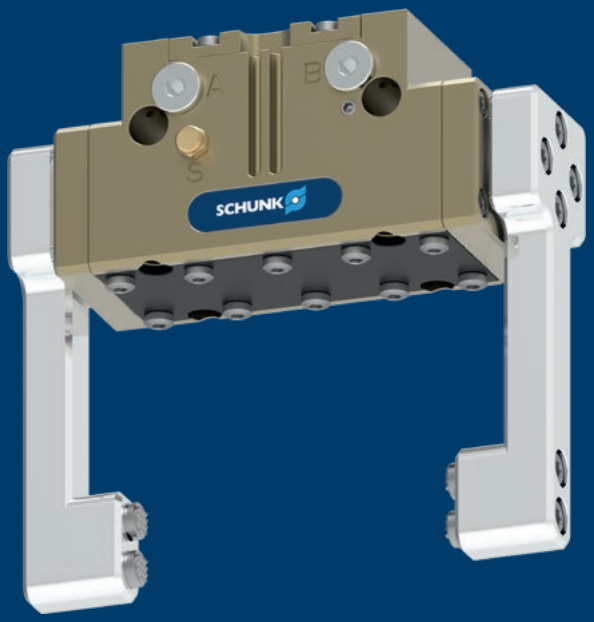



Superior Clamping and Gripping

SCHUNK®

# Product data sheet

## Sealed universal gripper DPG-plus

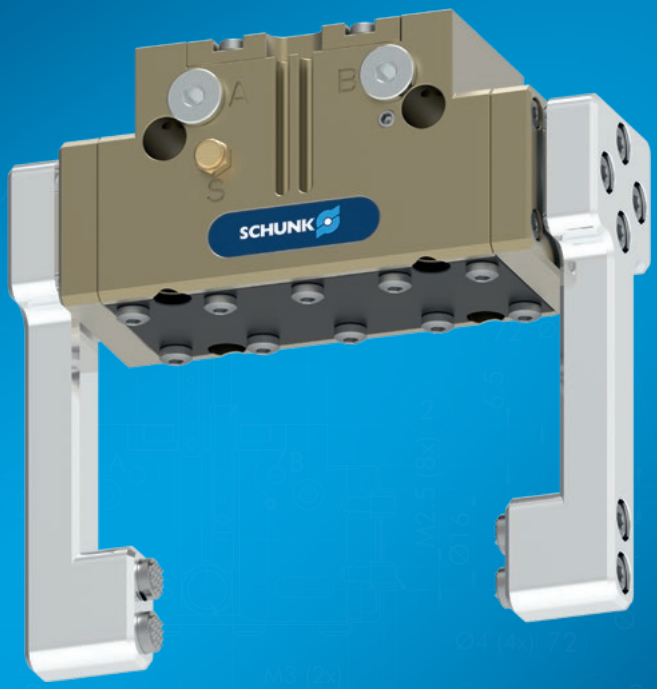
# Reliable. Fully encapsulated. Loadable.

# 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

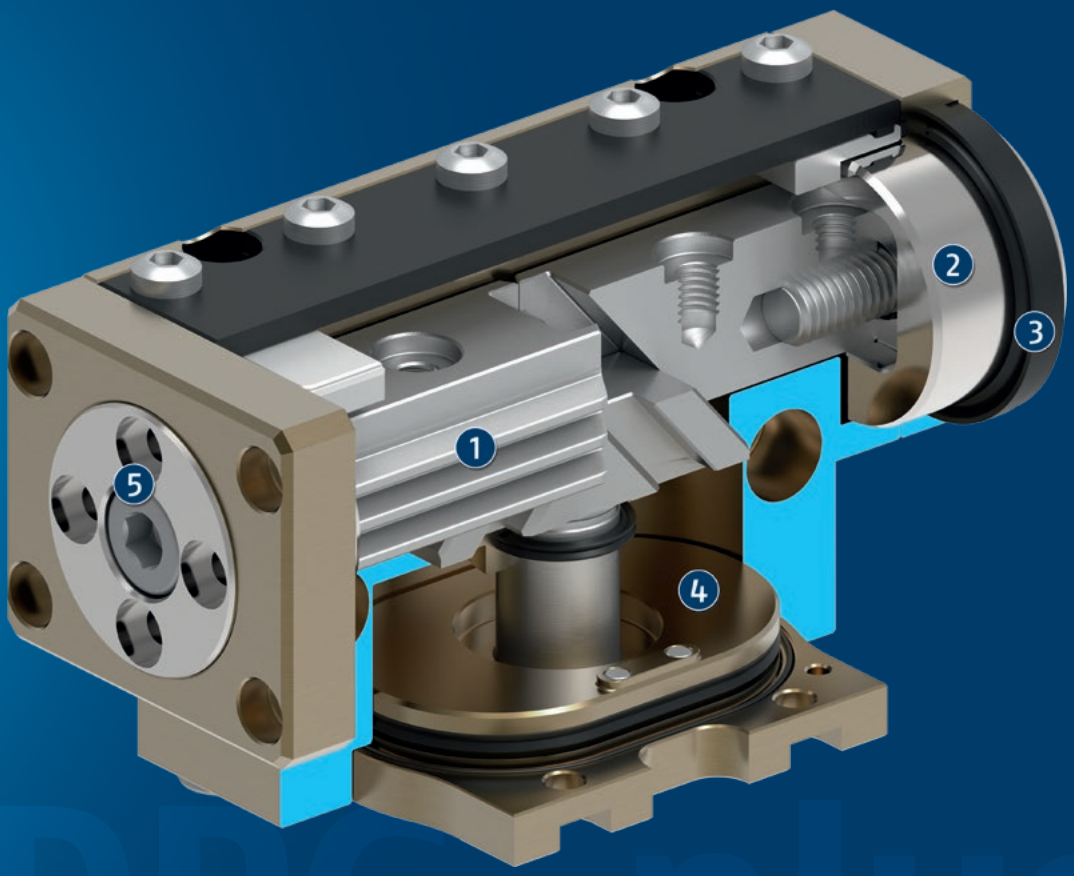
**Air supply via hose-free direct connection or screw connections** for flexible pressure supply in all automated systems

**Compact dimensions** for minimal interfering contours in handling

| Sizes | Weight | Gripping force | Stroke per jaw | Workpiece weight |
|---|---|---|---|---|
| Quantity: 11 | 0.12 .. 52 kg | 110 .. 11250 N | 2 .. 45 mm | 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 device:** 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.

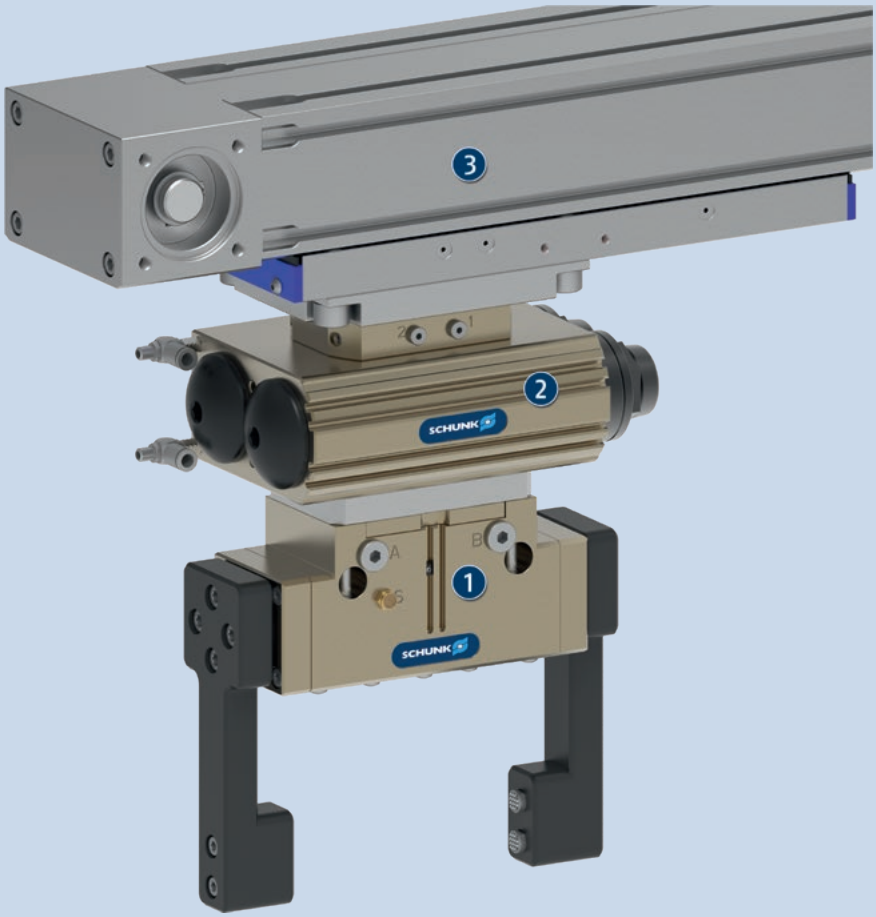
**Workpiece weight:** is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

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

## Application example

Sealed and extremely robust 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

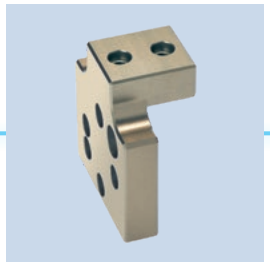
Tolerance compensation unit

Manual change system

Pressure maintenance valve

Magnetic switches

Jaw quick-change system



Intermediate jaw

Universal intermediate jaw

ⓘ For more information on these products can be found on the following product pages or at schunk.com.

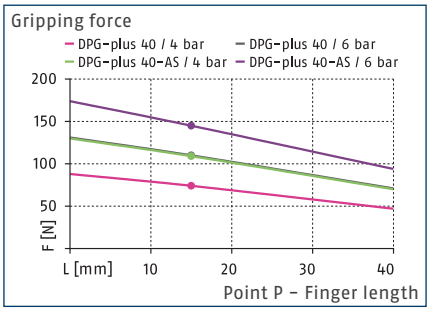
## Options and special information

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

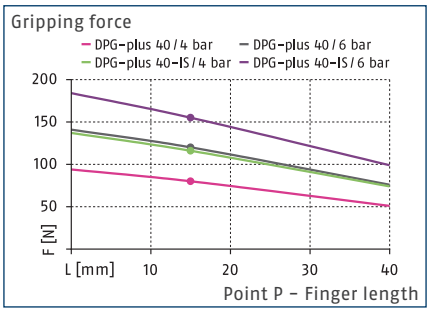
# DPG-plus 40

Sealed universal gripper

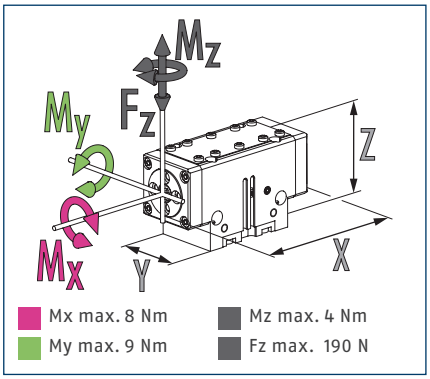
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

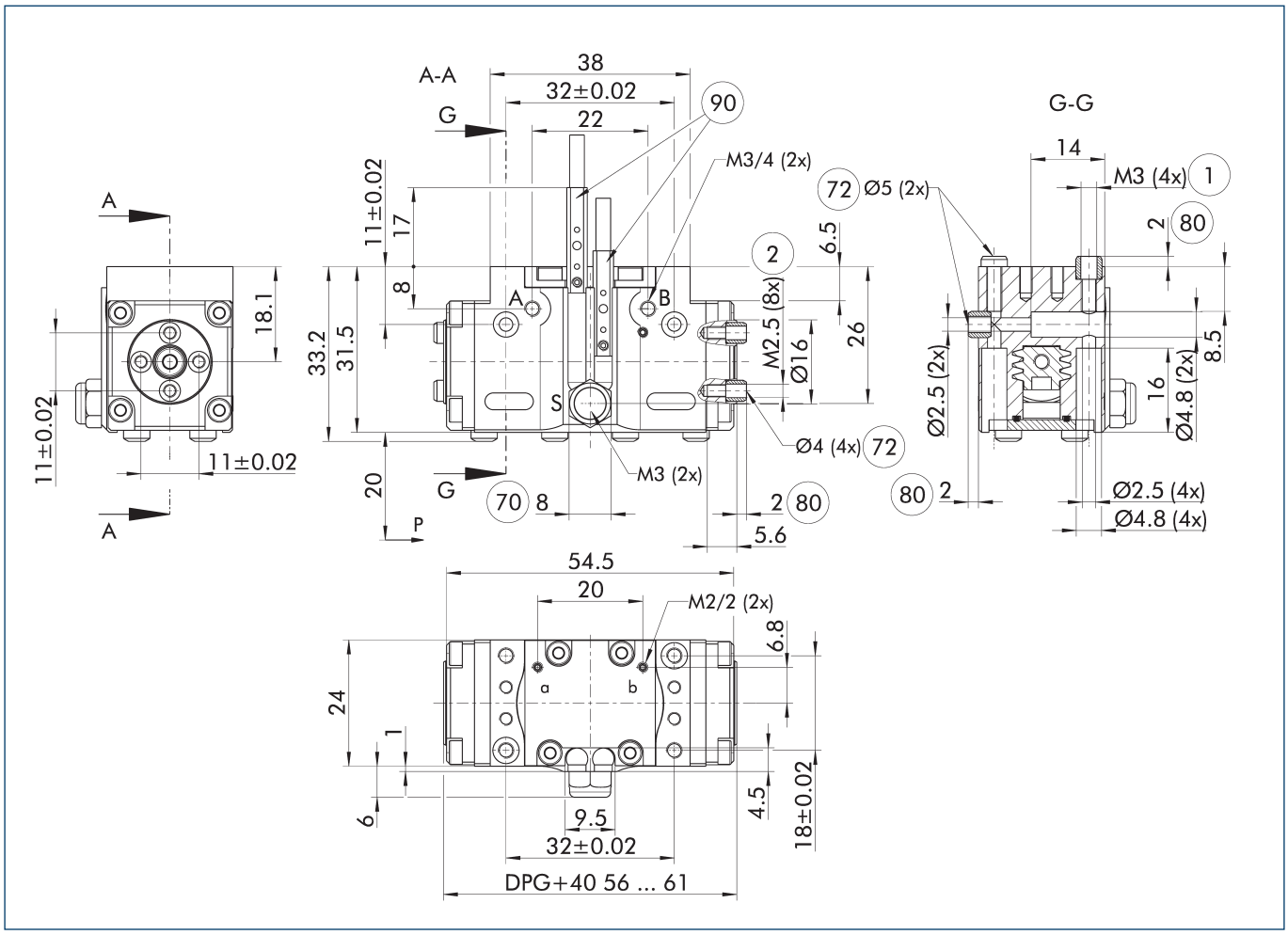
## Technical data

| 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 |
| Fluid consumption double stroke | [cm³] | 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 14644-1:1999 | | 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 |

ⓘ 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.

ⓘ 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

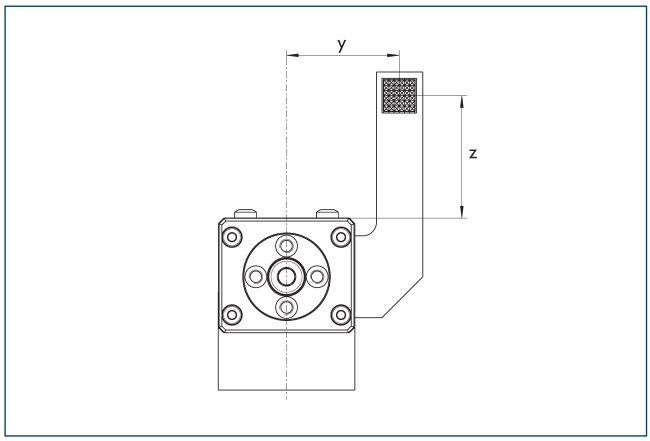
(80) Depth of the centering sleeve hole in the counter part

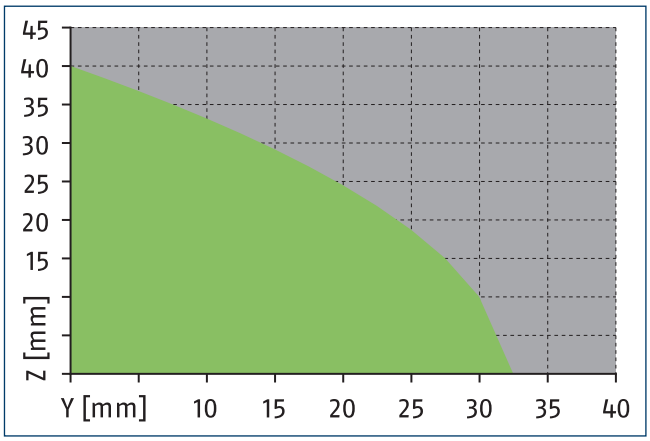
(90) Sensor MMS 22..

# DPG-plus 40

Sealed universal gripper

## Maximum permitted finger projection



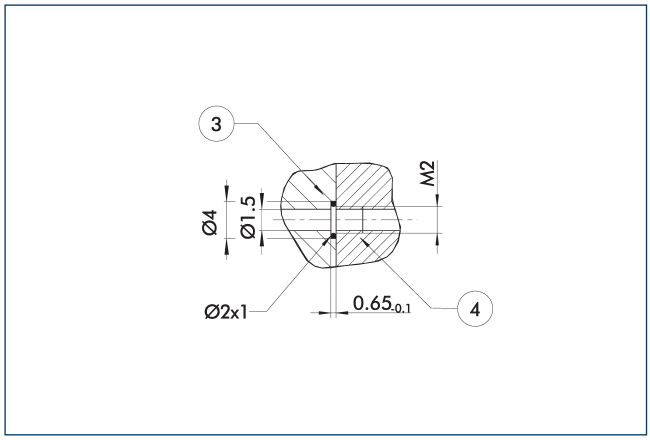




Permitted range

Inadmissible range

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

## Hose-free direct connection M2

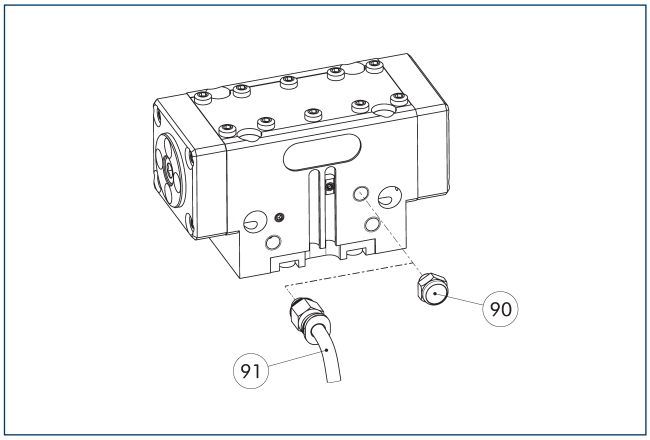



(3) Adapter

(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

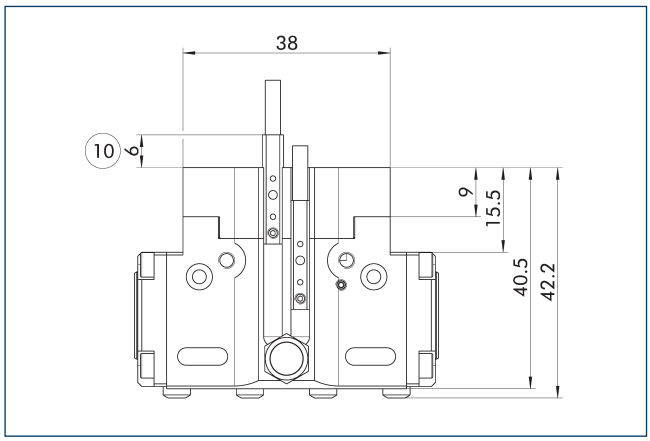



(90) Sinter filter

(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.

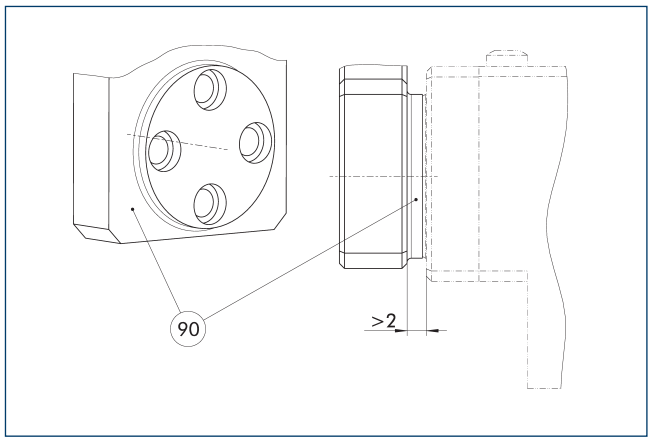
## Gripping force maintenance version AS/IS




(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/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.

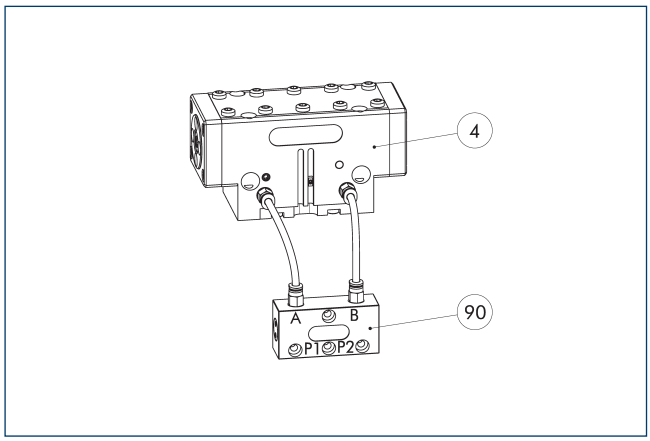
## Proposed jaw design




(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

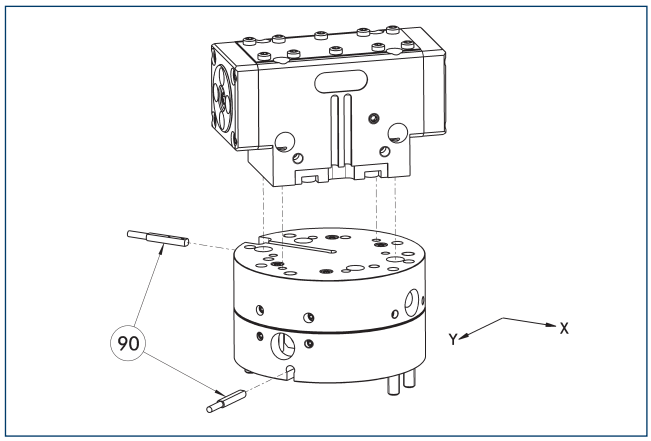
(90) SDV-P pressure maintenance valve

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 04 | 0403130 | 6 |
| Pressure maintenance valve with air bleed screw | | |
| SDV-P 04-E | 0300120 | 6 |

ⓘ 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




(90) Monitoring

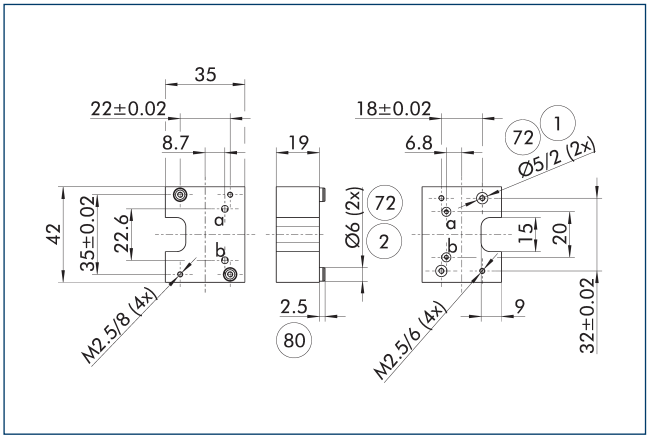
Grippers can be directly mounted without an adapter plate. For details see our catalog Gripping or Robot Accessories.

| Description | ID | Compensation XY | Reset force | Often combined |
|---|---|---|---|---|
| | | [mm] | [N] | |
| Compensation unit | | | | |
| AGE-F-XY-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

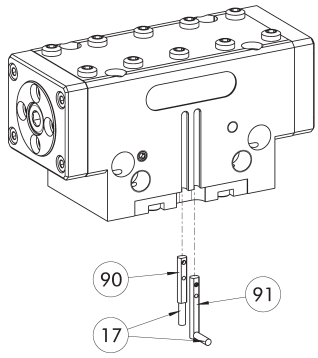



(1) Robot-side connection
(2) Tool-side connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

| Description | ID | |
|---|---|---|
| Tool side | | |
| A-CWA-050-040-P | 0305754 | |

## Electronic magnetic switch MMS



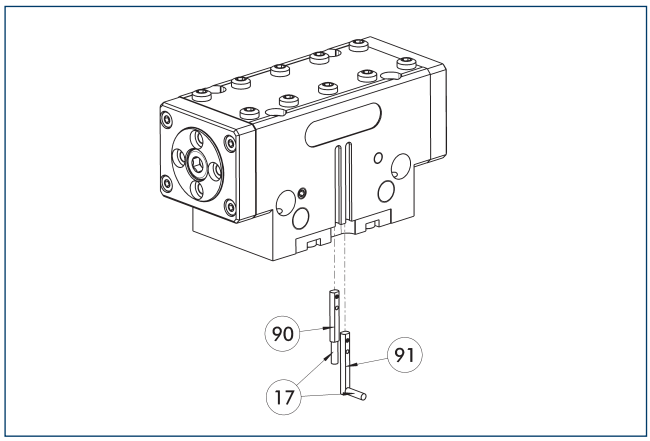

(17) Cable outlet
(90) Sensor MMS 22..
(91) Sensor MMS 22...-SA

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 | |
| 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



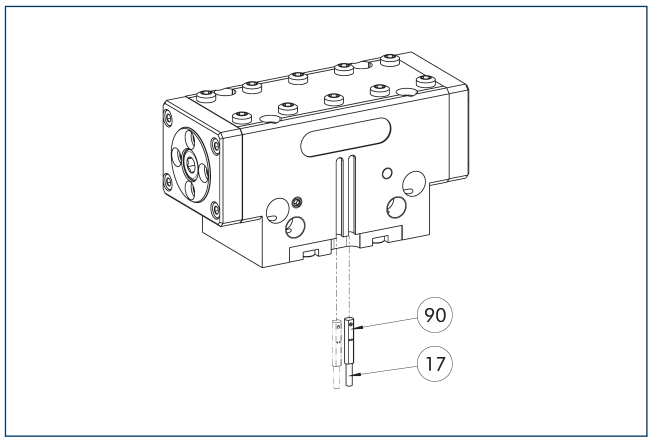

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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



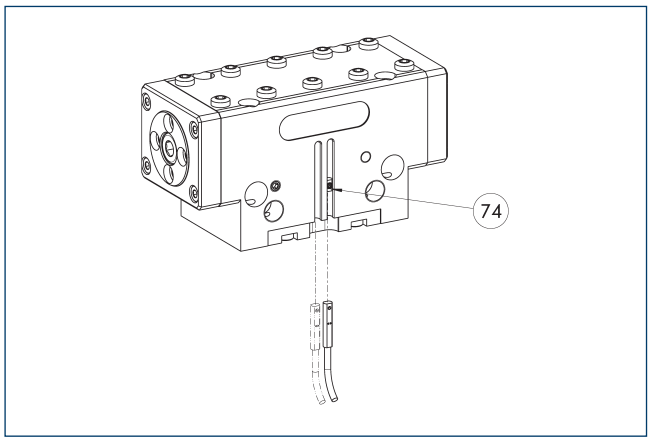

(17) Cable outlet
(90) MMS 22...-PI2-... sensor

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 | |

ⓘ 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



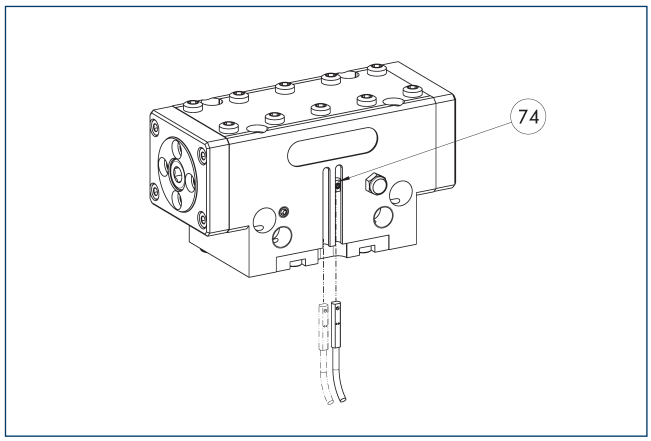

74 Limit stop for sensor

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 | |

ⓘ 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.

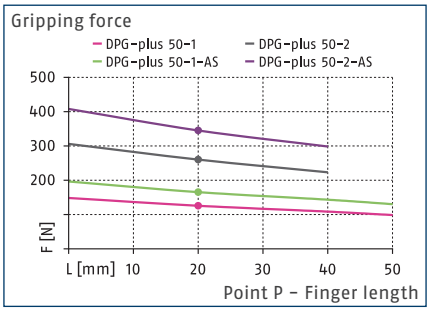
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

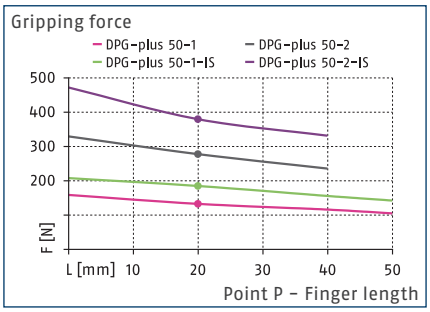
# DPG-plus 50

Sealed universal gripper

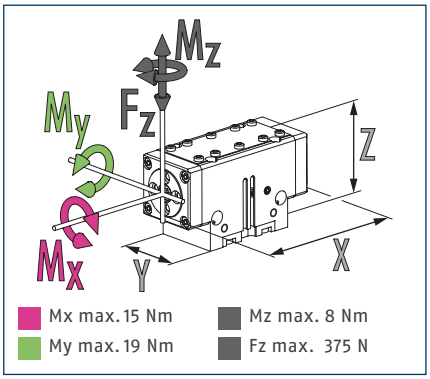

## Gripping force O.D. gripping




## Gripping force O.D. gripping




## Dimensions and maximum loads




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

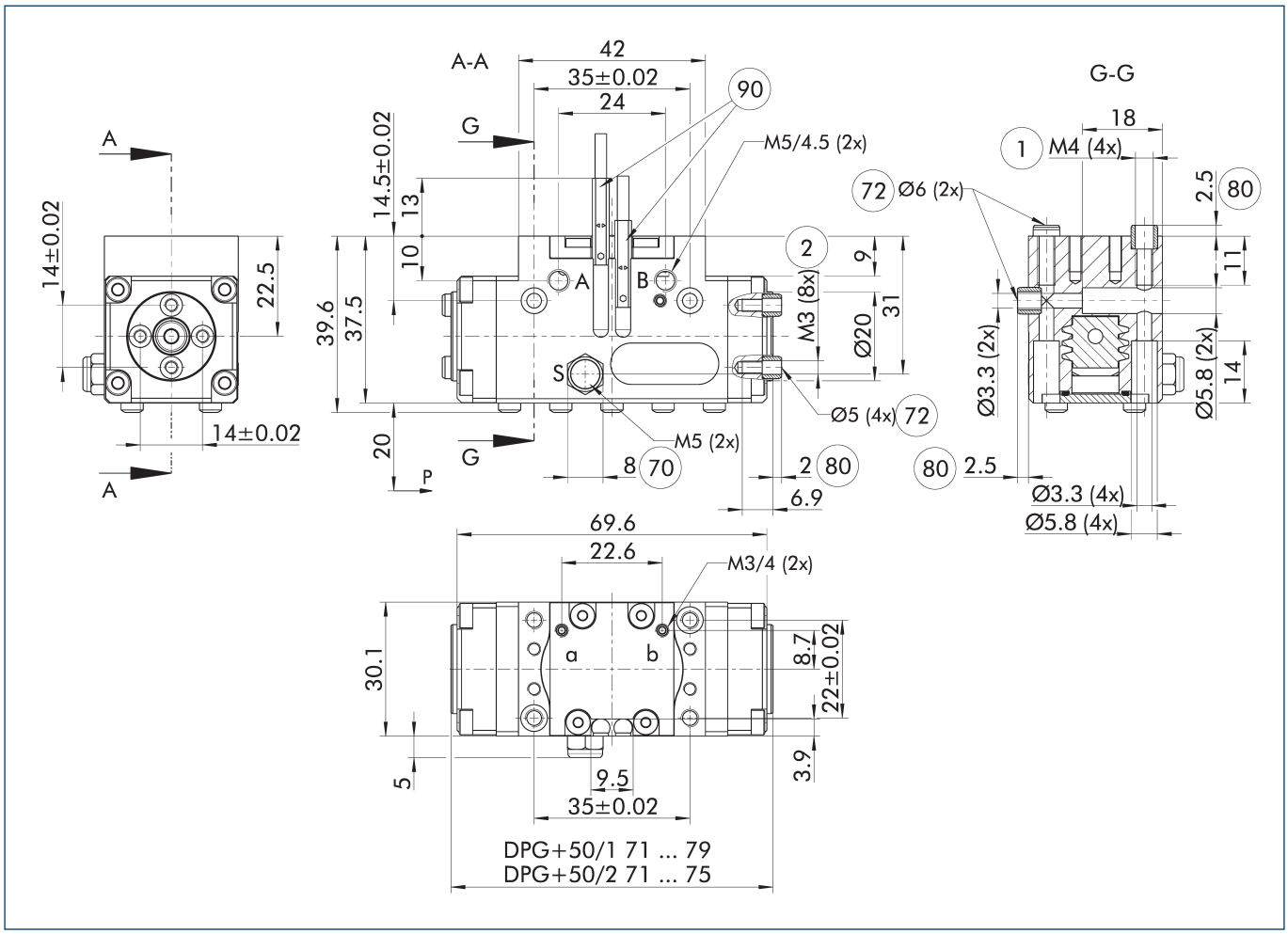
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

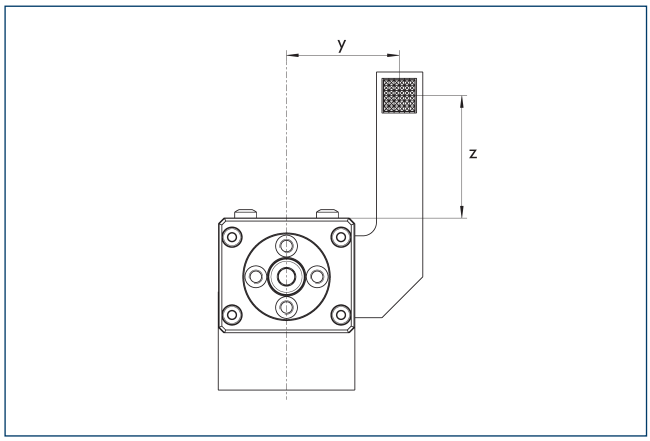
(70) Wrench size

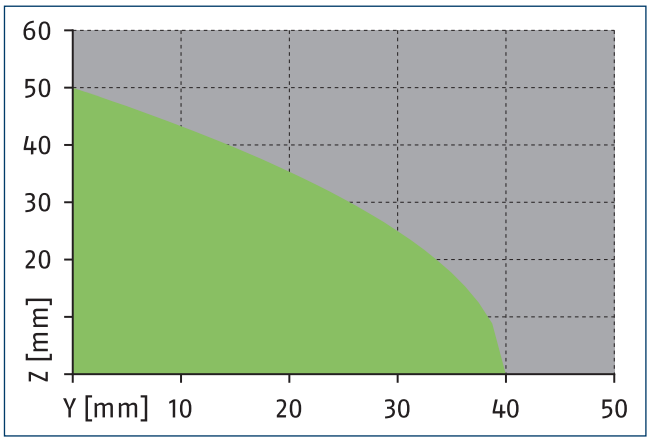
(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

(90) Sensor MMS 22..

## Maximum permitted finger projection



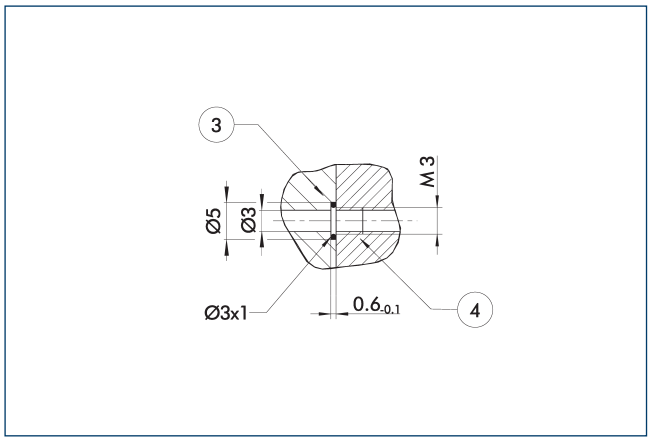




Permitted range

Inadmissible range

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

## Hose-free direct connection M3

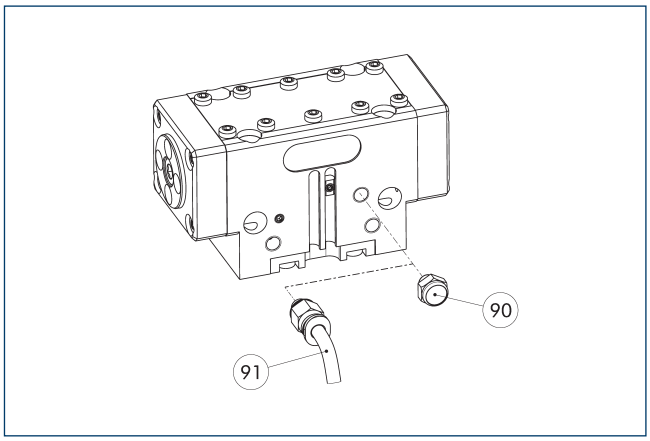



(3) Adapter

(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

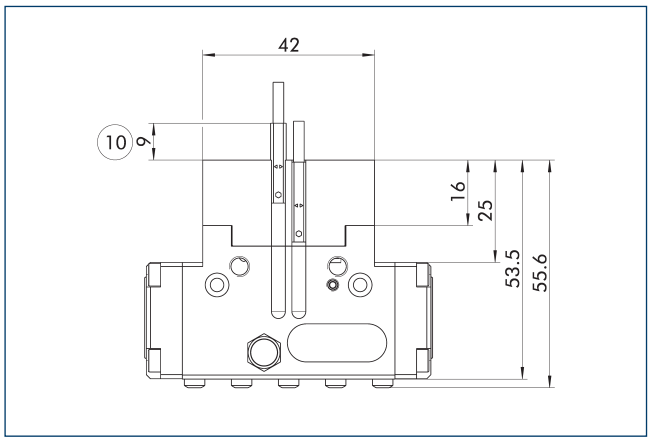



(90) Sinter filter

(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.

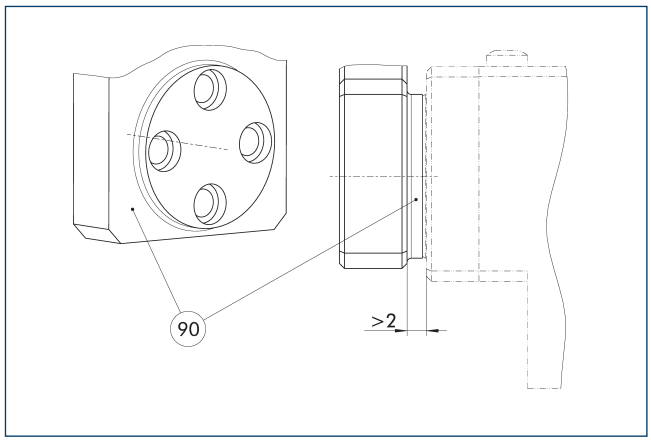
## Gripping force maintenance version AS/IS




(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/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.

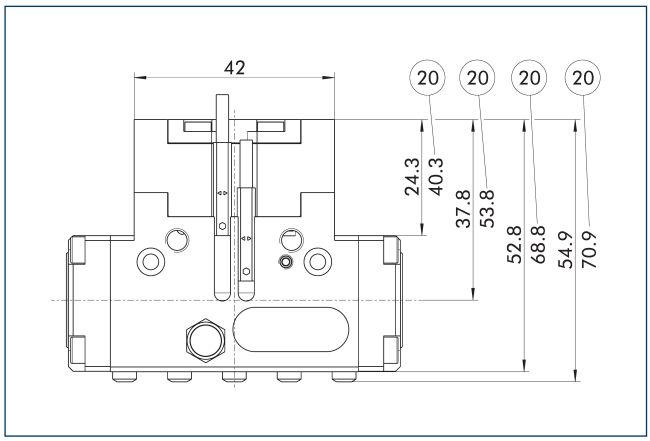
## Proposed jaw design




(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.

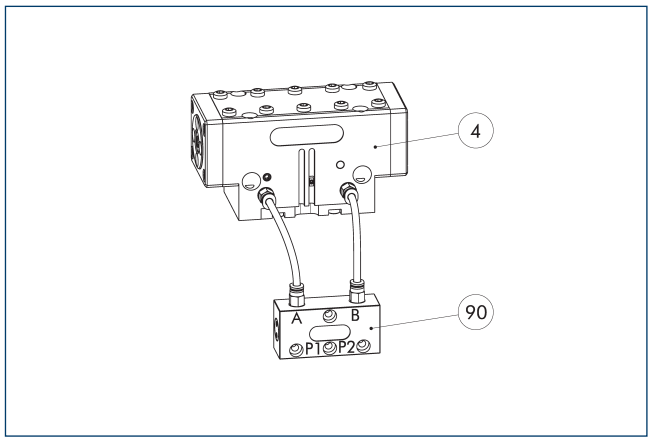
## Power booster version




(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.

## 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.

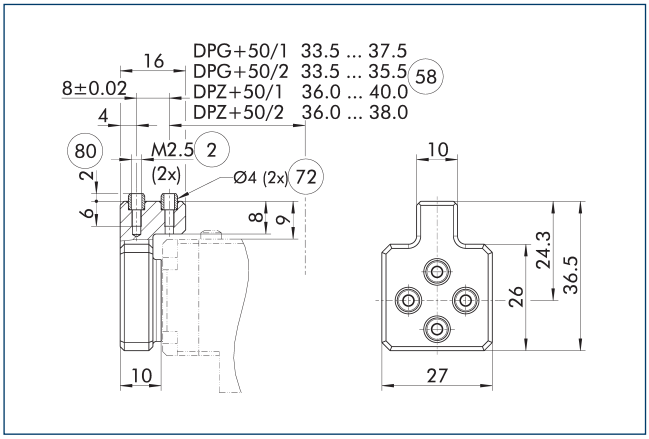
| Description | ID | Recommended hose diameter |
|---|---|---|
| | | [mm] |
| Pressure maintenance valve | | |
| SDV-P 04 | 0403130 | 6 |
| Pressure maintenance valve with air bleed screw | | |
| SDV-P 04-E | 0300120 | 6 |

ⓘ 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

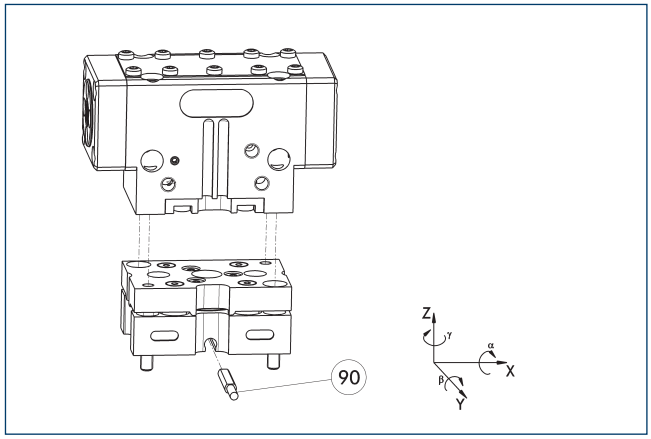



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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 50-40 | 0300191 | Aluminum | PGN-plus 40 | 1 |

## Tolerance compensation unit TCU

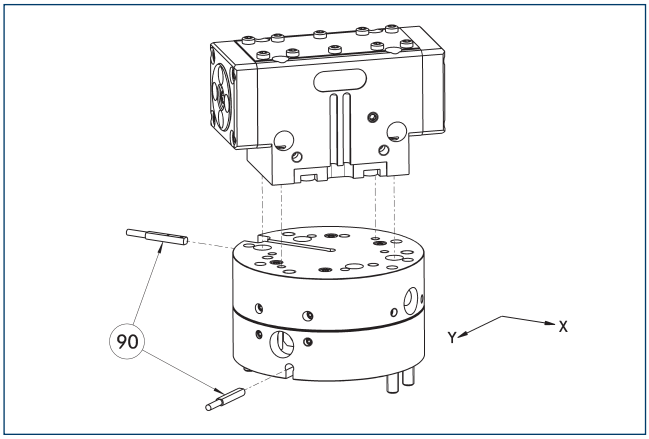



(90) Monitoring of locking

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 |
|---|---|---|---|
| Compensation unit | | | |
| TCU-P-050-3-OV | 0324757 | no | ±1°/±1°/±1,5° |

## Compensation unit AGE-F

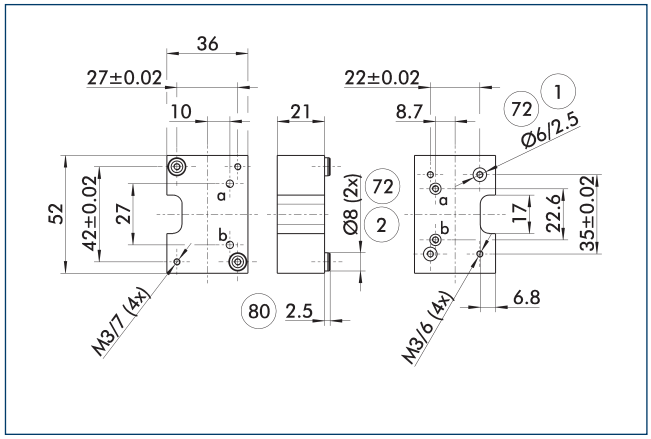



(90) Monitoring

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 | ● |

## Adapter plate for PGN-plus 50

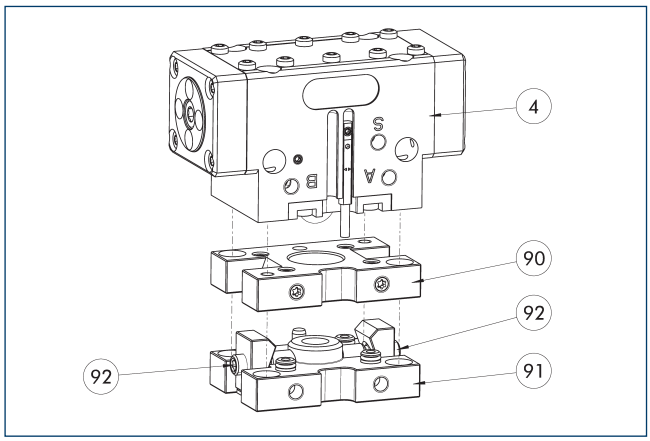



(1) Robot-side connection
(2) Tool-side connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

| Description | ID | |
|---|---|---|
| Tool side | | |
| A-CWA-064-050-P | 0305768 | |

## Compact change system for grippers

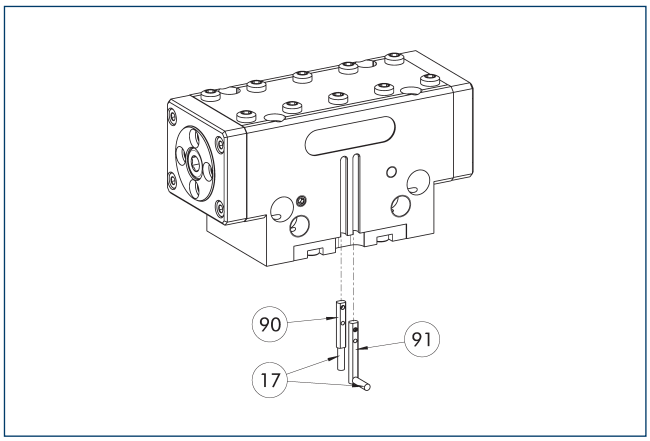



(4) Grippers
(91) CWK compact change master
(90) CWA compact change adapter
(92) Locking mechanism

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



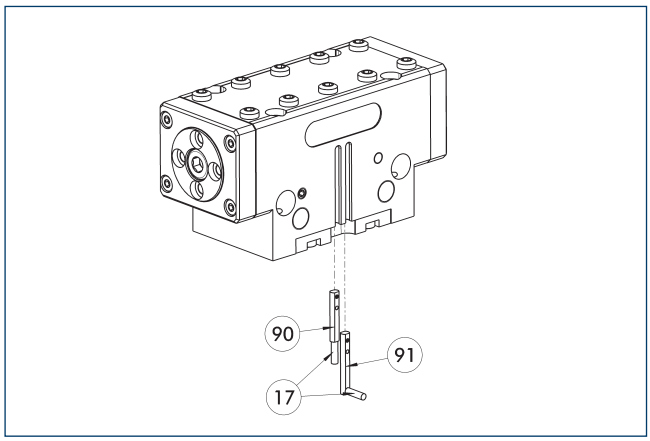

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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 | |
| 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



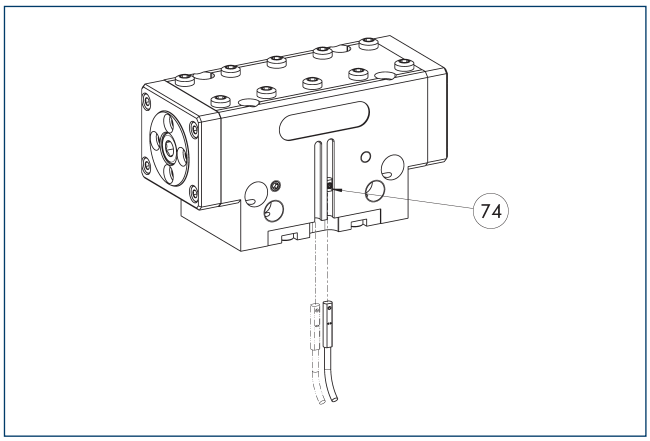

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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



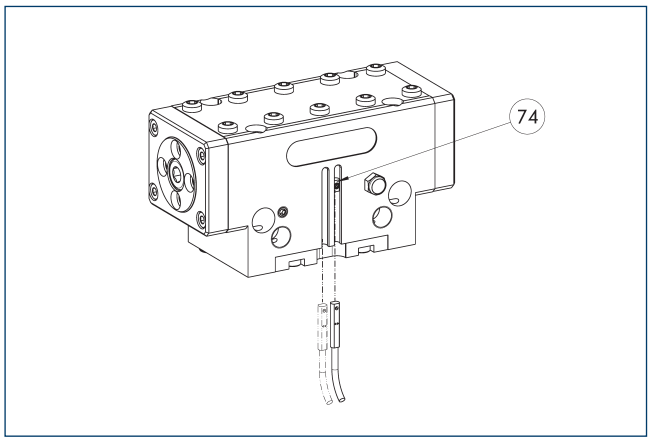

(74) Limit stop for sensor

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 | |

ⓘ 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

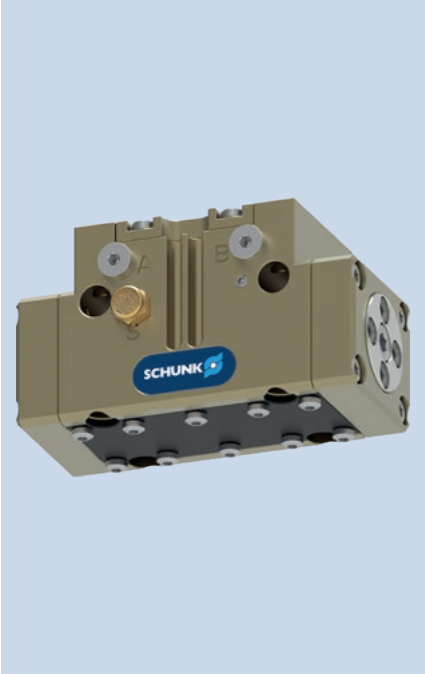
Sensor for multi-position monitoring through detection of the complete gripper stroke. The sensor is mounted directly in the C-slot of the gripper. The sensor is programmed for the gripper via the IO-Link interface, Magnet teaching tool MT (included in scope of delivery; ID 0301030) or the ST plug teaching 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 | |

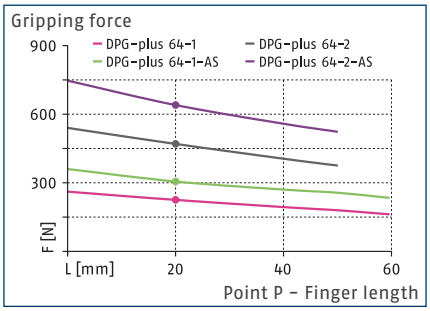
ⓘ One sensor is required for each gripper. No additional mounting kit is required – the gripper is equipped for use of the sensor by default. Further information and technical data can be found in the catalog chapter sensor systems.

# DPG-plus 64

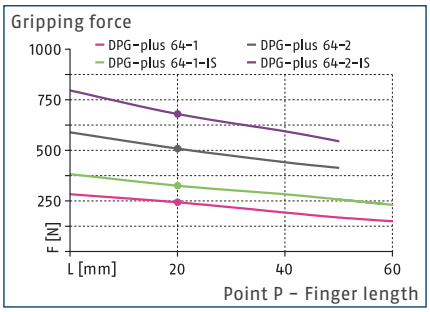
Sealed universal gripper



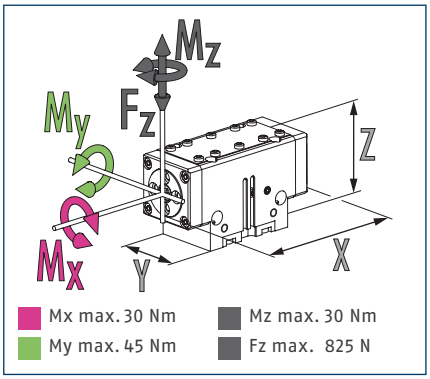

## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

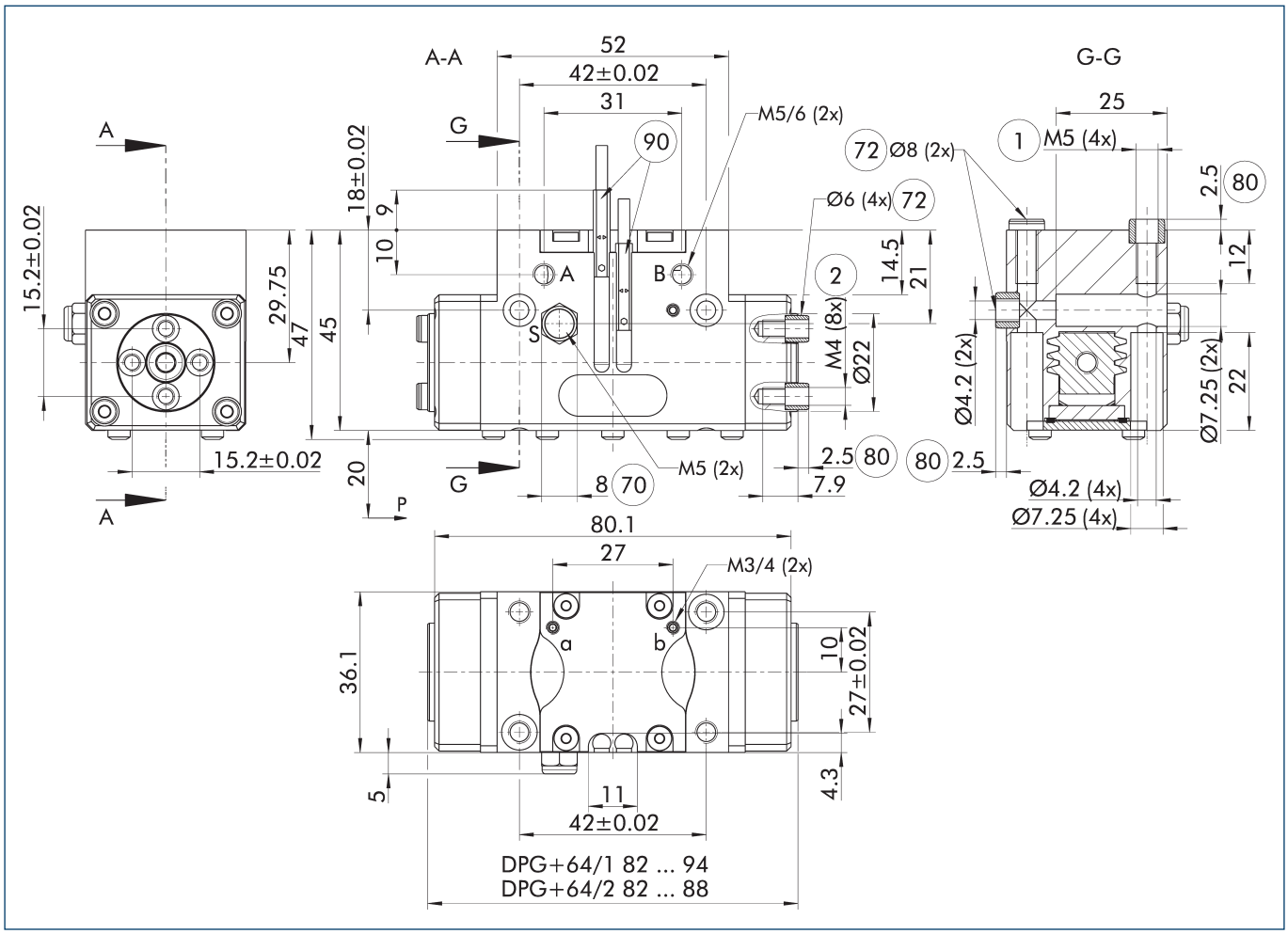
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

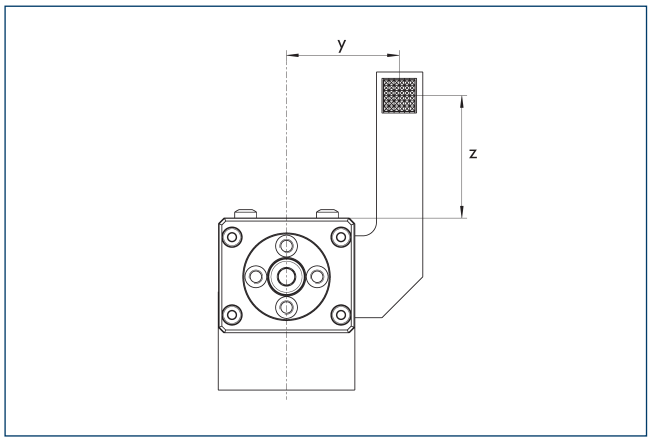
(70) Wrench size

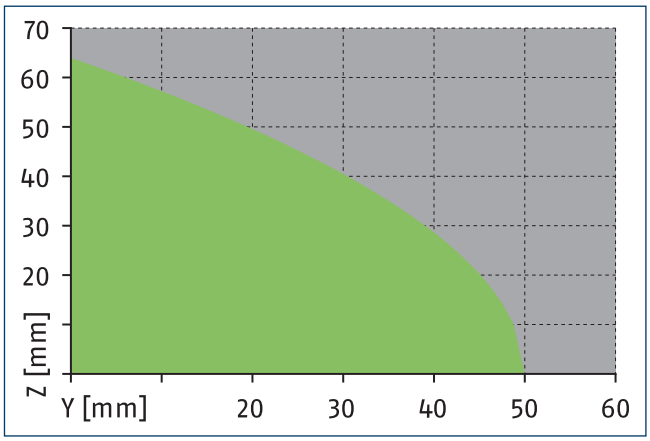
(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

(90) Sensor MMS 22..

## Maximum permitted finger projection

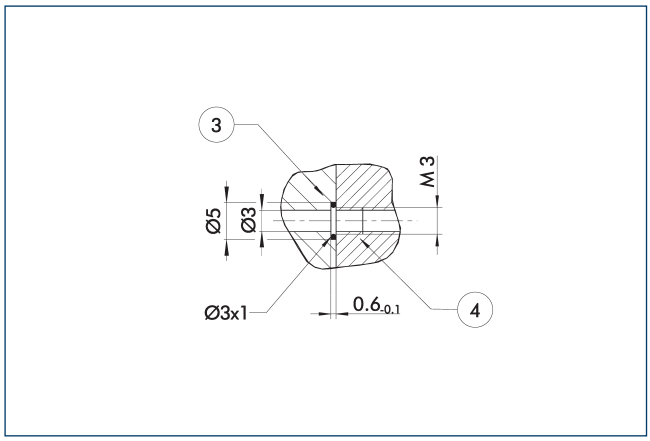



Permitted range  Inadmissible range

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

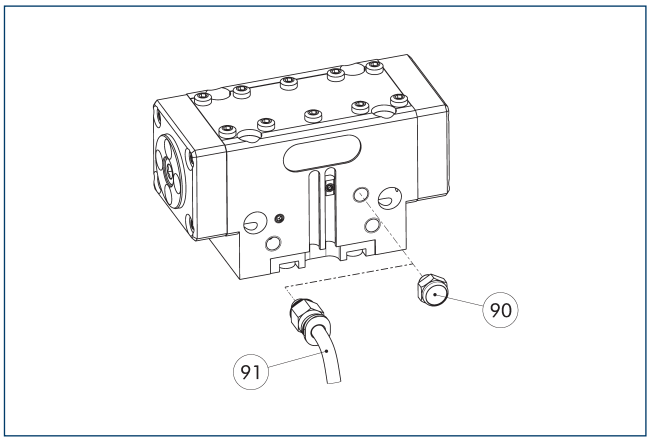
## Hose-free direct connection M3




(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.

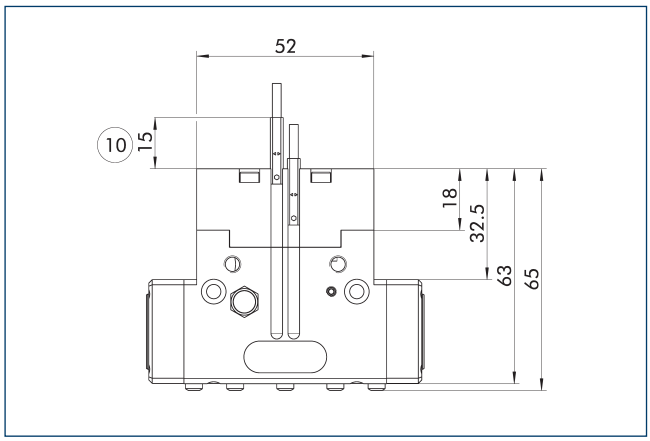
## Connect the air purge connection




(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.

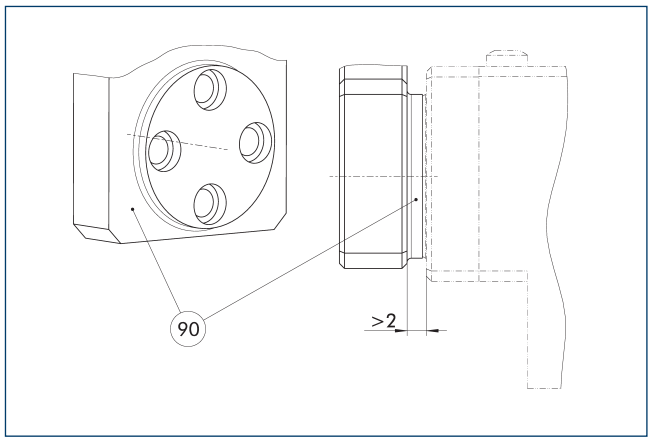
## Gripping force maintenance version AS/IS




(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/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.

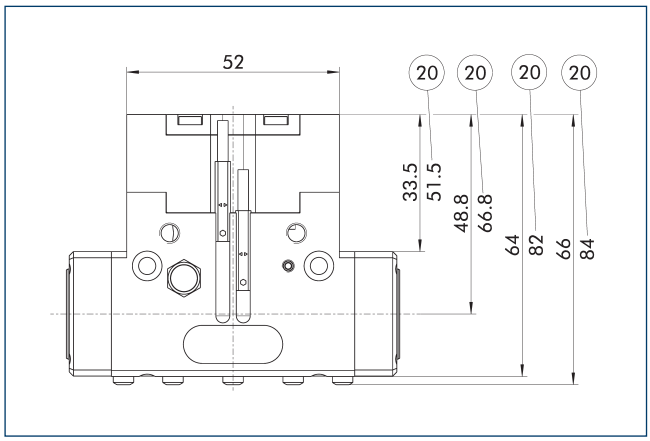
## Proposed jaw design




(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.

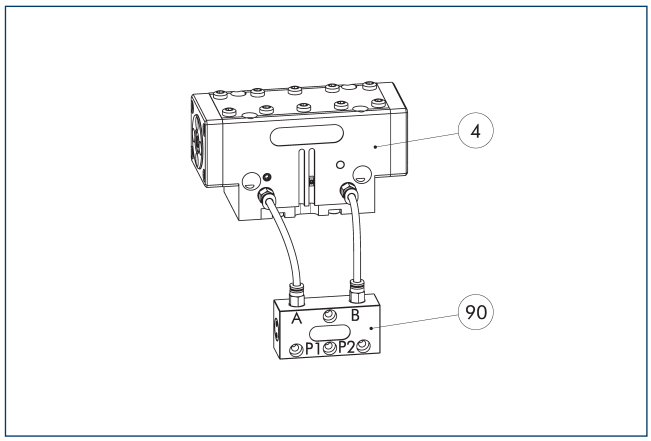
## Power booster version




(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.

## 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.

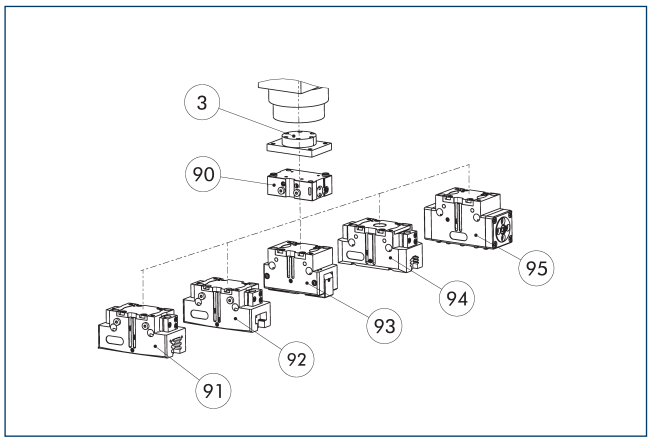
| Description | ID | Recommended hose diameter |
|---|---|---|
| | | [mm] |
| Pressure maintenance valve | | |
| SDV-P 04 | 0403130 | 6 |
| SDV-P 07 | 0403131 | 8 |
| Pressure maintenance valve with air bleed screw | | |
| SDV-P 04-E | 0300120 | 6 |
| SDV-P 07-E | 0300121 | 8 |

ⓘ 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

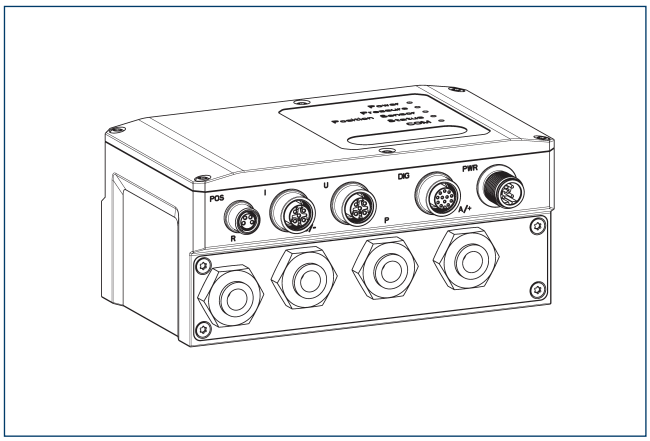



(3) Adapter
(90) SDV-P E-P pressure maintenance valve
(91) 2-finger parallel gripper PGN-plus/PGN-plus-P
(92) 2-finger parallel gripper JGP-P
(93) 2-finger angular gripper PWG-plus
(94) 2-finger parallel gripper PGB
(95) Sealed DPG-plus gripper

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

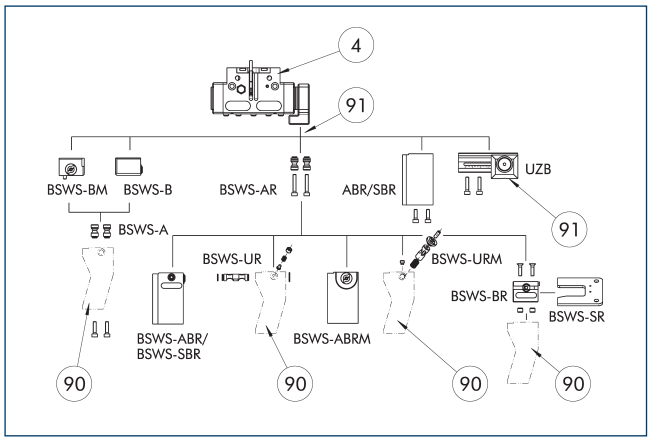


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

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

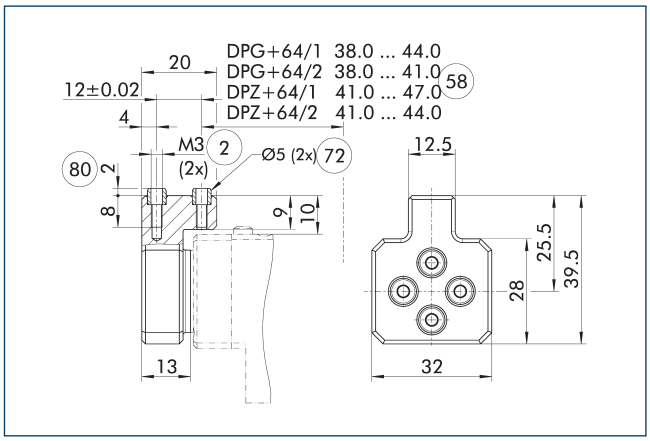
## Intermediate jaw interface




(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 64-50 intermediate jaw

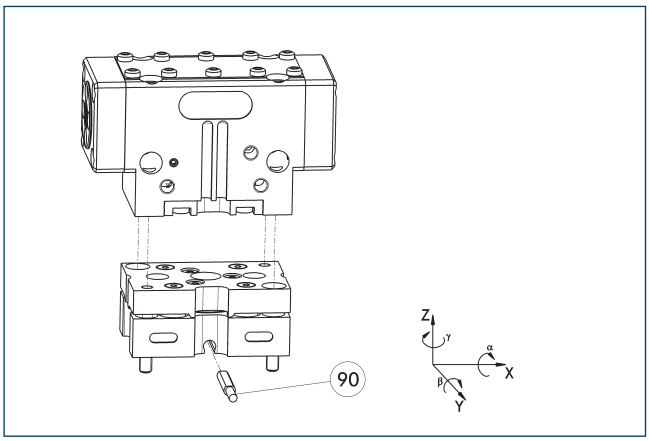



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

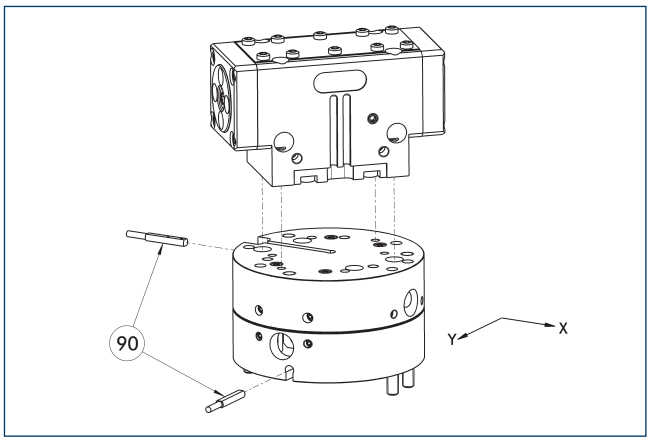



(90) Monitoring of locking

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 | ±1°/±1,5°/±2° | ● |
| TCU-P-064-3-OV | 0324775 | no | ±1°/±1,5°/±2° | |

## Compensation unit AGE-F

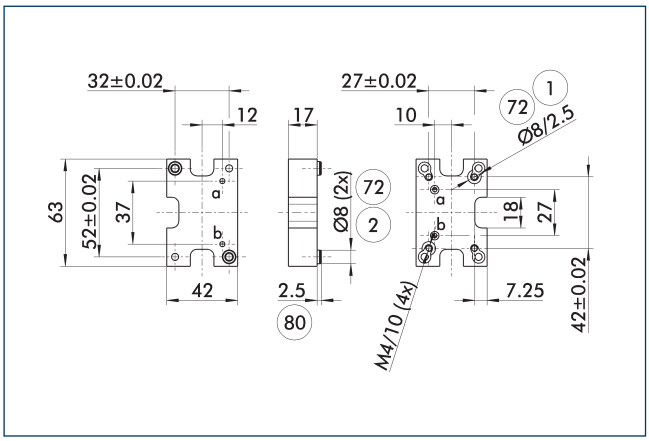



(90) Monitoring

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

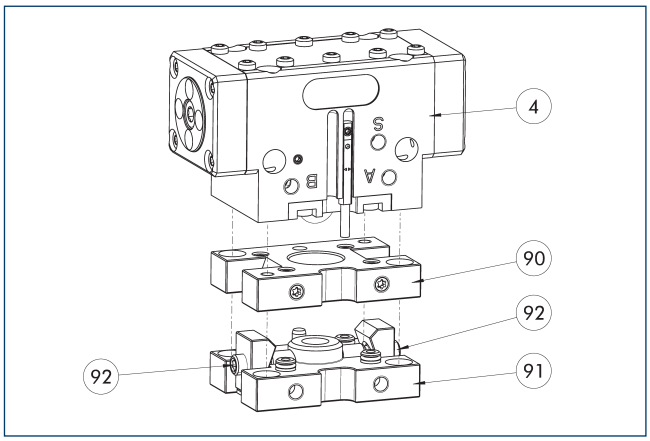



(1) Robot-side connection
(2) Tool-side connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

| Description | ID | |
|---|---|---|
| Tool side | | |
| A-CWA-080-064-P | 0305784 | |

## Compact change system for grippers

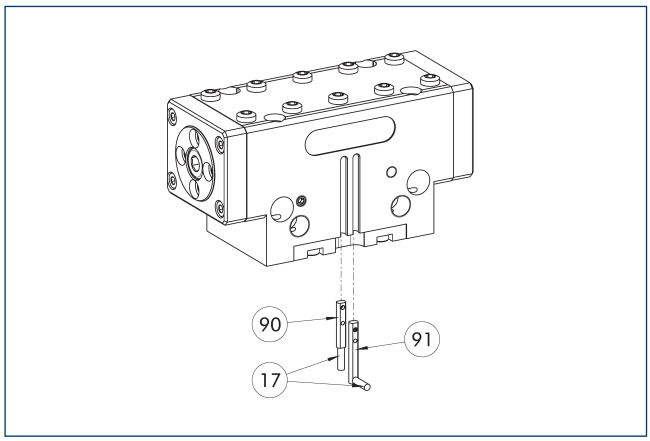



(4) Grippers
(90) CWA compact change adapter
(91) CWK compact change master
(92) Locking mechanism

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

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

## Electronic magnetic switch MMS



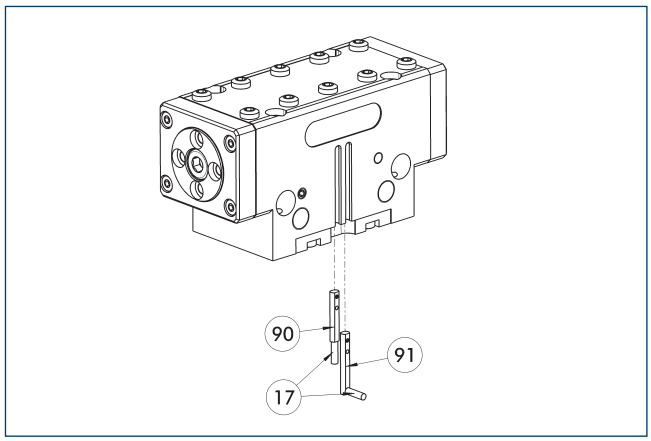

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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 | |
| 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



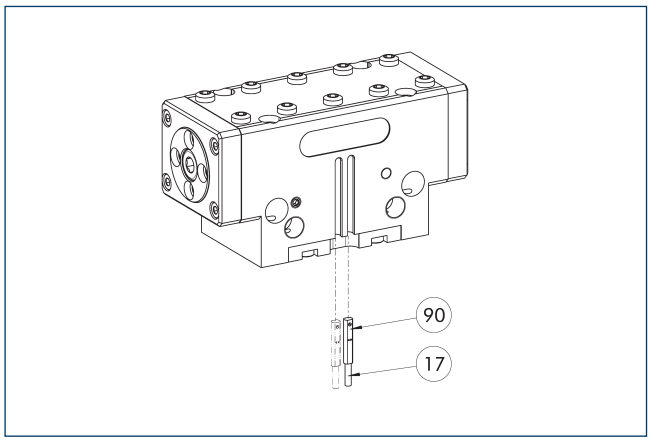

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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

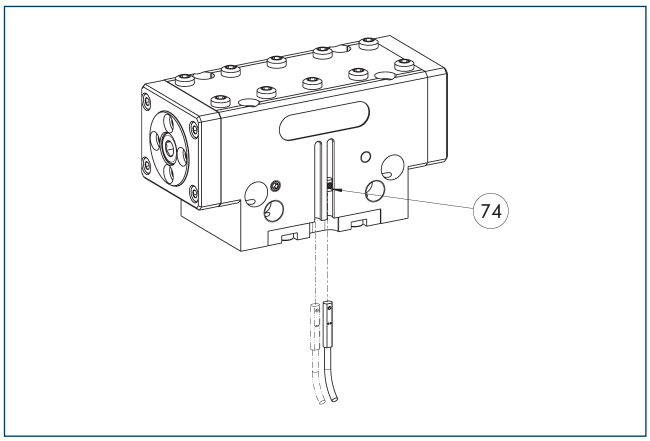
(90) MMS 22...-PI2-... sensor

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 | |

ⓘ 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



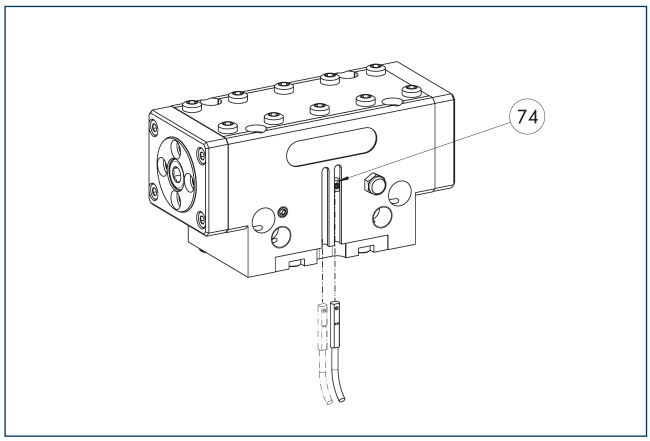

(74) Limit stop for sensor

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 | |

ⓘ 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.

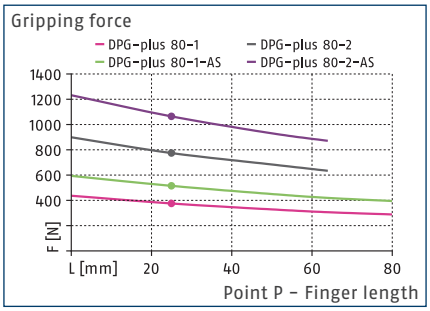
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

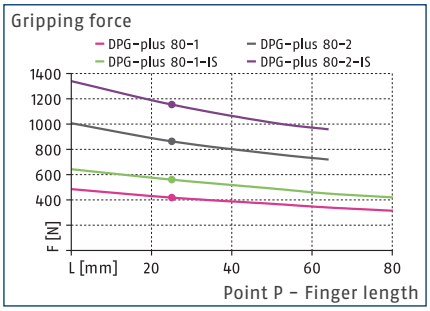
# DPG-plus 80

Sealed universal gripper

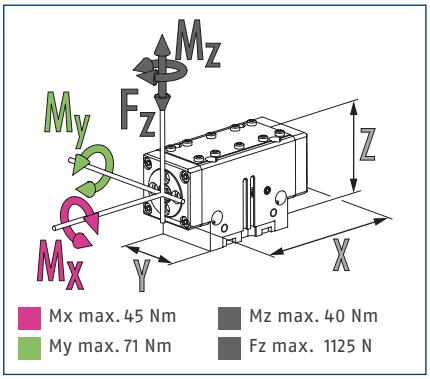
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

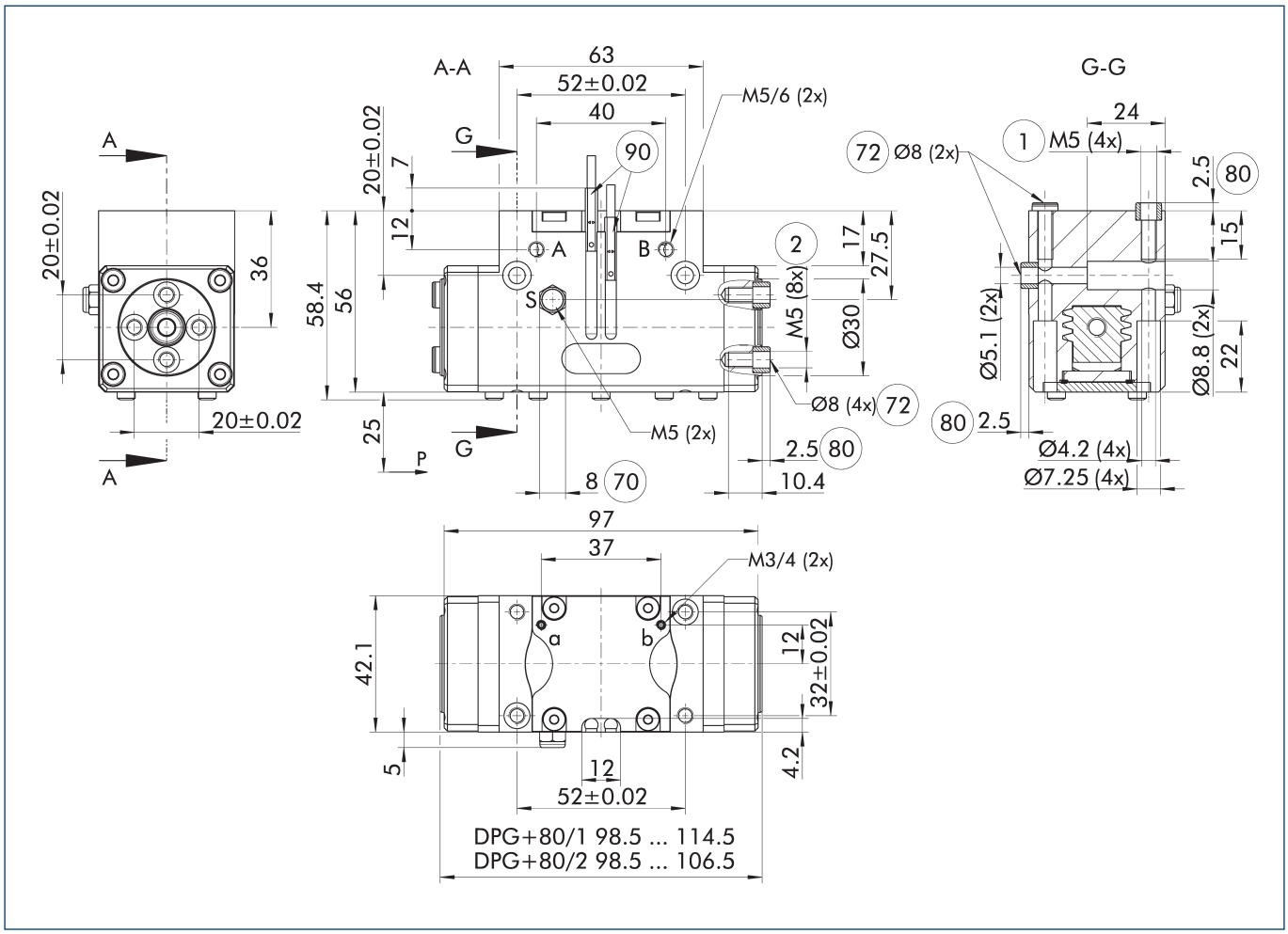
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

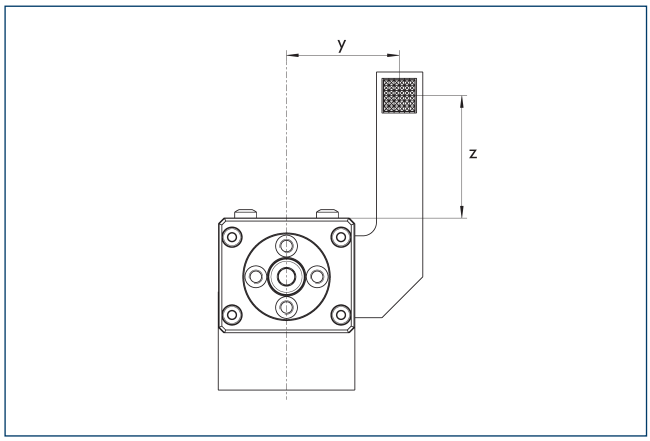
(80) Depth of the centering sleeve hole in the counter part

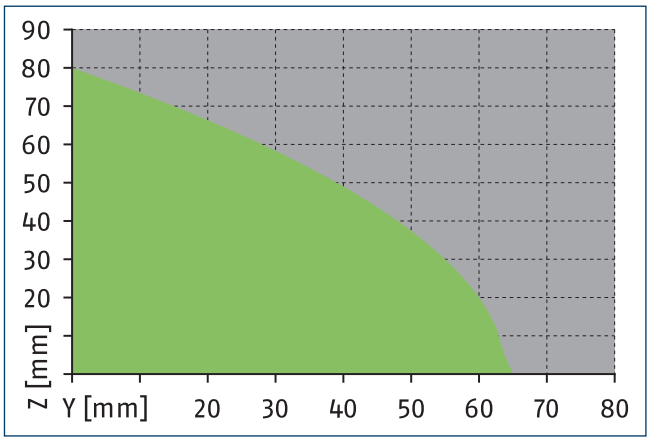
(90) Sensor MMS 22..

# DPG-plus 80

Sealed universal gripper

## Maximum permitted finger projection

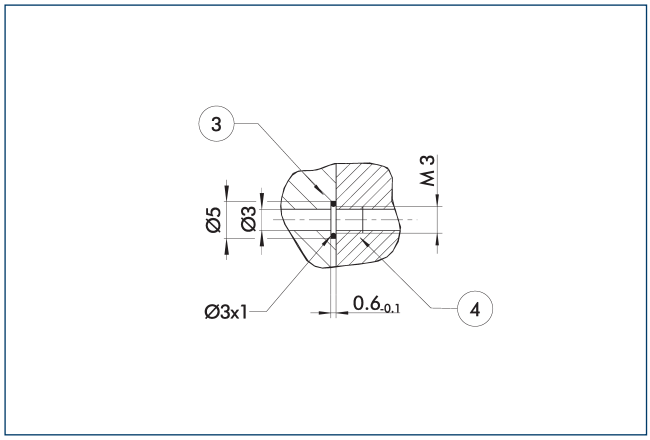



Permitted range  Inadmissible range

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

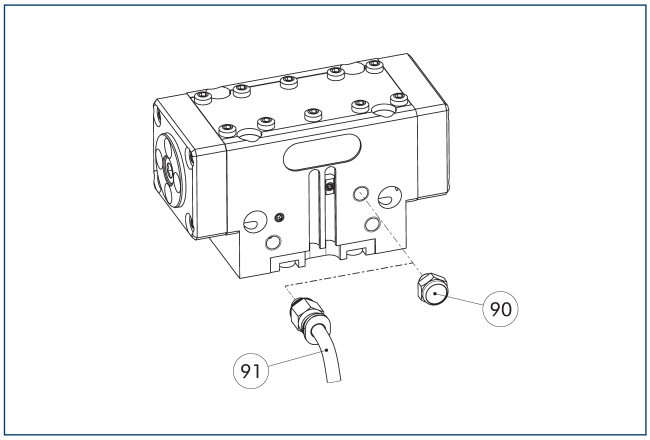
## Hose-free direct connection M3




(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.

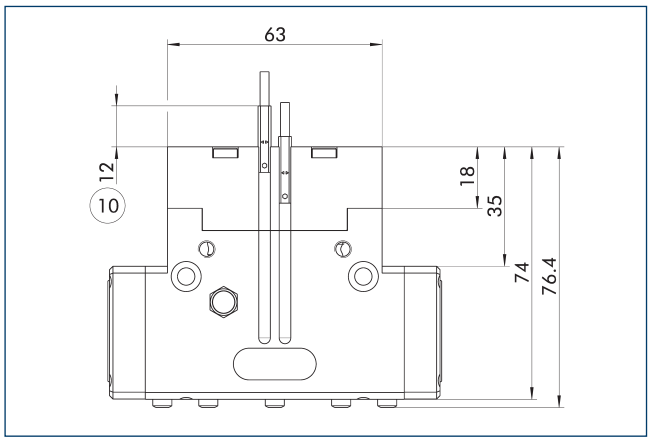
## Connect the air purge connection




(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.

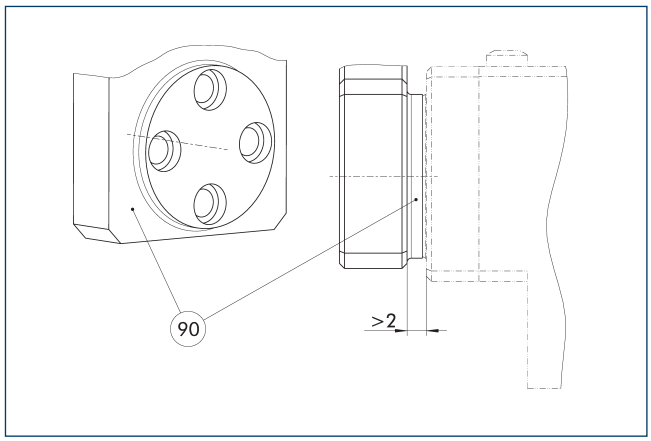
## Gripping force maintenance version AS/IS




(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/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.

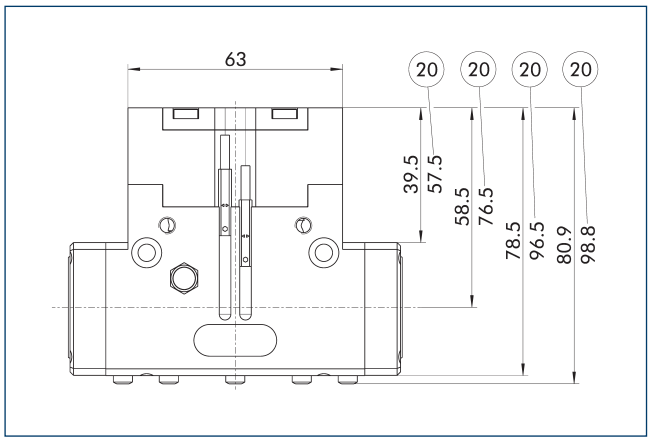
## Proposed jaw design




(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.

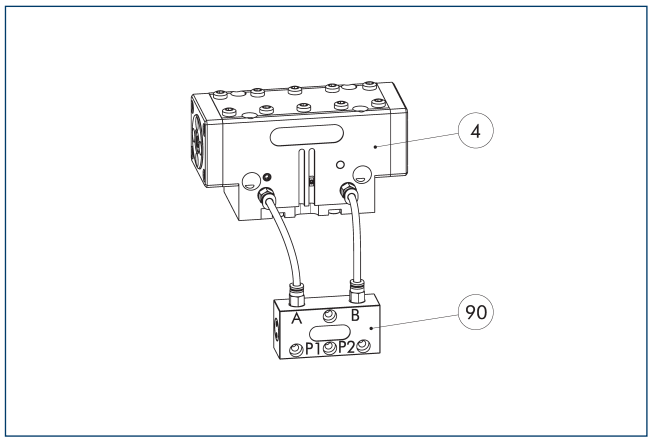
## Power booster version




(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.

## 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.

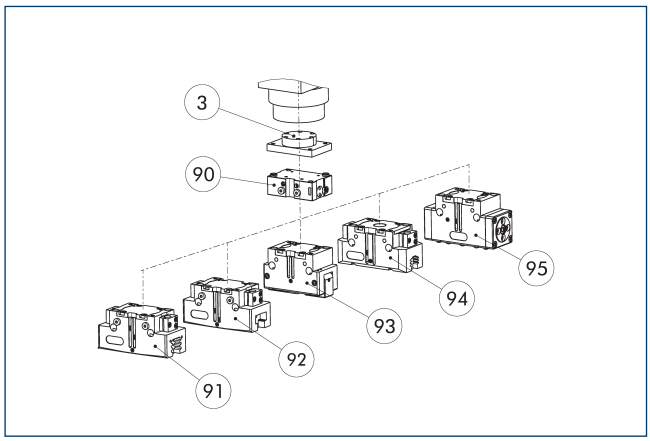
| Description | ID | Recommended hose diameter |
|---|---|---|
| | | [mm] |
| Pressure maintenance valve | | |
| SDV-P 04 | 0403130 | 6 |
| SDV-P 07 | 0403131 | 8 |
| Pressure maintenance valve with air bleed screw | | |
| SDV-P 04-E | 0300120 | 6 |
| SDV-P 07-E | 0300121 | 8 |

ⓘ 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

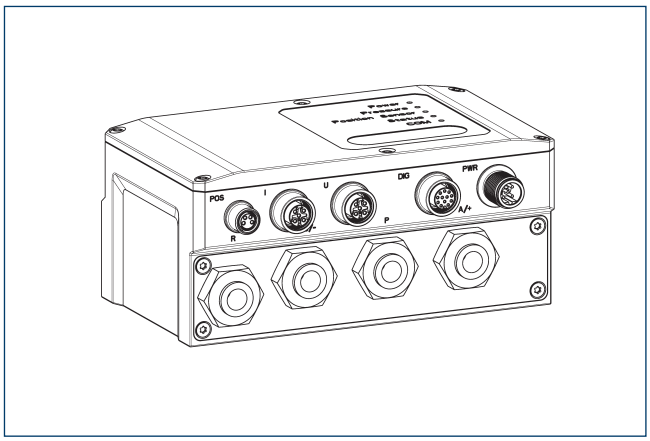



(3) Adapter
(90) SDV-P E-P pressure maintenance valve
(91) 2-finger parallel gripper PGN-plus/PGN-plus-P
(92) 2-finger parallel gripper JGP-P
(93) 2-finger angular gripper PWG-plus
(94) 2-finger parallel gripper PGB
(95) Sealed DPG-plus gripper

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

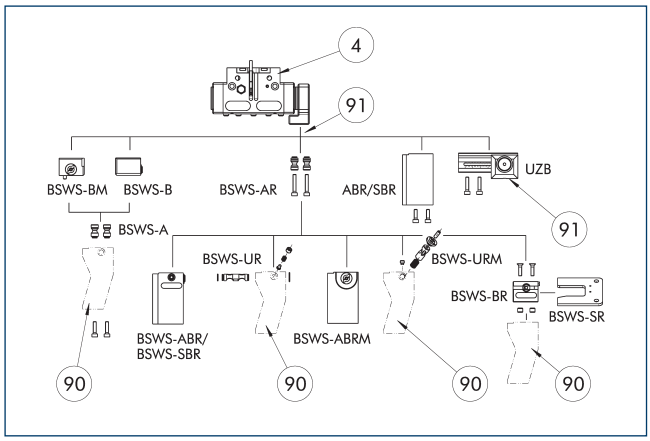


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

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

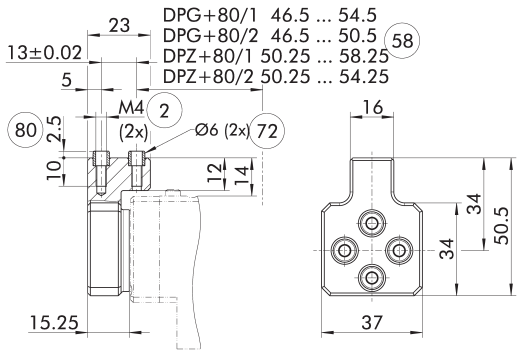
## Intermediate jaw interface




(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 80-64 intermediate jaw

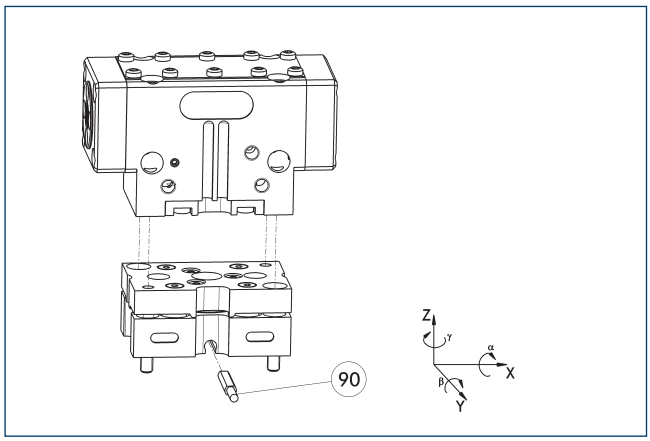



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

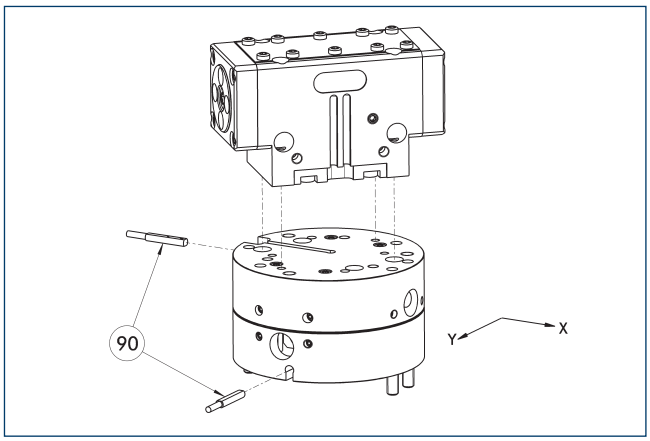



90 Monitoring of locking

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 | ±1°/±1,5°/±2° | ● |
| TCU-P-080-3-OV | 0324793 | no | ±1°/±1,5°/±2° | |

## Compensation unit AGE-F

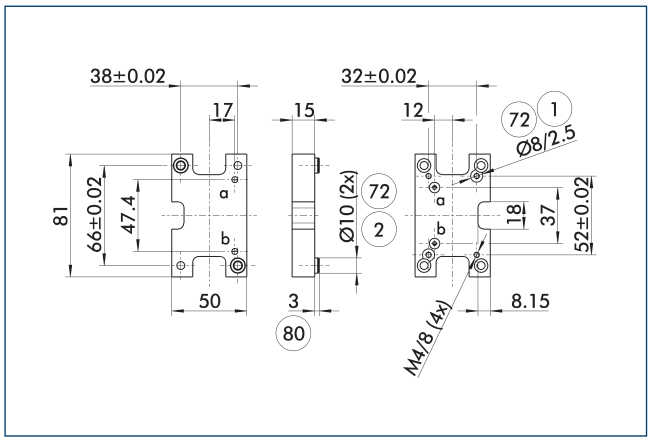



90 Monitoring

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

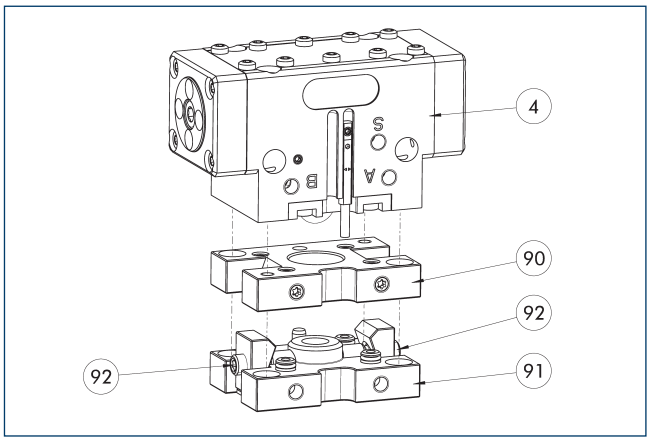



1 Robot-side connection
2 Tool-side connection
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the counter part

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

| Description | ID | |
|---|---|---|
| Tool side | | |
| A-CWA-100-080-P | 0305804 | |

## Compact change system for grippers

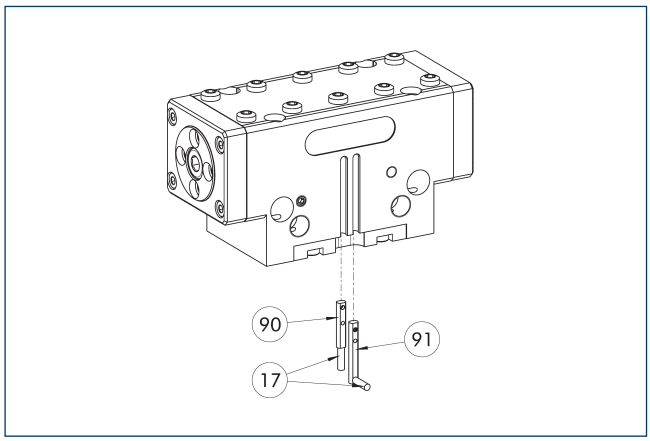



4 Grippers
90 CWA compact change adapter
91 CWK compact change master
92 Locking mechanism

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

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

## Electronic magnetic switch MMS



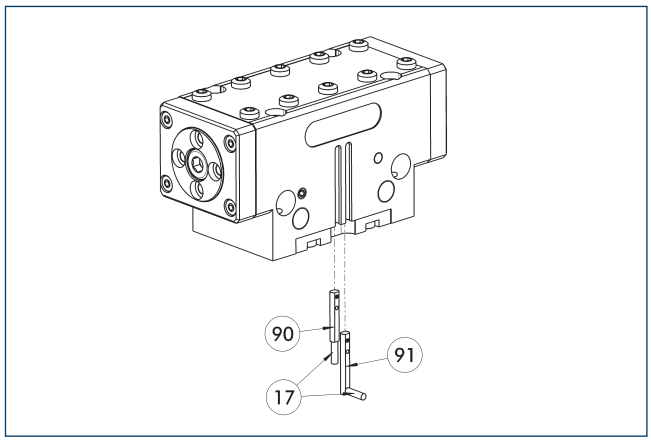

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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 | |
| 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



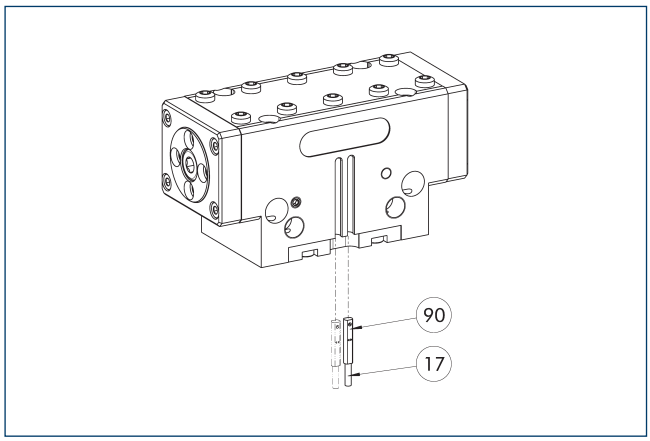

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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

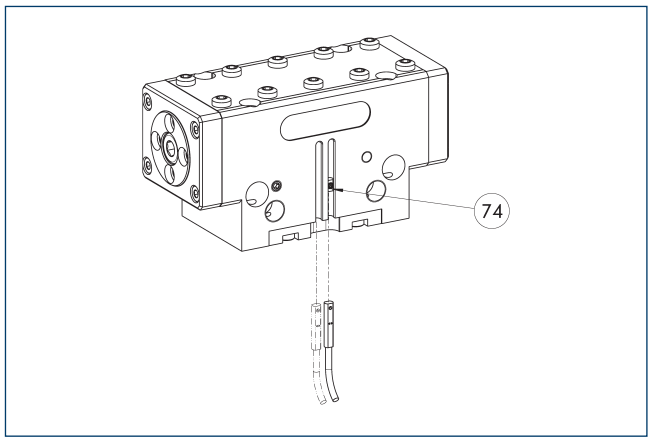
(90) MMS 22...-PI2-... sensor

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 | |

ⓘ 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



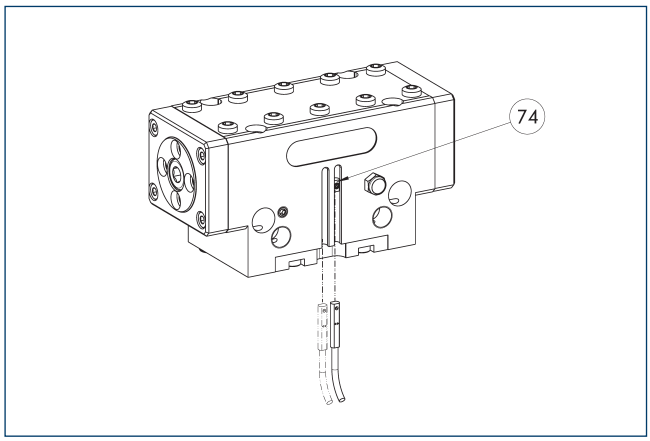

(74) Limit stop for sensor

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 | |

ⓘ 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.

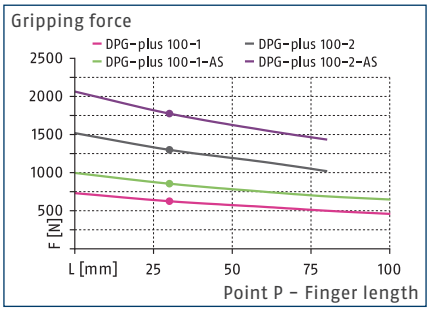
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

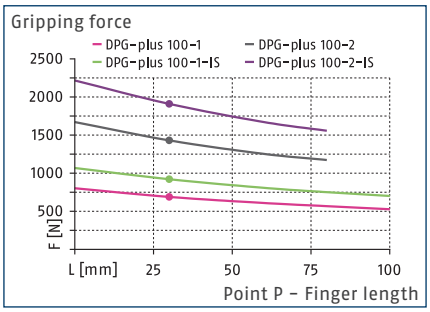
# DPG-plus 100

Sealed universal gripper

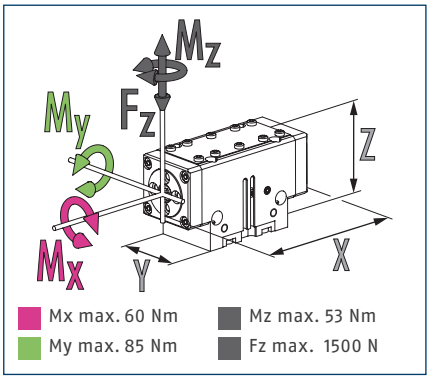

## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

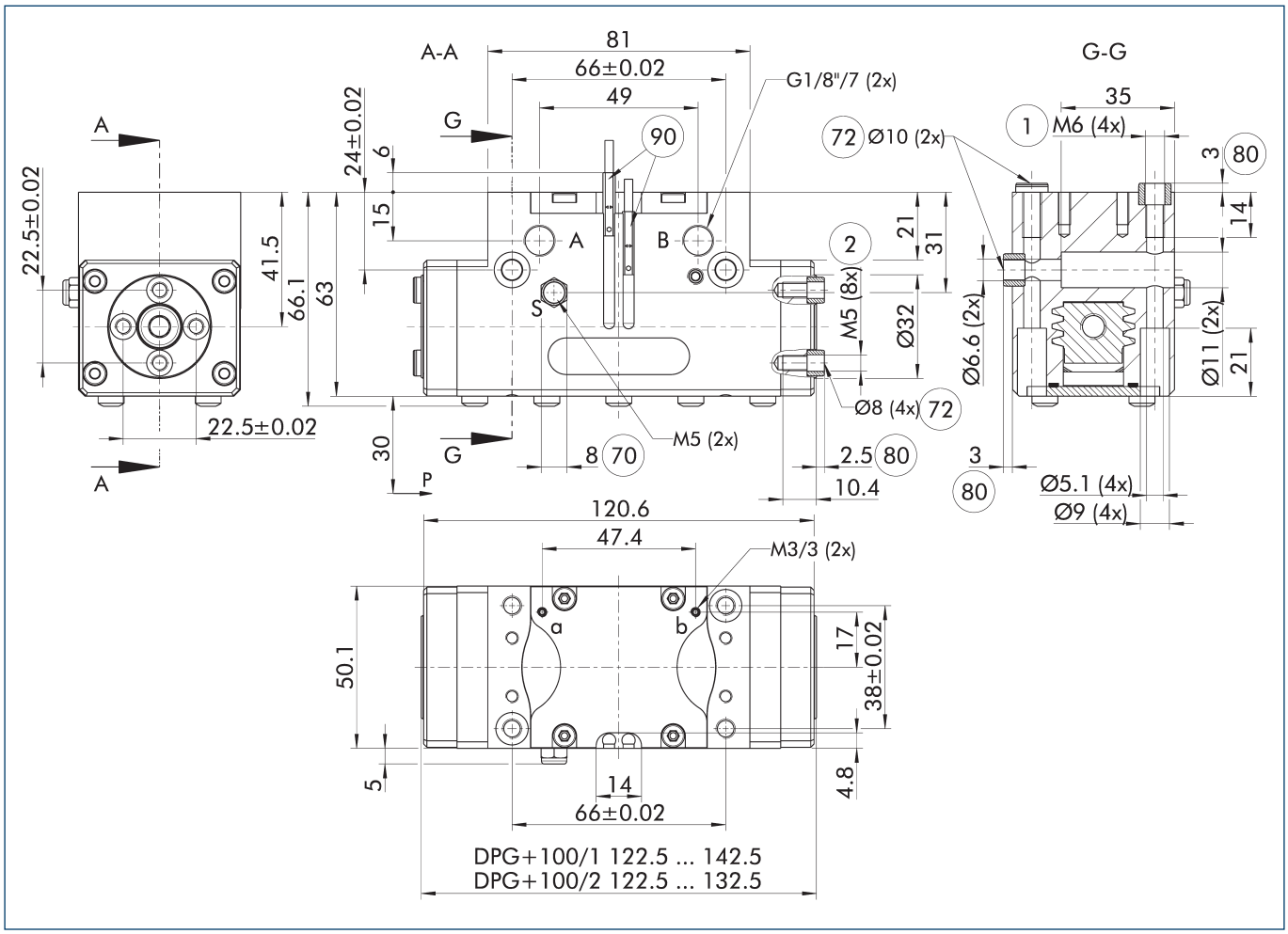
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

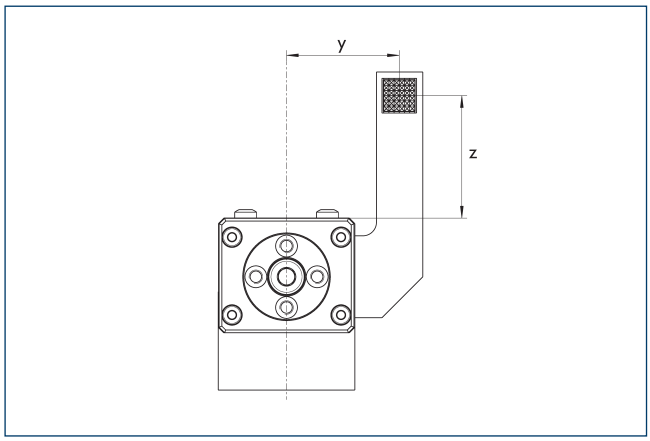
(80) Depth of the centering sleeve hole in the counter part

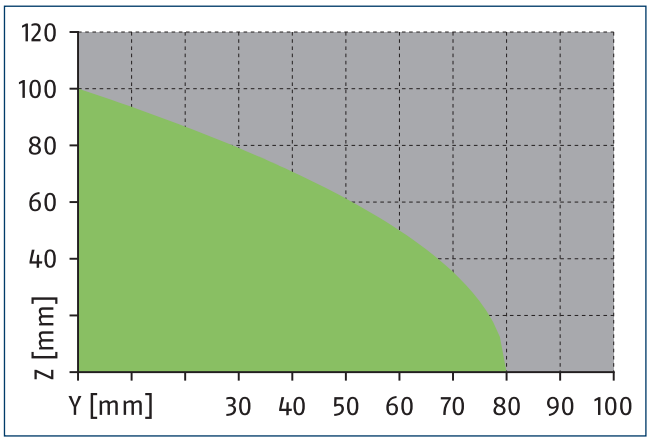
(90) Sensor MMS 22..

# DPG-plus 100

Sealed universal gripper

## Maximum permitted finger projection



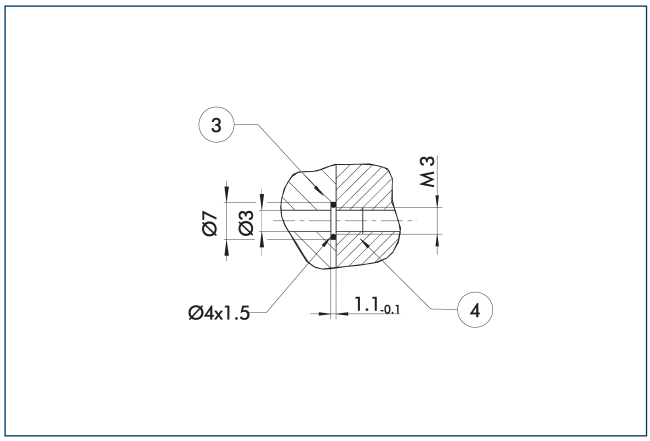




Permitted range

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

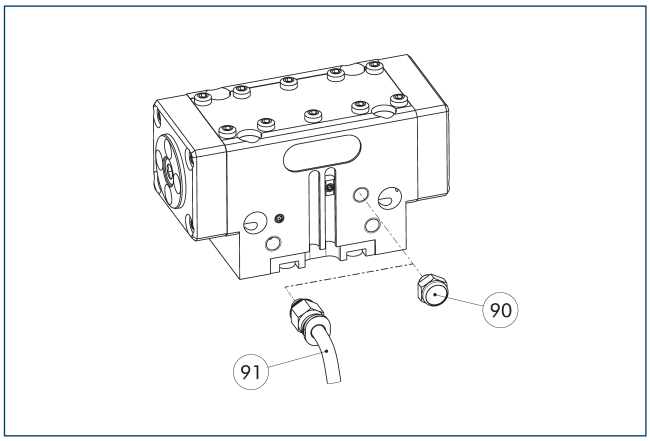



(3) Adapter

(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

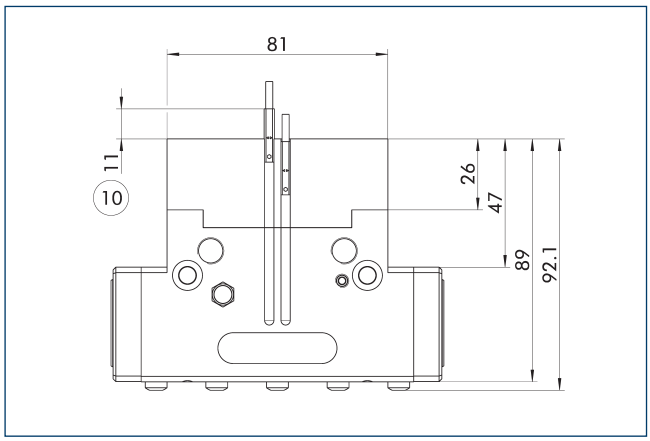



(90) Sinter filter

(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.

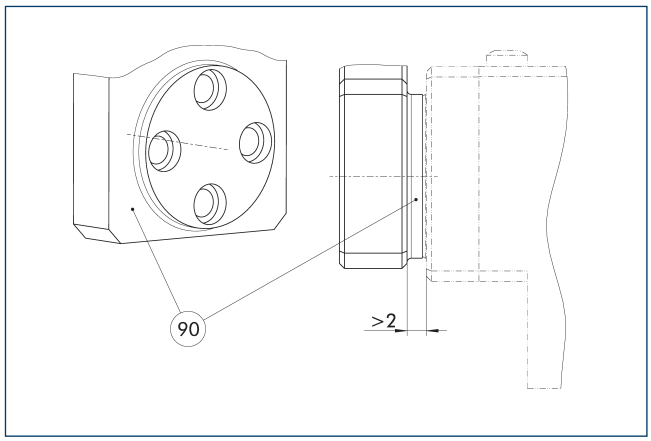
## Gripping force maintenance version AS/IS




(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/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.

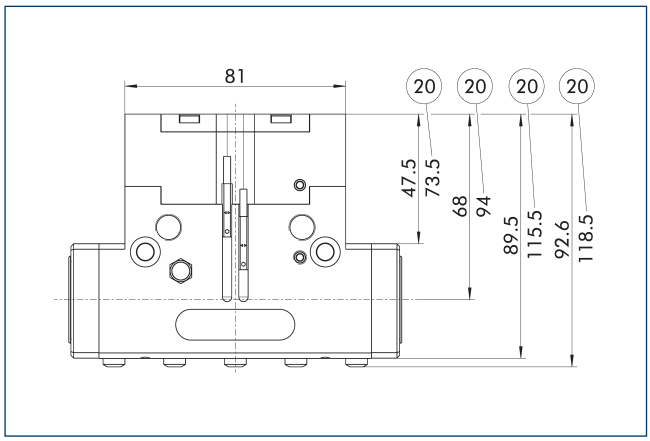
## Proposed jaw design




(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.

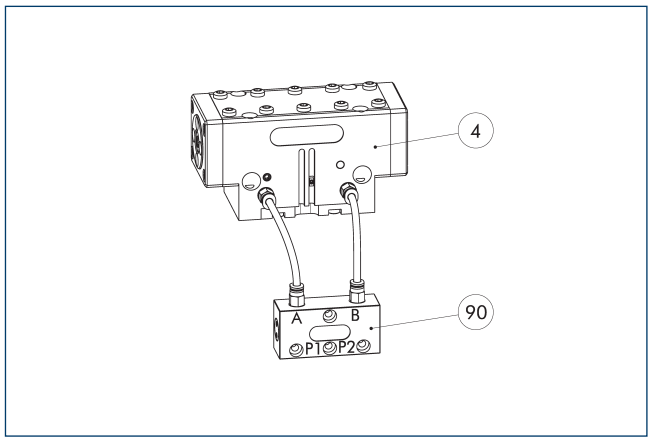
## Power booster version




(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.

## SDV-P pressure maintenance valve




(4) Grippers

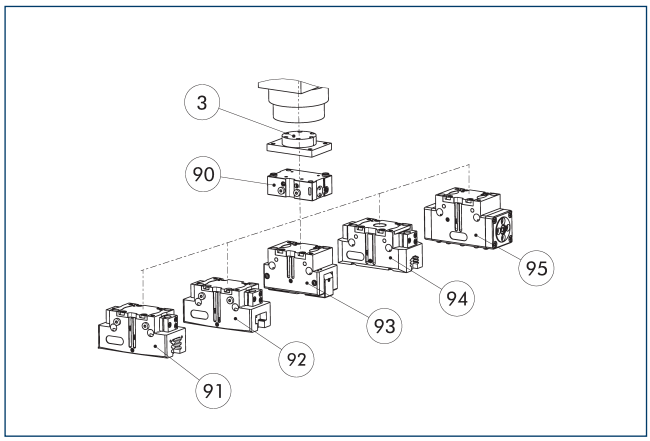
(90) SDV-P pressure maintenance valve

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 |

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

## SDV-P E-P pressure maintenance valve

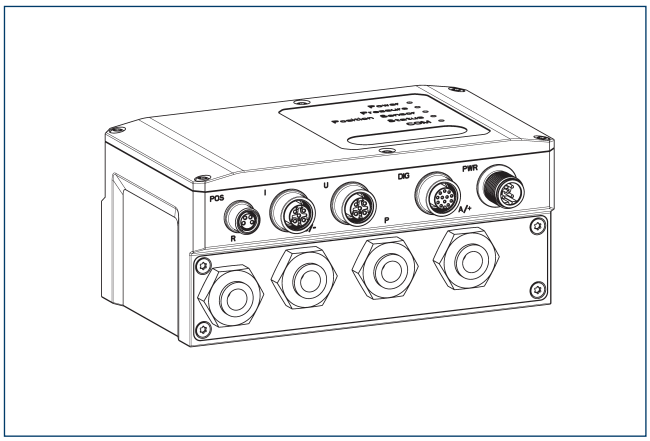



(3) Adapter
(90) SDV-P E-P pressure maintenance valve
(91) 2-finger parallel gripper PGN-plus/PGN-plus-P
(92) 2-finger parallel gripper JGP-P
(93) 2-finger angular gripper PWG-plus
(94) 2-finger parallel gripper PGB
(95) Sealed DPG-plus gripper

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

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

## Pneumatic positioning device PPD

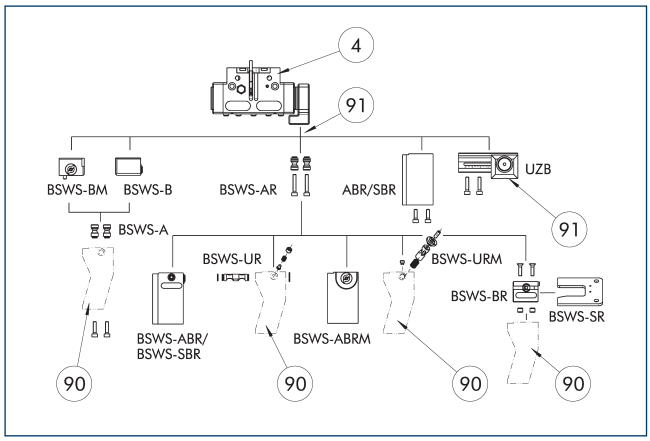


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

| 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.

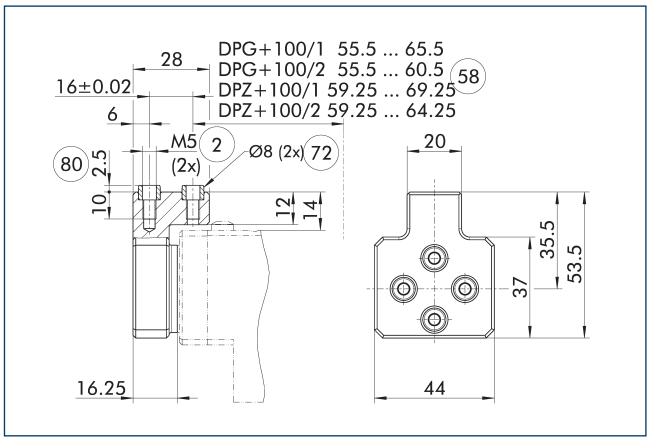
## Intermediate jaw interface




(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 100-80 intermediate jaw

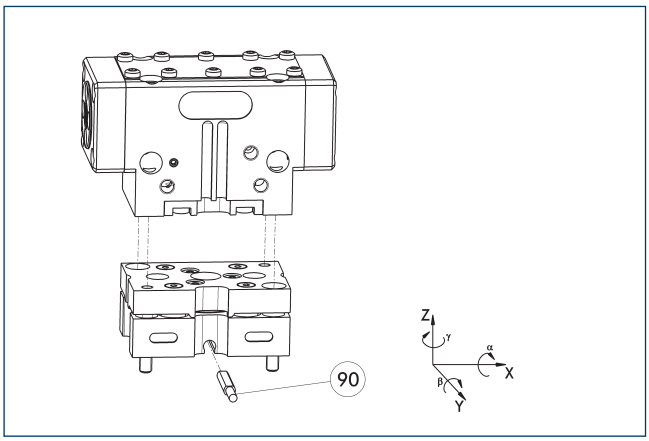



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

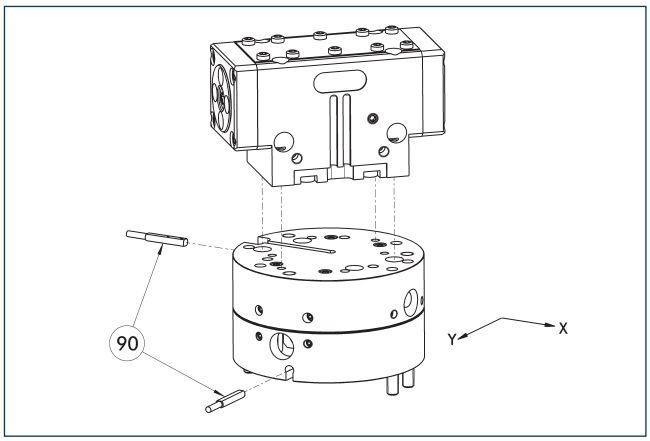



(90) Monitoring of locking

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 | ±1°/±1,5°/±1,2° | ● |
| TCU-P-100-3-OV | 0324811 | no | ±1°/±1,5°/±1,2° | |

## Compensation unit AGE-F

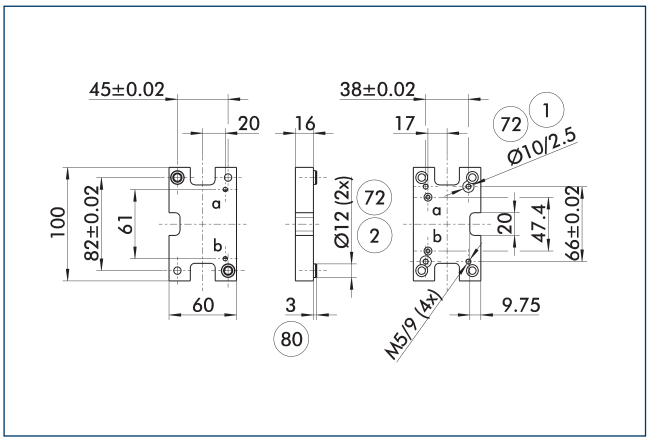



(90) Monitoring

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

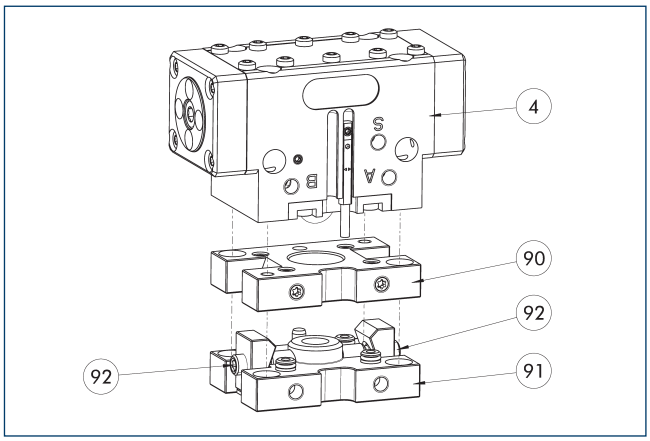



(1) Robot-side connection
(2) Tool-side connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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

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

## Compact change system for grippers

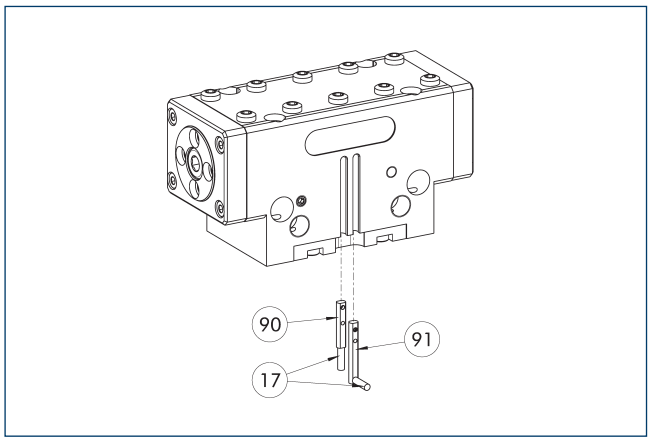



(4) Grippers
(90) CWA compact change adapter
(91) CWK compact change master
(92) Locking mechanism

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



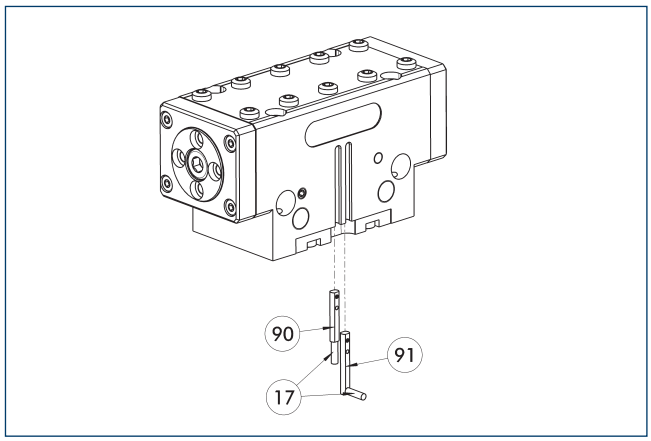

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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



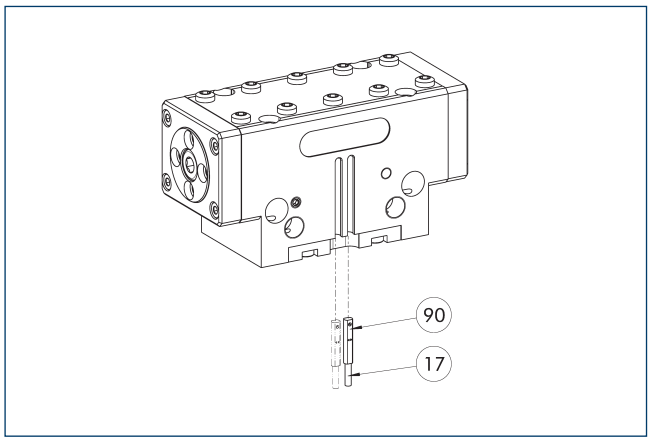

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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

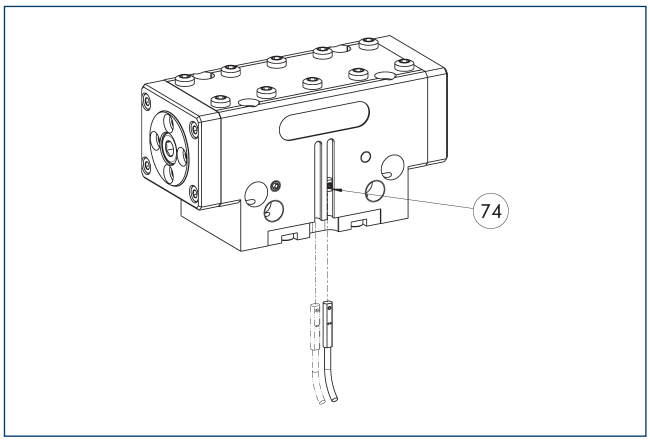
(90) MMS 22...-PI2-... sensor

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 | |

ⓘ 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



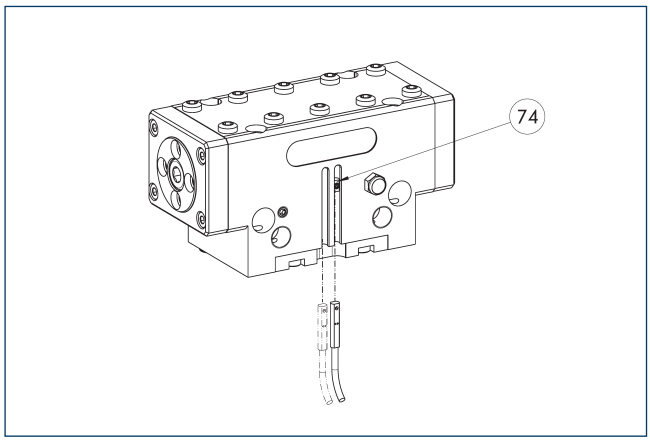

(74) Limit stop for sensor

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 | |

ⓘ 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.

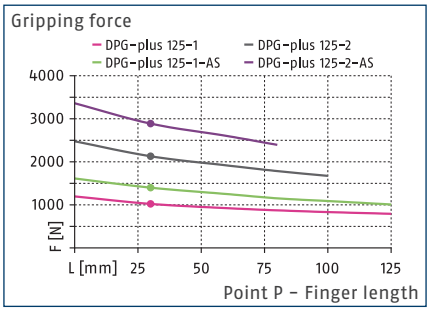
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

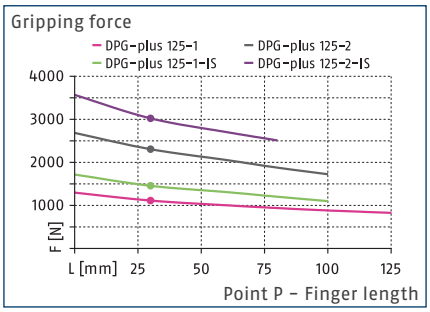
# DPG-plus 125

Sealed universal gripper

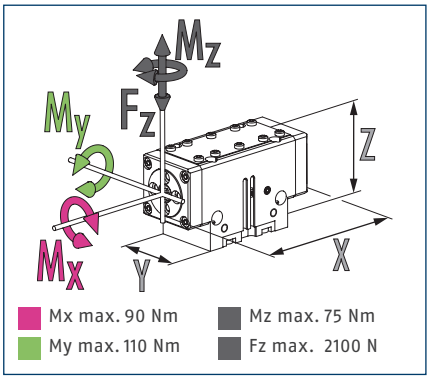

## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

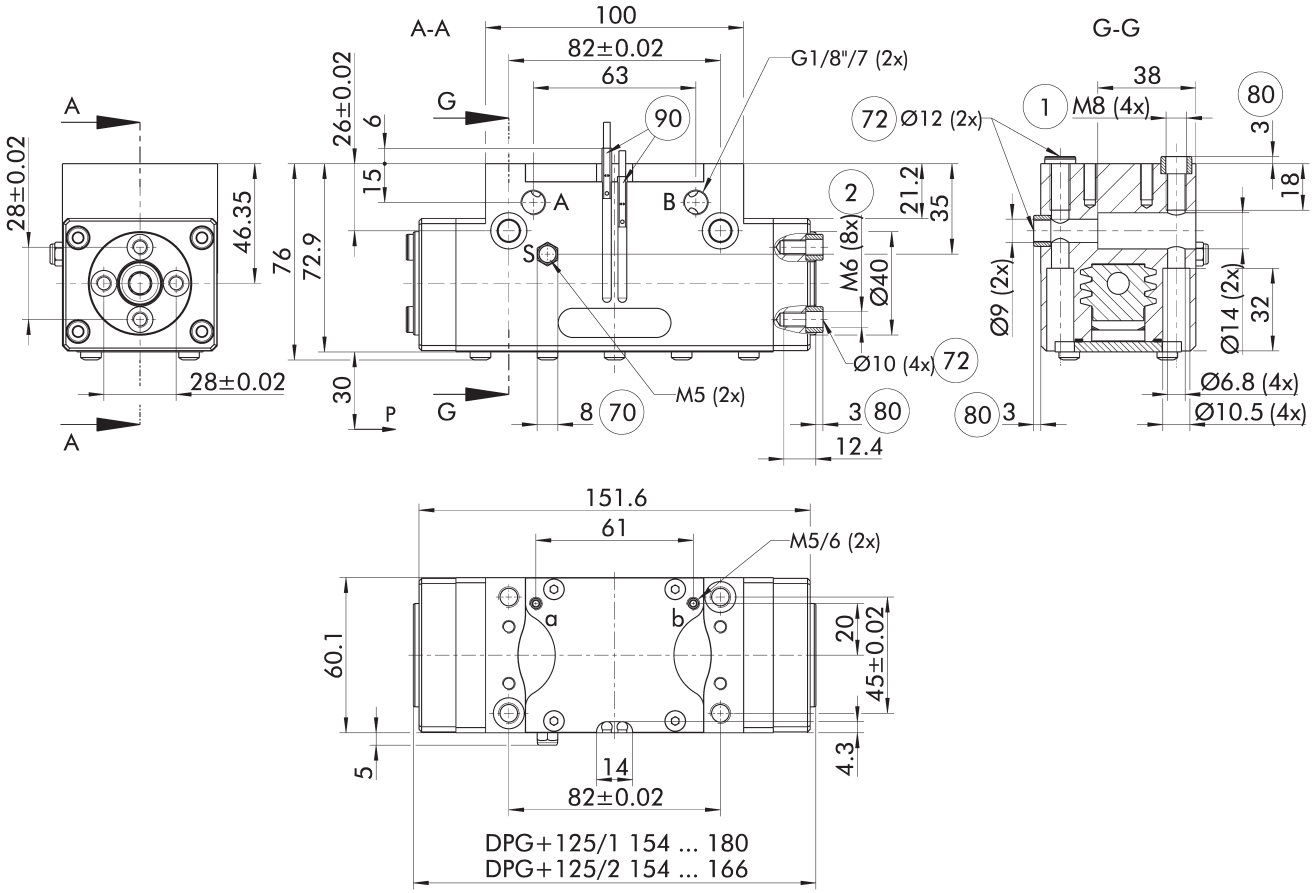
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

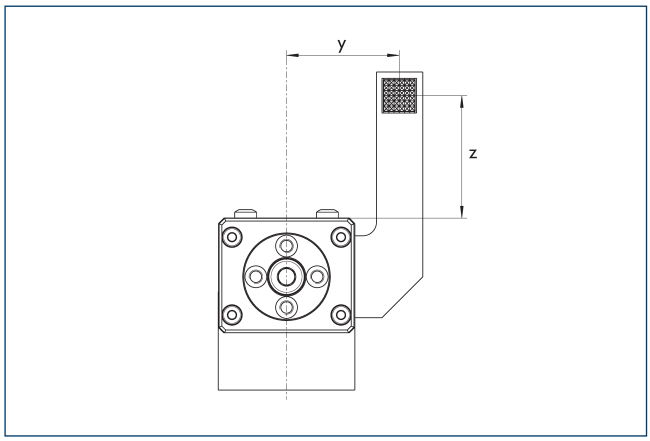
(70) Wrench size

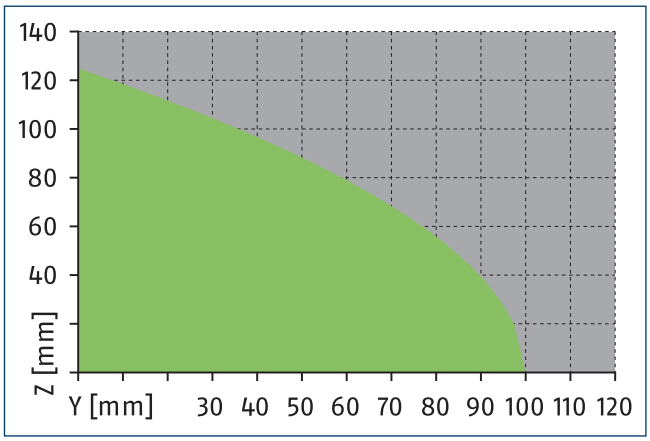
(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

(90) Sensor MMS 22..

## Maximum permitted finger projection



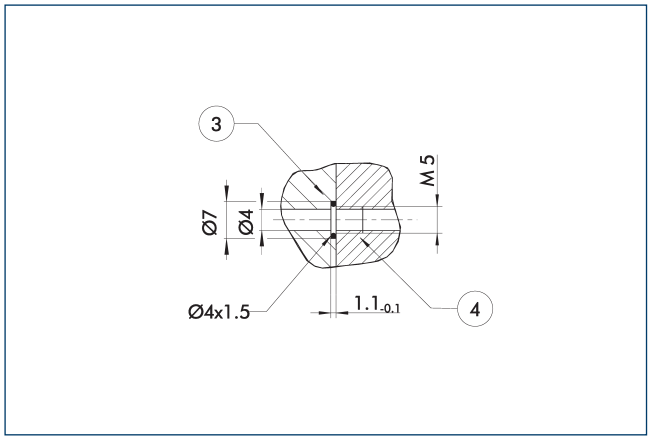




Permitted range

Inadmissible range

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

## Hose-free direct connection M5

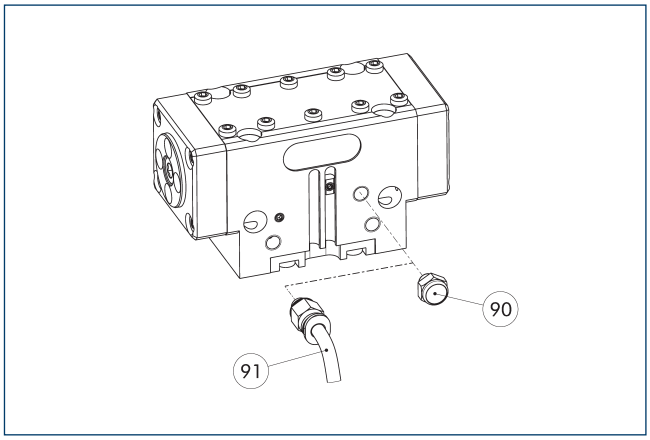



(3) Adapter

(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

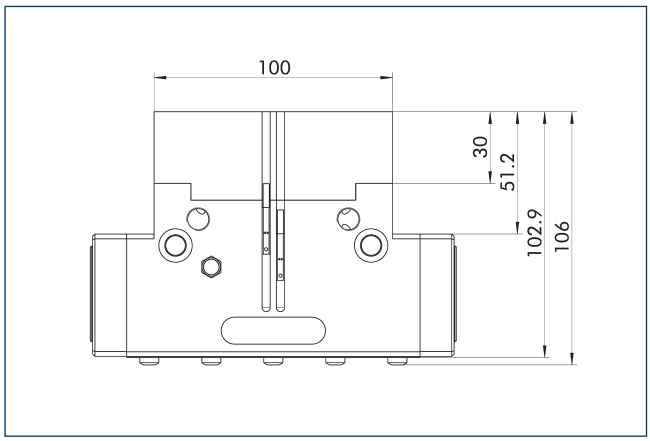



(90) Sinter filter

(91) Hose for ventilation or air purge connection

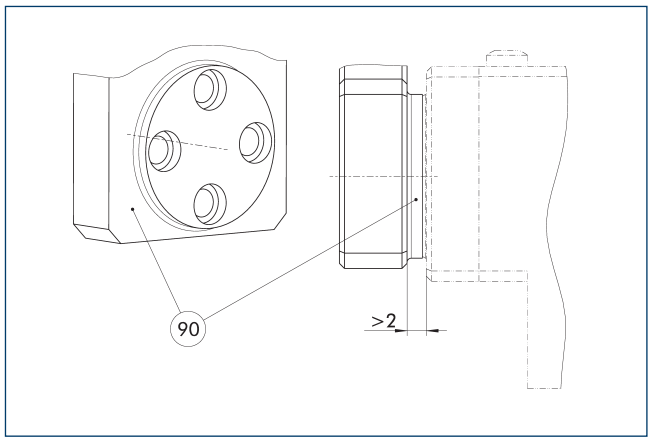
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

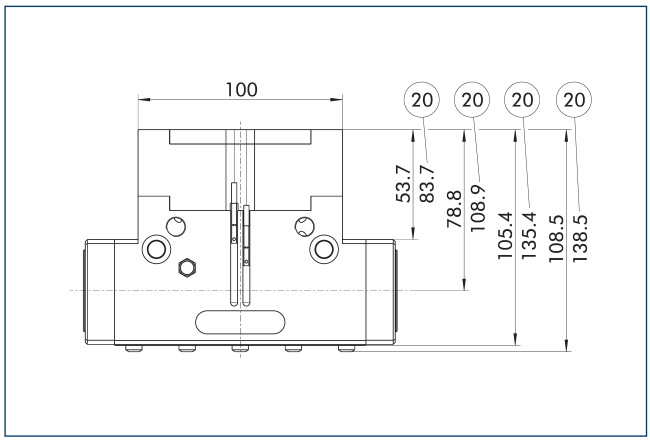
## Proposed jaw design




(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.

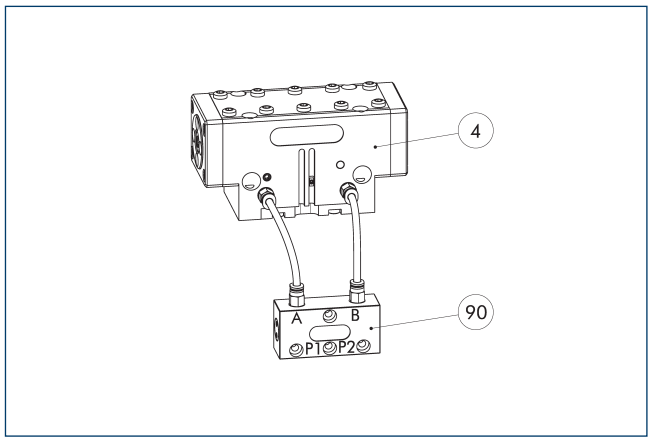
## Power booster version




(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.

## SDV-P pressure maintenance valve




(4) Grippers

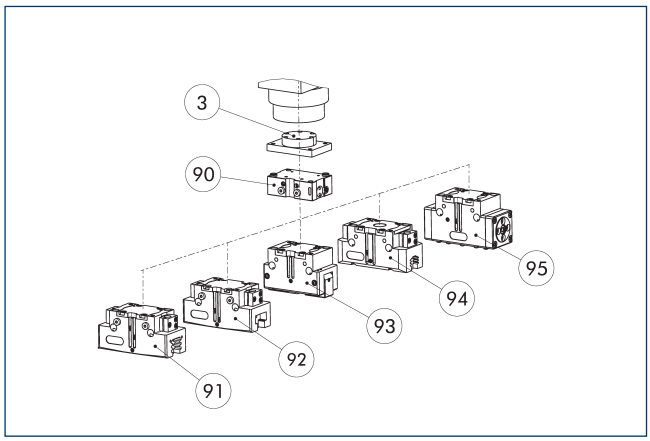
(90) SDV-P pressure maintenance valve

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 |

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

## SDV-P E-P pressure maintenance valve

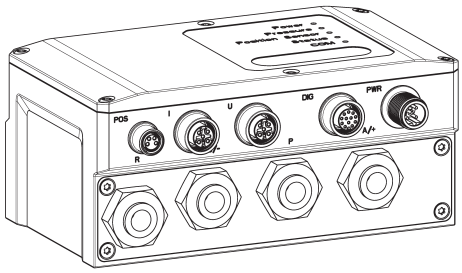



3 Adapter
90 SDV-P E-P pressure maintenance valve
91 2-finger parallel gripper PGN-plus/PGN-plus-P
92 2-finger parallel gripper JGP-P
93 2-finger angular gripper PWG-plus
94 2-finger parallel gripper PGB
95 Sealed DPG-plus gripper

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

| Description | ID | |
|---|---|---|
| Pressure maintenance valve | | |
| SDV-P 125-E-P | 0300127 | |

## Pneumatic positioning device PPD

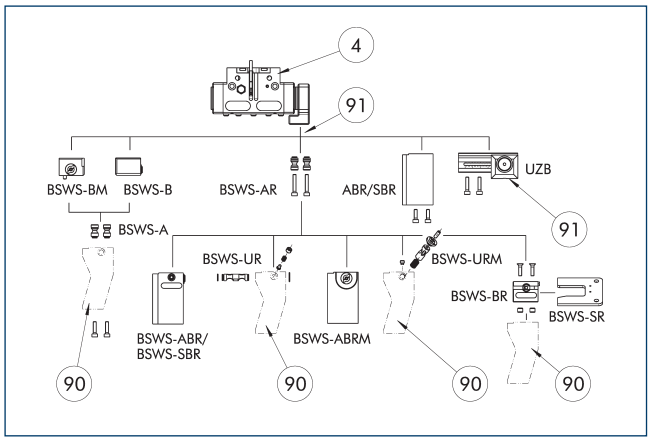


The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

| 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.

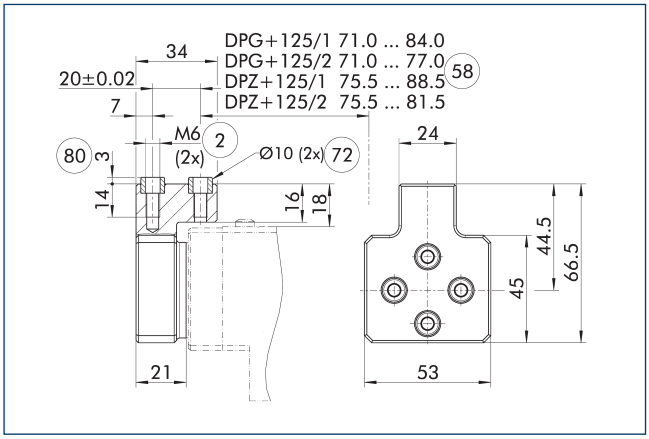
## Intermediate jaw interface




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

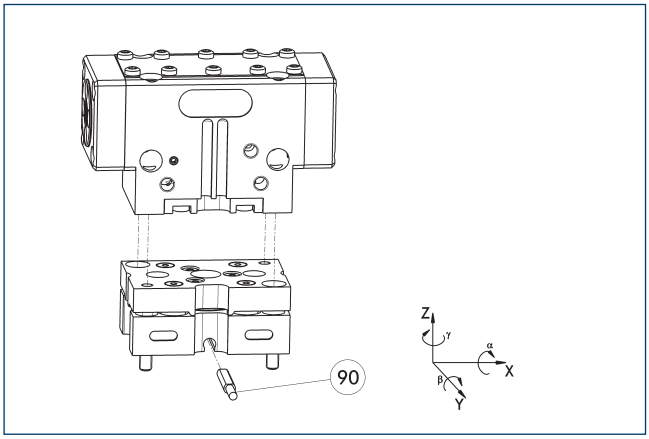



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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 125-100 | 0300195 | Aluminum | PGN-plus 100 | 1 |

## Tolerance compensation unit TCU

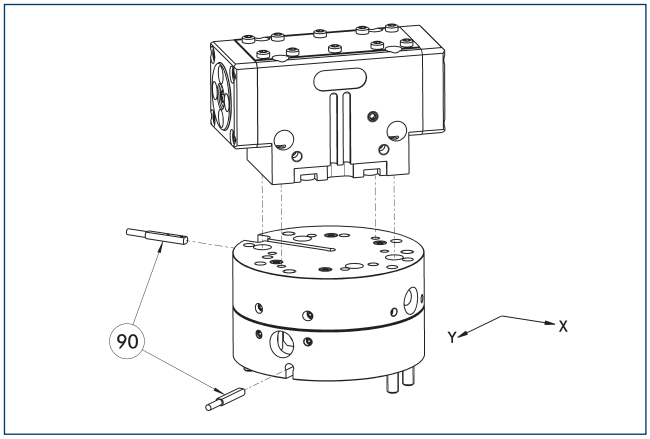



(90) Monitoring of locking

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-125-3-MV | 0324828 | yes | ±1°/±1,5°/±1,5° | ● |
| TCU-P-125-3-OV | 0324829 | no | ±1°/±1,5°/±1,5° | |

## Compensation unit AGE-F




(90) Monitoring

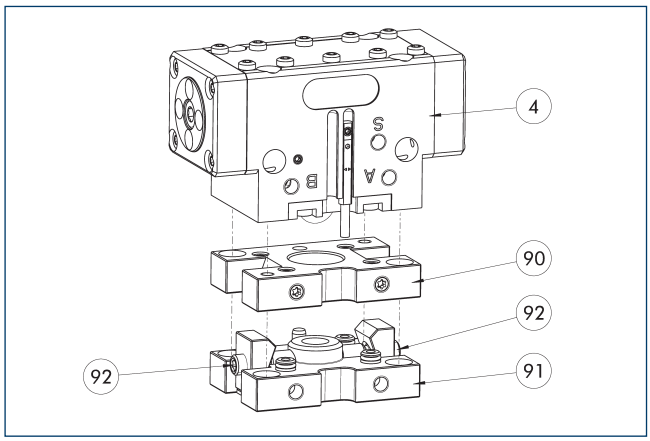
Grippers can be directly mounted without an adapter plate. For details see our catalog Gripping or Robot Accessories.

| 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 | ● |

# DPG-plus 125

Sealed universal gripper

## Compact change system for grippers

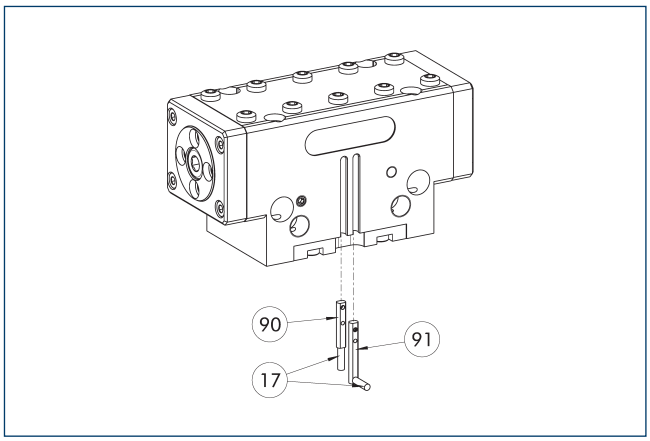



(4) Grippers
(91) CWK compact change master
(90) CWA compact change adapter
(92) Locking mechanism

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



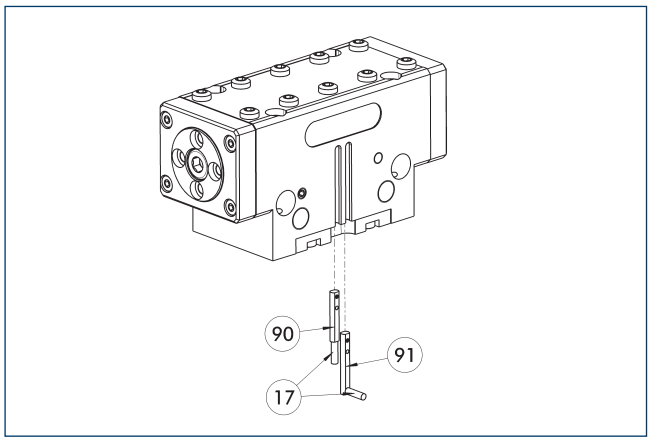

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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



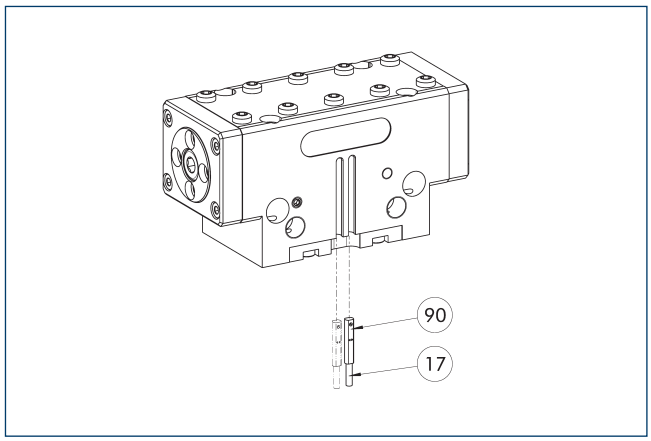

(17) Cable outlet
(91) Sensor MMS 22 ..-PI1-...-SA
(90) Sensor MMS 22 PI1-...

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 | |

ⓘ 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



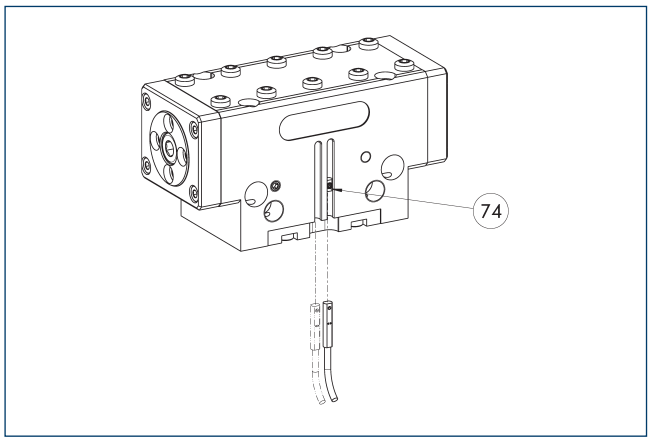

(17) Cable outlet
(90) MMS 22...-PI2-... sensor

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 | |

ⓘ 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



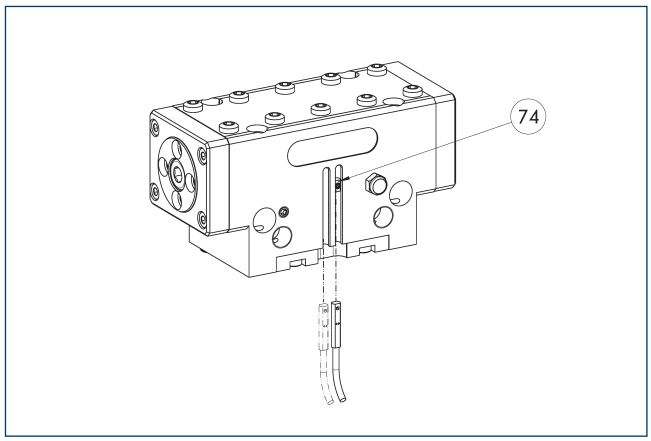

74 Limit stop for sensor

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 | |

ⓘ 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.

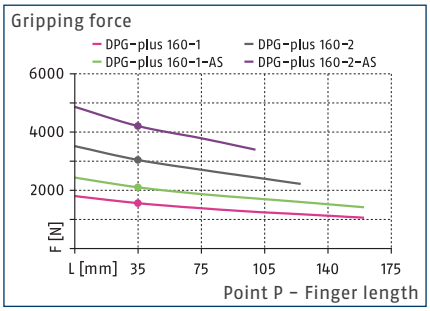
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

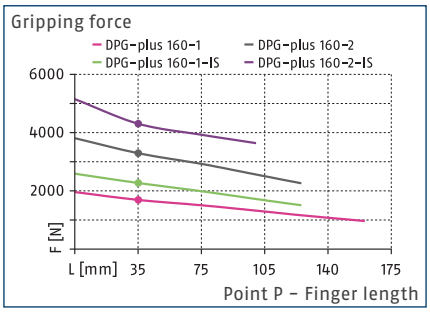
# DPG-plus 160

Sealed universal gripper

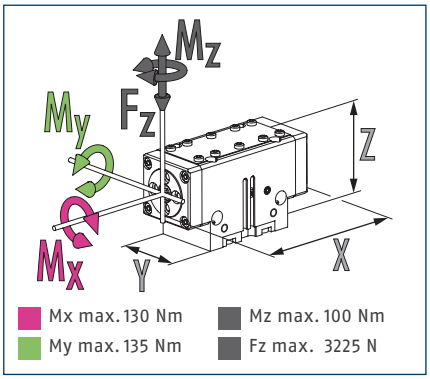
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

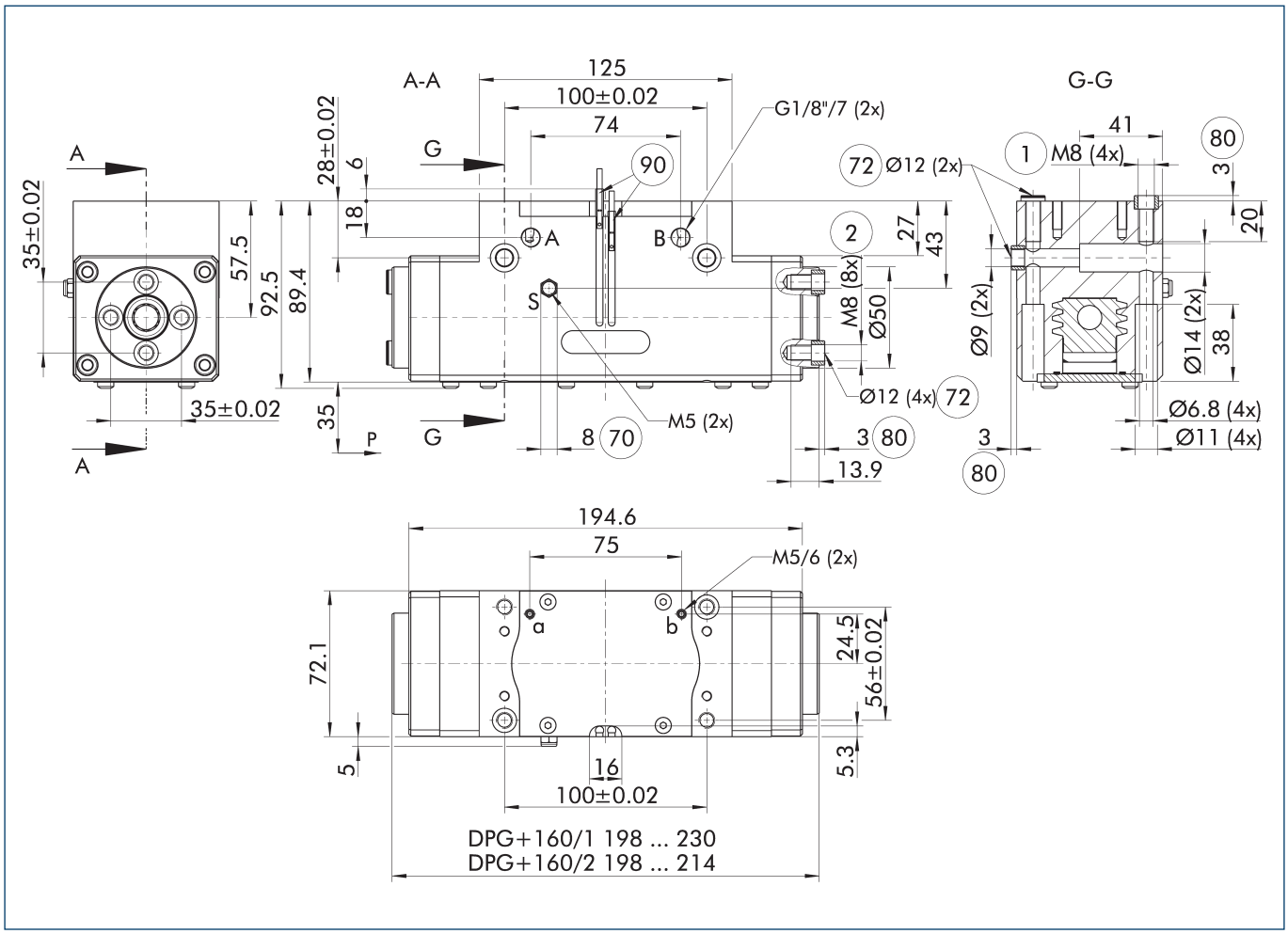
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 | |

ⓘ 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.

ⓘ 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

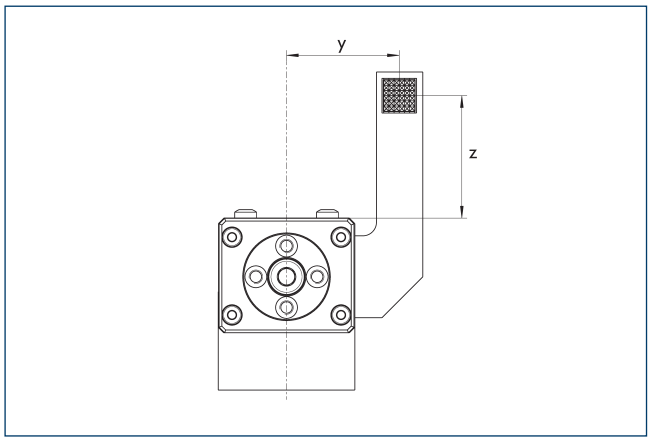
(80) Depth of the centering sleeve hole in the counter part

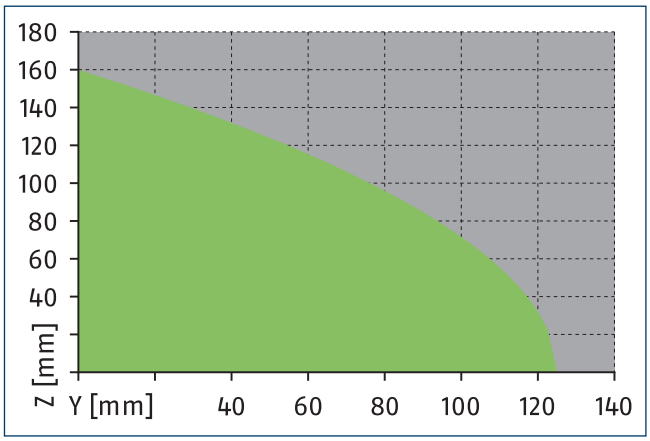
(90) Sensor MMS 22..

# DPG-plus 160

Sealed universal gripper

## Maximum permitted finger projection



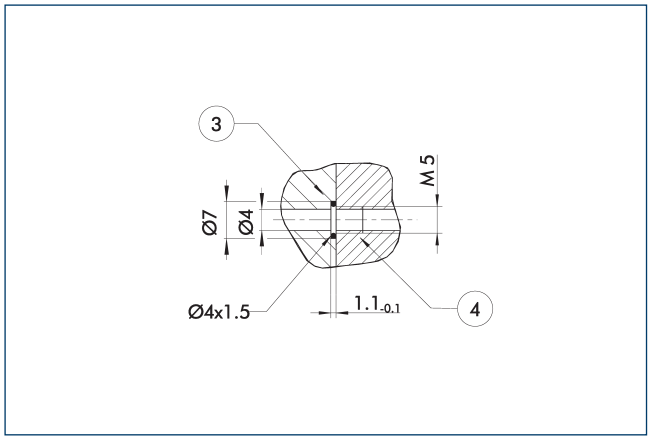




Permitted range

Inadmissible range

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

## Hose-free direct connection M5

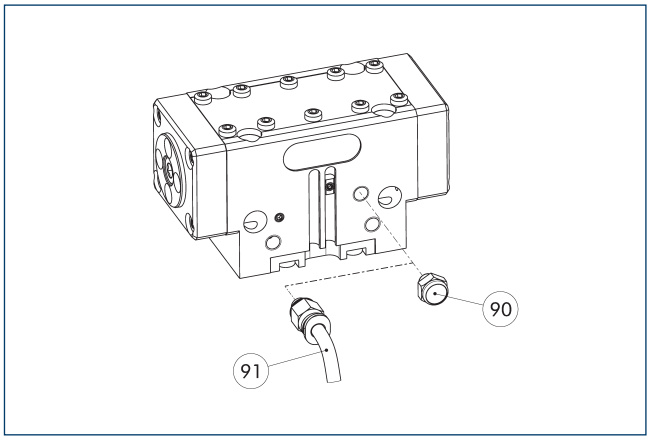



(3) Adapter

(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

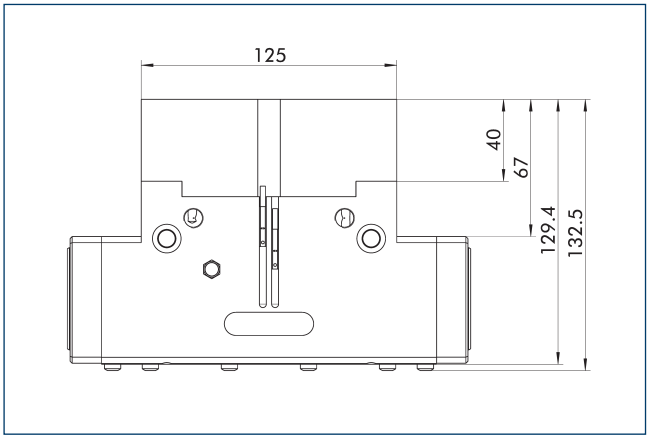



(90) Sinter filter

(91) Hose for ventilation or air purge connection

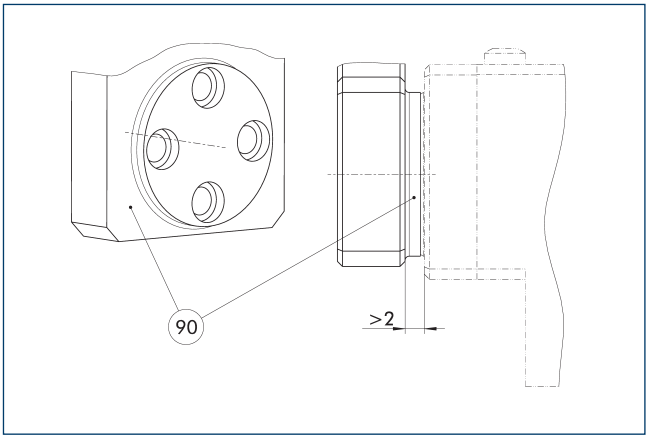
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

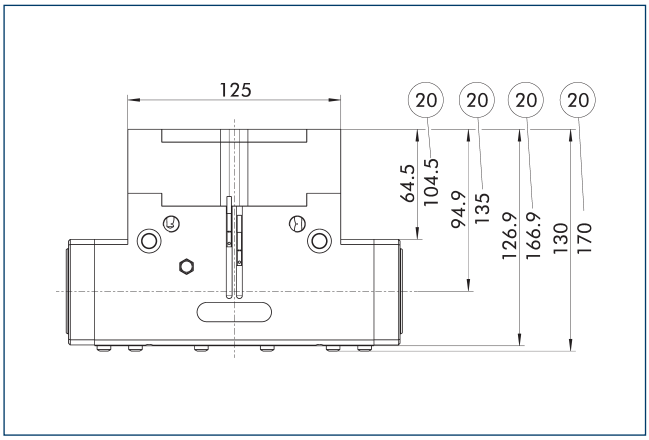
## Proposed jaw design




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.

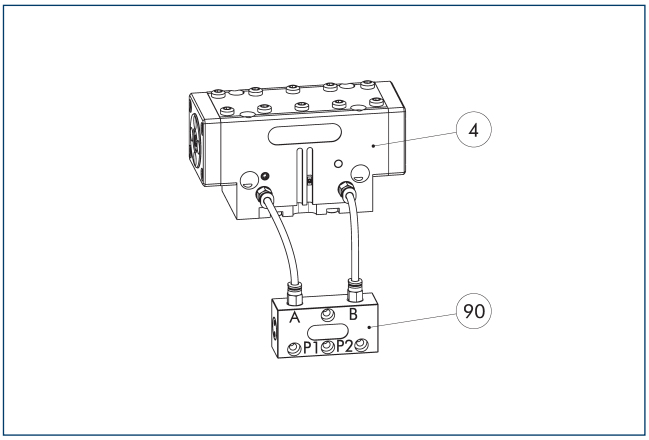
## Power booster version




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.

## 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.

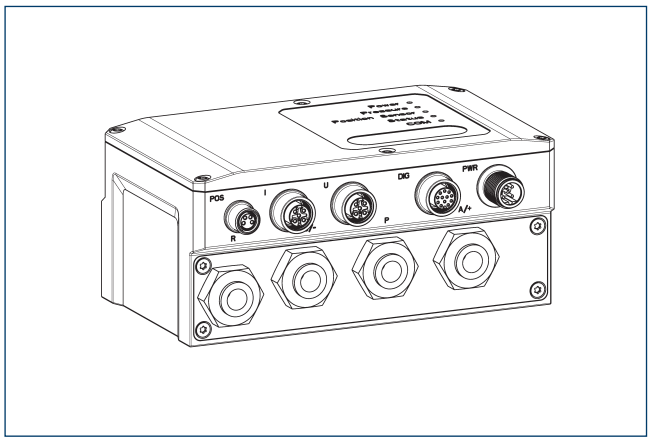
| Description | ID | Recommended hose diameter |
|---|---|---|
| | | [mm] |
| Pressure maintenance valve | | |
| SDV-P 04 | 0403130 | 6 |
| SDV-P 07 | 0403131 | 8 |
| Pressure maintenance valve with air bleed screw | | |
| SDV-P 04-E | 0300120 | 6 |
| SDV-P 07-E | 0300121 | 8 |
| SDV-P 10-E | 0300109 | 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 160

Sealed universal gripper

## Pneumatic positioning device PPD

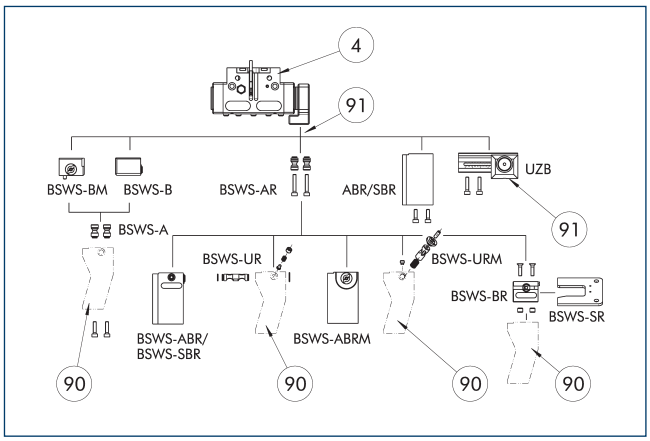



The PPD allows flexibility in all applications with pneumatic grippers through free positioning, gripping force and speed adjustment.

| Description | ID | |
|---|---|---|
| Pneumatic positioning device | | |
| PPD 20-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.

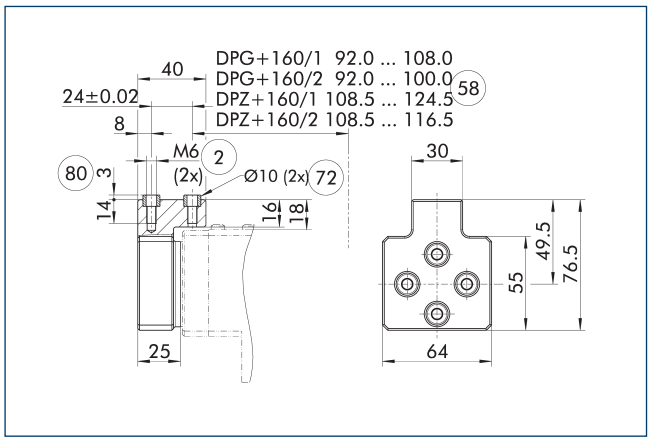
## Intermediate jaw interface




(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 160-125 intermediate jaw

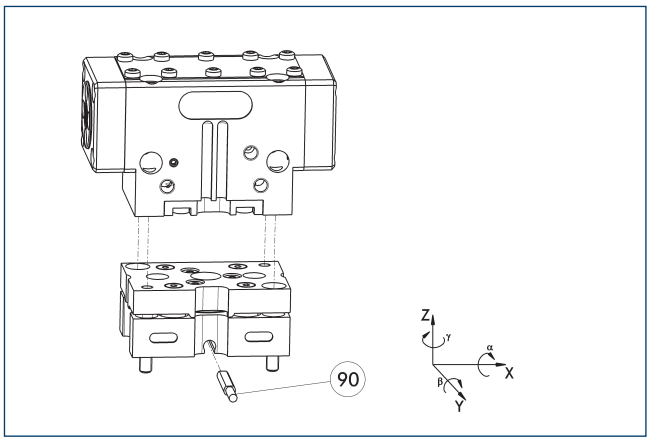



(2) Finger connection
(58) Distance from center of gripper
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the counter part

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 160-125 | 0300196 | Aluminum | PGN-plus 125 | 1 |

## Tolerance compensation unit TCU




(90) Monitoring of locking

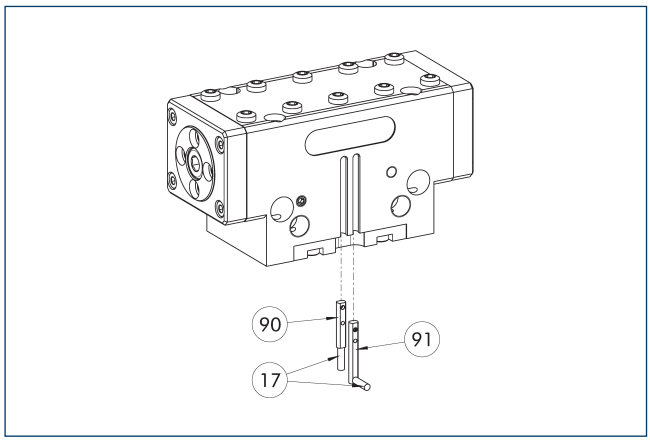
Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details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

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

# DPG-plus 160

Sealed universal gripper

## Electronic magnetic switch MMS



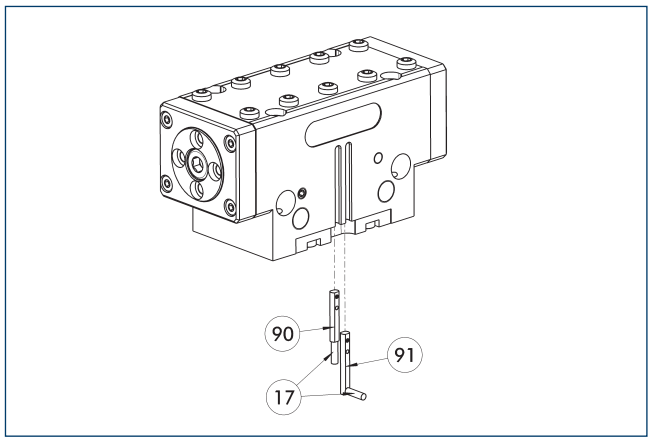

(17) Cable outlet
(90) Sensor MMS 22..
(91) Sensor MMS 22...-SA

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 | |

ⓘ 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



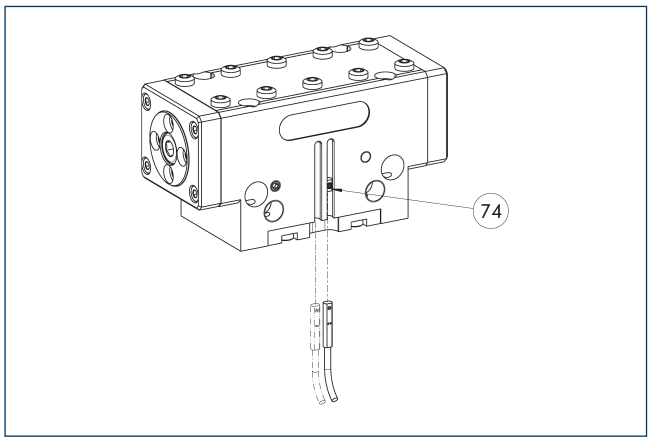

(17) Cable outlet
(90) Sensor MMS 22 PI1-...
(91) Sensor MMS 22 ..-PI1-...-SA

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 | |

ⓘ 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



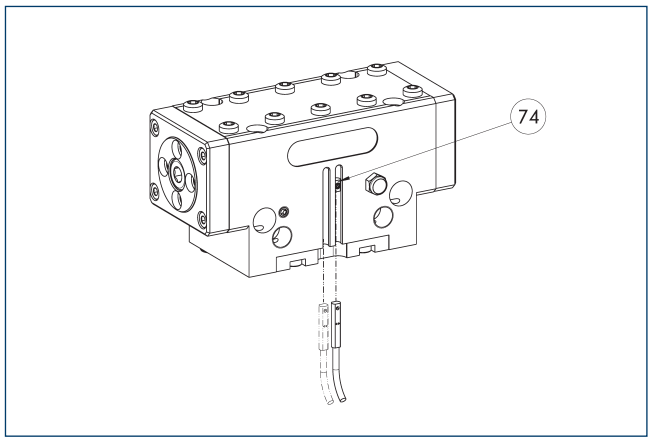

74 Limit stop for sensor

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 | |

ⓘ 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.

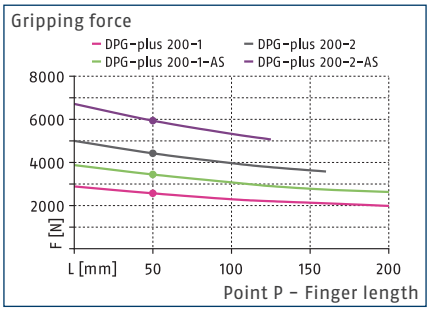
| Description | ID | |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-IOL-M08 | 0315830 | |
| MMS 22-IOL-M12 | 0315835 | |

ⓘ 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.

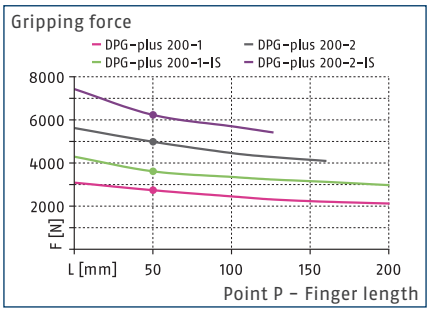
# DPG-plus 200

Sealed universal gripper

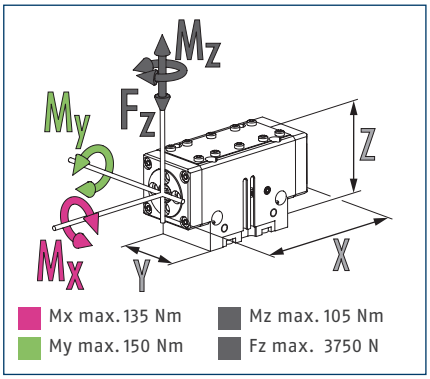
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

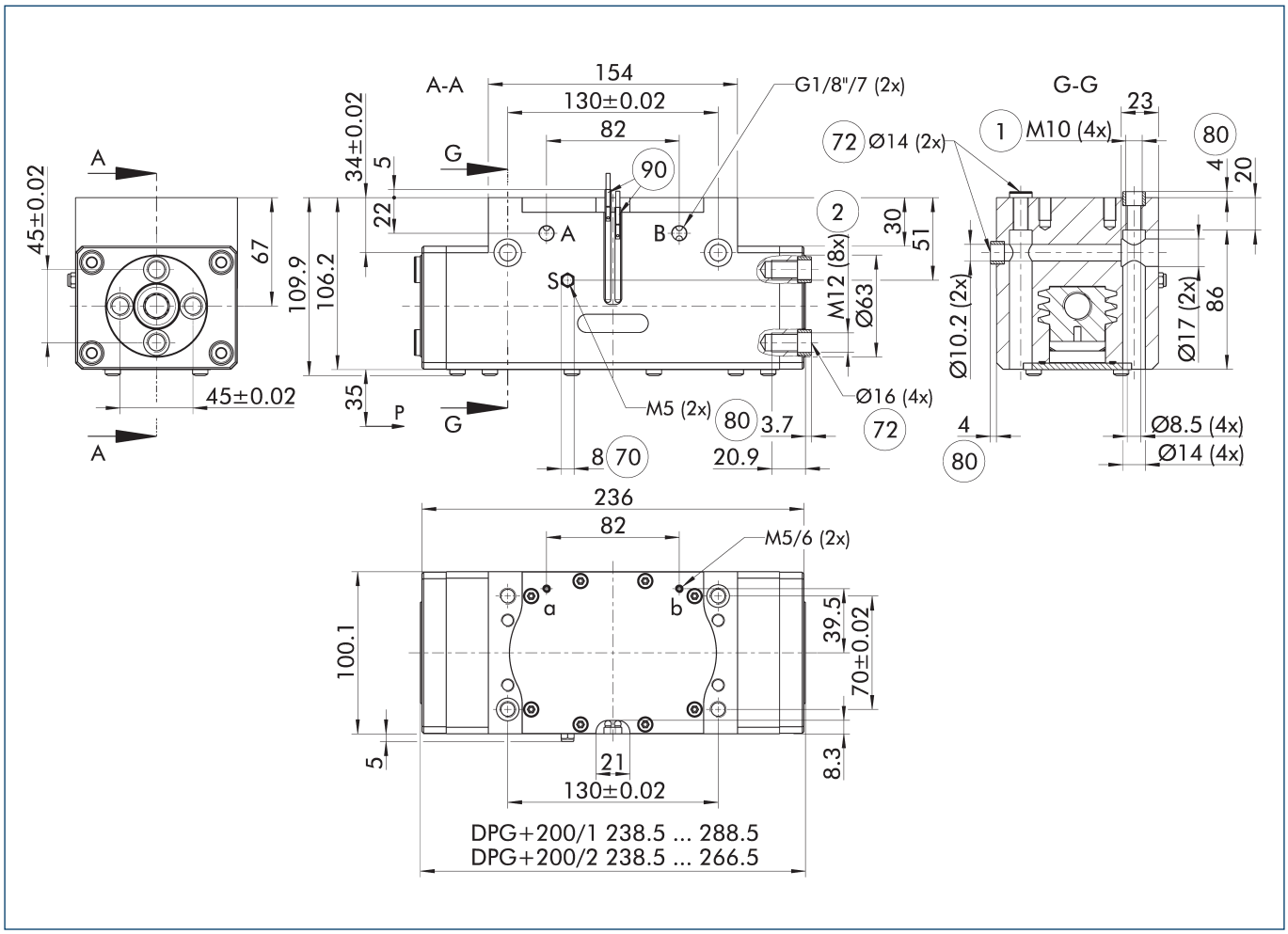
## Technical data

| 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/- | -/3605 | -/6490 |
| Min. spring force | [N] | | | 875 | 1520 | 875 | 1520 |
| Weight | [kg] | 7.3 | 7.3 | 9.5 | 9.5 | 9.5 | 9.5 |
| Recommended workpiece weight | [kg] | 12.8 | 22.1 | 12.8 | 22.1 | 12.8 | 22.1 |
| Fluid consumption double stroke | [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 14644-1:1999 | | 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 |

ⓘ 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.

ⓘ 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

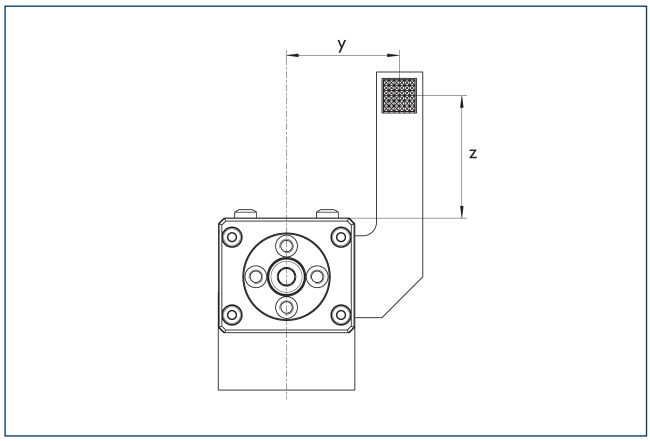
(80) Depth of the centering sleeve hole in the counter part

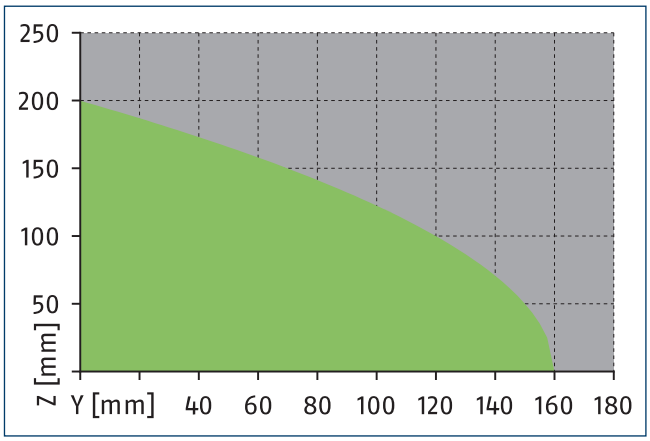
(90) Sensor MMS 22..

# DPG-plus 200

Sealed universal gripper

## Maximum permitted finger projection



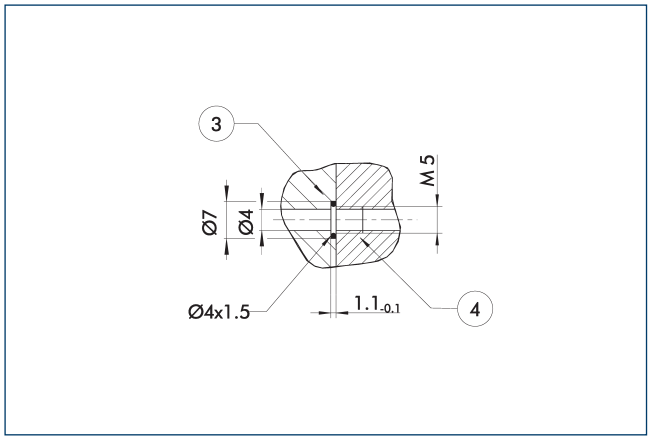




Permitted range

Inadmissible range

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

## Hose-free direct connection M5

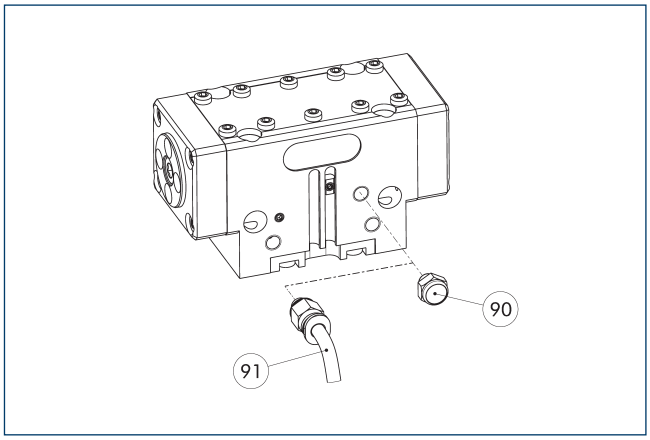



(3) Adapter

(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

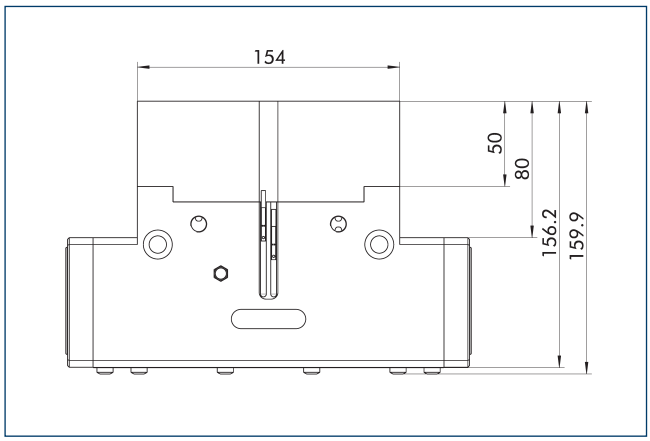



(90) Sinter filter

(91) Hose for ventilation or air purge connection

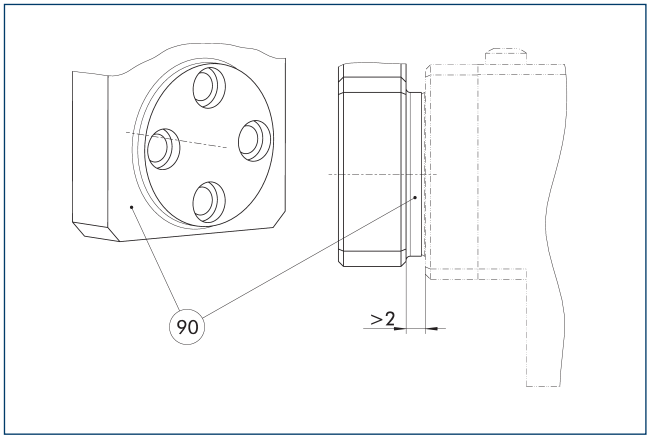
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

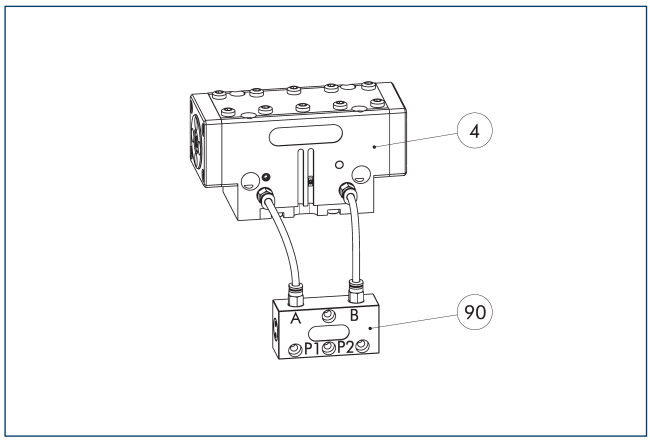
## Proposed jaw design




(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

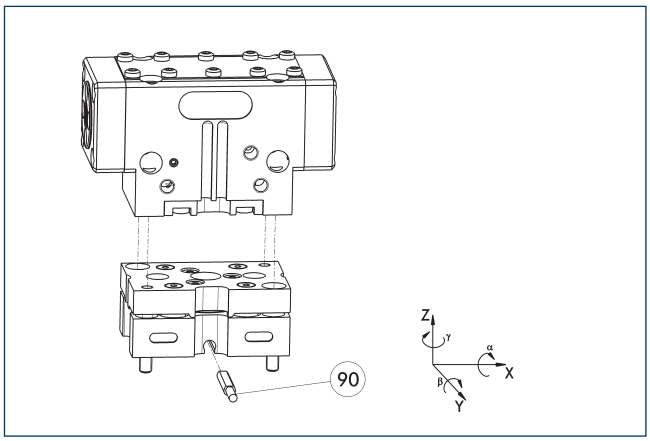
(90) SDV-P pressure maintenance valve

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 |

ⓘ 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.

## Tolerance compensation unit TCU




(90) Monitoring of locking

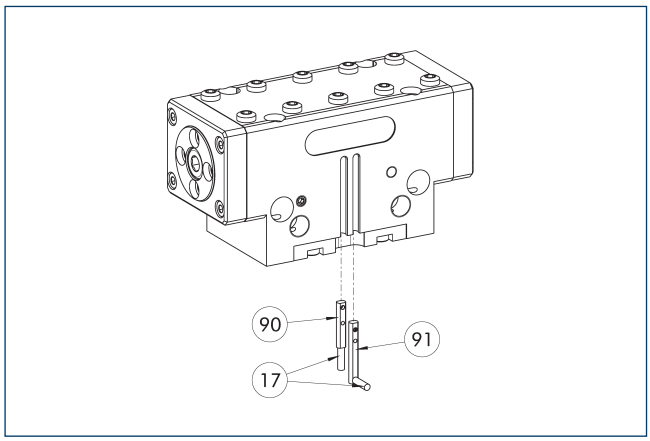
Grippers can be directly mounted without an adapter plate. Tolerance compensation unit and gripper have an identical screw connection diagram. Therefore the tolerance compensation units can be assembled later. Please consider the additional assembly height of the tolerance compensation unit. For details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

| Description | ID | Locking | Deflection | Often combined |
|---|---|---|---|---|
| Compensation unit | | | | |
| TCU-P-200-3-MV | 0324864 | yes | ±1°/±2°/±1,5° | ● |
| TCU-P-200-3-OV | 0324865 | no | ±1°/±2°/±1,5° | |

# DPG-plus 200

Sealed universal gripper

## Electronic magnetic switch MMS



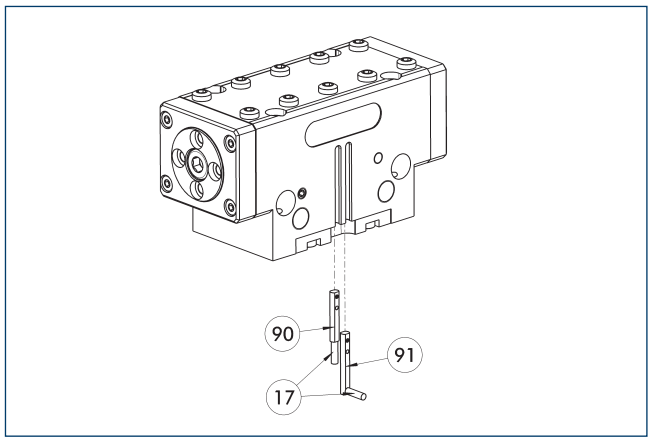

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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.

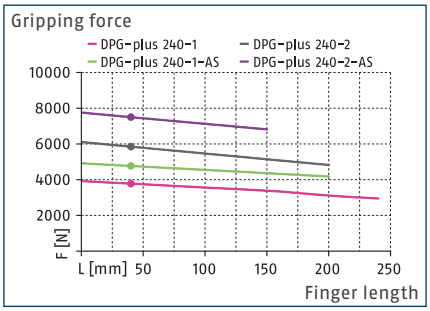
| Description | ID | Often combined |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-PI1-S-M8-PNP | 0301160 | ● |
| MMSK 22-PI1-S-PNP | 0301162 | |
| Programmable magnetic switch with lateral cable outlet | | |
| MMS 22-PI1-S-M8-PNP-SA | 0301166 | ● |
| MMSK 22-PI1-S-PNP-SA | 0301168 | |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

ⓘ 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.

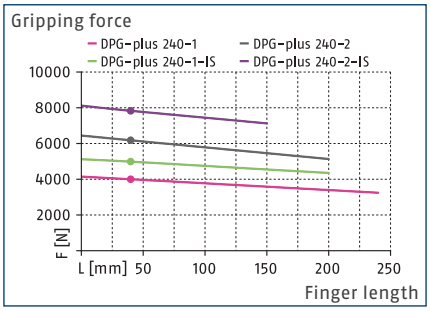
# DPG-plus 240

Sealed universal gripper

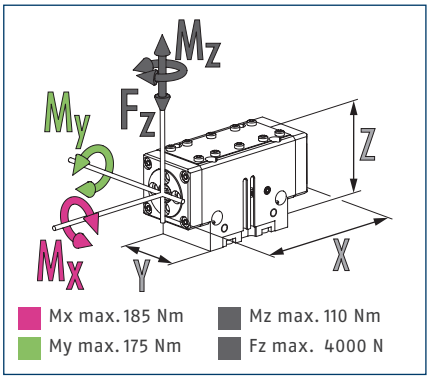
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

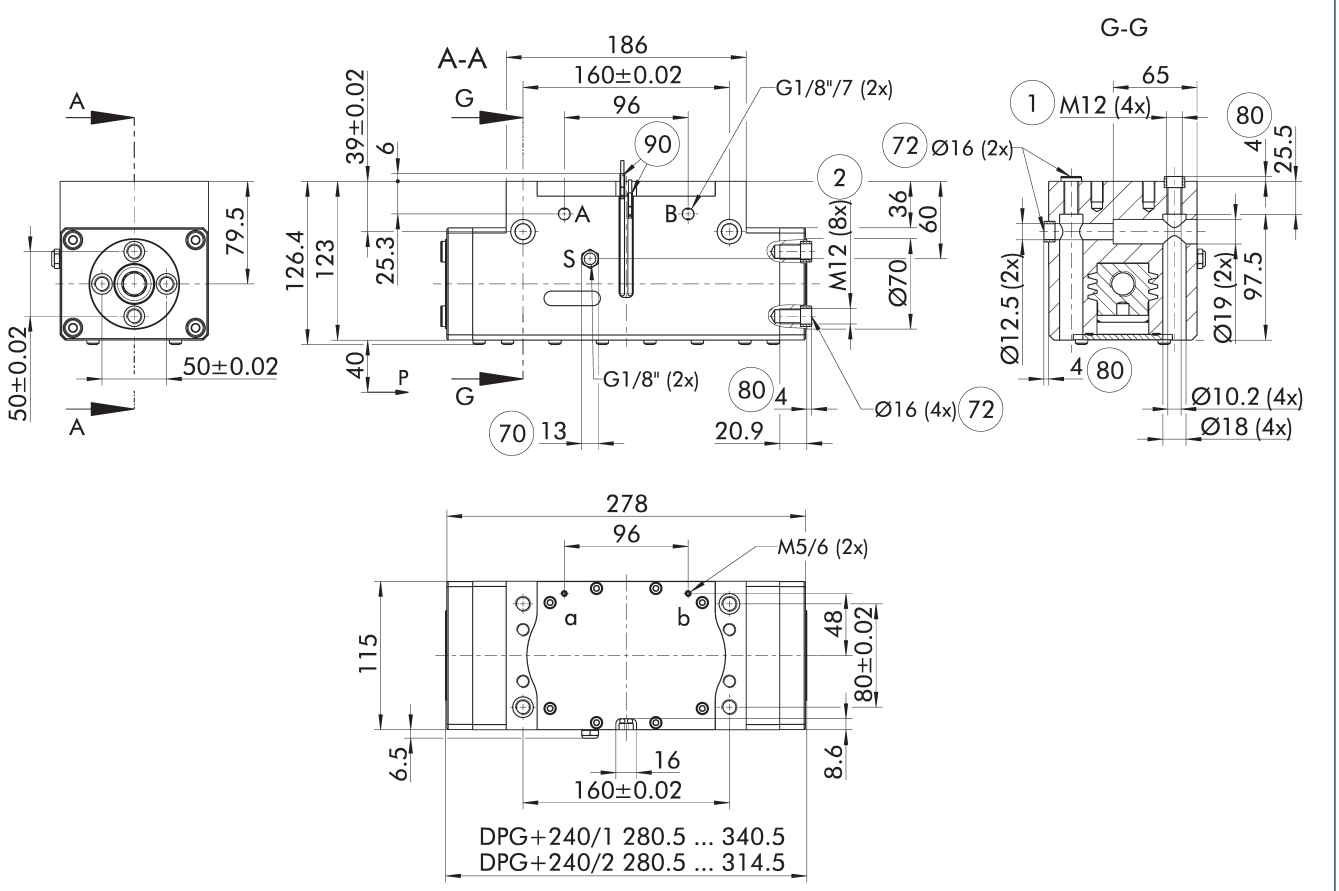
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 |

ⓘ 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.

ⓘ 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

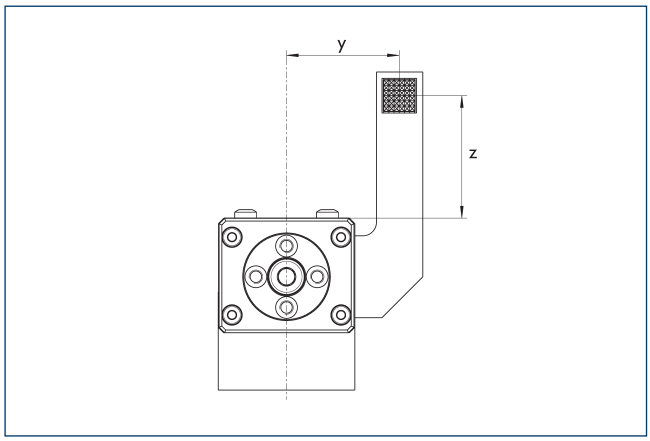
(80) Depth of the centering sleeve hole in the counter part

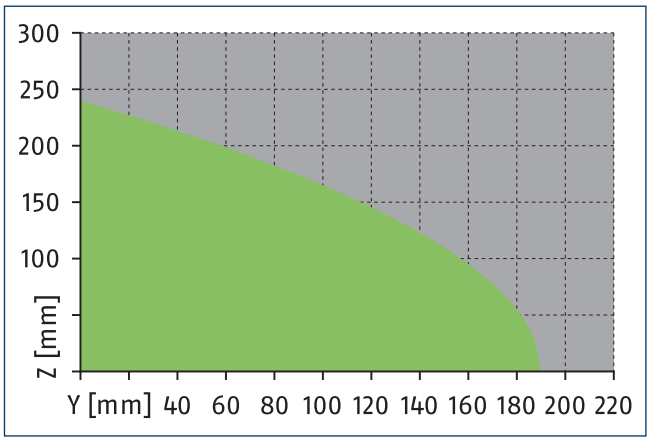
(90) Sensor MMS 22..

# DPG-plus 240

Sealed universal gripper

## Maximum permitted finger projection



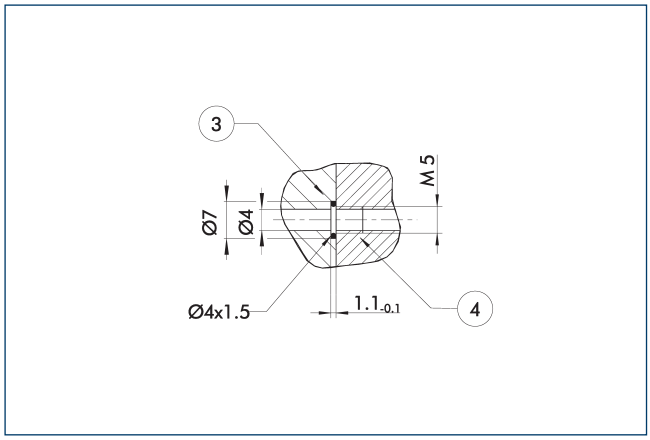




Permitted range

Inadmissible range

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

## Hose-free direct connection M5

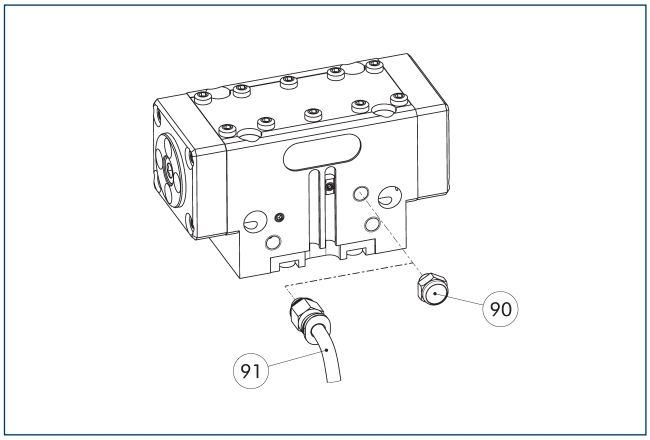



(3) Adapter

(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

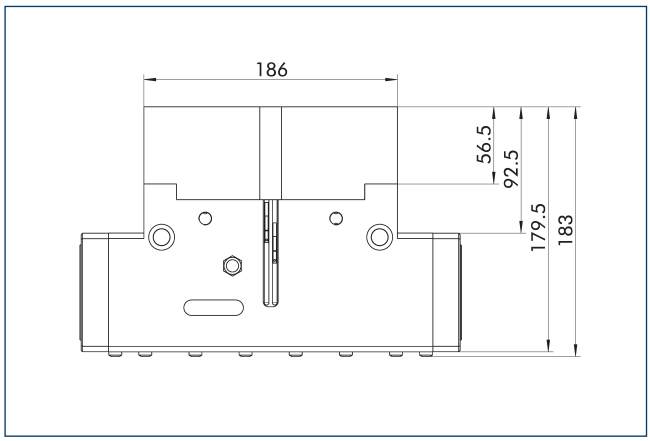



(90) Sinter filter

(91) Hose for ventilation or air purge connection

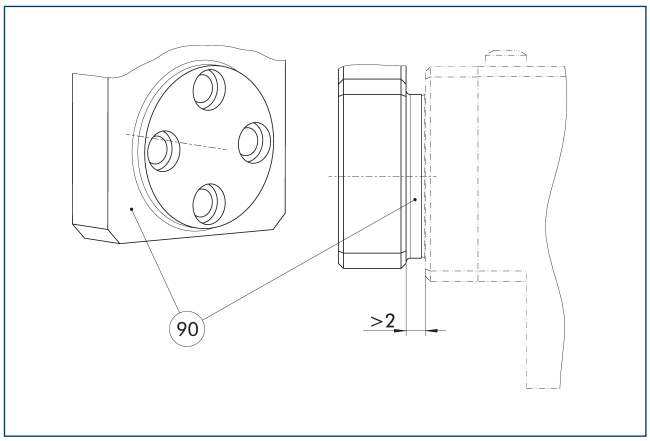
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

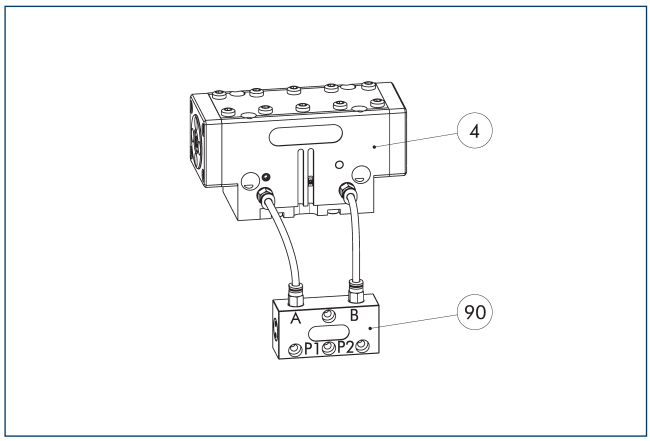
## Proposed jaw design




(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

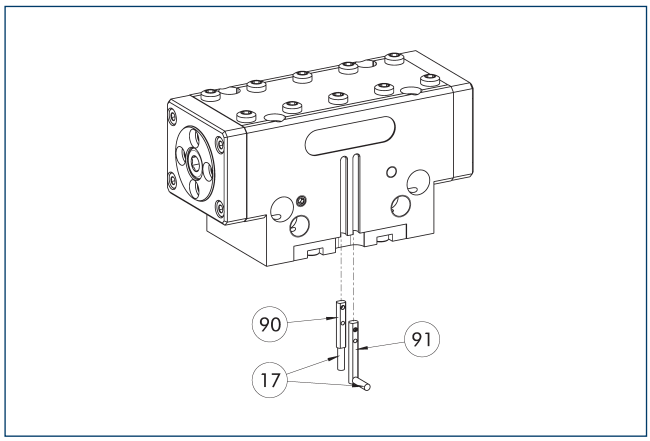
(90) SDV-P pressure maintenance valve

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 |

ⓘ 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



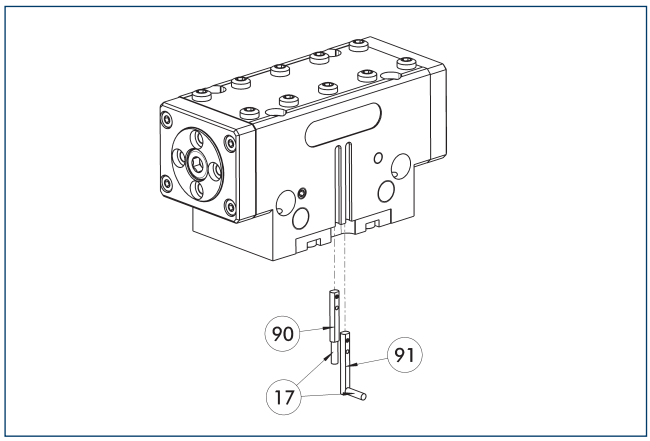

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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.

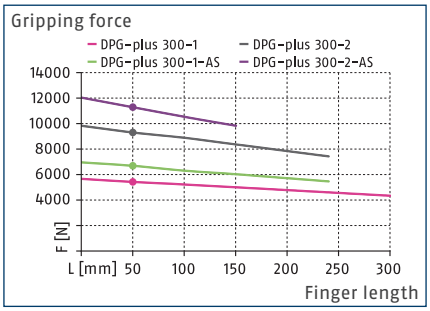
| Description | ID | Often combined |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-PI1-S-M8-PNP | 0301160 | ● |
| MMSK 22-PI1-S-PNP | 0301162 | |
| Programmable magnetic switch with lateral cable outlet | | |
| MMS 22-PI1-S-M8-PNP-SA | 0301166 | ● |
| MMSK 22-PI1-S-PNP-SA | 0301168 | |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

ⓘ 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.

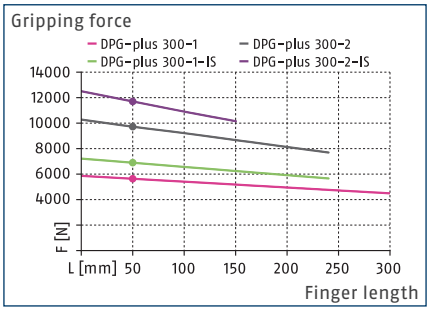
# DPG-plus 300

Sealed universal gripper

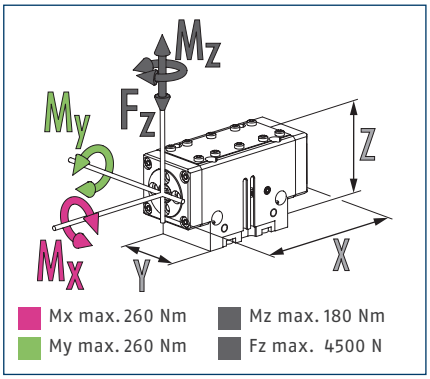
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

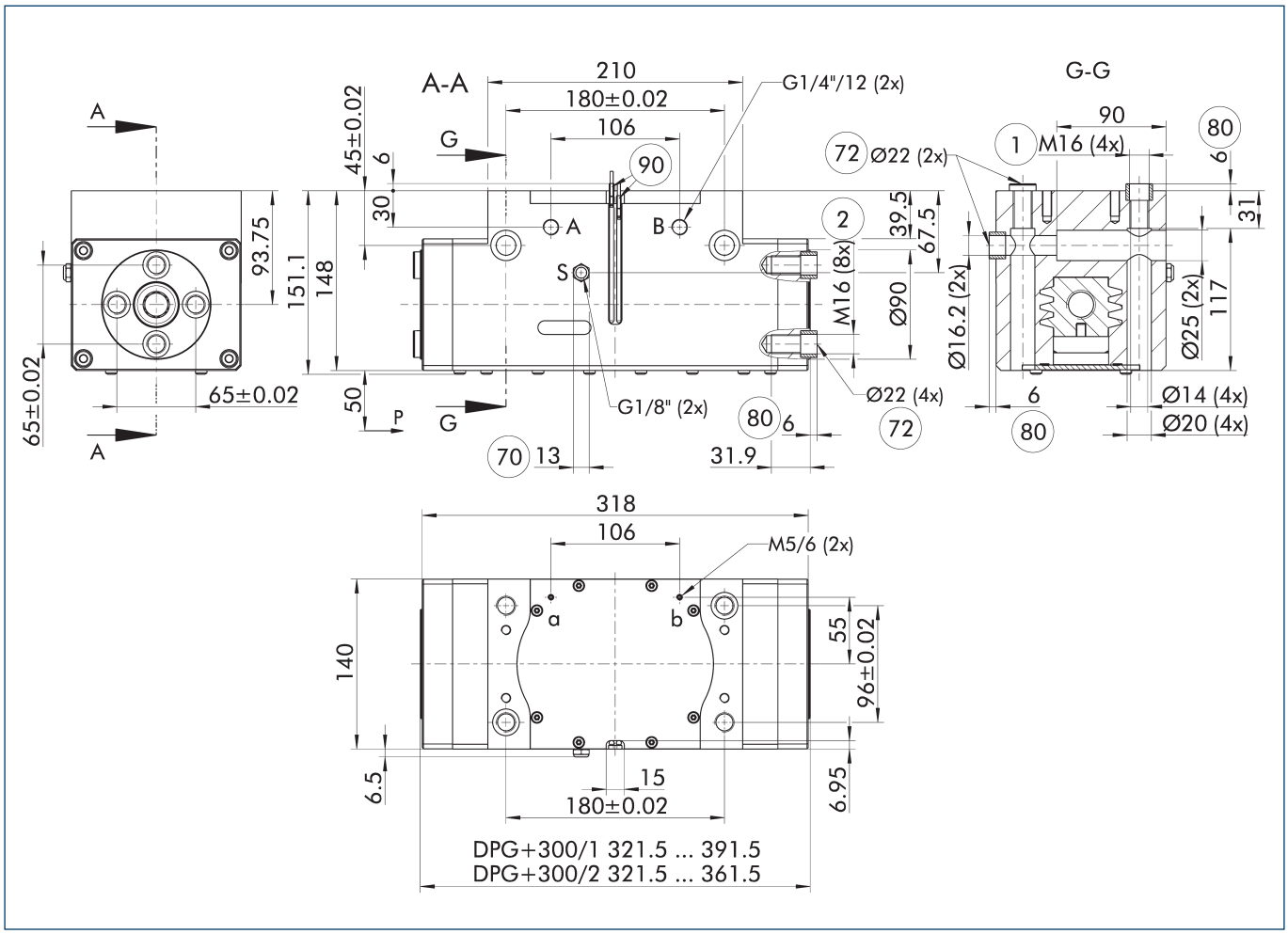
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 |

ⓘ 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.

ⓘ 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

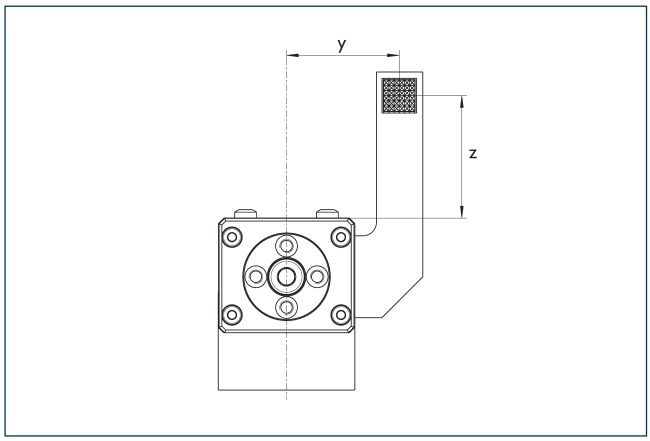
(80) Depth of the centering sleeve hole in the counter part

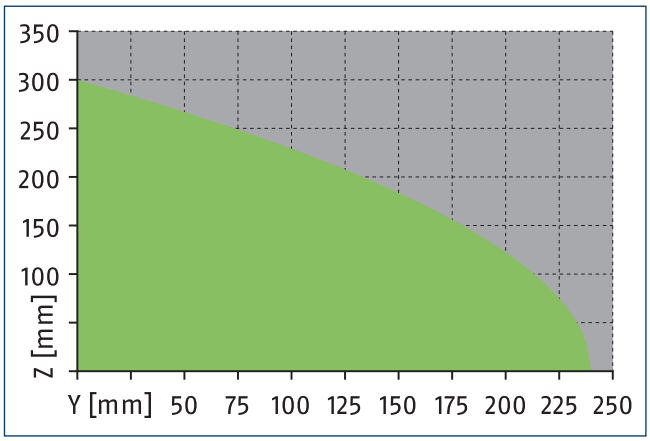
(90) Sensor MMS 22..

# DPG-plus 300

Sealed universal gripper

## Maximum permitted finger projection



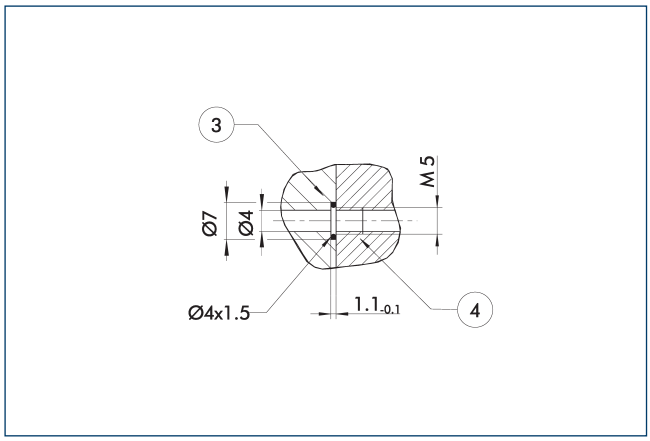




Permitted range

Inadmissible range

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

## Hose-free direct connection M5

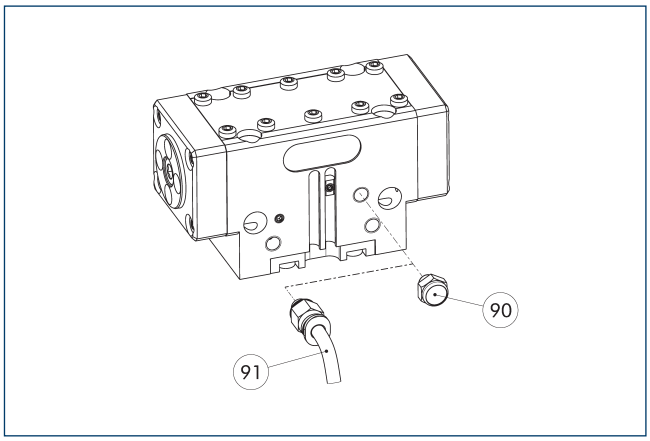



(3) Adapter

(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

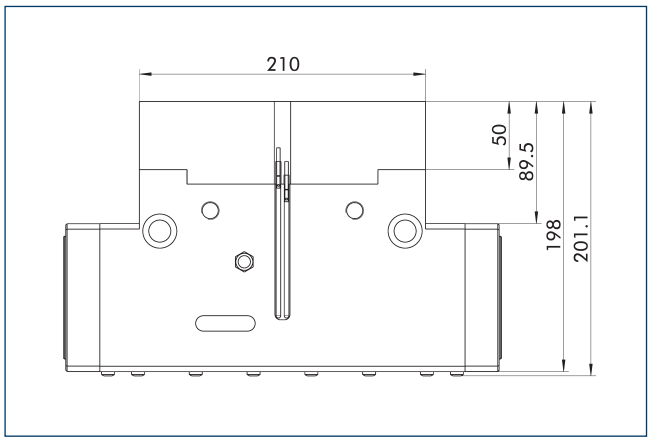



(90) Sinter filter

(91) Hose for ventilation or air purge connection

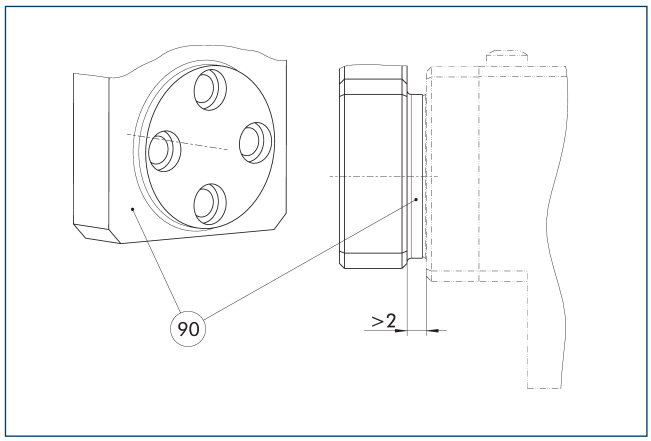
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

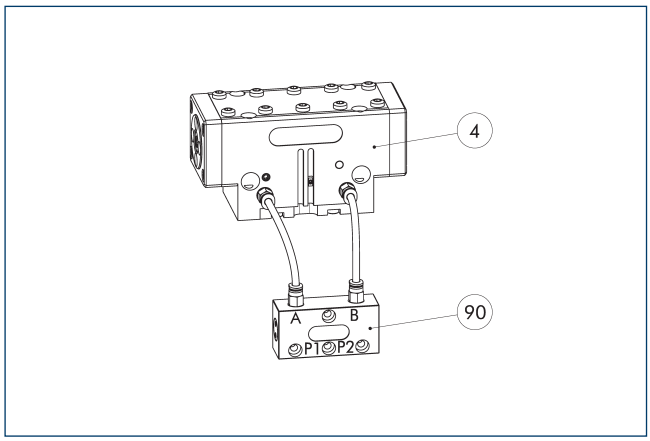
## Proposed jaw design




(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

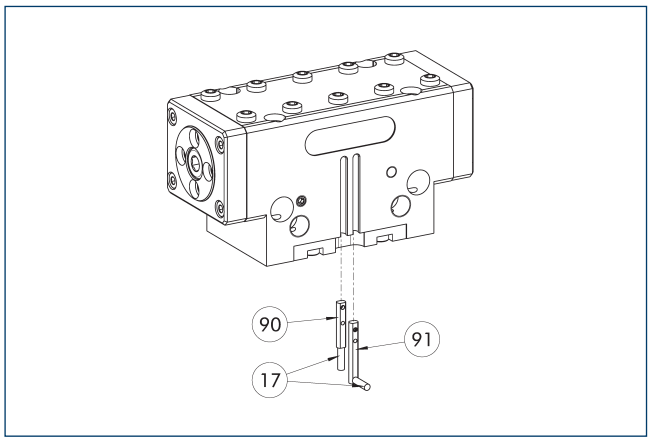
(90) SDV-P pressure maintenance valve

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.

## Electronic magnetic switch MMS



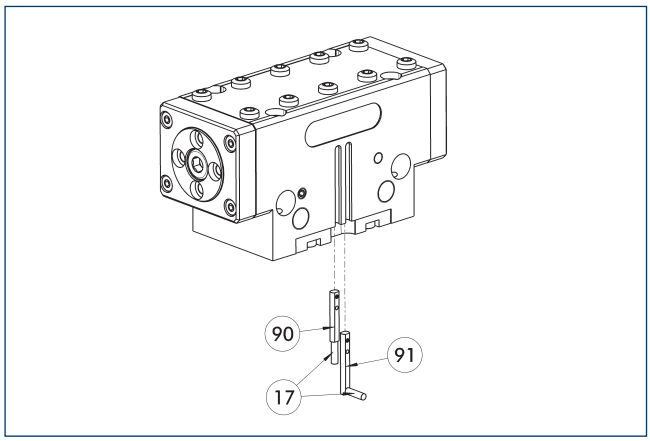

(17) Cable outlet
(91) Sensor MMS 22...-SA
(90) Sensor MMS 22..

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.

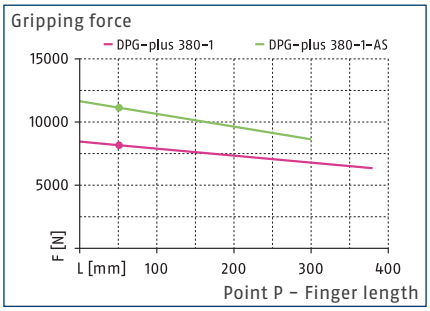
| Description | ID | Often combined |
|---|---|---|
| Programmable magnetic switch | | |
| MMS 22-PI1-S-M8-PNP | 0301160 | ● |
| MMSK 22-PI1-S-PNP | 0301162 | |
| Programmable magnetic switch with lateral cable outlet | | |
| MMS 22-PI1-S-M8-PNP-SA | 0301166 | ● |
| MMSK 22-PI1-S-PNP-SA | 0301168 | |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

ⓘ 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.

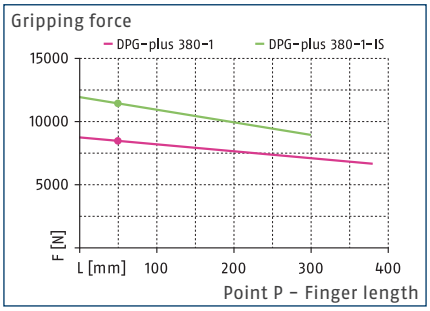
# DPG-plus 380

Sealed universal gripper

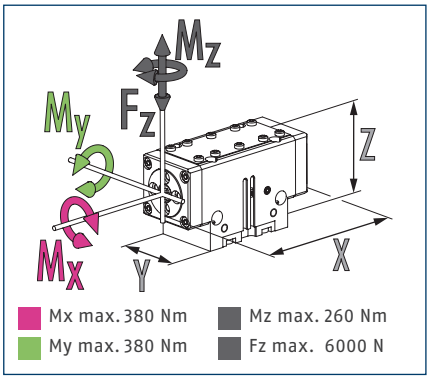
## Gripping force O.D. gripping




## Gripping force I.D. gripping




## Dimensions and maximum loads




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

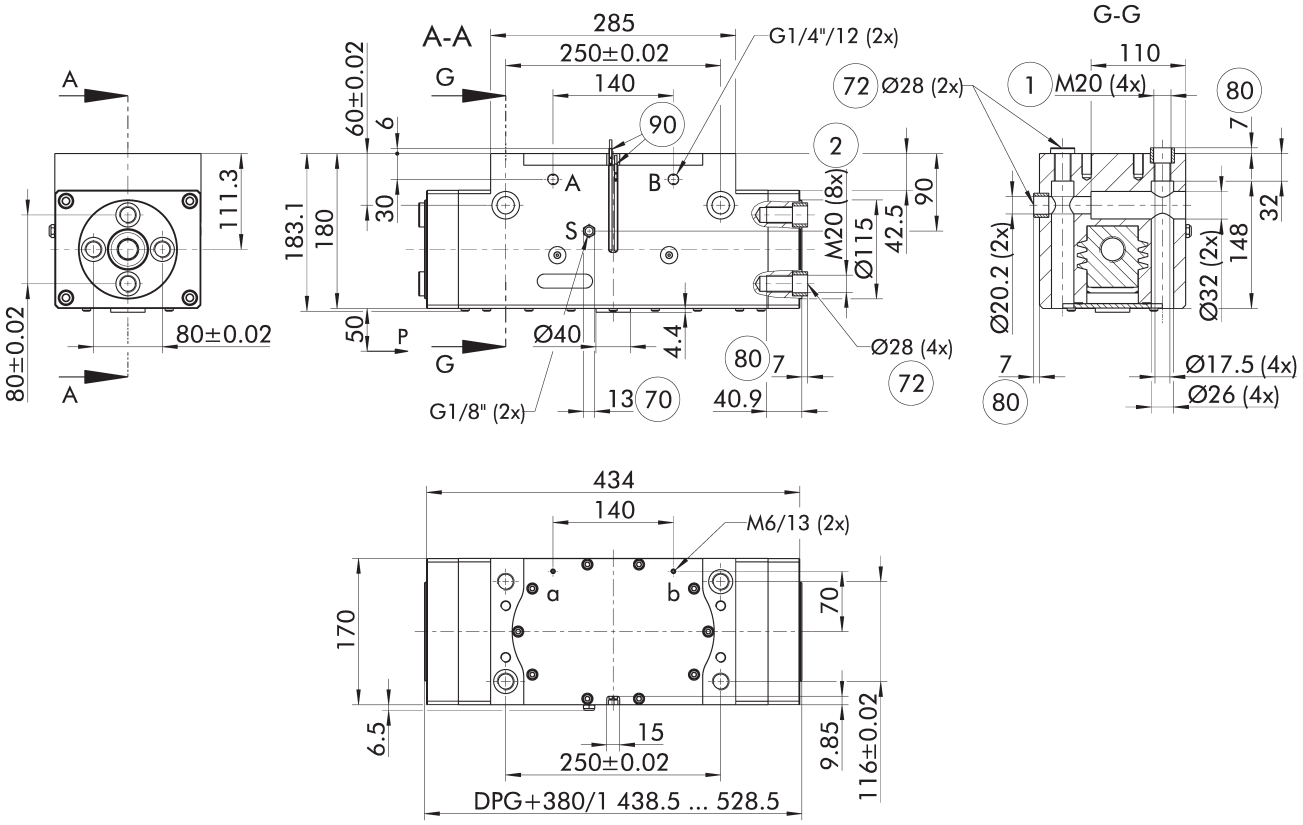
## Technical data

| 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 |
| Fluid consumption 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 14644-1:1999 | | 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 |

ⓘ 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.

ⓘ 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

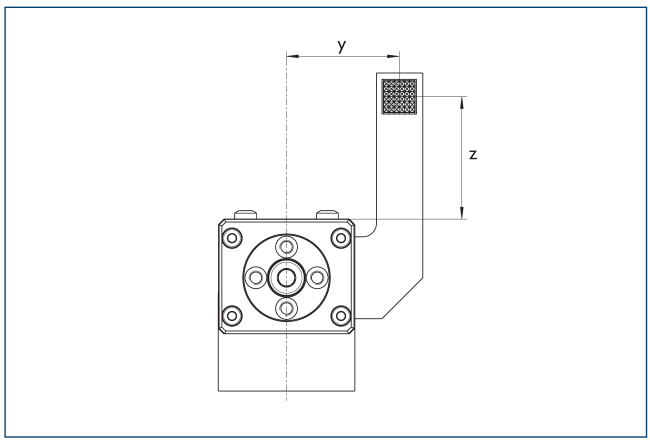
(70) Wrench size

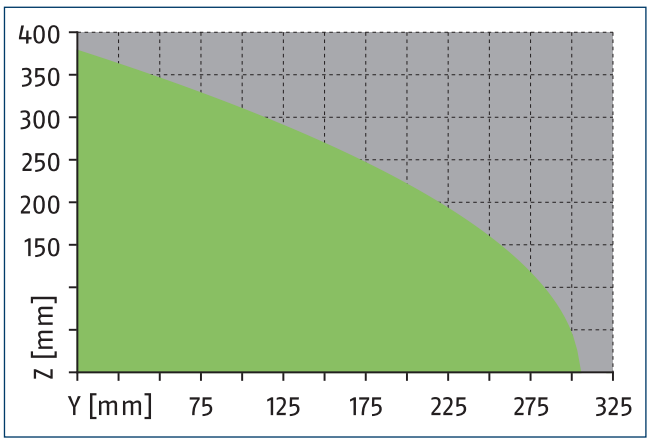
(72) Fit for centering sleeves

(80) Depth of the centering sleeve hole in the counter part

(90) Sensor MMS 22..

## Maximum permitted finger projection



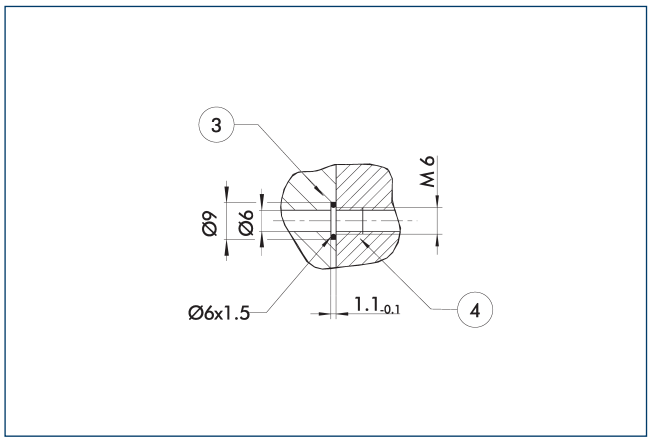




Lmax is equivalent to the maximum permitted finger length, see the technical data table.

# DPG-plus 380

Sealed universal gripper

## Hose-free direct connection M6

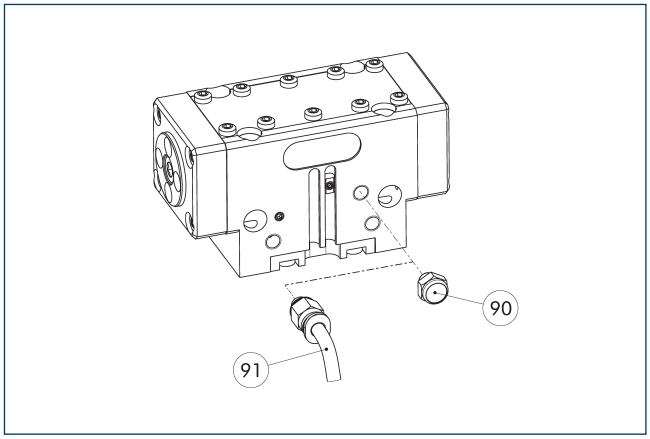



(3) Adapter

(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

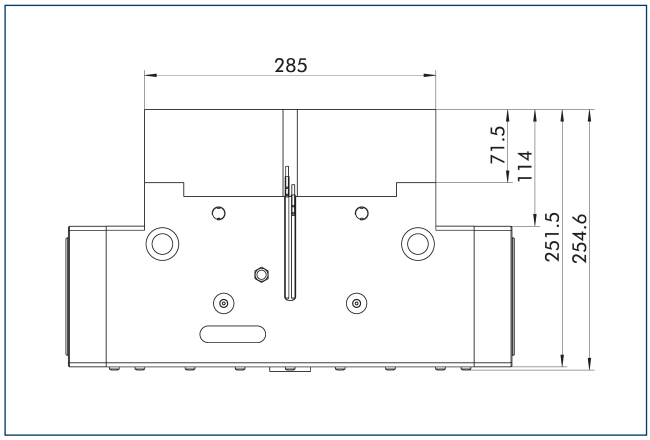



(90) Sinter filter

(91) Hose for ventilation or air purge connection

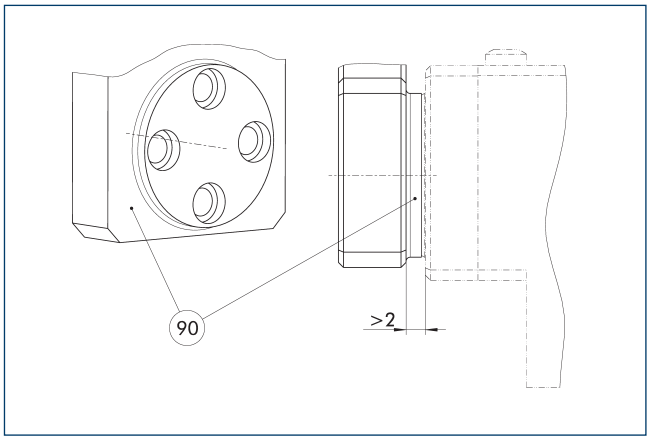
Please note that to achieve an IP 67 protection class, the gripper requires an additional hose for ventilation or a switchable air purge connection. For detailed information, please refer to the assembly and operating manual. Alternatively, a sinter filter (supplied) mounted on the air purge connection 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.

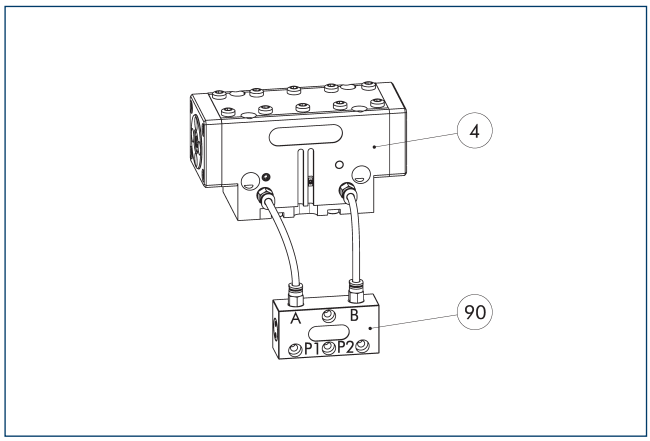
## Proposed jaw design




(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

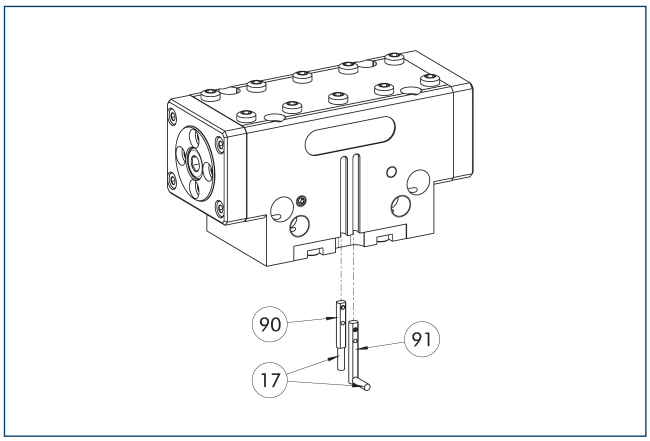
(90) SDV-P pressure maintenance valve

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.

## Electronic magnetic switch MMS




(17) Cable outlet

(90) Sensor MMS 22..

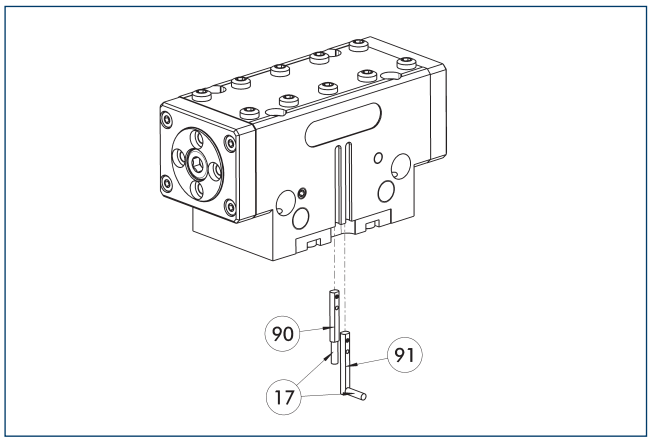
(91) Sensor MMS 22...-SA

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 | |

ⓘ 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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