operating principle: Rack and pinion principle

Housing material: Polyamide with glass fiber additive

Base jaw material: Steel

Actuation: Servo-electric, via brushless DC servomotor

Warranty: See assembly and operating manual

Scope of delivery: Accessory pack with adapter flange, mounting material and hexagon socket wrench, assembly and operating manual with declaration of conformity and incorporation, safety information

Gripping force: Is the arithmetic total of the gripping force applied to each gripper jaw at distance P (see illustration). For more information, see the detailed functional description.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights. For more information, see assembly and operating manual.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. PLC reaction times are not included in the above-mentioned times and must be taken into consideration when determining cycle times.



Application Example

Collaborating gripping unit to support the worker when feeding in and positioning workpieces.

- 1 Collaborating gripper for small components Co-act EGP-C

SCHUNK offers more ...

The following components make the product Co-act EGP-C even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Manual change system



Attachment fingers

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Light band for variants for Universal Robots and FANUC: Actuation of the light band is possible for the version –UREK with external cabling for Universal Robots. For the version –URID, the digital signals for actuation are not available. For FANUC (version –FCR7), use of the light band is possible for direct connection of the gripper to the robot control system. For the connection via the EE interface, the actuation of the light band is not provided.

Manually adjustable gripping force: With an integrated rotary switch, the gripping force can be adjusted for the Co-act EGP-C 40 in four stages from 100%, 75%, 50%, and 25%. To adjust the gripping force, the service flap must be opened.

Integrated sensor system: The gripper has two integrated inductive proximity switches. Hereby, the monitoring of the "Open" and "Closed" position of the gripper is monitored as standard. A sensor can alternatively be used depending on the area for workpiece monitoring. For this, the sensor must be manually adjusted. For this, a service flap must be opened for the size 40.

SAC – safety notes: In the enclosed assembly and operating manual, extensive safety notes on the use of the gripper are also included. The instructions also provide information and recommendations on the overall application.

Weight: The weight comprises the entire Co-act gripper including cable and connecting plug.

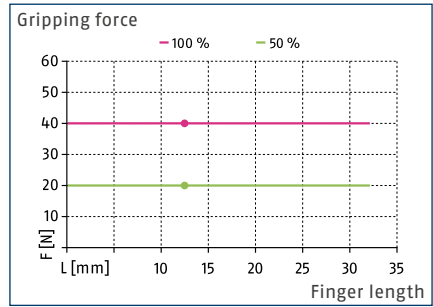
Co-act team: The Co-act team from SCHUNK is available to answer further questions at all times with experts on the topic of human-robot collaboration. You can reach the team at +49-7133-103-3444 or e-mail co-act-team@de.schunk.com.

Co-act EGP-C 25

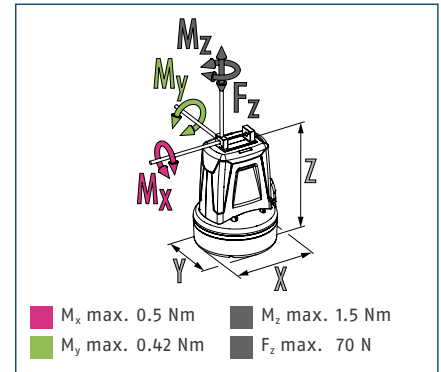
Co-act Grippers | Collaborating Gripper for Small Components



Gripping force O.D. gripping



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data – Co-act EGP-C for FANUC

Description		Co-act EGP-C 25-N-N-FCR7
ID		1326453
General operating data		
Compatible robot		FANUC CR-7 iA
Robot flange		Standard flange
LED strip light		Integrated
Displayable colors		Green, yellow, red
Integrated sensors		Yes, it is measured at two points
Dimensions X x Y x Z	[mm]	93.8 x 90.2 x 105
Mechanical operating data		
Stroke per jaw	[mm]	3
Min./max. gripping force	[N]	20/40
Min./max. force per jaw	[N]	10/20
Recommended workpiece weight	[kg]	0.2
Max. permissible finger length	[mm]	32
Max. permissible mass per finger	[kg]	0.02
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.09/0.09
Weight	[kg]	0.63
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Cable connector/cable end		Open wire strands
Cable length	[mm]	4000
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	0.14
Max. current	[A]	1
Controller electronics		Integrated
Communication interface		Digital I/O
Number of digital I/O		4/2

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/co-act-egp-c

Technical data – Co-act EGP-C for Universal Robots

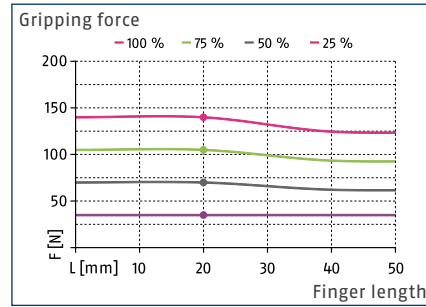
Description		Co-act EGP-C 25-N-N-URID	Co-act EGP-C 25-N-N-UREK
ID		1326452	1327881
General operating data			
Compatible robot		UR 3/5/10	UR 3/5/10
Robot flange		Standard flange	Standard flange
LED strip light			Integrated
Displayable colors			Green, yellow, red
Integrated sensors		Yes, it is measured at two points	Yes, it is measured at two points
Dimensions X x Y x Z	[mm]	93.8 x 90.2 x 105	93.8 x 90.2 x 105
Mechanical operating data			
Stroke per jaw	[mm]	3	3
Min./max. gripping force	[N]	20/40	20/40
Min./max. force per jaw	[N]	10/20	10/20
Recommended workpiece weight	[kg]	0.2	0.2
Max. permissible finger length	[mm]	32	32
Max. permissible mass per finger	[kg]	0.02	0.02
Repeat accuracy	[mm]	0.02	0.02
Closing/opening time	[s]	0.09/0.09	0.09/0.09
Weight	[kg]	0.36	0.63
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		30	30
Cable connector/cable end		M8	Open wire strands
Cable length	[mm]	50	4000
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	0.14	0.14
Max. current	[A]	1	1
Controller electronics		Integrated	Integrated
Communication interface		Digital I/O	Digital I/O
Number of digital I/O		2/2	4/2

Co-act EGP-C 40

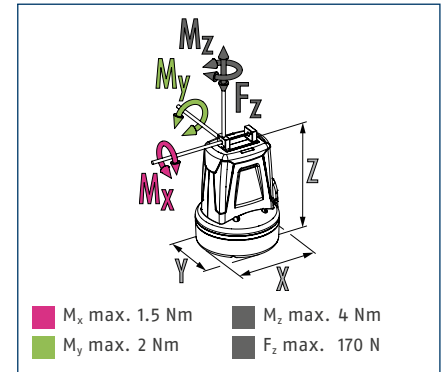
Co-act Grippers | Collaborating Gripper for Small Components



Gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data – Co-act EGP-C for KUKA

Description		Co-act EGP-C 40-N-N-KETI	Co-act EGP-C 40-N-N-KTOE
ID		1326454	1321170
General operating data			
Compatible robot		KUKA LBR iiwa 7/14	KUKA LBR iiwa 7/14
Robot flange		Media flange electric inside	Media flange touch electric
LED strip light		Integrated	Integrated
Displayable colors		Green, yellow, red	Green, yellow, red
Integrated sensors		Yes, it is measured at two points	Yes, it is measured at two points
Dimensions X x Y x Z	[mm]	93.8 x 90.2 x 135	93.8 x 90.2 x 123
Mechanical operating data			
Stroke per jaw	[mm]	6	6
Min./max. gripping force	[N]	35/140	35/140
Min./max. force per jaw	[N]	17.5/70	17.5/70
Recommended workpiece weight	[kg]	0.7	0.7
Max. permissible finger length	[mm]	50	50
Max. permissible mass per finger	[kg]	0.08	0.08
Repeat accuracy	[mm]	0.02	0.02
Closing/opening time	[s]	0.2/0.2	0.2/0.2
Weight	[kg]	0.6	0.62
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		30	30
Cable connector/cable end			M12
Cable length	[mm]		70
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	0.2	0.2
Max. current	[A]	2	2
Controller electronics		Integrated	Integrated
Communication interface		Digital I/O	Digital I/O
Number of digital I/O		4/2	4/2

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/co-act-egp-c

Technical data – Co-act EGP-C for FANUC

Description		Co-act EGP-C 40-N-N-FCR7
ID		1326456
General operating data		
Compatible robot		FANUC CR-7 iA
Robot flange		Standard flange
LED strip light		Integrated
Displayable colors		Green, yellow, red
Integrated sensors		Yes, it is measured at two points
Dimensions X x Y x Z	[mm]	93.8 x 90.2 x 120.5
Mechanical operating data		
Stroke per jaw	[mm]	6
Min./max. gripping force	[N]	35/140
Min./max. force per jaw	[N]	17.5/70
Recommended workpiece weight	[kg]	0.7
Max. permissible finger length	[mm]	50
Max. permissible mass per finger	[kg]	0.08
Repeat accuracy	[mm]	0.02
Closing/opening time	[s]	0.2/0.2
Weight	[kg]	0.66
Min./max. ambient temperature	[°C]	5/55
Protection class IP		30
Cable connector/cable end		Open wire strands
Cable length	[mm]	1000
Electrical operating data		
Nominal voltage	[V DC]	24
Nominal current	[A]	0.2
Max. current	[A]	2
Controller electronics		Integrated
Communication interface		Digital I/O
Number of digital I/O		4/2

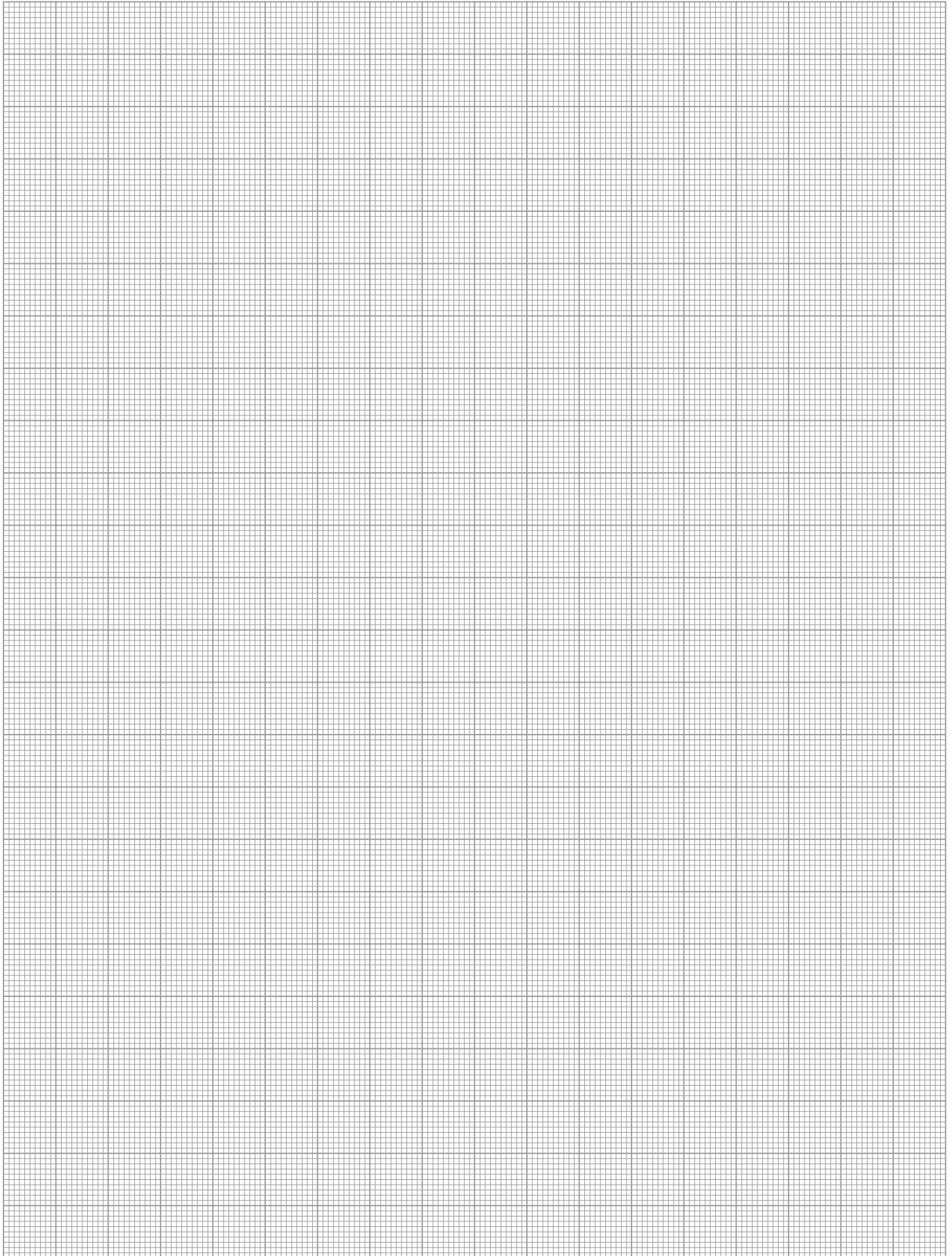
Co-act EGP-C 40

Co-act Grippers | Collaborating Gripper for Small Components

Technical data – Co-act EGP-C for Universal Robots

Description		Co-act EGP-C 40-N-N-URID	Co-act EGP-C 40-N-N-UREK
ID		1326455	1327883
General operating data			
Compatible robot		UR 3/5/10	UR 3/5/10
Robot flange		Standard flange	Standard flange
LED strip light			Integrated
Displayable colors			Green, yellow, red
Integrated sensors		Yes, it is measured at two points	Yes, it is measured at two points
Dimensions X x Y x Z	[mm]	93.8 x 90.2 x 123	93.8 x 90.2 x 123
Mechanical operating data			
Stroke per jaw	[mm]	6	6
Min./max. gripping force	[N]	35/140	35/140
Min./max. force per jaw	[N]	17.5/70	17.5/70
Recommended workpiece weight	[kg]	0.7	0.7
Max. permissible finger length	[mm]	50	50
Max. permissible mass per finger	[kg]	0.08	0.08
Repeat accuracy	[mm]	0.02	0.02
Closing/opening time	[s]	0.2/0.2	0.2/0.2
Weight	[kg]	0.59	0.86
Min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		30	30
Cable connector/cable end		M8	Open wire strands
Cable length	[mm]	50	4000
Electrical operating data			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	0.2	0.2
Max. current	[A]	0.6	2
Controller electronics		Integrated	Integrated
Communication interface		Digital I/O	Digital I/O
Number of digital I/O		2/2	4/2

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/co-act-egp-c



End-of-Arm Modular System

End-of-Arm Modular Systems | End-of-Arm Modular System for Universal Robots

Modular. Flexible. Easy.

End-of-Arm Modular System for Universal Robots

The modular gripping system consists of electrically and pneumatically controlled grippers, quick-change modules, and force/torque sensors, that are specifically adapted to robot arms from Universal Robots

Field of Application

The gripper should be used in a clean environment, particularly in automated assembly.

Advantages – Your benefits

Comprehensive modular system consisting of grippers, change system and force/torque sensor for fast and easy entry into automation

Pre-assembled gripping unit with robot interface therefore no mounting kits or external valves required

Plug & Work with the interfaces to match Universal Robots

UR plug-in installation modules included in the scope of delivery for fast and easy commissioning

Up to 36 combination possibilities cover all automation applications



Functional Description

The components of the modular system are prepared for mechanic and electric direct connection to the Universal Robots sizes 3, 5, and 10. The pneumatic gripping units additionally include integrated micro valves, meaning no external valves are required.



① **FT-AXIA 80**
6-axis force/torque sensor

② **SHS 50**
Manual change system

③ **Co-act EGP-C 40**
Collaborating gripper for small components

④ **EGP 40**
Electric gripper for small components

⑤ **KGG 100-80**
Pneumatic long-stroke gripper

⑥ **PSH 22-1**
Pneumatic long-stroke gripper

⑦ **JGP 80-1**
Pneumatic universal gripper

⑧ **JGP 100-1**
Pneumatic universal gripper

⑨ **PGN-plus-P 80-1**
Pneumatic universal gripper

⑩ **PGN-plus-P 100-1**
Pneumatic universal gripper

⑪ **PZN-plus 64**
Pneumatic centric gripper

End-of-Arm Modular System

End-of-Arm Modular Systems | End-of-Arm Modular System for Universal Robots

General Notes about the Series

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

Finger length: The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Actuation: Control via digital I/O

Scope of delivery: USB stick with plug-in installation module are included in the scope of delivery.

Assembly and operating manual with declaration of incorporation.

Pre-assembled units

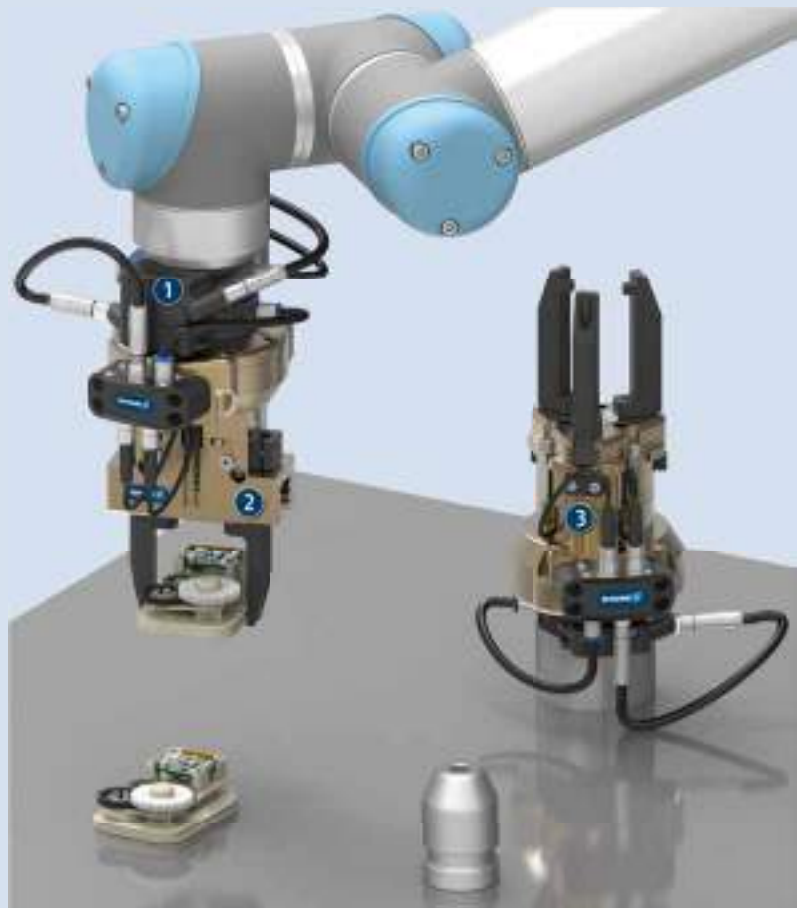
Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application Example

End-of-Arm gripping units for Universal Robots for flexible handling of various workpieces. By combining change system and gripping unit, the gripper can be exchanged to suit the workpiece.

- 1 Manual change system SHS
- 2 2-finger parallel gripper PGN-plus-P
- 3 3-finger centric gripper PZN-plus



SCHUNK offers more ...

The following components make the product End-of-Arm modular system for Universal Robots even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Universal intermediate jaw



Jaw quick-change system



Finger blank



Finger blank with jaw quick-change system

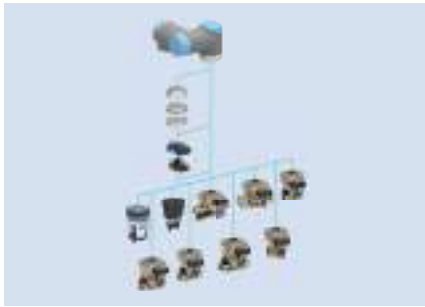


Attachment fingers

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

End-of-Arm Modular System

End-of-Arm Modular Systems | End-of-Arm Modular System for Universal Robots



Technical data

Description		Co-act EGP-C 40-N-N-URID	EOA-UR3510-EGP 40	EOA-UR3510-KGG 100-80	EOA-UR3510-PSH 22-1	EOA-UR3510-JGP 80-1	EOA-UR3510-JGP 100-1
ID		1326455	1320370	1327748	1327747	1348129	1348128
Function		Gripping	Gripping	Gripping	Gripping	Gripping	Gripping
Robot compatibility		UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10
Standard components		Co-act EGP-C 40-N-N-URID	EGP 40	KGG 100-80	PSH 22-1	JGP 80-1	JGP 100-1
Stroke per jaw	[mm]	6	6	40	28	8	10
Max. gripping force	[N]	140	140	175	320	415	660
Weight	[kg]	0.6	0.7	1.2	1.7	1.33	1.72
Recommended workpiece weight	[kg]	0.7	0.7	0.9	1.6	2.1	3.3

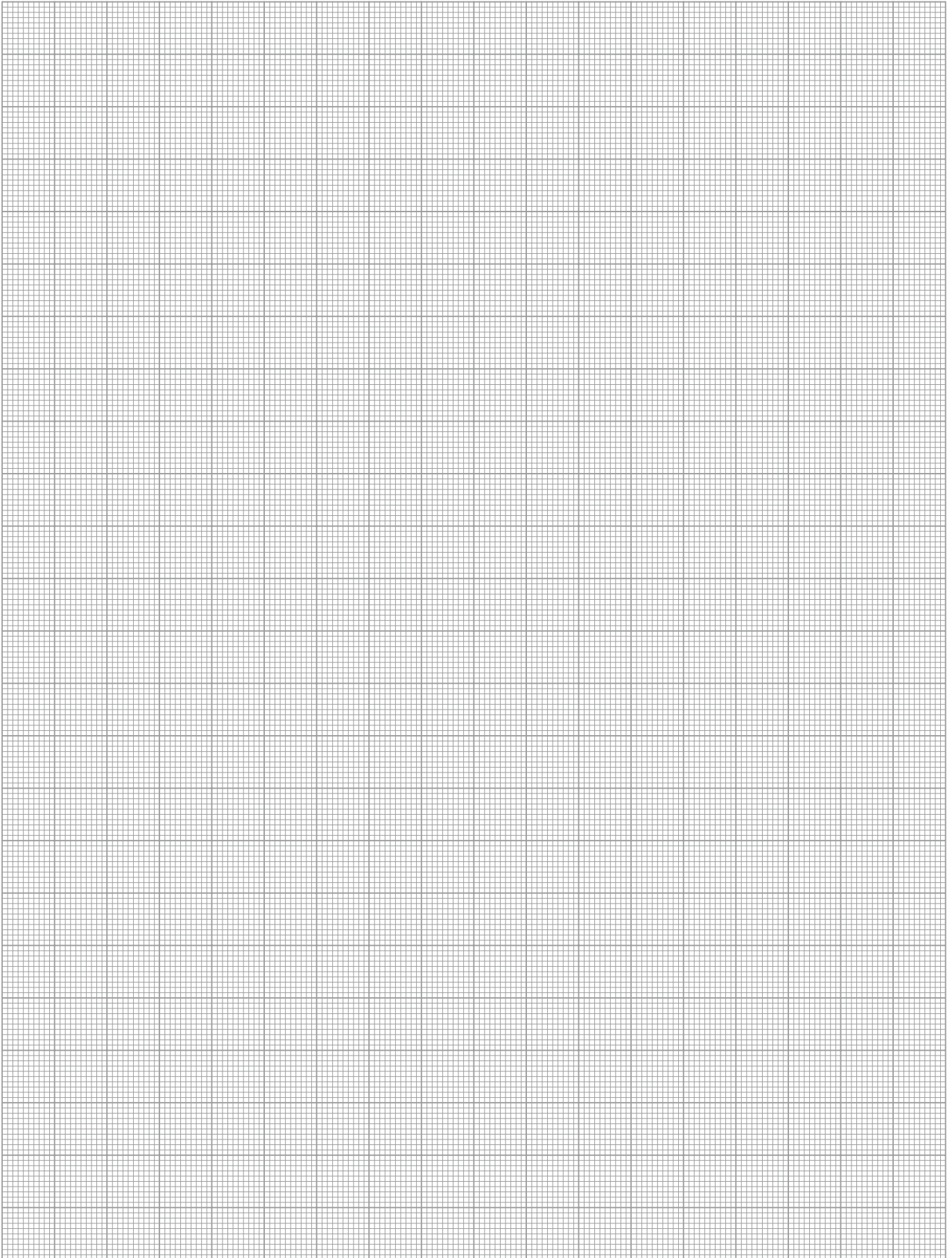
Description		EOA-UR3510-PGN- plus-P 80-1	EOA-UR3510-PGN- plus-P 100-1	EOA-UR3510-PZN- plus 64-1	EOA-UR3510-FTN- AXIA 80	EOA- UR3510-SHK-050	EOA- UR3510-SHA-050
ID		1327751	1327750	1327749	1357169	1334788	1334789
Function		Gripping	Gripping	Gripping	Measuring	Changing	Changing
Robot compatibility		UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10	UR 3/5/10
Standard components		PGN-plus-P 80-1	PGN-plus-P 100-1	PZN-plus 64-1	FT-AXIA 80	SHS 50	SHS 50
Stroke per jaw	[mm]	8	10	6			
Max. gripping force	[N]	550	870	580			
Weight	[kg]	1.38	1.8	1.22	0.51	0.35	0.14
Recommended workpiece weight	[kg]	2.75	4.35	2.9		11	11
Max. dynamic bending moment M_x / M_y	[Nm]					25	25
Max. dynamic bending moment M_z	[Nm]					45	45
Min. measuring range F_x , F_y	[N]				200		
Max. measuring range F_x , F_y	[N]				500		
Min. measuring range F_z	[N]				360		
Max. measuring range F_z	[N]				900		
Min. moment measuring range	[Nm]				8		
Max. moment measuring range	[Nm]				20		

① You can find more technical values in the catalog chapter for the respective standard component.

If you combine a Co-act EGP-C 40 with a force/torque sensor, a cable extension, ID 1339964 is required.


If you combine an EGP 40 with a force/torque sensor, the adapter plates ID 1355667 and a cable extension ID 1339964 are required. For a combination of an EGP 40 with a change-system, an adapter plate IF 1355667 is required.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/eoa-ur



Special Grippers

Product Quickfinder

	Page	Image	Stroke per finger [mm]			Gripping force [N]			
			0 – 10	10 – 100	100 – 1000	0 – 100	100 – 1000	1000 – 10000	10000 – 100000
Characterization									
Hole gripper LOG	546		0.15 – 5.8					27 – 2516	

	Page	Image	Description	Fields of application
Characterization				
O-ring gripper ORG • 6-finger gripper for process-reliable internal and external assembly of O-rings	552		O-ring gripper	For automated assembly of O-rings
Gripper with shank interface GSW-B	558		Universal gripper with shank interface	For fully automated loading and unloading of machining centers
Gripper with shank interface GSW-B-AGE	566		Universal gripper with shank interface and compensation unit	For fully automated loading and unloading of clamping devices such as vises
Vacuum gripper with shank interface GSW-V	572		Vacuum gripper with shank interface	For fully automated loading and unloading of flat workpieces
Magnetic Gripper with shank interface GSW-M	580		Magnetic gripper with shank interface	For fully automated loading and unloading of ferromagnetic workpiece families
Cleaning device with shank interface RGG	586		Cleaning device with shank interface	For cleaning for instance clamping devices and automated cleaning of machine tools.

Ambient conditions						Variant variety	Variety of sensor systems
Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom		
●	●	●			○	+++	

Ambient conditions						Variant variety	Variety of sensor systems
Normal, clean environment	Contaminated environment I, coarse dust	Contaminated environment II, fine dust and liquids	Contaminated environment III, aggressive liquids	High temperature range >90 °C	Cleanroom		
●					○	+	+
●	●	○	○	●	○	++	+
●	○	○	○	●	○	++	+
●	○	○				+	
●	○	○				+	
●	●	●	●	●		+	

● = Very highly suitable ○ = Highly suitable ○ = Suitable in customized version

+ = Medium selection ++ = Wide selection +++ = Very wide selection



LOG

Special Grippers | Hole Gripper

Cost-efficient. Smoothly running. Reliable.

Hole Gripper LOG

Light gripper made of very resistant polyamide with closed diaphragm system

Field of Application

Particularly suitable for highly dynamic applications with a low workpiece weight, for handling of small components and plastic parts, as well as for sand core handling.



Advantages – Your benefits

Low weight allows high dynamics in the application

Closed membrane system and internal stop protect the expansion membrane against damage

Short delivery time for customized measurements

Long service life enables long-lasting economical use

Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems



Sizes
Quantity: 5



Weight
0.008 .. 0.44 kg



Clamping diameter
20 .. 99 mm



Workpiece weight
0.55 .. 12.83 kg



Functional Description

The membrane expands when pressure is applied, creating a synchronized movement of the gripping surfaces.



① Air connection thread

② Mounting threads

③ Gripping surface

④ O-ring seal

For hose-free air connection

⑤ Membrane

⑥ Internal stop/overload protection

General Notes about the Series

Operating principle: Membrane

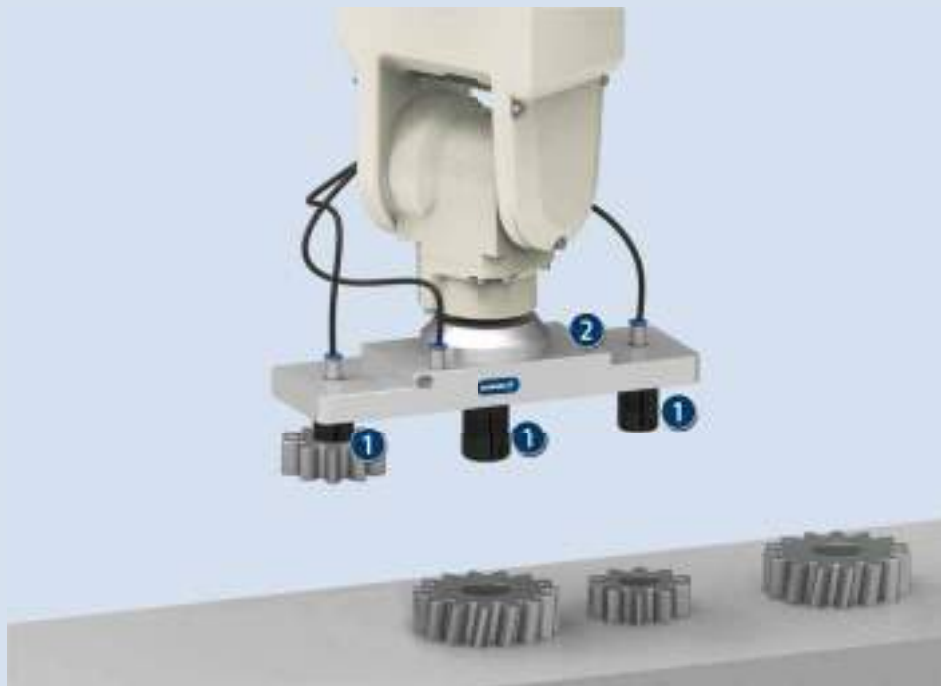
Housing material: PA 12

Base jaw material: PA 12

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Scope of delivery: Assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force maintenance: Not possible



Application Example

Handling of gears with different diameters.

❶ Hole gripper LOG

❷ Customized adapter plate

SCHUNK offers more ...

The following components make the product LOG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Universal gripper



Miniature swivel unit



Linear module



Compensation unit



Pressure maintenance valve



Manual change system

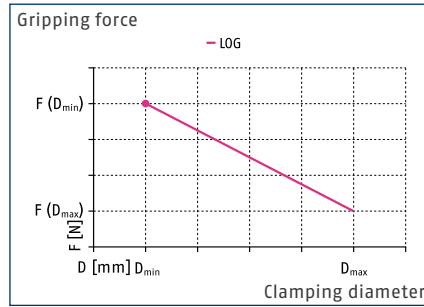
① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

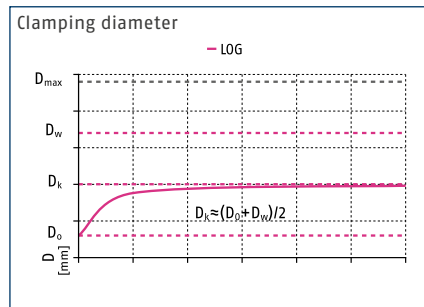
Additional sizes and customized designs are available upon request



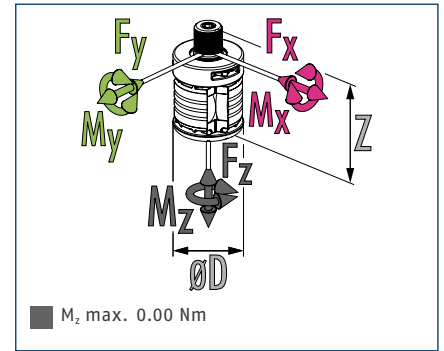
Gripping force I.D. gripping



Creep properties



Dimensions and maximum loads



① The indicated moments and forces are static values and should not appear simultaneously.

Technical data

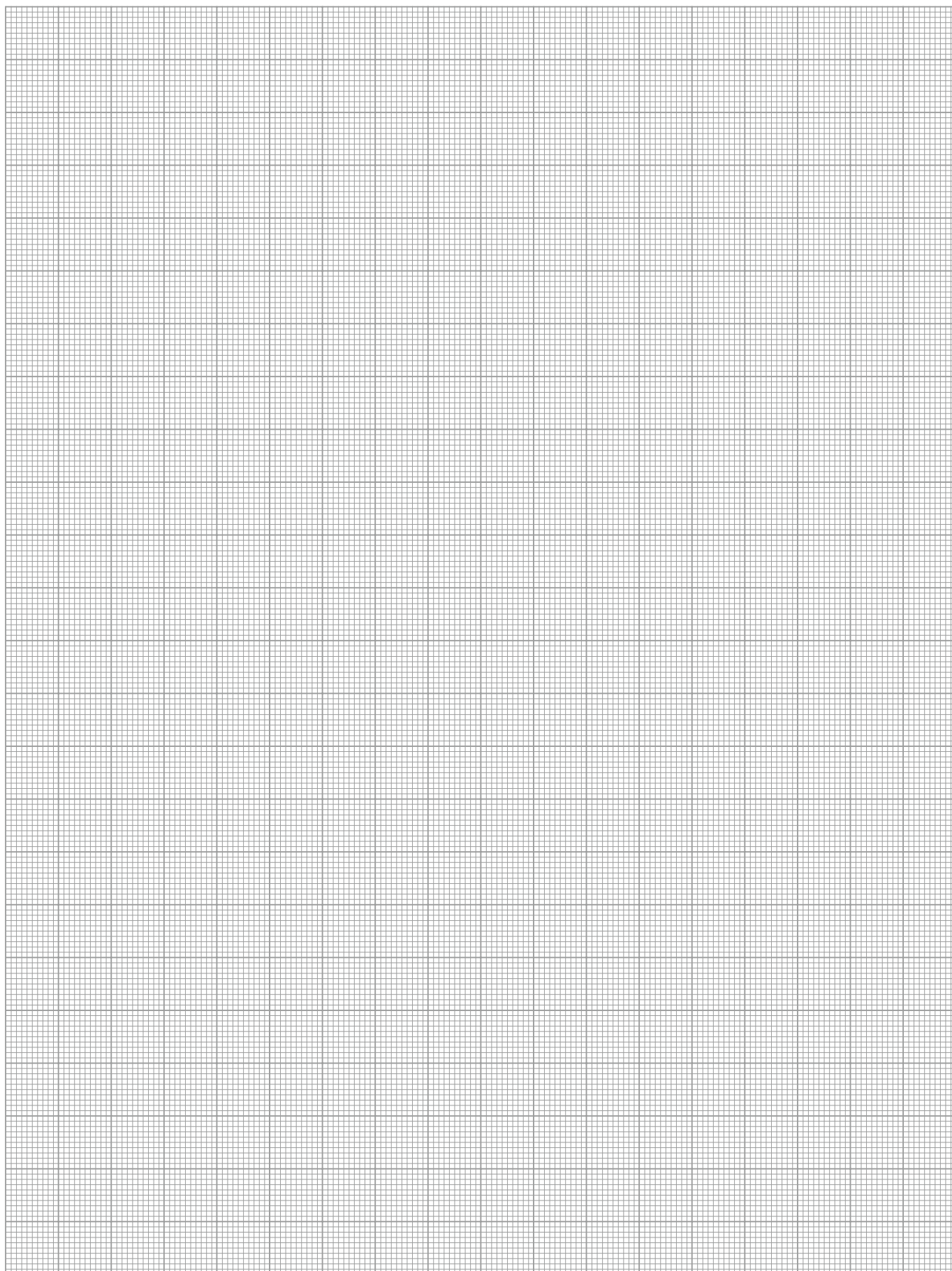
Description		LOG 20.0-M14x1.5-M5	LOG 40.0-M16x1-M5	LOG 60.0-M16x1-M5	LOG 80.0-M20x1,5-G1/8	LOG 99.0-M20x1.5-G1/8
ID		0398920	0398940	0398960	0398980	0398999
Mounting thread A		M14 x 1.5	M16 x 1	M16 x 1	M20 x 1.5	M20 x 1.5
Air connection thread B		M5	M5	M5	G1/8"	G1/8"
Min. workpiece diameter	[mm]	20	40	60	80	99
Max. workpiece diameter	[mm]	20.3	44.37	66.13	88.7	110.7
Opening force for $\varnothing D_{min}$	[N]	107.2	241.4	596.7	972.7	2516.7
Opening force for $\varnothing D_{max}$	[N]	27.3	66.7	190.5	433.3	1166.7
Weight	[kg]	0.008	0.034	0.108	0.238	0.44
Recommended workpiece weight	[kg]	0.55	1.23	3.04	4.96	12.83
Fluid consumption double stroke	[cm ³]	2.35	8.21	28.82	65.34	122.8
Max. operating pressure	[bar]	6	6	6	6	6
Nominal operating pressure	[bar]	6	6	6	6	6
Closing/opening time	[s]	0.05/0.05	0.08/0.08	0.14/0.14	0.22/0.22	0.44/0.44
Min./max. ambient temperature	[°C]	-40/80	-40/80	-40/80	-40/80	-40/80
Housing material		PA 12	PA 12	PA 12	PA 12	PA 12
Dimensions $\varnothing D \pm 0.2 \times Z$	[mm]	19.8 x 46	39.6 x 64	59.4 x 87.5	79.2 x 111	98.01 x 123.33
Moments M_x max./ M_y max.	[Nm]	1.50/1.50	2.00/2.00	2.00/2.00	2.50/2.50	2.50/2.50
Forces F_x max./ F_y max./ F_z max.	[N]	150.00/150.00/150.00	200.00/200.00/200.00	200.00/200.00/200.00	250.00/250.00/250.00	250.00/250.00/250.00

① The gripping force can be set directly by the operating pressure. At a lower pressure than the nominal operating pressure, the full stroke cannot be achieved.

The graduation of the individual sizes varies about 1 mm. Please consider that the size of the mounting thread A depends on the individual gripper size. (LOG 20–25: M14 x 1.5; LOG 26–63: M16 x 1; LOG 64–99: M20 x 1.5).

Information on further gripper sizes are available online.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/log



ORG

Special Grippers | O-ring Gripper

Reliable. Flexible. Productive.

O-ring Assembly Gripper ORG

A gripper, attached with appropriate attachment fingers allows assembly of O-rings, including square rings and others both on shafts (O.D. assembly) and in bores (I.D. assembly)

Field of Application

The gripper should be used in a clean environment, particularly in automated assembly.

Advantages – Your benefits

O.D. and I.D. assembly with one gripper ensures flexibility and cost-saving

Process reliable due to new mounting principle for high availability

Standard assembly finger for O.D. assembly for conventional ring sizes for fast commissioning



Sizes
Quantity: 1



Weight
1.35 kg



Repeat accuracy
0.02 mm

Functional Description

O.D. assembly

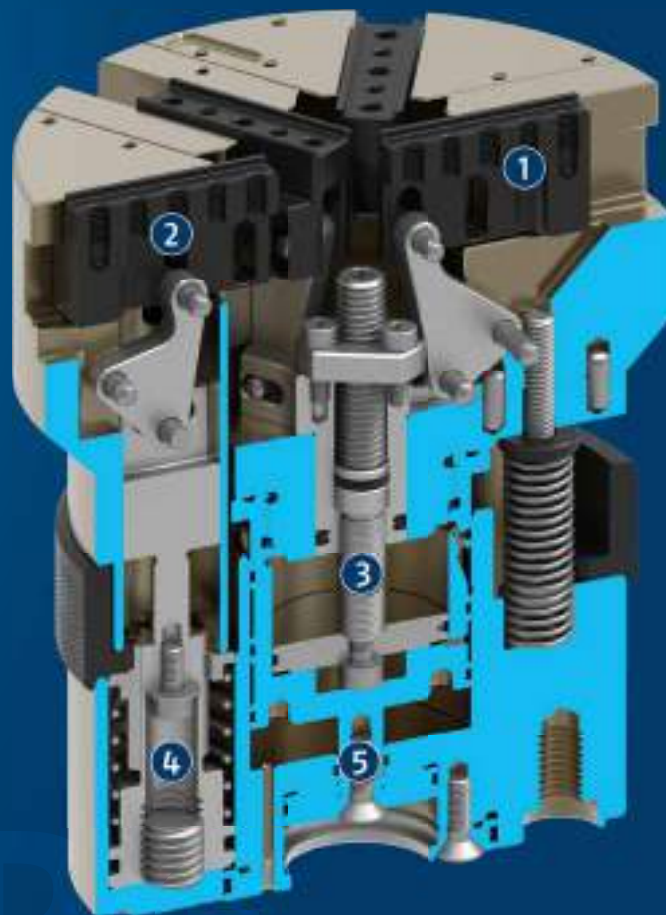
The O-ring is expanded by all six fingers, then the gripper is moved to the assembly groove on the shaft. First the three fingers of triple jaws A are retracted with the linear motion.

The O-ring is fit through the triangle shape, which adjusts to the remaining hold of the three fingers of triple jaws B, already partially in the groove. The entire gripper is now retracted. The O-ring is now forced completely into its assembly groove.

I.D. assembly

The O-ring is forced into a cloverleaf shape by the segment jaw of triple B and the finger of triple A. The gripper is moved with its fingers in the assembly bore. The segment jaws now press the O-ring onto a majority of the groove's circumference.

The fingers are retracted and the O-ring remains settles further in the groove. The fingers are now inside the O-ring and the segment jaws press the O-ring, forcing it into its groove.



- ① **Triple jaw A**
Double-acting
- ② **Triple jaw B**
One-way acting
- ③ **Drive**
For triple jaws A
- ④ **Drive**
For triple jaws B
- ⑤ **Drive**
For linear motion



General Notes about the Series

Operating principle: Two independent triple-finger combinations deform the O-ring in order to then install it.

Housing material: Aluminum

Base jaw material: Steel

Actuation: Pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering sleeves, assembly instructions (operating manual with declaration of incorporation is available online)

Gripping force: Is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration)

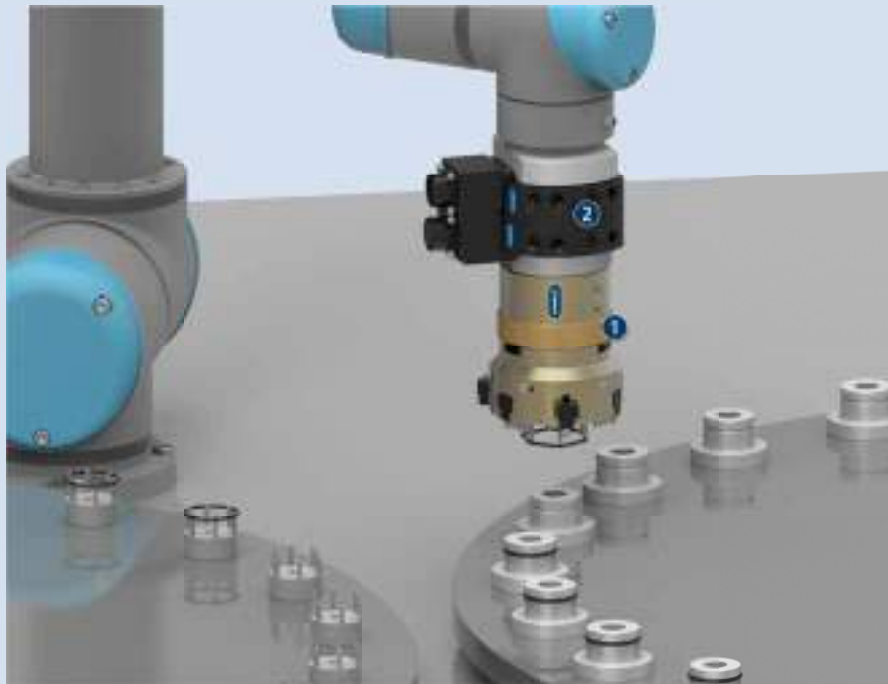
Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Workpiece weight: Is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: Are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.



Application Example

Gripping unit for assembling O-rings.

❶ O-ring gripper ORG

❷ Quick-change system SWS

SCHUNK offers more ...

The following components make the product ORG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Assembly fingers



Inductive proximity switch

① Further information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com). Please contact us: SCHUNK technical hotline +49-7133-103-2696

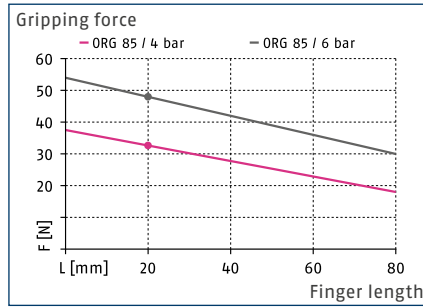
Options and special Information

For standard O-ring sizes SCHUNK offers standard assembly fingers for external assembly. Assembly fingers for internal assembly are always O-ring specific. On request, they can be purchased as customized components from SCHUNK or manufactured by customers themselves. Drawings and design instructions can be found in the extensive operating manual that is available online as a PDF document.

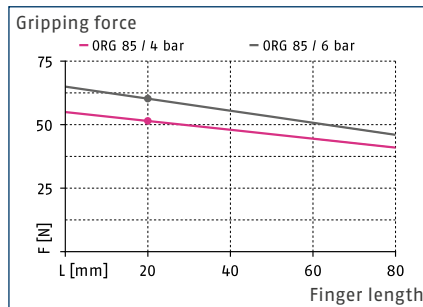
Max. O-ring cord thickness: The max. O-ring cord thickness to be installed is a diameter of 4 mm.



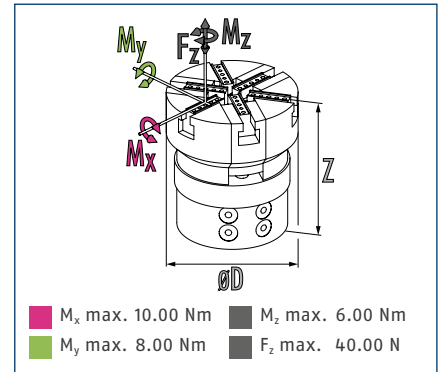
Triple jaws A outside gripping force



Triple jaws A inside gripping force



Dimensions and maximum loads



① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

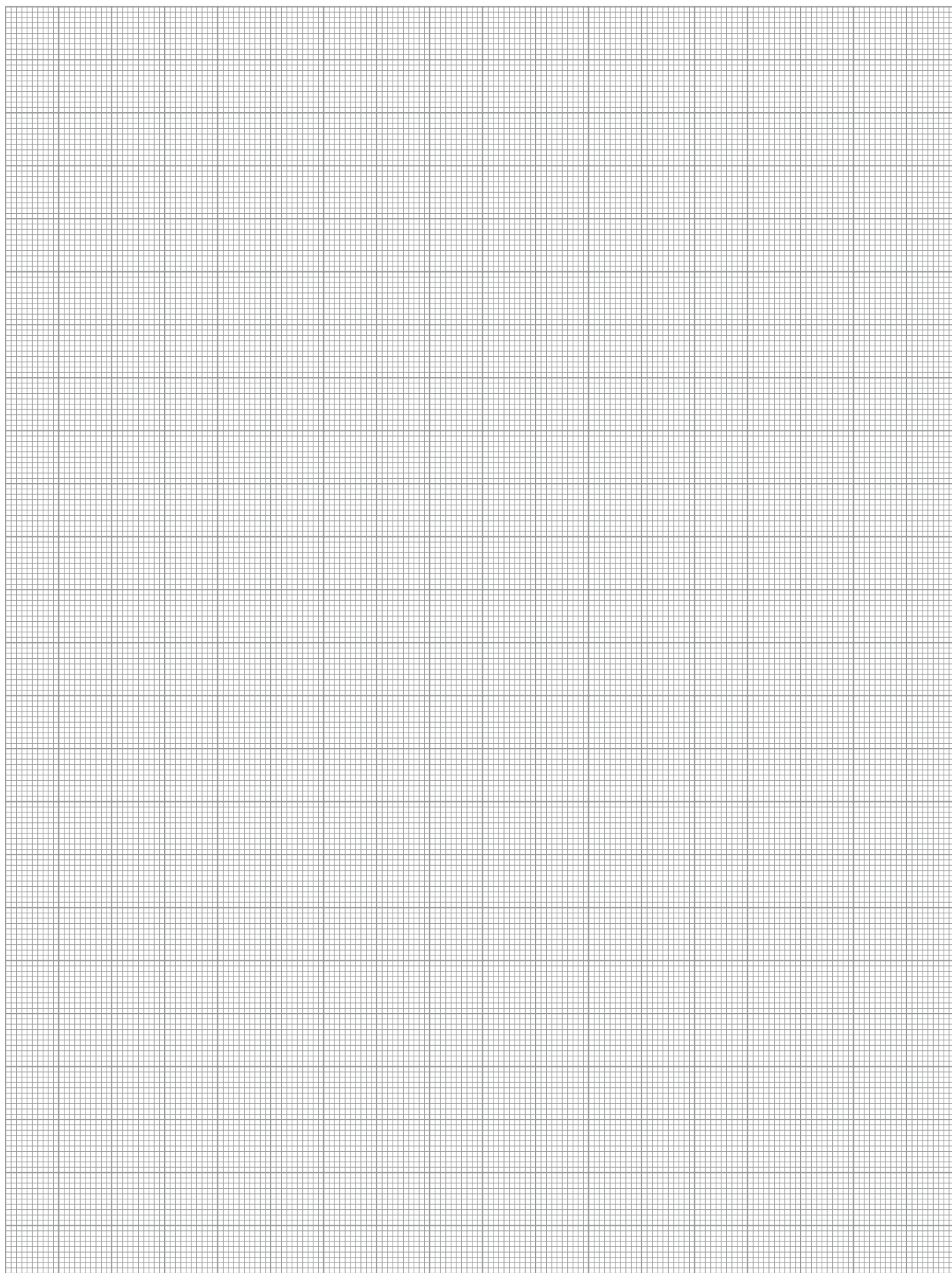
Description		ORG 85
ID		0304120
Number of fingers		6
Triple jaws A: working principle		Double-acting
Triple jaws A: stroke per finger	[mm]	21.0
Triple jaws A: closing force	[N]	45.0
Triple jaws A: opening force	[N]	55.0
Triple jaws A: retraction stroke	[mm]	5.0
Triple jaws A: retraction force	[N]	20.0
Triple jaws A: fluid consumption per double stroke	[cm ³]	11
Triple jaws A: fluid consumption per retraction stroke	[cm ³]	6
Triple jaws B: working principle		One-way acting
Triple jaws B: stroke per finger	[mm]	15.0
Triple jaws B: opening force	[N]	125.0
Triple jaws B: fluid consumption per opening stroke	[cm ³]	9
Closing/opening time	[s]	0.1/0.12
Weight	[kg]	1.35
Min./nom./max. operating pressure	[bar]	4/6/8
Max. permissible finger length	[mm]	80.0
Protection class IP		40
Min./max. ambient temperature	[°C]	5/90
Repeat accuracy	[mm]	0.02
Dimensions Ø D x Z	[mm]	85 x 98

① The principle mountability of O-rings depends on the shape (O-ring, square ring, etc.), shore hardness, inner diameter, and cord strength, as well as installation depth. In general, Ø 5 mm to Ø 160 mm O-rings can be mounted for outside assembly, and for internal assembly O-ring from Ø 10 mm to Ø 120 mm are used.

Triple jaws A and B can both be adjusted with regard to their opening stroke – the closed position remains unaffected.

Please contact SCHUNK to ensure ultimate installation compatibility.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/org



GSW-B

Special Grippers | Gripper with Shaft Interface

High Flow Rate. Cost-efficient. Powerful. Gripper with Shank Interface GSW-B

Universal gripper PGN-plus/PZN-plus with shank interface GSW-B

Field of Application

Unit for fully automated loading and unloading of machining centers.

Advantages – Your benefits

Price-attractive module consisting of a universal gripper PGN-plus/PZN-plus and a shank interface

Fast, automated exchange of the gripper from the storage rack

Fully automated workpiece change without robot or gantry system



Sizes
Quantity: 4



Suitable for
PGN-plus/
PZN-plus



Shank diameter
20 mm

Functional Description

The pressure generated by the central machine coolant supply is reduced by the pressure distributor, which is integrated in the adapter plates. The gripper can then be actuated and can actuate the base jaws correspondingly

via the piston and wedge hook. During the gripping operation the gripper continuously supplies coolant or compressed air via the lateral pressure control valve.



① Mounting

For automatically exchanging and inserting the spindle (not included in the scope of delivery)

② Adapter plate with integrated pressure distributor

For a large pressure range

③ Multi-tooth guidance

Highly loadable, nearly backlash-free base jaw guidance for long finger lengths

④ Base jaw

For the connection of workpiece-specific gripper fingers

⑤ Wedge-hook principle

For high force transmission and centric gripping

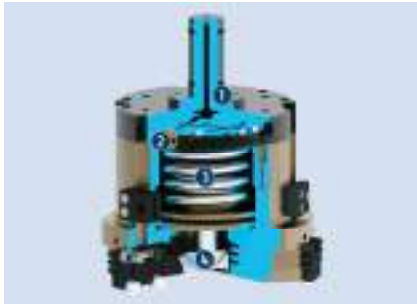
⑥ Housing

Is weight-optimized due to the use of high-strength aluminum alloy



Detailed Functional Description

Gripper versions



The gripper with shank interface GSW-B is available as a parallel and centric gripper in the versions AS and IS. Due to the integrated spring, the gripper moves back to its original position in the depressurized condition. In the version AS, the spring acts as closing force in the depressurized state; and in the version IS as an opening force.

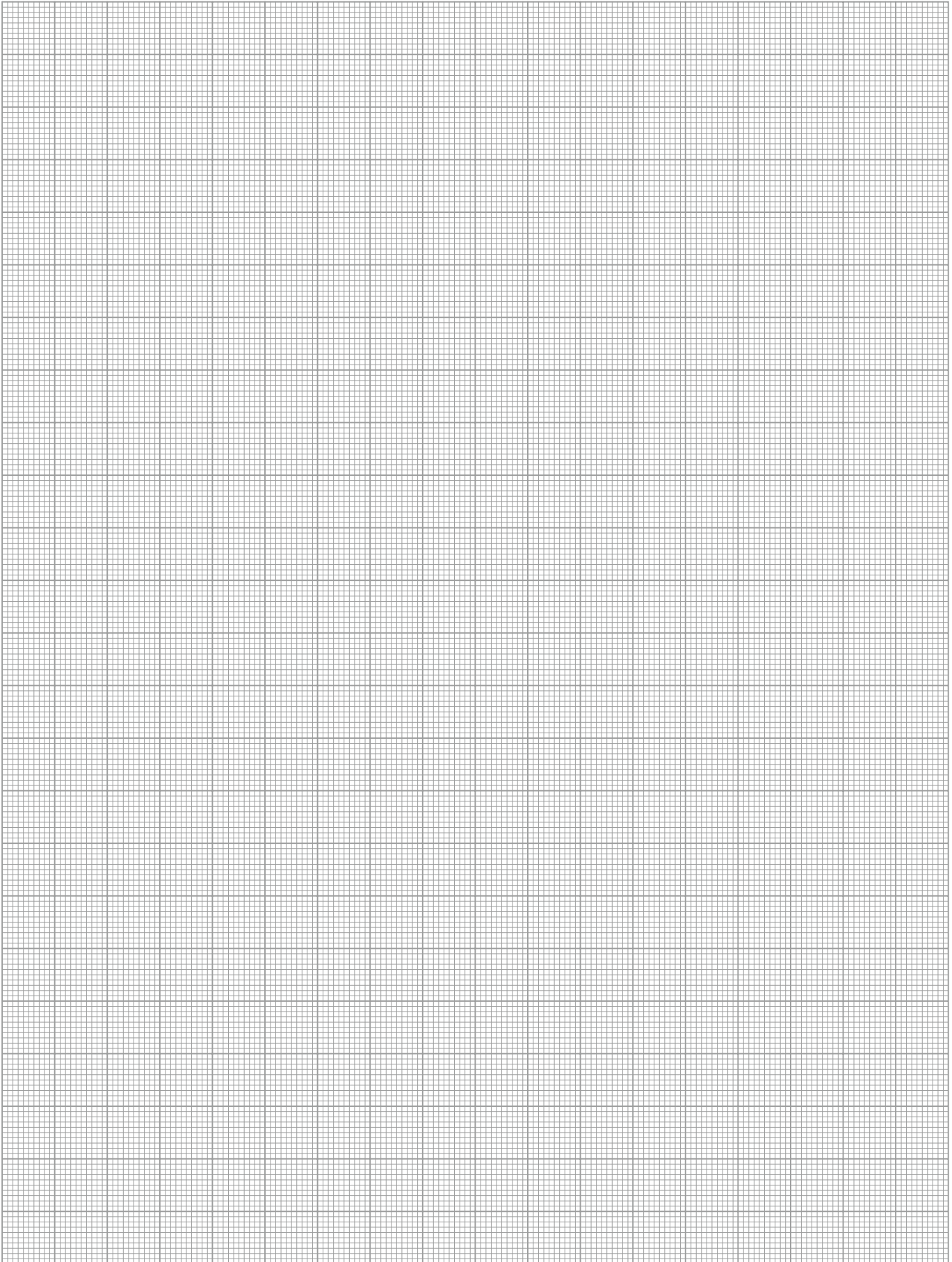
- ❶ Adapter plate with mounting for toolholder
- ❷ Pressure relief valve
- ❸ Piston chamber with spring support
- ❹ Wedge-hook principle

Gripper monitoring



On option, the gripper can be equipped with a wireless sensor system. Therefore monitoring of the gripper and the wireless transmission of the signals from the machine room are possible.

- ❶ Adapter plate with spindle Interface GSW-B
- ❷ End position monitoring with cylindrical reed switches RMS 80
- ❸ Transmitter module RSS-T2 for radio sensor system



General Notes about the Series

Operating principle: Pressure distributor and wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Blackened steel

Spindle interface material: Aluminum alloy

Actuation: Hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering elements, assembly instructions (operating manual with declaration of incorporation is available online), the gripper is not included in the scope of delivery and must be ordered separately

Gripping force: Refers to the combination of a GSW-B with a correspondingly named gripper, and represents the minimum sufficient gripping force.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Closing and opening times: The indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.



Application Example

Use of a gripper with spindle interface in a machine tool for automated loading of raw parts and unloading of finished parts.

- ① Workpiece rack
- ② Quick-change pallet system VERO-S with lathe chuck ROTA TPS
- ③ Gripper with spindle interface PGN-plus on GSW-B, and with wireless sensor system, RSS
- ④ Machine table

SCHUNK offers more ...

The following components make the product GSW-B even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Magnetic gripper



Vacuum gripper



Cleaning unit



Toolholder



Finger blank



Universal intermediate jaw



Jaw quick-change system



Protection cover



Reed switch



Wireless sensor system

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Air connections: Please note that the connection A of IS version grippers or grippers of AS version should not be sealed air-tight.

Diversity of variants: When using the GSW-B with the PGN-plus/-P and PZN-plus grippers, nearly all variants and accessories of these grippers can be used. For more information see the chapter gripper series. Further shaft diameters on request.

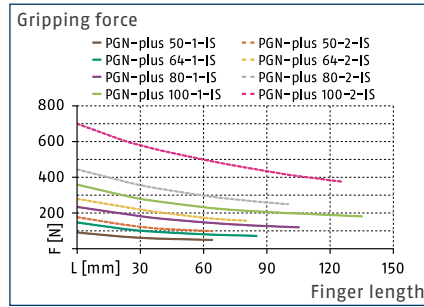
Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-B 50-100

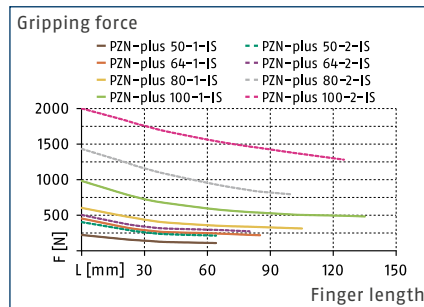
Special Grippers | Gripper with Shaft Interface



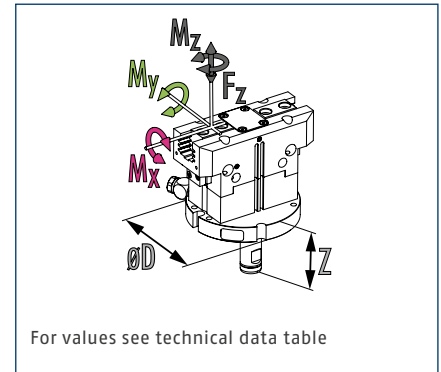
Gripping force O.D. gripping



Gripping force O.D. gripping



Dimensions and maximum loads



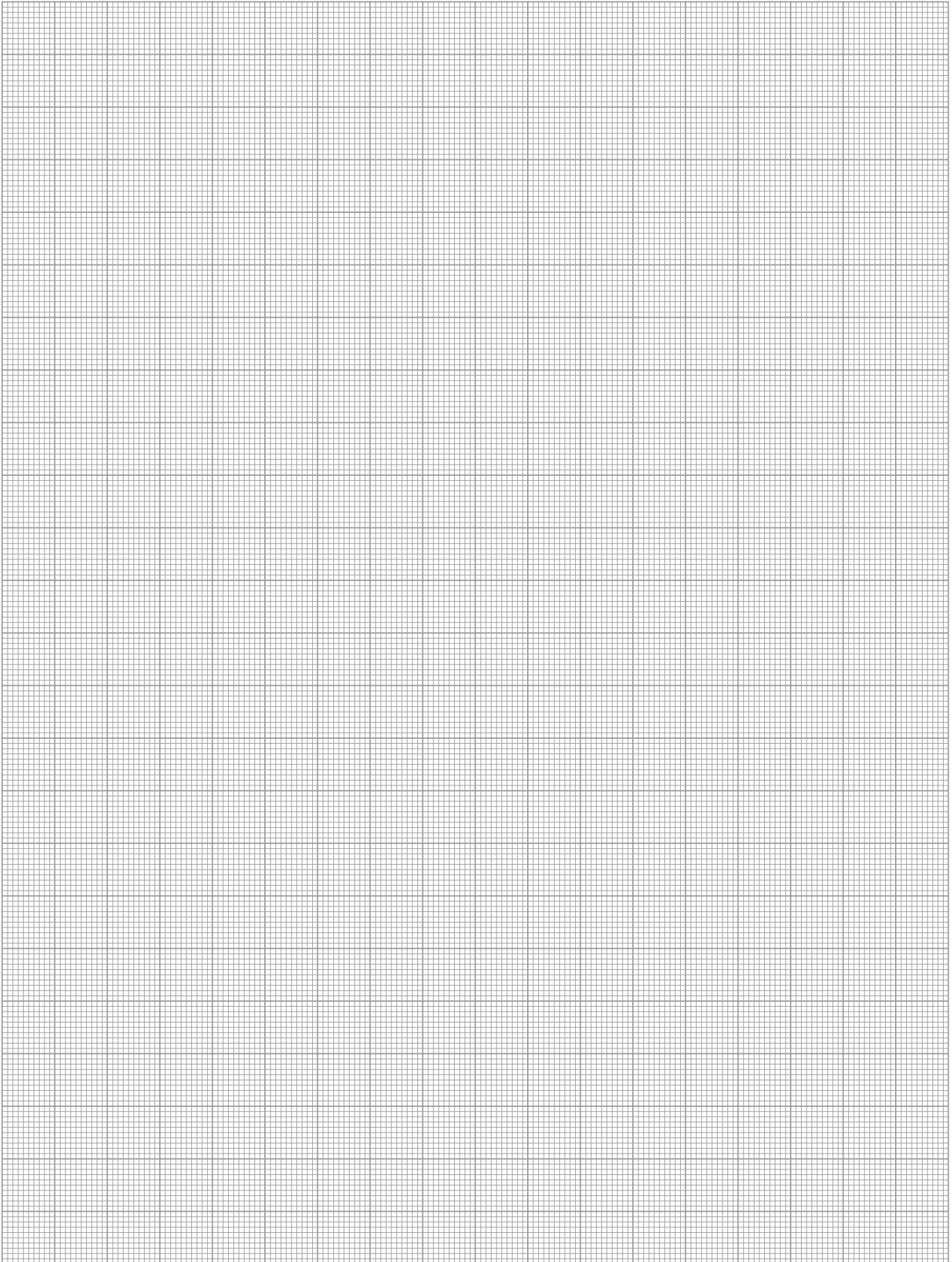
① Refer to the respective size of the gripper for the forces and torques.

Technical data

Description		GSW-B 50-P	GSWB 50-Z	GSW-B 64-PZ	GSW-B 80-PZ	GSW-B 100-PZ
ID		0308420	0308421	0308422	0308423	0308424
General technical data						
Weight	[kg]	0.2	0.2	0.23	0.31	0.42
Max. permissible speed	[1/min]	20	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6	6
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40	40
Min./max. operating pressure, coolant	[bar]	20/50	20/50	20/50	20/50	20/50
Protection class IP		40	40	40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90	5/90
Dimensions Ø D x Z	[mm]	52 x 66	52 x 66	64 x 63	80 x 63	100 x 63
Prepared for parallel grippers		Yes	No	Yes	Yes	Yes
Prepared for centric grippers		No	Yes	Yes	Yes	Yes

① The values only relate to the adapter GSW-B. The suitable gripper can be ordered separately. You will find gripper-specific values on the following catalog pages.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsw-b



High flow rate. Cost-efficient. Compliant. Gripper with Shank Interface GSW-B and Compensation Unit

Universal gripper PGN-plus/PZN-plus with GSW-B shank interface and compensation unit AGE

Field of Application

Unit for fully automated loading and unloading of machining centers.

Advantages – Your benefits

Price-attractive module consisting of a universal gripper PGN-plus/PZN-plus and a shank interface

Fast, automated changeover from the gripper to the storage rack

Fully automated workpiece change without robot or gantry system

Three compensation directions in one unit compact design for minimum installation height

Robust sliding guidance for high moment load at minimum space

Compensation of workpiece-related tolerances and position inaccuracies reduced risk of jamming, necessary assembly forces are reduced and wear of the workpiece and handling device is minimized



Sizes
Quantity: 4



Suitable for
PGN-plus /
PZN-plus



Shank diameter
20 mm



Compensation XY
1.5 mm

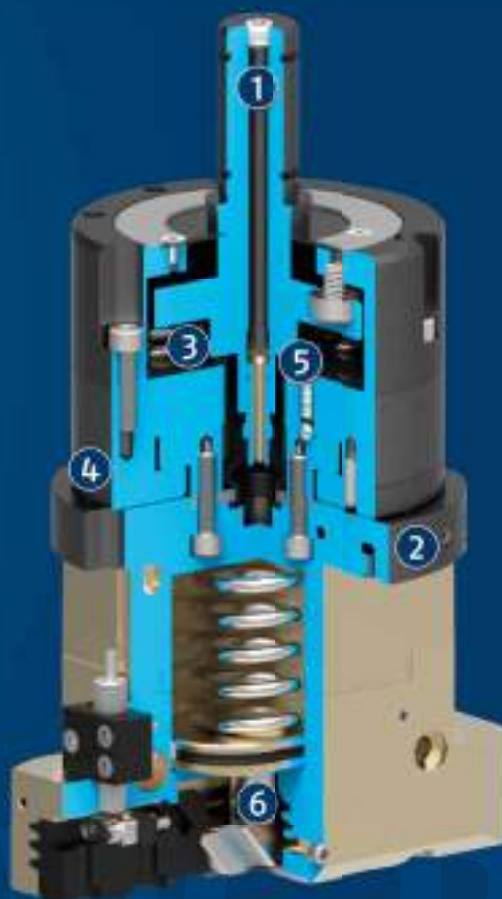


Compensation Z
2.7 mm

Functional Description

The pressure generated by the central machine coolant supply is reduced by the pressure distributor, which is integrated in the adapter plates. The gripper can then be actuated and can actuate the base jaws correspondingly

via the piston and wedge hook. During the gripping operation the gripper continuously supplies coolant or compressed air via the lateral pressure control valve.



- ① **Taper shank**
For universal assembly of the gripper
- ② **Adapter plate with integrated pressure distributor**
For a large pressure range
- ③ **Axial compensation**
Spring-loaded, for pressing workpieces into place
- ④ **Planar compensation**
For preventing the spindle or axes from wear
- ⑤ **Angular compensation**
For higher flexibility and compliance
- ⑥ **Gripper kinematics**
For high force transmission and centric gripping



General Notes about the Series

Operating principle: Pressure distributor and wedge-hook kinematics

Housing material: Aluminum alloy, anodized

Base jaw material: Blackened steel

Spindle interface material: Aluminum alloy

Actuation: Hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Centering elements, assembly instructions (operating manual with declaration of incorporation is available online), the gripper is not included in the scope of delivery and must be ordered separately

Gripping force: Refers to the combination of a GSW-B with a correspondingly named gripper, and represents the minimum sufficient gripping force.

Finger length: Is measured from the reference surface as the distance P in direction to the main axis.

Repeat accuracy: Is defined as a distribution of the end position for 100 consecutive strokes.

Closing and opening times: The indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.



Application Example

Handling of pinions in a milling center.

- ① Vacuum gripper GSW-V
- ② Magnetic gripper GSW-M
- ③ Gripper with shank interface GSW-B and PGN-plus
- ④ Gripper with shank interface GSW-B and PZN-plus
- ⑤ Cleaning unit RGG
- ⑥ Wireless sensor system RSS

SCHUNK offers more ...

The following components make the product GSW-B-AGE even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Magnetic gripper



Vacuum gripper



Cleaning unit



Toolholder



Finger blank



Universal intermediate jaw



Jaw quick-change system



Protection cover



Reed switch



Wireless sensor system

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Please note that use under extreme conditions (e.g. with coolant, casting or abrasive dust) will considerably reduce the service life of this product.

Further shaft diameters on request.

Please note that the connection A of IS version grippers or grippers of AS version should not be sealed air-tight.

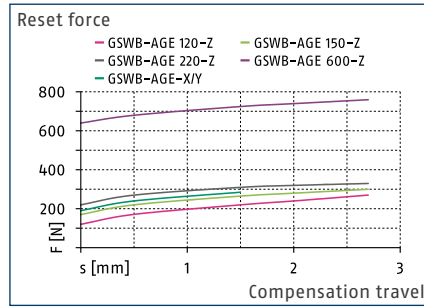
Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-B-AGE 50-100

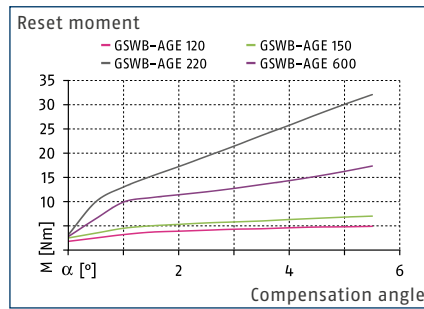
Special Grippers | Gripper with Shaft Interface



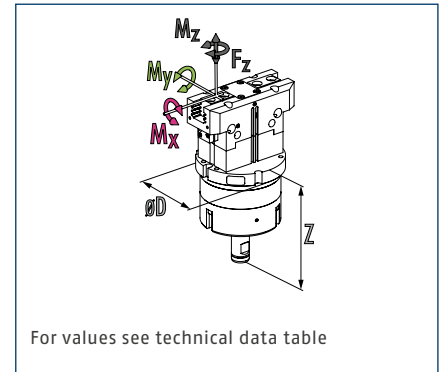
Compensation travel



Compensation angle



Dimensions and maximum loads



① Refer to the respective size of the gripper for the forces and torques.

Technical data

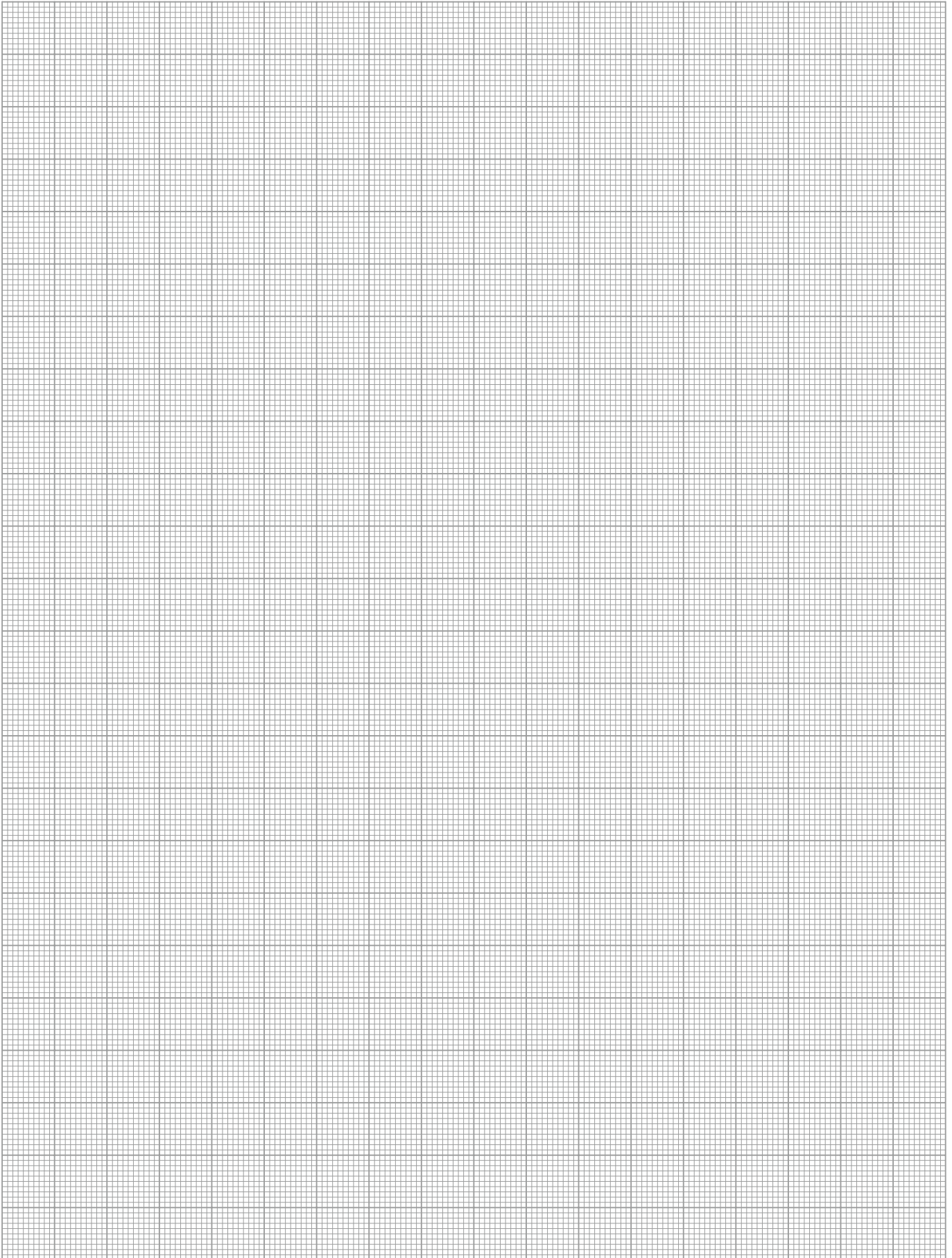
Description		GSW-B-AGE-XYZ 120	GSW-B-AGE-XYZ 150	GSW-B-AGE-XYZ 220	GSW-B-AGE-XYZ 600
ID		0308435	0308436	0308437	0308438
General technical data					
Weight	[kg]	1.1	1.1	1.1	1.1
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Nominal operating pressure coolant	[bar]	40	40	40	40
Min./max. operating pressure, coolant	[bar]	20/50	20/50	20/50	20/50
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Compensation XY	[mm]	1.5	1.5	1.5	1.5
Compensation Z	[mm]	2.7	2.7	2.7	2.7
Angular deflection	[°]	5.5	5.5	5.5	5.5
Deflection rotatory	[°]	3.5	3.5	3.5	3.5
Rotary compensation torque	[Nm]	0.2	0.2	0.2	0.2
Dimensions Ø D x Z	[mm]	90 x 132.1	90 x 129.1	90 x 129.1	90 x 129.1
Moments M_x max./ M_y max./ M_z max.	[Nm]	20.00/25.00/10.00	40.00/60.00/40.00	60.00/95.00/55.00	80.00/115.00/70.00
Forces F_z max.	[N]	500.00	1100.00	1500.00	2000.00

① The values only refer to the adapter GSW-B-AGE with compensation unit. The suitable gripper can be ordered separately.

You will find gripper-specific values on the following catalog pages.

Position of the allowable center of mass as a function of the payload for horizontal applications. A higher value of mass is valid for central locking, and a lower value of mass for position storage.

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsw-b-age



GSW-V

Special Grippers | Vacuum Gripper with Shank Interface

Compact. Cost-efficient. Productive.

Vacuum Gripper with Shank Interface GSW-V

Vacuum gripper for spindle interfaces are ideal for handling flat components

Field of Application

Unit for automatic loading and unloading of machining centers by their own axis, which provides compressed air and coolant supply via the tool mounting.

Advantages – Your benefits

Price-attractive module for flexible automation in your machine

Fast, automated exchange and insertion of the gripper from the storage rack

Fully automated workpiece changeover without robot or gantry system

Universally suitable for many different workpieces



Suction pad diameter
30 .. 125 mm



Clamping diameter
20 .. 32 mm



Weight
0.12 .. 0.39 kg



Gripping force
55 .. 980 N



Workpiece weight
0.28 .. 4.9 kg

Functional Description

The gripper can be used in any machine which provides compressed air or coolant supply via the toolholder mounting.

The vacuum gripper is equipped with an integrated

Venturi nozzle, and therefore does not require a vacuum connection to generate negative pressure.

During the gripping operation the gripper continuously supplies coolant or compressed air.



- ① **Vacuum suction cup**
For a flexible range of parts
- ② **Intake duct**
For producing suction power

- ③ **Media supply**
Via spindle interface
- ④ **Venturi nozzle**
For producing negative pressure
- ⑤ **Outlet opening**
For diverting the overpressure



GSW-V

Special Grippers | Vacuum Gripper with Shank Interface

General Notes about the Series

Operating principle: Venturi nozzle

Housing material: Aluminum

Spindle interface material: Aluminum alloy

Material of the suction cups: NBR-60

Actuation: Hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Assembly and operating manual

Suction pad: Perfectly adaptable to smooth surfaces, with damping effect during attachment, and stroke effect during the suction phase. Special suction cups on request.

Times: The indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.

Workpiece weight: Is calculated for force-fit gripping, specified rated flow rate and pressure, as well as a confidence coefficient of 2 against the gravitational force of the earth's acceleration.



Application Example

Handling of pinions in a milling center.

- ❶ Vacuum gripper GSW-V
- ❷ Magnetic gripper GSW-M
- ❸ Gripper with shank interface GSW-B and PGN-plus
- ❹ Gripper with shank interface GSW-B and PZN-plus
- ❺ Cleaning unit RGG
- ❻ Wireless sensor system RSS

SCHUNK offers more ...

The following components make the product GSW-V even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Gripper with shaft interface



Magnetic gripper



Cleaning unit



Toolholder



Stationary workholding

① Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Please note that use under extreme conditions (e.g. with coolant, casting or abrasive dust) will considerably reduce the service life of this product.

Further shaft diameters on request.

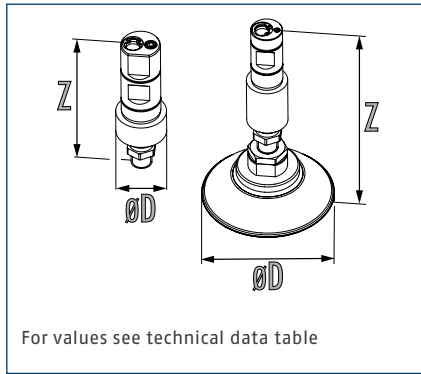
Please note that the product is not suitable for heat shrink toolholders.

Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-V 20

Special Grippers | Vacuum Gripper with Shank Interface

Dimensions

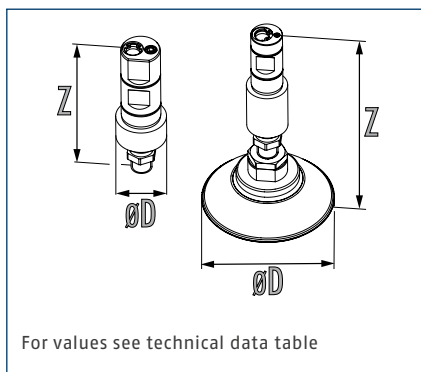


Technical data

Description		GSW-V20	GSW-V20-SND030	GSW-V20-SND080	GSW-V20-SND125
ID		0309120	0309121	0309122	0309123
Weight	[kg]	0.12	0.14	0.19	0.28
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	300	300	300	300
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Min. flow rate compressed air	[l/min]	220	220	220	220
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
Min./max. operating pressure, coolant	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Min. vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	90	90	90	90
Dimensions Ø D x Z	[mm]	26 x 100	34 x 110	89 x 130	135 x 138

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsw-v

Dimensions



Technical data

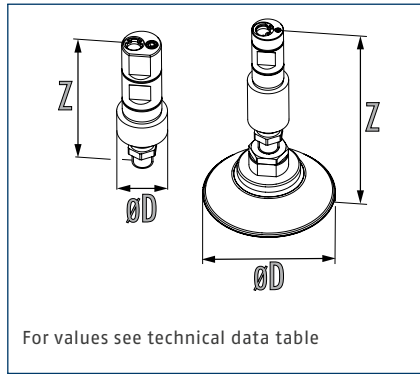
Description		GSW-V25	GSW-V25-SND030	GSW-V25-SND080	GSW-V25-SND125
ID		0309125	0309126	0309127	0309128
Weight	[kg]	0.15	0.17	0.22	0.31
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	300	300	300	300
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Min. flow rate compressed air	[l/min]	200	200	200	200
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
Min./max. operating pressure, coolant	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Min. vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	94	94	94	94
Dimensions Ø D x Z	[mm]	32 x 100	34 x 110	89 x 130	135 x 138

GSW-V 32

Special Grippers | Vacuum Gripper with Shank Interface



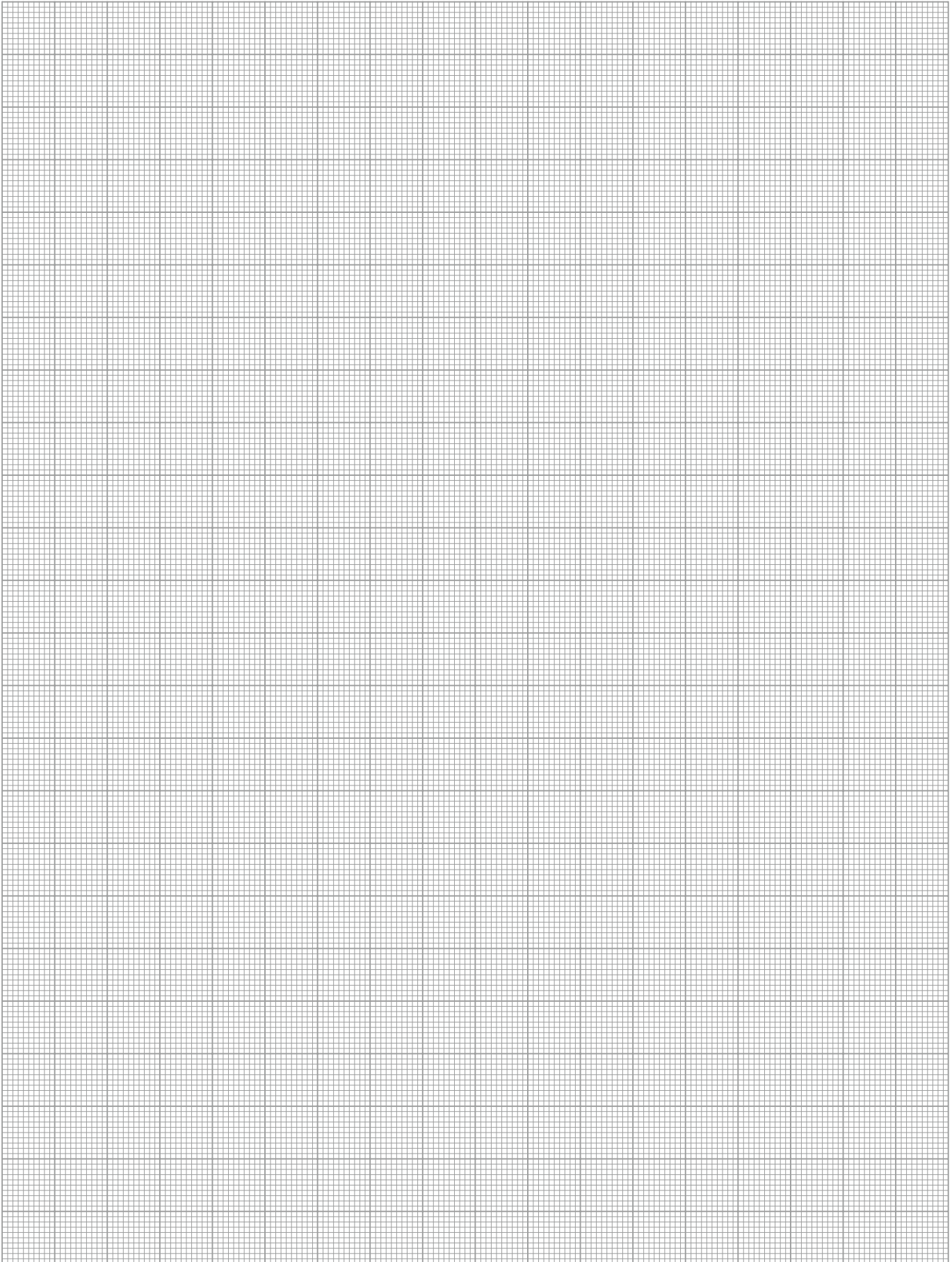
Dimensions



Technical data

Description		GSW-V32	GSW-V32-SND030	GSW-V32-SND080	GSW-V32-SND125
ID		0309130	0309131	0309132	0309133
Weight	[kg]	0.23	0.24	0.3	0.39
Recommended workpiece weight	[kg]		0.28	2	4.9
Time evacuation	[s]		1	1.1	1.2
Time for putting down	[s]		0.7	0.7	0.7
Suction force	[N]		55	400	980
Min./max. ambient temperature	[°C]	5/90	5/90	5/90	5/90
Max. permissible speed	[1/min]	20	20	20	20
Nominal operating pressure compressed air	[bar]	6	6	6	6
Nominal flow rate compressed air	[l/min]	350	350	350	350
Min./max. operating pressure, compressed air	[bar]	4/8	4/8	4/8	4/8
Min. flow rate compressed air	[l/min]	250	250	250	250
Nominal operating pressure coolant	[bar]	40	40	40	40
Nominal flow rate coolant	[l/min]	25	25	25	25
Min./max. operating pressure, coolant	[bar]	20/60	20/60	20/60	20/60
Nominal vacuum	[bar]	-0.8	-0.8	-0.8	-0.8
Min. vacuum	[bar]	-0.6	-0.6	-0.6	-0.6
Noise pressure level	[dB(A)]	98	98	98	98
Dimensions Ø D x Z	[mm]	40 x 105	34 x 115	89 x 135	135 x 143

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsw-v



GSW-M

Special Grippers | Magnetic Gripper with Shank Interface

Cost-efficient. Productive. Compliant.

Magnetic Gripper with Shank Interface GSW-M

Magnetic gripper for spindle interfaces is excellently suitable for handling flat components

Field of Application

Unit for automatic loading and unloading of machining centers by their own axis, which provides compressed air and coolant supply via the tool mounting.

Advantages – Your benefits

Price-attractive module for flexible automation in your machine

Fast, automated exchange and insertion of the gripper from the storage rack

Fully automated workpiece change without robot or gantry system

Universally suitable for many different workpieces



Sizes
Quantity: 1



Weight
1 kg



Holding force
70 N



Workpiece weight
3.5 kg

Functional Description

The gripper can be used in any machine which provides compressed air or coolant supply via the toolholder mounting.

The magnetic gripper GSW-M is placed on the workpiece and pressed 20 mm deep. The spring force (F_c) of the ejector must be overcome. (In addition, there is a reserve or compensation stroke of 9 mm.)

The stroke causes the permanent magnet to approach the workpiece and the workpiece is firmly held by the magnet. To place the workpiece, the gripper is actuated with compressed air or coolant. During the placement, the gripper continuously supplies coolant or compressed air via the outlet port.



- | | |
|---|--|
| <p>① Permanent magnet
For holding of magnetic materials</p> <p>② Media supply
Via spindle interface</p> <p>③ Overpressure valve
For a large pressure range</p> | <p>④ Drain valve
For coolant operation</p> <p>⑤ Rubber friction ring
For absorbing shear forces and protecting the workpiece</p> <p>⑥ Thread
For customer-specific attachments/supports</p> |
|---|--|



GSW-M

Special Grippers | Magnetic Gripper with Shank Interface

General Notes about the Series

Operating principle: Permanent magnet

Housing material: Aluminum

Spindle interface material: Aluminum alloy

Actuation: Hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Assembly and operating manual



Application Example

Handling of pinions in a milling center.

- ❶ Vacuum gripper GSW-V
- ❷ Magnetic gripper GSW-M
- ❸ Gripper with shank interface GSW-B and PGN-plus
- ❹ Gripper with shank interface GSW-B and PZN-plus
- ❺ Cleaning unit RGG
- ❻ Wireless sensor system RSS

SCHUNK offers more ...

The following components make the product GSW-M even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Gripper with shaft interface



Vacuum gripper



Cleaning unit



Toolholder



Stationary workholding

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Please note that use under extreme conditions (e.g. with coolant, casting or abrasive dust) will considerably reduce the service life of this product.

Further shaft diameters on request.

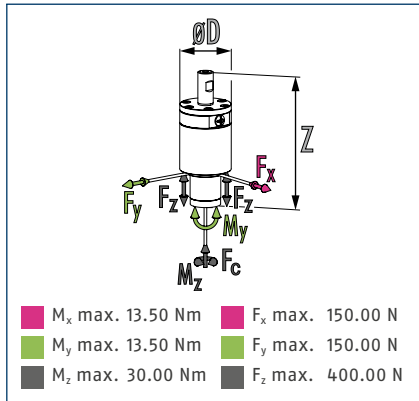
Please note that the product is not suitable for heat shrink toolholders.

Precondition: If the spindles do not rotate, then the machines have to provide compressed air or coolant.

GSW-M 20

Special Grippers | Magnetic Gripper with Shank Interface

Dimensions and maximum loads

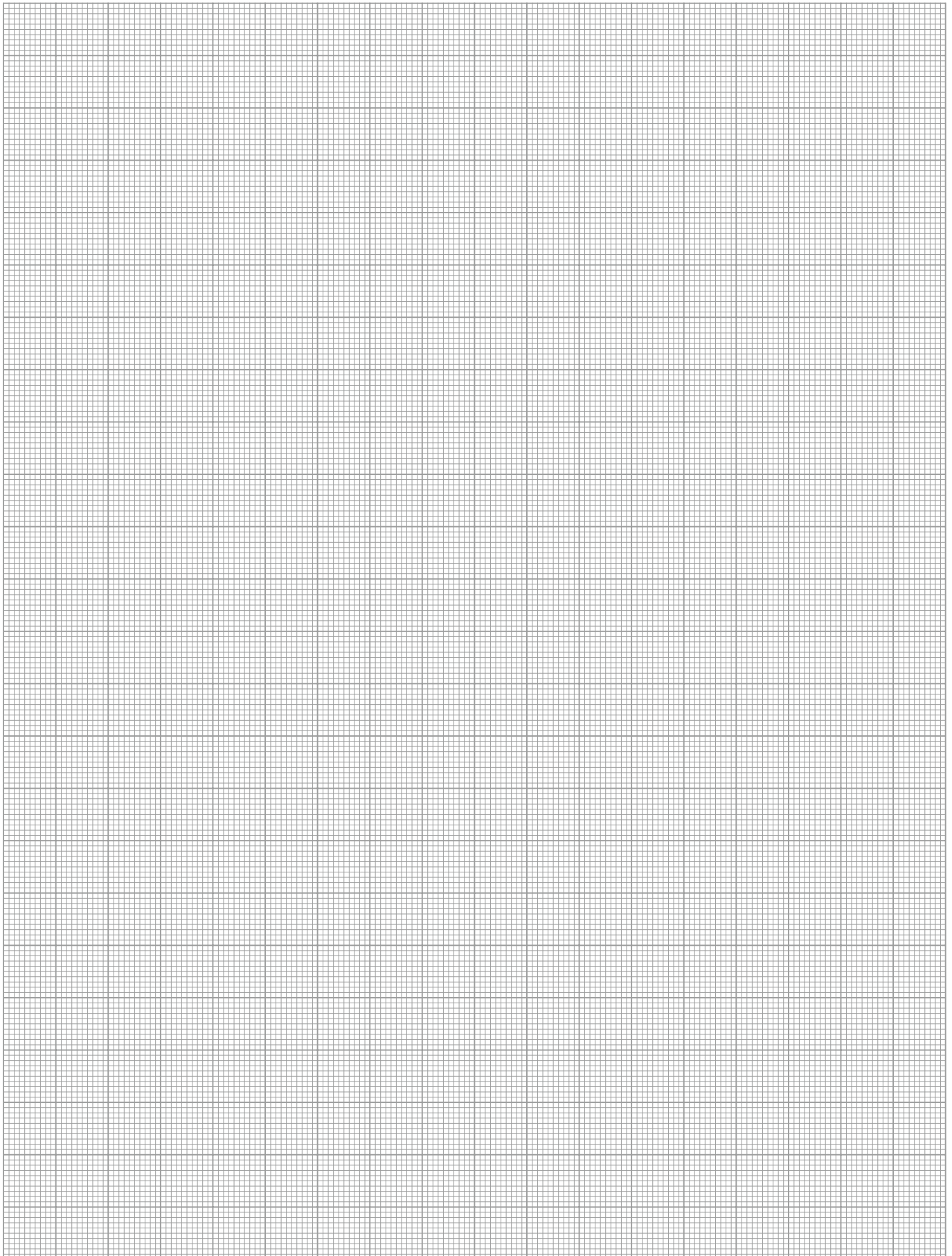


ⓘ The indicated moments and forces are static values and should not appear simultaneously.

Technical data

Description		GSW-M 20
ID		0308355
General technical data		
Weight	[kg]	1
Holding force	[N]	70
Recommended workpiece weight	[kg]	3.5
Max. permissible speed	[1/min]	0
Nominal operating pressure compressed air	[bar]	6
Min./max. operating pressure, compressed air	[bar]	2/8
Nominal operating pressure coolant	[bar]	40
Min./max. operating pressure, coolant	[bar]	10/50
Min./max. ambient temperature	[°C]	5/90
Dimensions $\varnothing D \times Z$	[mm]	67 x 177.1
Broach spring force F_c	[N]	80.00

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/gsw-m



RGG

Special Grippers | Cleaning Unit with Shank Interface

Reliable. Productive. Cost-efficient.

General Accessories RGG

For cleaning of clamping devices and automation of machine tools. The cleaning unit can be used in any machine, which provides compressed air or coolant supply via the tool mounting

Field of Application

Every machine with conventional tool mountings and compressed air or coolant supply by the spindle.

Advantages – Your benefits

Price-attractive module for flexible automation in your machine

Fast, automatic cleaning for a maximum machine utilization

Idle times reduced to a minimum

Increased safety for the machine operators



Sizes
Quantity: 1



Weight
0.1 kg

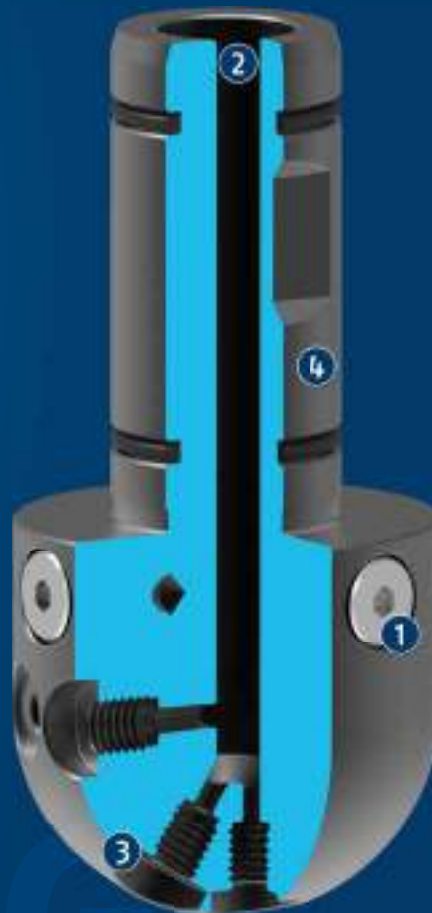
Functional Description

The cleaning unit is operated hydraulically with machine coolant (filtered, max. particle size of 30 μm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4].

Cleanliness made simple – a total of six nozzles on the ballhead blow out a powerful jet of air or coolant, which is

forced from the toolholder taper into the shaft of the cleaning unit via a bore.

The head can also rotate with the machine tool spindle when it moves, and can reach all corners of the working area.



① **Locking screws and restrictor inserts**
For changing the cleaning jet

② **Center bore**
For introduction of cleaning medium

③ **Outlet openings**
For producing cleaning jets

④ **Clamping diameter**
For mounting in any toolholding system



General Notes about the Series

Spindle interface material: Aluminum alloy

Actuation: Hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4]

Warranty: 24 months

Scope of delivery: Scope of delivery with locking screws, set-screws, assembly and operating instructions



Application Example

Handling of pinions in a milling center.

- ❶ Vacuum gripper GSW-V
- ❷ Magnetic gripper GSW-M
- ❸ Gripper with shank interface GSW-B and PGN-plus
- ❹ Gripper with shank interface GSW-B and PZN-plus
- ❺ Cleaning unit RGG
- ❻ Wireless sensor system RSS

SCHUNK offers more ...

The following components make the product RGG even more productive – the suitable addition for the highest functionality, flexibility, reliability, and process safety.



Gripper with shaft interface



Vacuum gripper



Magnetic gripper



Toolholder



Stationary workholding

Further information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special Information

Please note that use under extreme conditions (e.g. with coolant, casting or abrasive dust) will considerably reduce the service life of this product.

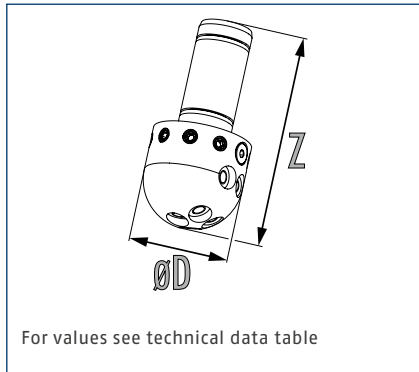
Please note that the product is not suitable for heat shrinking toolholders.

RGG 20

Special Grippers | Cleaning Unit with Shank Interface



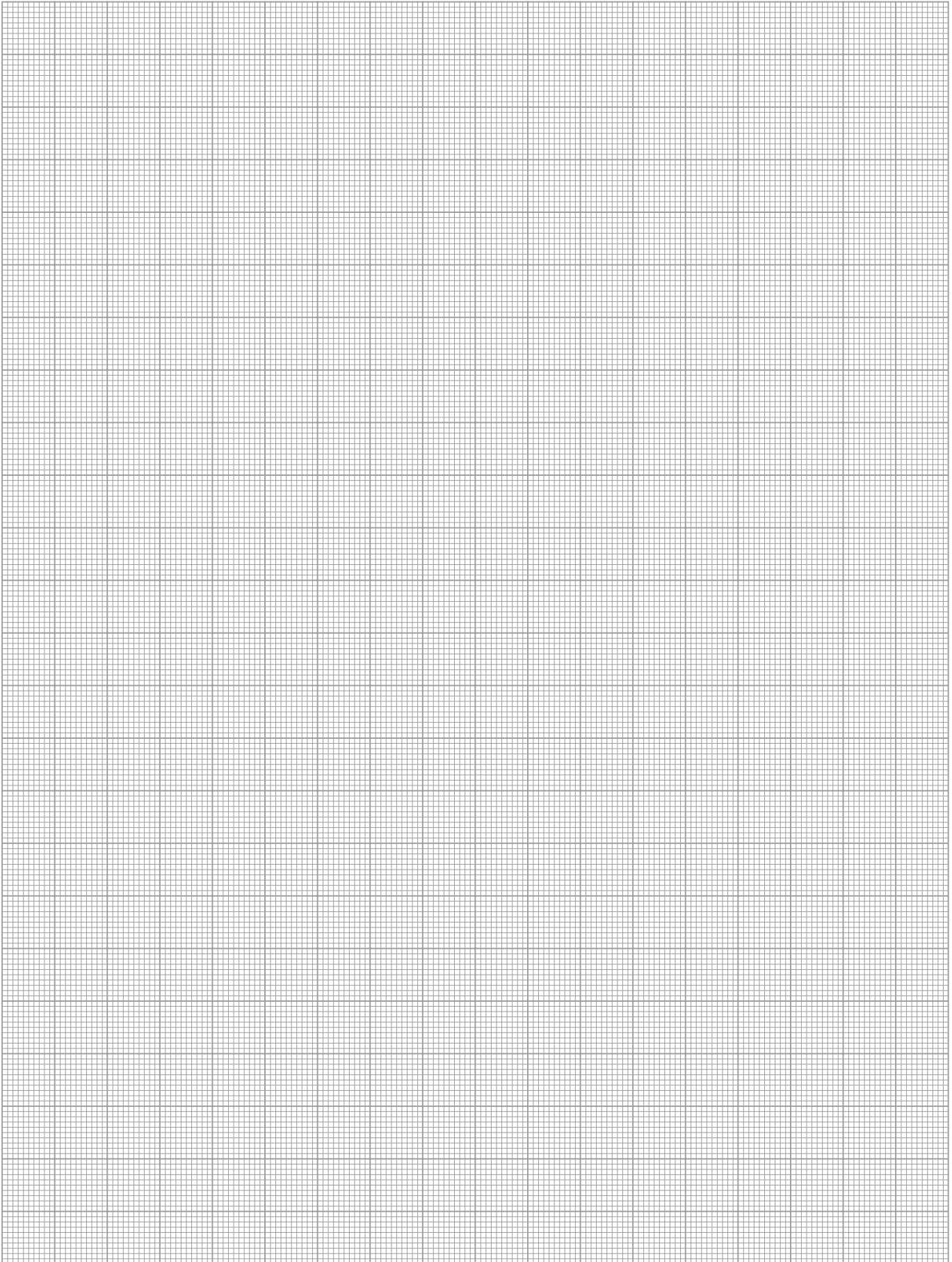
Dimensions



Technical data

Description		RGG 20
ID		0308590
Weight	[kg]	0.10
Min./max. ambient temperature	[°C]	-10/90
Max. permissible speed	[1/min]	100
Max. operating pressure	[bar]	80
Dimensions Ø D x Z	[mm]	37 x 78

More detailed, up-to-date information on the SCHUNK product including drawings, CAD data, and operating manuals are available online at: schunk.com/rgg

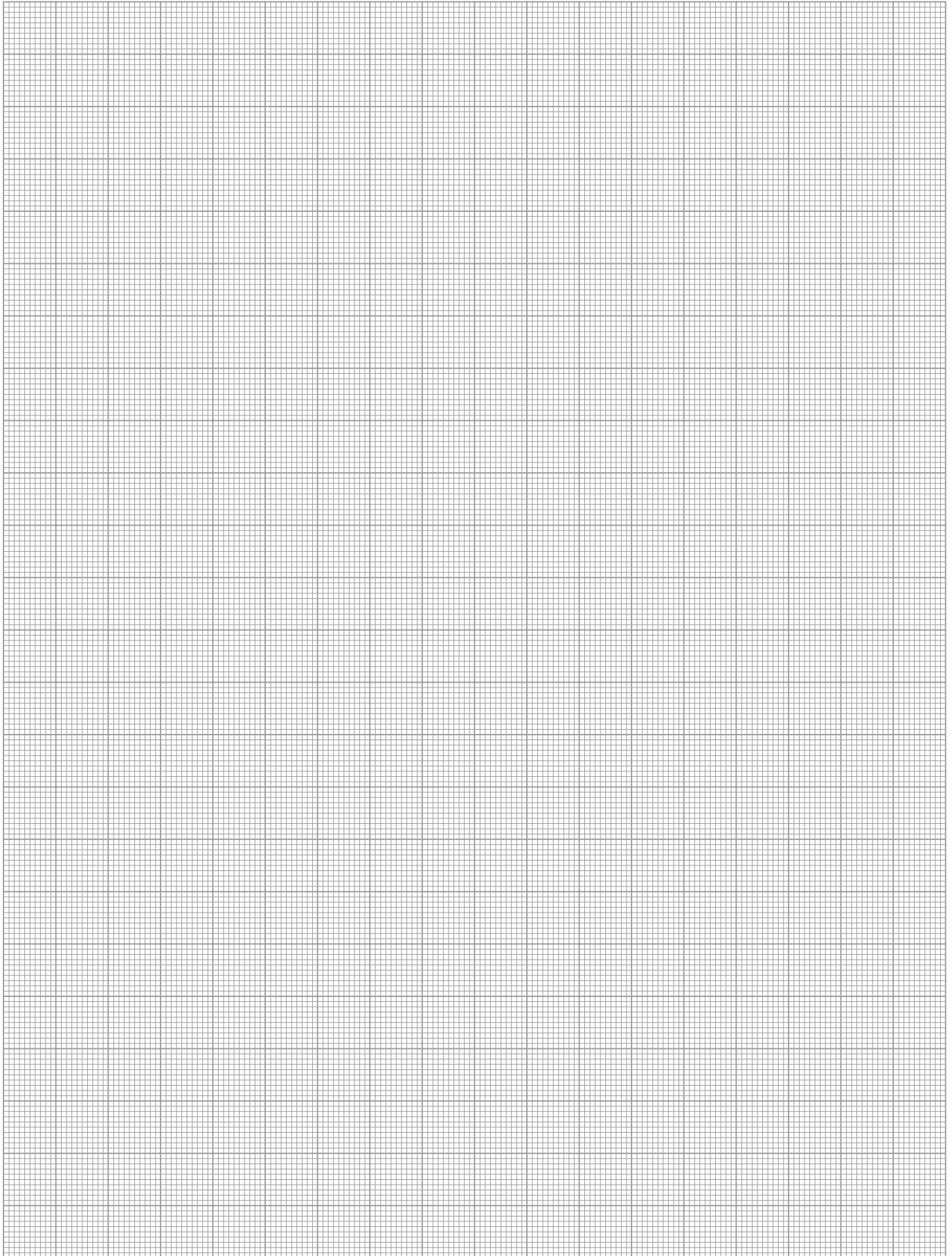


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SCHUNK Service



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 toolholding 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.
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- 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
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SCHUNK Newsletter

We let you know first!



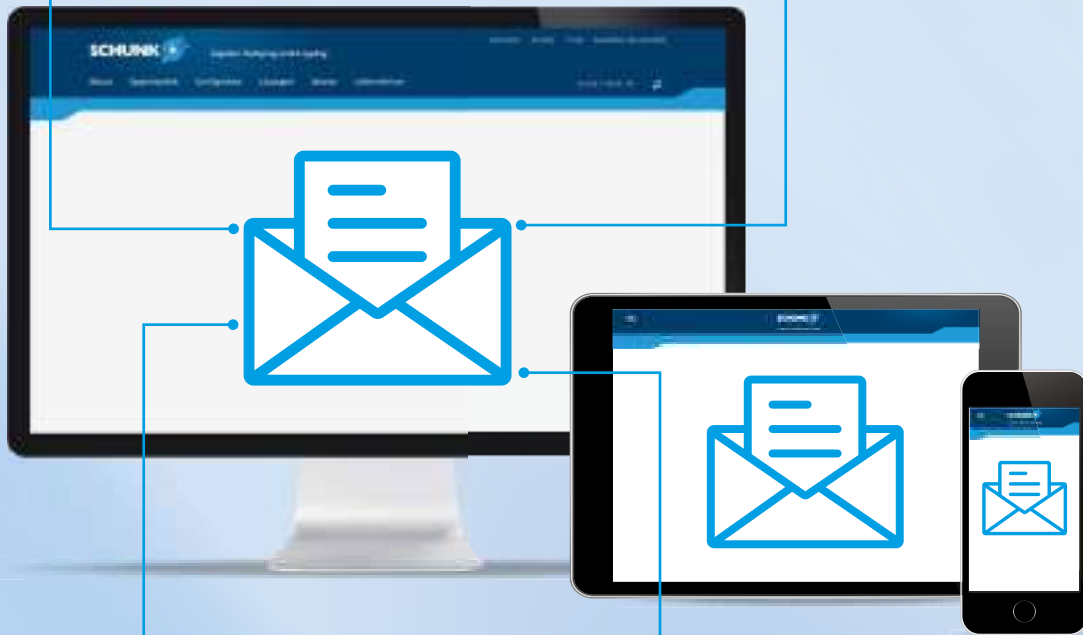
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Pocket Brochure with new Products
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Catalog SCHUNK Grippers
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Catalog Linear and Rotary Modules
Cutting-edge technology and product diversity on 438 pages

Catalog Robot Accessories
The SCHUNK End-of-Arm competence on 306 pages

Product Overview SCHUNK Gripping Systems
SCHUNK Gripping Systems at a glance

SCHUNK Co-act Grippers
Grippers for collaborative operation

SCHUNK 24 V Mechatronic Program
The new standard in assembly automation

SCHUNK End-of-Arm Modular System
Modular Gripping System for Universal Robots

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

Quantity

Clamping Technology

Quantity

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

Catalog Toolholders
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Lathe chucks for sophisticated metal cutting of world-renowned quality on 650 compact pages

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Product Overview Clamping Technology
SCHUNK Clamping Technology at a glance

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

Catalog Hydraulic Expansion Technology
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Depaneling Machine

Product Overview Depaneling Machine
Solutions for the complete spectrum of depaneling technology



schunk.com/catalogs

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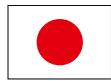
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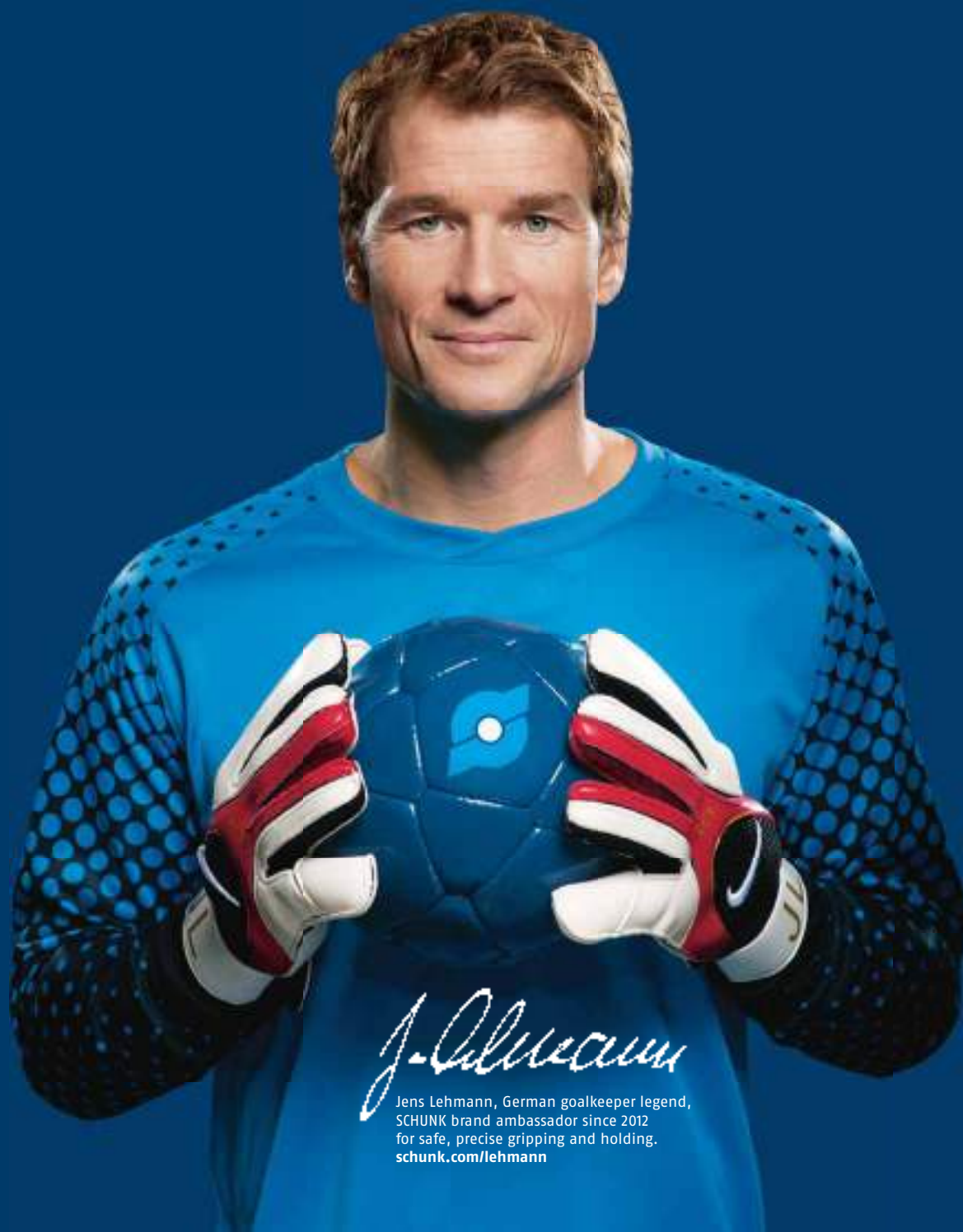


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