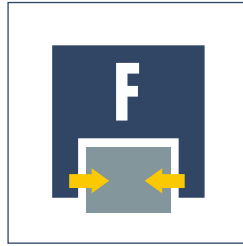




Sizes
50 .. 380



Weight
0.125 kg .. 28.0 kg



Gripping force
100 N .. 15100 N



Stroke per finger
2 mm .. 45 mm



Force-fit gripping
0.5 kg .. 75.0 kg

Application example



Horizontal turning station with
180° reorientation of the workpiece

- 1 2-Finger Parallel Gripper PGN 125
- 2 Rotary Actuator SRU 35.1-180-3-4
- 3 Gantry Axis LIRAX-P-SLF-01

Universal Gripper

Universal 2-finger parallel gripper with high gripping force and robust T-slot guidance. Please use the PGN only for replacement orders, for new designs please use the successor model PGN-plus.

Area of application

For universal use in clean to slightly dirty environments. Special solutions are available for use in high temperatures, with dust or corrosion protection. Please ask for more details!

Your advantages and benefits

High precision T-slot guidance

For precise handling of a varied range of workpieces

High maximum moments

Suitable for use with long gripper fingers

Can be attached from two sides in three screw directions

For universal and flexible gripper mounting

Air supply via hose-free direct connection or via fittings

For flexible pressure supply in all automated systems

Double-sided air purge connection

To keep dirt out of the guidance areas



General information on the series

Working principle

Wedge-hook kinematics

Housing material

Aluminum alloy, hard-anodized

Base jaws material

Steel

Actuation

Pneumatic, via filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirement on the quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Warranty

24 months

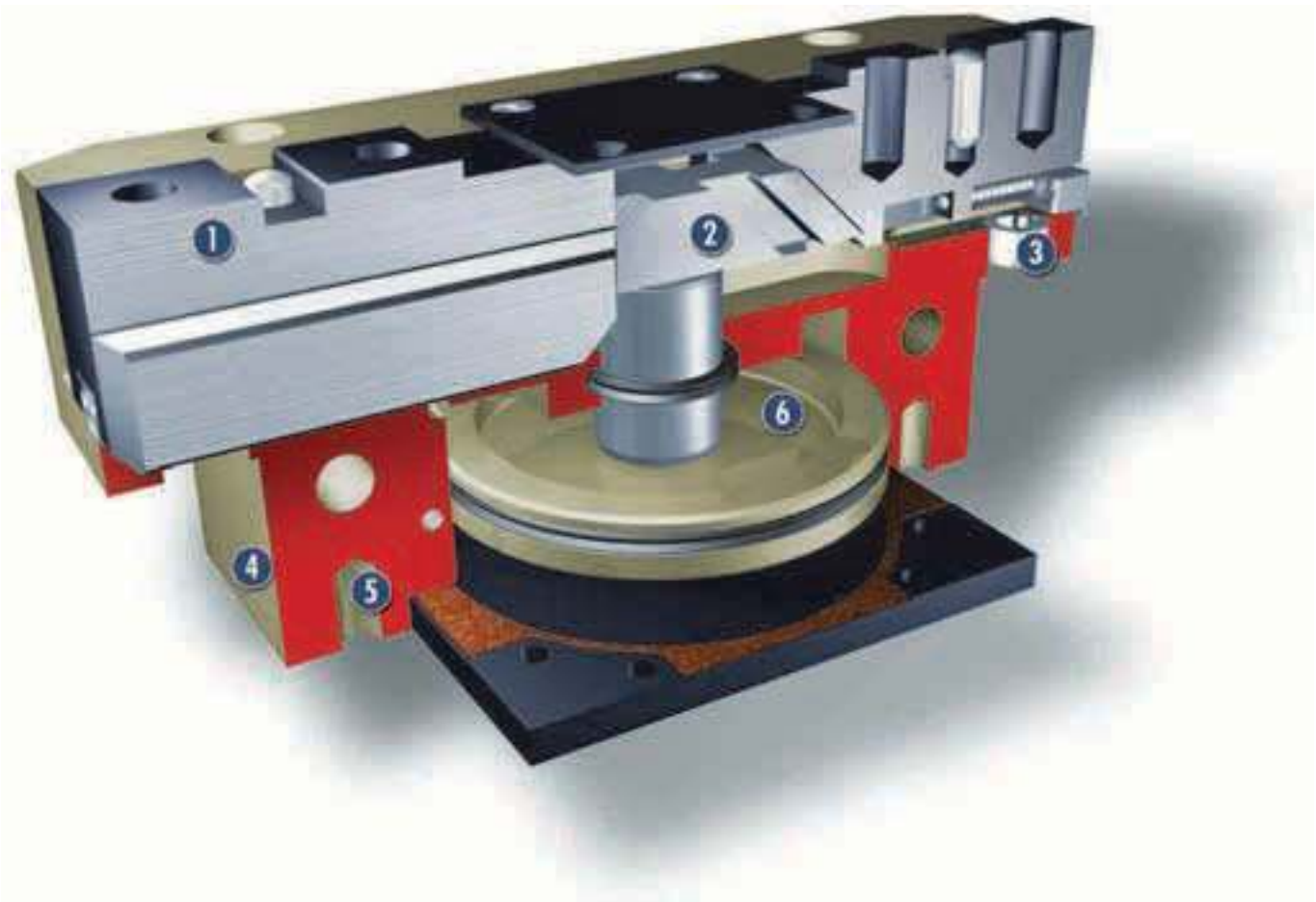
Scope of delivery

Brackets for proximity switches (only for sizes 64, 80), dowel pins, O-rings for direct connection, guide sleeves, assembly and operating manual with manufacturers declaration

Maintenance of gripping force

Possible using variants with mechanical gripping force safety device or pressure maintenance valve SDV-P

Sectional diagram



- 1 Base jaws**
for the adaptation of workpiece-specific gripper fingers
- 2 Kinematics**
wedge hook design for high power transmission and synchronous gripping
- 3 Sensor systems**
integrated brackets for proximity switches and adjustable operating targets
- 4 Housing**
weight-reduced thanks to the use of a hard-anodized, high-strength aluminum alloy
- 5 Centering and mounting options**
for universal gripper mounting
- 6 Drive**
pneumatic piston for actuation

Functional description

The round piston is pressed up or down by compressed air. Via its slanted working surfaces, the wedge hook redirects this movement into a lateral, synchronous gripping motion of the two base jaws.

Options and special information

Please use the PGN only for replacement orders, for new designs, please use the successor model PGN-plus.

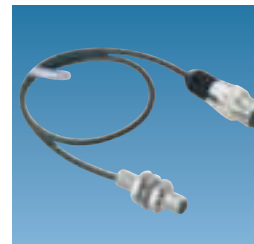
Accessories

SCHUNK accessories – the suitable complement for the highest level of functionality, reliability and controlled production of all automation modules.

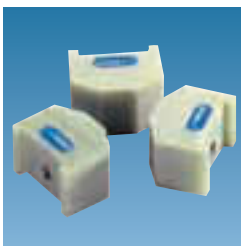
Fittings



Inductive proximity switches IN



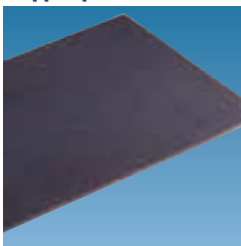
Plastic inserts – Quentes



Sensor cables W/WK/KV/GK



Gripper pads HKI



Sensor distributor V



Pressure maintenance valves SDV-P



Finger blanks



Flexible position sensor FPS



① Please refer to the additional views at the end of each size for the specific size of the required accessory, availability for the gripper size, the description and the ID No. You can find more detailed information on our range of accessories in the "Accessories" catalog section.

General information on the series

Gripping force

is the arithmetic total of the gripping force applied to each base jaw at distance P (see illustration) measured from the upper edge of the gripper.

Finger length

is measured from the upper edge of the gripper housing in the direction of the main axis.

Repeat accuracy

is defined as the variance of the end position after 100 consecutive strokes.

Workpiece weight

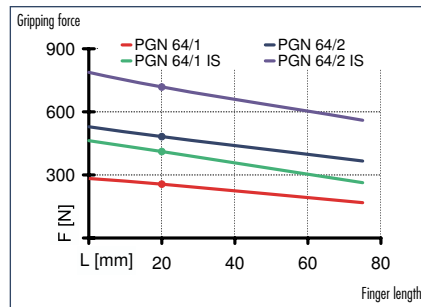
The recommended workpiece weight is calculated for force-fit gripping with a friction coefficient of 0.1 and a safety of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit clamping.

Closing and opening times

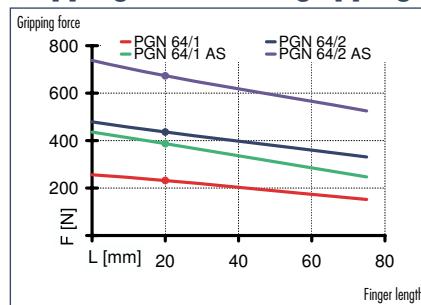
Closing and opening times are the pure movement times of the base jaws or fingers. Valve switching times, hose filling times or PLC reaction times are not included and must be taken into consideration when determining cycle times.



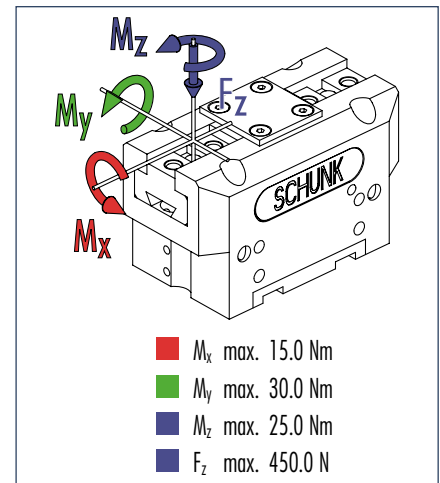
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

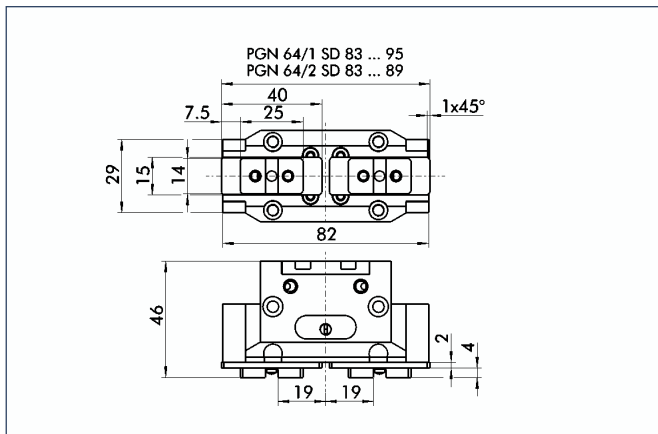


① Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. The tool life may be reduced.

Technical data

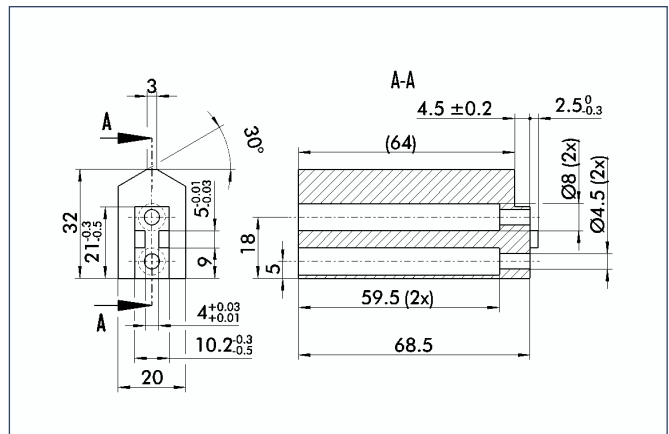
Designation		PGN 64-1	PGN 64-2	PGN 64-1 AS	PGN 64-2 AS	PGN 64-1 IS	PGN 64-2 IS
	ID	0370100	0370150	0370400	0370450	0370460	0370470
Stroke per finger	[mm]	6.0	3.0	6.0	3.0	6.0	3.0
Closing force	[N]	220.0	420.0	370.0	740.0		
Opening force	[N]	255.0	480.0			370.0	740.0
Min. gripping force by spring	[N]			70.0	140.0	70.0	140.0
Weight	[kg]	0.27	0.27	0.35	0.35	0.35	0.35
Recommended workpiece weight	[kg]	1.1	2.1	1.1	2.1	1.1	2.1
Air consumption per double stroke	[cm ³]	10.0	10.0	10.0	10.0	10.0	10.0
Nominal pressure	[bar]	6.0	6.0	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	2.0	4.0	4.0	4.0	4.0
Maximum pressure	[bar]	8.0	8.0	6.5	6.5	6.5	6.5
Closing time	[s]	0.02	0.02	0.01	0.01	0.02	0.02
Opening time	[s]	0.02	0.02	0.02	0.02	0.01	0.01
Closing / opening time with spring only	[s]			0.05	0.05	0.05	0.05
Max. permitted finger length	[mm]	64.0	64.0	64.0	64.0	64.0	64.0
Max. permitted weight per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
IP class		40	40	40	40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01	0.01	0.01	0.01

Dust protected version



The "Dust-proof" option increases the degree of protection against penetrating substances. The screw connection diagram moves by the height of the intermediate jaw. The finger length must still be measured from the upper edge of the gripper housing.

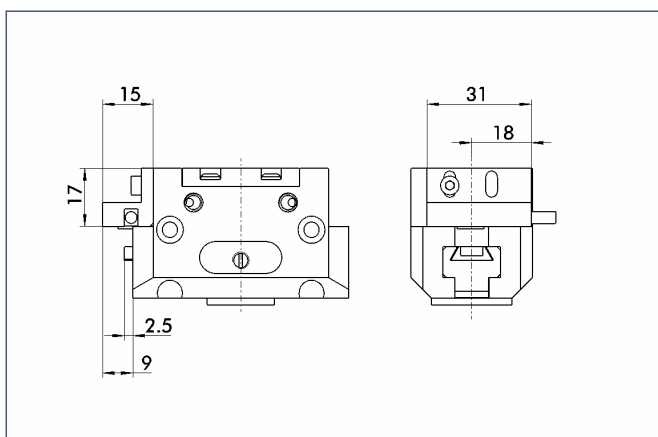
Finger blanks



Finger blanks for customer-specific reworking, incl. screw connection diagram

Designation	Material	Scope of delivery	ID
ABR 64	Aluminum	1	0300725
SBR 64	16 MnCr 5	1	0300734

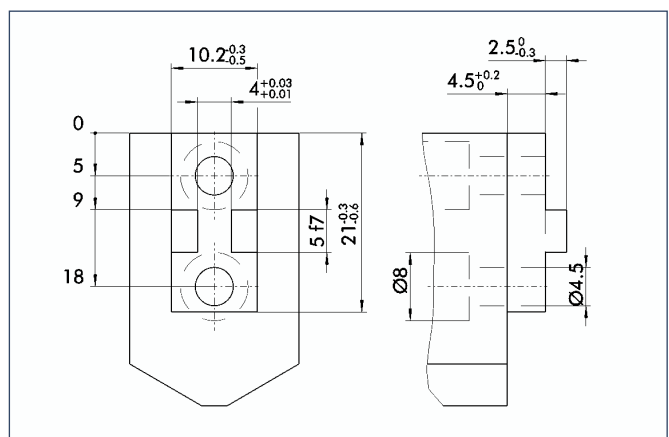
Mounting kit for FPS



The flexible position sensor FPS can distinguish between five freely programmable areas or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

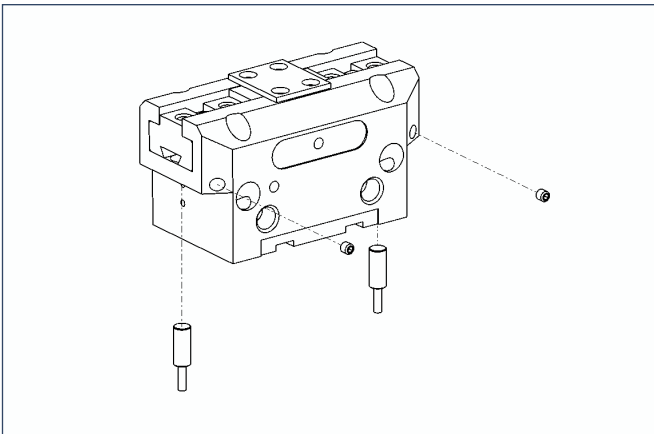
Designation	ID
AS-PGN 64-100/ HGN 80-100	0301710

Finger design



Suggestion for connection dimensions – Gripper fingers

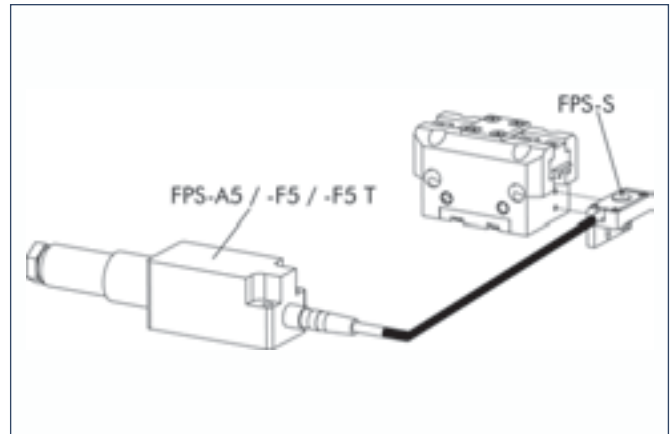
Sensor systems



End position monitoring: Inductive proximity switches, for direct mounting

Designation	ID	Recommended product
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
IN-B 80/S-M8	0301477	
INK 80/S	0301550	

① Two sensors (NO contacts/S) are required per gripper as well as an optional extension cable.



Measuring system: Position monitoring FPS

Designation	ID
AS-PGN 64-100/ HGN 80-100	0301710
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5/ F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as optional extras in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

Designation	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

① For the sensor cables, observe the minimum permitted bending radii. Generally, these are 35 mm.

 You can find detailed information and components of the specified accessory in the "Accessories" catalog section.