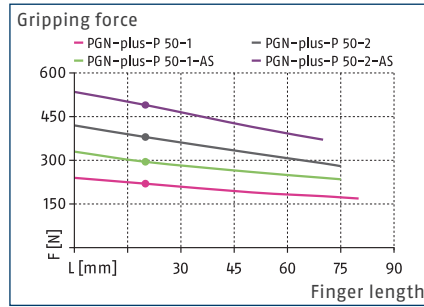


# PGN-plus-P 50

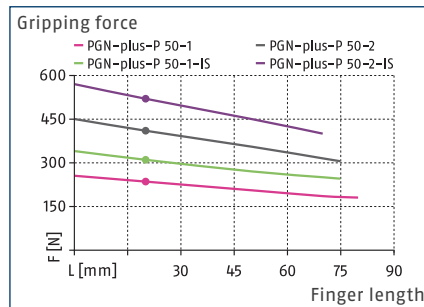
Universal gripper



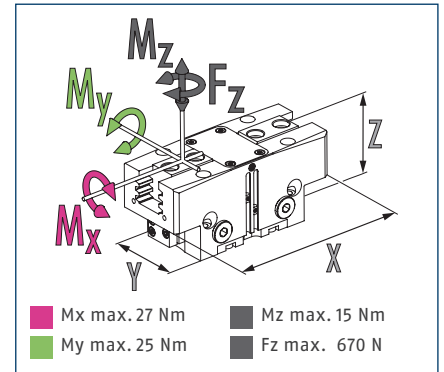
## Gripping force O.D. gripping



## Gripping force I.D. gripping



## Dimensions and maximum loads



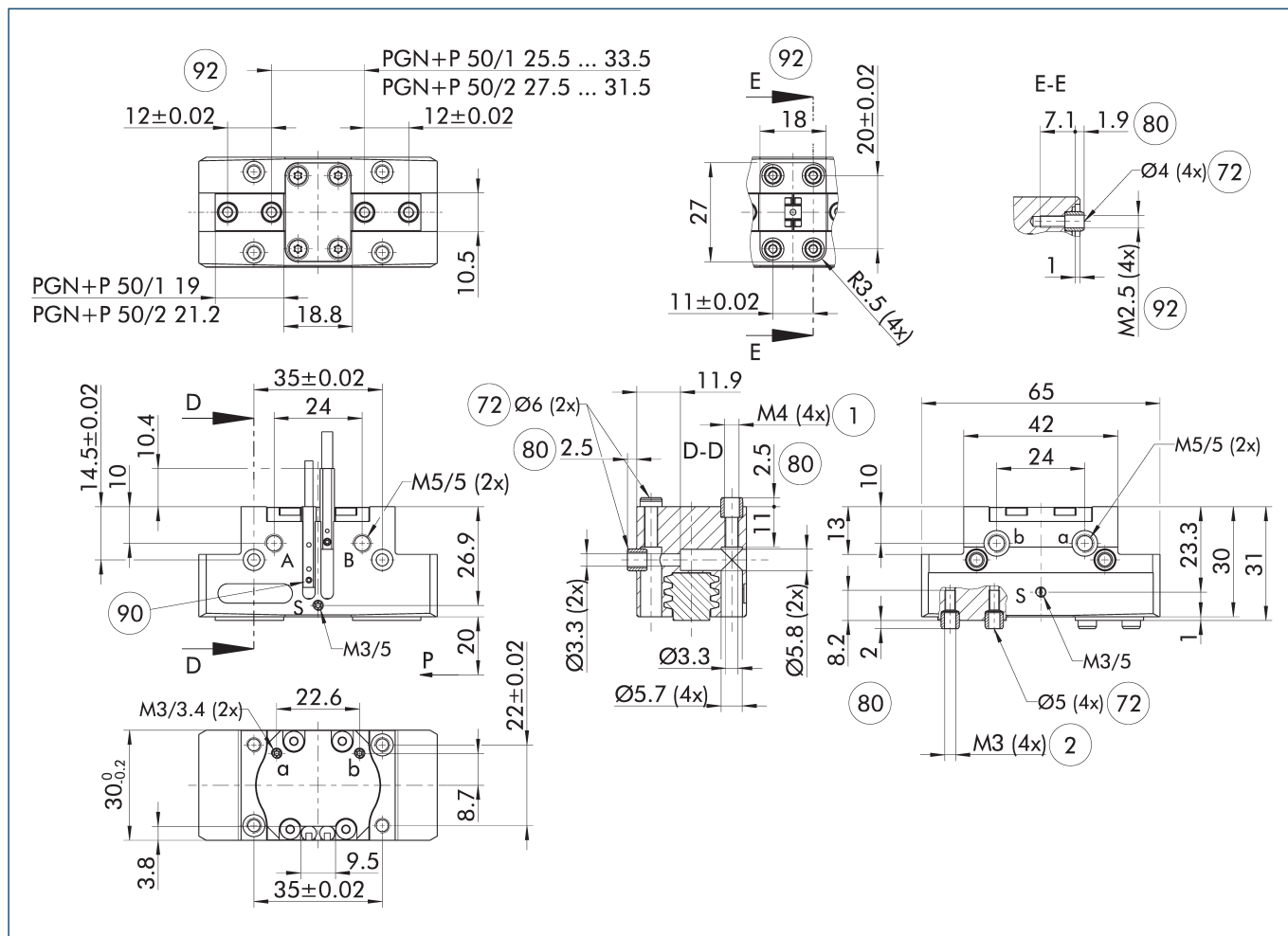
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

## Technical data

Description		PGN-plus-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
Cylinder volume per double stroke	[cm <sup>3</sup> ]	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]	0.015/0.015	0.015/0.015	0.015/0.025	0.015/0.025	0.025/0.015	0.025/0.015
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 weight per finger	[kg]	0.2	0.2	0.2	0.2	0.2	0.2
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]	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
<b>Options and their characteristics</b>							
Dustproof version		1317516	1317527	1317531	1317534	1317539	1317541
IP protection class		64	64	64	64	64	64
Weight	[kg]	0.21	0.21	0.24	0.24	0.24	0.24
Corrosion-protected version		38318472	38318473	38318474	38318475	38318476	38318477
High-temperature version		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		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.

## 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).

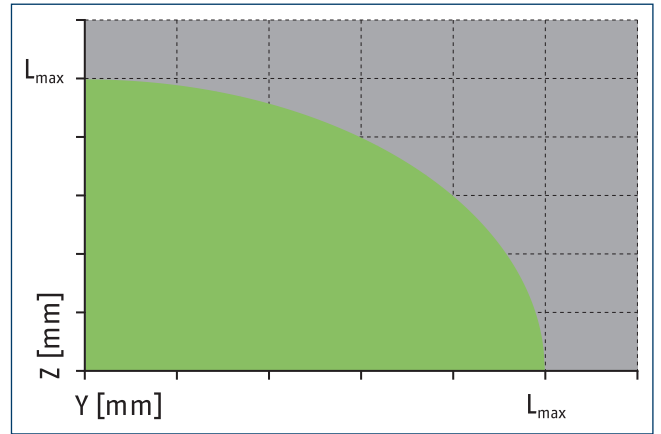
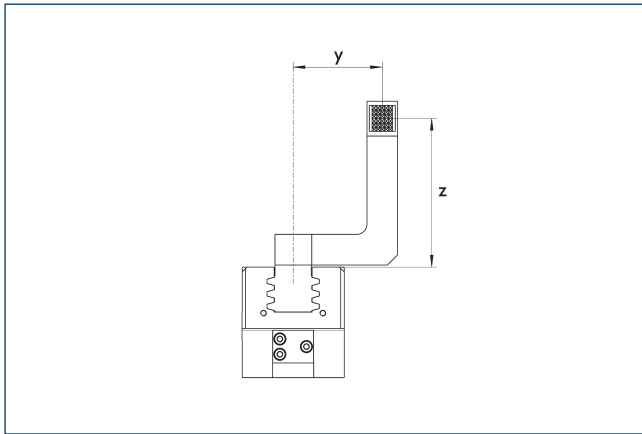
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- S Air purge connection
- ① Gripper connection
- ② Finger connection
- ⑦② Fit for centering sleeves

- ⑧① Depth of the centering sleeve hole in the counter part
- ⑨① Sensor MMS 22..
- ⑨② Screw connection with centering for customized mounting (these centering sleeves are not included in the scope of delivery)

# PGN-plus-P 50

Universal gripper

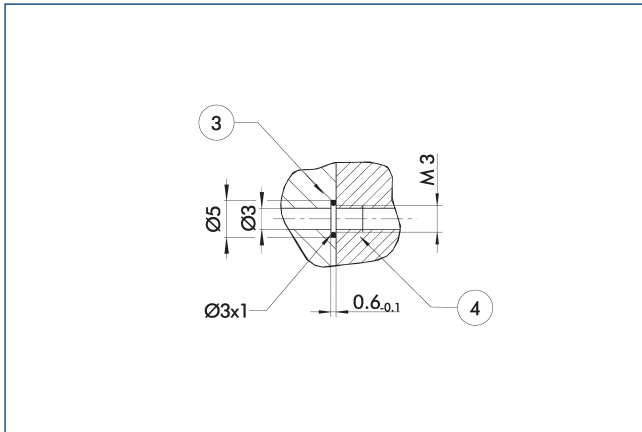
## Maximum permitted finger projection



■ Permitted range      ■ Inadmissible range

$L_{max}$  is equivalent to the maximum permitted finger length, see the technical data table.

## Hose-free direct connection M3

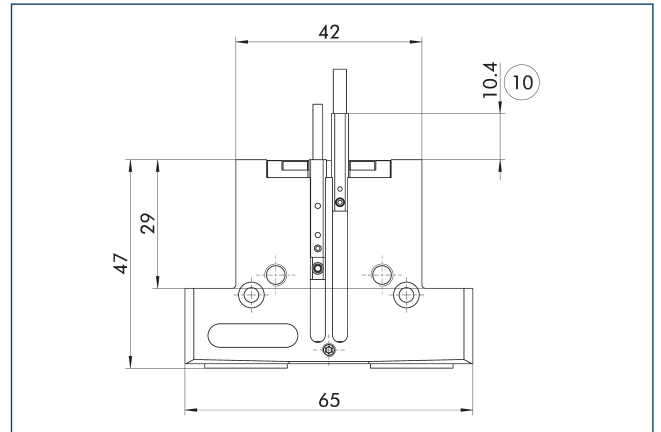


③ Adapter

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.

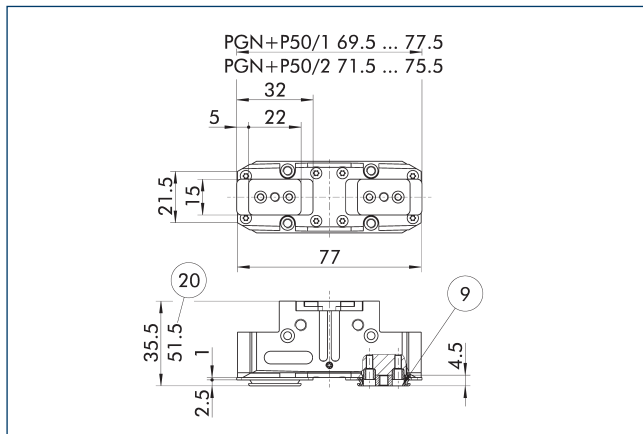
## Gripping force maintenance version AS/IS



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



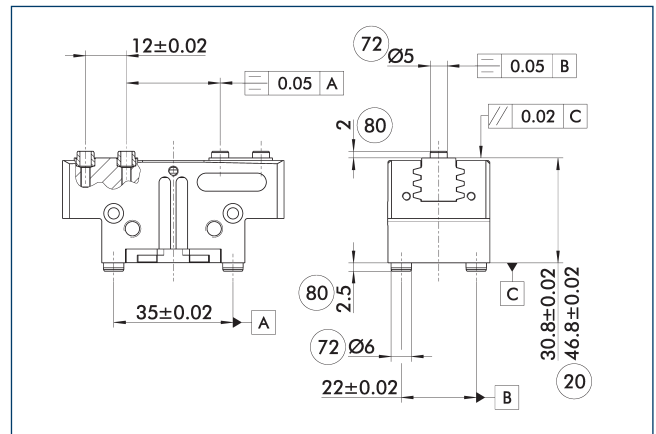
- ⑨ For mounting screw connection    ⑳ For version AS/IS diagram, see basic version

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.

Description	ID	
Dust cover		
SAD PGN-plus-P 50	1347474	

- ① The "dustproof" option can either be ordered as a pre-mounted gripper version or can be retrofitted to the gripper using the "SAD PGN-plus-P" retrofit kit.

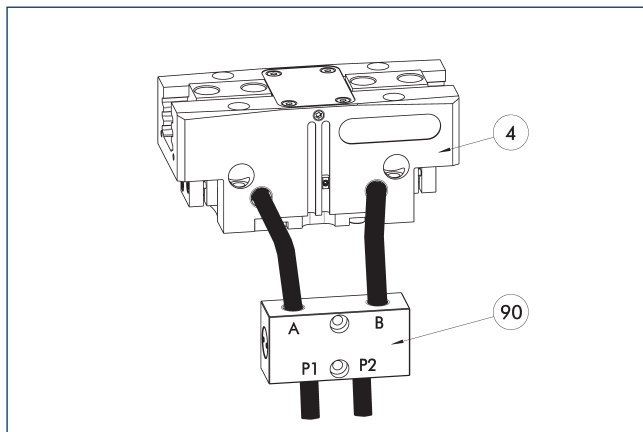
## Precision version



- ⑳ For version AS/IS    ㉓ Depth of the centering sleeve hole in the counter part  
 ㉒ Fit for centering sleeves

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



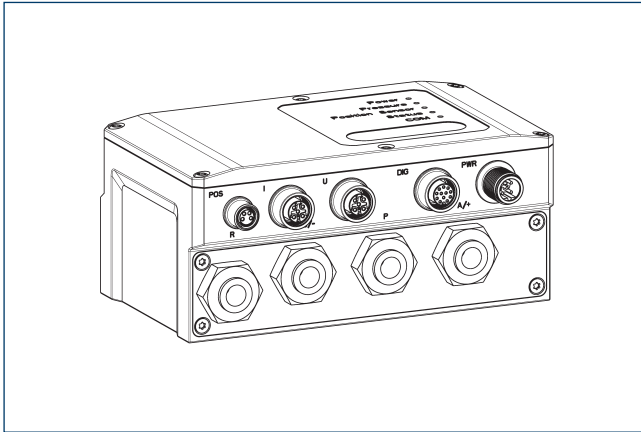
- ④ Grippers    ㉑ SDV-P pressure maintenance valve

The SDV-P pressure maintenance valve ensures in emergency STOP situations that the pressure in the piston chamber of pneumatic gripper, swivel, linear, and quick-change modules is temporarily maintained.

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

- 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.

## Pneumatic positioning device PPD

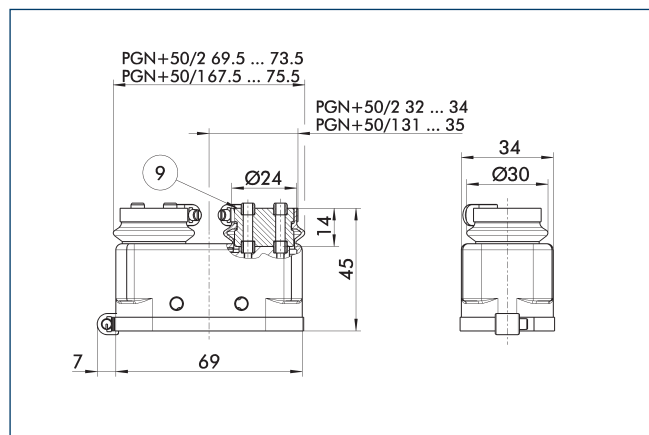


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID	
Pneumatic positioning device		
PPD 10-IOL	1540698	
Adapter		
A GGN0804-1204-A	1540691	
IO-Link connection cable		
KA GGN1205-1212-IOL-00100-A	1540697	
Voltage supply connection cable - cable track compatible		
KA GLN12B05-LK-01000-A	1540660	
Cable extension		
KV GGN0804-I0-00150-A	1540662	
KV GGN0804-I0-00300-A	1540663	
Assembly set		
Assembly set PPD	1540705	

① In addition to the PPD, a position sensor (SCHUNK IO-Link sensor or analog sensor (4...20 mA)) is required.

## Protective cover HUE PGN-plus 50



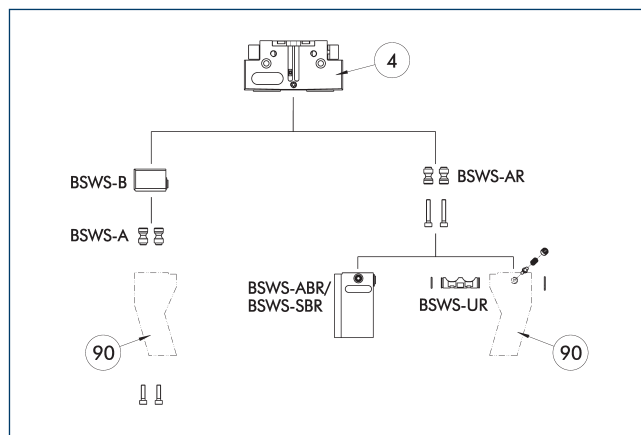
⑨ For mounting screw connection diagram, see basic version

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 50	0371479	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.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 50	0303020	2
BSWS-AR 50	0300091	2
Quick-change jaw system base		
BSWS-B 50	0303021	1
Jaw quick-change system finger blank		
BSWS-ABR-PGZN-plus 50	0300071	1
BSWS-SBR-PGZN-plus 50	0300081	1
Jaw quick-change system locking mechanism		
BSWS-UR 50	0302990	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

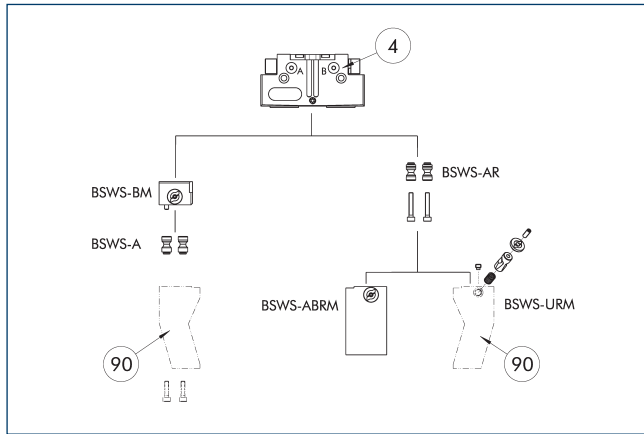
Series	Size	Variant	Suitability
PGN-plus-P	50	-1 (6 bar)	■■■■■
PGN-plus-P	50	-1-AS/1-IS (6 bar)	■■■■■
PGN-plus-P	50	-2 (6 bar)	■■■■■
PGN-plus-P	50	-2-AS/2-IS (6 bar)	■■■■■
Legend			
■■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

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

# PGN-plus-P 50

Universal gripper

## Jaw quick-change system BSWS-M



④ Grippers                      ⑨① Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-A 50	0303020	2
BSWS-AR 50	0300091	2
Quick-change jaw system base		
BSWS-BM 50	1313899	1
Jaw quick-change system finger blank		
BSWS-ABRM-PGZN-plus 50	1420850	1
Jaw quick-change system locking mechanism		
BSWS-URM 50	1380614	1

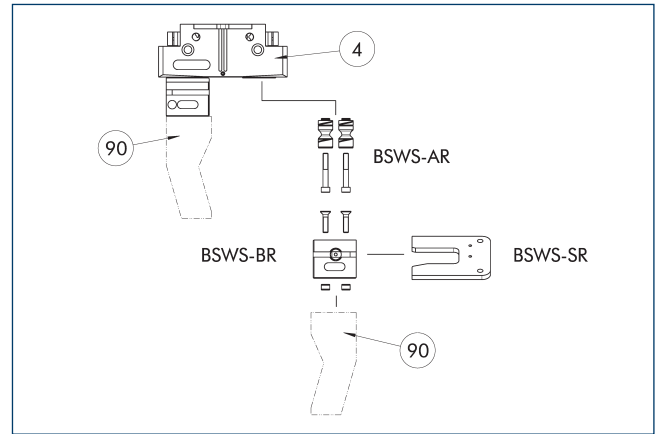
① If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked. Only systems that are listed in the table, can be used.

### Fields of application

Series	Size	Variant	Suitability
PGN-plus-P	50	-1 (6 bar)	■■■■■
PGN-plus-P	50	-1-AS/1-IS (6 bar)	■■■■■
PGN-plus-P	50	-2 (6 bar)	■■■■■
PGN-plus-P	50	-2-AS/2-IS (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-R



④ Grippers                      ⑨① Customized gripper fingers

There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	Scope of delivery
Jaw quick-change system adapter pin		
BSWS-AR 50	0300091	2
Quick-change jaw system base		
BSWS-BR 50	1555889	1
Storage system		
BSWS-SR 50	1555948	1
Attachment kit for proximity switch		
AS-IN40-BSWS-SR 50/64	1561455	1
Inductive proximity switch		
IN 40-S-M12	0301574	
IN 40-S-M8	0301474	
INK 40-S	0301555	
Inductive proximity switch with lateral cable outlet		
IN 40-S-M12-SA	0301577	
INK 40-S-SA	0301565	

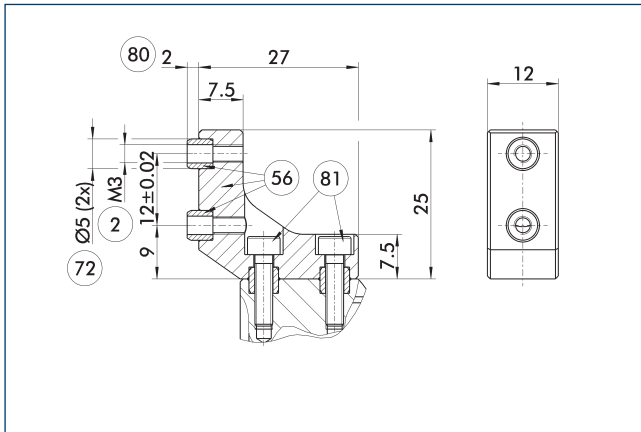
① If the operating pressure is higher than 6 bar, suitability for use beyond the application limits must be checked. Only systems that are listed in the table, can be used.

### Fields of application

Series	Size	Variant	Suitability
PGN-plus-P	50	-1 (6 bar)	■■■■■
PGN-plus-P	50	-1-AS/1-IS (6 bar)	■■■■■
PGN-plus-P	50	-2 (6 bar)	■■■■■
PGN-plus-P	50	-2-AS/2-IS (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 50 intermediate jaws

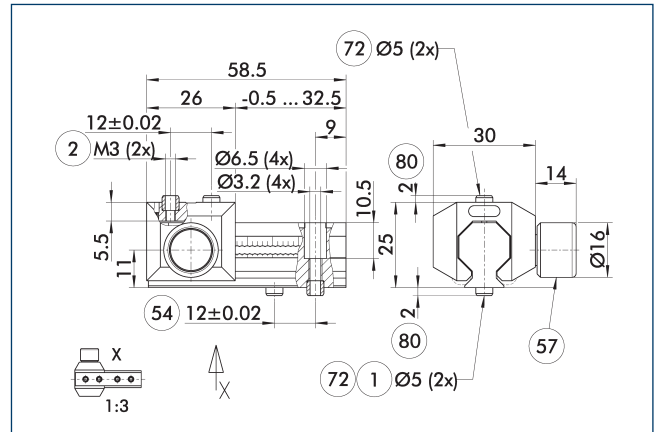


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

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 50	0311712	Aluminum	PGN-plus 50	1

## UZB 50 universal intermediate jaw



- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw.

Description	ID	Grid dimension
		[mm]
Universal intermediate jaw		
UZB 50	0300041	1.5
Finger blank		
ABR-PGZN-plus 50	0300009	
SBR-PGZN-plus 50	0300019	

④ 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-P	50	-1 (6 bar)	■■■■
PGN-plus-P	50	-1-AS/1-IS (6 bar)	■■□□
PGN-plus-P	50	-2 (6 bar)	■■□□
PGN-plus-P	50	-2-AS/2-IS (6 bar)	□□□□
Legend			
■■■■	Can be combined without restrictions		
■■□□	Use with restrictions (see loading limits)		
□□□□	cannot be combined		

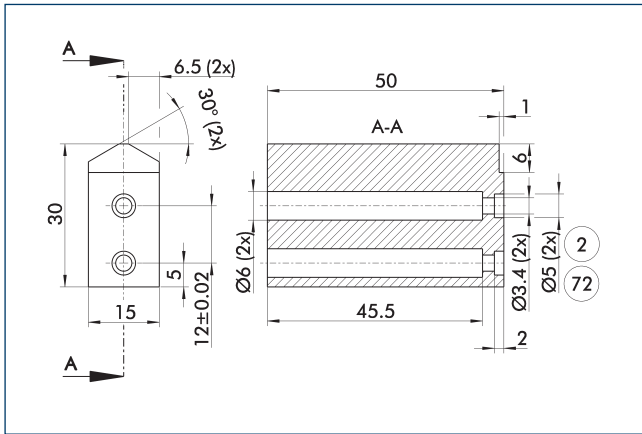
The load limits for describing the application limits can be found in the catalog chapter of the corresponding accessories.



# PGN-plus-P 50

Universal gripper

## Finger blanks ABR/SBR-PGZN-plus 50

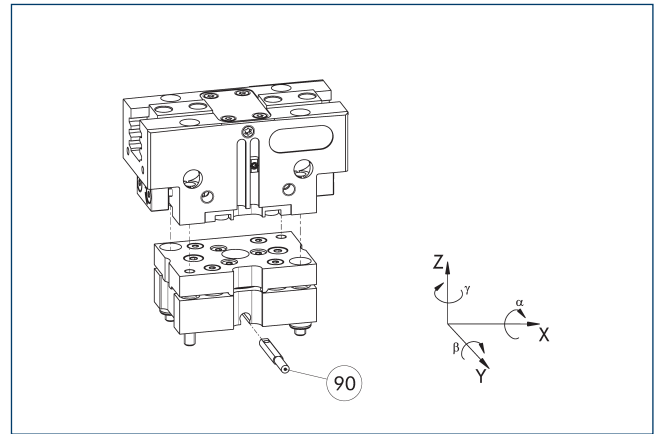


- ② Finger connection
- ⑦② Fit for centering sleeves

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

Description	ID	Material	Scope of delivery
Finger blank			
ABR-PGZN-plus 50	0300009	Aluminum (3.4365)	1
SBR-PGZN-plus 50	0300019	Steel (1.7131)	1

## Tolerance compensation unit TCU

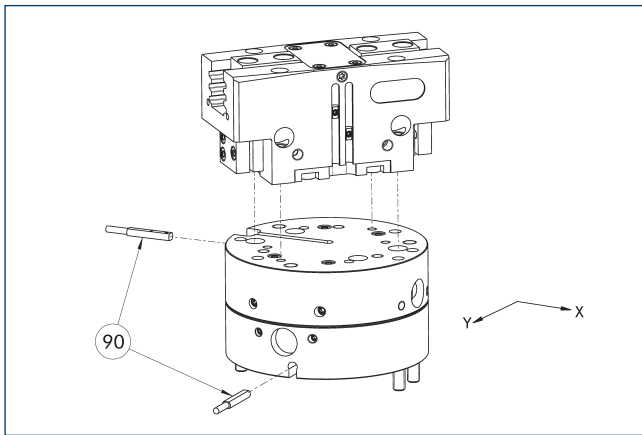


- ⑨⑩ Monitoring of locking

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
Compensation unit			
TCU-P-050-3-0V	0324757	no	±1°/±1°/±1,5°

## Compensation unit AGE-F



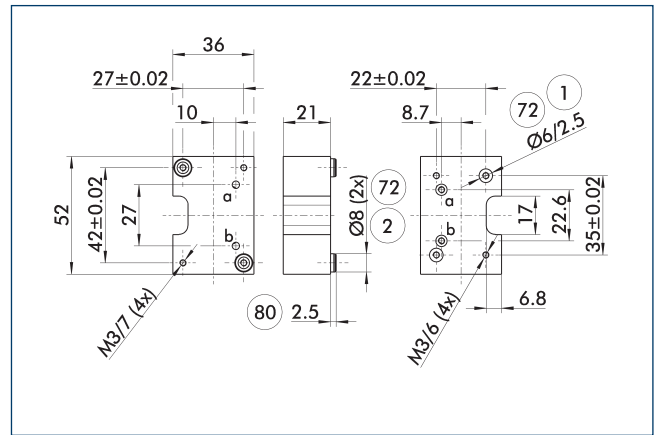
- ⑨⑩ Monitoring

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	Reset force	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-040-1	0324920	± 2	3	
AGE-F-XY-040-2	0324921	± 2	4	
AGE-F-XY-040-3	0324922	± 2	4.5	●

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

## Adapter plate for PGN-plus 50

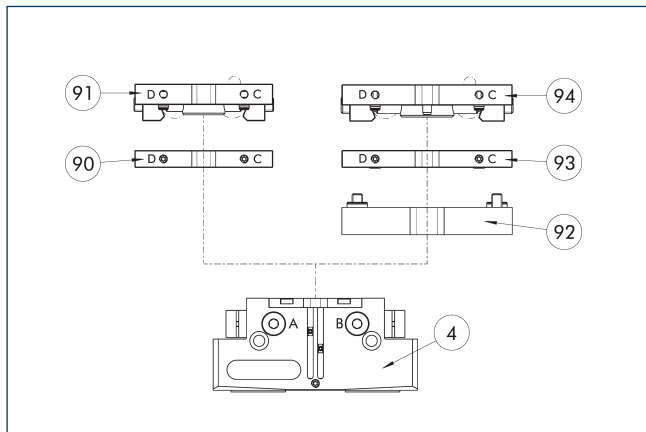


- ① Robot-side connection
- ② Tool-side connection
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part

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-064-050-P	0305768

## Compact change system for grippers

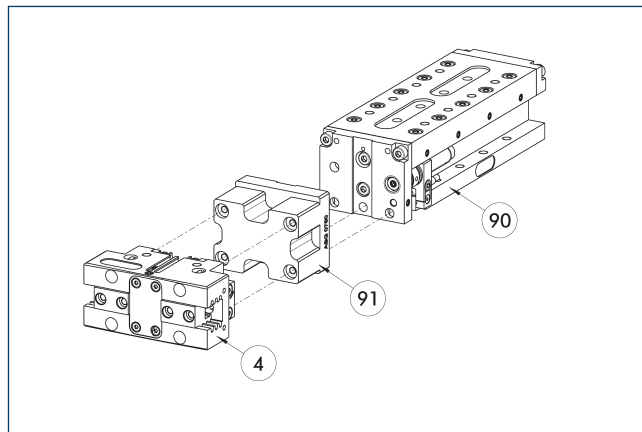


- ④ Grippers
- ⑨② A-CWA adapter plate
- ⑨① CWA compact change adapter
- ⑨③ CWA compact change adapter
- ⑨① CWK compact change master
- ⑨④ CWK compact change master

Grippers can be directly mounted without an adapter plate. For details see our catalog Gripping or Robot Accessories.

Description	ID
Tool side	
A-CWA-064-050-P	0305768
CWA compact change adapter	
CWA-050-P	0305751
CWK compact change master	
CWK-050-P	0305750

## Modular Assembly Automation



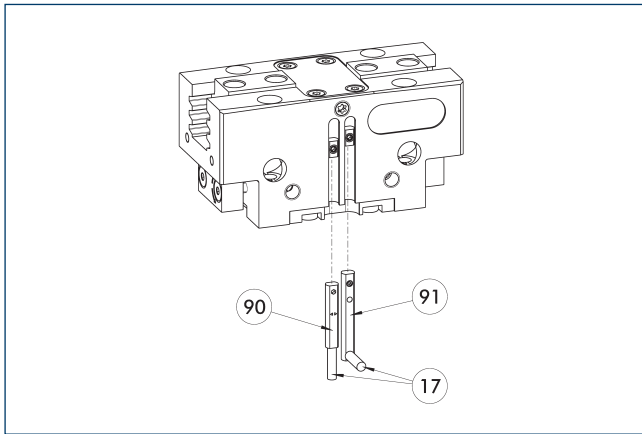
- ④ Grippers
- ⑨① ASG adapter plate
- ⑨① Linear module CLM/KLM/LM/ELP/ELM/ELS/HLM

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

# PGN-plus-P 50

Universal gripper

## Electronic magnetic switch MMS



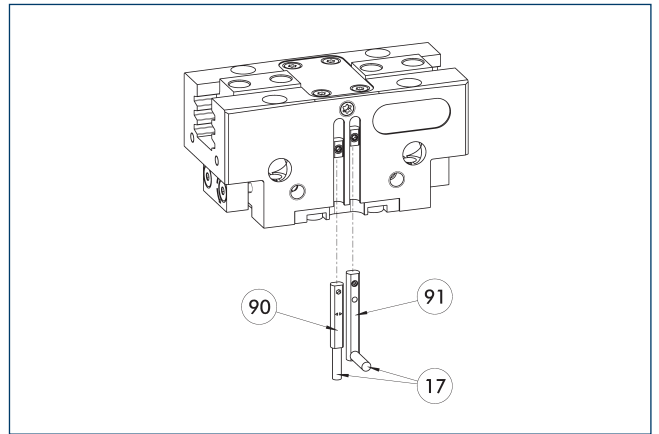
- ①7 Cable outlet
- ①91 Sensor MMS 22...-SA
- ①90 Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
<b>Electronic magnetic switch</b>		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
<b>Electronic magnetic switches with lateral cable outlet</b>		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
<b>Connection cables</b>		
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	
<b>Clip for connector/socket</b>		
CLI-M8	0301463	
<b>Cable extension</b>		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
<b>Sensor distributor</b>		
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



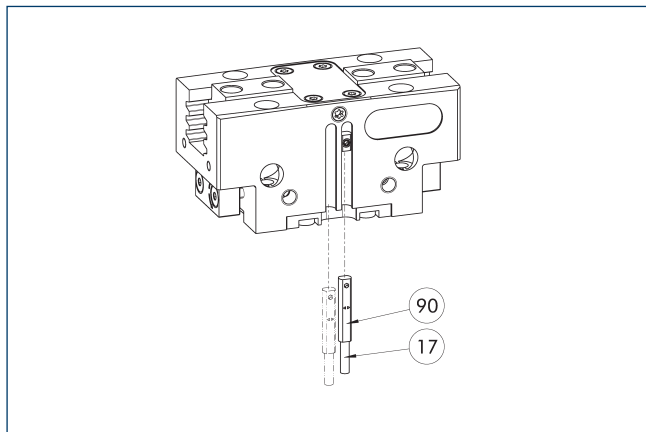
- ①7 Cable outlet
- ①91 Sensor MMS 22 ..-PI1...-SA
- ①90 Sensor MMS 22 PI1...

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
<b>Programmable magnetic switch</b>		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
<b>Programmable magnetic switch with lateral cable outlet</b>		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
<b>Programmable magnetic switch with stainless steel housing</b>		
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**



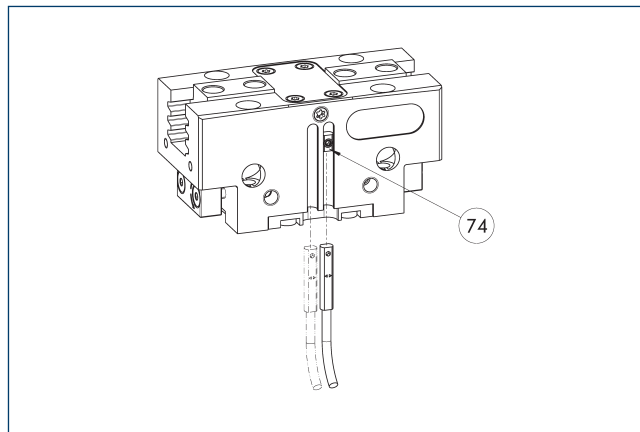
⑰ Cable outlet                      ⑨① MMS 22...-PI2-... sensor

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
<b>Programmable magnetic switch</b>		
MMS 22-PI2-S-M8-PNP	0301180	●
MMSK 22-PI2-S-PNP	0301182	
<b>Programmable magnetic switch with lateral cable outlet</b>		
MMS 22-PI2-S-M8-PNP-SA	0301186	●
MMSK 22-PI2-S-PNP-SA	0301188	
<b>Programmable magnetic switch with stainless steel housing</b>		
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**



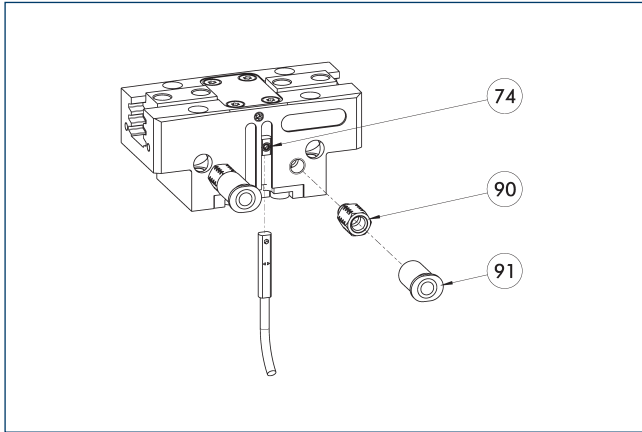
⑦④ Limit stop for sensor

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

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



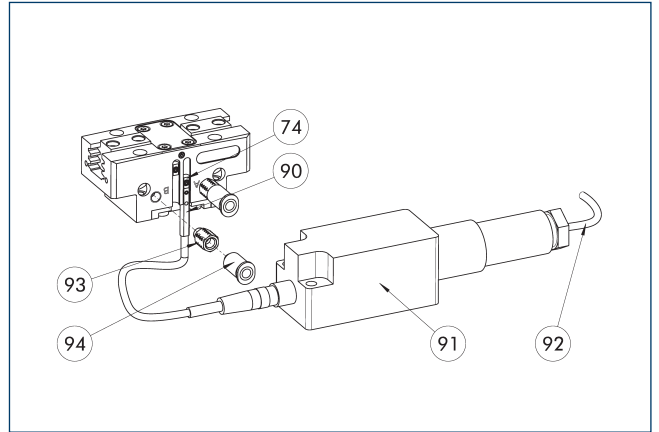
- ⑦④ Limit stop for sensor
- ⑨① Air connection (not included in the scope of delivery)
- ⑨① Flow control coupling,  $\varnothing$  0.8 mm, for teaching process (ID 9953035/not included in the scope of delivery)

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 per unit. The output voltage of the sensor differs according to the unit and is typically between 0.3 and 10 V. For teaching the sensor, a flow control coupling is required to reduce the speed during the teaching process. The resolution of the sensor can be smaller in the peripheral areas of the gripper. For further information on the product, see operating manual.

### Flexible position sensor with MMS-A



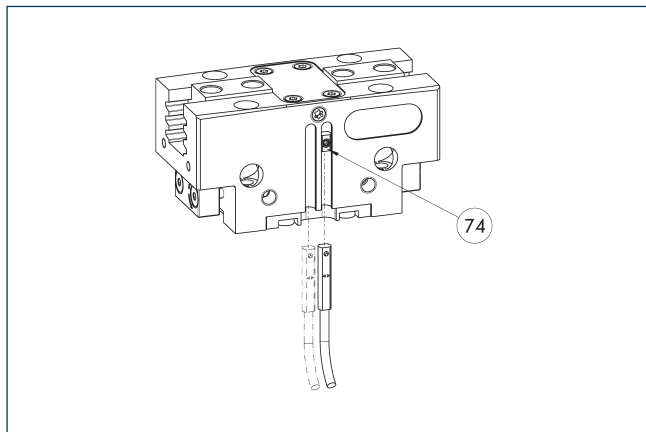
- ⑦④ Limit stop for sensor
- ⑨① Air connection (not included in the scope of delivery)
- ⑨① MMS 22-A-... sensor
- ⑨③ Flow control coupling,  $\varnothing$  0.8 mm, for teaching process (ID 9953035/not included in the scope of delivery)
- ⑨① FPS-F5 evaluation electronic
- ⑨④ Connection cables
- ⑨② Air connection (not included in the scope of delivery)

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, an MMS 22-A-05V, and evaluation electronics (FPS-F5) are required for each gripper. For teaching the sensor, a flow control coupling is required to reduce the speed during the teaching process. The resolution of the sensor can be smaller in the peripheral areas of the gripper. For further information on the product, see operating manual.

## Programmable magnetic switch MMS-IO-Link



### 74 Limit stop for sensor

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 IO-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 IO-Link master is required for operation.

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

- 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.