



Product data sheet
PGN-plus100
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

Optimal 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 monitoring
- + **Compact dimensions**
for minimal interfering contours in handling
- + **Manifold options**
for special optimization for your specific case of application (dustproof, high-temperature, corrosion-protected, etc.)



Sizes
Quantity: 11



Weight
0.08 .. 39.5 kg



Gripping force
123 .. 21150 N



Stroke per jaw
2 .. 45 mm

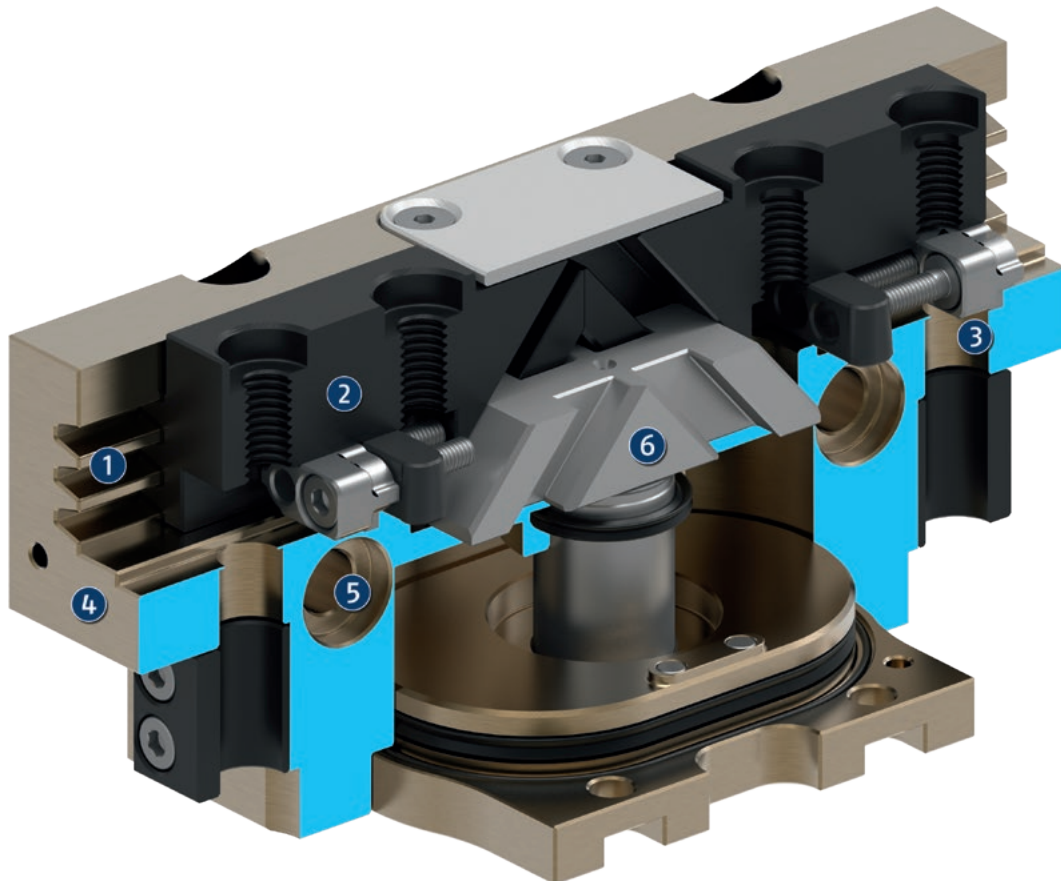


Workpiece weight
0.62 .. 80.5 kg

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.



- ❶ **Multi-tooth guidance**
highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ❷ **Base jaw**
for the connection of workpiece-specific gripper fingers
- ❸ **Sensor system**
Brackets for proximity switches and adjustable control cams in the housing
- ❹ **Housing**
is weight-optimized due to the use of high-strength aluminum alloy
- ❺ **Centering and mounting possibilities**
for universal assembly of the gripper
- ❻ **Wedge-hook design**
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

Service life characteristics: on request

Scope of delivery: Gripper in the ordered variant, accessory kit (centering sleeves, O-rings for direct connection/detailed contents see operating manual) and safety information. Product-specific instructions can be downloaded at schunk.com/downloads-manuals.

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.

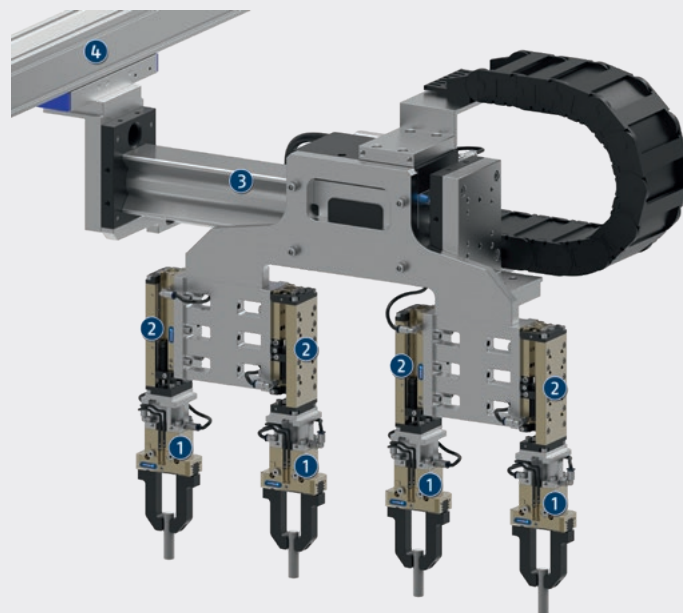
The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

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 movement times of the base jaws only, without application-specific gripper fingers. 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 14644-1:1999: 5



Application example

Handling gantry with multiple grippers for simultaneous removal of several workpieces

- ① 2-finger parallel gripper PGN-plus
- ② Linear axis CLM

- ③ Universal linear axis LDN
- ④ Universal linear axis Beta

SCHUNK offers more ...

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



Linear axis



Tool changer



Universal swivel unit



Compensation unit



Jaw quick-change system



Universal intermediate jaw



Pressure maintenance valve



Manual change system



Finger blank



Flexible position sensor



Magnetic switches



Inductive proximity switch

① For more information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com).

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

Power booster version KVZ: if higher gripping forces are required

Precision version P: for the highest accuracy

ATEX version EX: for explosive environments

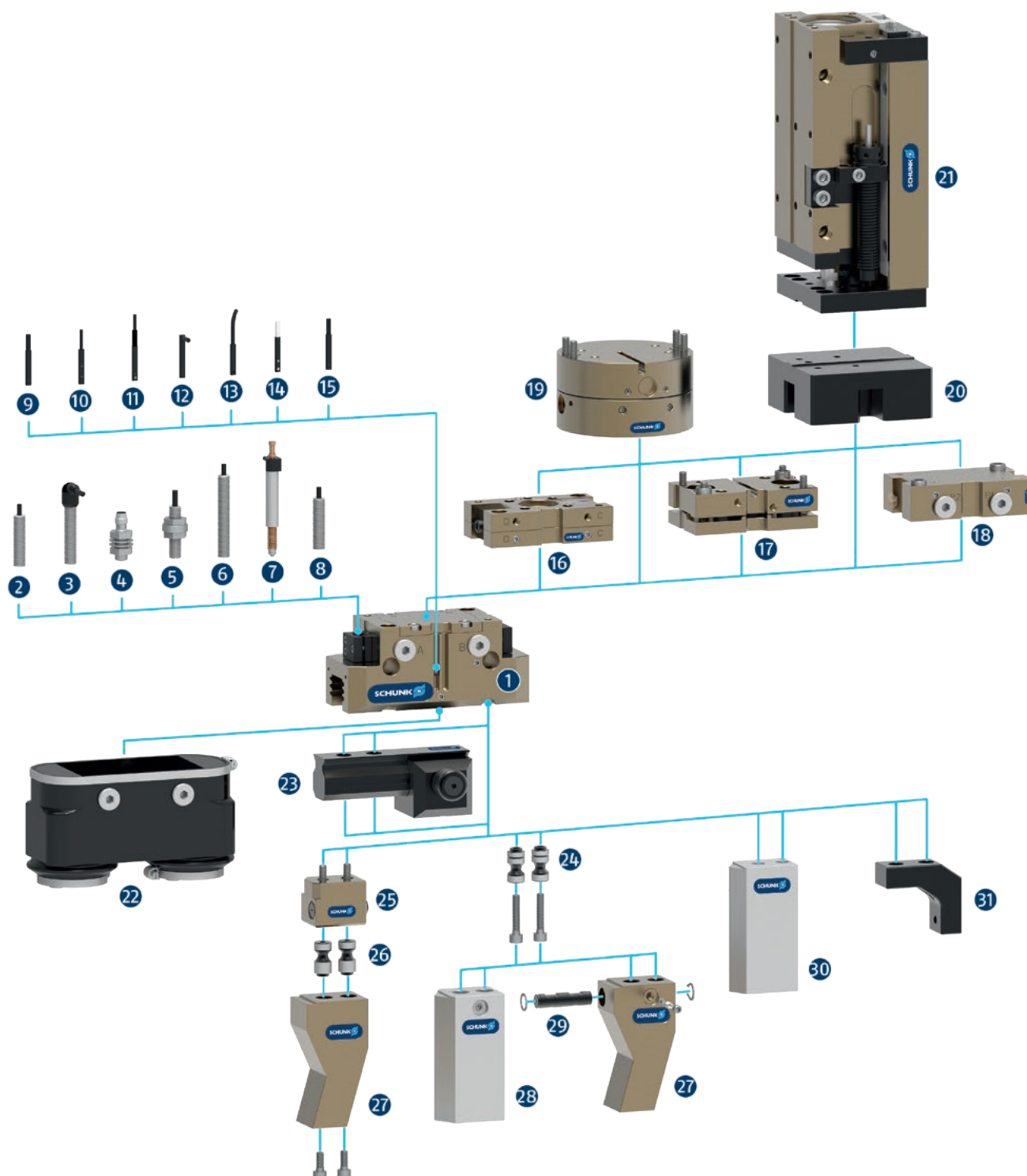
Dustproof version SD: absolutely dustproof, increased degree of protection against ingress of materials.

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

Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at <https://info.nsf.org/USDA/Listings.asp> using the lubricant information in the operating manual.

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 system

- 2 **IN ...**
Inductive proximity switch with molded cable and straight cable outlet
- 3 **IN ...-SA**
Inductive proximity switch with molded cable and lateral cable outlet
- 4 **IN-C 80**
Inductive proximity switch, directly pluggable
- 5 **FPS**
Flexible position sensor for monitoring up to five different, freely selectable positions
- 6 **IPD 80**
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 **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 position
- 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 position
- 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 axis with pneumatic drive and play-free pre-loaded crossed roller bearings
- 22 **HUE**
Sleeve for protection against dirt

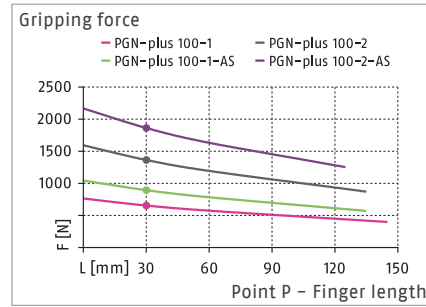
Finger Accessories

- 23 **UZZ**
The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.
- 24 **BSWS-AR**
Adapter pin of the 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 pin 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

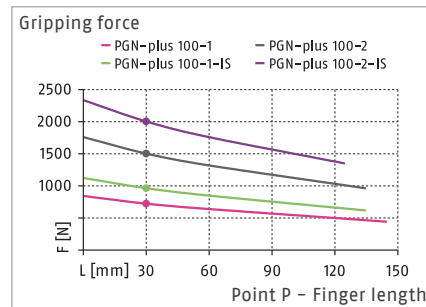
BSWS-SBR
Finger blank made of steel with interface to the jaw quick-change system
- 29 **BSWS-UR**
Locking mechanism for the integration of the jaw quick-change system into customized fingers
- 30 **ABR/SBR**
Finger blanks made of aluminum or steel with standardized screw connection diagram
- 31 **ZBA**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



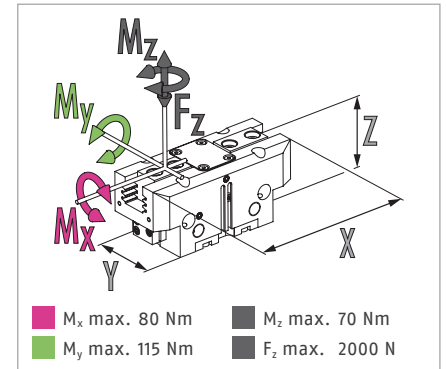
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



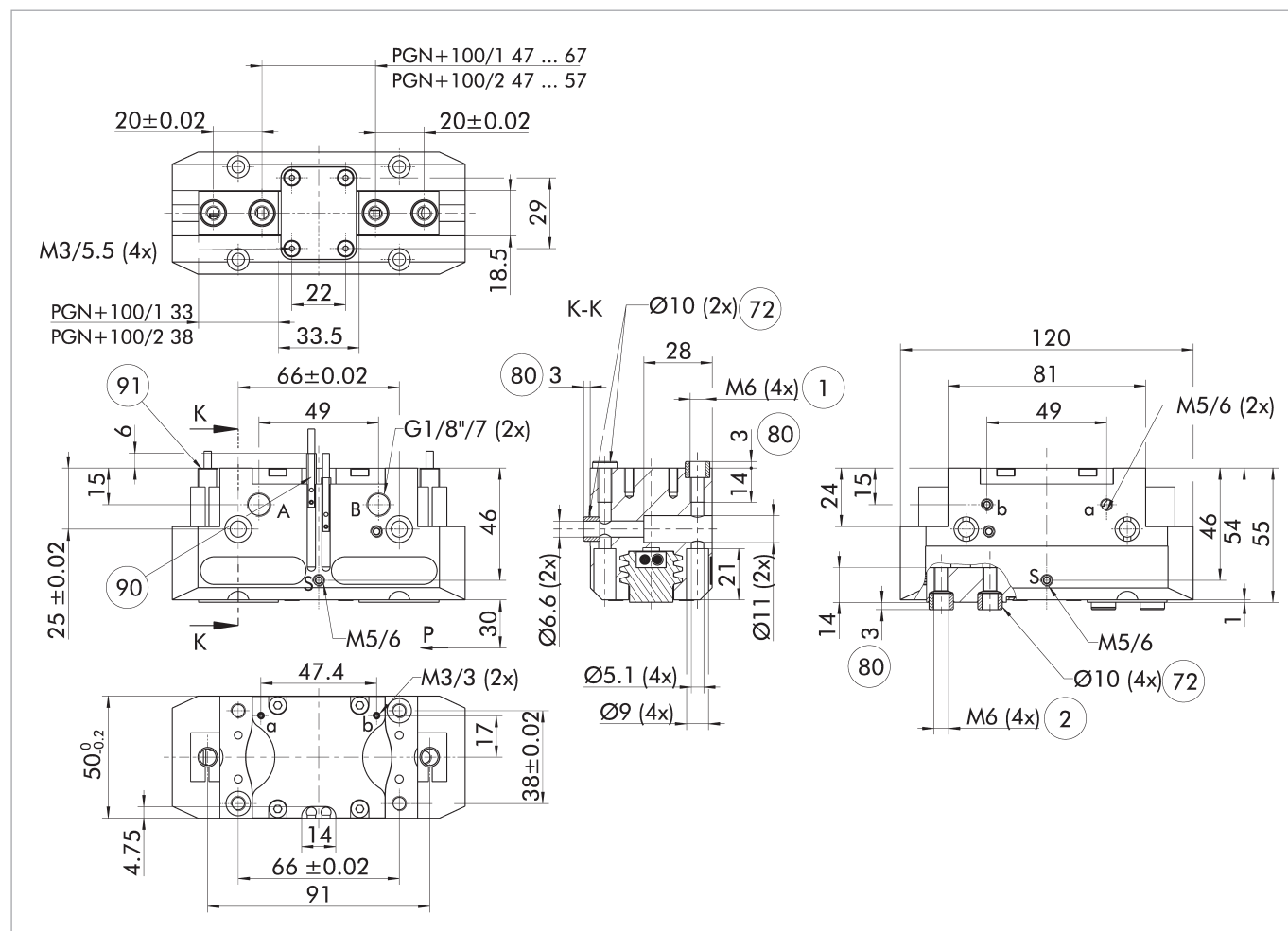
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	1.1	1.1	1.1	1.1	1.1	1.1
IP protection class		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							
Dustproof version		37371102	37371152	37371402	37371452	37371462	37371472
IP protection class		64	64	64	64	64	64
Weight	[kg]	0.99	0.99	1.18	1.18	1.18	1.18
Corrosion-protected version		38371102	38371152	38371402	38371452	38371462	38371472
High-temperature version		39371102	39371152	39371402	39371452	39371462	39371472
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		0372102	0372152	0372402		0372462	
Closing/opening force	[N]	1080/1185	2235/2445	1280/-		-/1385	
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		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.

Main view

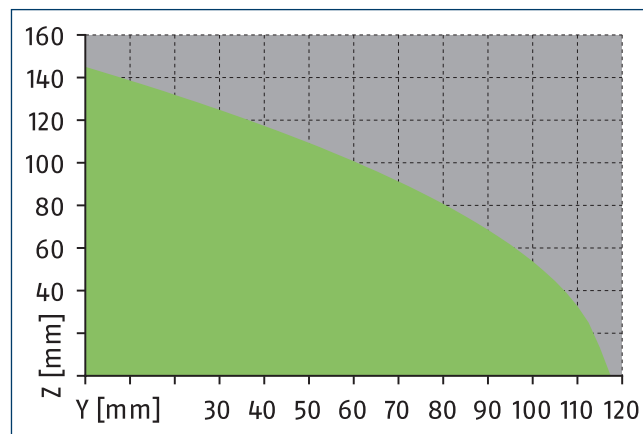
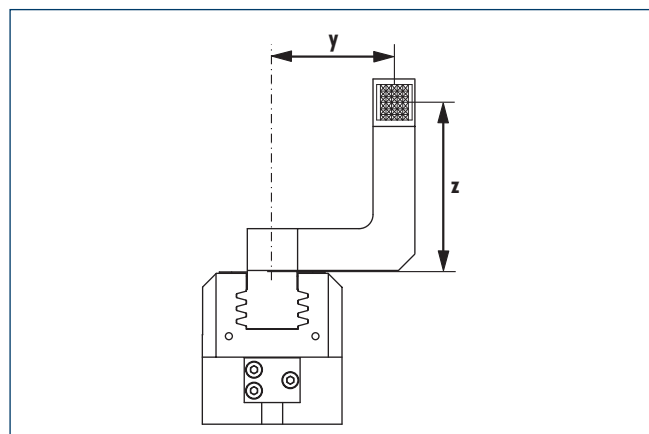


The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- ① As an alternative/in addition to spring-assisted mechanical gripping force maintenance, the SDV-P pressure maintenance valve can be used for I.D. and O.D. gripping (see "Accessories" section of catalog).

- A, a Main / direct connection, gripper opening
B, b Main / direct connection, gripper closing
S Air purge connection
① Gripper connection
② Finger connection
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part
90 Sensor MMS 22..
91 Sensor IN ...

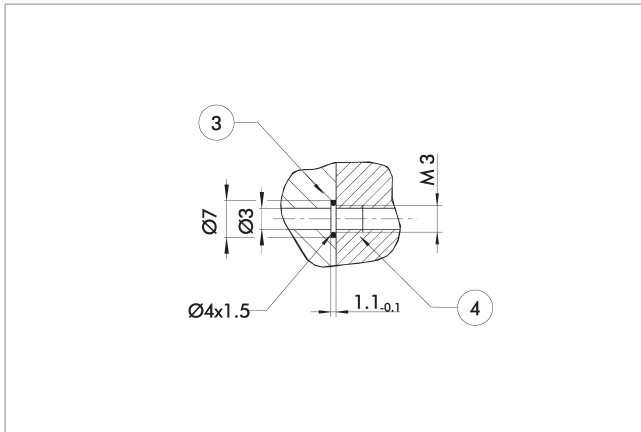
Maximum permitted finger projection



■ Permitted range ■ Inadmissible range

The curve applies for stroke version 1. For other versions, the curve must be parallelly off-set to the max. permissible finger length.

Hose-free direct connection M3

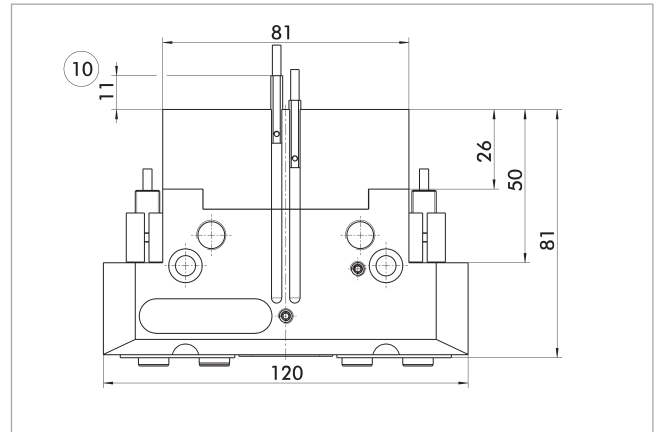


③ Adapter

④ Grippers

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

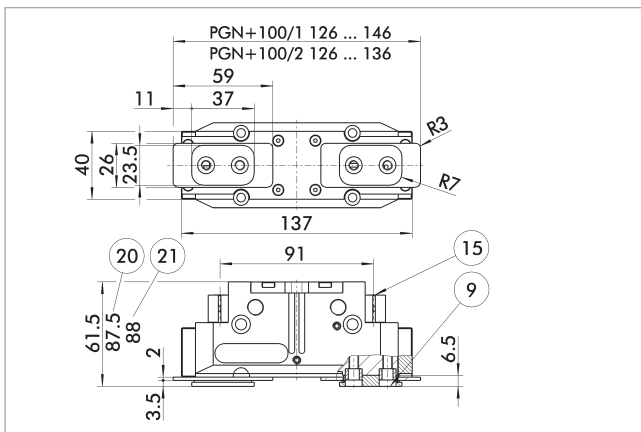
Gripping force maintenance version AS/IS



⑩ Projection applies only for AS version

The mechanical gripping force maintenance device ensures that a minimum clamping force will be applied even if there is a drop in pressure. In the AS/S variant this acts as a closing force, in the IS variant as an opening force. Besides this, gripping force maintenance can be used to increase gripping force or for single actuated gripping.

Dustproof version



⑨ For mounting screw connection diagram, see basic version

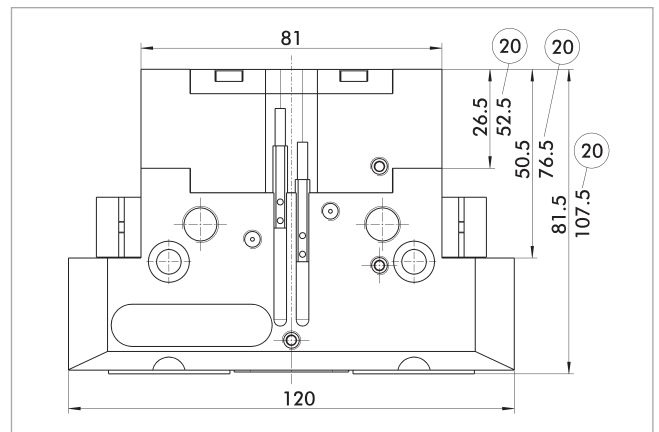
⑳ For version AS/IS

㉑ Applies for KVZ version

⑮ Sealing bolt

The "dustproof" option increases the degree of protection against penetrating substances. The assembly diagram shifts by the height of the intermediate jaw. The finger length is still measured from the upper edge of the gripper housing.

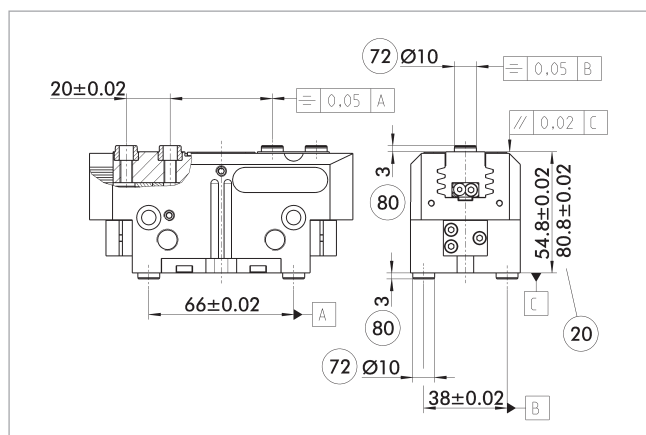
Power booster version



㉒ For version AS/IS

The KVZ cylinder increases the gripping forces during opening and closing. A second, in series-connected piston also increases the force on the wedge hook. Please consider that grippers which are equipped with a gripping force maintenance device are higher.

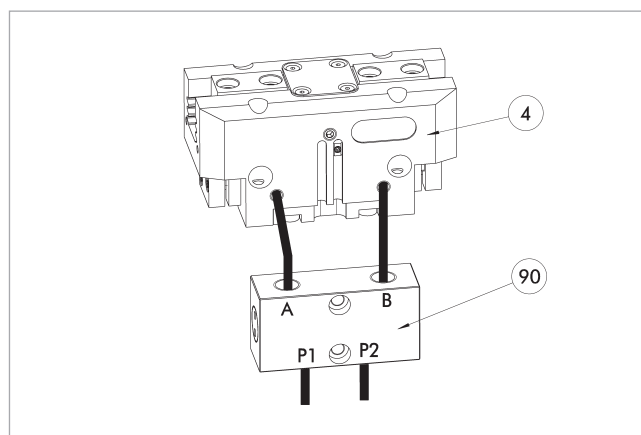
Precision version



- 20 For version AS/IS
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part

The indicated tolerances just refer to the variants of precision versions shown in the chart of technical specifications. All other variants of precision versions are available on request.

SDV-P pressure maintenance valve



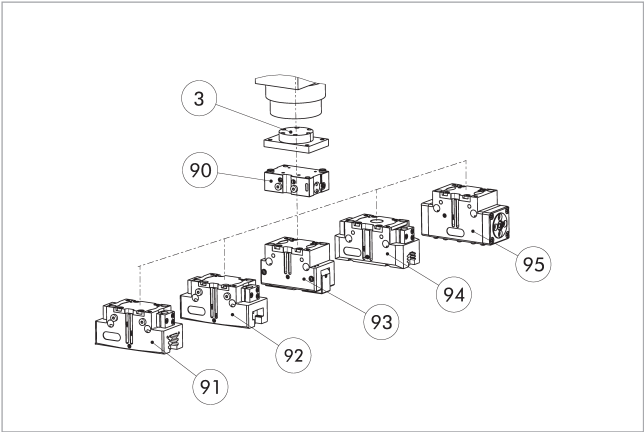
- 4 Grippers
90 SDV-P pressure maintenance valve

The SDV-P pressure maintenance valves ensure in emergency stop situations that the pressure in the piston chamber of pneumatic gripper, swivel, and quick-change modules as well as in linear axes is temporarily maintained.

Description	ID	Recommended hose diameter [mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8

- ① In order to achieve the specified closing and opening time for each gripper variant, the recommended hose diameter must be used. The direct allocation of the respective variant of the gripper for the respective SDV-P can be found at schunk.com.

SDV-P E-P pressure maintenance valve



- 3

Adapter
- 90

SDV-P E-P pressure maintenance valve
- 91

2-finger parallel gripper PGN-plus/PGN-plus-P
- 92

2-finger parallel gripper JGP-P
- 93

2-finger angular gripper PWG-plus
- 94

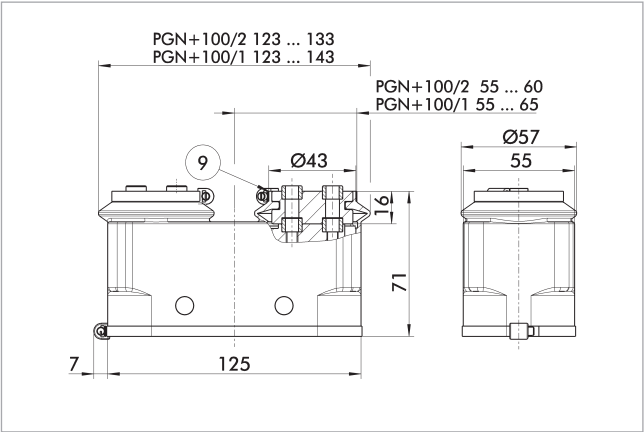
2-finger parallel gripper PGB
- 95

Sealed DPG-plus gripper

The SDV-P E-P pressure maintenance valves ensure that the pressure in the piston chamber is maintained temporarily during an emergency stop. SDV-P E-P can be directly connected to the listed grippers without the need for additional pneumatic hoses.

Description	ID
Pressure maintenance valve	
SDV-P 100-E-P	0300126

Protective cover HUE PGN-plus 100



- 9

For mounting screw connection diagram, see basic version

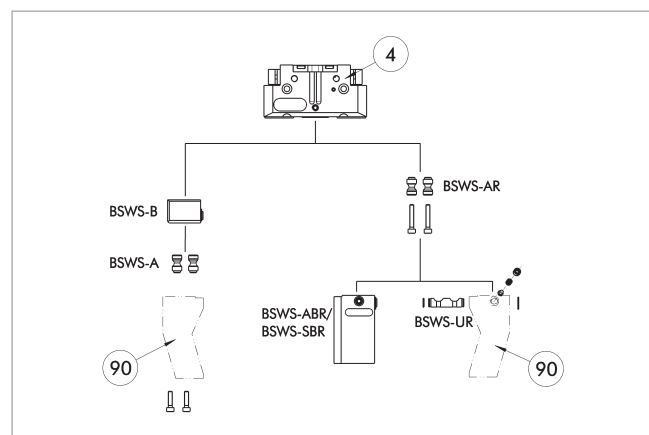
The HUE protective cover fully protects the gripper against external influences. The cover is suitable for applications of up to IP65 if an additional sealing of the cover bottom is provided. For detailed information, please see the HUE series. The connection diagram shifts by the height of the intermediate jaw.

Description	ID	IP protection class
Protection cover		
HUE PGN-plus 100	0371482	65

- 1

The HUE protective cover is not suitable for use on grippers with gripping force maintenance. An inductive monitoring of the gripper in connection with the HUE protective cover is not possible. SCHUNK recommends the use of magnetic sensors that are approved for the respective gripper variant.

BSWS jaw quick-change jaw systems



④ Grippers

⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product. It is not possible to combine BSWS-AR adapter pins with grippers in the dust-tight version. Please feel free to contact us for alternative solution proposals.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 100	0303026	2
BSWS-AR 100	0300094	2
Quick-change jaw system base		
BSWS-B 100	0303027	1
Jaw quick-change system finger blank		
BSWS-ABR-PGZN-plus 100	0300074	1
BSWS-SBR-PGZN-plus 100	0300084	1
Jaw quick-change system locking mechanism		
BSWS-UR 100	0302993	1

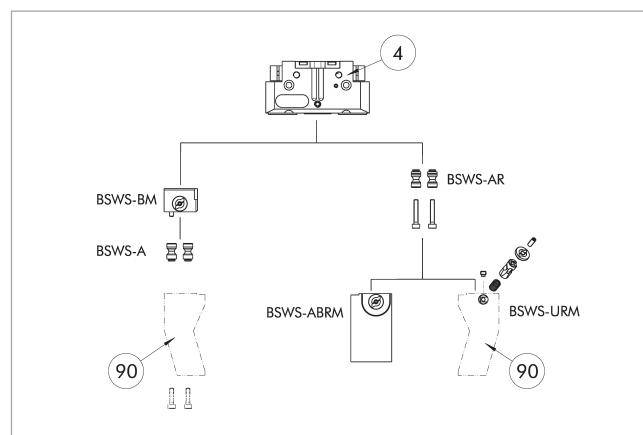
① If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked. Only systems that are listed in the table, can be used.

Fields of application

Series	Size	Variant	Suitability
PGN-plus	100	-1 (6 bar)	■■■■
PGN-plus	100	-1-AS/1-IS (6 bar)	■■■■
PGN-plus	100	-2 (6 bar)	■■■■
PGN-plus	100	-2-AS/2-IS (6 bar)	■■■■
PGN-plus	100	-...-KVZ (6 bar)	■■□□
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.

Jaw quick-change system BSWS-M



④ Grippers

⑨ Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product. It is not possible to combine BSWS-AR adapter pins with grippers in the dust-tight version. Please feel free to contact us for alternative solution proposals.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 100	0303026	2
BSWS-AR 100	0300094	2
Quick-change jaw system base		
BSWS-BM 100	1313902	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 100	1420853	1
Jaw quick-change system locking mechanism		
BSWS-URM 100	1398403	1

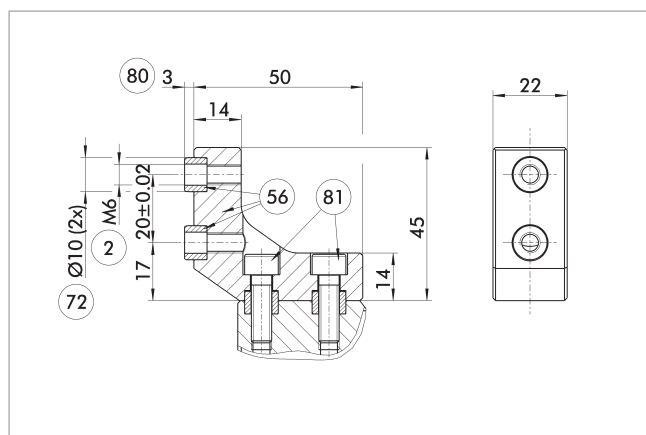
① If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked. Only systems that are listed in the table, can be used.

Fields of application

Series	Size	Variant	Suitability
PGN-plus	100	-1 (6 bar)	■■■■
PGN-plus	100	-1-AS/1-IS (6 bar)	■■■■
PGN-plus	100	-2 (6 bar)	■■■■
PGN-plus	100	-2-AS/2-IS (6 bar)	■■■■
PGN-plus	100	-...-KVZ (6 bar)	■■□□
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.

ZBA-L-plus 100 intermediate jaws

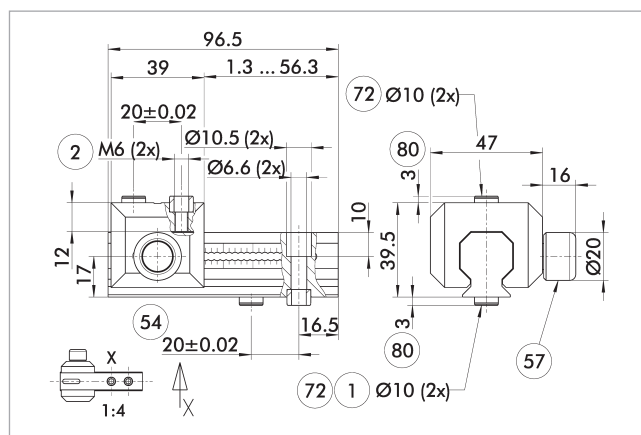


- | | |
|--------------------------------------|---|
| ② Finger connection | ⑧① Depth of the centering sleeve hole in the counter part |
| ⑤⑥ Included in the scope of delivery | ⑧① Not included in the scope of delivery |
| ⑦② Fit for centering sleeves | |

The optional ZBA-L-plus intermediate jaws allow the screw connection diagram of the top jaws to be rotated by 90°. This makes it easier to design and produce top jaws (particularly for long versions) because no deep through-bores are required.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-L-plus 100	0311742	Aluminum	PGN-plus 100	1

UZH 100 universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw. The fully removable UZB-S slide (can also be ordered separately) allows for a quick jaw change.

Description	ID	Grid dimension
		[mm]
Universal intermediate jaw		
UZF 100	0300044	2.5
Finger blank		
ABR-PGZN-plus 100	0300012	
SBR-PGZN-plus 100	0300022	
Slide for universal intermediate jaw		
UZF-S 100	5518272	2.5

- ① If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked.

Fields of application

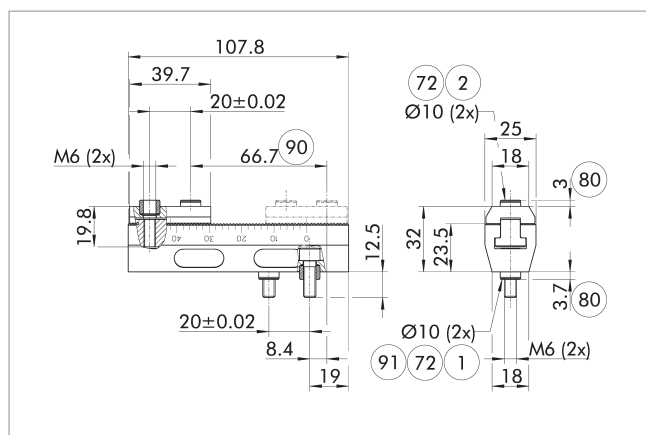
Series	Size	Variant	Suitability
PGN-plus	100	-1 (6 bar)	■■■■
PGN-plus	100	-1-AS/1-IS (6 bar)	■■■■
PGN-plus	100	-2 (6 bar)	■■■■
PGN-plus	100	-2-AS/2-IS (6 bar)	■■■□
PGN-plus	100	-...-KVZ (6 bar)	□□□□

Legend

■ ■ ■ ■	Can be combined without restrictions
■ ■ □ □	Use with restrictions (see loading limits)
□ □ □ □	cannot be combined

The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.

Adjustable intermediate jaw VZB 100

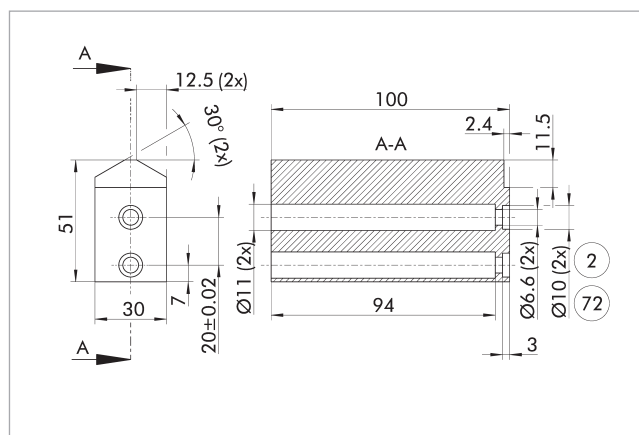


- ① Gripper connection
- ② Finger connection
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑨① Max. adjustment travel
- ⑨① Not included in the VZB scope of delivery

The drawing shows the adjustable intermediate jaw VZB.

Description	ID	Grid dimension
		[mm]
Adjustable intermediate jaw		
VZB 100	1636492	1.6

Finger blanks ABR/SBR-PGZN-plus 100



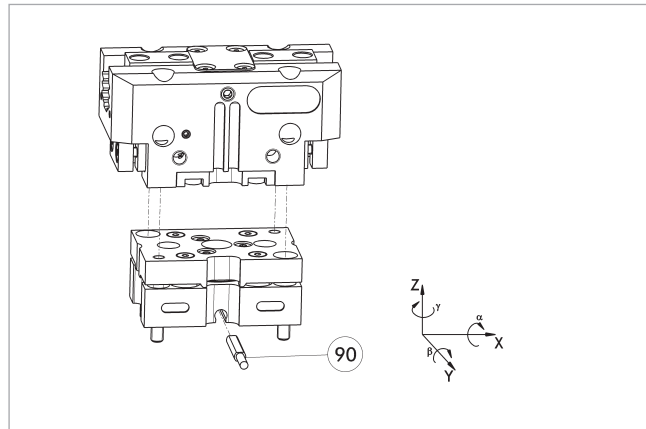
- ② Finger connection
- ⑦② Fit for centering sleeves

The drawing shows the finger blank which can be reworked by the customer.

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 100	0300012	Aluminum (3.4365)	1
SBR-PGZN-plus 100	0300022	Steel (1.7131)	1

- ① When finger blanks are used, the closing stroke of individual gripper series may be limited. Please check this in detail in advance using the CAD data and adjust the reworking of the fingers accordingly.

Tolerance compensation unit TCU

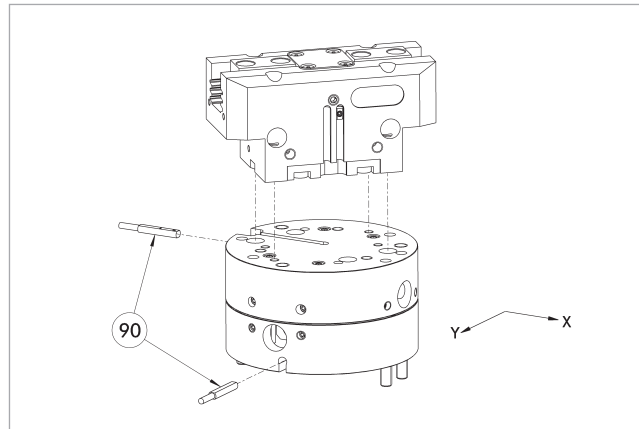


- ⑨① Monitoring of locking

Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details please refer to our catalog robot accessories.

Description	ID	Locking	Deflection	Often combined
Compensation unit				
TCU-P-100-2-MV	0324808	yes	±1°/±1,5°/±1,2°	●
TCU-P-100-3-0V	0324811	no	±1°/±1,5°/±1,2°	

Compensation unit AGE-F



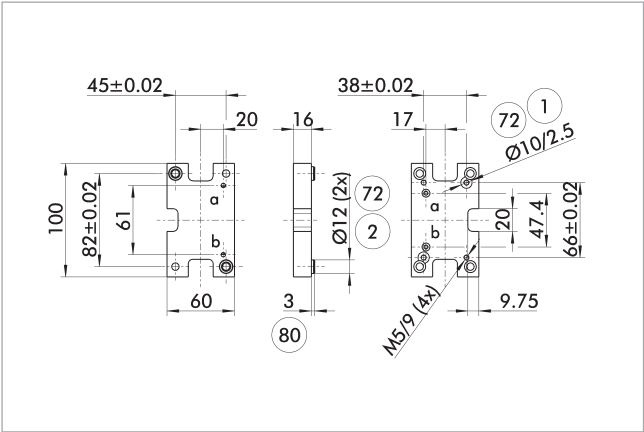
- ⑨① Monitoring

The unit has direct connection possibilities for different grippers of the PGN-plus, PGN-plus-P and PZN-plus series. For more detailed information, please refer to the main view.

Description	ID	Compensation XY	Min. return force with integrated spring	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-080-1	0324960	± 5	39	
AGE-F-XY-080-2	0324961	± 5	85	
AGE-F-XY-080-3	0324962	± 5	90	●

- ① Due to the interfering contour, monitoring of the gripper is not possible.

Adapter plate for PGN-plus 100

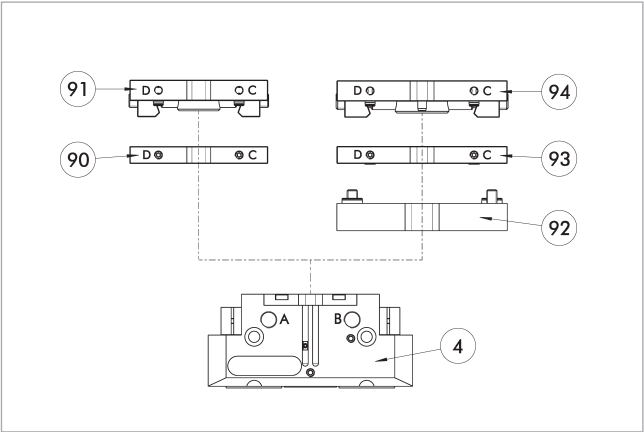


- 1 Robot-side connection
- 2 Tool-side connection
- 72 Fit for centering sleeves
- 80 Depth of the centering sleeve hole in the counter part

The adapter plate has integrated air feed-throughs in order to be able to use the hose-free direct connection of the appropriate gripper.

Description	ID
Tool side	
A-CWA-125-100-P	0305829

Compact change system for grippers

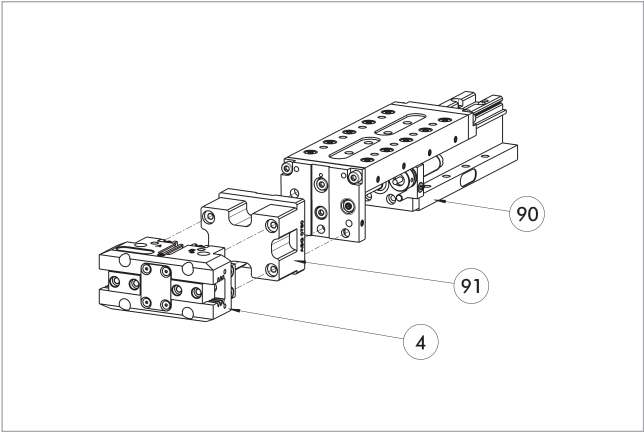


- 4 Grippers
- 90 CWA compact change adapter
- 91 CWK compact change master
- 92 A-CWA adapter plate
- 93 CWA compact change adapter
- 94 CWK compact change master

The CWS is a manual change system with integrated air feed-through for simple exchange of the handling components. The gripper can either be attached directly to a change system of the same size or mounted to a change system one size larger via an adapter plate. The adapter plate also has integrated air feed-throughs.

Description	ID
Tool side	
A-CWA-125-100-P	0305829
CWA compact change adapter	
CWA-100-P	0305801
CWK compact change master	
CWK-100-P	0305800

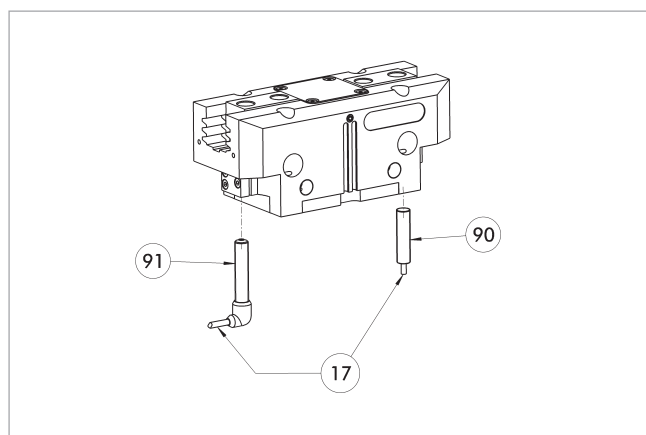
Modular Assembly Automation



- 4 Grippers
- 90 Linear axis CLM/KLM/LM/ELP/ELM/ELS/HLM
- 91 ASG adapter plate

Grippers and linear axes can be combined as standard from the modular system of modular assembly automation. For more information see our main catalog "Modular Assembly Automation".

Inductive proximity switches



17 Cable outlet

91 Sensor IN...-SA

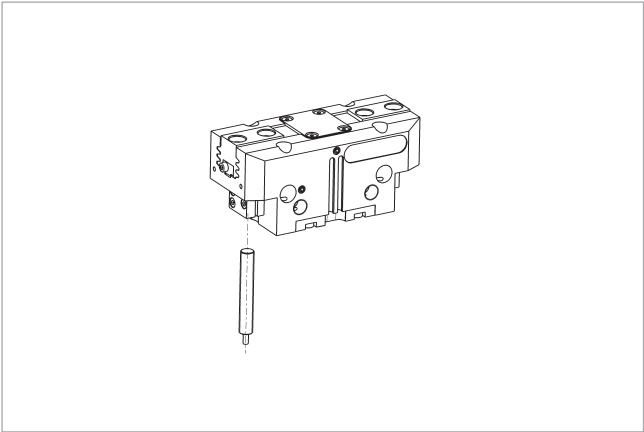
90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
INK 80-S	0301550	
Inductive proximity switch with lateral cable outlet		
IN 80-S-M12-SA	0301587	
IN 80-S-M8-SA	0301483	●
INK 80-S-SA	0301566	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Inductive position sensor IPD

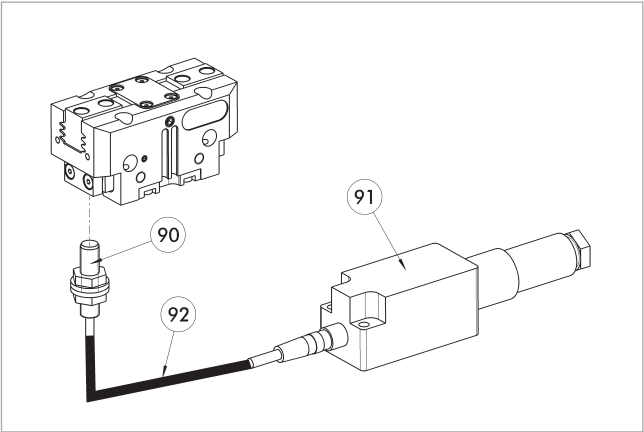


Inductive position sensor for multi-position sensing for any number of positions with analog or IO-Link output signal.

Description	ID	Often combined
Attachment kit for position sensor		
AS-IPD 80-PGZN-plus 100-1	1640588	
AS-IPD 80-PGZN-plus 100-2	1640621	
Inductive position sensor		
IPD 80-A-M8	1600417	
IPD 80-IOL-M12	1600415	●
IPD 80-IOL-M8	1600413	●

① When an IPD position sensor is used, one attachment kit (AS-IPD...) and one IPD sensor are required per gripper.

Flexible position sensor



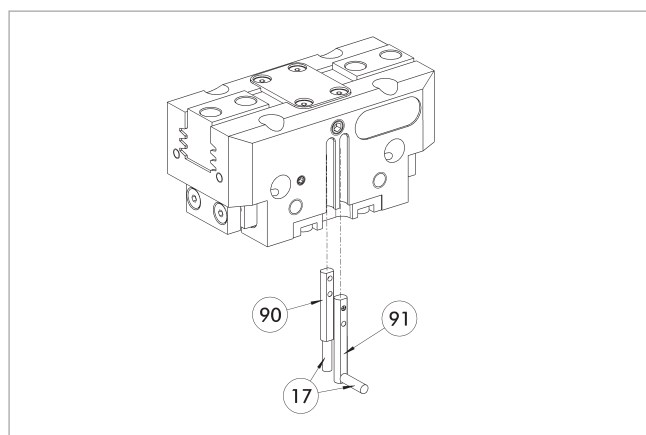
- 90 FPS-S sensor
- 91 FPS-F5 evaluation electronic
- 92 Cable extension

Flexible position monitoring of up to five positions.

Description	ID
Attachment kit for FPS	
AS-FPS-PGZN-plus 100-1	0301634
AS-FPS-PGZN-plus 100-2/PZB 125	0301635
Sensor	
FPS-S M8	0301704
Evaluation electronics	
FPS-F5	0301805
Cable extension	
KV BG08-SG08 3P-0050	0301598
KV BG08-SG08 3P-0100	0301599

① When using an FPS system, an FPS sensor (FPS-S) as well as an electronic processor (FPS-F5 / F5 T) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are optionally available – see catalog chapter “Accessories.”

Electronic magnetic switch MMS



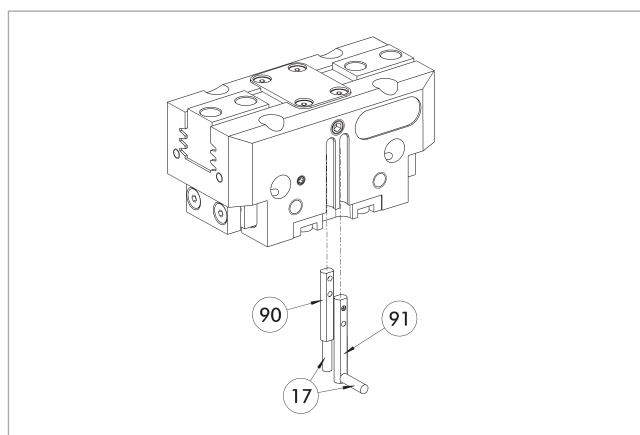
- 17 Cable outlet
90 Sensor MMS 22..
91 Sensor MMS 22...-SA

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Reed Switches		
RMS 22-S-M8	0377720	●
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Programmable magnetic switch MMS 22-PI1



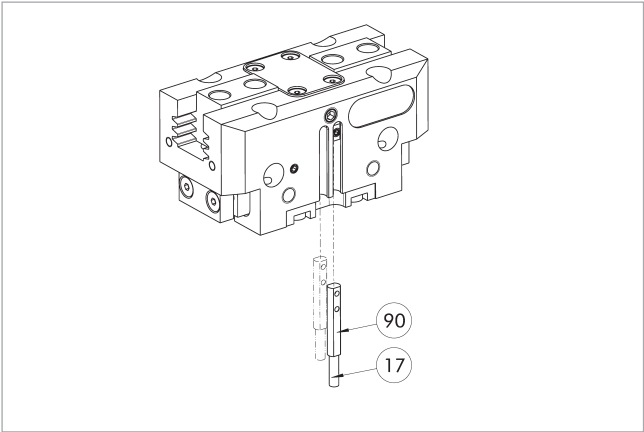
- 17 Cable outlet
90 Sensor MMS 22 PI1-...
91 Sensor MMS 22 ...-PI1-...-SA

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Programmable magnetic switch MMS 22-PI2



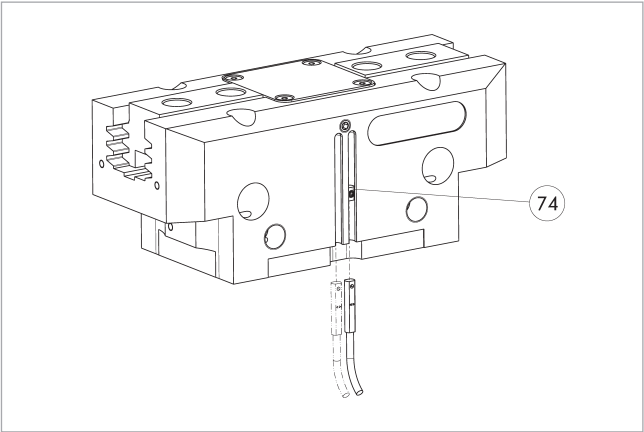
17 Cable outlet 90 MMS 22...-PI2-... sensor

Position monitoring with two programmable positions per sensor and electronics integrated in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI2-S-M8-PNP-HD	0301130	●
MMSK 22-PI2-S-PNP-HD	0301132	

- ① One sensor is required per unit for monitoring two positions. Extension cables and sensor distributors are optionally available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor systems.

MMS-P programmable magnetic switch



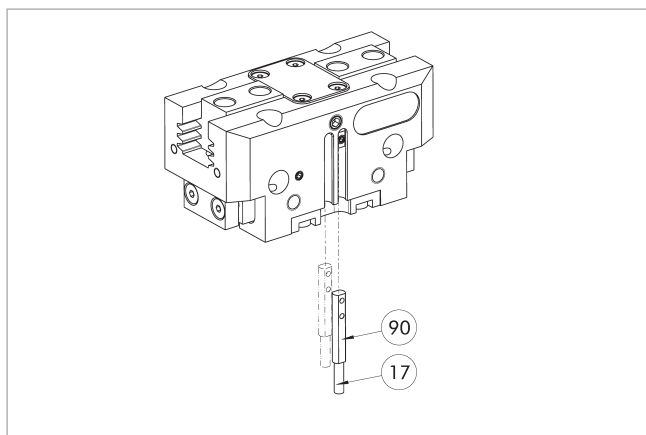
74 Limit stop for sensor

Position monitoring with two programmable positions per sensor. End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Programmable magnetic switch		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
Connection cables		
KA GLN0804-LK-00500-A	0307767	●
KA GLN0804-LK-01000-A	0307768	
KA WLN0804-LK-00500-A	0307765	
KA WLN0804-LK-01000-A	0307766	
Clip for connector/socket		
CLI-M8	0301463	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

- ① One sensor is required per unit for monitoring two positions. Extension cables and sensor distributors are optionally available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor systems.

Analog position sensor MMS-A



17 Cable outlet

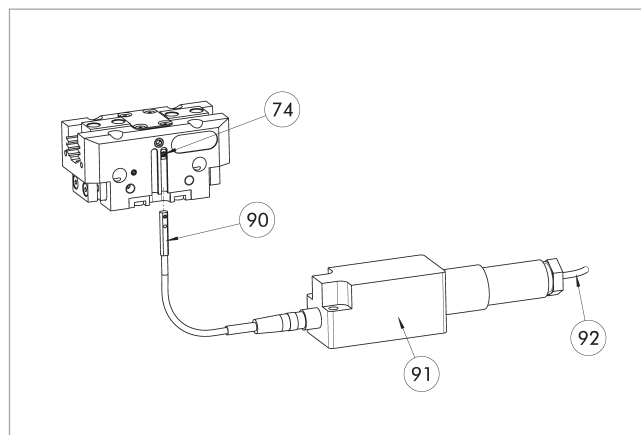
90 MMS 22-A-... sensor

Non-contact measuring, analog multi-position monitoring for any number of positions, easy to assemble in the C-slot. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the chart provided, teaching is only possible with the ST teaching tools.

Description	ID
Analog position sensor	
MMS 22-A-10V-M08	0315825
MMS 22-A-10V-M12	0315828

- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

Flexible position sensor with MMS-A



74 Limit stop for sensor

91 FPS-F5 evaluation electronic

90 MMS 22-A-... sensor

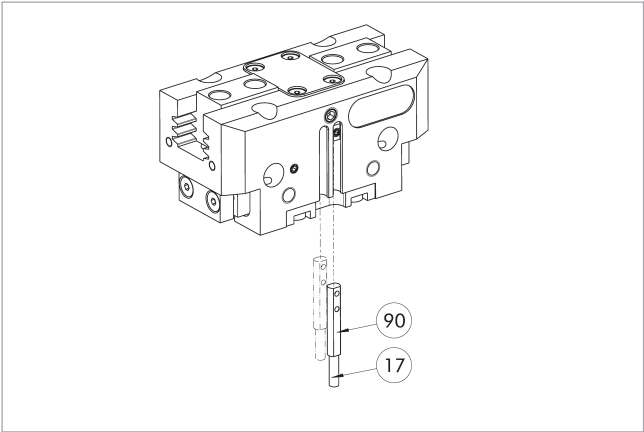
92 Connection cables

Flexible position monitoring of up to five positions. Sensor can be taught using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID
Analog position sensor	
MMS 22-A-05V-M08	0315805
Evaluation electronics	
FPS-F5	0301805
Sensor Teaching Tool	
MT-MMS 22-PI	0301030
Connection cables	
KA BG16-L 12P-1000	0301801

- ① When using an FPS system, one MMS 22-A-05V and one evaluation electronics (FPS-F5) are required per each gripper, as well as an attachment kit (AS), if listed. On option, cable extensions (KV) are available – see catalog chapter "Accessories."

Programmable magnetic switch MMS-I0-Link



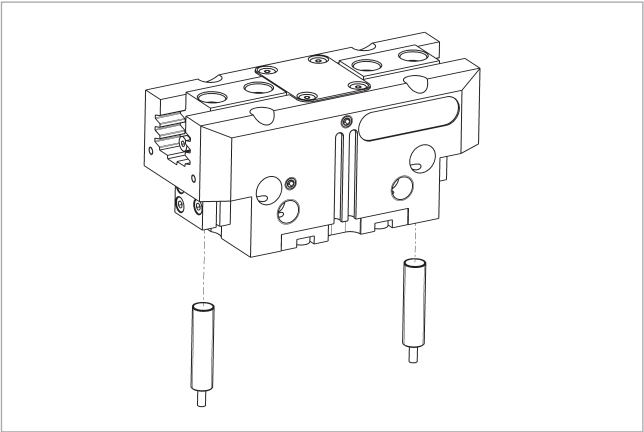
17 Cable outlet 90 Sensor MMS 22-I0L-...

Sensor for multi-position monitoring through detection of the complete gripper stroke. The sensor is mounted directly in the C-slot of the gripper. The sensor is programmed for the gripper via the I0-Link interface, Magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching tool (not included in scope of delivery; ID 0301026). An I0-Link master is required for operation.

Description	ID
Programmable magnetic switch	
MMS 22-I0L-M08	0315830
MMS 22-I0L-M12	0315835

- One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

Cylindrical reed switches



End position monitoring can be mounted with an attachment kit.

Description	ID
Attachment kit for proximity switch	
AS-RMS 80 PGN/PZN-plus 100/125	0377726
Reed Switches	
RMS 80-S-M8	0377721

- Two sensors (closer/S) are required for each unit and extension cables are available as an option. This attachment kit needs to be ordered optionally as an accessory. Two mounting kits are required for each gripper. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.



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