



Superior Clamping and Gripping



Product data sheet

Universal gripper PGF

PGF

Universal gripper

Flexible. Compact. Robust.

Universal gripper PGF

Universal parallel gripper with surface-guided base jaws

Field of application

suitable for clean work environments and high part diversity due to its long jaw stroke and high gripping forces

Advantages – Your benefits

Precise flat guidance for very good guidance characteristics

Large stroke at compact design for minimal interfering contours

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

M5 connection on both sides of the guidances for the use of lubricating nipples



Sizes
Quantity: 5



Weight
0.3 .. 5.3 kg



Gripping force
240 .. 1900 N



Stroke per jaw
7.5 .. 31.5 mm

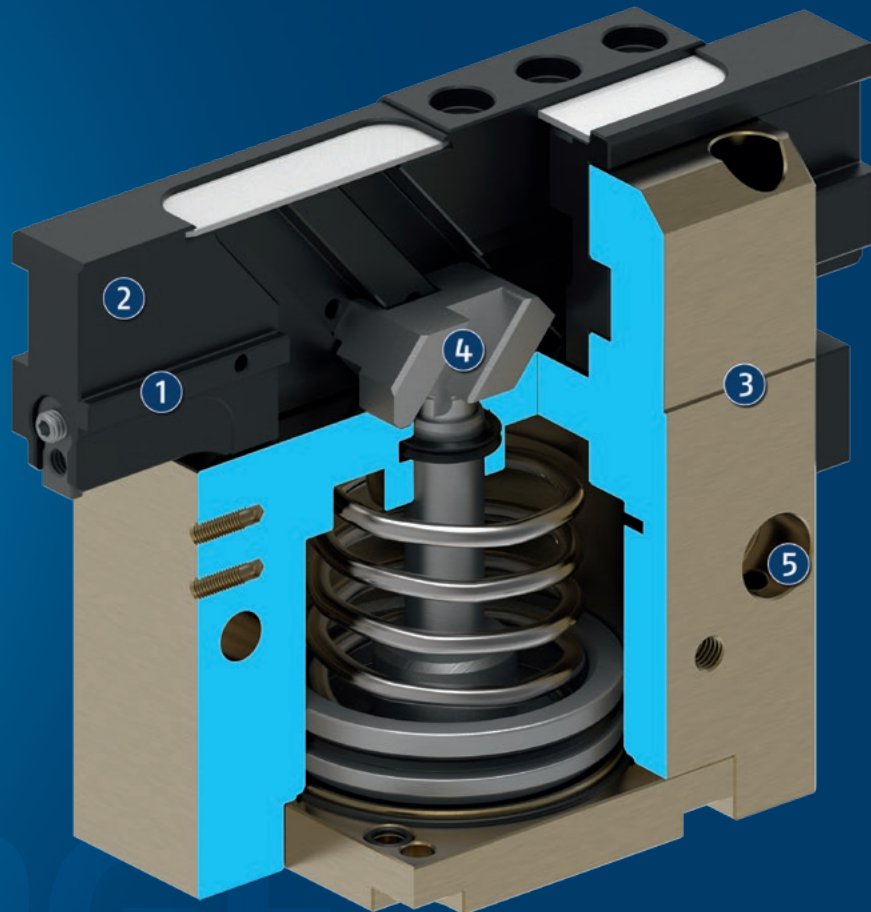


Workpiece weight
1.2 .. 7.1 kg

Functional description

The round piston is pushed upwards or downwards with compressed air.

The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Sliding guide**
precise gripping through flat, low-play precision ground guidance along the entire length of the housing
- ② **Base jaw**
for the connection of workpiece-specific gripper fingers
- ③ **Housing**
is weight-optimized due to the use of high-strength aluminum alloy
- ④ **Wedge-hook design**
for high force transmission and centric gripping
- 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: 24 months

Service life characteristics: on request

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

Gripping force maintenance: possible by using the version with mechanical gripping force maintenance or pressure maintenance valve SDV-P

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

Finger length: is measured from the reference surface as the distance P in direction to the main axis.

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

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

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

Closing and opening times: are movement times of the base jaws only, without application-specific gripper fingers. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application example

Compensation unit for mounting a pin in a bore with a roughly tolerated position. The compensation unit compensates for the planar offset without turning or tilting the workpiece.

- 1 2-finger parallel gripper PGF with top finger and workpiece
- 2 Compensation unit AGE-XY



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



Anti-collision and overload protection sensor



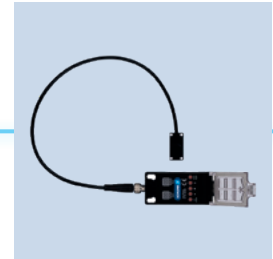
Manual change system



Pressure maintenance valve



Inductive proximity switch



Flexible position sensor

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

Options and special information

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

Due to the long guidance, the gripper is highly resistant during gripping operations where the gripper fingers are exposed to high moment loads. Grippers with a higher exchange accuracy are available on request.

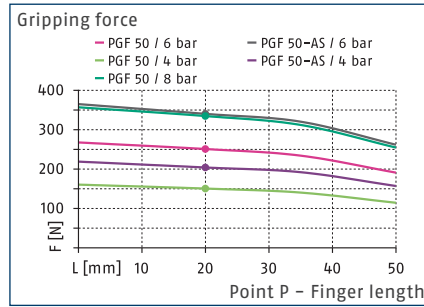
Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at <https://info.nsf.org/USDA/Listings.asp> using the lubricant information in the operating manual.

PGF 50

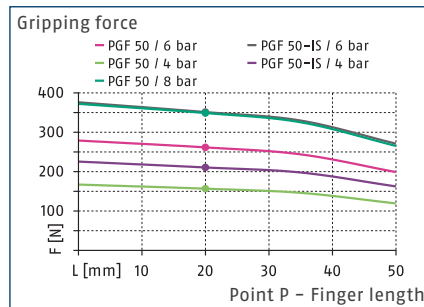
Universal gripper



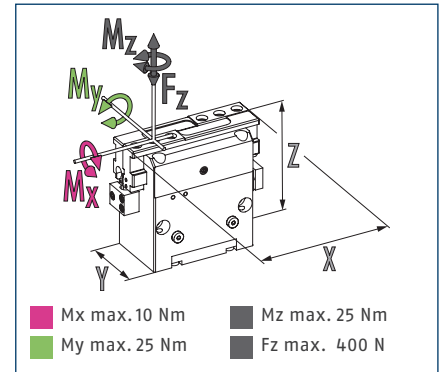
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



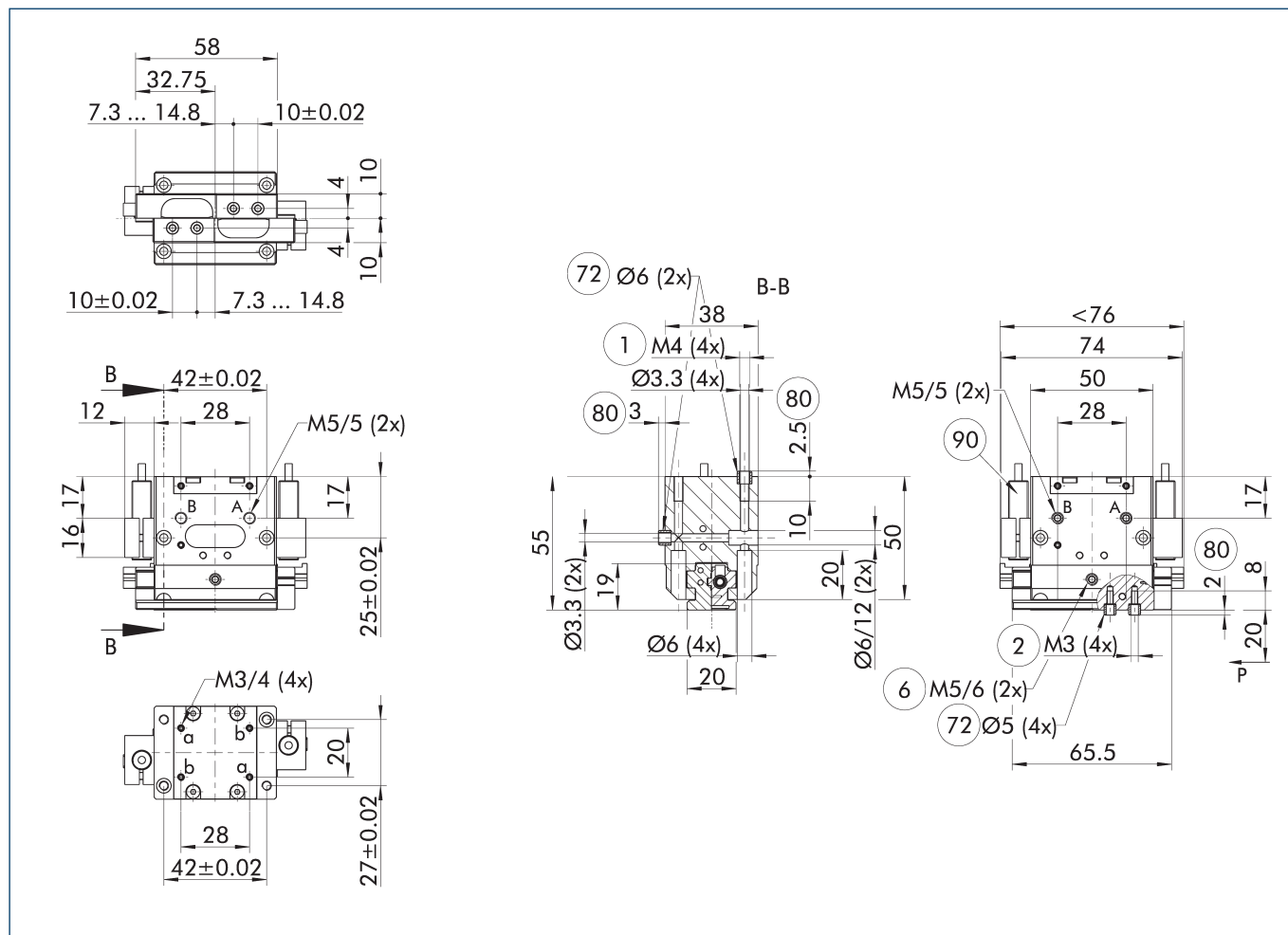
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGF 50	PGF 50-AS	PGF 50-IS
ID		0340360	0340361	0340362
Stroke per jaw	[mm]	7.5	7.5	7.5
Closing/opening force	[N]	240/260	340/-	-/360
Min. spring force	[N]		100	100
Weight	[kg]	0.3	0.35	0.35
Recommended workpiece weight	[kg]	1.2	1.2	1.2
Cylinder volume per double stroke	[cm ³]	14	14	14
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.03/0.03	0.03/0.07	0.07/0.03
Closing/opening time with spring	[s]		0.50	0.50
Max. permissible finger length	[mm]	50	50	50
Max. permissible weight per finger	[kg]	0.25	0.25	0.25
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	76 x 38 x 55	76 x 38 x 55	76 x 38 x 55

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view

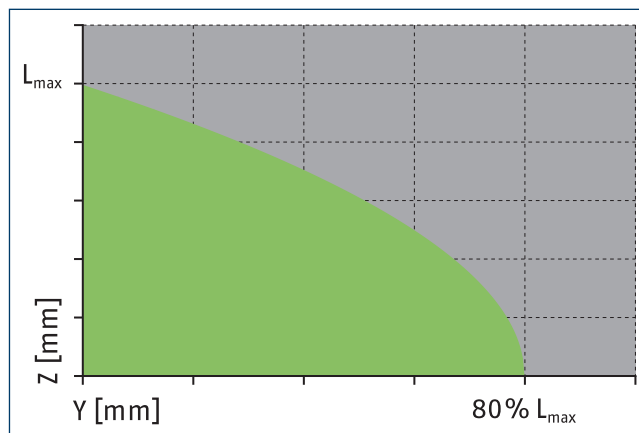
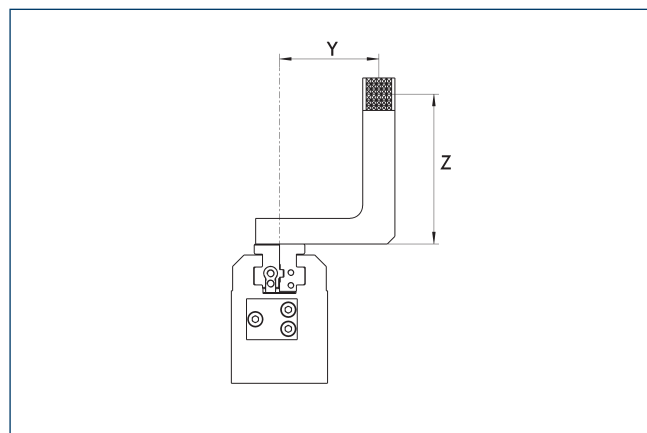


The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

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

- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑥ Lubricating nipple connection
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑨⑩ Sensor IN ...

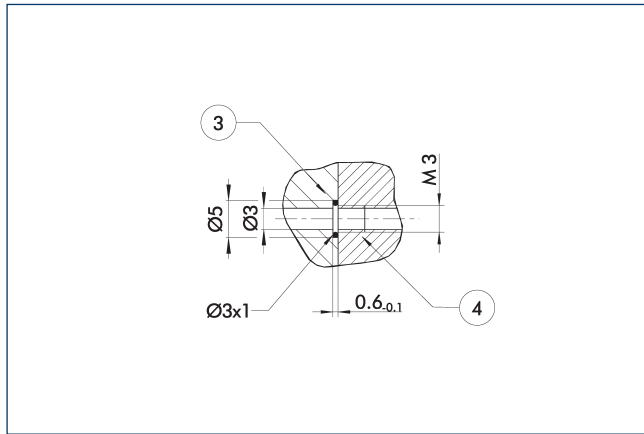
Maximum permitted finger projection



■ Permitted range ■ Inadmissible range

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

Hose-free direct connection M3

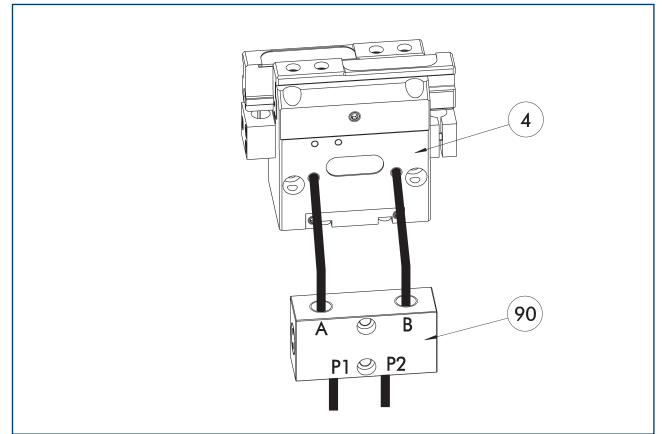


③ Adapter

④ Grippers

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

SDV-P pressure maintenance valve



④ Grippers

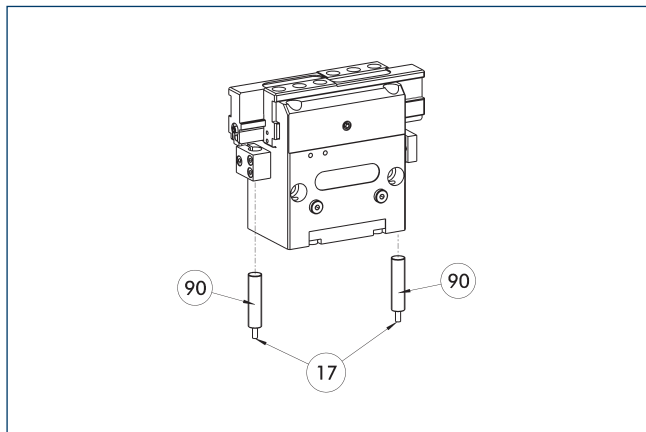
⑨⑩ SDV-P pressure maintenance valve

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

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

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

Inductive proximity switches



17 Cable outlet

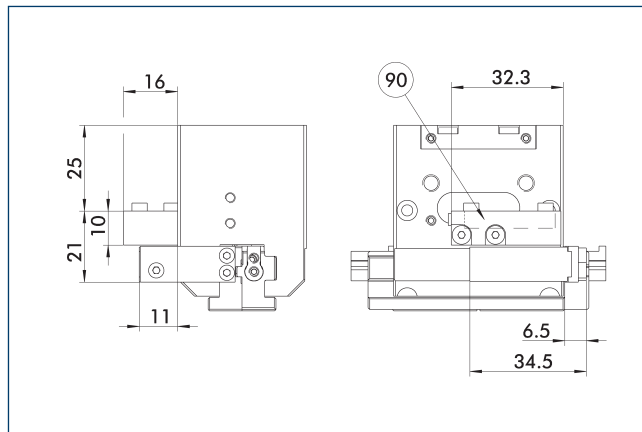
90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

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

Attachment kit for FPS



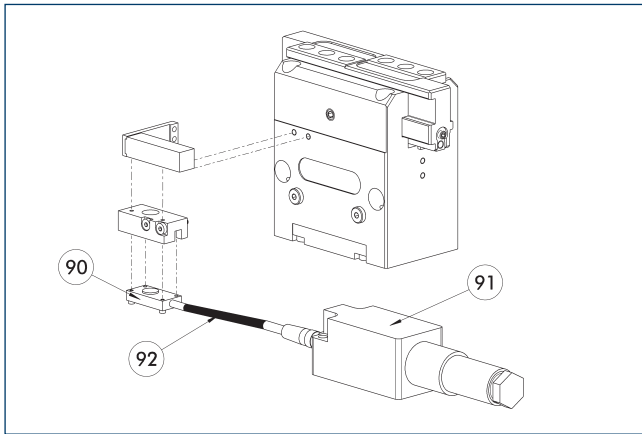
90 FPS-S 13 sensor

The following FPS position sensor can differentiate between five programmable areas or switching points for the stroke of a gripper, and can be used in connection with a PC as a measuring system.

Description	ID	
Attachment kit for FPS		
AS-FPS-PGF 50	0302731	

① This attachment kit needs to be ordered optionally as an accessory.

Flexible position sensor



- ⑨⑩ FPS-S sensor
- ⑨① FPS-F5 evaluation electronic
- ⑨② Cable extension

Flexible position monitoring of up to five positions.

Description	ID	Often combined
Attachment kit for FPS		
AS-FPS-PGF 50	0302731	
Sensor		
FPS-S 13	0301705	
Evaluation electronics		
FPS-F5	0301805	●
Cable extension		
KV BG08-SG08 3P-0050	0301598	
KV BG08-SG08 3P-0100	0301599	

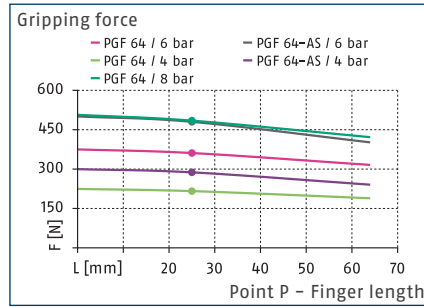
- ① When using an FPS system, an FPS sensor (FPS-S) as well as an electronic processor (FPS-F5 / F5 T) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are optionally available – see catalog chapter “Accessories.”

PGF 64

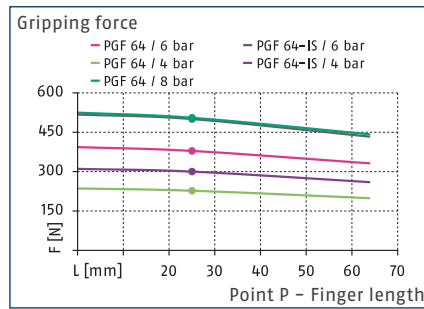
Universal gripper



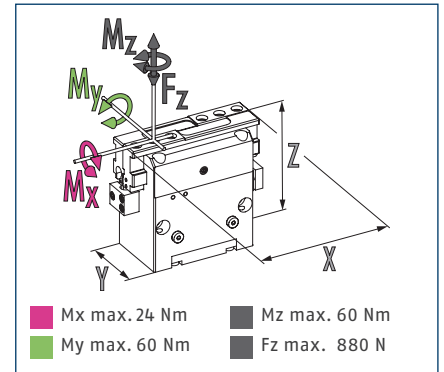
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



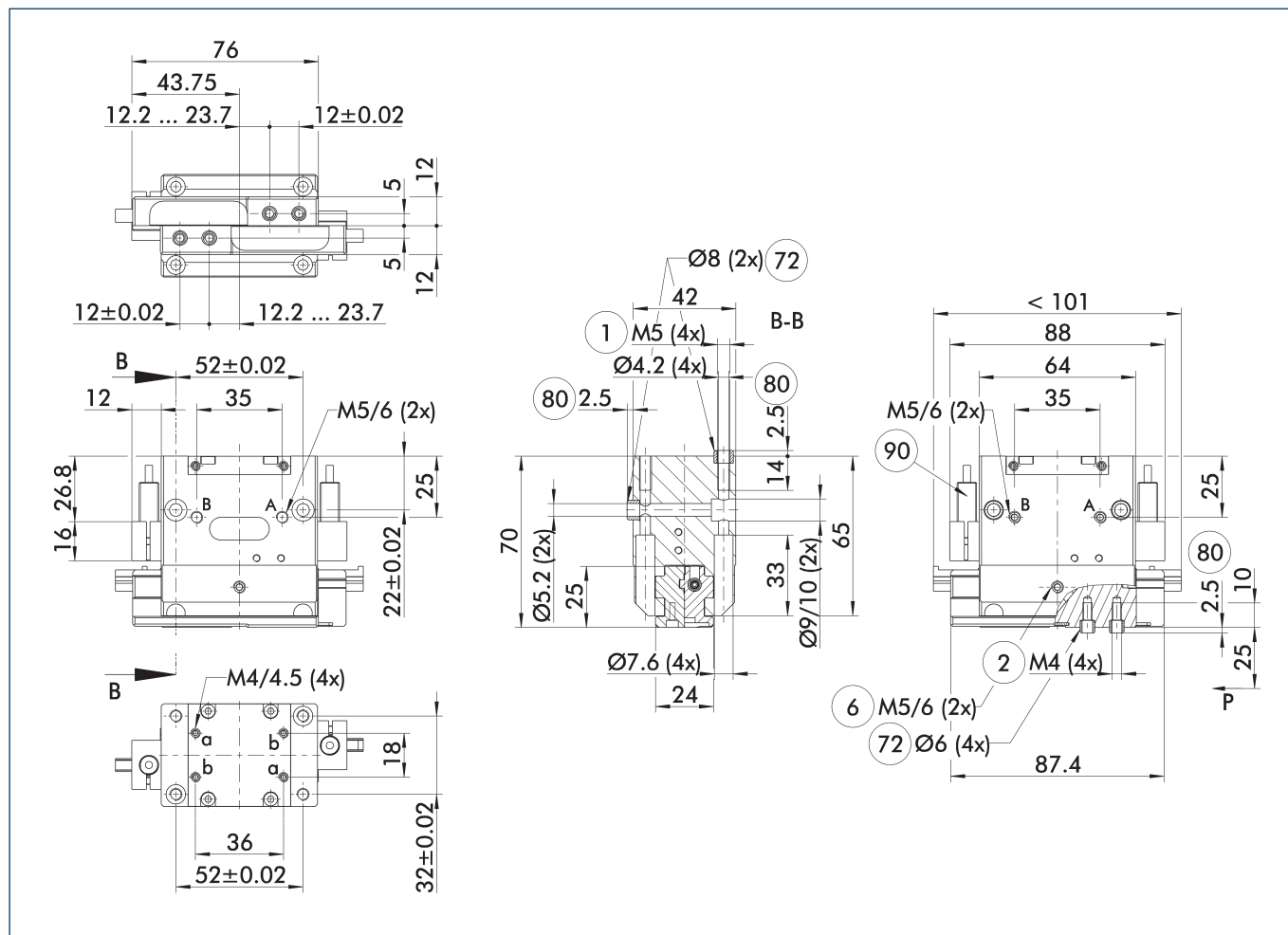
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGF 64	PGF 64-AS	PGF 64-IS
ID		0340365	0340366	0340367
Stroke per jaw	[mm]	11.5	11.5	11.5
Closing/opening force	[N]	360/380	480/-	-/500
Min. spring force	[N]		120	120
Weight	[kg]	0.6	0.7	0.7
Recommended workpiece weight	[kg]	1.8	1.8	1.8
Cylinder volume per double stroke	[cm ³]	30	30	30
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.06/0.06	0.05/0.1	0.1/0.05
Closing/opening time with spring	[s]		0.50	0.50
Max. permissible finger length	[mm]	64	64	64
Max. permissible weight per finger	[kg]	0.4	0.4	0.4
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	101 x 42 x 70	101 x 42 x 70	101 x 42 x 70

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view

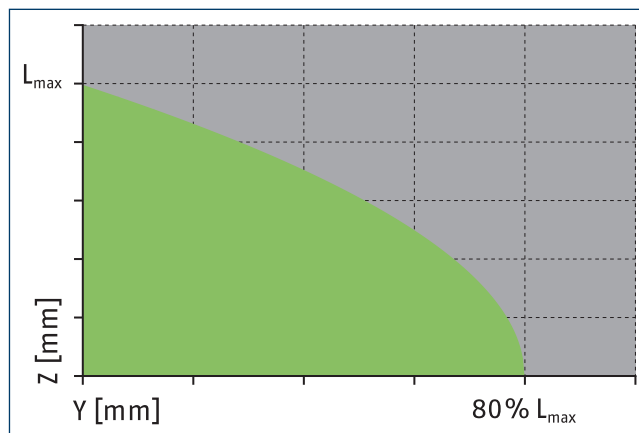
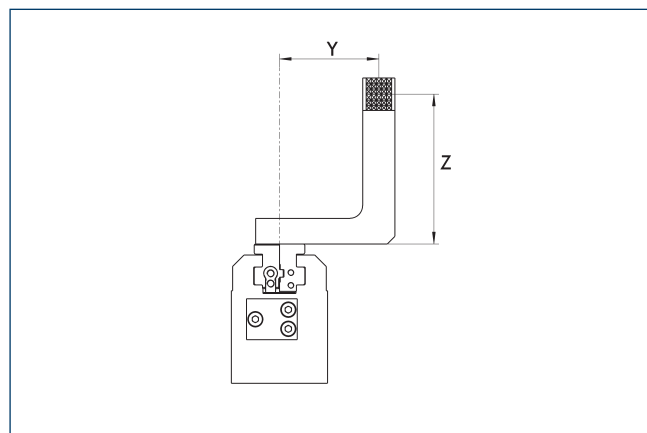


The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

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

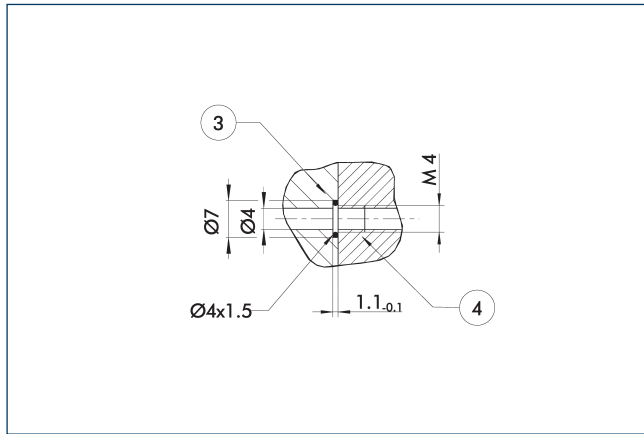
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑥ Lubricating nipple connection
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑨⑩ Sensor IN ...

Maximum permitted finger projection



■ Permitted range ■ Inadmissible range
 L^{max} is equivalent to the maximum permitted finger length, see the technical data table.

Hose-free direct connection M4

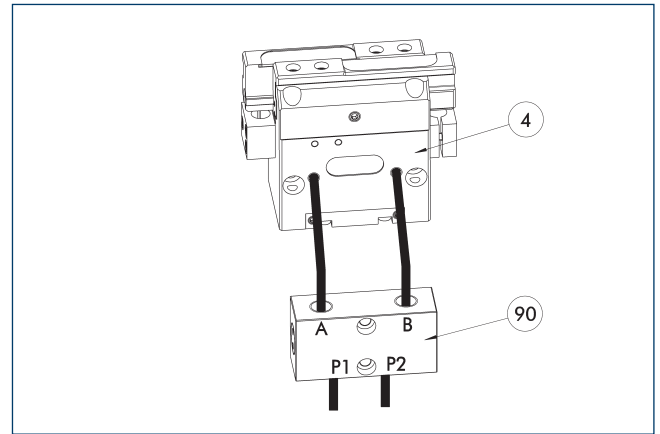


③ Adapter

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.

SDV-P pressure maintenance valve



④ Grippers

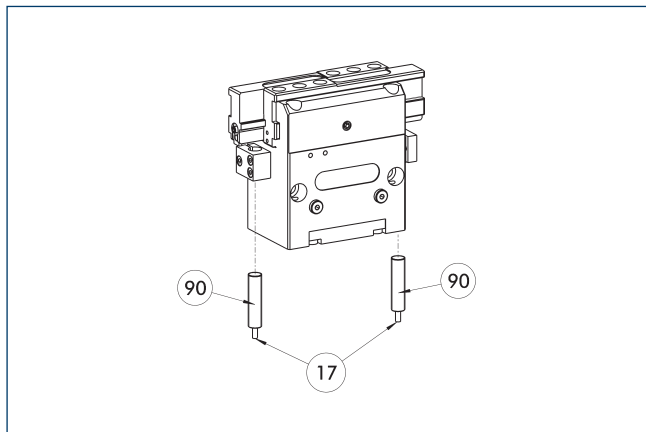
⑨⑩ SDV-P pressure maintenance valve

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

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

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

Inductive proximity switches



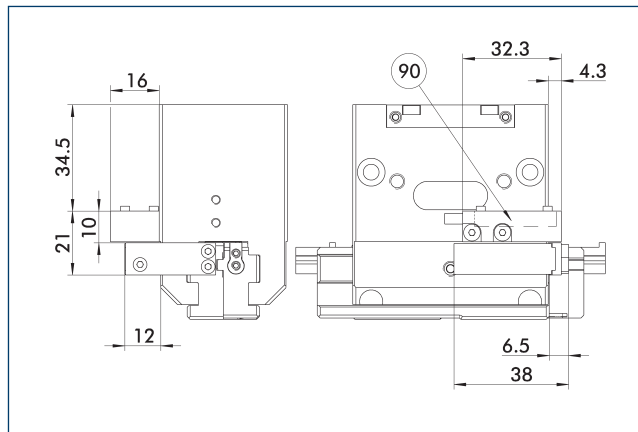
17 Cable outlet 90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

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

Attachment kit for FPS



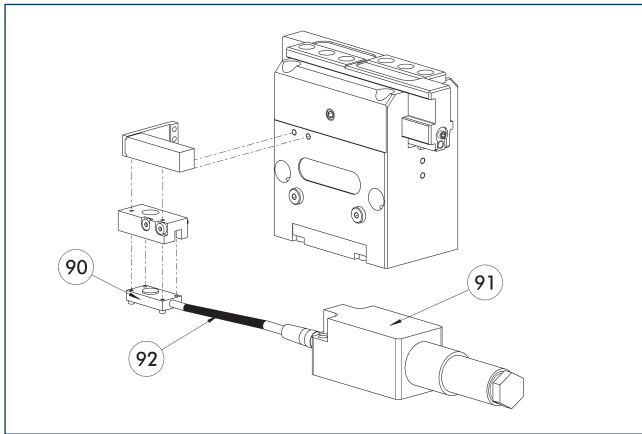
90 FPS-S 13 sensor

The following FPS position sensor can differentiate between five programmable areas or switching points for the stroke of a gripper, and can be used in connection with a PC as a measuring system.

Description	ID	
Attachment kit for FPS		
AS-FPS-PGF 64	0302732	

① This attachment kit needs to be ordered optionally as an accessory.

Flexible position sensor



- ⑨⑩ FPS-S sensor
- ⑨① FPS-F5 evaluation electronic
- ⑨② Cable extension

Flexible position monitoring of up to five positions.

Description	ID	Often combined
Attachment kit for FPS		
AS-FPS-PGF 64	0302732	
Sensor		
FPS-S 13	0301705	
Evaluation electronics		
FPS-F5	0301805	●
Cable extension		
KV BG08-SG08 3P-0050	0301598	
KV BG08-SG08 3P-0100	0301599	

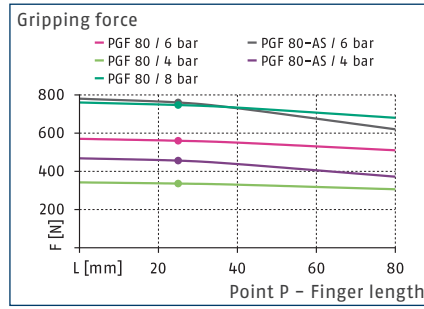
- ① When using an FPS system, an FPS sensor (FPS-S) as well as an electronic processor (FPS-F5 / F5 T) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are optionally available – see catalog chapter “Accessories.”

PGF 80

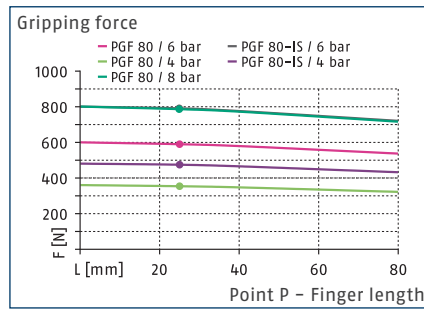
Universal gripper



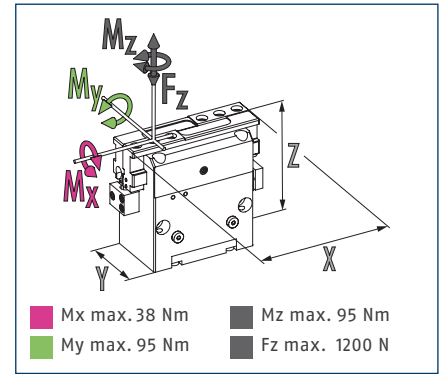
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



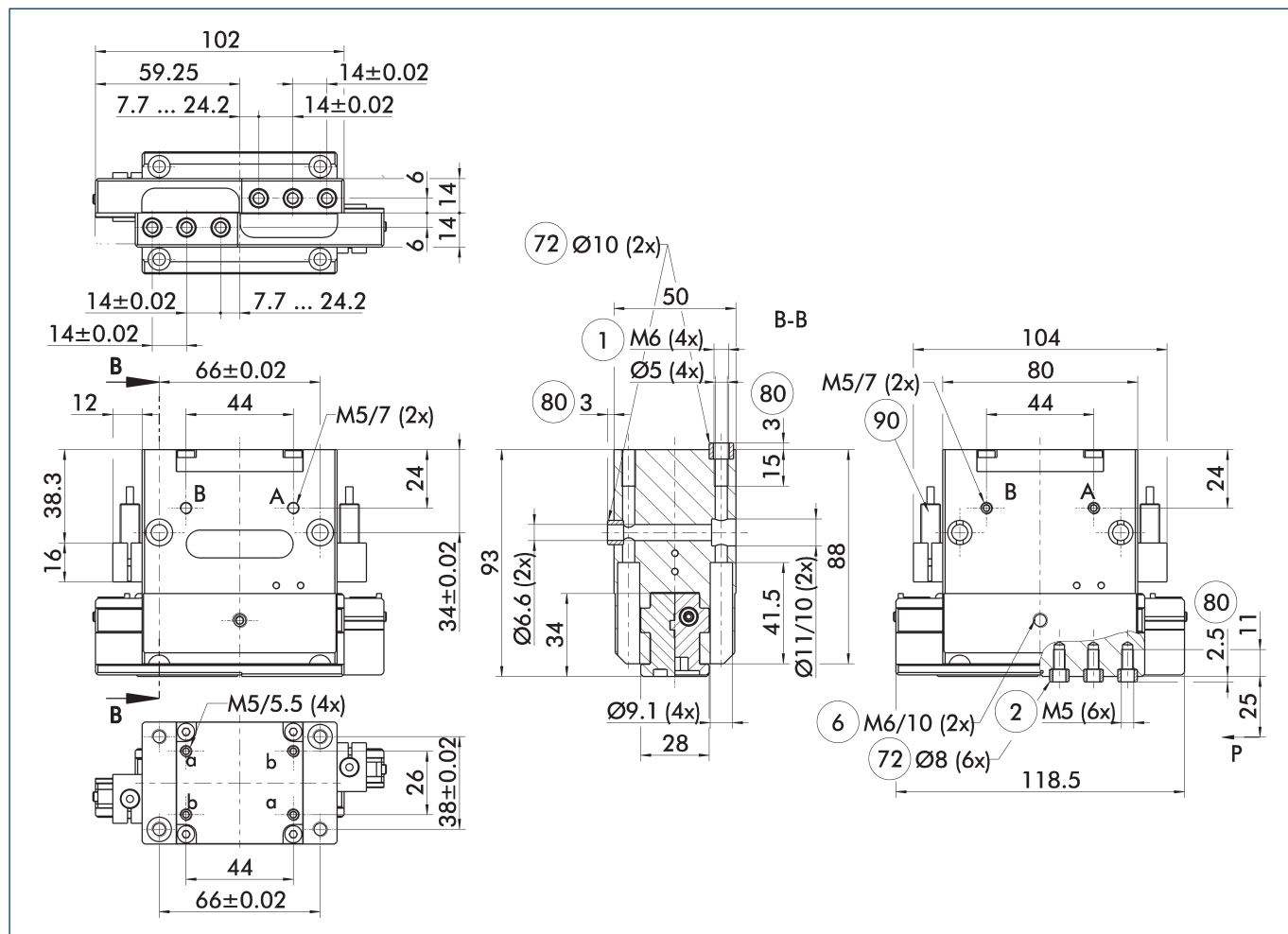
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGF 80	PGF 80-AS	PGF 80-IS
ID		0340370	0340371	0340372
Stroke per jaw	[mm]	16.5	16.5	16.5
Closing/opening force	[N]	560/590	760/-	-/790
Min. spring force	[N]		200	200
Weight	[kg]	1.15	1.25	1.25
Recommended workpiece weight	[kg]	2.8	2.8	2.8
Cylinder volume per double stroke	[cm ³]	77	77	77
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.1/0.1	0.08/0.14	0.14/0.08
Closing/opening time with spring	[s]		0.60	0.60
Max. permissible finger length	[mm]	80	80	80
Max. permissible weight per finger	[kg]	0.75	0.75	0.75
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.02	0.02	0.02
Dimensions X x Y x Z	[mm]	118.5 x 50 x 93	118.5 x 50 x 93	118.5 x 50 x 93

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view

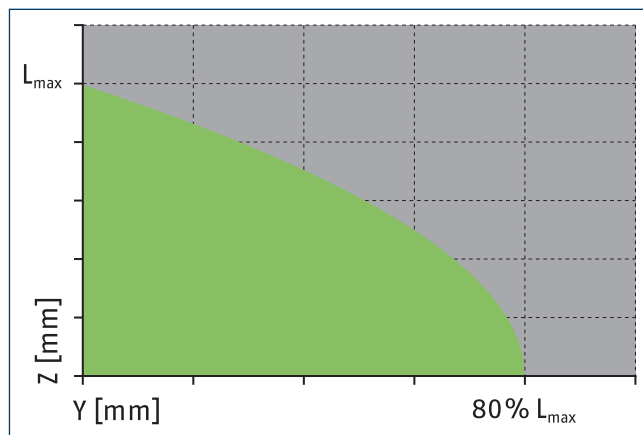
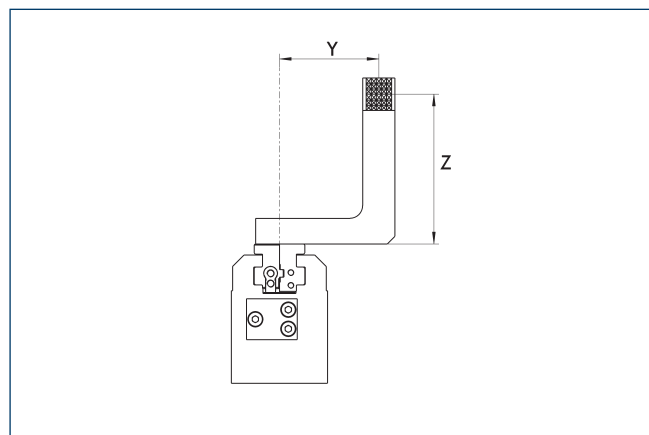


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- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑥ Lubricating nipple connection
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑨⑩ Sensor IN ...

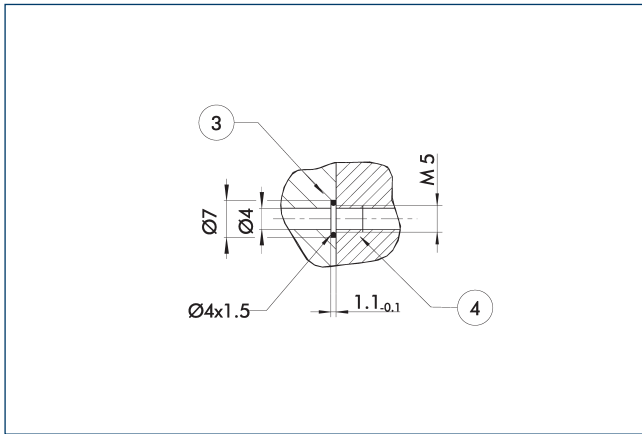
Maximum permitted finger projection



■ Permitted range ■ Inadmissible range

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

Hose-free direct connection M5

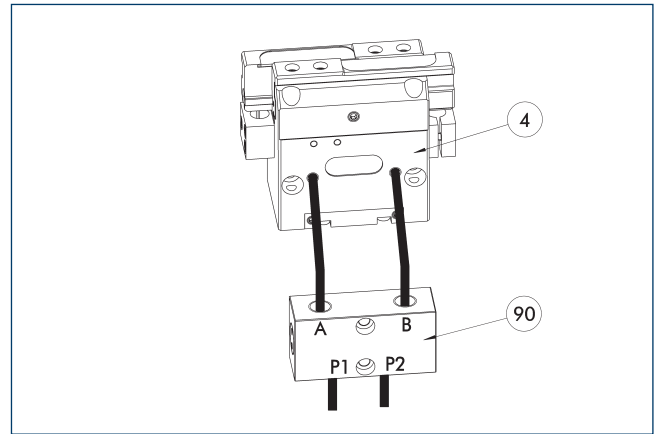


③ Adapter

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.

SDV-P pressure maintenance valve



④ Grippers

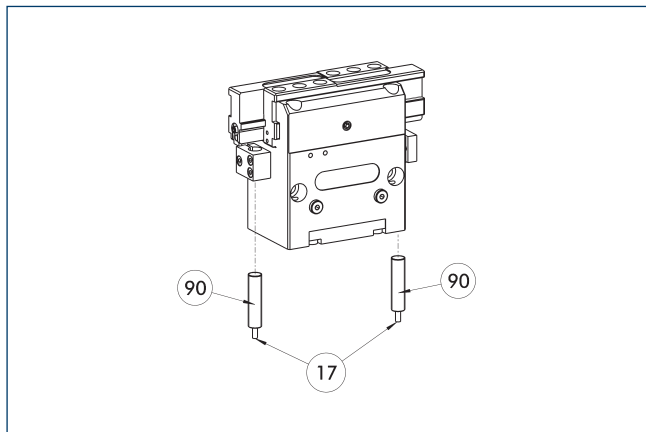
⑨⑩ SDV-P pressure maintenance valve

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

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

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

Inductive proximity switches



17 Cable outlet

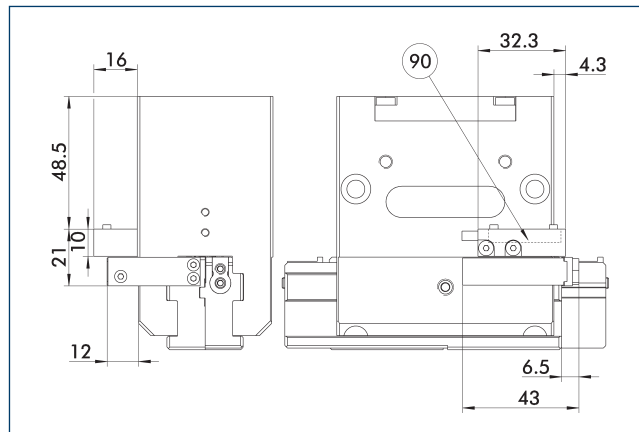
90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

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

Attachment kit for FPS



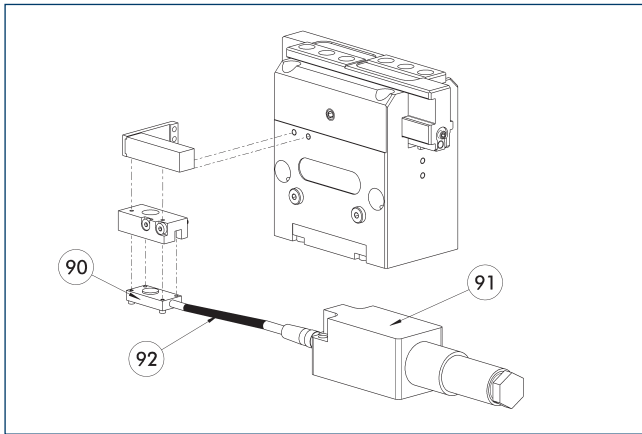
90 FPS-S 13 sensor

The following FPS position sensor can differentiate between five programmable areas or switching points for the stroke of a gripper, and can be used in connection with a PC as a measuring system.

Description	ID	
Attachment kit for FPS		
AS-FPS-PGF 80	0302733	

① This attachment kit needs to be ordered optionally as an accessory.

Flexible position sensor



- ⑨⑩ FPS-S sensor
- ⑨① FPS-F5 evaluation electronic
- ⑨② Cable extension

Flexible position monitoring of up to five positions.

Description	ID	Often combined
Attachment kit for FPS		
AS-FPS-PGF 80	0302733	
Sensor		
FPS-S 13	0301705	
Evaluation electronics		
FPS-F5	0301805	●
Cable extension		
KV BG08-SG08 3P-0050	0301598	
KV BG08-SG08 3P-0100	0301599	

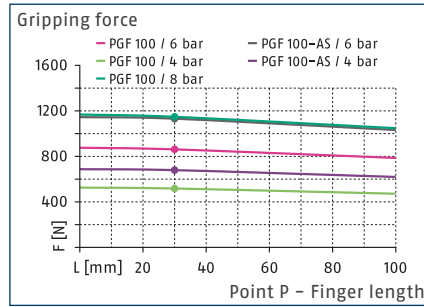
- ① When using an FPS system, an FPS sensor (FPS-S) as well as an electronic processor (FPS-F5 / F5 T) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are optionally available – see catalog chapter “Accessories.”

PGF 100

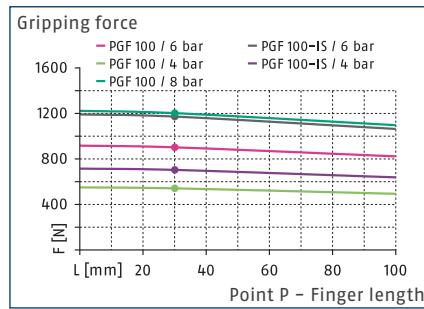
Universal gripper



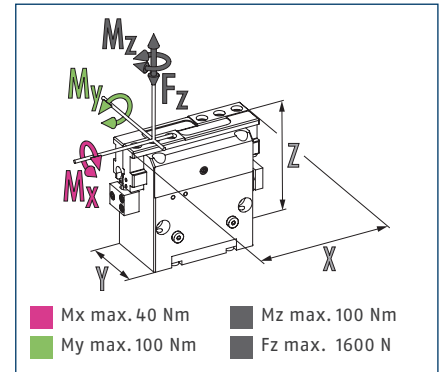
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



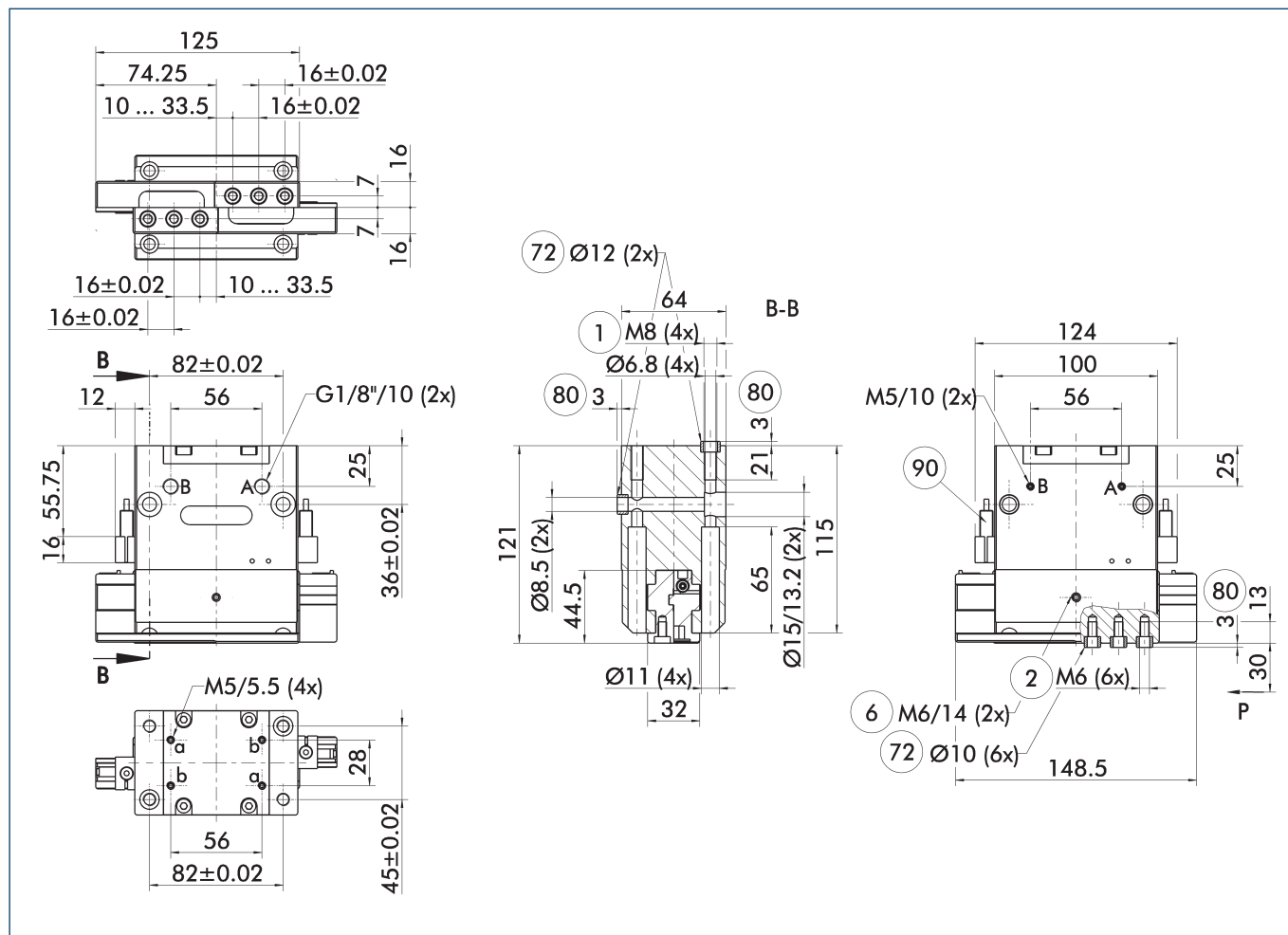
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGF 100	PGF 100-AS	PGF 100-IS
ID		0340380	0340381	0340382
Stroke per jaw	[mm]	23.5	23.5	23.5
Closing/opening force	[N]	880/900	1150/-	-/1170
Min. spring force	[N]		270	270
Weight	[kg]	2.35	2.85	2.85
Recommended workpiece weight	[kg]	4.4	4.4	4.4
Cylinder volume per double stroke	[cm ³]	154	154	154
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.15/0.15	0.16/0.25	0.25/0.16
Closing/opening time with spring	[s]		0.70	0.70
Max. permissible finger length	[mm]	100	100	100
Max. permissible weight per finger	[kg]	1.4	1.4	1.4
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.03	0.03	0.03
Dimensions X x Y x Z	[mm]	148.5 x 64 x 121	148.5 x 64 x 121	148.5 x 64 x 121

① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view

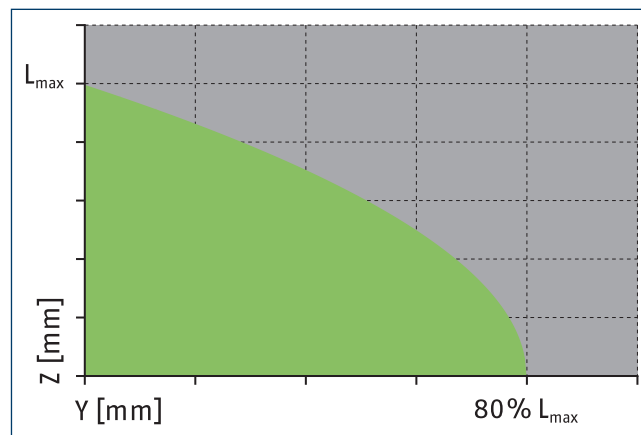
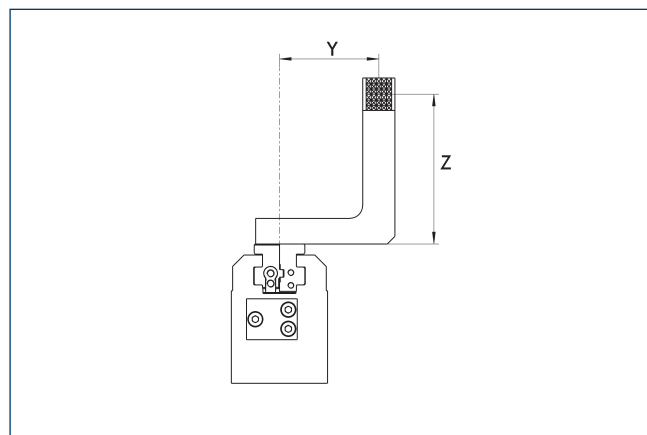


The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

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

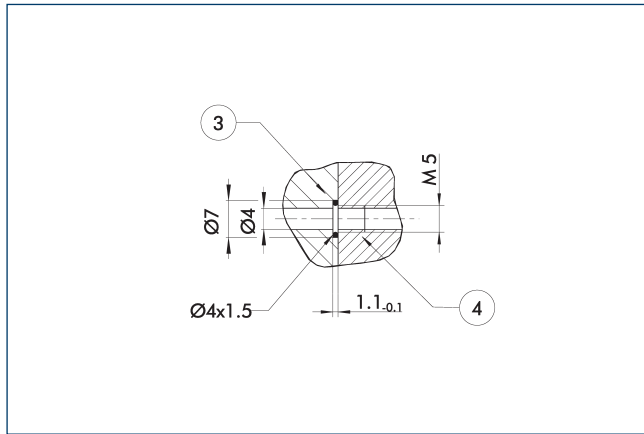
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑥ Lubricating nipple connection
- ⑦② Fit for centering sleeves
- ⑧② Depth of the centering sleeve hole in the counter part
- ⑨② Sensor IN ...

Maximum permitted finger projection



■ Permitted range ■ Inadmissible range
 L^{max} is equivalent to the maximum permitted finger length, see the technical data table.

Hose-free direct connection M5

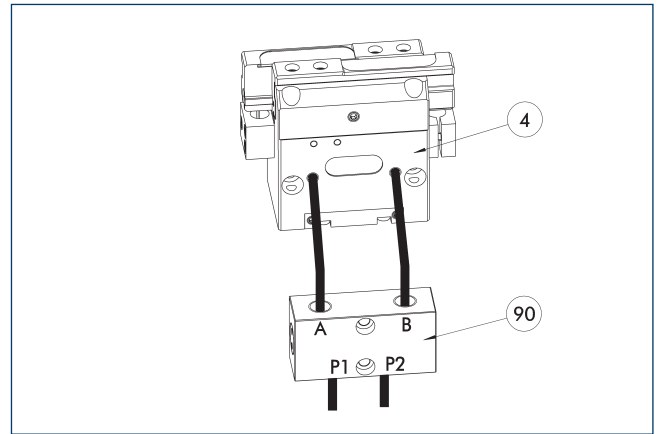


③ Adapter

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.

SDV-P pressure maintenance valve



④ Grippers

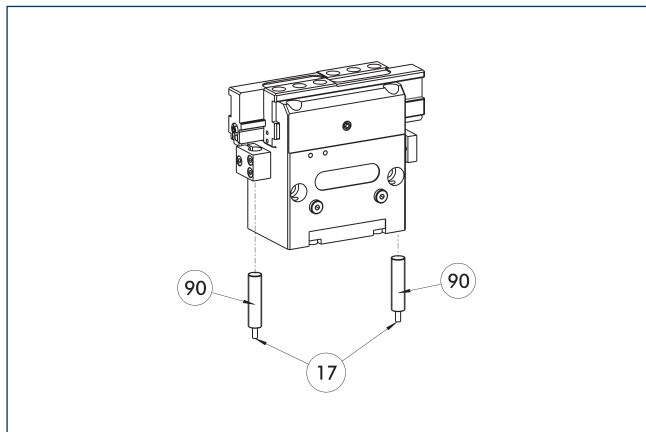
⑨⑩ SDV-P pressure maintenance valve

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

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

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

Inductive proximity switches



17 Cable outlet

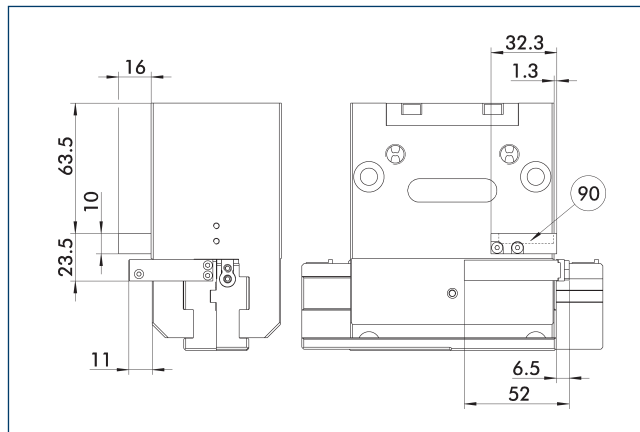
90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

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

Attachment kit for FPS



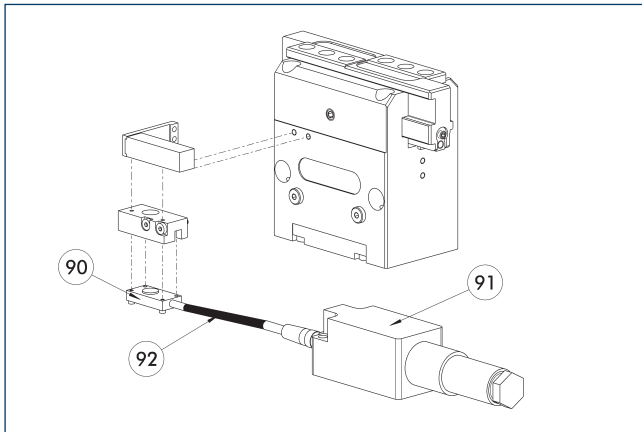
90 FPS-S 13 sensor

The following FPS position sensor can differentiate between five programmable areas or switching points for the stroke of a gripper, and can be used in connection with a PC as a measuring system.

Description	ID	
Attachment kit for FPS		
AS-FPS-PGF 100	0302734	

① This attachment kit needs to be ordered optionally as an accessory.

Flexible position sensor



- ⑨⑩ FPS-S sensor
- ⑨① FPS-F5 evaluation electronic
- ⑨② Cable extension

Flexible position monitoring of up to five positions.

Description	ID	Often combined
Attachment kit for FPS		
AS-FPS-PGF 100	0302734	
Sensor		
FPS-S 13	0301705	
Evaluation electronics		
FPS-F5	0301805	●
Cable extension		
KV BG08-SG08 3P-0050	0301598	
KV BG08-SG08 3P-0100	0301599	

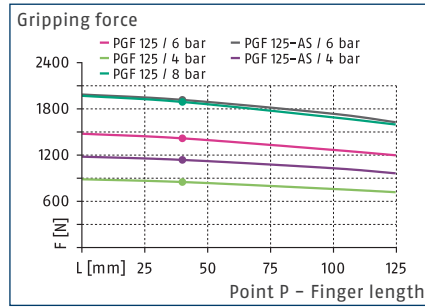
- ① When using an FPS system, an FPS sensor (FPS-S) as well as an electronic processor (FPS-F5 / F5 T) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are optionally available – see catalog chapter “Accessories.”

PGF 125

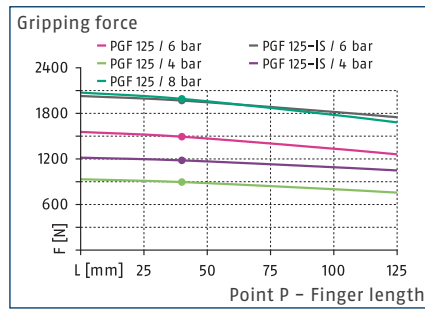
Universal gripper



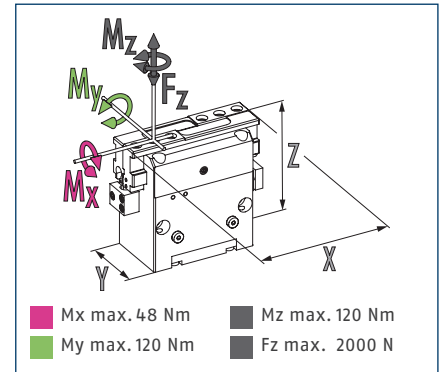
Gripping force O.D. gripping



Gripping force I.D. gripping



Dimensions and maximum loads



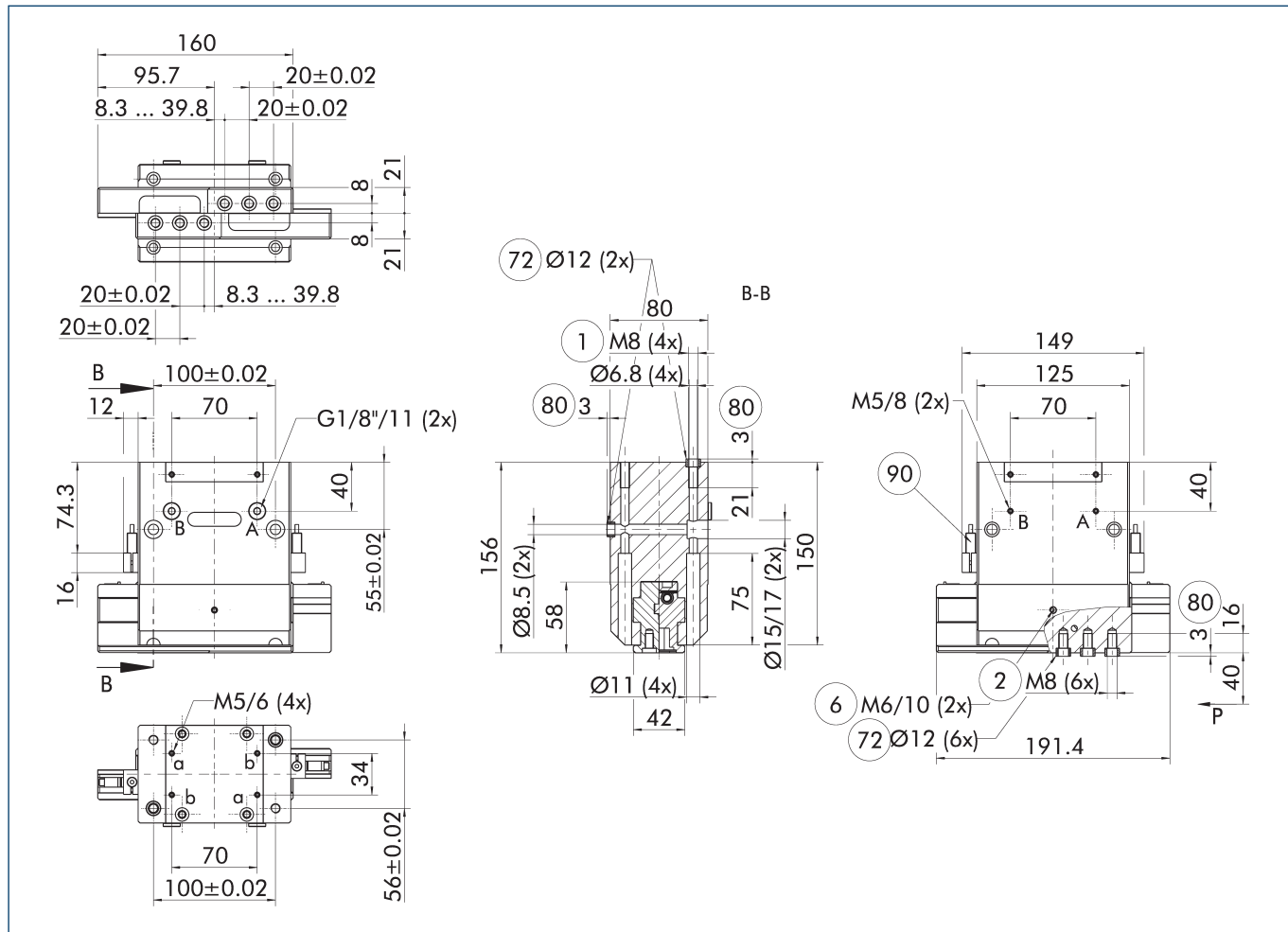
① The indicated moments and forces are static values, apply for each base jaw and may appear simultaneously. Loads may additionally occur to the moment produced by the gripping force itself.

Technical data

Description		PGF 125	PGF 125-AS	PGF 125-IS
ID		0340390	0340391	0340392
Stroke per jaw	[mm]	31.5	31.5	31.5
Closing/opening force	[N]	1420/1490	1900/-	-/1970
Min. spring force	[N]		480	480
Weight	[kg]	5	5.3	5.3
Recommended workpiece weight	[kg]	7.1	7.1	7.1
Cylinder volume per double stroke	[cm ³]	300	300	300
Min./nom./max. operating pressure	[bar]	3.5/6/8	4/6/6.5	4/6/6.5
Closing/opening time	[s]	0.25/0.25	0.22/0.4	0.4/0.22
Closing/opening time with spring	[s]		0.80	0.80
Max. permissible finger length	[mm]	125	125	125
Max. permissible weight per finger	[kg]	2.4	2.4	2.4
IP protection class		40	40	40
Min./max. ambient temperature	[°C]	5/90	5/90	5/90
Repeat accuracy	[mm]	0.03	0.03	0.03
Dimensions X x Y x Z	[mm]	191.5 x 80 x 156	191.5 x 80 x 156	191.5 x 80 x 156

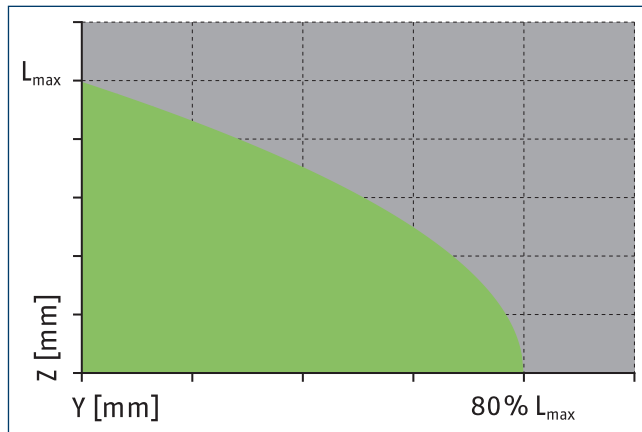
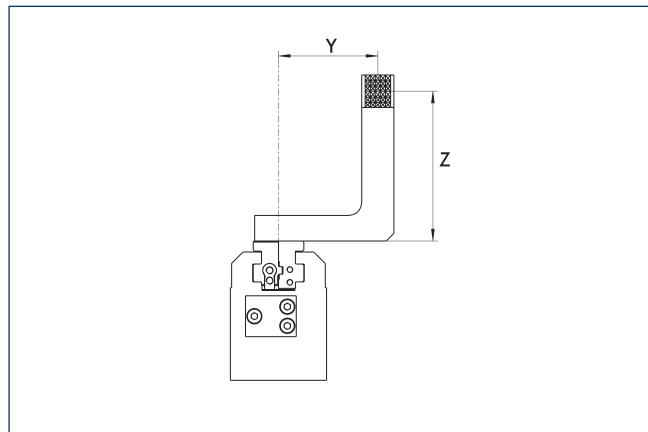
① It may take a few 100 gripping cycles until the full gripping force (as indicated in the data table) will be available.

Main view



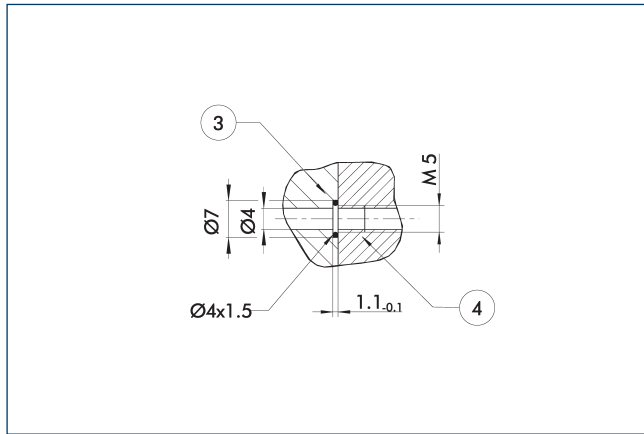
- A, a Main / direct connection, gripper opening
- B, b Main / direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑥ Lubricating nipple connection
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑨⑩ Sensor IN ...

Maximum permitted finger projection



■ Permitted range ■ Inadmissible range
 L^{max} is equivalent to the maximum permitted finger length, see the technical data table.

Hose-free direct connection M5

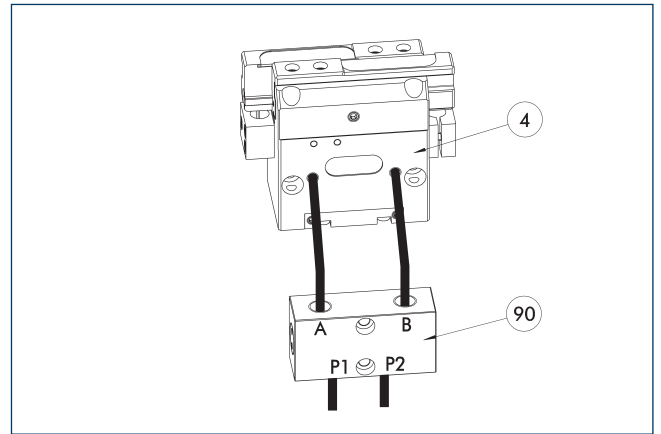


③ Adapter

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.

SDV-P pressure maintenance valve



④ Grippers

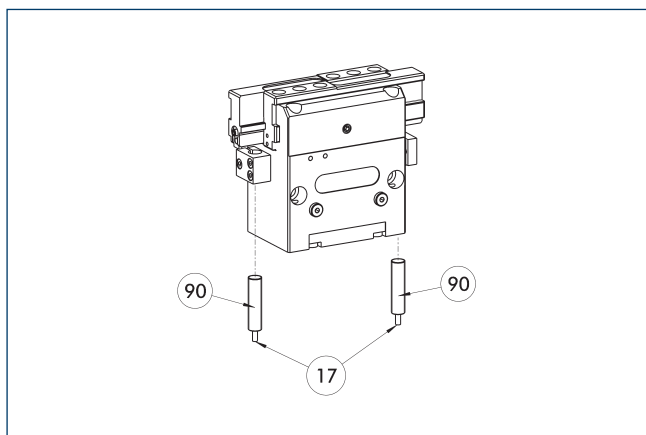
⑨⑩ SDV-P pressure maintenance valve

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

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

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

Inductive proximity switches



17 Cable outlet

90 Sensor IN ...

Directly mounted end position monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
IN-C 80-S-M8-PNP	0301475	
INK 80-S	0301550	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Clip for connector/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

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



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