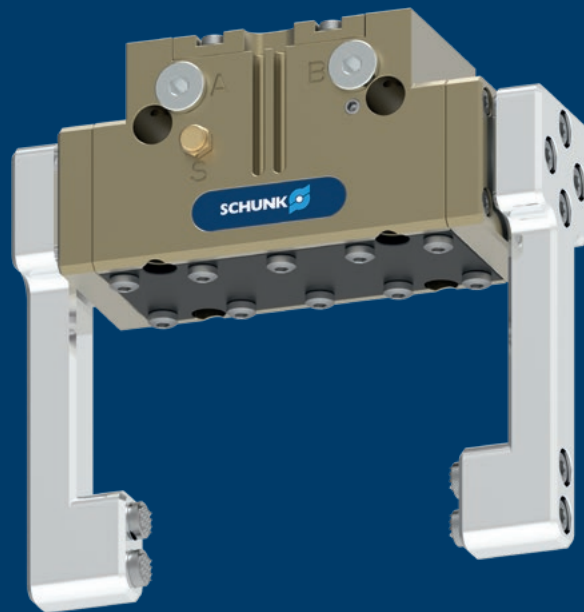




Hand in hand for tomorrow



Product data sheet

Sealed universal gripper DPG-plus

DPG-plus

Sealed universal gripper

Reliable. Fully encapsulated. Loadable.

Sealed DPG-plus gripper

Dense 2-finger parallel gripper that meets the requirements of IP67 and does not allow substances to enter the working environment

Field of application

The gripper is ideally suitable for handling of 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, secure gripper sealing

High maximum moments possible suitable for using long gripper fingers

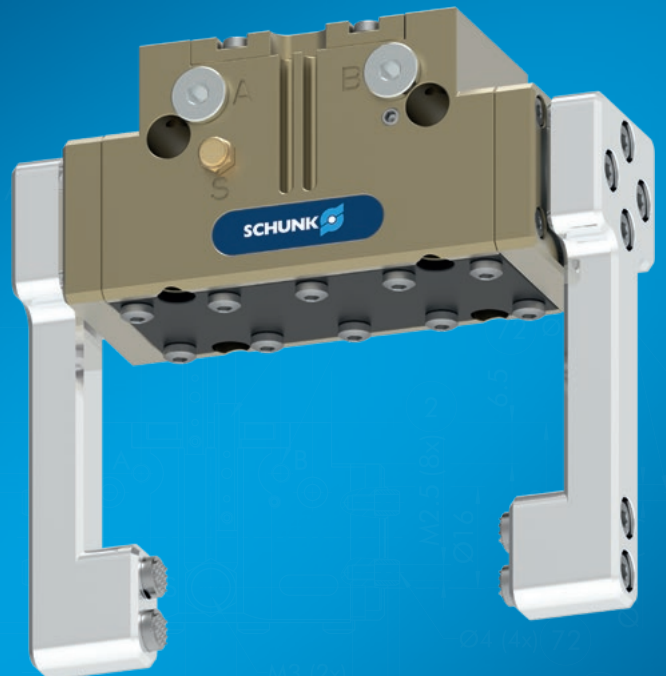
Sealed 2-Finger Parallel Gripper complies to IP67 requirements despite a high moment load

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 minimal interfering contours in handling



Sizes
Quantity: 11



Weight
0.12 .. 52 kg



Gripping force
110 .. 11250 N



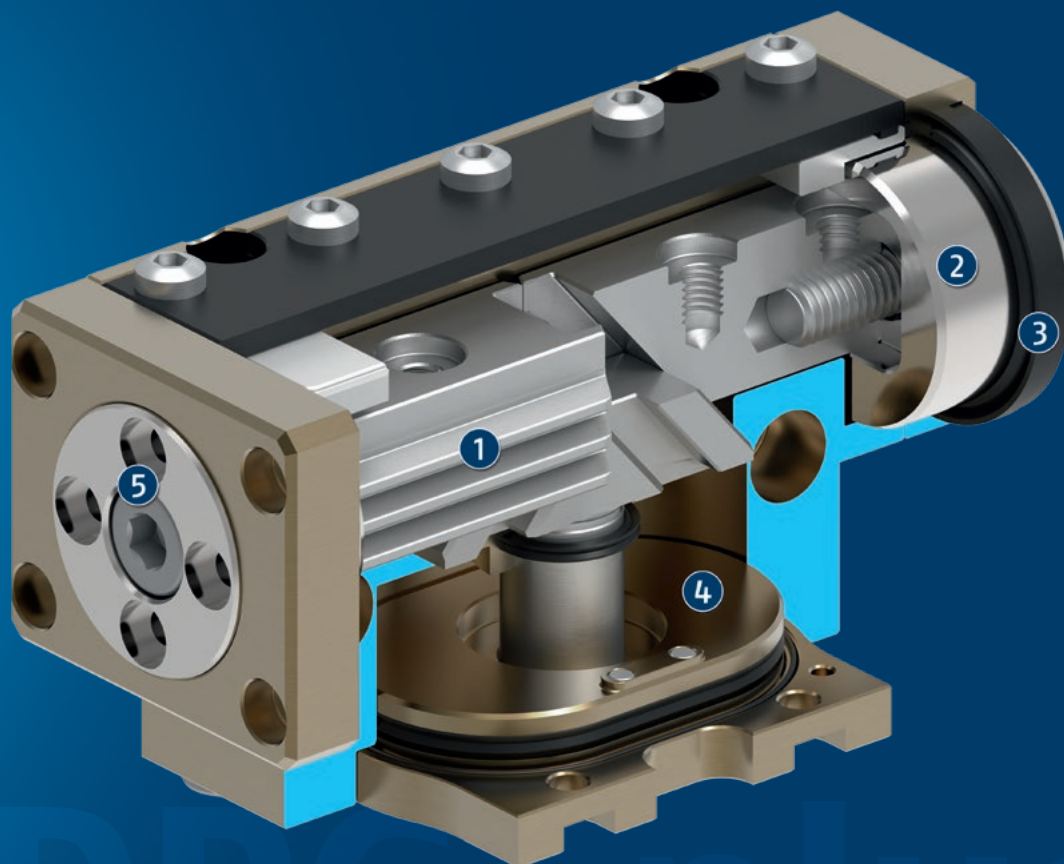
Stroke per jaw
2 .. 45 mm



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, secure 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

Service life characteristics: on request

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

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.

Note – tightness: Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

Repeat accuracy: is defined as a distribution of the end Position for 100 consecutive strokes.

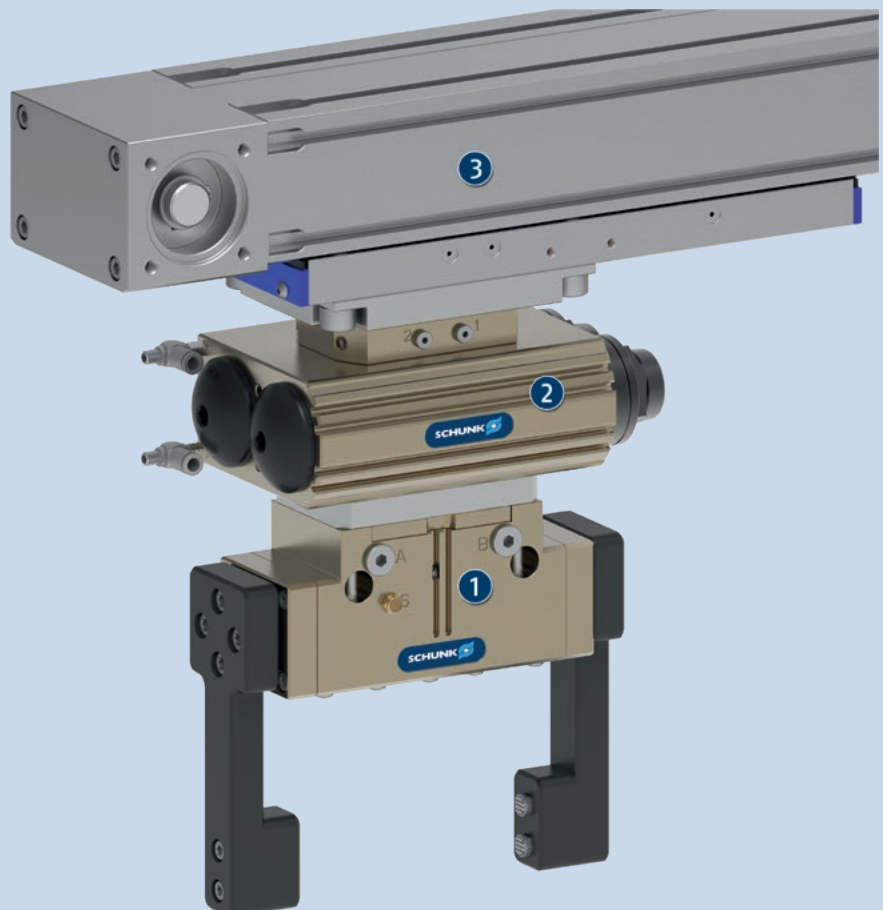
Workpiece weight: is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

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.

Application example

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

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

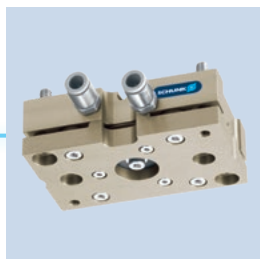


SCHUNK offers more ...

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



Compensation unit



Tolerance compensation unit



Manual change system



Pressure maintenance valve



Magnetic switches



Jaw quick-change system



Intermediate jaw



Universal intermediate jaw

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/IS version this acts as a closing force, in the IS version as an opening force.

Power booster 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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

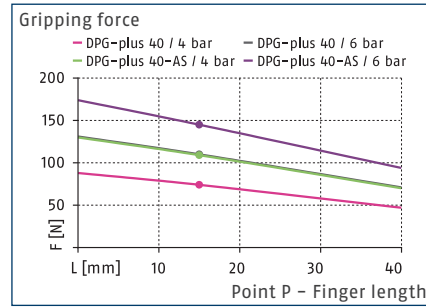
Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at <https://info.nsf.org/USDA/Listings.asp> using the lubricant information in the operating manual.

DPG-plus 40

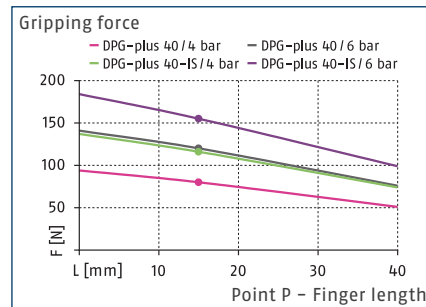
Sealed universal gripper



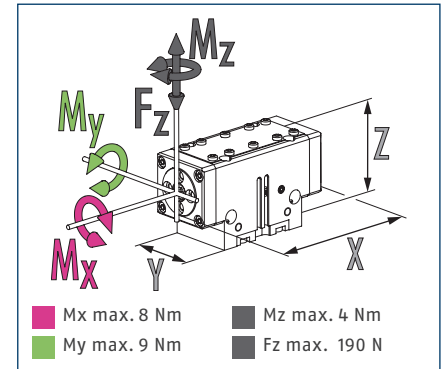
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



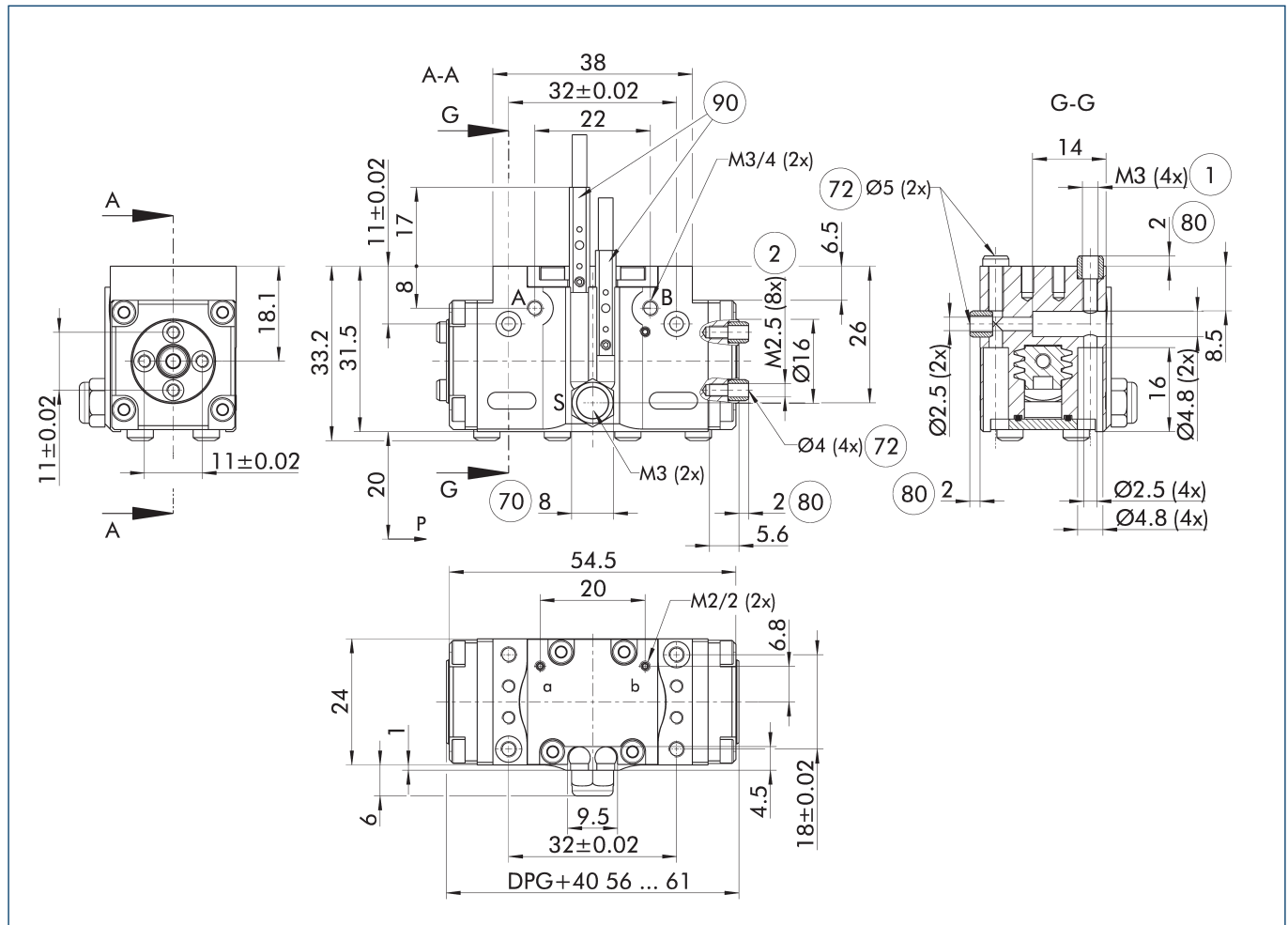
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		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
Cylinder volume per 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 weight per finger	[kg]	0.1	0.1	0.1
IP protection class		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		1321185	1321187	1321188
Min./max. ambient temperature	[°C]	5/130	5/130	5/130

① Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.
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 The SDV-P pressure maintenance valve can be used as a gripping force maintenance device (see catalog section on accessories).

A, a Main / direct connection, gripper opening

B, b Main / direct connection, gripper closing

S, E Air purge connection, or deaeration bore

① Gripper connection

② Finger connection

⑦ Wrench size

⑦ Fit for centering sleeves

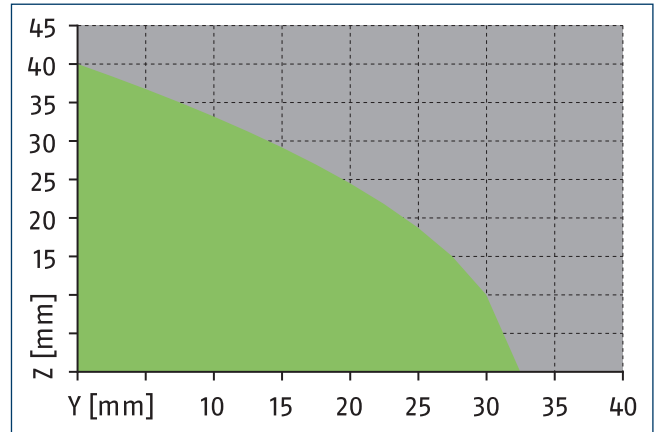
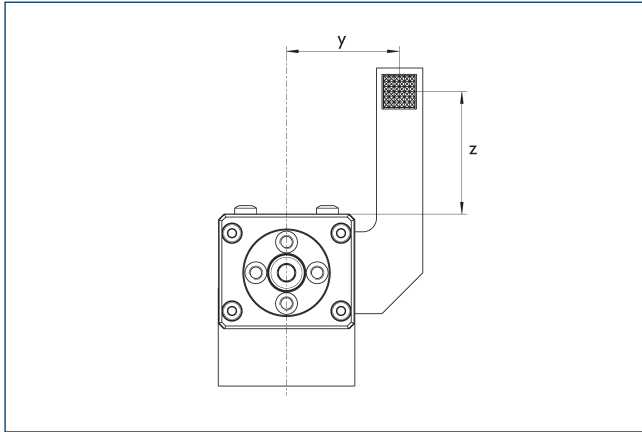
⑧ Depth of the centering sleeve hole in the counter part

⑨ Sensor MMS 22..

DPG-plus 40

Sealed universal gripper

Maximum permitted finger projection

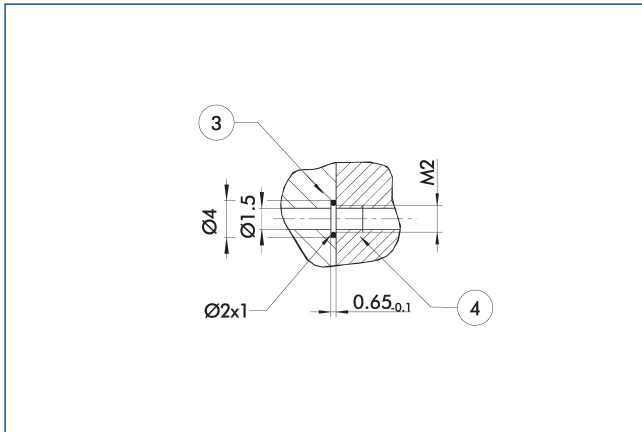


■ Permitted range

■ 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 M2

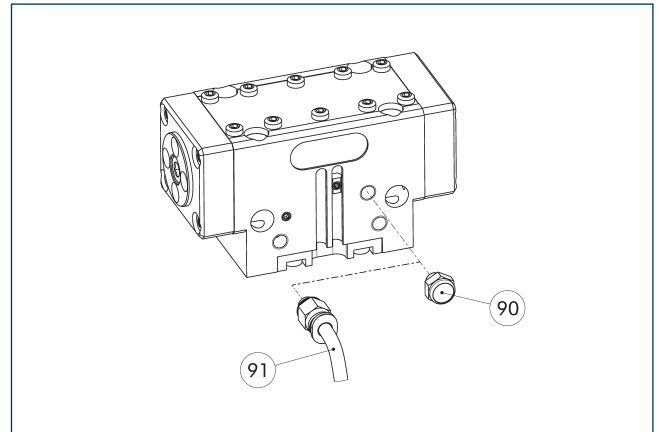


③ Adapter

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.

Connect the air purge connection

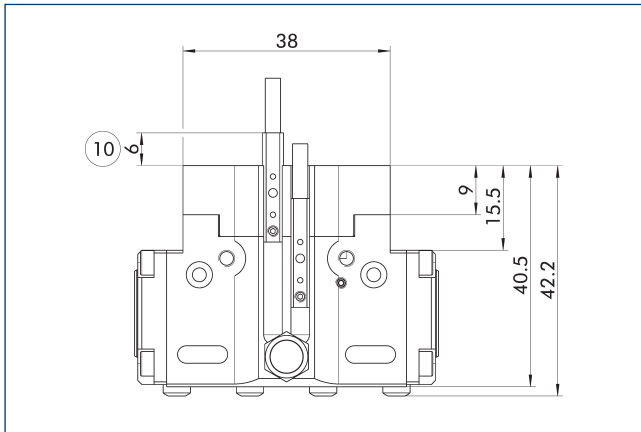


90 Sinter filter

91 Hose for ventilation or air purge connection

Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

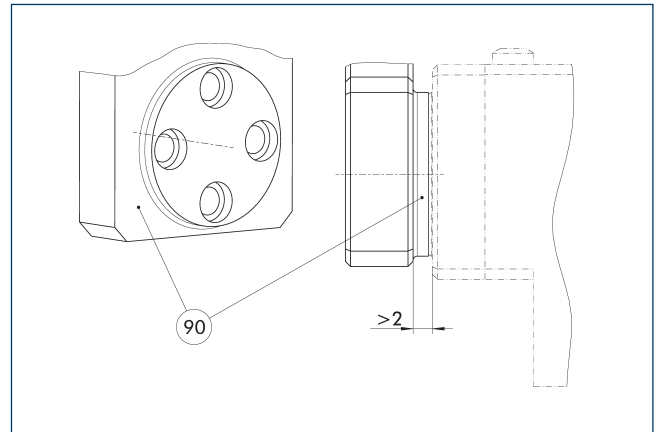
Gripping force maintenance version AS/IS



- 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/IS 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.

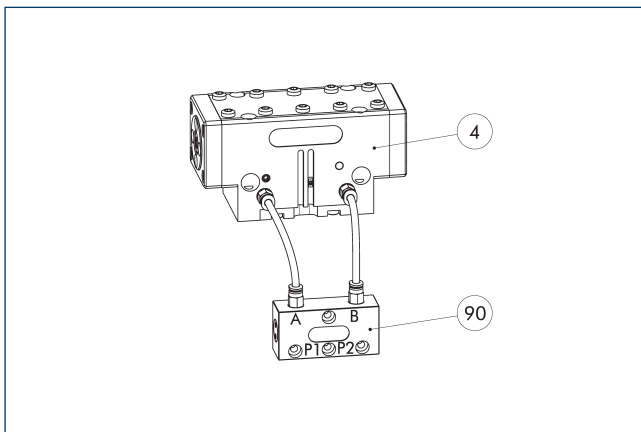
Proposed jaw design



- ⑨⑩ Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



- ④ Grippers

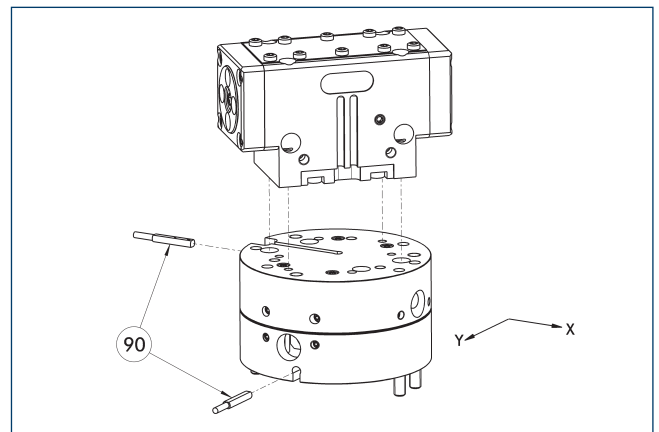
- ⑨⑩ SDV-P pressure maintenance valve

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.

Compensation unit AGE-F



- ⑨⑩ Monitoring

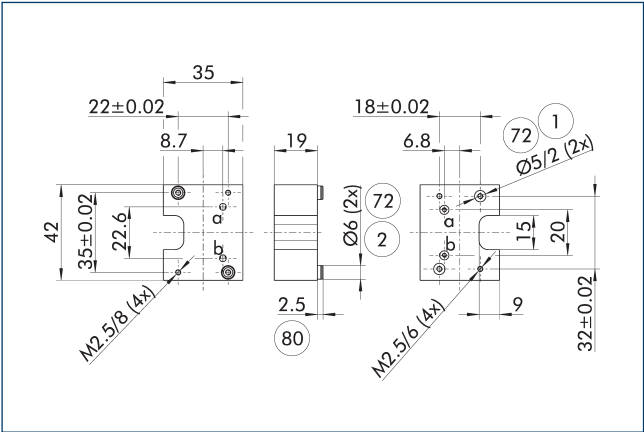
Grippers can be directly mounted without an adapter plate. For details see our catalog Gripping or Robot Accessories.

Description	ID	Compensation XY	Reset force	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-031-1	0324900	± 1.5	1.5	
AGE-F-XY-031-2	0324901	± 1.5	4	
AGE-F-XY-031-3	0324902	± 1.5	5.5	●

DPG-plus 40

Sealed universal gripper

Adapter plate for PGN-plus 40

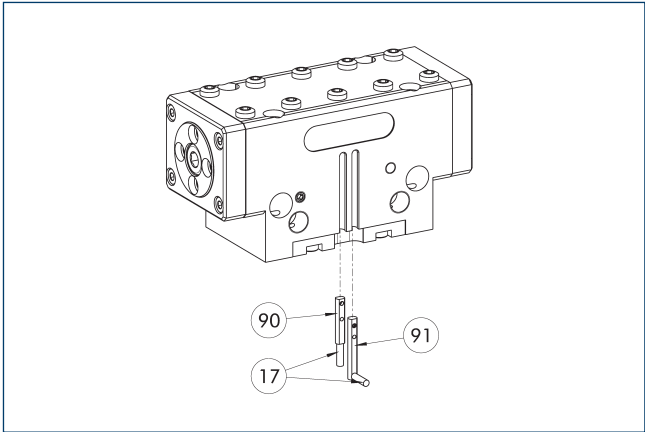


- ① Robot-side connection
- ② Tool-side connection
- ⑦② Fit for centering sleeves
- ⑧② Depth of the centering sleeve hole in the counter part

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-050-040-P	0305754	

Electronic magnetic switch MMS



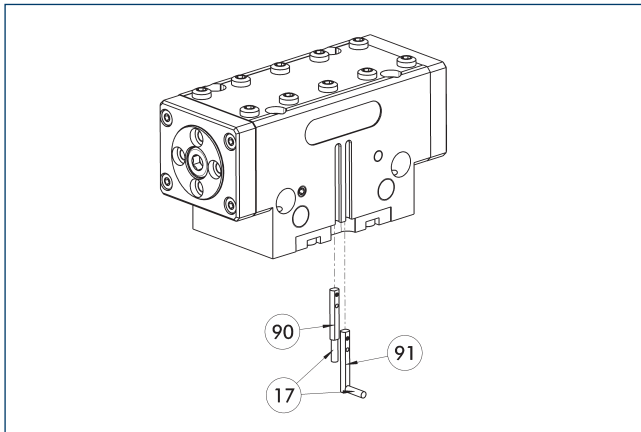
- ①⑦ Cable outlet
- ②⑦ Sensor MMS 22..
- ⑧① Sensor MMS 22...-SA

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	
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



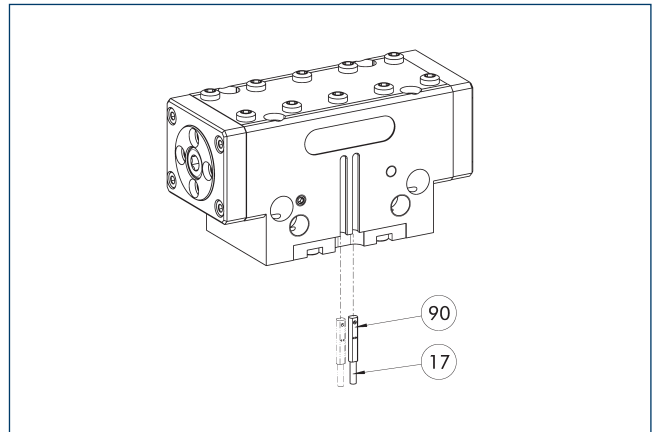
- 17 Cable outlet
91 Sensor MMS 22 ..-PI1-...-SA
90 Sensor MMS 22 PI1-...

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
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



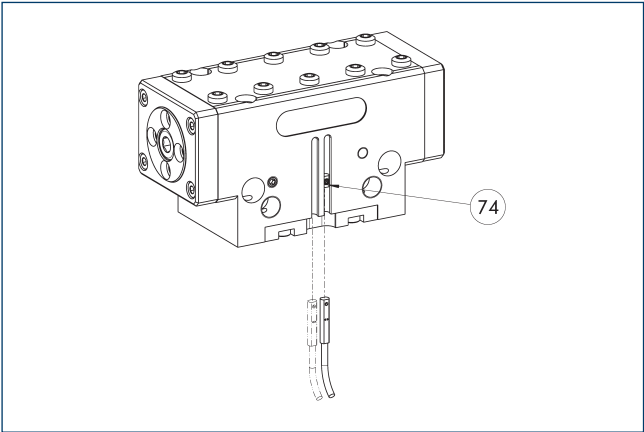
- 17 Cable outlet
90 MMS 22...-PI2-... sensor

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



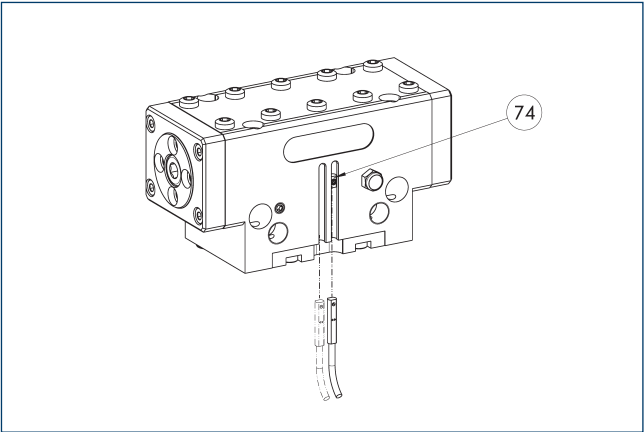
74 Limit stop for sensor

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.

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-IOI-M08	0315830	
MMS 22-IOI-M12	0315835	

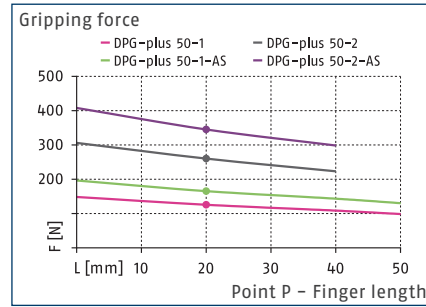
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 50

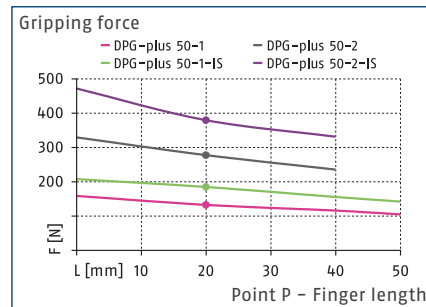
Sealed universal gripper



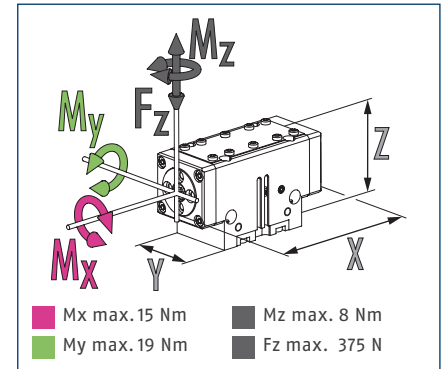
Gripping force O.D. gripping



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.

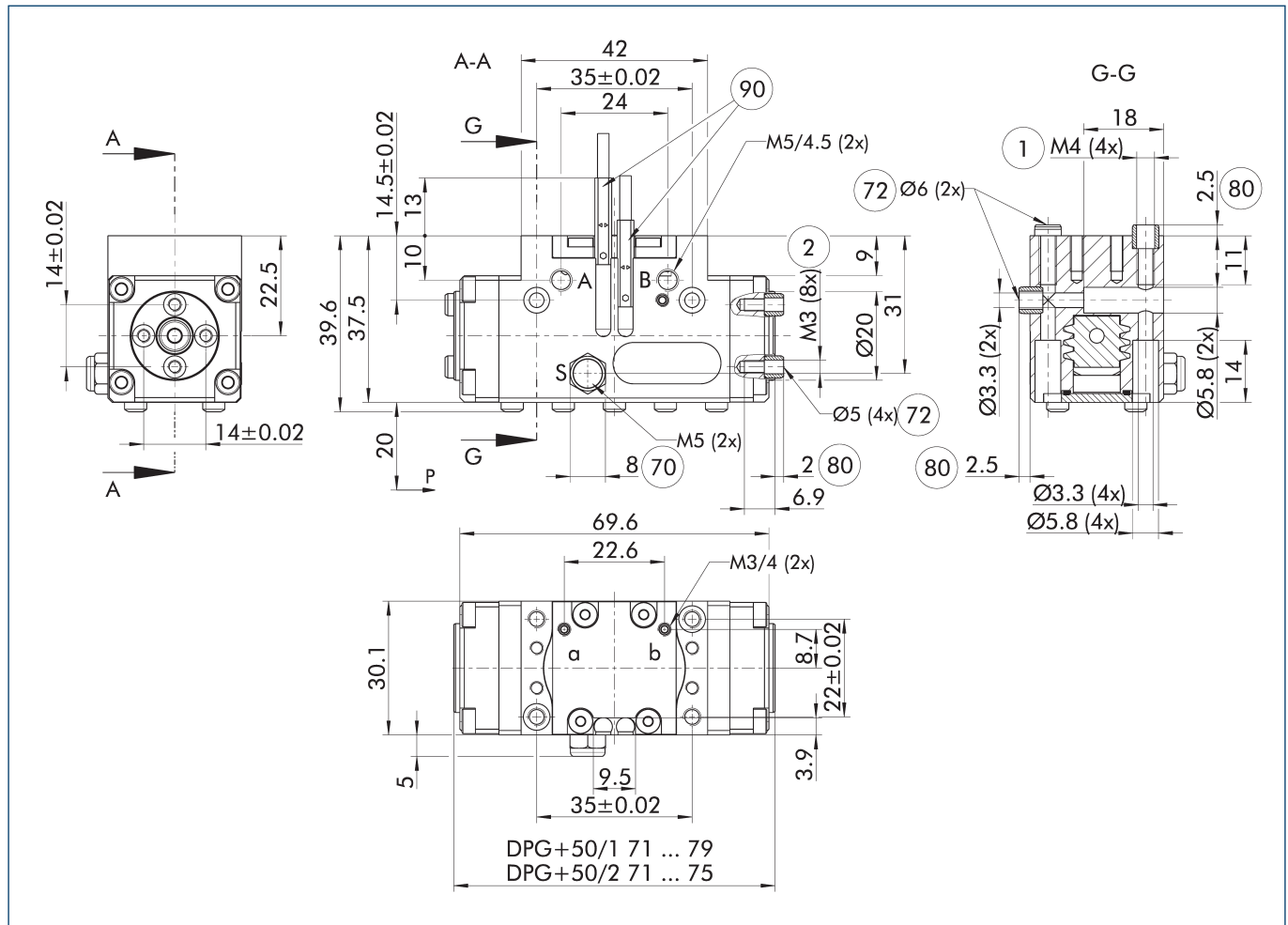
Technical data

Description		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
IP protection class		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		1321189	1321190	1321192	1321193	1321194	1321195
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1315952	1315957	1315959		1315965	
Closing/opening force	[N]	202/209	424/453	234/-		-/252	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

Main view



For finger connection, we recommend only to use two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can be used as a gripping force maintenance device (see catalog section on accessories).

A, a Main / direct connection, gripper opening

B, b Main / direct connection, gripper closing

S, E Air purge connection, or deaeration bore

① Gripper connection

② Finger connection

70 Wrench size

72 Fit for centering sleeves

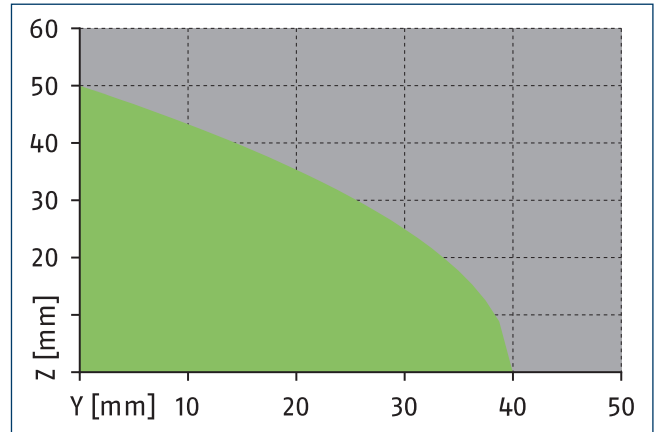
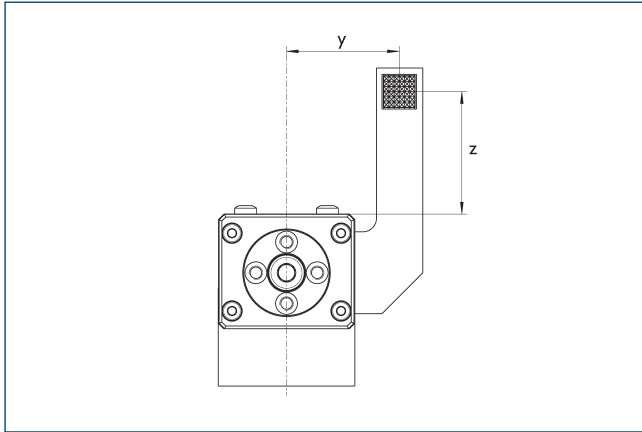
80 Depth of the centering sleeve hole in the counter part

90 Sensor MMS 22..

DPG-plus 50

Sealed universal gripper

Maximum permitted finger projection

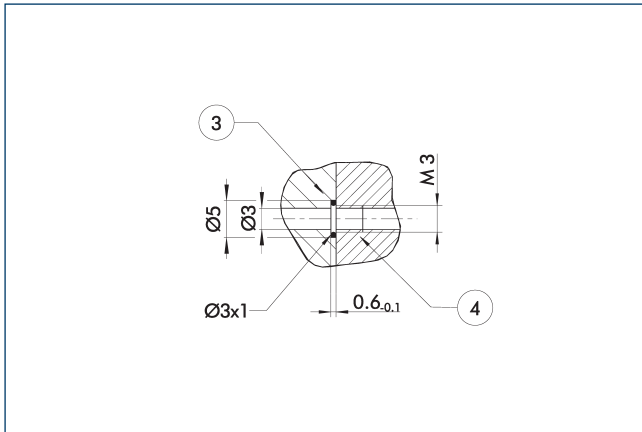


■ Permitted range

■ 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

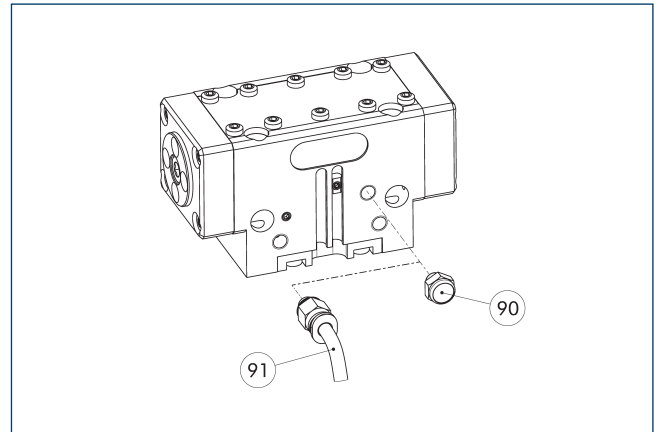


③ Adapter

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.

Connect the air purge connection

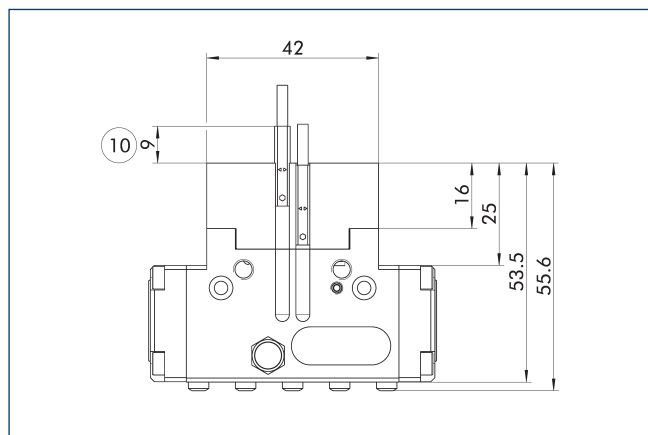


⑨⑩ Sinter filter

⑨⑪ Hose for ventilation or air purge connection

Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

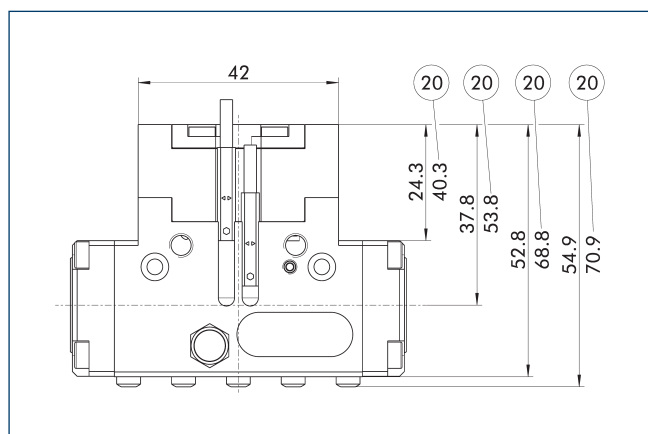
Gripping force maintenance version AS/IS



- 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/IS 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.

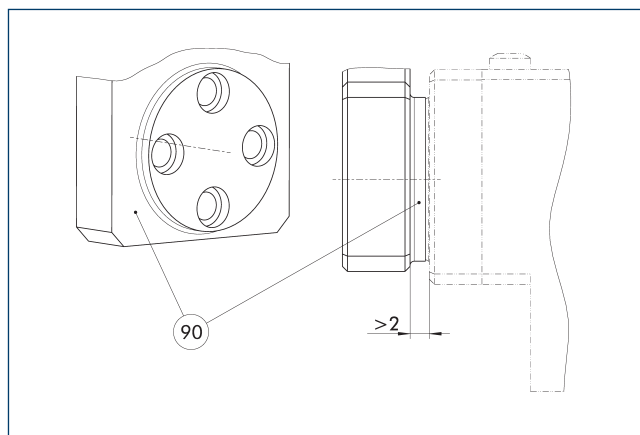
Power booster version



- ②① 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.

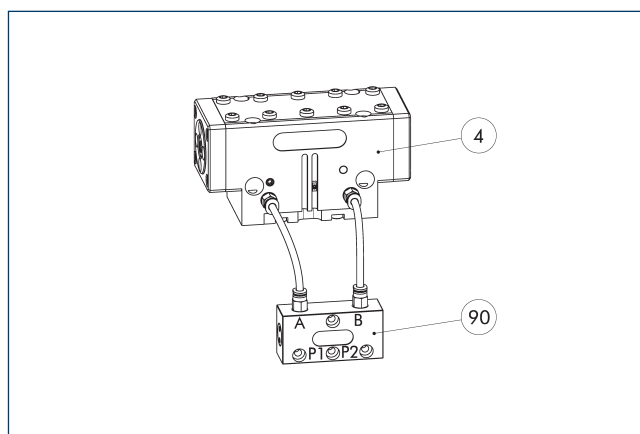
Proposed jaw design



- ⑨① Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



- ④ Grippers

- ⑨① 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.

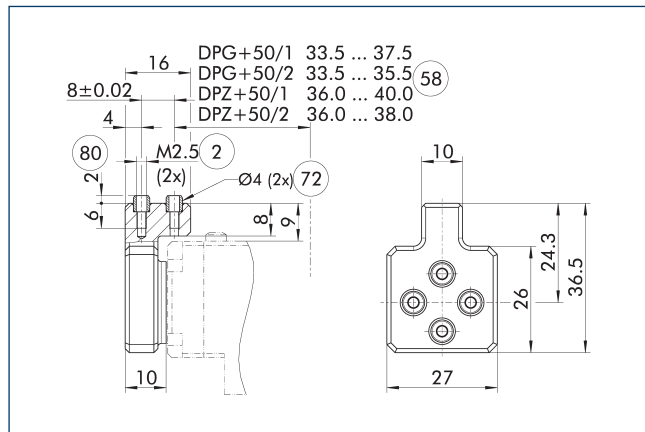
Description	ID	Recommended hose diameter [mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6

- 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.

DPG-plus 50

Sealed universal gripper

ZBA DPG-plus/DPZ-plus 50-40 intermediate jaw

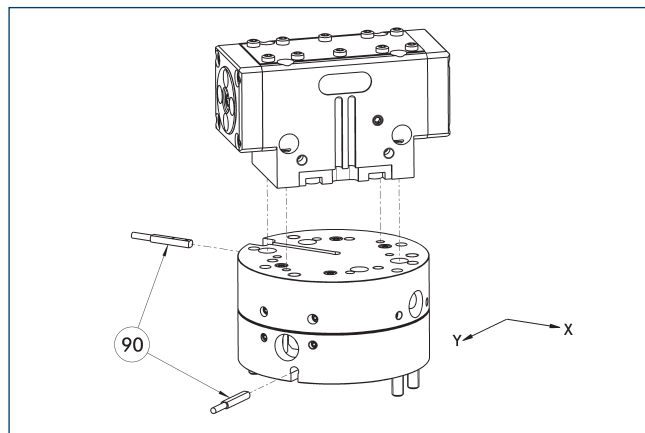


- | | |
|------------------------------------|---|
| ② Finger connection | ⑦② Fit for centering sleeves |
| ⑤⑧ Distance from center of gripper | ⑧⑩ Depth of the centering sleeve hole in the counter part |

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 50-40	0300191	Aluminum	PGN-plus 40	1

Compensation unit AGE-F

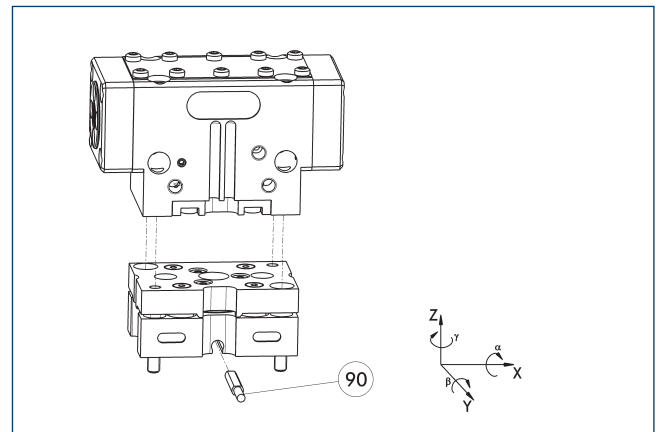


- ## 90 Monitoring

Grippers can be directly mounted without an adapter plate. For details see our catalog [Gripping](#) or [Robot Accessories](#).

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	●

Tolerance compensation unit TCU

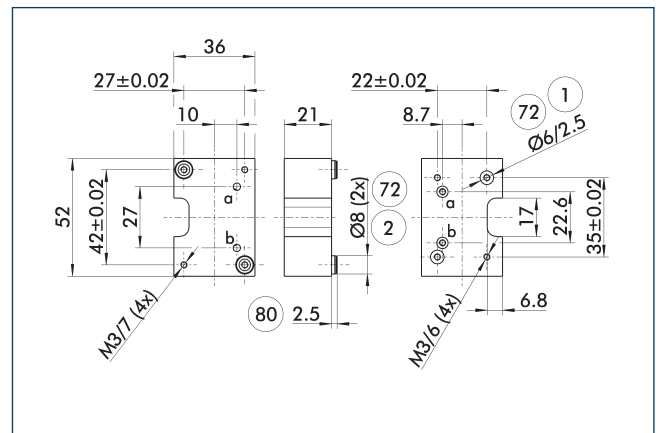


- 90 Monitoring of locking

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	$\pm 1^\circ / \pm 1^\circ / \pm 1,5^\circ$

Adapter plate for PGN-plus 50

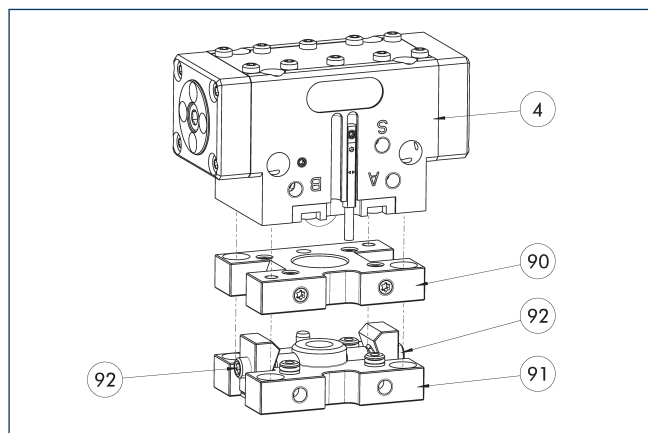


- | | |
|-------------------------|---|
| ① Robot-side connection | ⑦② Fit for centering sleeves |
| ② Tool-side connection | ⑧① Depth of the centering sleeve hole in the counter part |

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

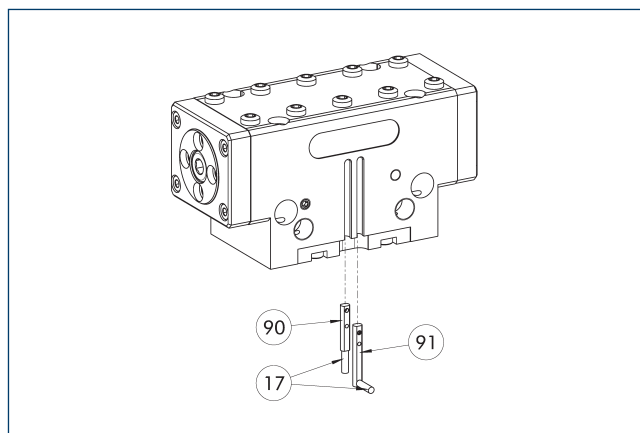


- ④ Grippers
- ⑨① CWK compact change master
- ⑨① CWA compact change adapter
- ⑨② Locking mechanism

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	

Electronic magnetic switch MMS



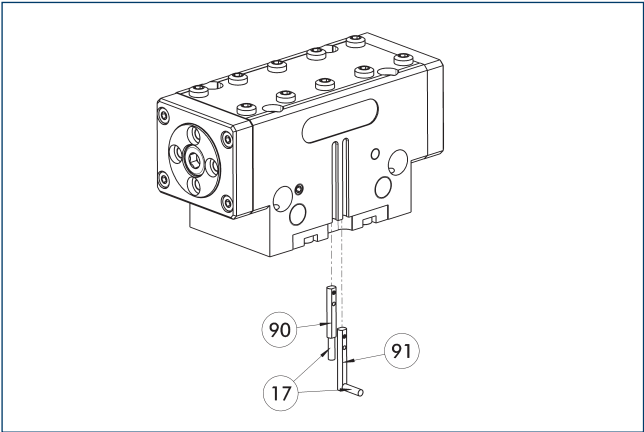
- ①⑦ Cable outlet
- ⑨① Sensor MMS 22...-SA
- ⑨① Sensor MMS 22..

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	
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



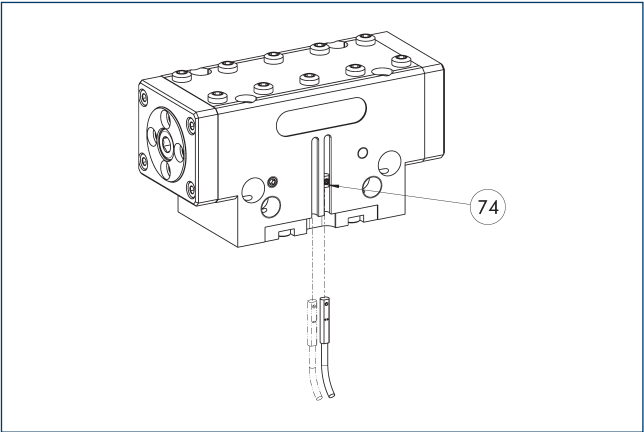
- 17 Cable outlet
- 91 Sensor MMS 22 ..-PI1-...-SA
- 90 Sensor MMS 22 PI1-...

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
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.

MMS-P programmable magnetic switch



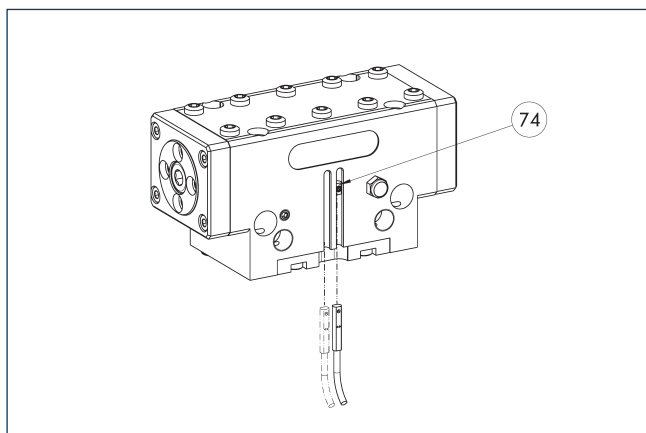
- 74 Limit stop for sensor

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.

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	

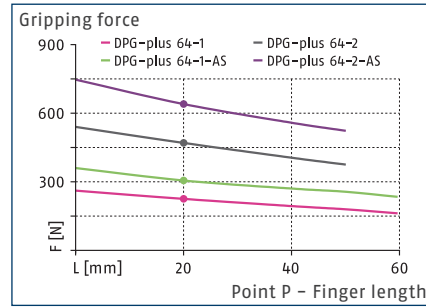
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 64

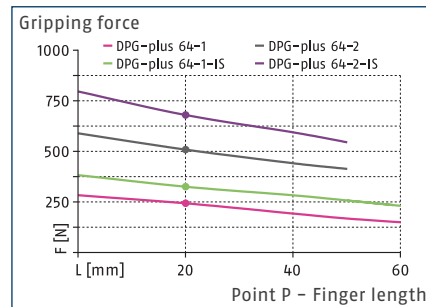
Sealed universal gripper



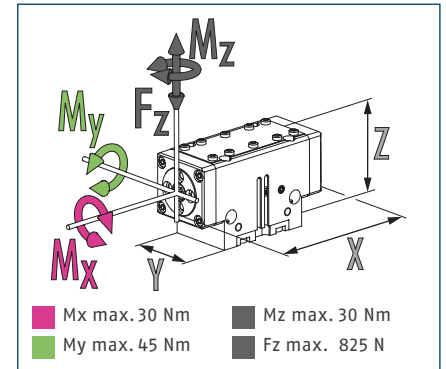
Gripping force O.D. gripping



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		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	470/500	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
Cylinder volume per double stroke	[cm³]	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	60	50
Max. permissible weight per finger	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
IP protection class		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		1321196	1321197	1321199	1321200	1321201	1321203
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1315968	1315970	1315972		1315975	
Closing/opening force	[N]	369/399	780/834	430/-		-/462	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

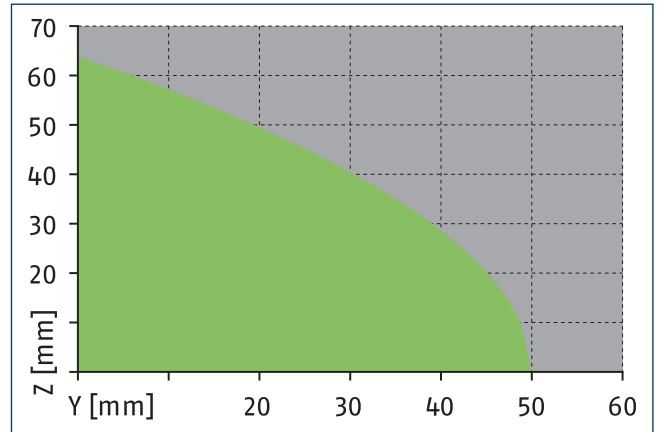
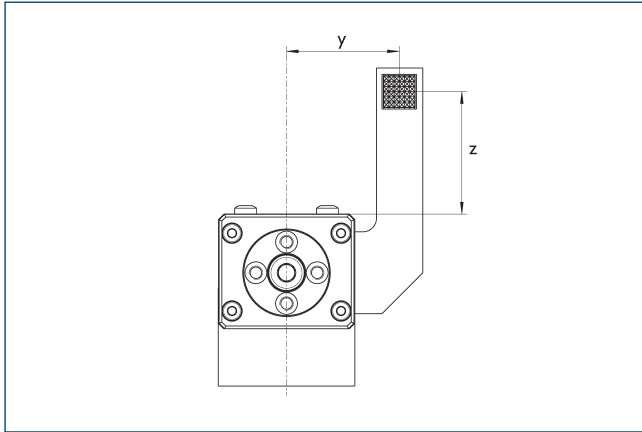
[illegible]

90 Sensor MMS 22..

DPG-plus 64

Sealed universal gripper

Maximum permitted finger projection

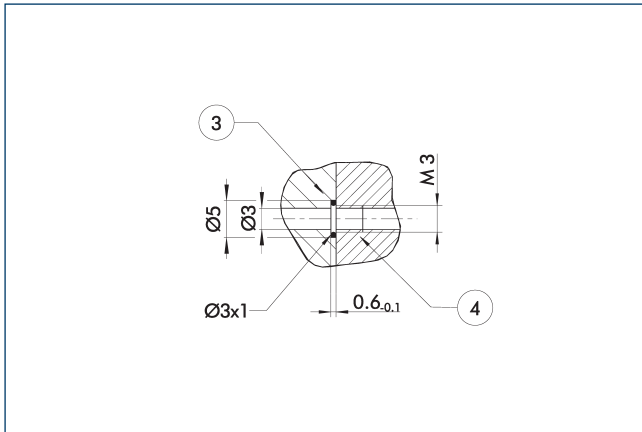


■ Permitted range

■ 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

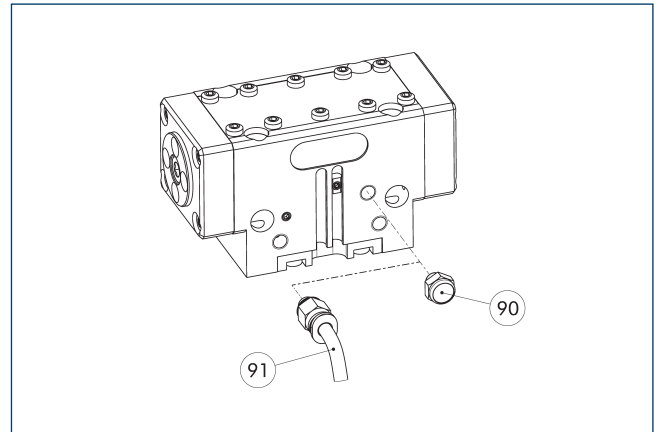


③ Adapter

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.

Connect the air purge connection

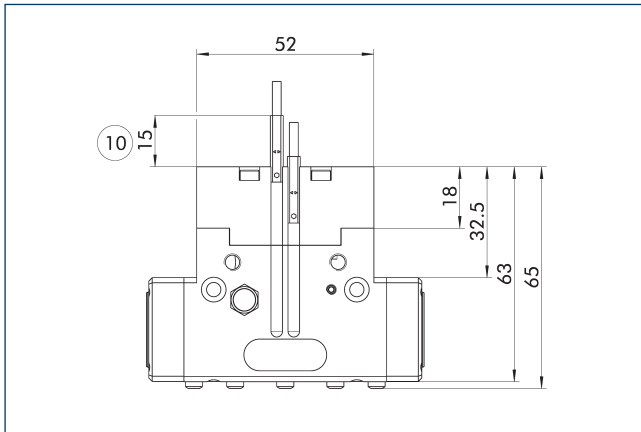


⑨⑩ Sinter filter

⑨① Hose for ventilation or air purge connection

Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

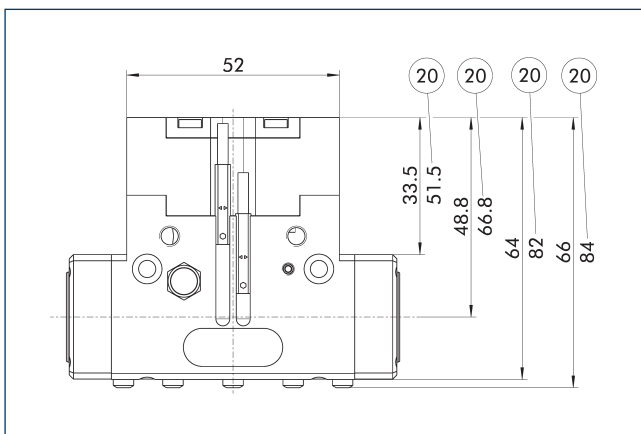
Gripping force maintenance version AS/IS



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/IS 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.

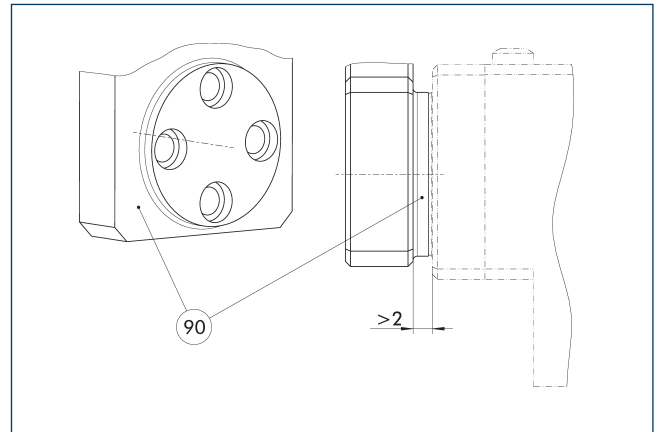
Power booster version



②① 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.

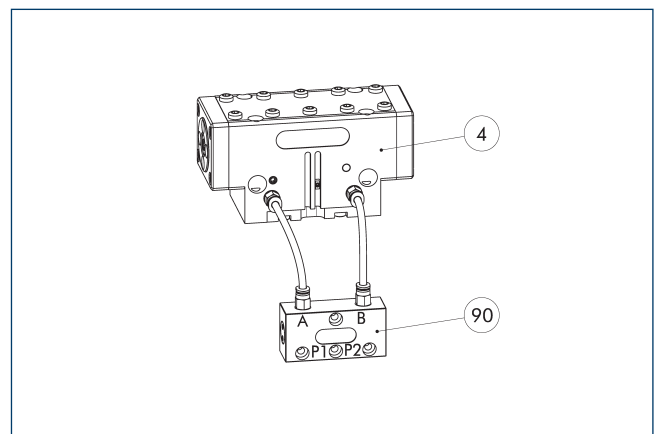
Proposed jaw design



⑨① Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



④ Grippers

⑨① 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.

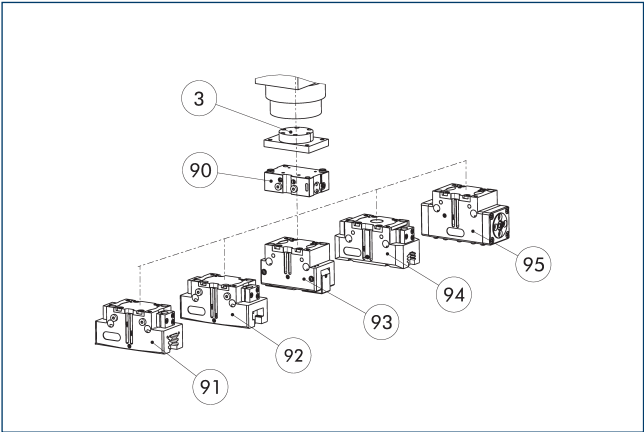
Description	ID	Recommended hose diameter [mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8

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.

DPG-plus 64

Sealed universal gripper

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

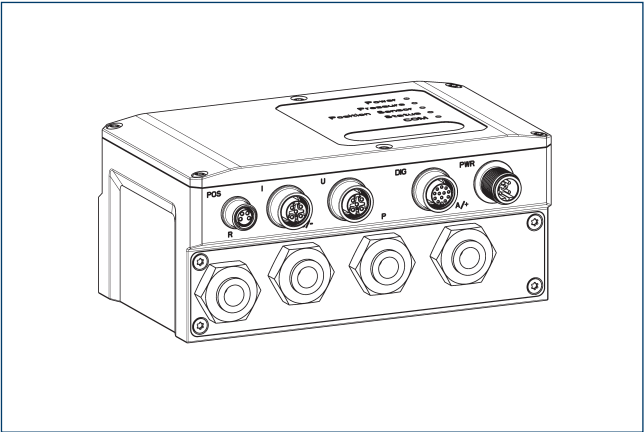
2-finger parallel gripper PGB
- 95

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 64-E-P	0300124

Pneumatic positioning device PPD

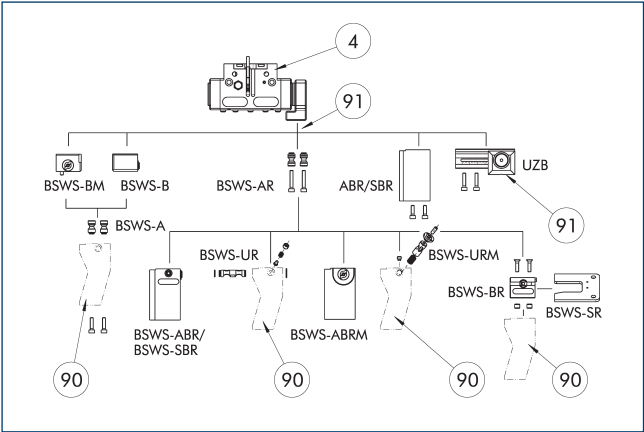


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID
Pneumatic positioning device	
PPD 10-IO-L	1540698
Adapter	
A GGN0804-1204-A	1540691
IO-Link connection cable	
KA GGN1205-1212-IO-L-00100-A	1540697
Voltage supply connection cable – cable track compatible	
KA GLN12B05-LK-01000-A	1540660
Cable extension	
KV GGN0804-IO-00150-A	1540662
KV GGN0804-IO-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.

Intermediate jaw interface



- 4

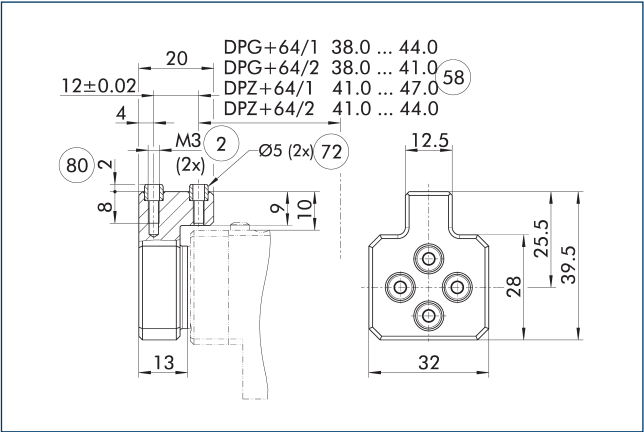
Grippers
- 90

Customized gripper fingers
- 91

Uniform screw connection pattern

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

ZBA DPG-plus/DPZ-plus 64-50 intermediate jaw



- 2

Finger connection
- 58

Distance from center of gripper
- 72

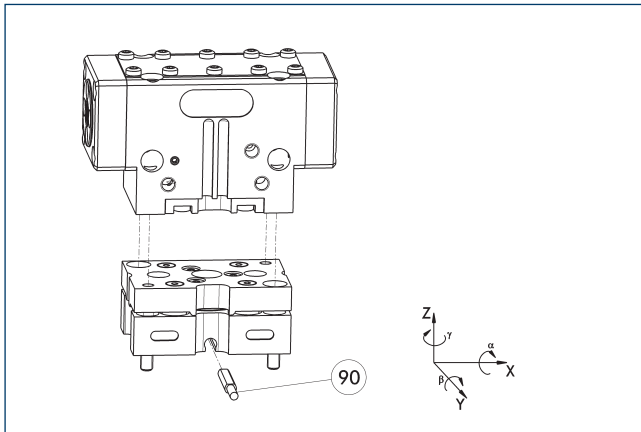
Fit for centering sleeves
- 80

Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 64-50	0300192	Aluminum	PGN-plus 50	1

Tolerance compensation unit TCU

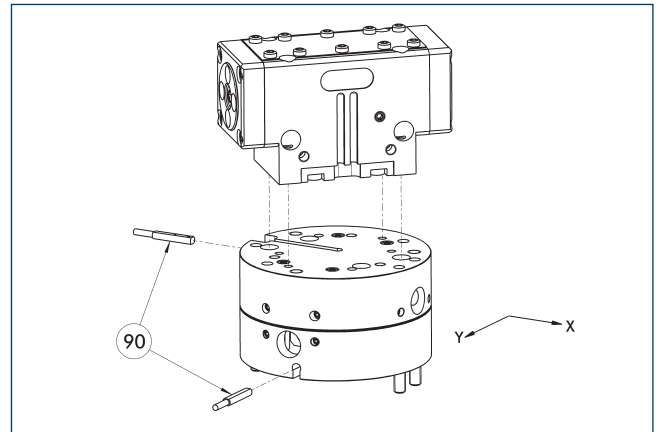


90 Monitoring of locking

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-064-3-MV	0324774	yes	$\pm 1^\circ / \pm 1,5^\circ / \pm 2^\circ$	●
TCU-P-064-3-0V	0324775	no	$\pm 1^\circ / \pm 1,5^\circ / \pm 2^\circ$	

Compensation unit AGE-F

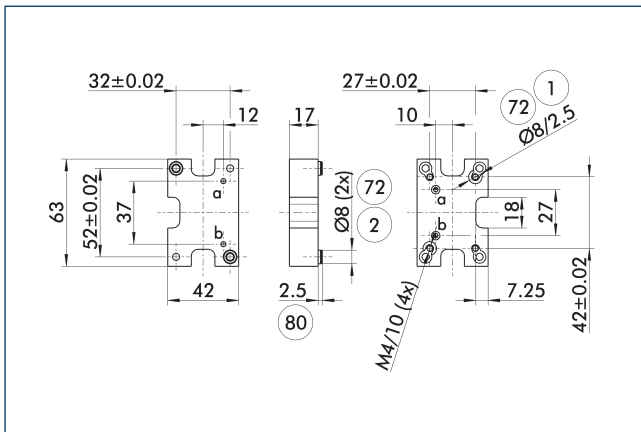


90 Monitoring

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

Description	ID	Compensation XY	Reset force	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-063-1	0324940	± 4	12	
AGE-F-XY-063-2	0324941	± 4	16	
AGE-F-XY-063-3	0324942	± 4	20	●

Adapter plate for PGN-plus 64

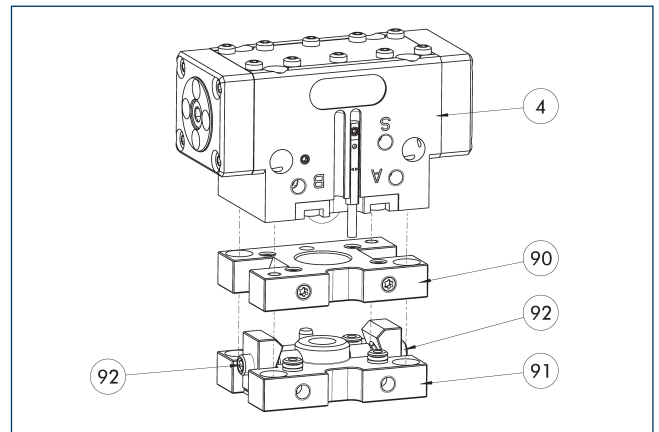


- ① Robot-side connection
- ② Tool-side connection
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part

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-080-064-P	0305784	

Compact change system for grippers

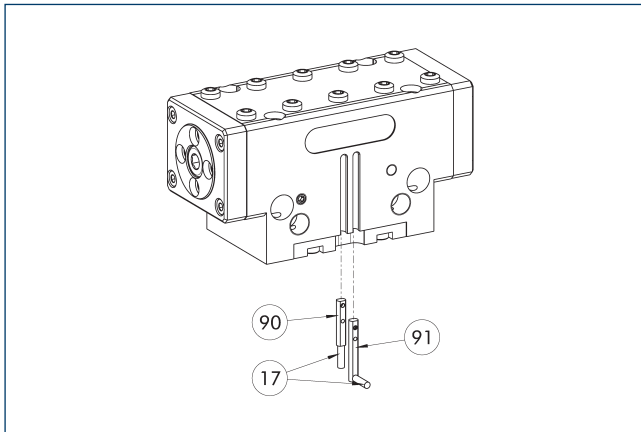


- ④ Grippers
- ⑨ CWA compact change adapter
- ⑨ CWK compact change master
- ⑨ Locking mechanism

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

Description	ID	
Tool side		
A-CWA-080-064-P	0305784	
CWA compact change adapter		
CWA-064-P	0305765	
CWK compact change master		
CWK-064-P	0305764	

Electronic magnetic switch MMS



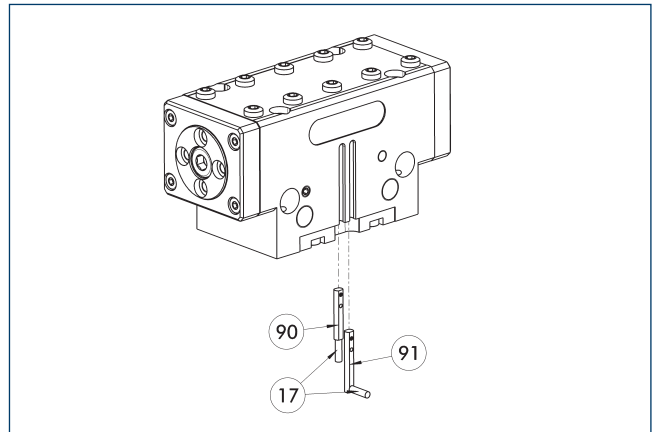
- ① Cable outlet
② Sensor MMS 22-...-SA
③ Sensor MMS 22-...

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	
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



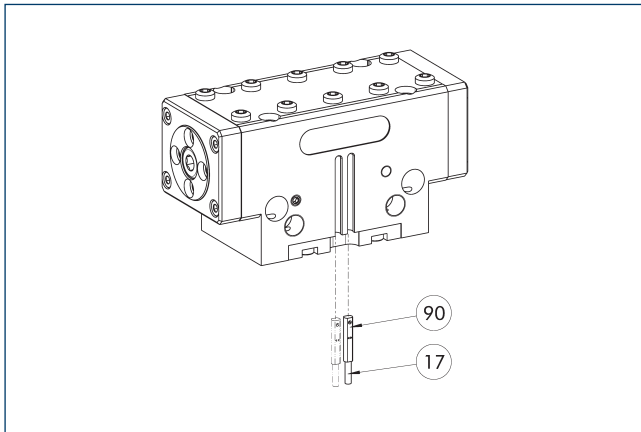
- ① Cable outlet
② Sensor MMS 22-PI1-...-SA
③ Sensor MMS 22-PI1-...

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
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

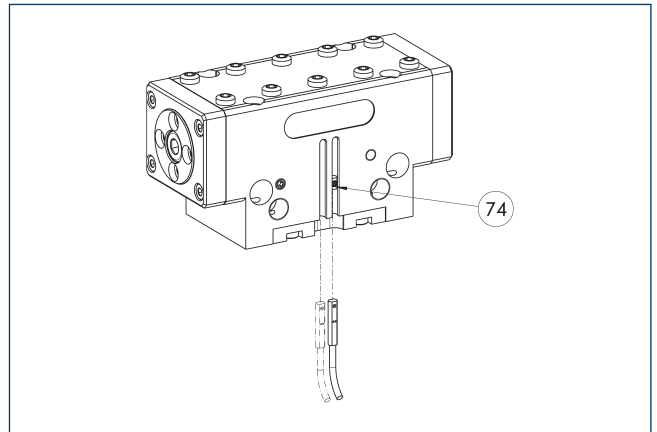
90 MMS 22...-PI2-... sensor

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



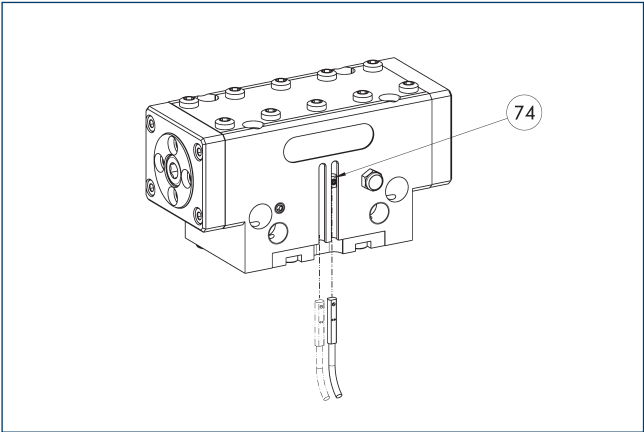
74 Limit stop for sensor

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.

Programmable magnetic switch MMS-I0-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-I0L-M08	0315830	
MMS 22-I0L-M12	0315835	

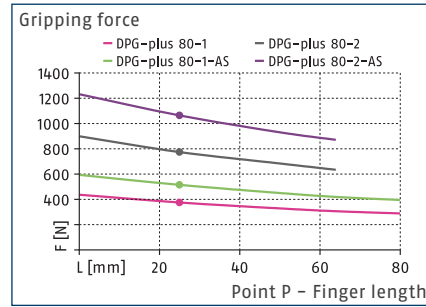
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 80

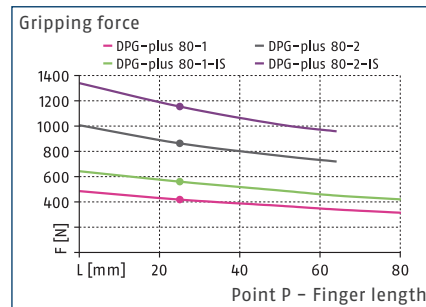
Sealed universal gripper



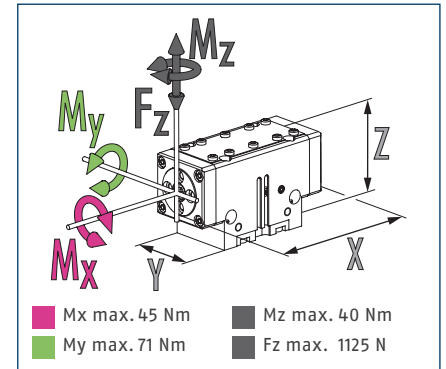
Gripping force O.D. gripping



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.

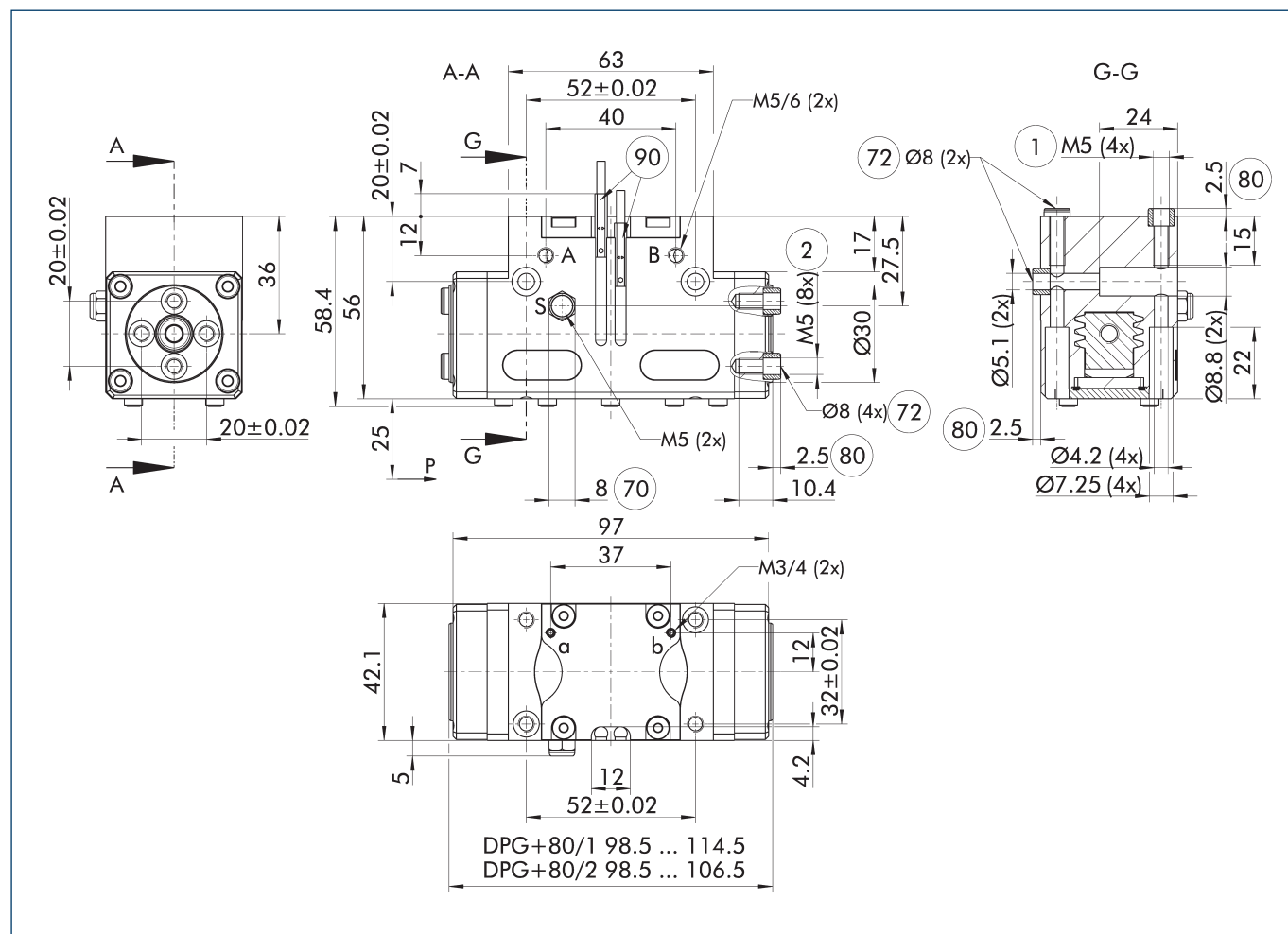
Technical data

Description		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	0.5	0.5	0.5	0.5	0.5	0.5
IP protection class		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		1321206	1321207	1321210	1321211	1321212	1321213
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1315980	1315982	1315985		1315990	
Closing/opening force	[N]	613/687	1270/1406	736/-		-/811	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

Main view



For finger connection, we recommend only to use two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- ① The SDV-P pressure maintenance valve can be used as a gripping force maintenance device (see catalog section on accessories).

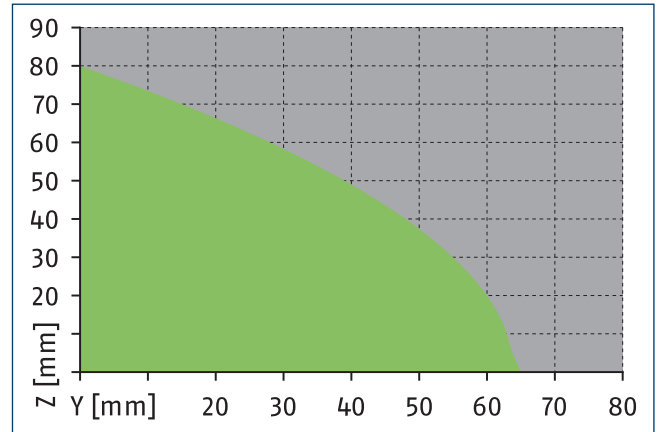
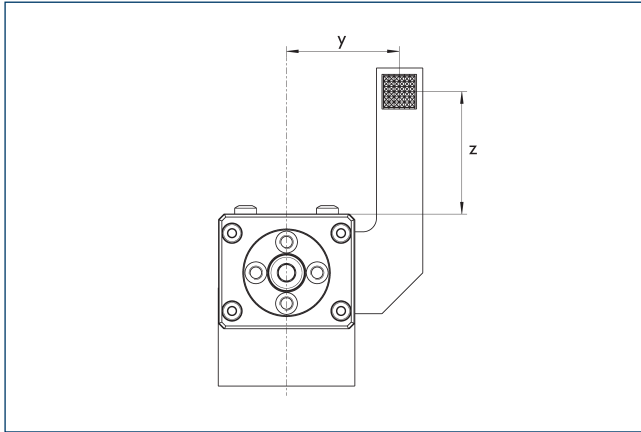
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- S, E Air purge connection, or deaeration bore
- ① Gripper connection

- ② Finger connection
- ⑦0 Wrench size
- ⑦2 Fit for centering sleeves
- ⑧0 Depth of the centering sleeve hole in the counter part
- ⑨0 Sensor MMS 22..

DPG-plus 80

Sealed universal gripper

Maximum permitted finger projection

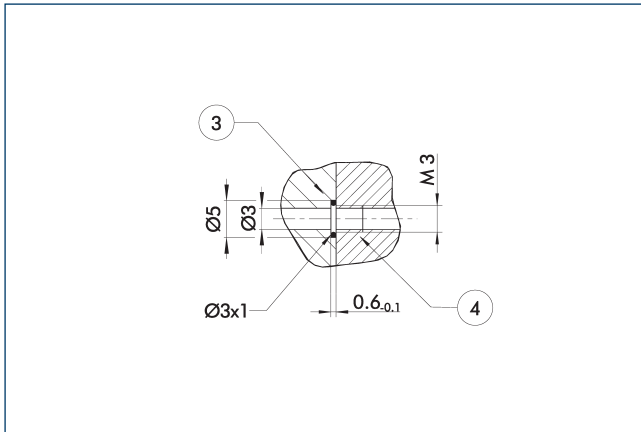


■ Permitted range

■ 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

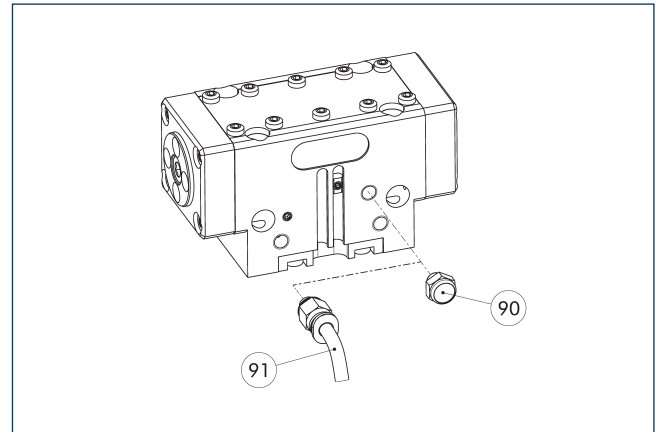


③ Adapter

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.

Connect the air purge connection

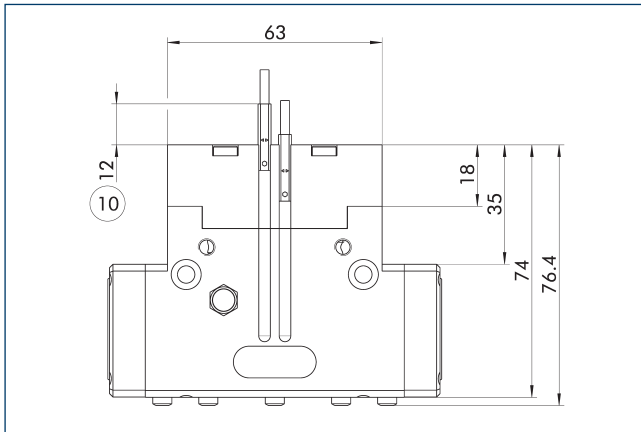


⑨⑩ Sinter filter

⑨⑪ Hose for ventilation or air purge connection

Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

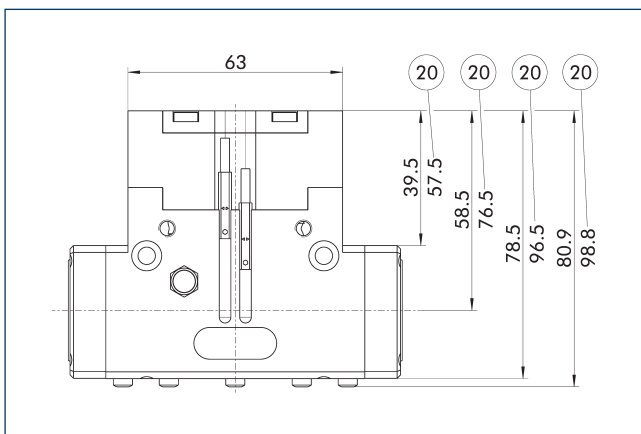
Gripping force maintenance version AS/IS



- 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/IS 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.

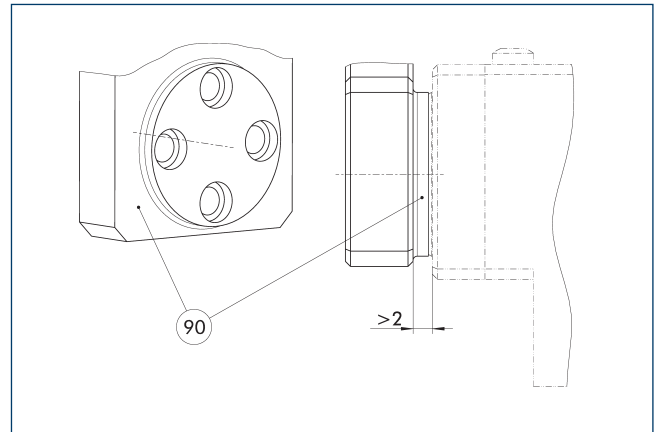
Power booster version



- ②① 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.

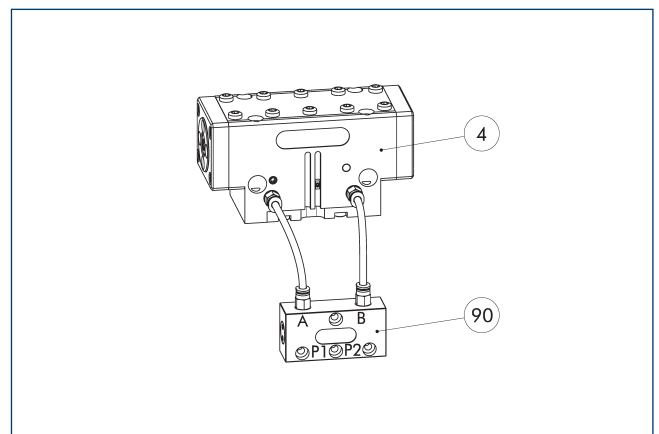
Proposed jaw design



- ⑨① Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



- ④ Grippers

- ⑨① 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.

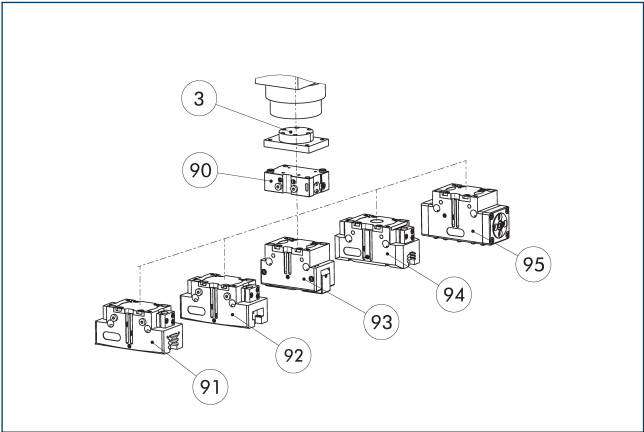
Description	ID	Recommended hose diameter [mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8

- 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.

DPG-plus 80

Sealed universal gripper

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

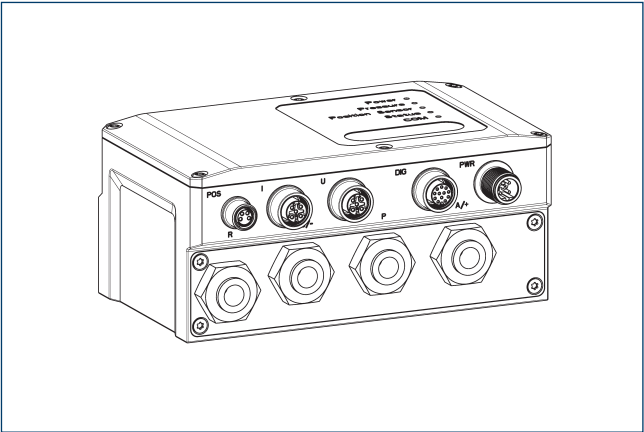
2-finger parallel gripper PGB
- 95

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 80-E-P	0300125

Pneumatic positioning device PPD

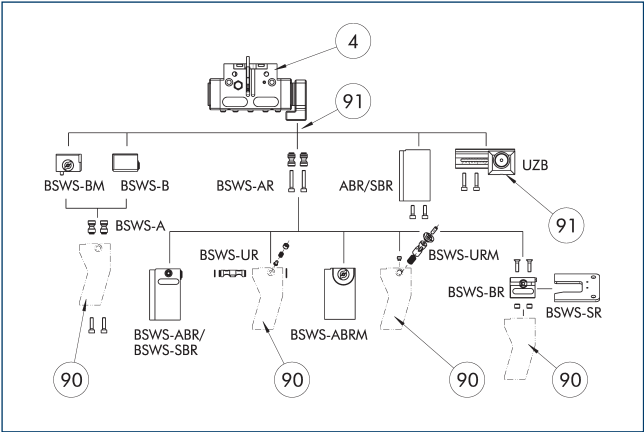


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID
Pneumatic positioning device	
PPD 10-IO-L	1540698
Adapter	
A GGN0804-1204-A	1540691
IO-Link connection cable	
KA GGN1205-1212-IO-L-00100-A	1540697
Voltage supply connection cable – cable track compatible	
KA GLN12B05-LK-01000-A	1540660
Cable extension	
KV GGN0804-IO-00150-A	1540662
KV GGN0804-IO-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.

Intermediate jaw interface



- 4

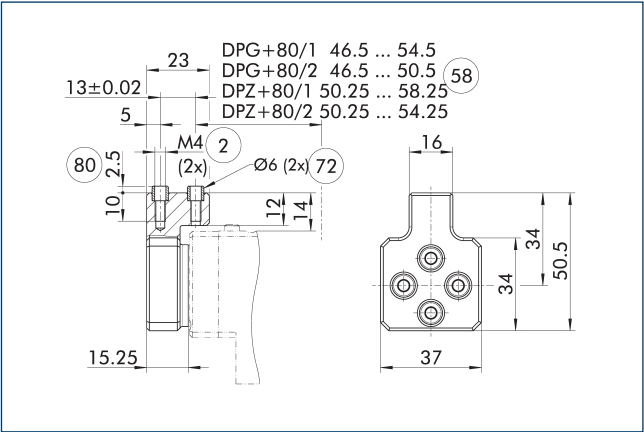
Grippers
- 90

Customized gripper fingers
- 91

Uniform screw connection pattern

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

ZBA DPG-plus/DPZ-plus 80-64 intermediate jaw



- 2

Finger connection
- 58

Distance from center of gripper
- 72

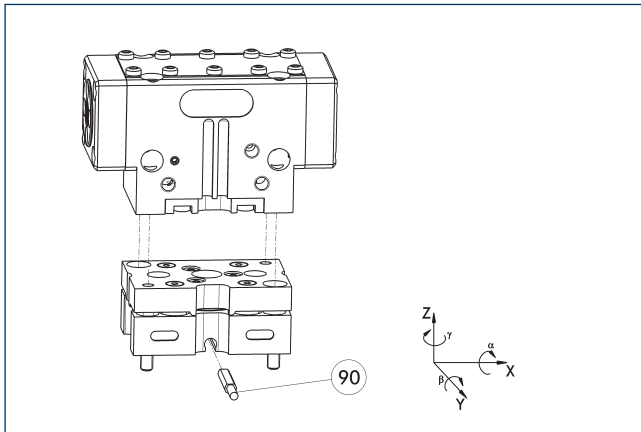
Fit for centering sleeves
- 80

Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 80-64	0300193	Aluminum	PGN-plus 64	1

Tolerance compensation unit TCU

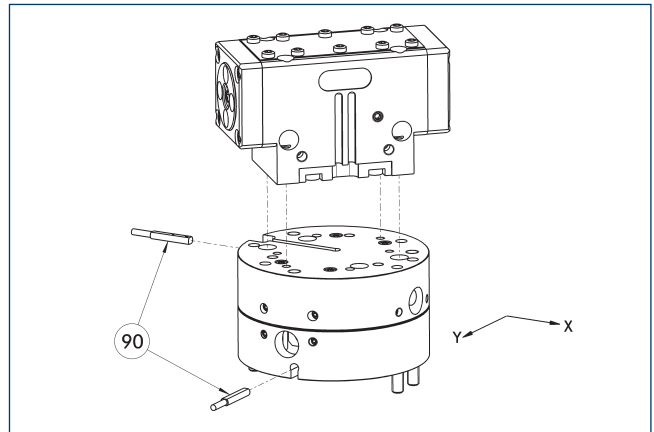


90 Monitoring of locking

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-080-3-MV	0324792	yes	$\pm 1^\circ/\pm 1,5^\circ/\pm 2^\circ$	●
TCU-P-080-3-0V	0324793	no	$\pm 1^\circ/\pm 1,5^\circ/\pm 2^\circ$	

Compensation unit AGE-F

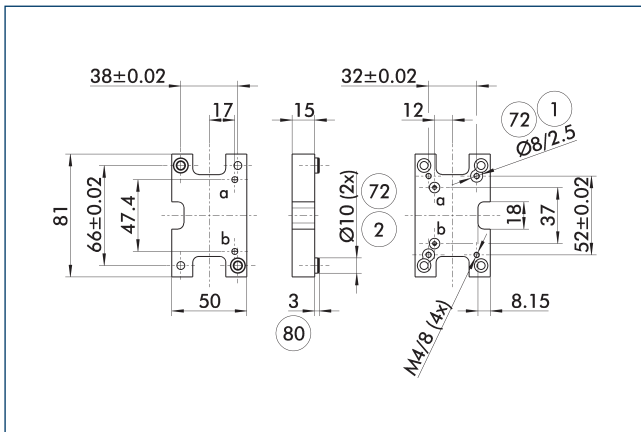


90 Monitoring

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

Description	ID	Compensation XY	Reset force	Often combined
		[mm]	[N]	
Compensation unit				
AGE-F-XY-063-1	0324940	± 4	12	
AGE-F-XY-063-2	0324941	± 4	16	
AGE-F-XY-063-3	0324942	± 4	20	●

Adapter plate PGN-plus 80

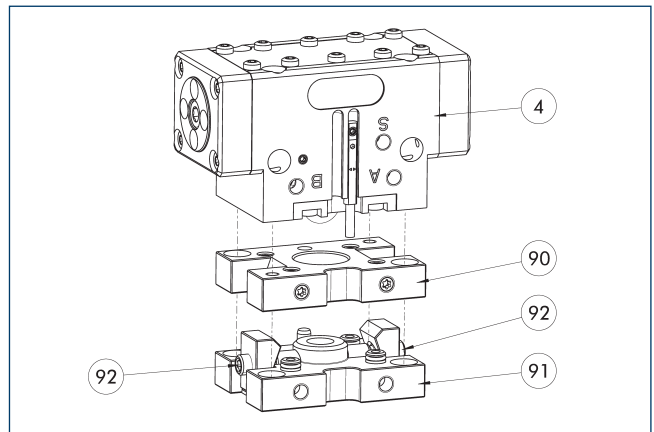


- ① Robot-side connection
- ② Tool-side connection
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part

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-100-080-P	0305804

Compact change system for grippers

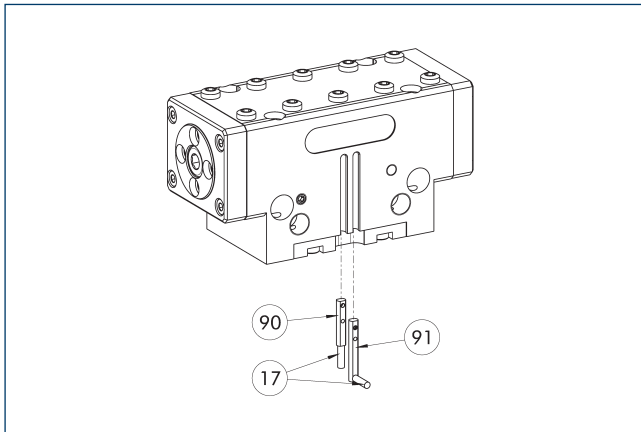


- ④ Grippers
- ⑨ CWA compact change adapter
- ⑨ CWK compact change master
- ⑨ Locking mechanism

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

Description	ID
Tool side	
A-CWA-100-080-P	0305804
CWA compact change adapter	
CWA-080-P	0305781
CWK compact change master	
CWK-080-P	0305780

Electronic magnetic switch MMS



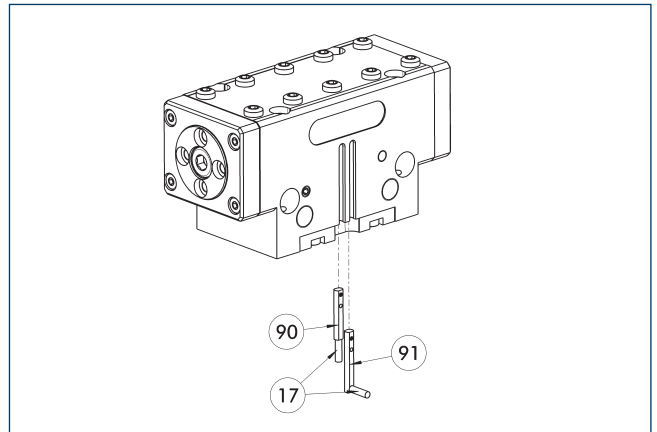
- ① Cable outlet
② Sensor MMS 22...-SA
③ Sensor MMS 22..

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	
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



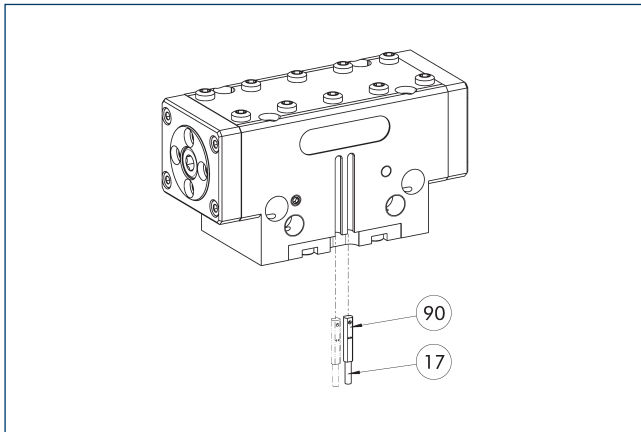
- ① Cable outlet
② Sensor MMS 22 ..-PI1-...-SA
③ Sensor MMS 22 PI1-...

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
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

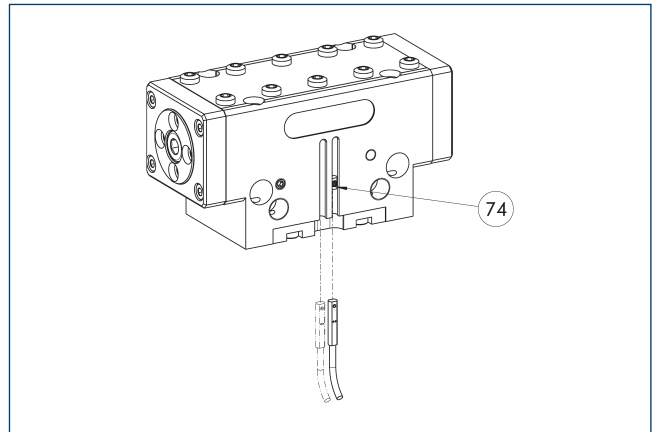
90 MMS 22...-PI2-... sensor

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.

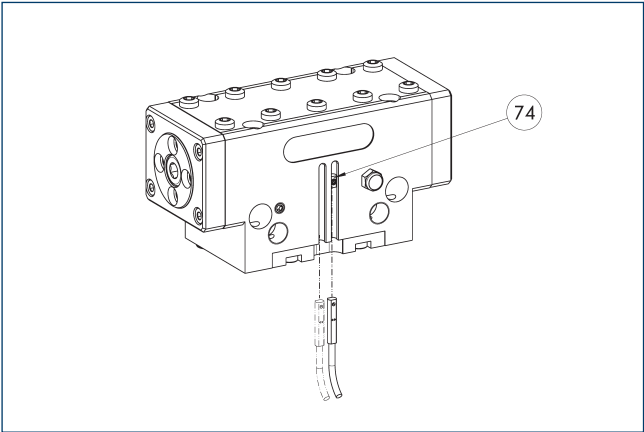
Description	ID	Often combined
Programmable magnetic switch		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
Connection cables		
KA GLN0804-LK-00500-A	0307767	●
KA GLN0804-LK-01000-A	0307768	
KA WLN0804-LK-00500-A	0307765	
KA WLN0804-LK-01000-A	0307766	
Clip for connector/socket		
CLI-M8	0301463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

DPG-plus 80

Sealed universal gripper

Programmable magnetic switch MMS-I0-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-I0L-M08	0315830	
MMS 22-I0L-M12	0315835	

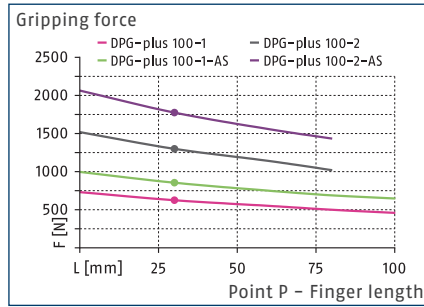
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 100

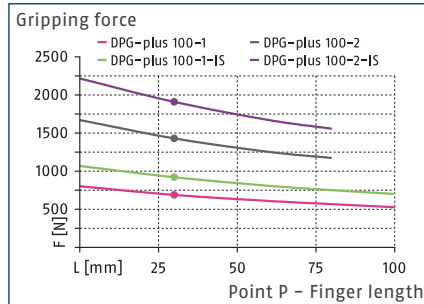
Sealed universal gripper



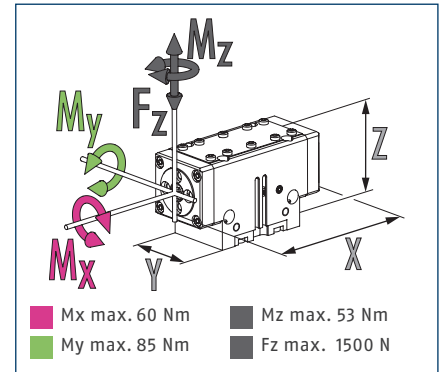
Gripping force O.D. gripping



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		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
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]	0.2/0.5	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 weight per finger	[kg]	0.95	0.95	0.95	0.95	0.95	0.95
IP protection class		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		1321214	1321215	1321217	1321218	1321219	1321222
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1316029	1316034	1316041		1316044	
Closing/opening force	[N]	1018/1126	2120/2318	1212/-		-/1322	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

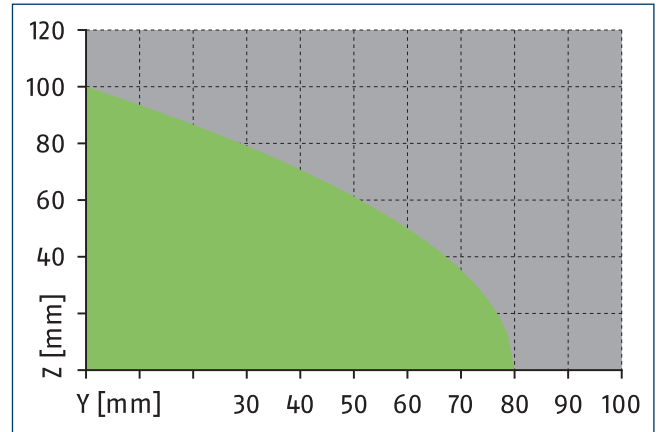
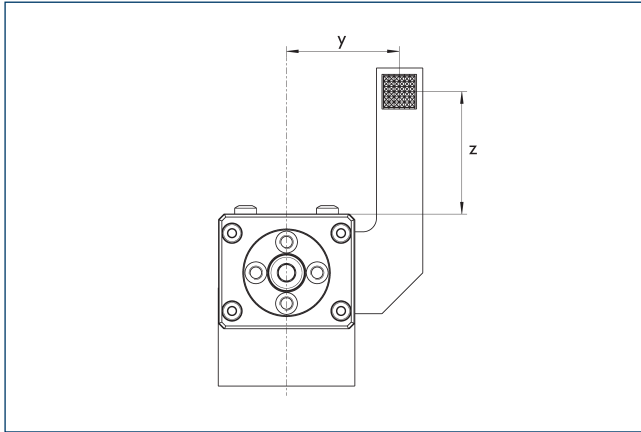
[illegible]

⑨0 Sensor MMS 22..

DPG-plus 100

Sealed universal gripper

Maximum permitted finger projection

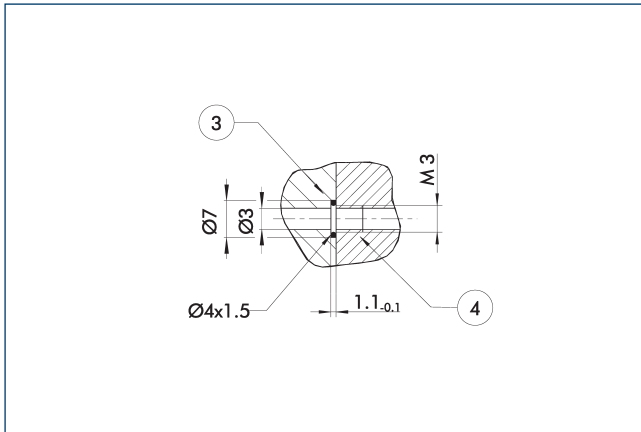


■ Permitted range

■ 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

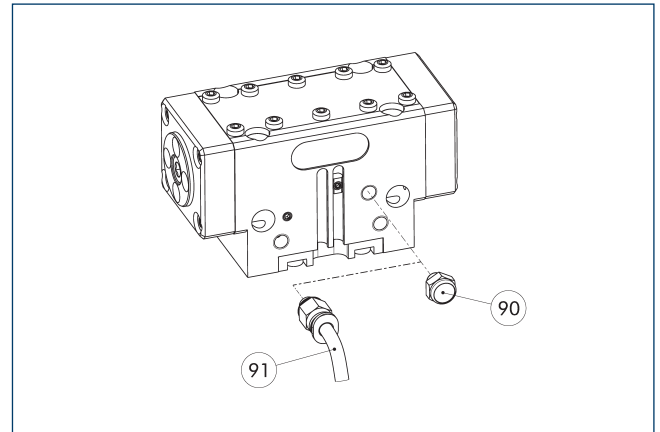


③ Adapter

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.

Connect the air purge connection

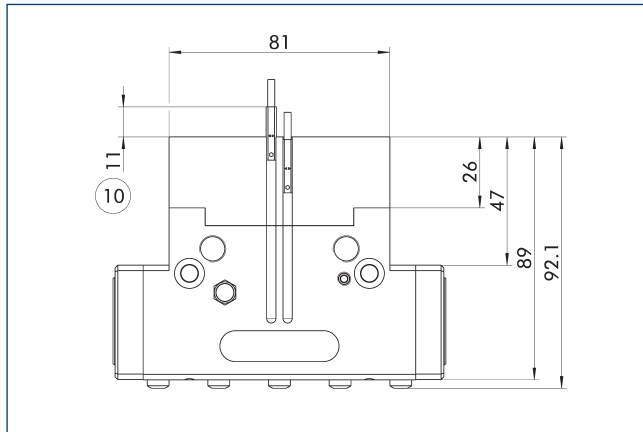


⑨⑩ Sinter filter

⑨⑪ Hose for ventilation or air purge connection

Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

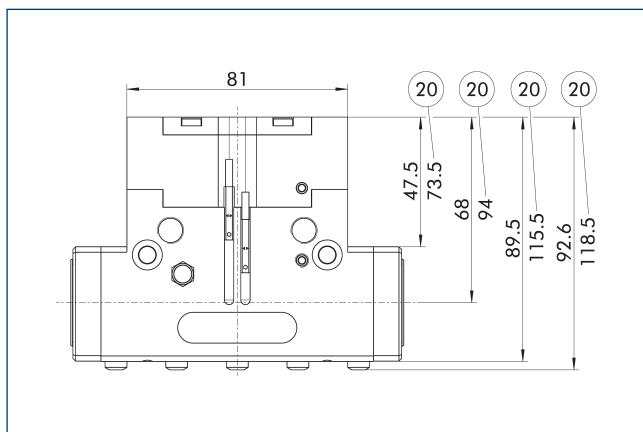
Gripping force maintenance version AS/IS



- 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/IS 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.

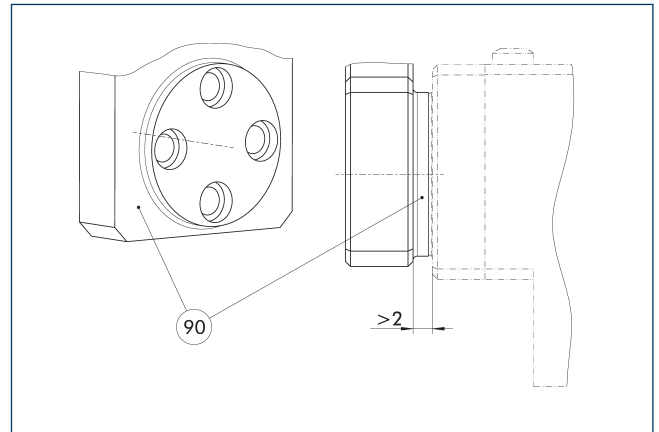
Power booster version



- ②① 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.

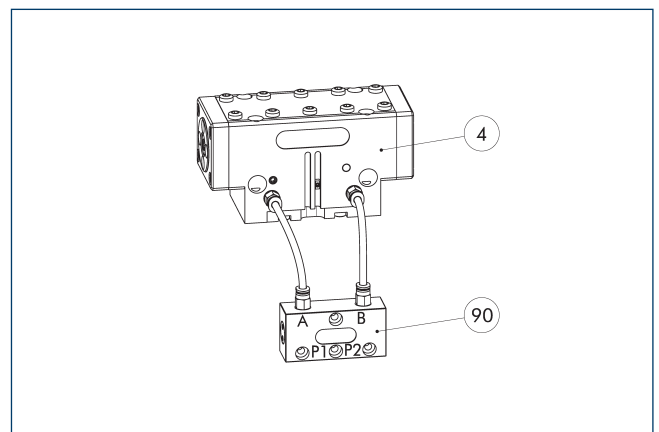
Proposed jaw design



- ⑨① Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



- ④ Grippers

- ⑨① 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.

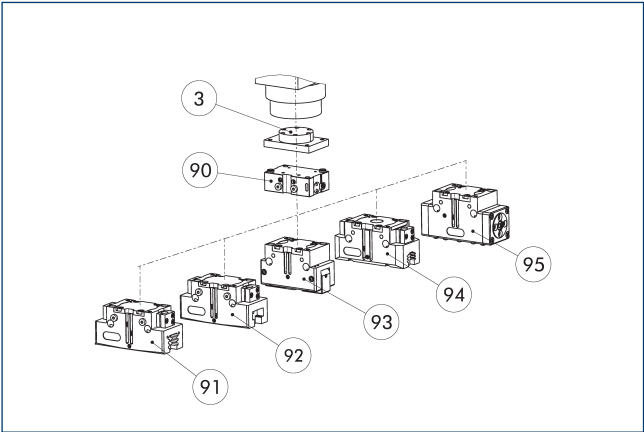
Description	ID	Recommended hose diameter [mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8

- 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.

DPG-plus 100

Sealed universal gripper

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

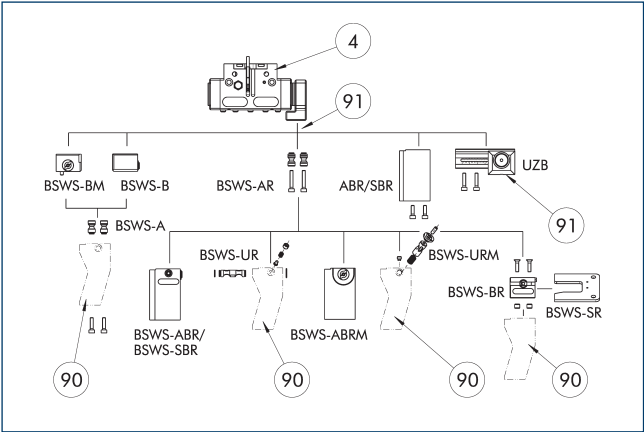
2-finger parallel gripper PGB
- 95

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

Intermediate jaw interface



- 4

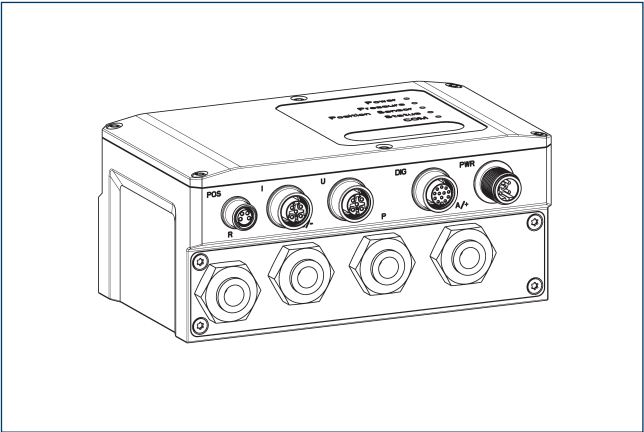
Grippers
- 90

Customized gripper fingers
- 91

Uniform screw connection pattern

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

Pneumatic positioning device PPD

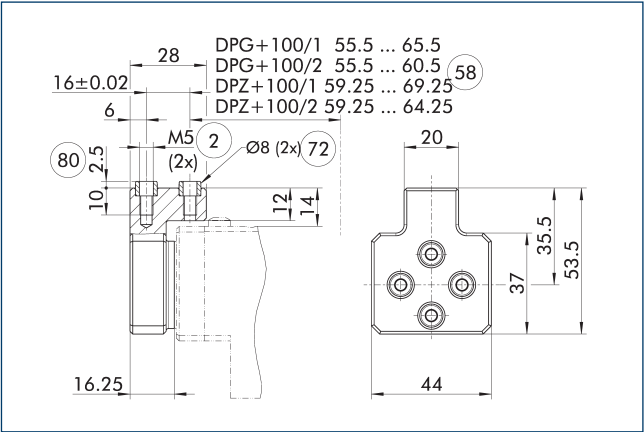


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID
Pneumatic positioning device	
PPD 20-IO-L	1540700
Adapter	
A GGN0804-1204-A	1540691
IO-Link connection cable	
KA GGN1205-1212-IO-L-00100-A	1540697
Voltage supply connection cable - cable track compatible	
KA GLN12B05-LK-01000-A	1540660
Cable extension	
KV GGN0804-IO-00150-A	1540662
KV GGN0804-IO-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.

ZBA DPG-plus/DPZ-plus 100-80 intermediate jaw



- 2

Finger connection
- 58

Distance from center of gripper
- 72

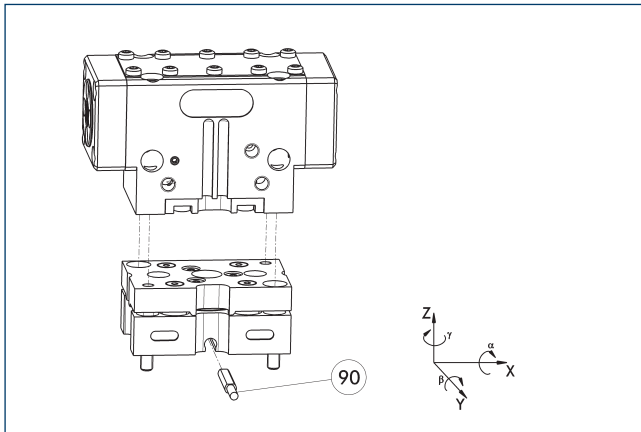
Fit for centering sleeves
- 80

Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 100-80	0300194	Aluminum	PGN-plus 80	1

Tolerance compensation unit TCU

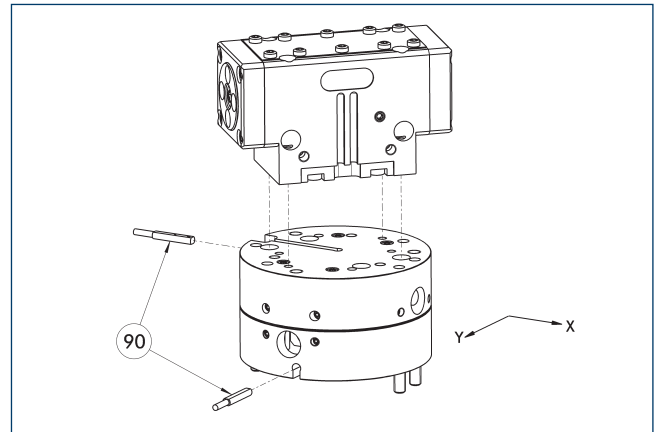


90 Monitoring of locking

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	$\pm 1^\circ / \pm 1,5^\circ / \pm 1,2^\circ$	●
TCU-P-100-3-0V	0324811	no	$\pm 1^\circ / \pm 1,5^\circ / \pm 1,2^\circ$	

Compensation unit AGE-F

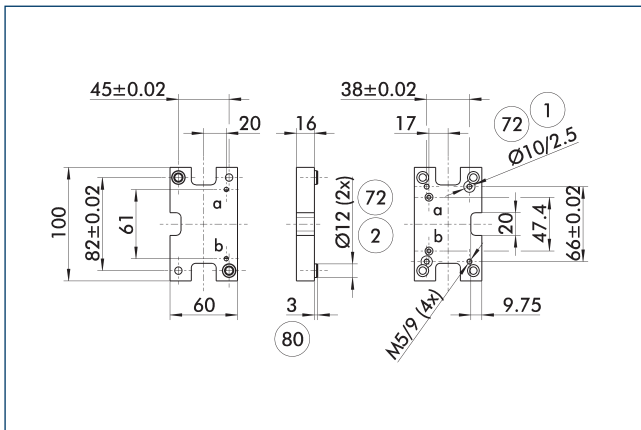


90 Monitoring

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

Description	ID	Compensation XY	Reset force	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	●

Adapter plate for PGN-plus 100

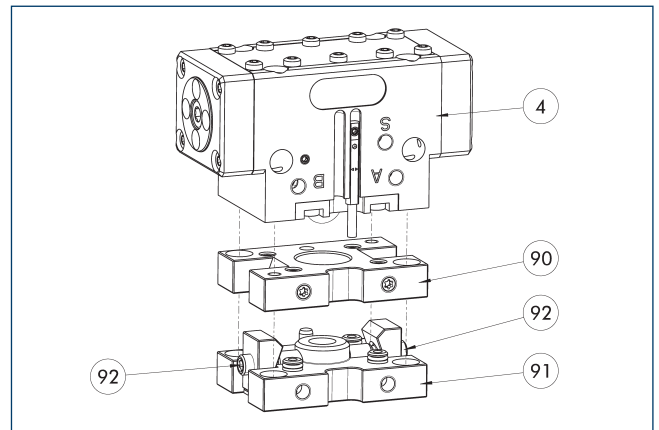


- ① Robot-side connection
- ② Tool-side connection
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part

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

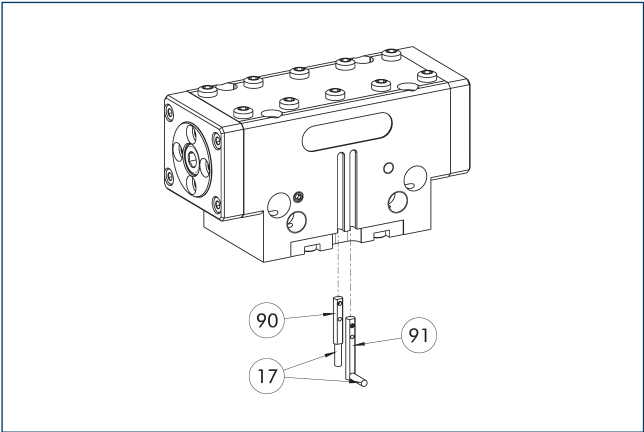


- ④ Grippers
- ⑨ CWA compact change adapter
- ⑨ CWK compact change master
- ⑨ Locking mechanism

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

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

Electronic magnetic switch MMS



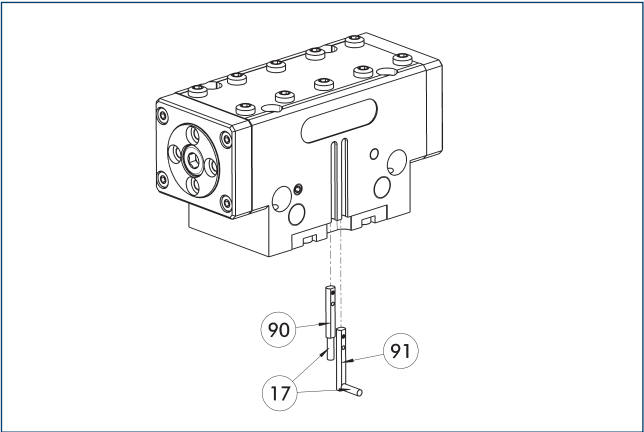
- 17 Cable outlet
90 Sensor MMS 22..
91 Sensor MMS 22...-SA

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



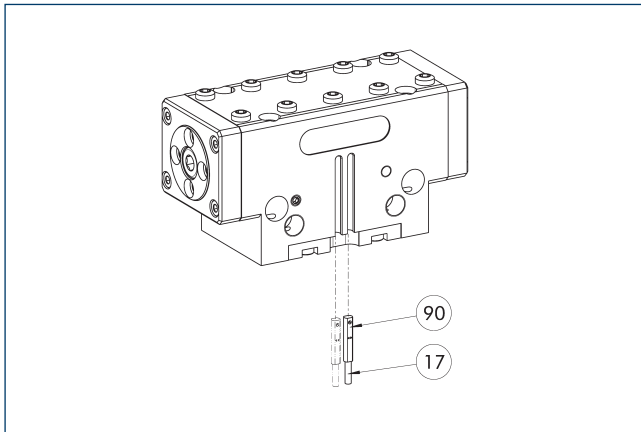
- 17 Cable outlet
90 Sensor MMS 22 PI1-...
91 Sensor MMS 22 ..-PI1-...-SA

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

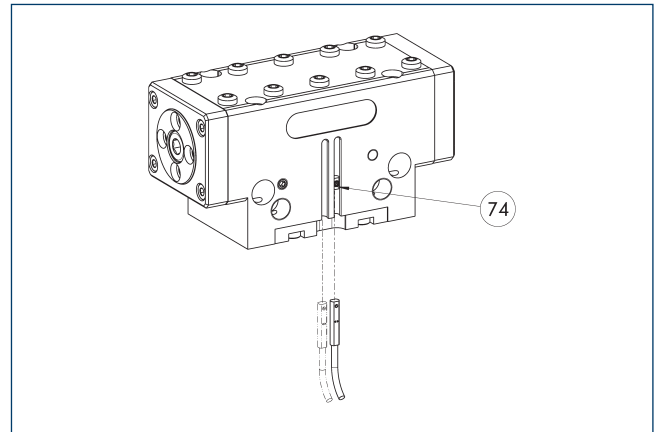
90 MMS 22...-PI2-... sensor

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.

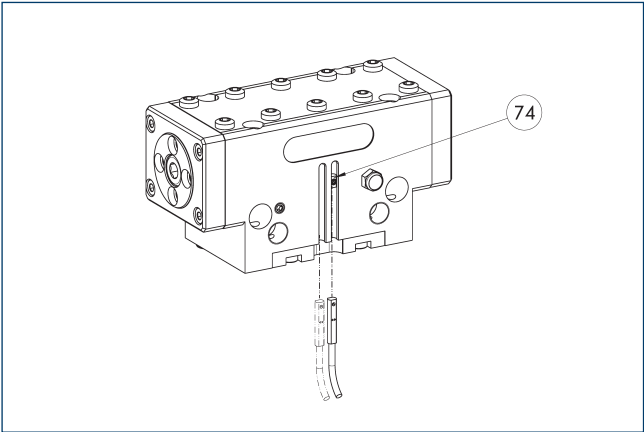
Description	ID	Often combined
Programmable magnetic switch		
MMSK-P 22-S-PNP	0301371	
MMS-P 22-S-M8-PNP	0301370	●
Connection cables		
KA GLN0804-LK-00500-A	0307767	●
KA GLN0804-LK-01000-A	0307768	
KA WLN0804-LK-00500-A	0307765	
KA WLN0804-LK-01000-A	0307766	
Clip for connector/socket		
CLI-M8	0301463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

DPG-plus 100

Sealed universal gripper

Programmable magnetic switch MMS-I0-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-I0L-M08	0315830	
MMS 22-I0L-M12	0315835	

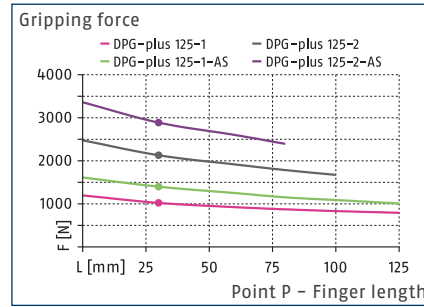
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 125

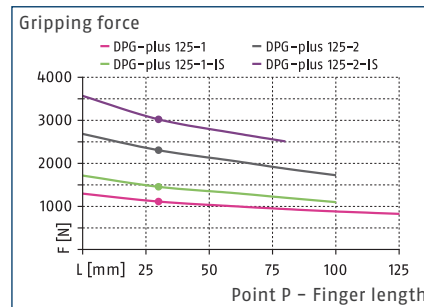
Sealed universal gripper



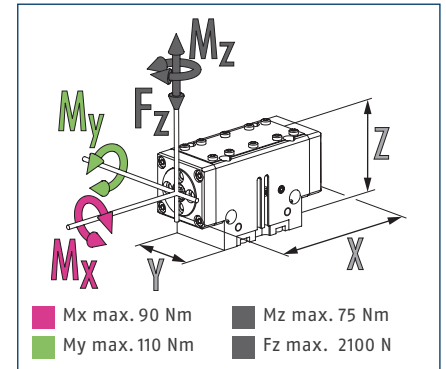
Gripping force O.D. gripping



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		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	1.75	1.75	1.75	1.75	1.75	1.75
IP protection class		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		1321224	1321226	1321228	1321229	1321230	1321231
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1316059	1316062	1316067		1316070	
Closing/opening force	[N]	1673/1814	3486/3760	2005/-		-/2115	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

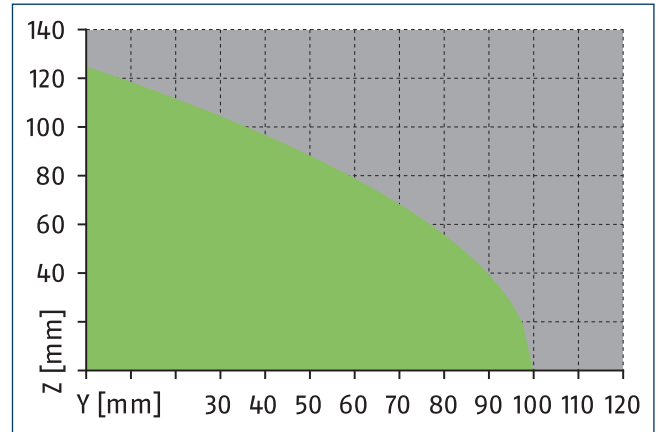
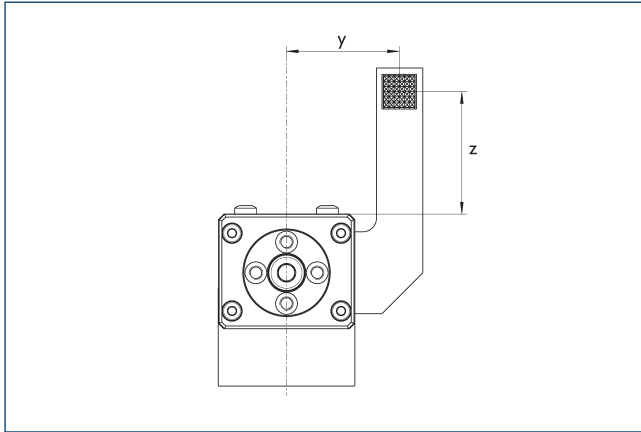
It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

90 Sensor MMS 22..

DPG-plus 125

Sealed universal gripper

Maximum permitted finger projection

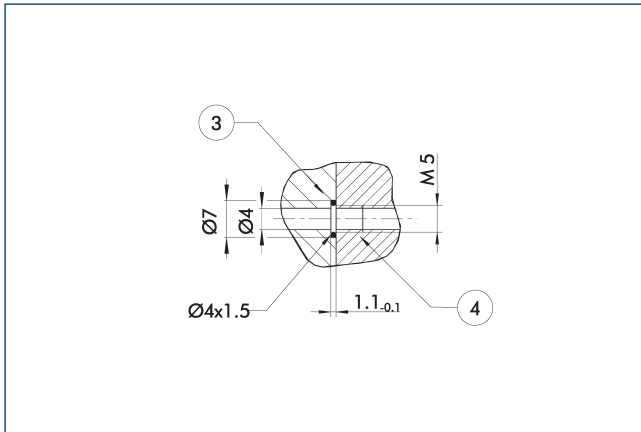


■ Permitted range

■ 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 M5

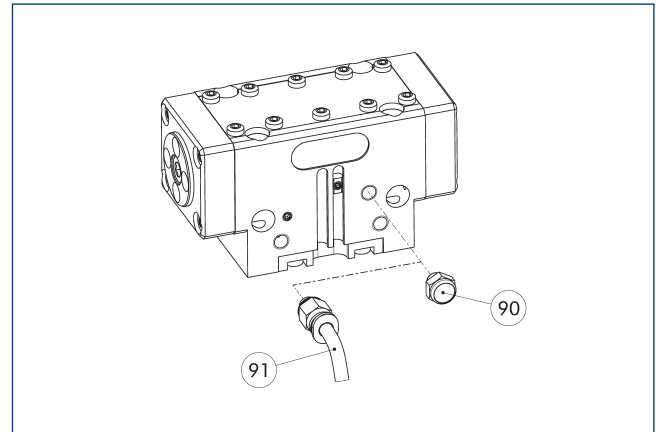


③ Adapter

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.

Connect the air purge connection

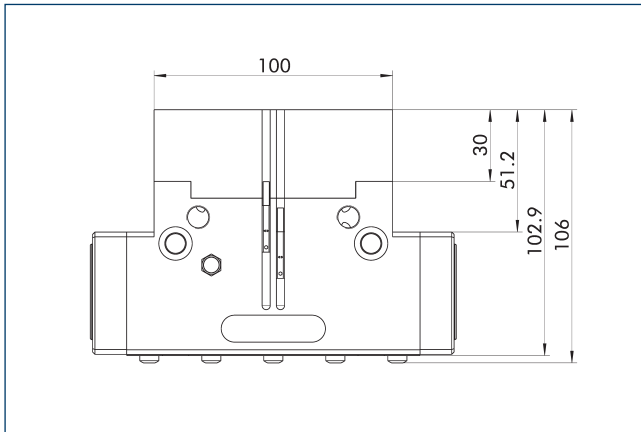


⑨⑩ Sinter filter

⑨⑪ Hose for ventilation or air purge connection

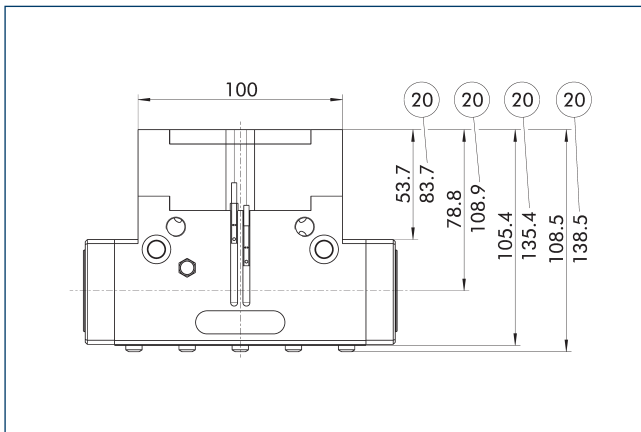
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

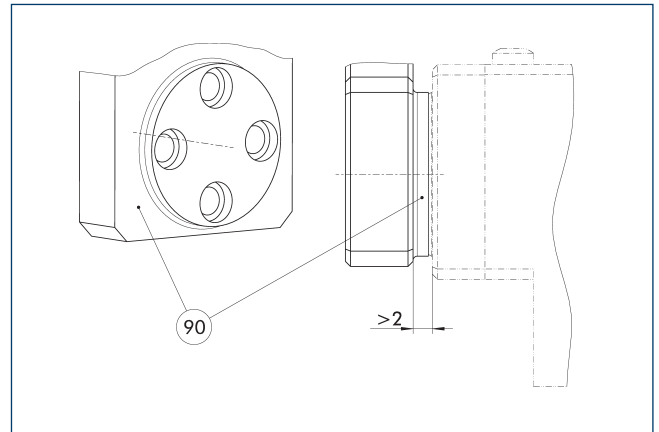
Power booster version



20 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.

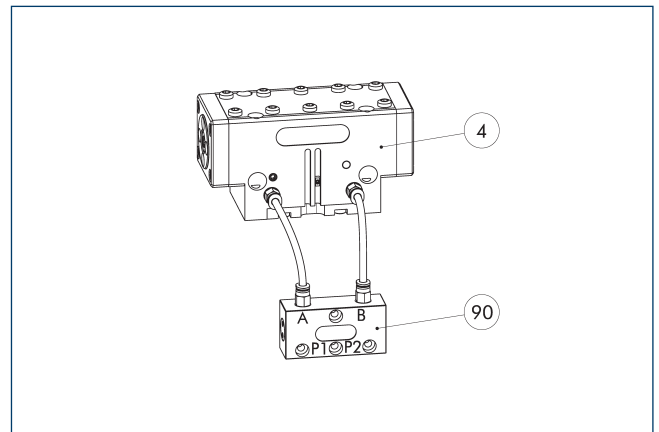
Proposed jaw design



90 Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



4 Grippers

90 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.

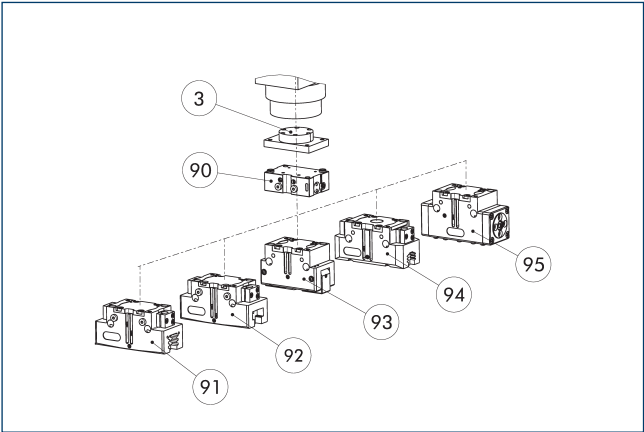
Description	ID	Recommended hose diameter
		[mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8

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.

DPG-plus 125

Sealed universal gripper

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

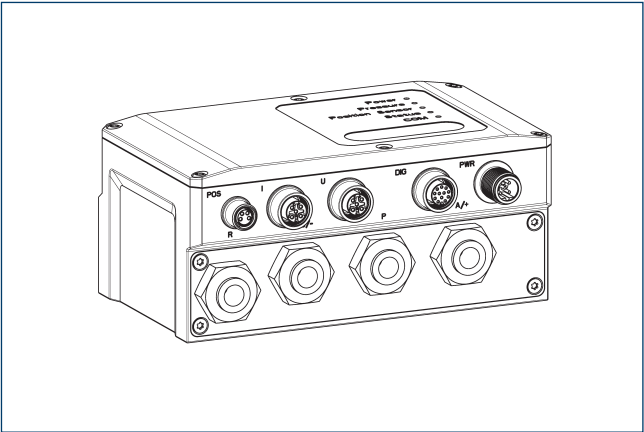
2-finger parallel gripper PGB
- 95

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 125-E-P	0300127	

Pneumatic positioning device PPD

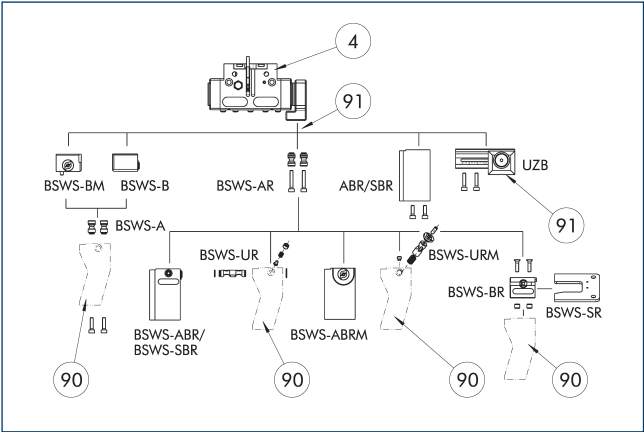


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID	
Pneumatic positioning device		
PPD 20-IOL	1540700	
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-IO-00150-A	1540662	
KV GGN0804-IO-00300-A	1540663	
Assembly set		
Assembly set PPD	1540705	

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

Intermediate jaw interface



- 4

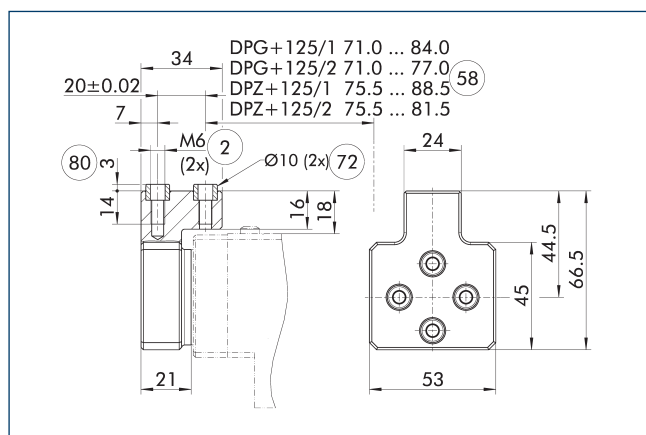
Grippers
- 90

Customized gripper fingers
- 91

Uniform screw connection pattern

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

ZBA DPG-plus/DPZ-plus 125-100 intermediate jaw

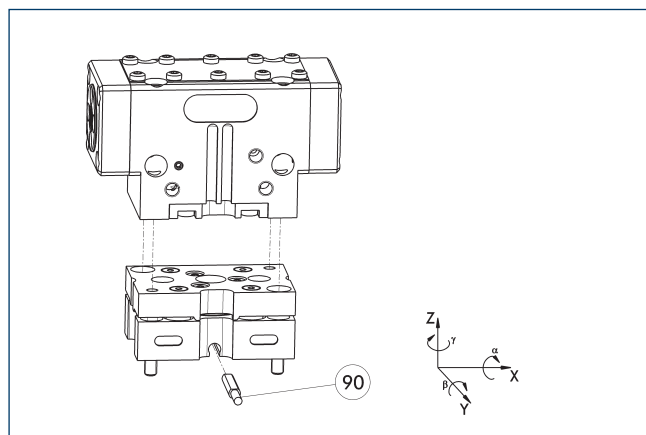


- ② Finger connection
- ⑤⑧ Distance from center of gripper
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 125-100	0300195	Aluminum	PGN-plus 100	1

Tolerance compensation unit TCU

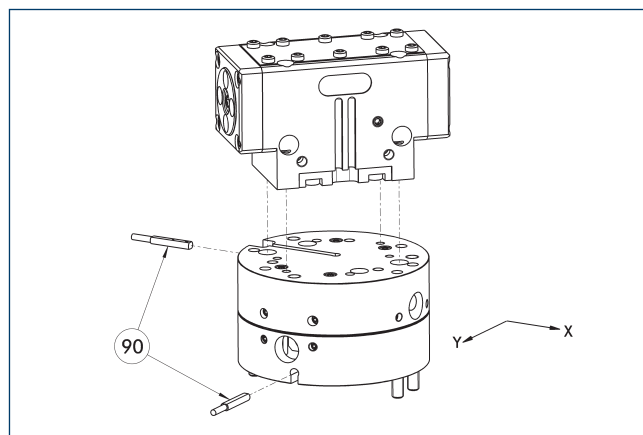


- ⑨⑩ Monitoring of locking

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	Often combined
Compensation unit				
TCU-P-125-3-MV	0324828	yes	±1°/±1,5°/±1,5°	●
TCU-P-125-3-0V	0324829	no	±1°/±1,5°/±1,5°	

Compensation unit AGE-F

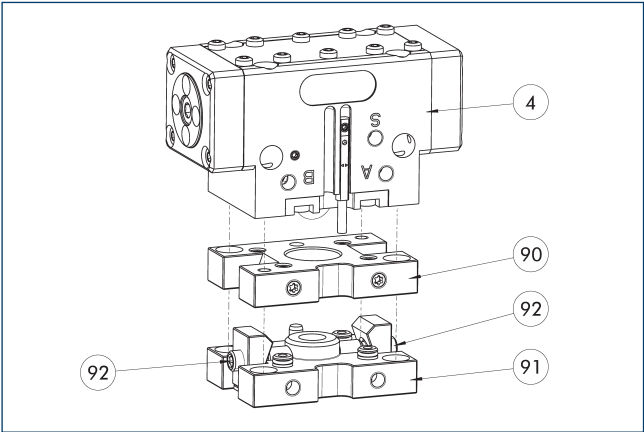


- ⑨⑩ Monitoring

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

Description	ID	Compensation XY	Reset force	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	●

Compact change system for grippers

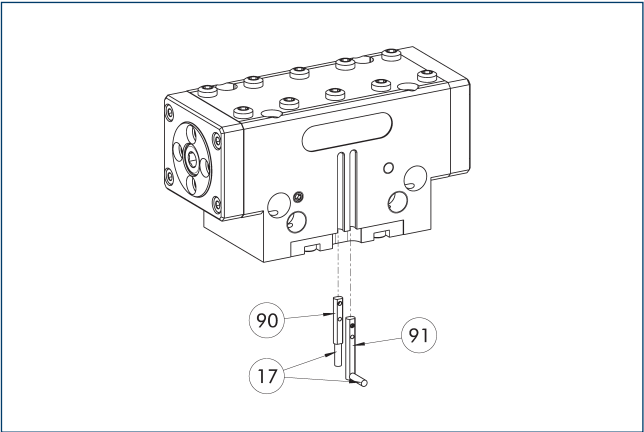


- ④ Grippers
- ⑨① CWK compact change master
- ⑨① CWA compact change adapter
- ⑨② Locking mechanism

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

Description	ID	
CWA compact change adapter		
CWA-125-P	0305826	
CWK compact change master		
CWK-125-P	0305825	

Electronic magnetic switch MMS



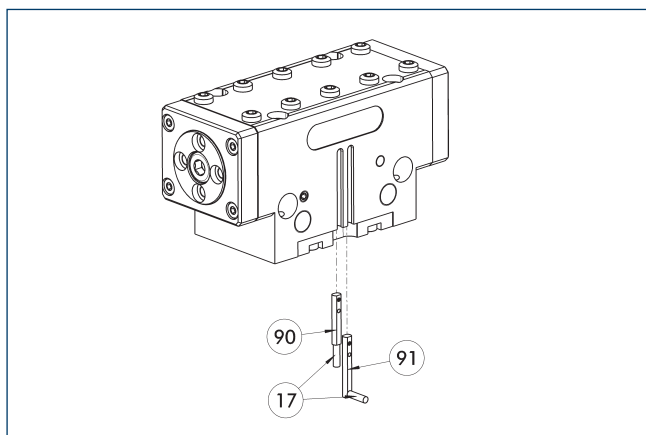
- ①⑦ Cable outlet
- ⑨① Sensor MMS 22...-SA
- ⑨① Sensor MMS 22..

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



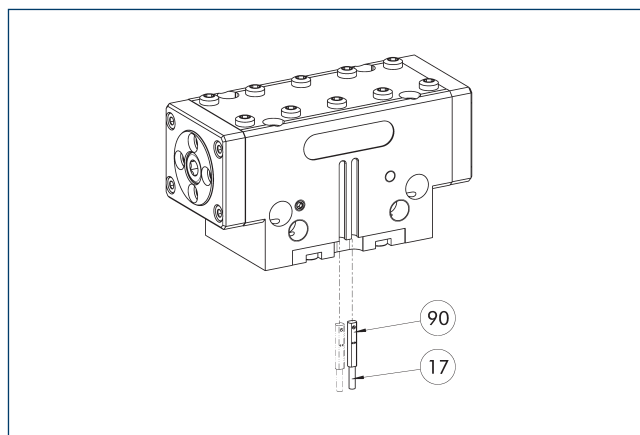
- ①⑦ Cable outlet ①⑨ Sensor MMS 22 ..-PI1-...-SA
①⑩ Sensor MMS 22 PI1-...

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
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



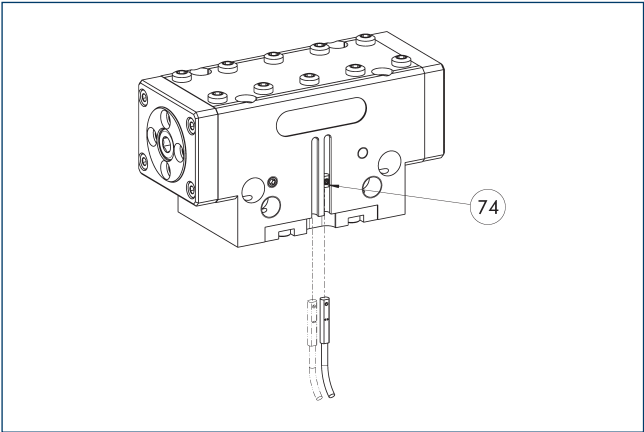
- ①⑦ Cable outlet ①⑩ MMS 22...-PI2-... sensor

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



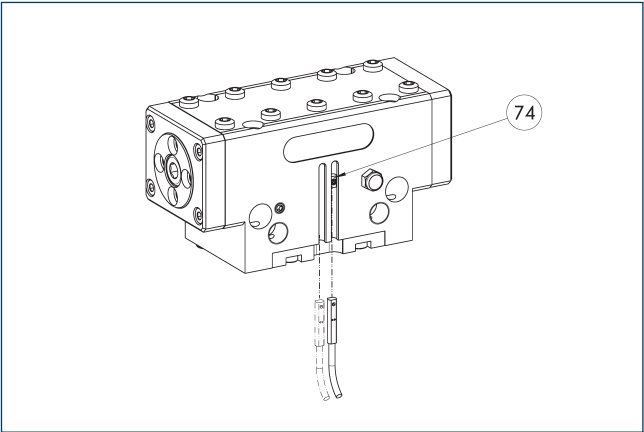
74 Limit stop for sensor

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.

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-IOI-M08	0315830	
MMS 22-IOI-M12	0315835	

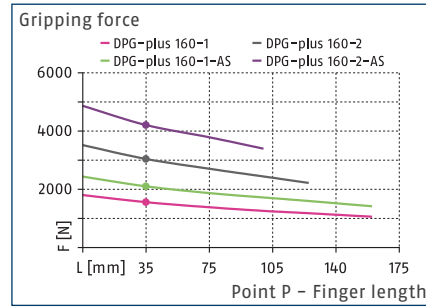
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 160

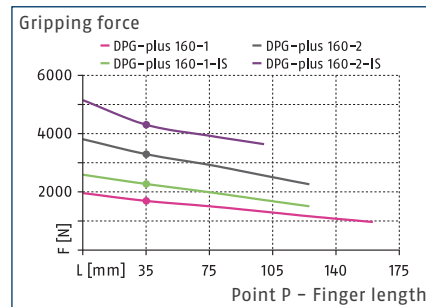
Sealed universal gripper



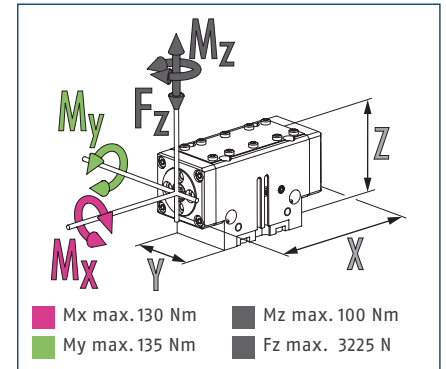
Gripping force O.D. gripping



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.

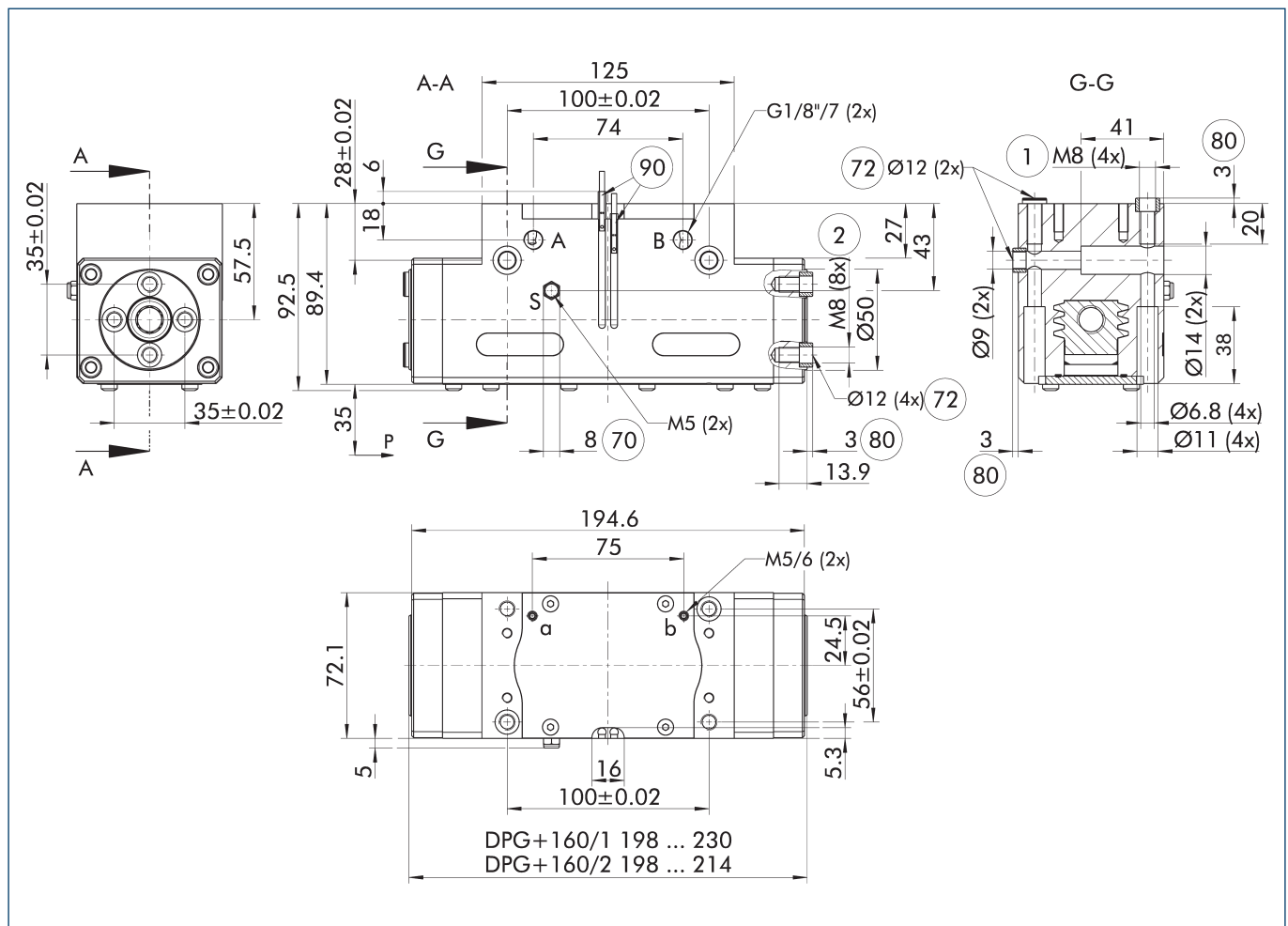
Technical data

Description		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	3	3	3	3	3	3
IP protection class		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		1321232	1321235	1321237	1321238	1321239	1321241
Min./max. ambient temperature	[°C]	5/130	5/130	5/130	5/130	5/130	5/130
Power booster version		1316077	1316080	1316082		1316085	
Closing/opening force	[N]	2565/2754	4995/5402	3013/-		-/3201	
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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

Main view



For finger connection, we recommend only to use two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- ① The SDV-P pressure maintenance valve can be used as a gripping force maintenance device (see catalog section on accessories).

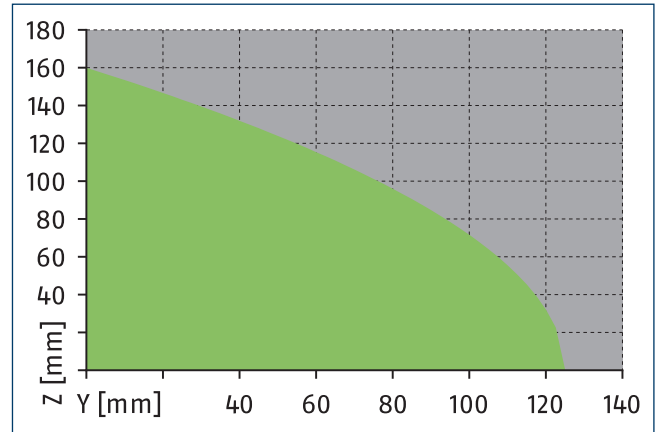
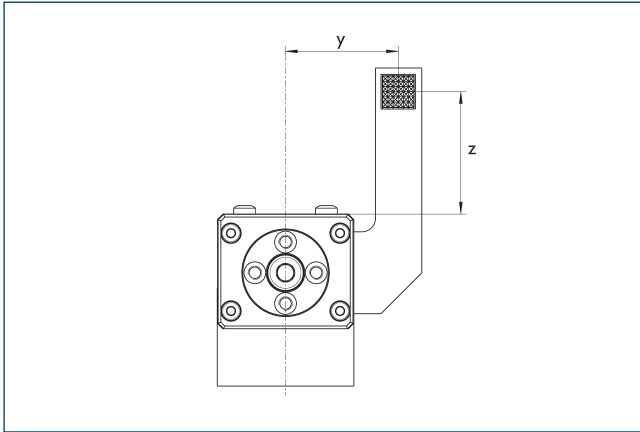
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- S, E Air purge connection, or deaeration bore
- ① Gripper connection

- ② Finger connection
- 70 Wrench size
- 72 Fit for centering sleeves
- 80 Depth of the centering sleeve hole in the counter part
- 90 Sensor MMS 22..

DPG-plus 160

Sealed universal gripper

Maximum permitted finger projection

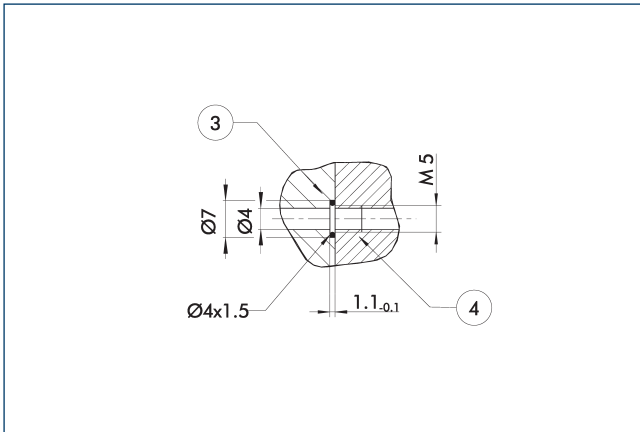


■ Permitted range

■ 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 M5

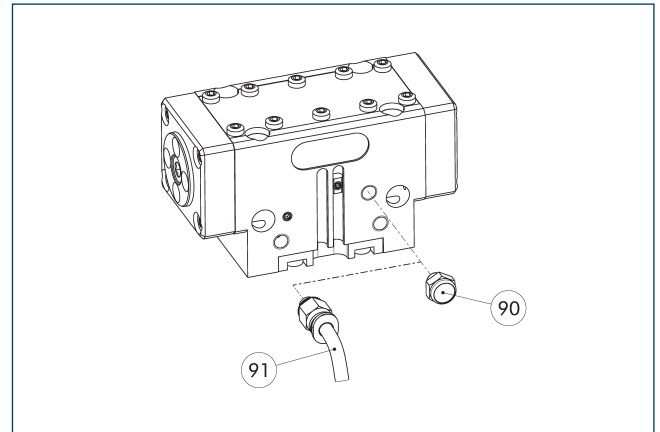


③ Adapter

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.

Connect the air purge connection

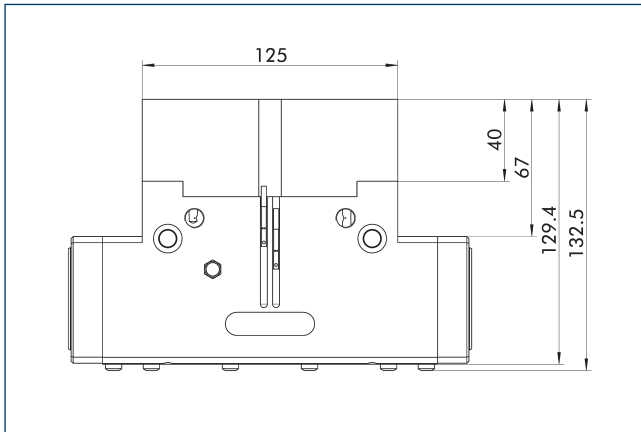


⑨⑩ Sinter filter

⑨① Hose for ventilation or air purge connection

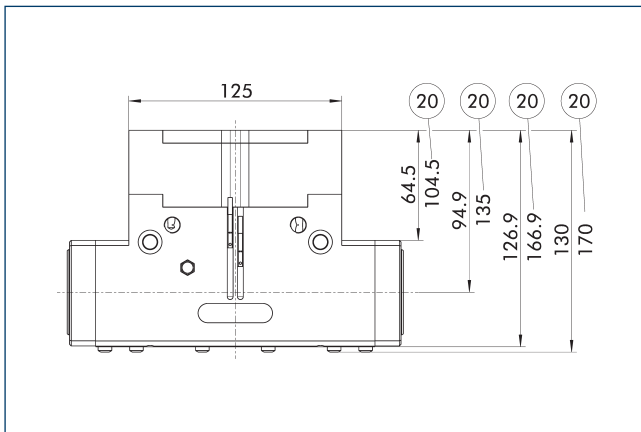
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

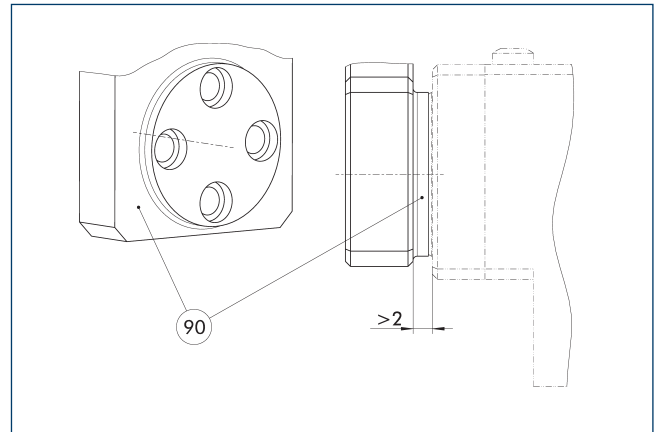
Power booster version



②① 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.

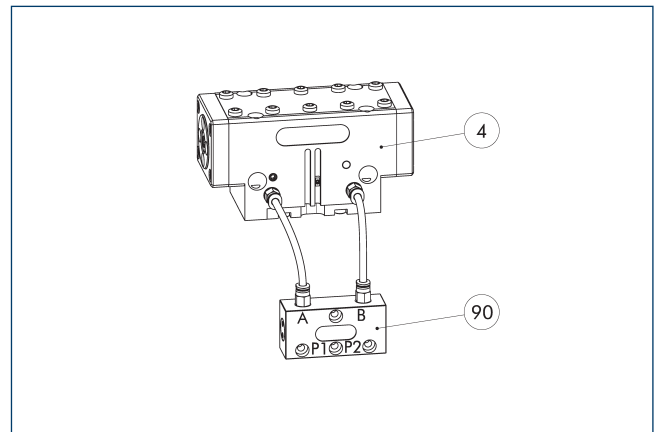
Proposed jaw design



⑨① Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



④ Grippers

⑨① 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.

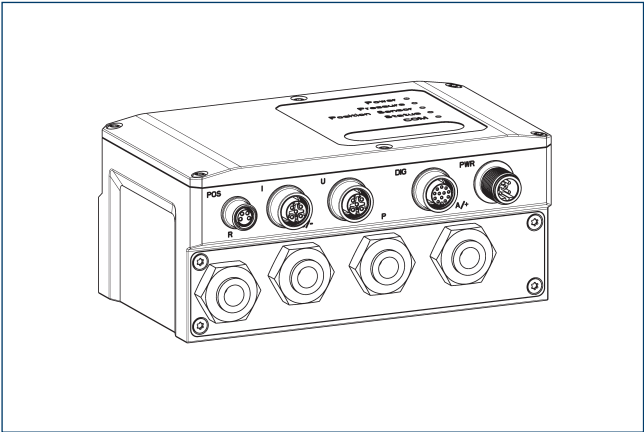
Description	ID	Recommended hose diameter
		[mm]
Pressure maintenance valve		
SDV-P 04	0403130	6
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 04-E	0300120	6
SDV-P 07-E	0300121	8
SDV-P 10-E	0300109	10

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.

DPG-plus 160

Sealed universal gripper

Pneumatic positioning device PPD

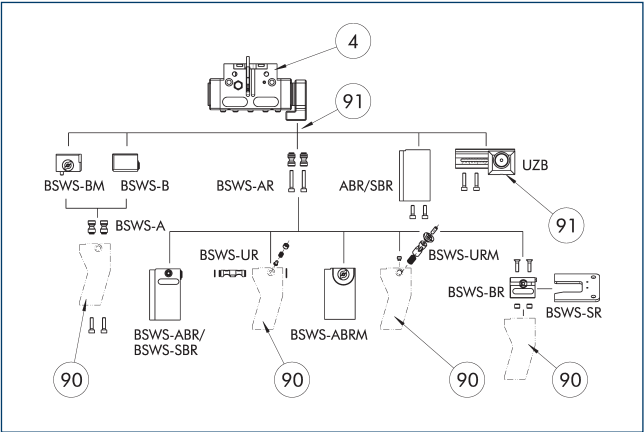


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

Description	ID	
Pneumatic positioning device		
PPD 20-IO-L	1540700	
Adapter		
A GGN0804-1204-A	1540691	
IO-Link connection cable		
KA GGN1205-1212-IO-L-00100-A	1540697	
Voltage supply connection cable - cable track compatible		
KA GLN12B05-LK-01000-A	1540660	
Cable extension		
KV GGN0804-IO-00150-A	1540662	
KV GGN0804-IO-00300-A	1540663	
Assembly set		
Assembly set PPD	1540705	

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

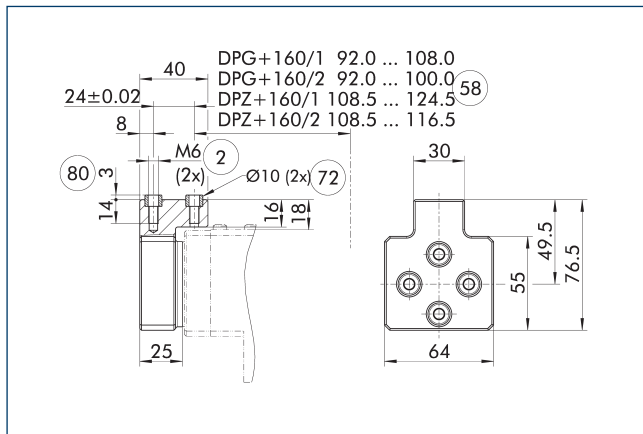
Intermediate jaw interface



- ④ Grippers
- ⑨① Uniform screw connection pattern
- ⑨① Customized gripper fingers

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

ZBA DPG-plus/DPZ-plus 160-125 intermediate jaw

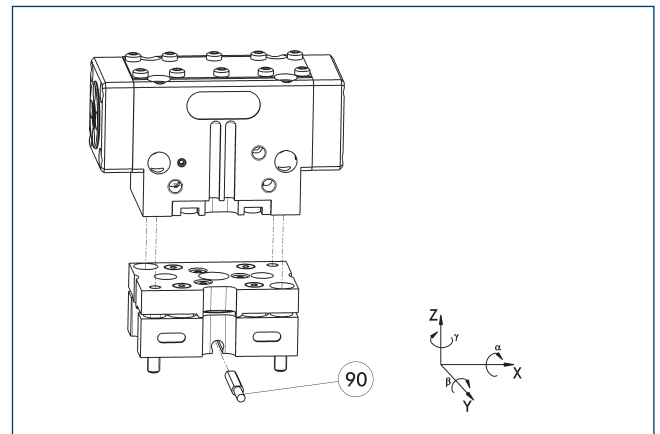


- ② Finger connection
- ⑤⑧ Distance from center of gripper
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-DPG-DPZ-plus 160-125	0300196	Aluminum	PGN-plus 125	1

Tolerance compensation unit TCU

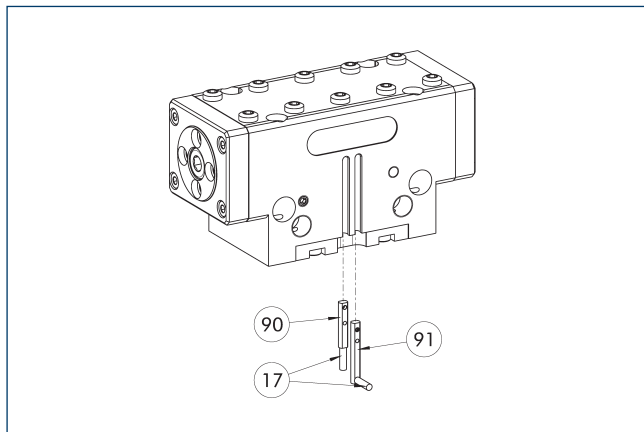


- ⑨⑩ Monitoring of locking

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	Often combined
Compensation unit				
TCU-P-160-3-MV	0324846	yes	±1°/±2°/±1,5°	●
TCU-P-160-3-OV	0324847	no	±1°/±2°/±1,5°	

Electronic magnetic switch MMS



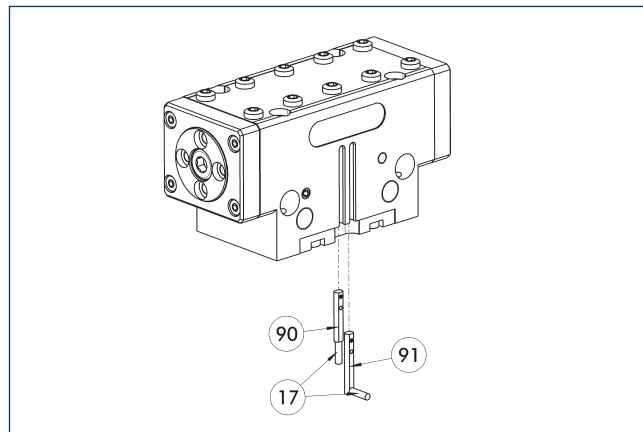
- ①⑦ Cable outlet
⑨① Sensor MMS 22...-SA

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



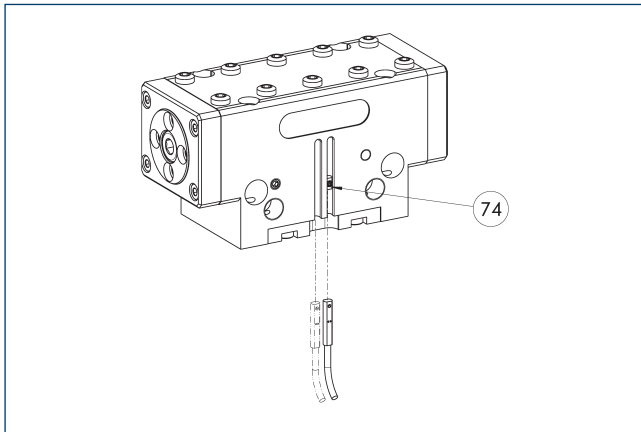
- ①⑦ Cable outlet
⑨① Sensor MMS 22 ..-PI1-...-SA

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.

MMS-P programmable magnetic switch



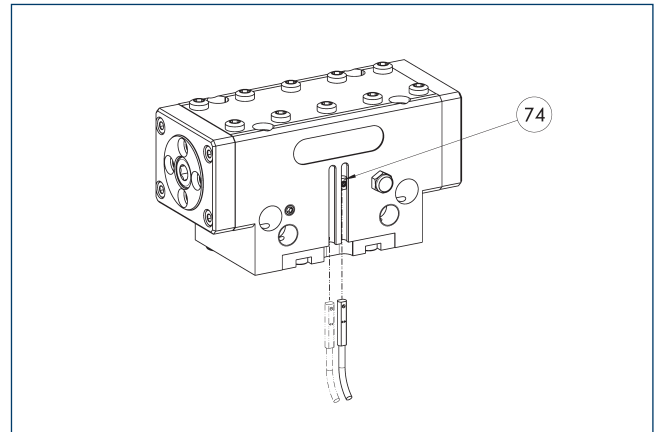
74 Limit stop for sensor

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.

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-IOL-M08	0315830	
MMS 22-IOL-M12	0315835	

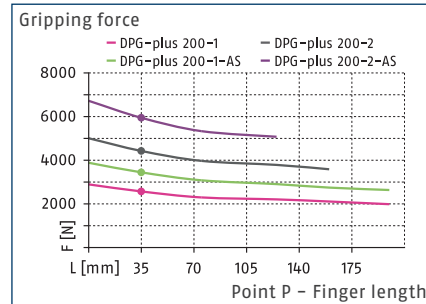
- ① One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

DPG-plus 200

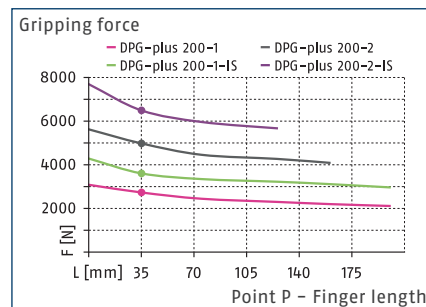
Sealed universal gripper



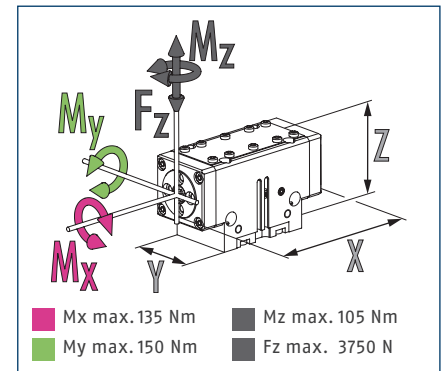
Gripping force O.D. gripping



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		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/-	-13605	-16490
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
Cylinder volume per double stroke	[cm³]	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	125
Max. permissible weight per finger	[kg]	5.5	5.5	5.5	5.5	5.5	5.5
IP protection class		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		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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

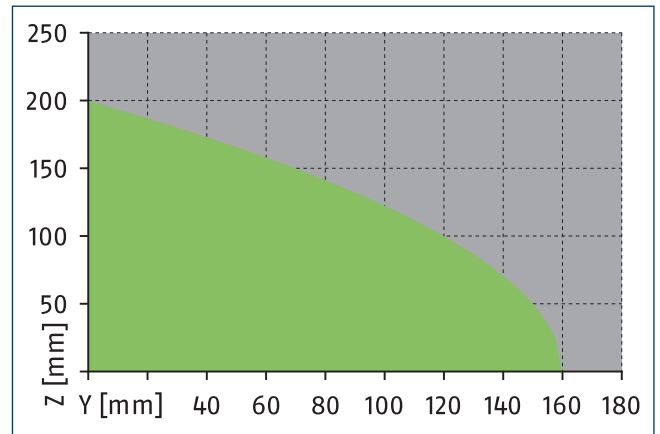
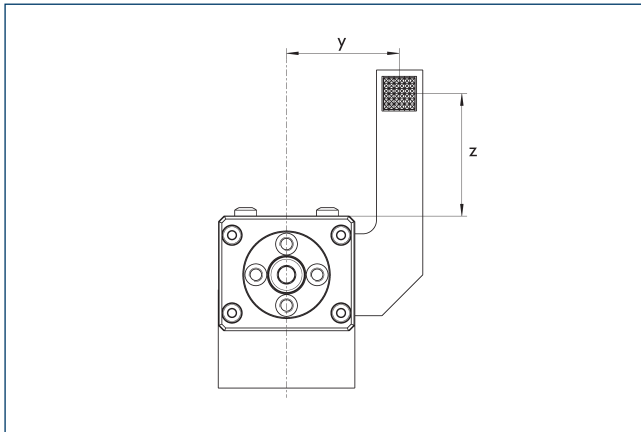
It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

(90) Sensor MMS 22..

DPG-plus 200

Sealed universal gripper

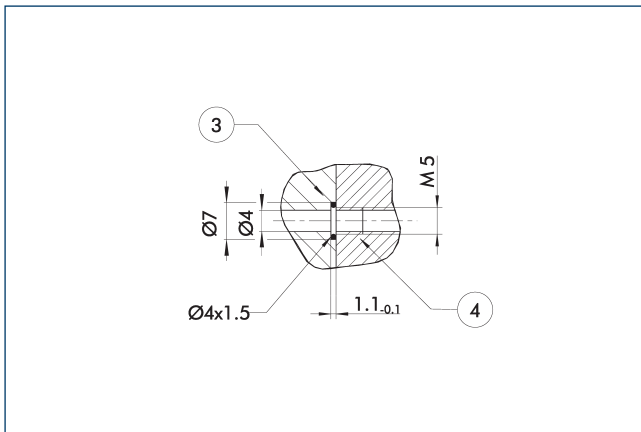
Maximum permitted finger projection



■ 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 M5

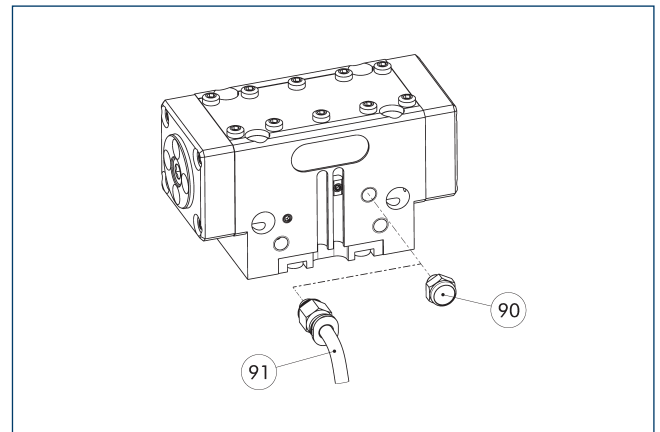


③ Adapter

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.

Connect the air purge connection

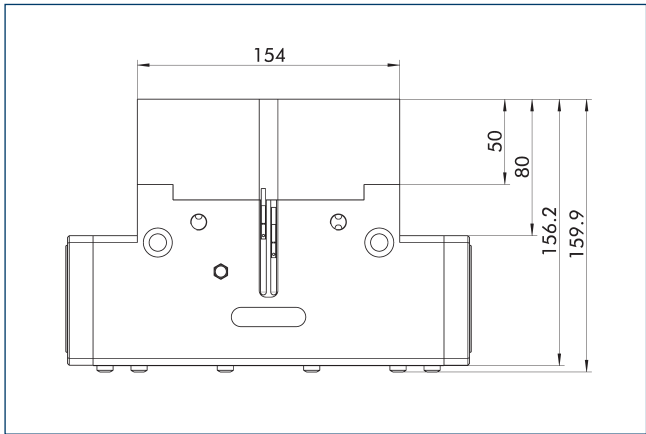


90 Sinter filter

91 Hose for ventilation or air purge connection

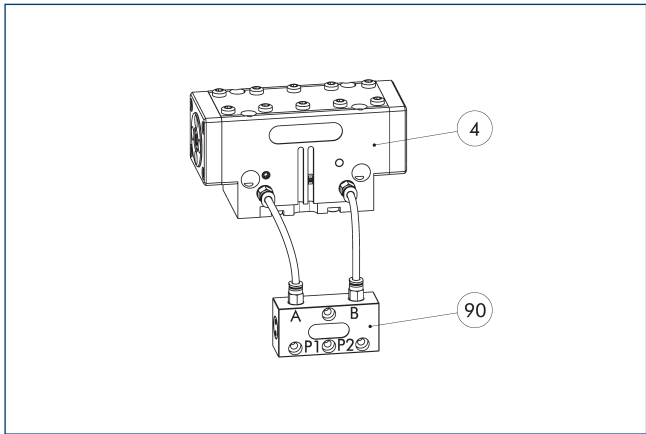
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

SDV-P pressure maintenance valve



④ Grippers

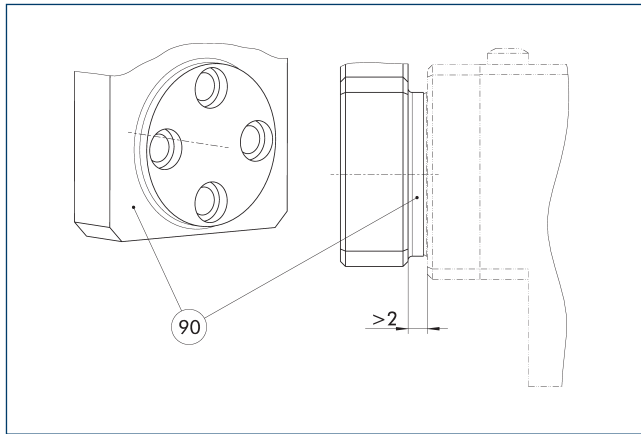
⑨⑩ SDV-P pressure maintenance valve

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
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.

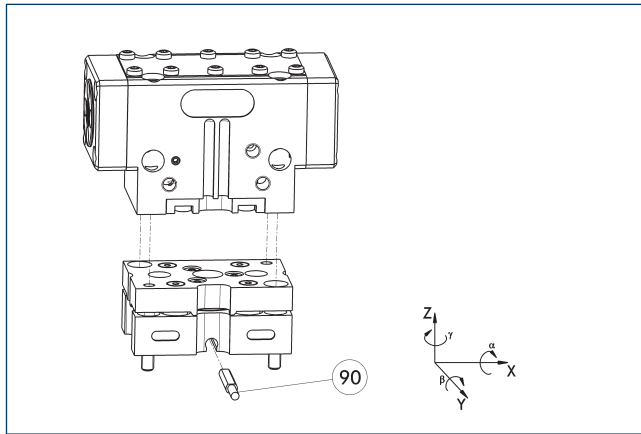
Proposed jaw design



⑨⑩ Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

Tolerance compensation unit TCU

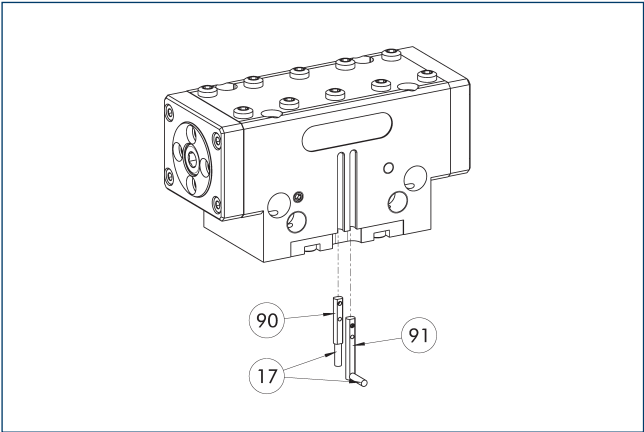


⑨⑩ Monitoring of locking

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	Often combined
Compensation unit				
TCU-P-200-3-MV	0324864	yes	$\pm 1^\circ / \pm 2^\circ / \pm 1,5^\circ$	●
TCU-P-200-3-0V	0324865	no	$\pm 1^\circ / \pm 2^\circ / \pm 1,5^\circ$	

Electronic magnetic switch MMS



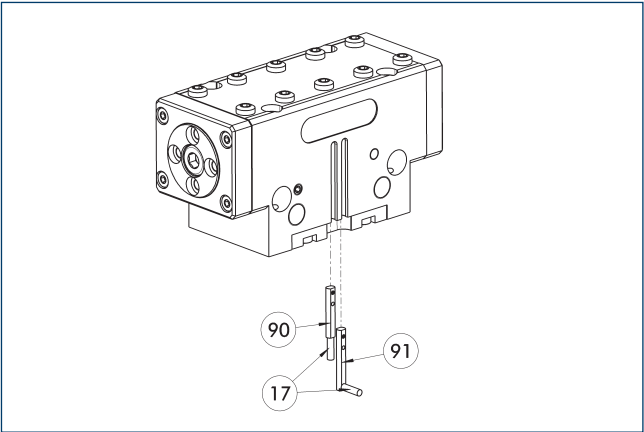
- 17 Cable outlet
90 Sensor MMS 22..
91 Sensor MMS 22...-SA

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

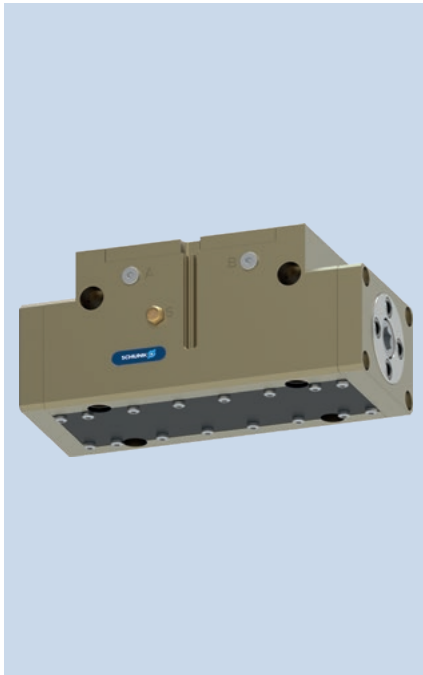
Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery, ID 0301030) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the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

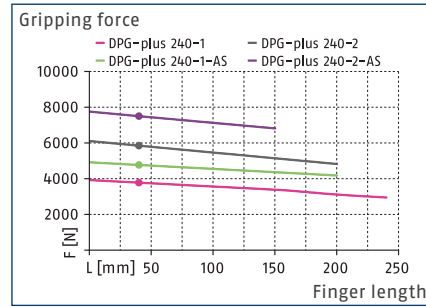
- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

DPG-plus 240

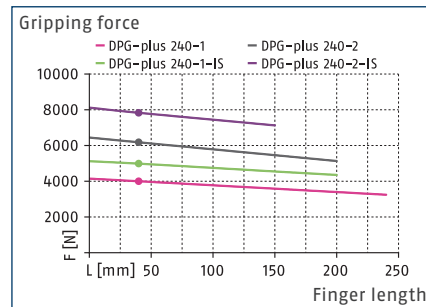
Sealed universal gripper



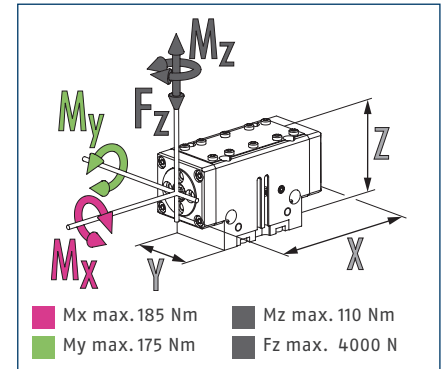
Gripping force O.D. gripping



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		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	7	7	7	7	7	7
IP protection class		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		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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

The technical drawing illustrates the design of two valve models, DPG+240/1 and DPG+240/2. It includes three main views:

- Front View (Top Left):** Shows the circular end view of the valve body. Key dimensions include a total width of 50 ± 0.02 , a central bore diameter of $\varnothing 79.5$, and mounting hole positions.
- Side View (Middle):** Provides a longitudinal section of the valve assembly. Dimensions shown include overall length (186), internal thread specifications ($G1/8''/7 (2x)$), and various diameters for ports and internal components.
- Cross-section G-G (Right):** A detailed cross-sectional view labeled "G-G". It shows the internal ball valve mechanism, including the ball, stem, and seat. Dimensions specify the ball diameter ($\varnothing 12.5 (2x)$), stem diameter ($\varnothing 10.2 (4x)$), and other internal features.
- Bottom View (Bottom):** Shows the base of the valve assembly. Dimensions include a total width of 278 , a central distance of 96 , and mounting hole patterns.

At the bottom of the drawing, the model numbers are listed with their corresponding length ranges:

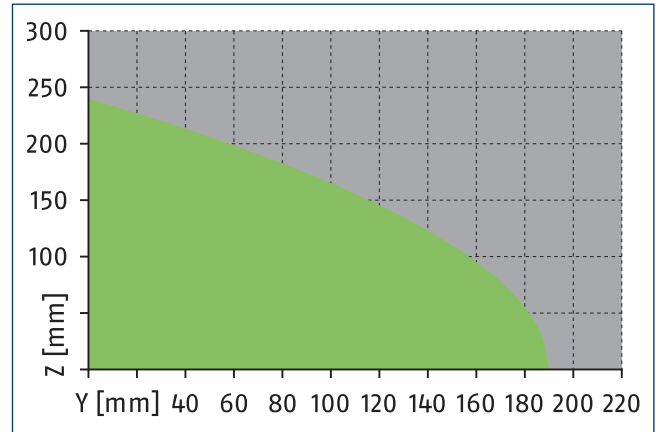
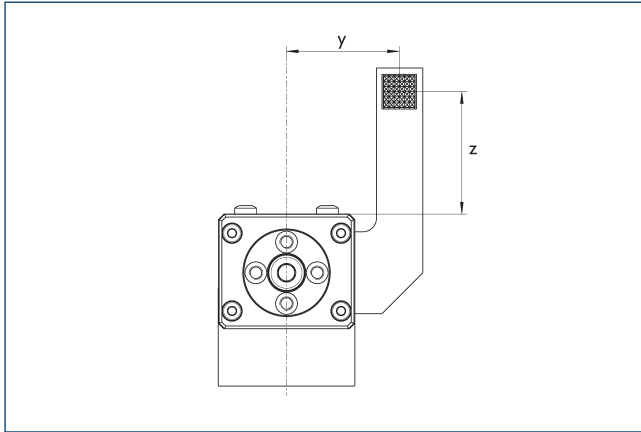
- DPG+240/1 280.5 ... 340.5
- DPG+240/2 280.5 ... 314.5

⑨0 Sensor MMS 22..

DPG-plus 240

Sealed universal gripper

Maximum permitted finger projection

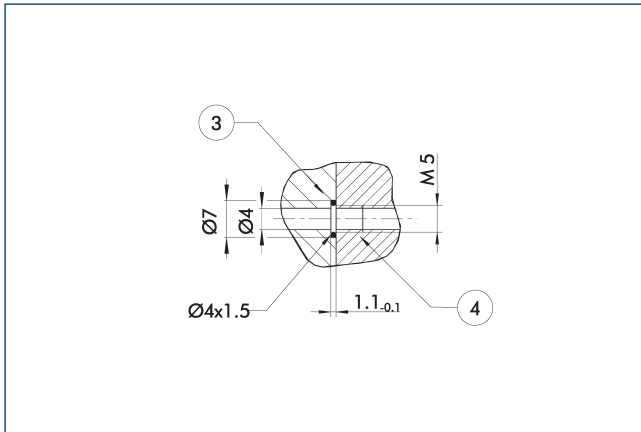


■ Permitted range

■ 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 M5

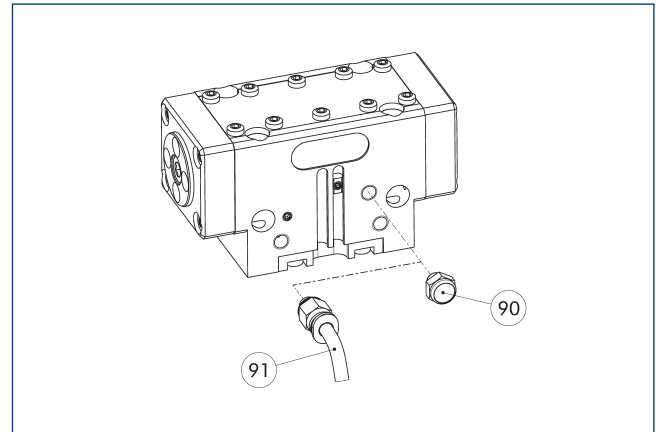


③ Adapter

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.

Connect the air purge connection

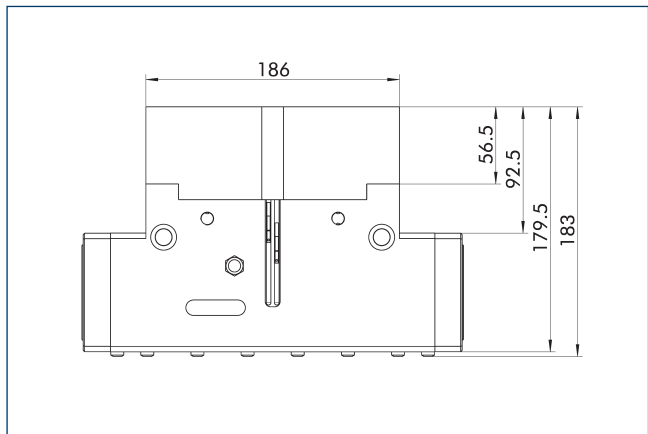


⑨⑩ Sinter filter

⑨① Hose for ventilation or air purge connection

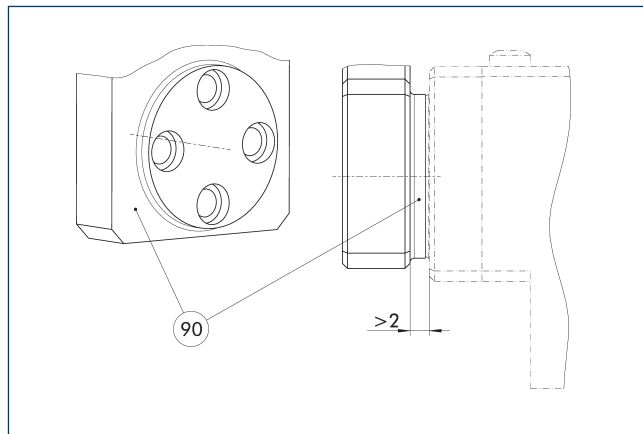
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

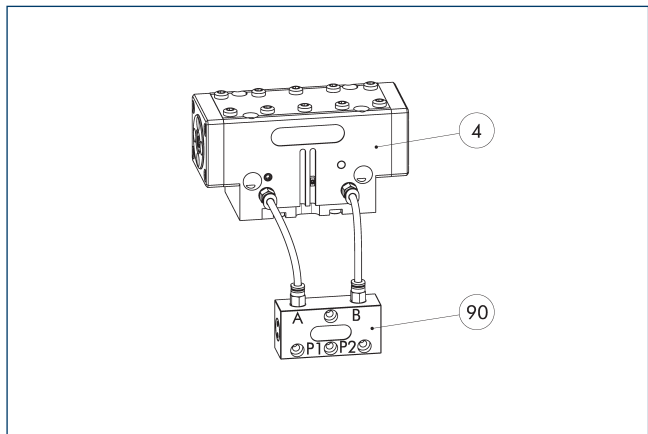
Proposed jaw design



90 Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



4 Grippers

90 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.

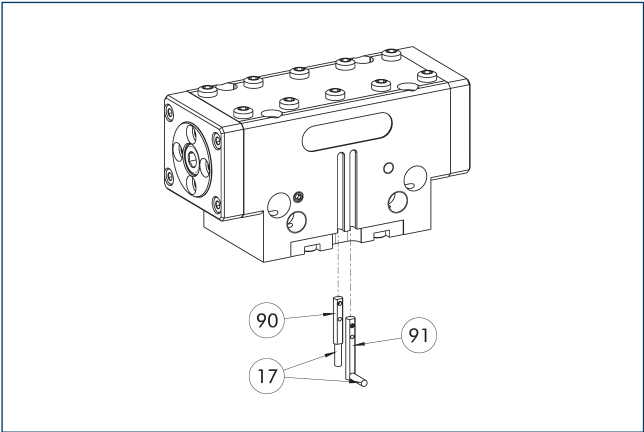
Description	ID	Recommended hose diameter
		[mm]
Pressure maintenance valve		
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 07-E	0300121	8

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.

DPG-plus 240

Sealed universal gripper

Electronic magnetic switch MMS



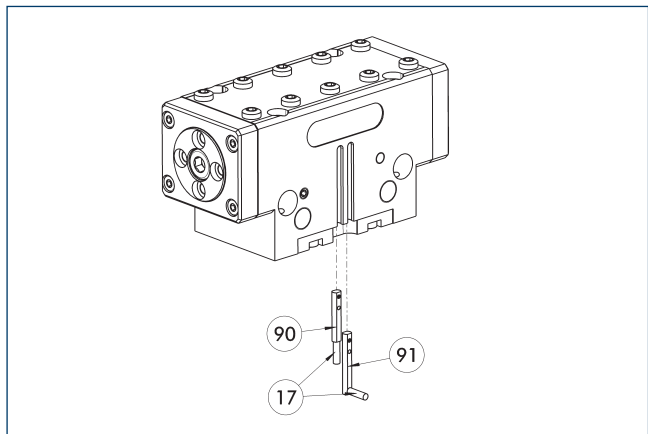
- 17 Cable outlet 91 Sensor MMS 22...-SA
90 Sensor MMS 22..

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

91 Sensor MMS 22 ..-PI1-...-SA

90 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
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	

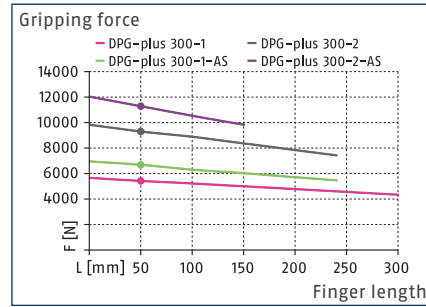
- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

DPG-plus 300

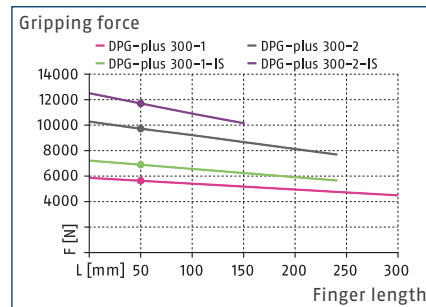
Sealed universal gripper



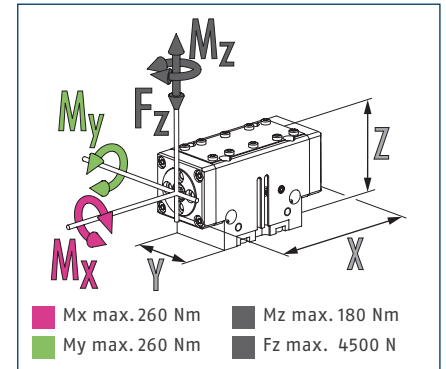
Gripping force O.D. gripping



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.

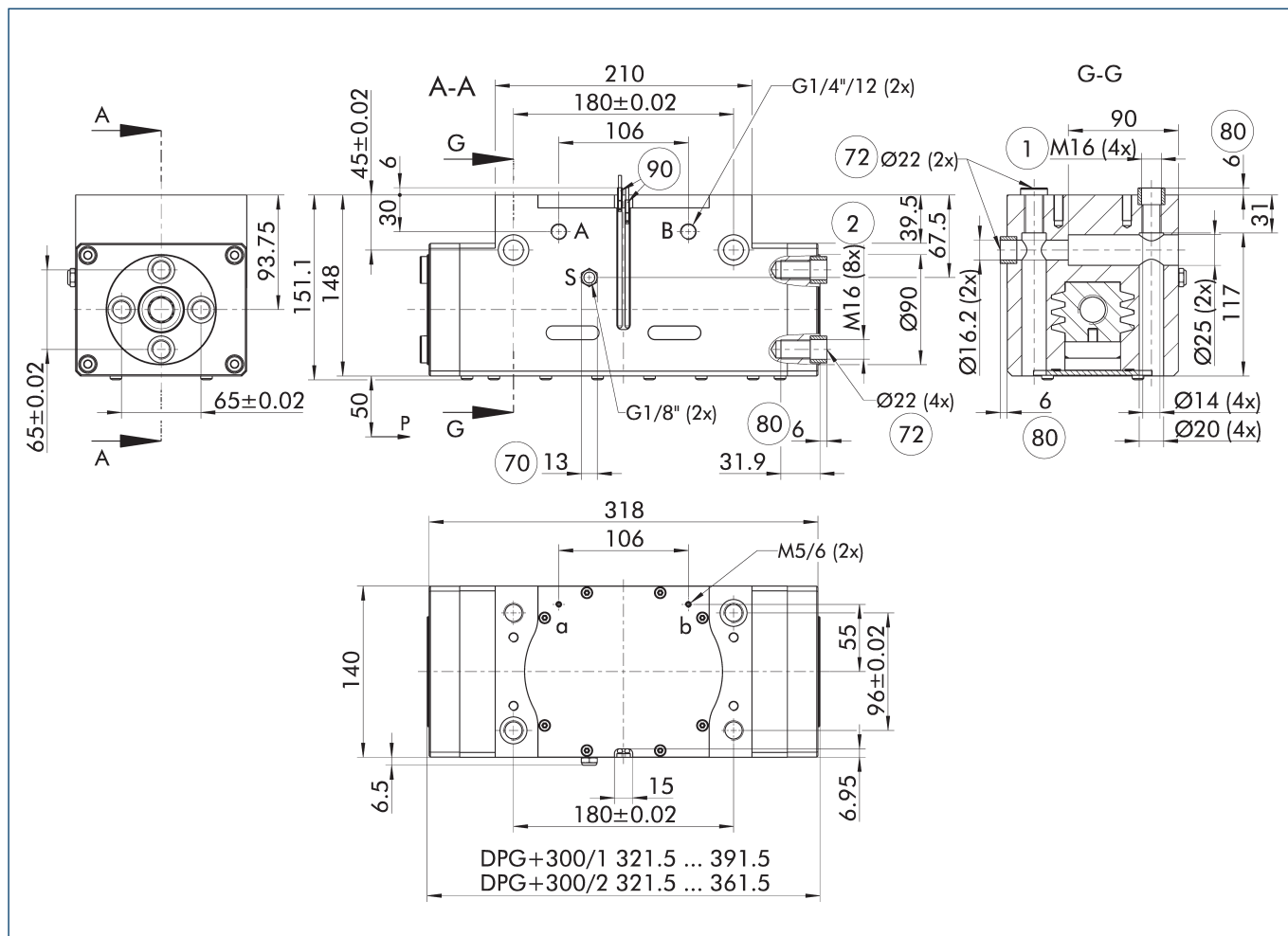
Technical data

Description		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
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	8.5	8.5	8.5	8.5	8.5	8.5
IP protection class		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		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 to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

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

Main view



For finger connection, we recommend only to use two of the four centering bores for each finger. The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- ① The SDV-P pressure maintenance valve can be used as a gripping force maintenance device (see catalog section on accessories).

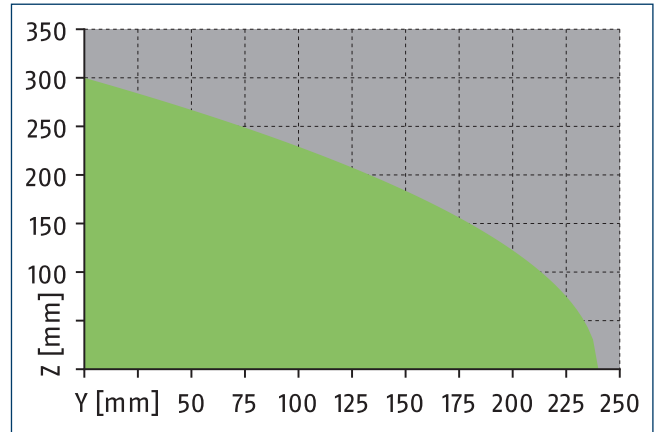
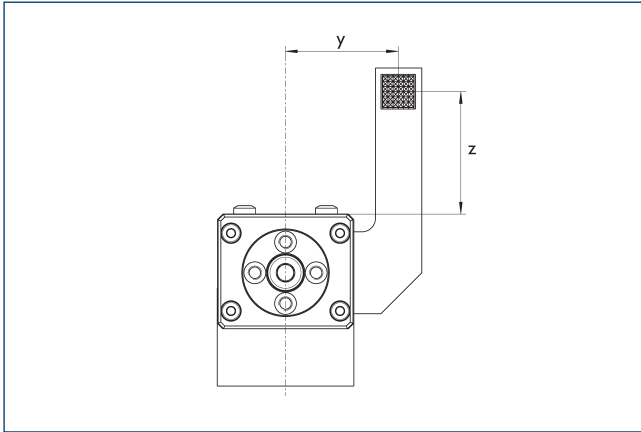
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- S, E Air purge connection, or deaeration bore
- ① Gripper connection

- ② Finger connection
- ⑦ Wrench size
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ Sensor MMS 22..

DPG-plus 300

Sealed universal gripper

Maximum permitted finger projection

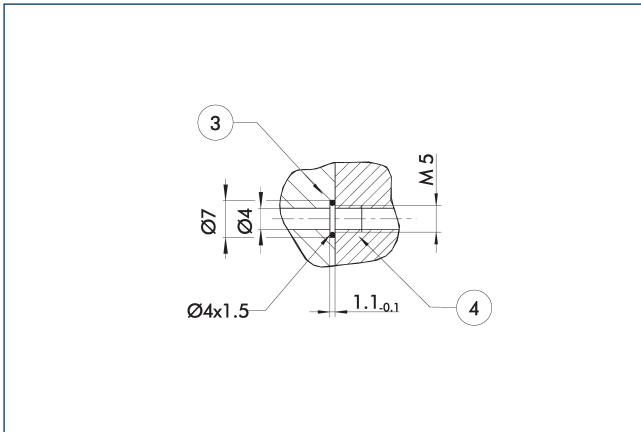


■ Permitted range

■ 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 M5

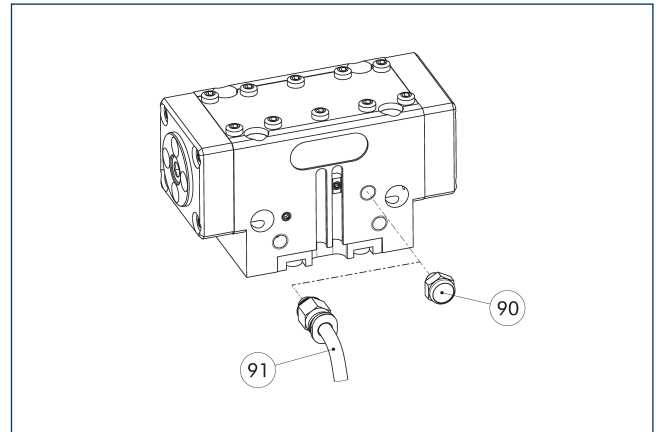


③ Adapter

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.

Connect the air purge connection

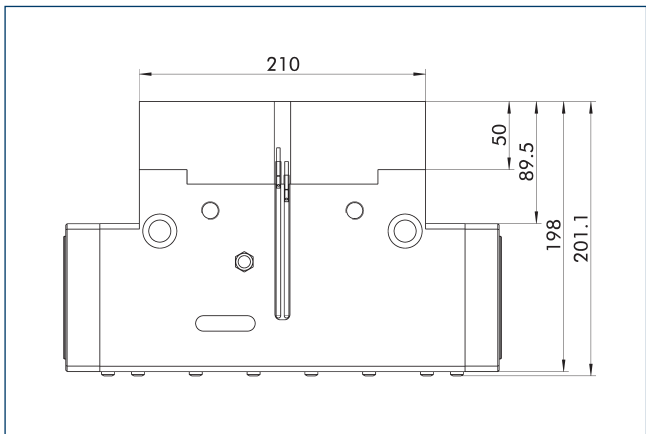


⑨⑩ Sinter filter

⑨⑪ Hose for ventilation or air purge connection

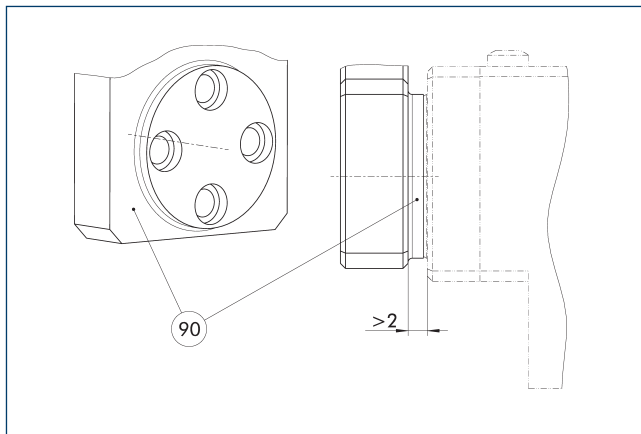
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

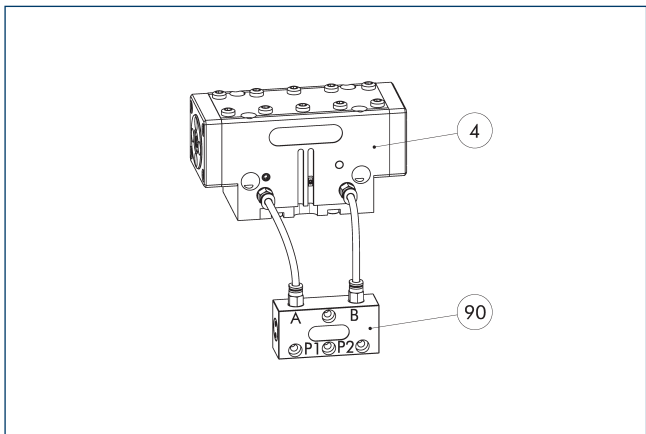
Proposed jaw design



90 Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



4 Grippers

90 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.

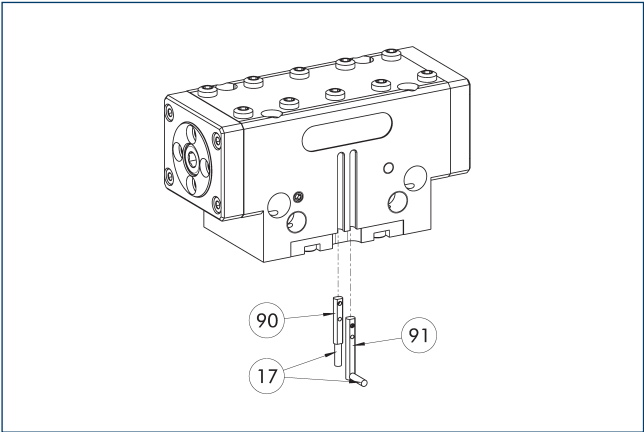
Description	ID	Recommended hose diameter
		[mm]
Pressure maintenance valve		
SDV-P 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 07-E	0300121	8
SDV-P 10-E	0300109	10

❗ 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.

DPG-plus 300

Sealed universal gripper

Electronic magnetic switch MMS



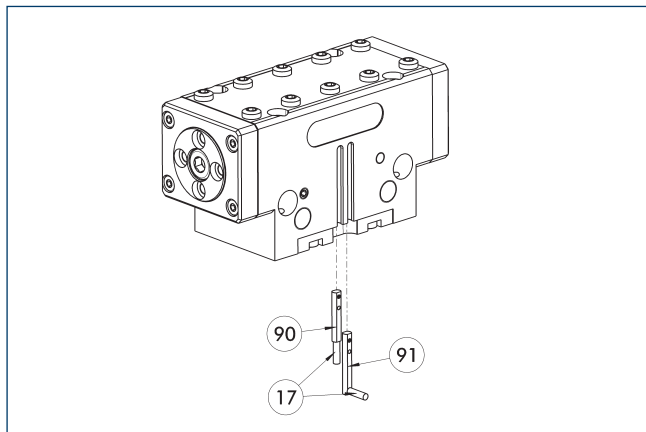
- 17 Cable outlet
- 91 Sensor MMS 22...-SA
- 90 Sensor MMS 22..

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	

- ⓘ 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

91 Sensor MMS 22 ..-PI1-...-SA

90 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
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	

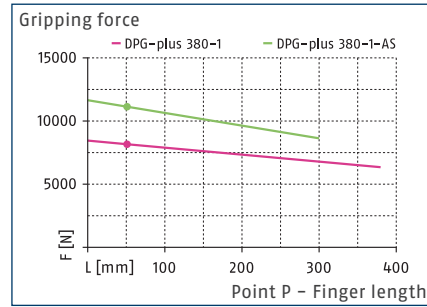
- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

DPG-plus 380

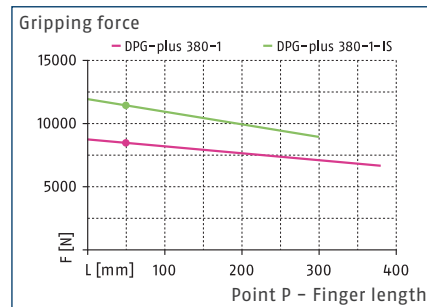
Sealed universal gripper



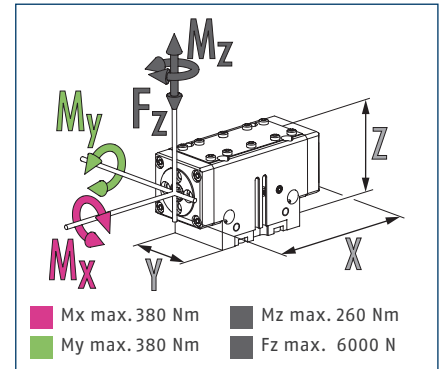
Gripping force O.D. gripping



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.

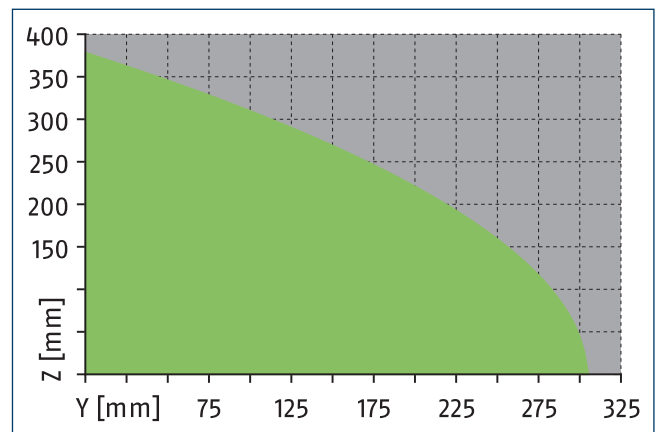
Technical data

Description		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]	8150/8460	11120/-	-/11430
Min. spring force	[N]		2970	2970
Weight	[kg]	42	52	52
Recommended workpiece weight	[kg]	40.7	40.7	40.7
Cylinder volume per double stroke	[cm³]	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 weight per finger	[kg]	10	10	10
IP protection class		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		1321263	1321265	1321266
Min./max. ambient temperature	[°C]	5/130	5/130	5/130

① Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.
It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

90 Sensor MMS 22..

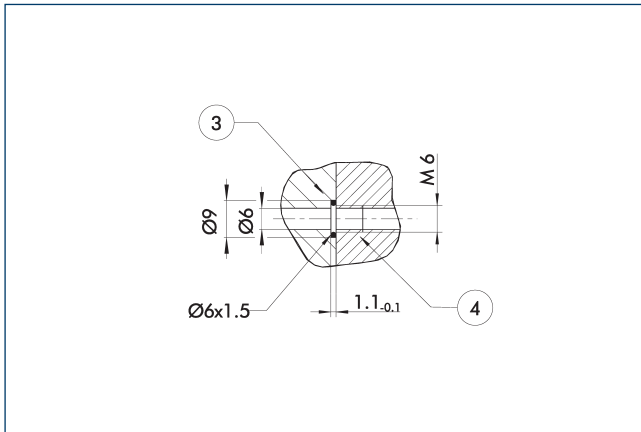
The technical drawing illustrates the sensor assembly in two views. The front view (bottom) shows a square base with a central circular feature containing a smaller circle, surrounded by eight smaller circles. The side view (top) shows the profile of the assembly, including a vertical rectangular section with a textured top surface. Dimension y indicates the horizontal distance from the center of the front view to the center of the textured surface. Dimension z indicates the vertical distance from the top of the base to the top of the textured surface.



DPG-plus 380

Sealed universal gripper

Hose-free direct connection M6

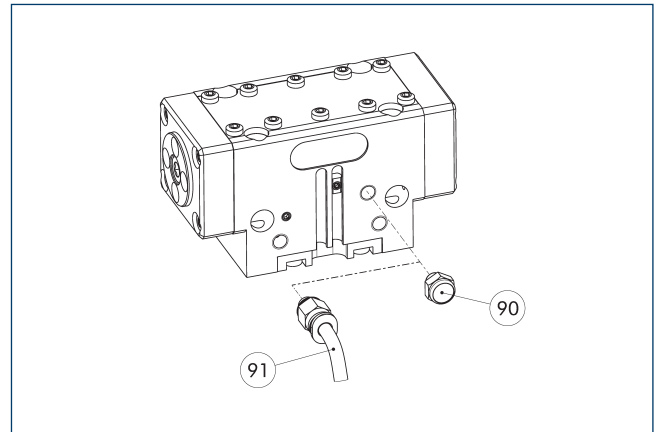


③ Adapter

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.

Connect the air purge connection

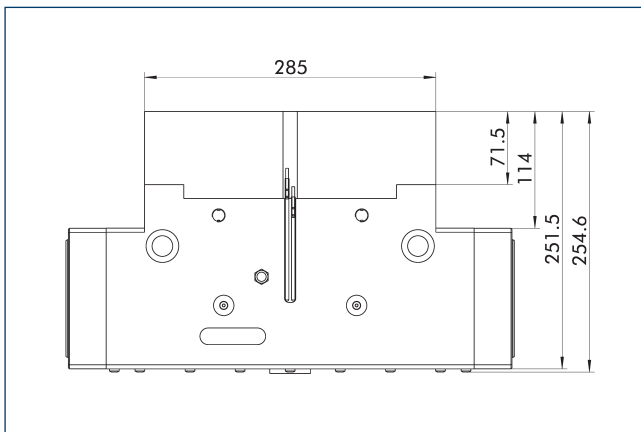


⑨⑩ Sinter filter

⑨① Hose for ventilation or air purge connection

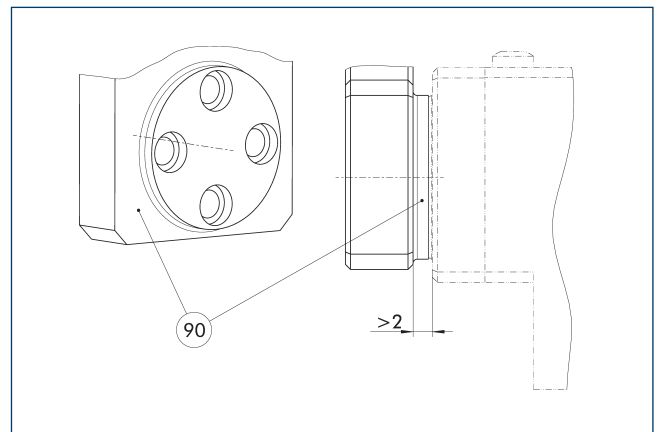
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection can prevent the penetration of dirt particles > 0.12 mm. However, this reduces the protection class to IP 54.

Gripping force maintenance version AS/IS



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.

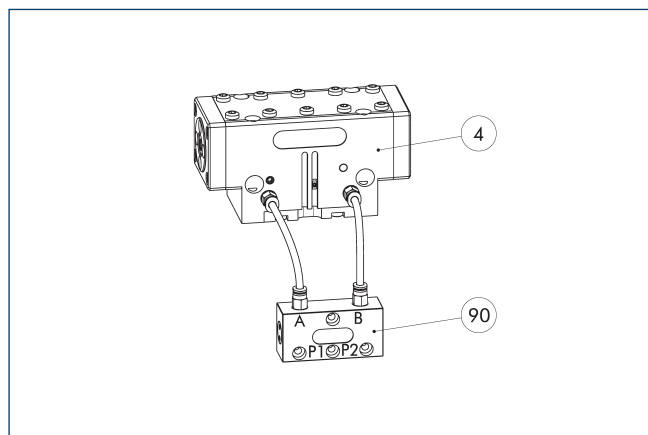
Proposed jaw design



⑨⑩ Step

In order to avoid impairment of the stroke due to contamination or chips, there should be a sufficient distance between the top jaws and the gripper.

SDV-P pressure maintenance valve



④ Grippers

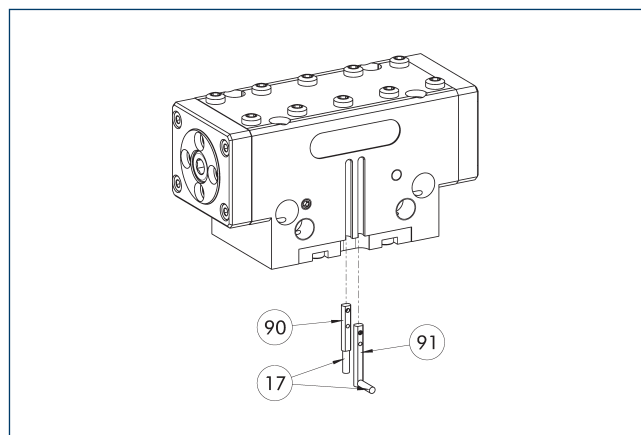
⑨⑩ SDV-P pressure maintenance valve

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 07	0403131	8
Pressure maintenance valve with air bleed screw		
SDV-P 07-E	0300121	8
SDV-P 10-E	0300109	10

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.

Electronic magnetic switch MMS



①⑦ Cable outlet

⑨⑩ Sensor MMS 22..

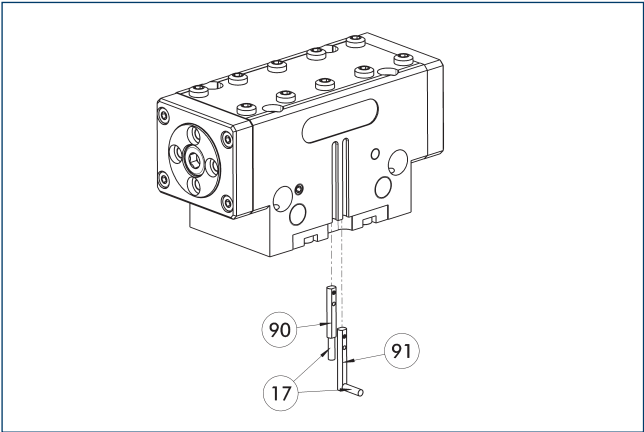
⑨① Sensor MMS 22...-SA

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
- 91 Sensor MMS 22 ..-PI1-...-SA
- 90 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
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	

- 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.



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