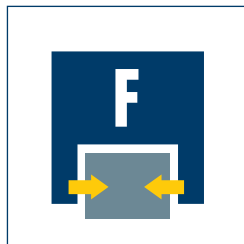




Sizes
40 .. 160



Weight
0.08 kg .. 3.3 kg



Gripping force
123 N .. 2390 N

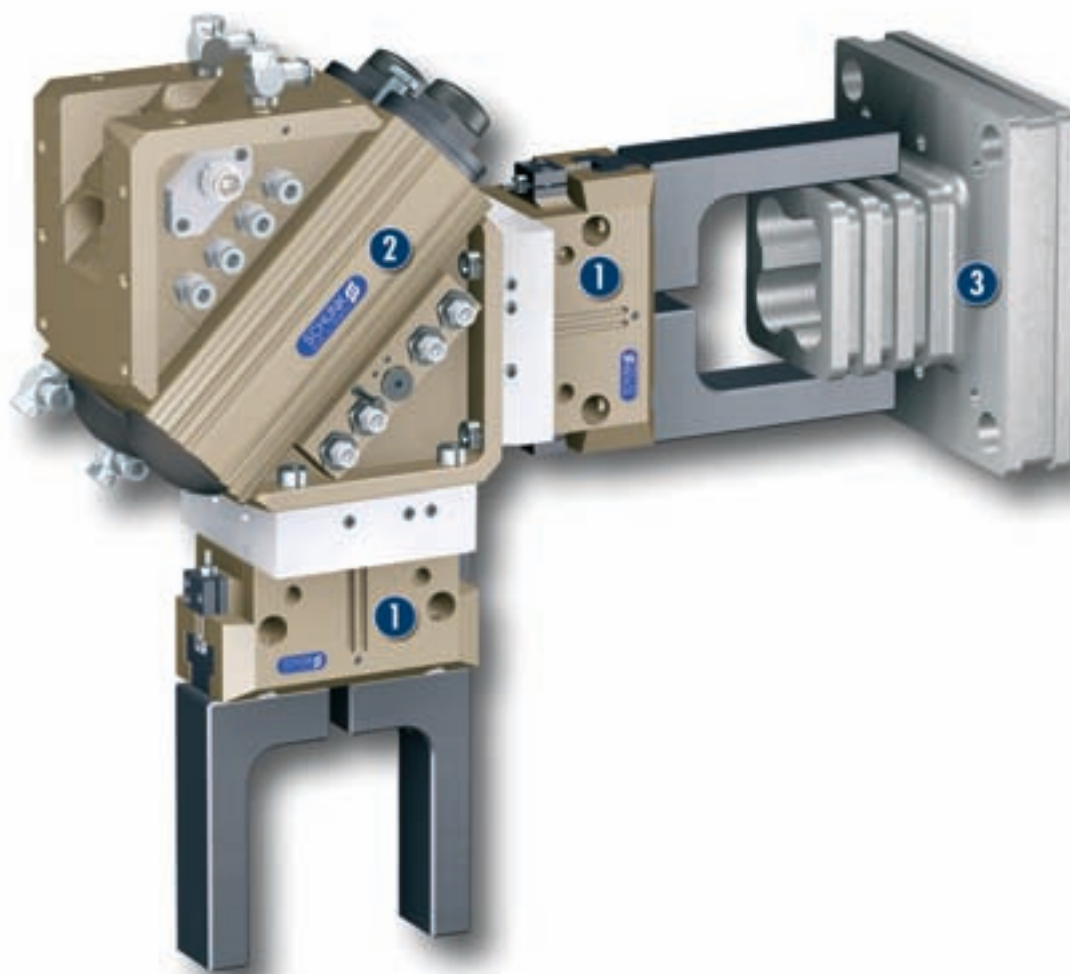


Stroke per finger
2.5 mm .. 16 mm



Workpiece weight
0.62 kg .. 8.2 kg

Application example



Supply and assembly devices

1 2-Finger Parallel Gripper JGP with workpiece-specific gripper fingers

2 SRH Swivel Head

3 Workpiece

Universal Gripper

Universal 2-Finger Parallel Gripper of the compact class with T-slot guide and best cost-performance ratio

Area of application

Optimum standard solution for many fields of application. Universal application in clean and slightly dirty surroundings in machine building and plant building industry, assembly and handling and automotive industry.

Your advantages and benefits

Concentration onto the basics

für maximum profitability

Sturdy T-slot guide

for the precise handling of all kinds of workpieces

Compact dimensions and low weight

for minimal interfering contours in handling

High maximum load capabilities possible

suitable for the use of long gripper fingers

Wedge-hook design

for high power transmission and synchronized gripping

Comprehensive sensor accessories

for interrogation and control of the stroke position

Mounting from two gripper sides

for universal and flexible gripper assembly

Air supply via hose-free direct connection or screw connections

for the flexible supply of compressed air in all automation systems



General information on the series

Working principle

Wedge-hook kinematics

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirements on quality of the compressed air according to
DIN ISO 8573-1: 6 4 4.

Warranty

24 months

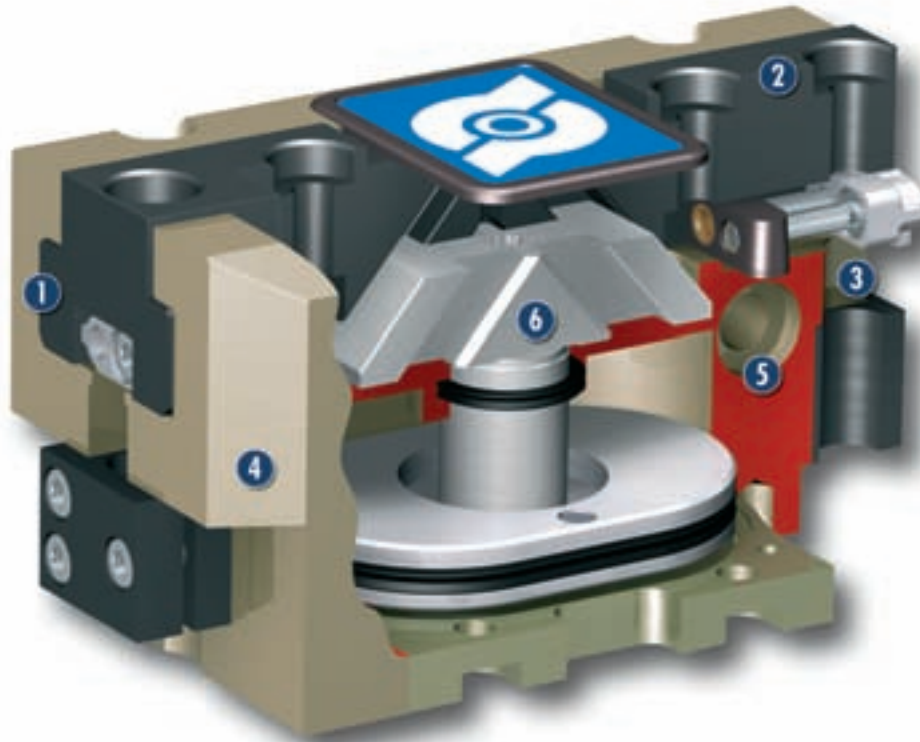
Scope of delivery

Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force safety device

with either mechanical gripping force safety device or SDV-P pressure maintenance valve

Sectional diagram



- 1 T-slot guide**
loadable, robust base jaw guidance for extremely long gripper fingers
- 3 Sensor system**
Proximity switch can be assembled without attachment kit
- 5 Centring and mounting possibilities**
for universal finger assembly
- 2 Base jaws**
for adaptation to the workpiece-specific gripper finger
- 4 Housing**
weight-optimised through application of hard-anodized, high-strength aluminum alloy
- 6 Kinematics**
wedge-hook principle for high power transmission and synchronous gripping

Function description

The oval piston is moved up or down by means of compressed air. Through its angular active surfaces, the wedge hook transforms this motion into the lateral, synchronous gripping movement of both base jaws.

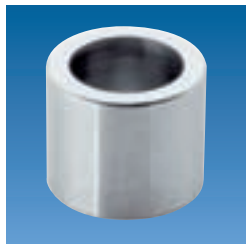
Options and special information

The JGP serie is especially suitable for economic handling solutions and distinguishes by its high cost-benefit ratio.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Centering sleeves



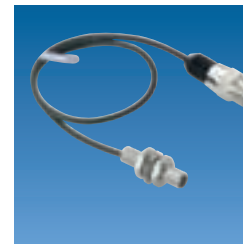
Fittings



MMS magnetic switches



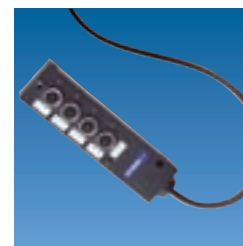
IN inductive proximity switches



KV/KA sensor cables



V sensor distributors



BSWS quick-change jaw system



SDV-P pressure maintenance valves



Finger blanks



FMS force measuring system



APS analog position sensor



FPS flexible position sensor



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Gripping force

is the arithmetic total of the gripping force applied to each claw jaw at distance P (see illustration), measured from the upper edge of the gripper.

Finger length

is measured from the upper edge of the gripper housing in the direction of the main axis.

Repeat accuracy

is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight

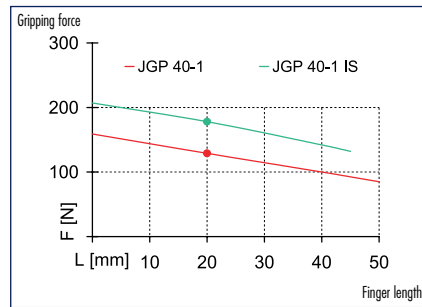
The recommended workpiece weight is calculated for a force-fit connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

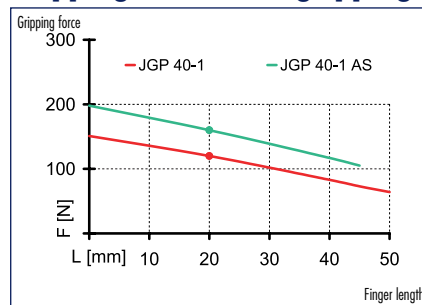
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



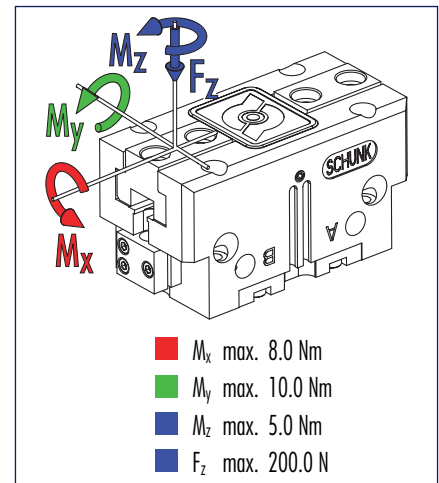
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

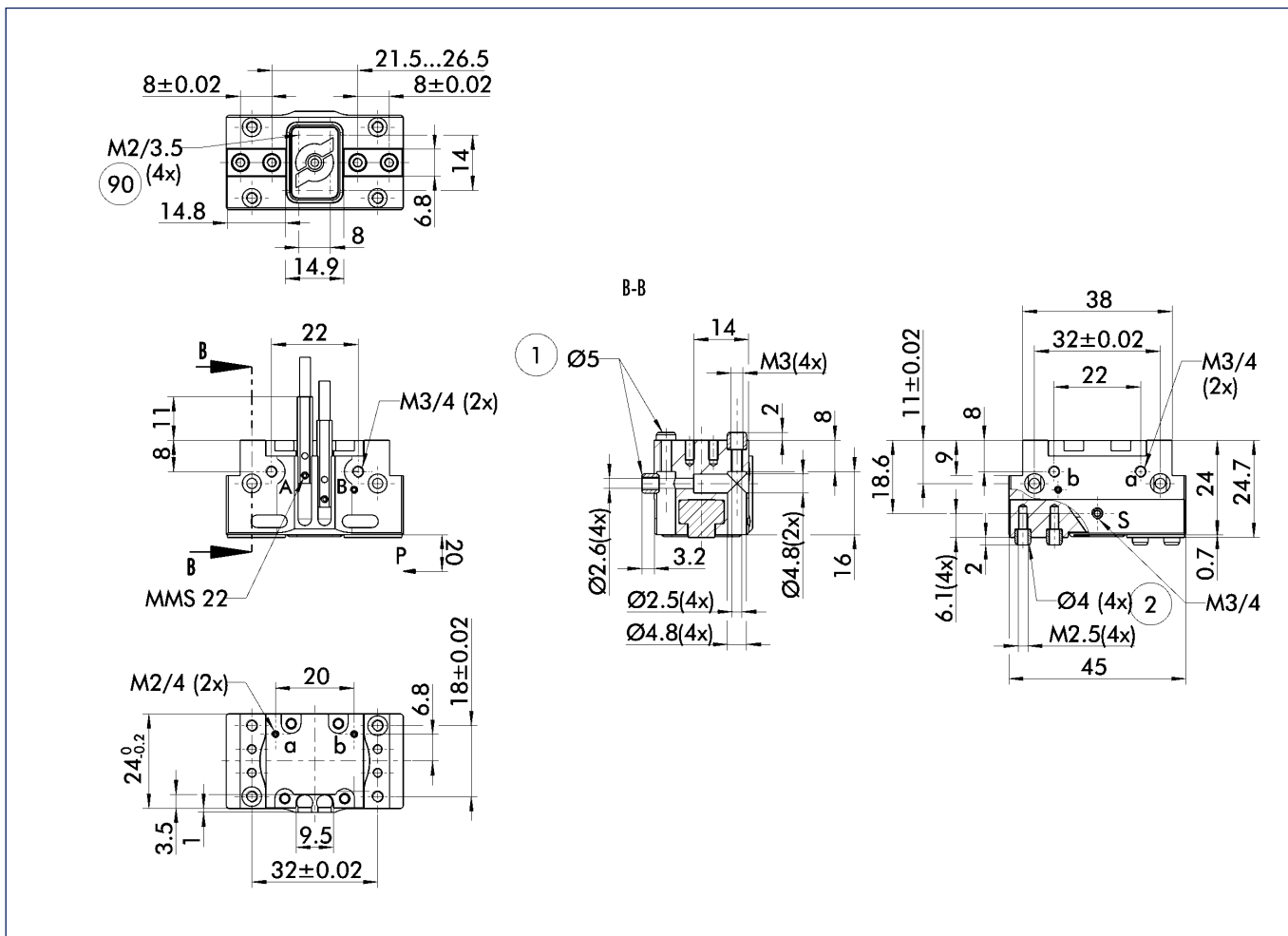


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 40-1	JGP 40-1-AS	JGP 40-1-IS
	ID	0308600	0308601	0308602
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing force	[N]	123.0	163.0	
Opening force	[N]	132.0		182.0
Min. spring force	[N]		40.0	50.0
Weight	[kg]	0.08	0.09	0.09
Recommended workpiece weight	[kg]	0.62	0.62	0.62
Air consumption per double stroke	[cm ³]	2.5	5.5	5.5
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.02	0.02	0.03
Opening time	[s]	0.02	0.03	0.02
Max. permitted finger length	[mm]	50.0	45.0	45.0
Max. permitted weight per finger	[kg]	0.1	0.1	0.1
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

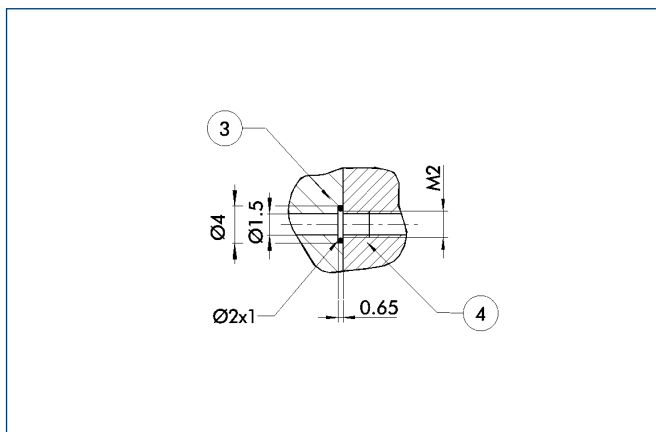


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

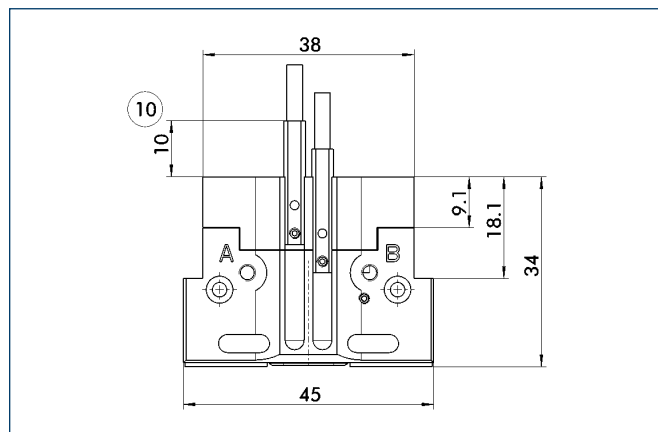
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

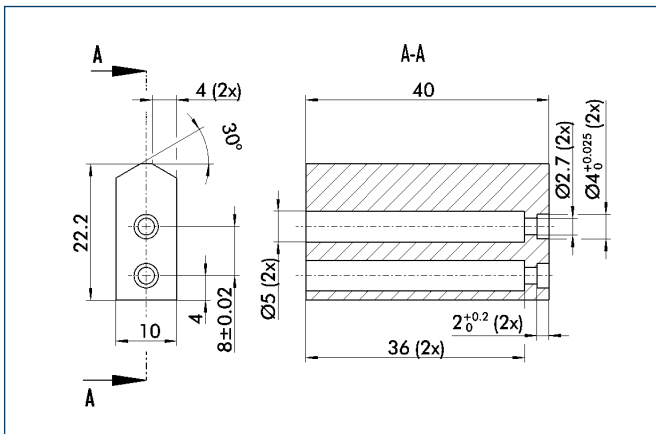
AS/IS gripping force safety device



- ⑩ Projection only with AS version

The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

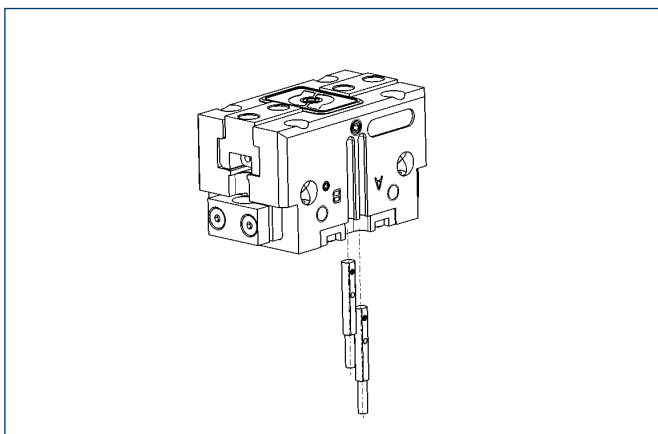
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 40	Aluminum	1	0300008
SBR-plus 40	1.6 MnCr 5	1	0300018

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

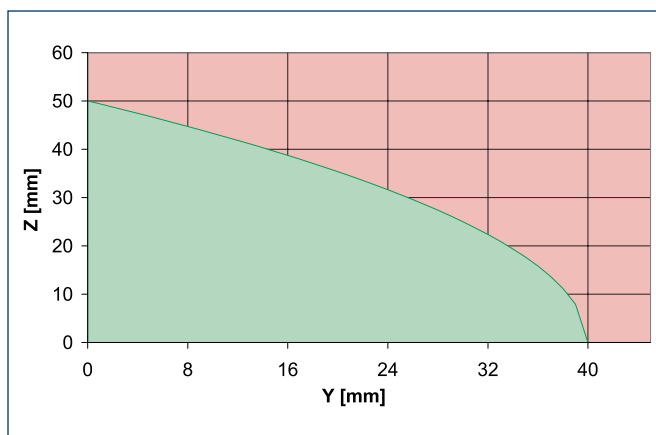
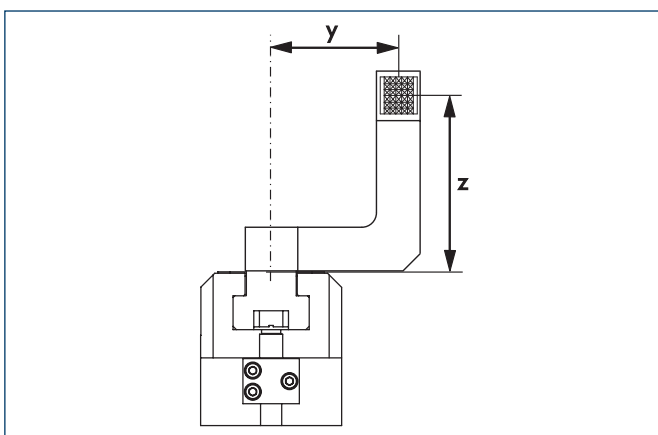
① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Maximum permitted finger offset



■ Permitted range
■ Non-permissible range

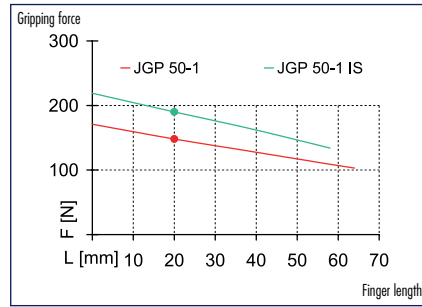
The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.



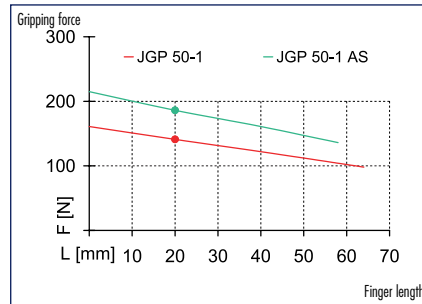
You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.



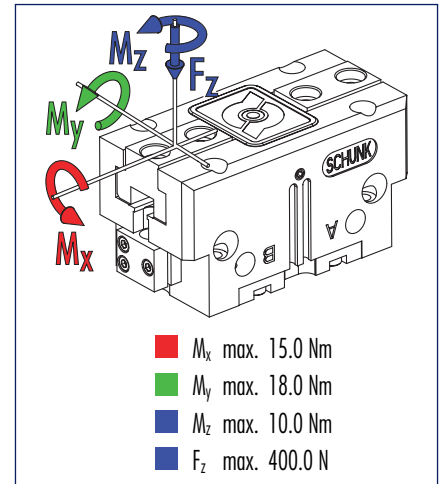
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

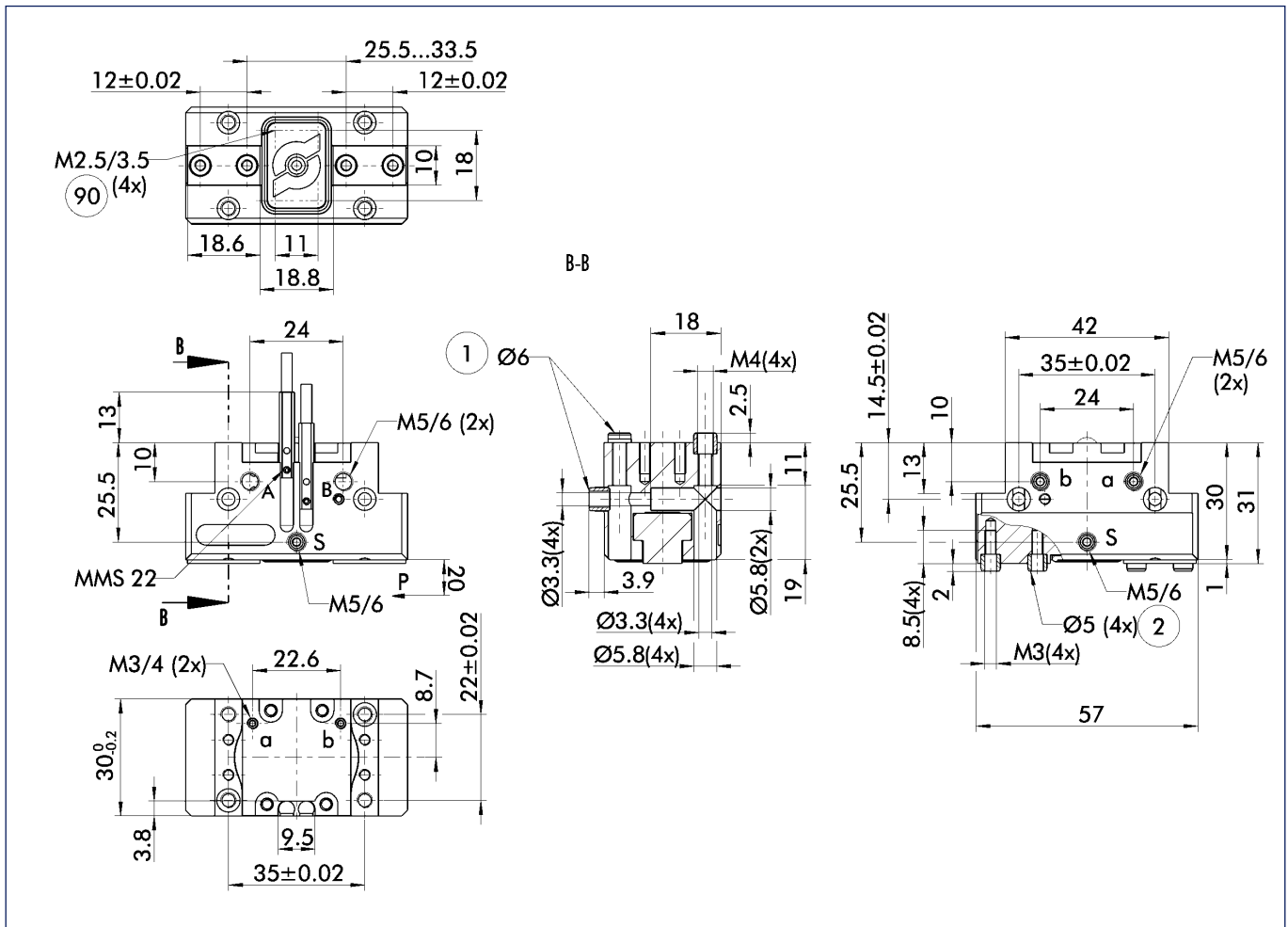


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 50-1	JGP 50-1 AS	JGP 50-1 IS
	ID	0308610	0308611	0308612
Stroke per jaw	[mm]	4.0	4.0	4.0
Closing force	[N]	140.0	185.0	
Opening force	[N]	145.0		190.0
Min. spring force	[N]		45.0	45.0
Weight	[kg]	0.15	0.2	0.2
Recommended workpiece weight	[kg]	0.7	0.7	0.7
Air consumption per double stroke	[cm ³]	5.0	12.0	12.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.02	0.02	0.02
Opening time	[s]	0.02	0.03	0.03
Max. permitted finger length	[mm]	64.0	58.0	60.0
Max. permitted weight per finger	[kg]	0.18	0.18	0.18
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

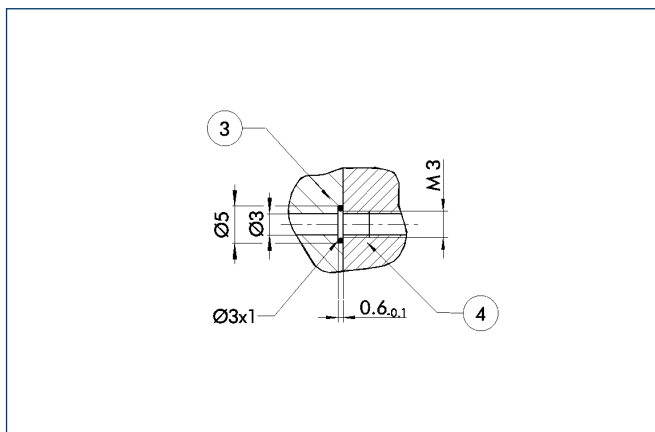


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⑨ Thread below the cover for fastening external attachments

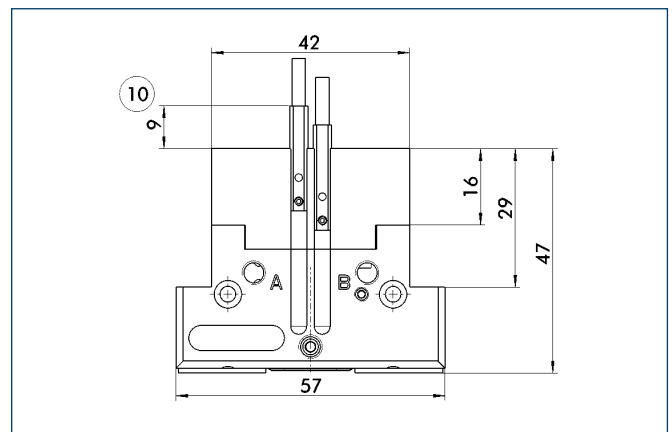
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

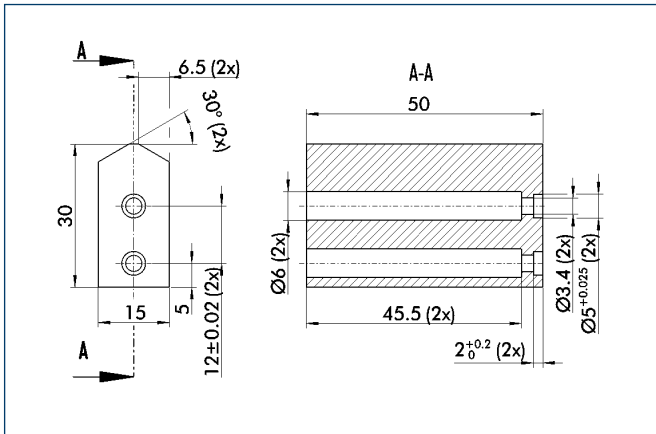
AS/IS gripping force safety device



- ⑩ Projection only with AS version

The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

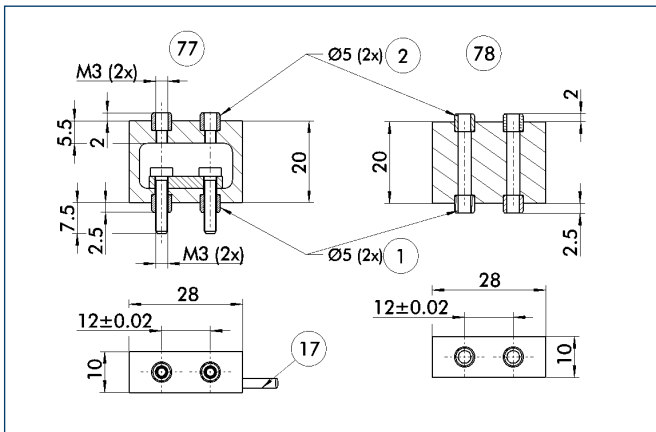
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 50	Aluminum	1	0300009
SBR-plus 50	16 MnCr 5	1	0300019

FMS force measuring jaws

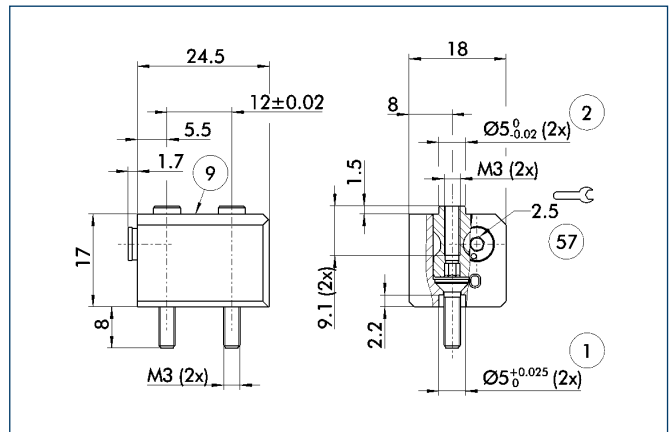


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passiv intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A1	0301810
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 50	0301830
FMS-ZBP 50	0301831

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤⑦ Locking mechanism

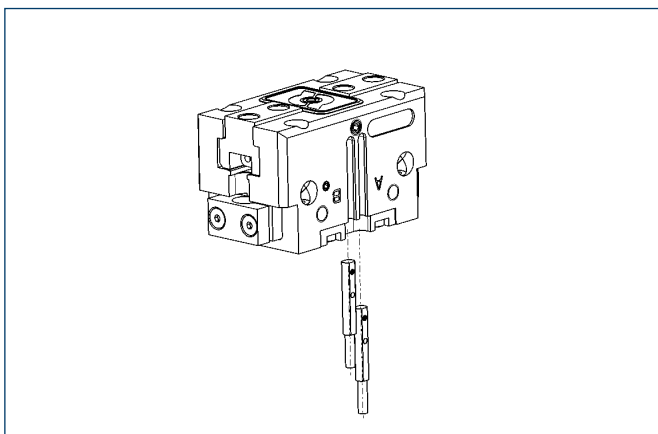
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 50	0303020
BSWS-B 50	0303021



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:

Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

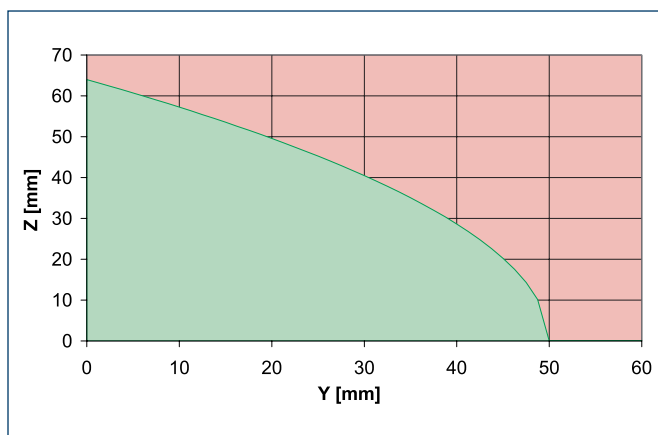
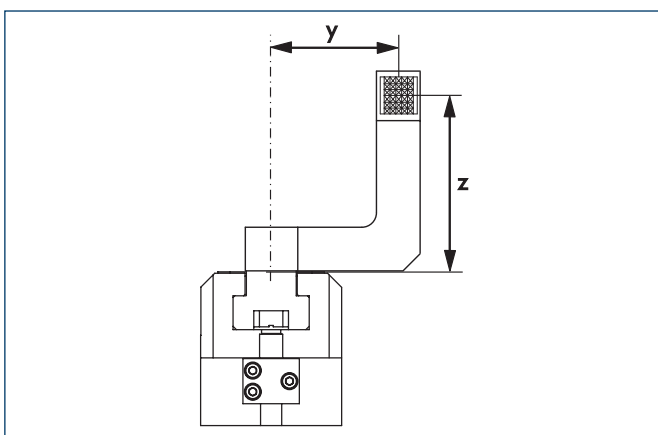
① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Maximum permitted finger offset



■ Permitted range
■ Non-permissible range

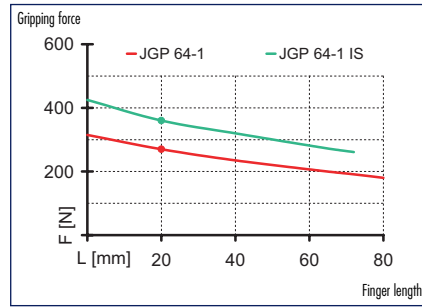
The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.



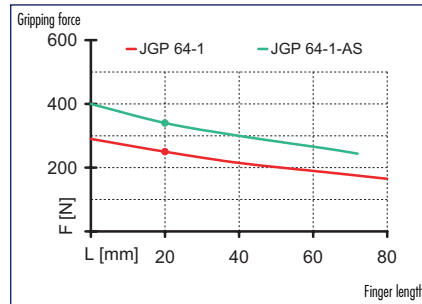
You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.



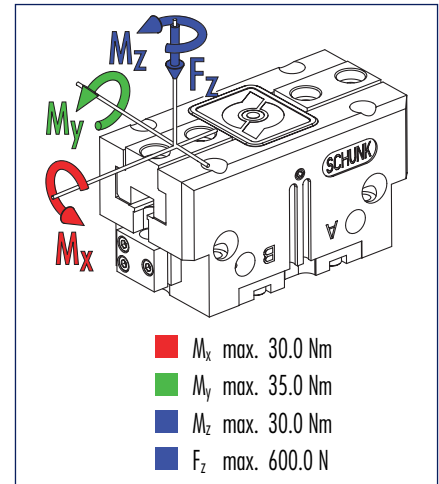
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

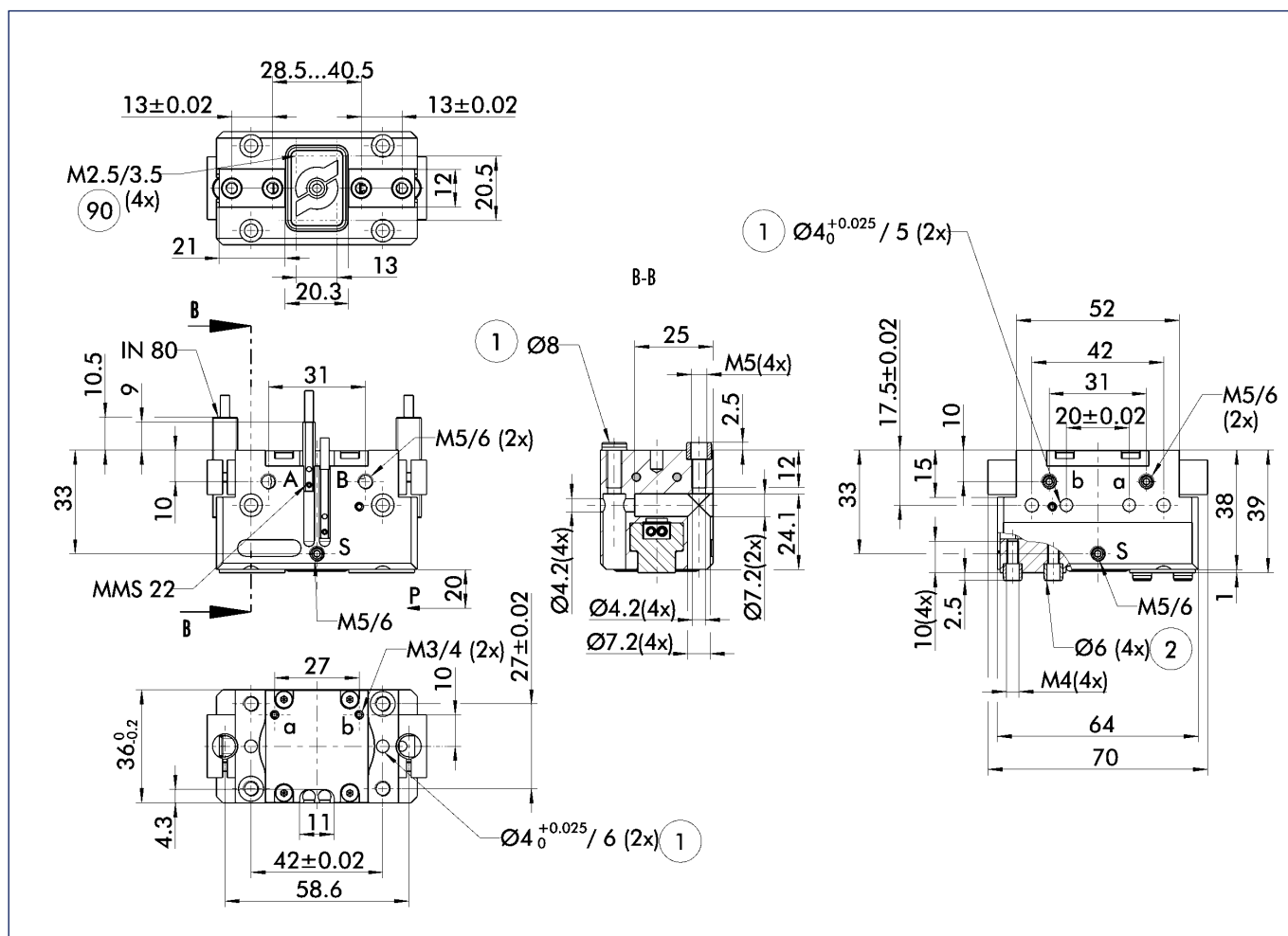


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 64-1	JGP 64-1-AS	JGP 64-1-IS
	ID	0308620	0308621	0308622
Stroke per jaw	[mm]	6.0	6.0	6.0
Closing force	[N]	250.0	340.0	
Opening force	[N]	270.0		360.0
Min. spring force	[N]		90.0	90.0
Weight	[kg]	0.28	0.37	0.37
Recommended workpiece weight	[kg]	1.25	1.25	1.25
Air consumption per double stroke	[cm ³]	9.0	9.0	9.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.03	0.02	0.04
Opening time	[s]	0.03	0.04	0.02
Max. permitted finger length	[mm]	80.0	72.0	72.0
Max. permitted weight per finger	[kg]	0.35	0.35	0.35
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

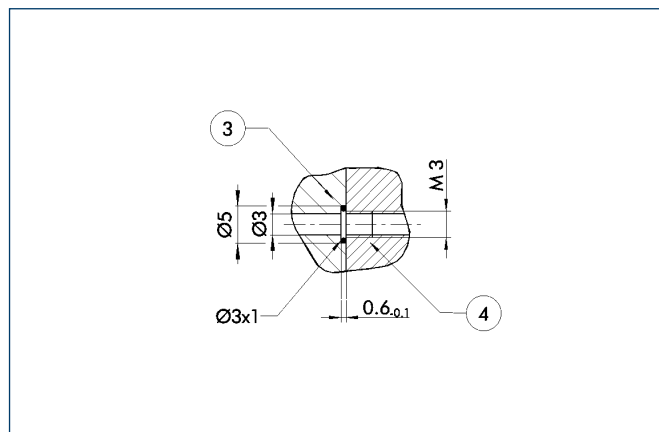


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

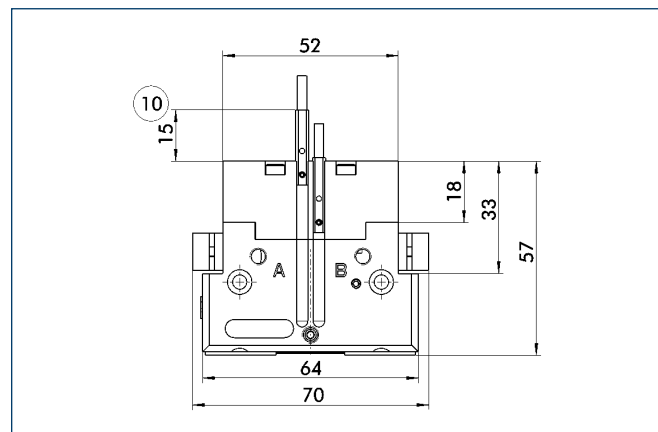
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

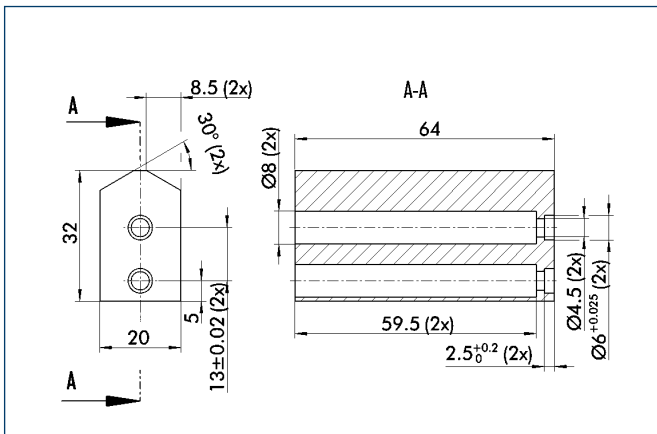
AS/IS gripping force safety device



- ⑩ Projection only with AS version

The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

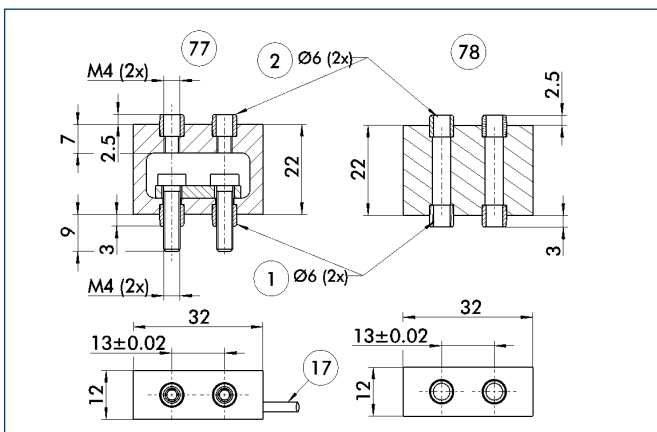
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 64	Aluminum	1	0300010
SBR-plus 64	16 MnCr 5	1	0300020

FMS force measuring jaws

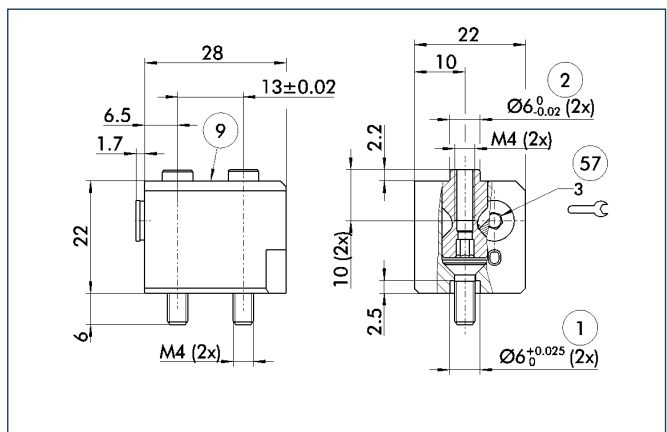


- ① Gripper connection
- ② Finger connection
- ①7 Cable outlet
- ⑦7 Active intermediate jaws
- ⑦8 Passiv intermediate jaws

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A1	0301810
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 64	0301832
FMS-ZBP 64	0301833

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤7 Locking mechanism

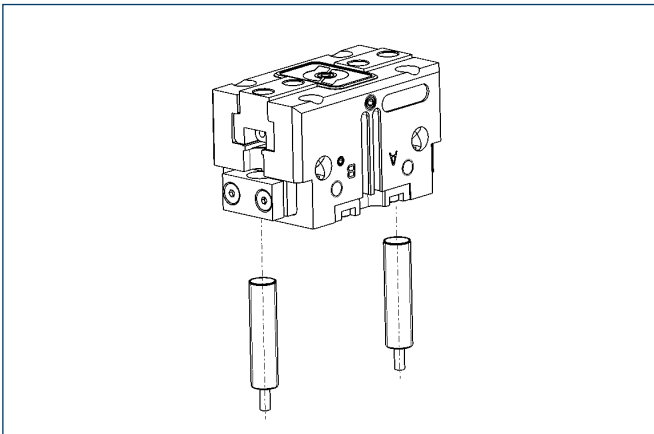
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 64	0303022
BSWS-B 64	0303023



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:
Inductive proximity switches, for direct mounting

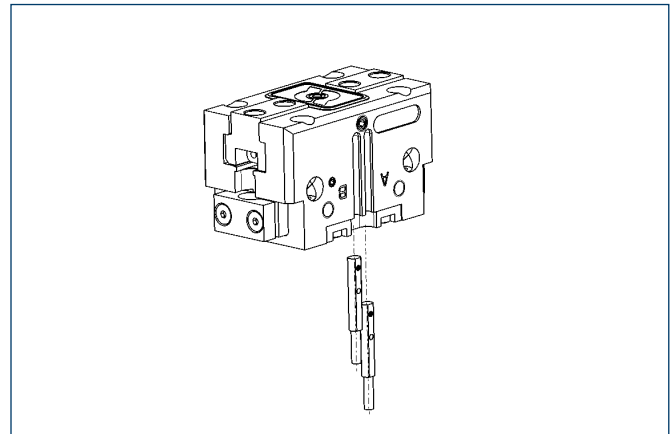
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
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

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

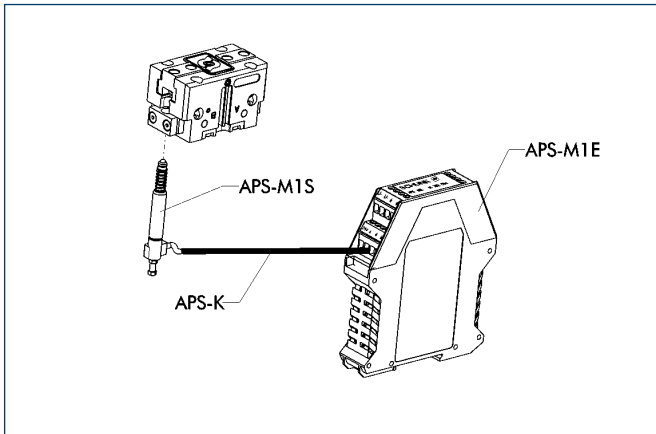
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system

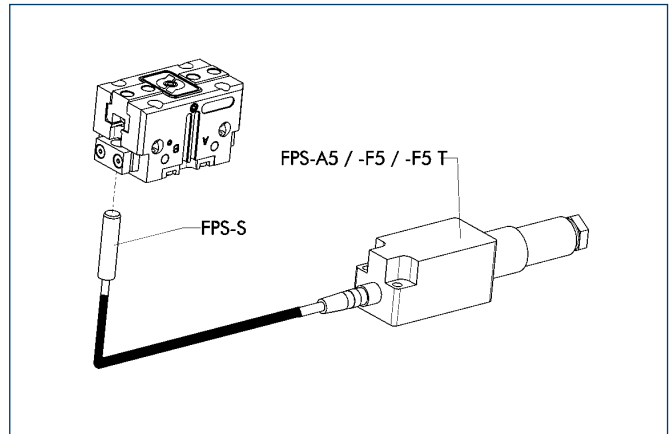


Measuring system:

APS Analog position sensor

Description	ID
APS-K0200	0302066
APS-K0700	0302068
APS-M1E	0302064
APS-M1S	0302062
AS-APS-M1-64/1	0302075

- ① When using an APS system, a mounting kit (AS-APS, incl. 3 m cable), an APS sensor (APS-M1S) and electronics (APS-M1E) are required for each gripper. An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.



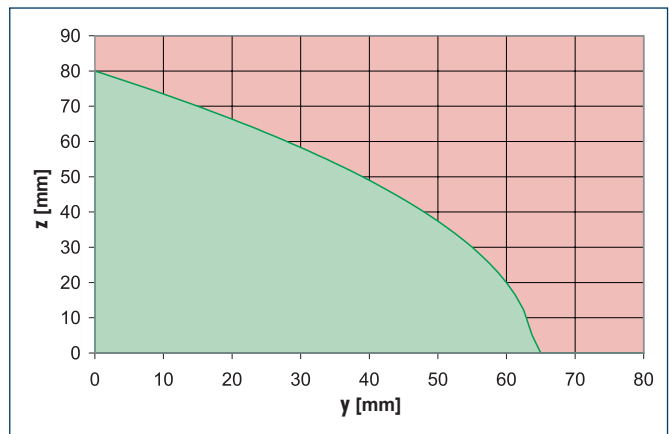
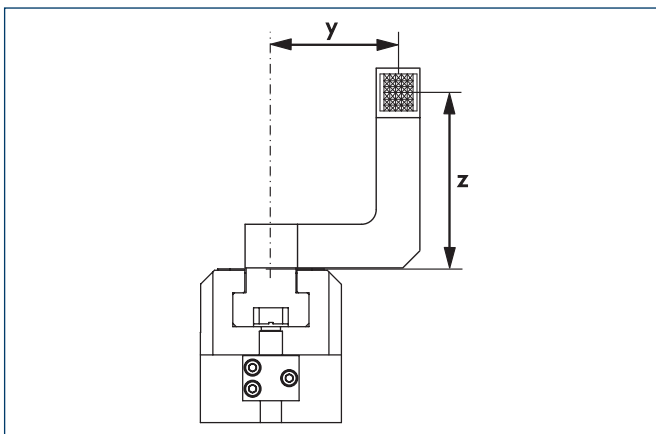
Measuring system:

FPS Flexible position sensor

Description	ID
AS-PGN/PZN-plus 64/1, PGN/PZN-plus 80/2	0301630
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S M8	0301704

- ① When using an FPS system, an FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the „Accessories“ catalog section.

Maximum permitted finger offset

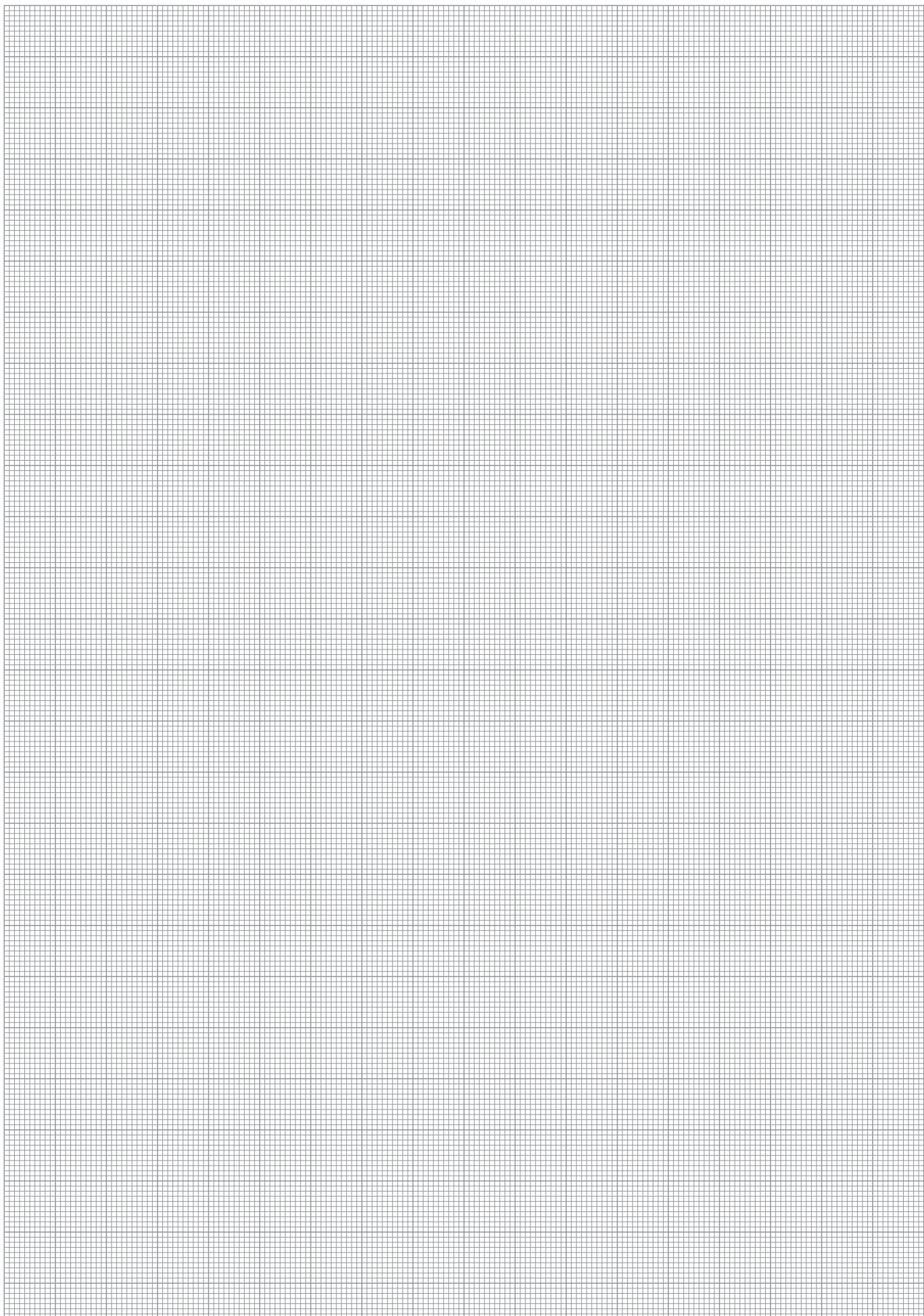


- Permitted range
- Non-permissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

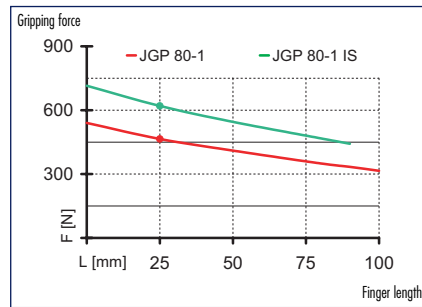


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

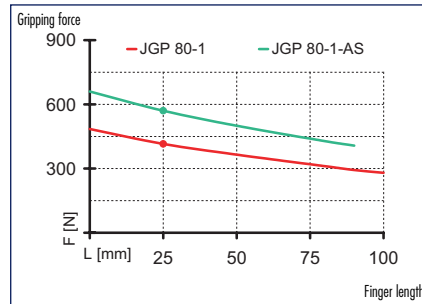




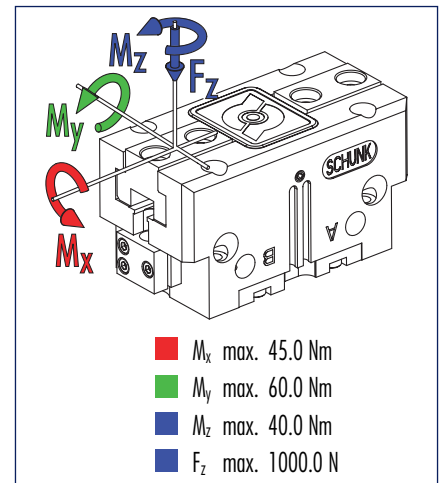
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

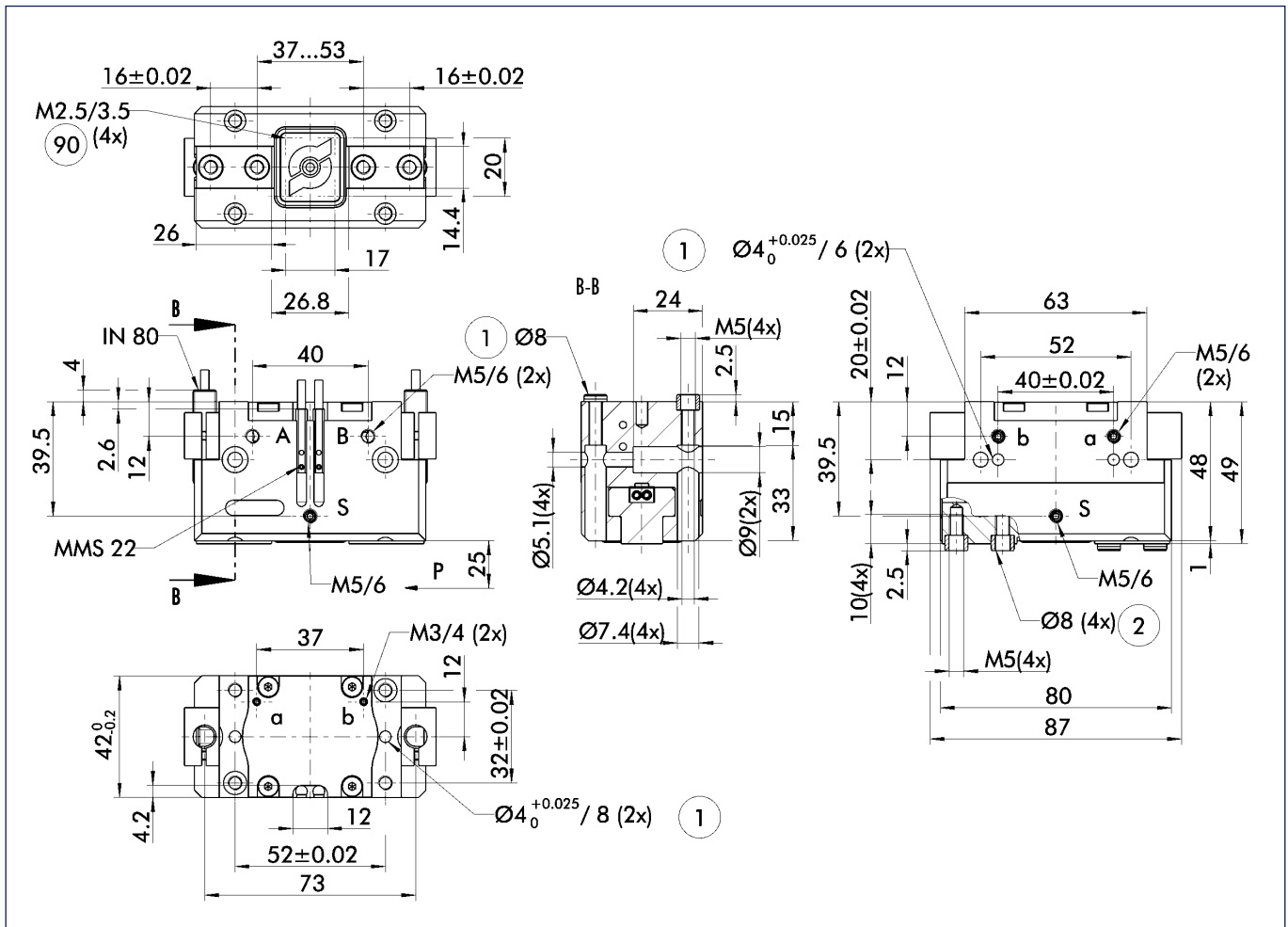


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 80-1	JGP 80-1-AS	JGP 80-1-IS
	ID	0308630	0308631	0308632
Stroke per jaw	[mm]	8.0	8.0	8.0
Closing force	[N]	415.0	570.0	
Opening force	[N]	465.0		620.0
Min. spring force	[N]		155.0	155.0
Weight	[kg]	0.5	0.6	0.6
Recommended workpiece weight	[kg]	2.1	2.1	2.1
Air consumption per double stroke	[cm ³]	21.0	21.0	21.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.04	0.03	0.05
Opening time	[s]	0.04	0.05	0.03
Max. permitted finger length	[mm]	100.0	90.0	90.0
Max. permitted weight per finger	[kg]	0.6	0.6	0.6
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

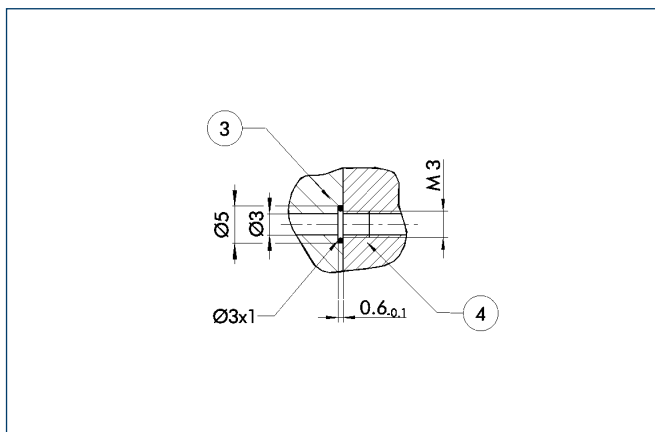


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⑨ Thread below the cover for fastening external attachments

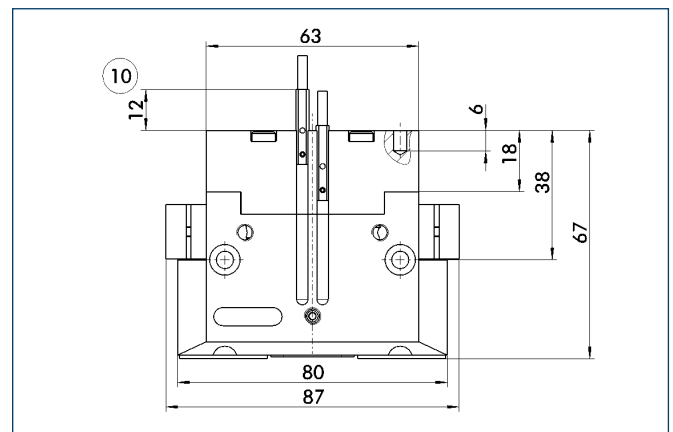
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

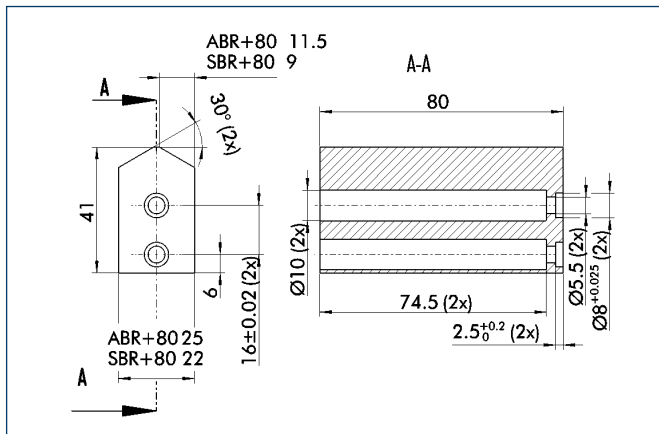
AS/IS gripping force safety device



- ⑩ Projection only with AS version

The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

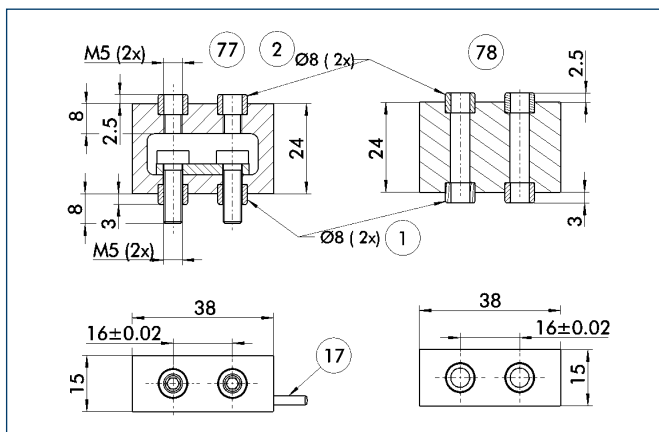
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 80	Aluminum	1	0300011
SBR-plus 80	16 MnCr 5	1	0300021

FMS force measuring jaws

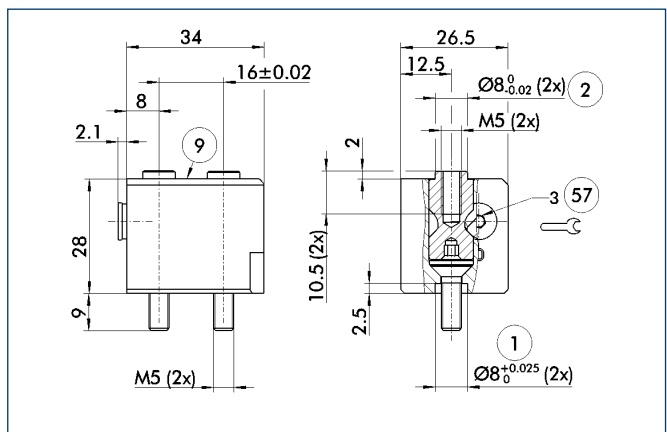


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passiv intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A1	0301810
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 80	0301834
FMS-ZBP 80	0301835

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤⑦ Locking mechanism

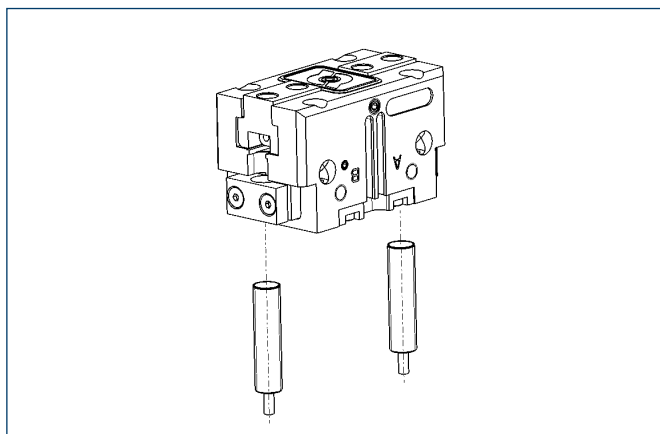
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 80	0303024
BSWS-B 80	0303025



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:
Inductive proximity switches, for direct mounting

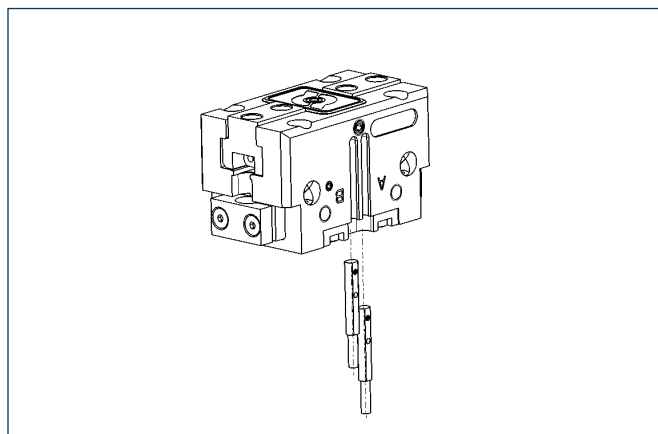
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
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

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

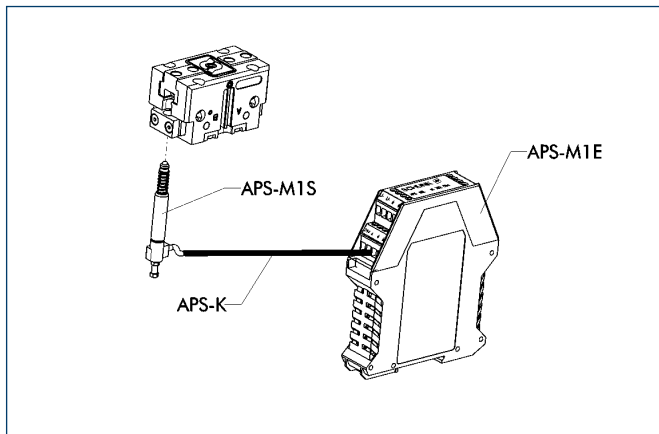
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system

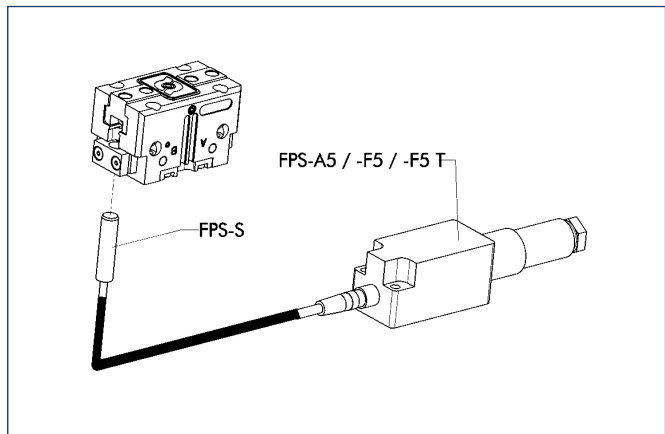


Measuring system:

APS Analog position sensor

Description	ID
APS-K0200	0302066
APS-K0700	0302068
APS-M1E	0302064
APS-M1S	0302062
AS-APS-M1-80/1	0302077

① When using an APS system, a mounting kit (AS-APS, incl. 3 m cable), an APS sensor (APS-M1S) and electronics (APS-M1E) are required for each gripper. An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.



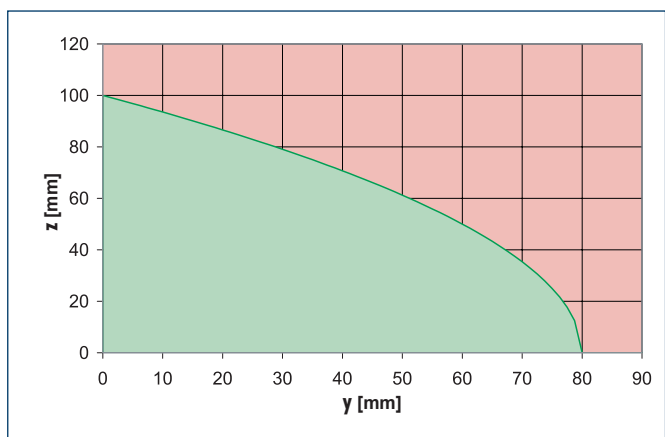
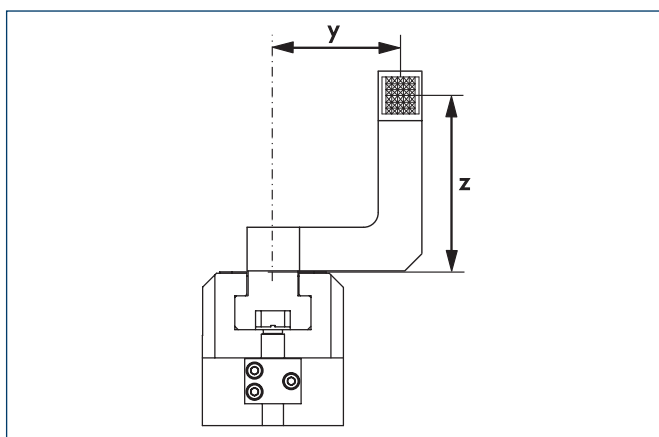
Measuring system:

FPS Flexible position sensor

Description	ID
AS-PGN-plus/PZN-plus 80/1, PZB 80/100	0301632
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S M8	0301704

① When using an FPS system, an FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the „Accessories“ catalog section.

Maximum permitted finger offset

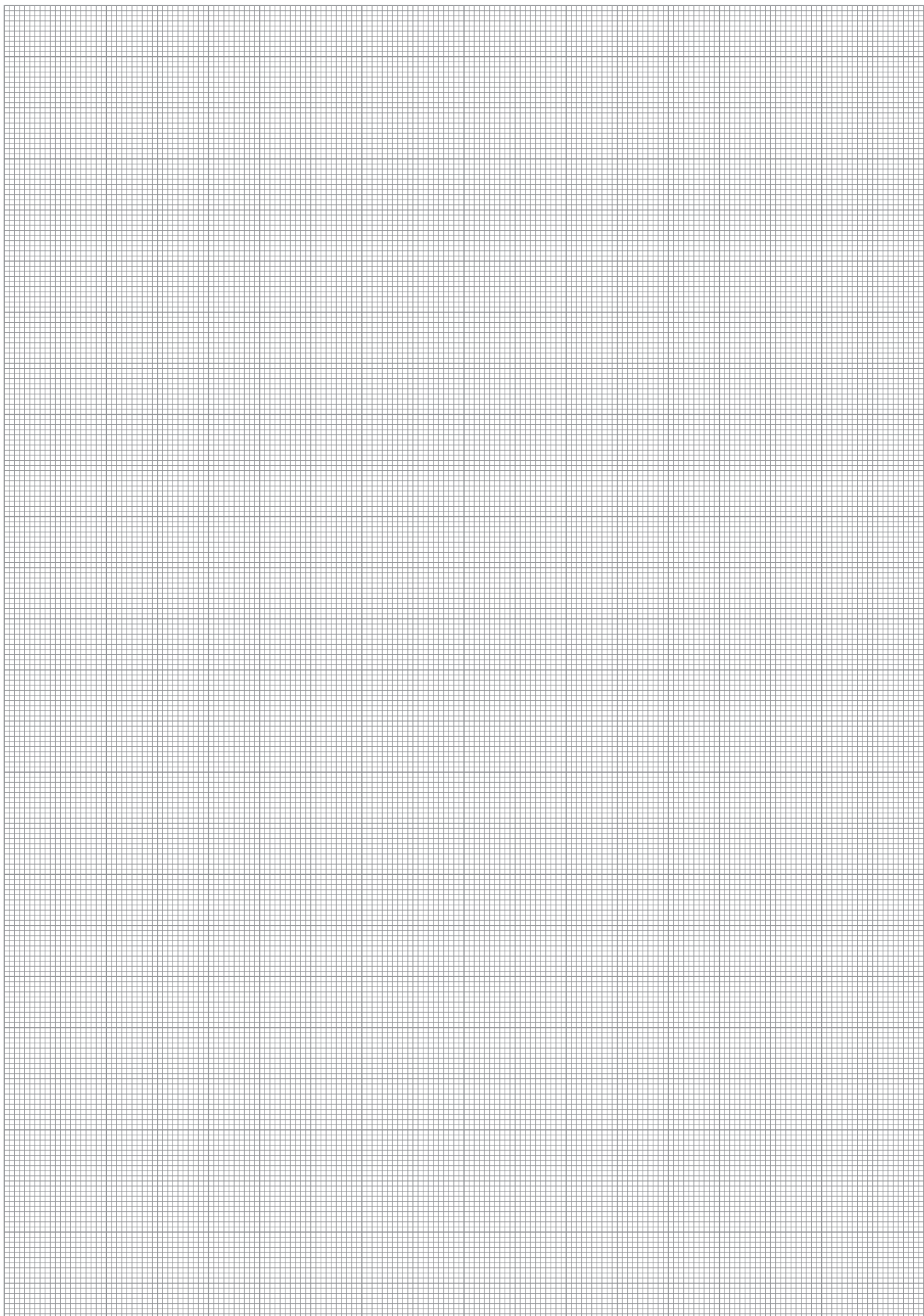


■ Permitted range
■ Non-permissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

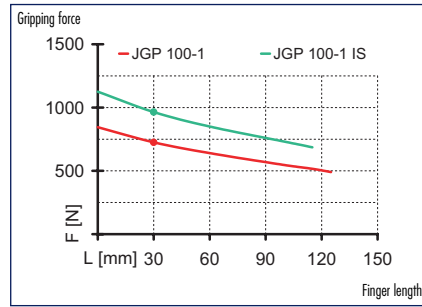


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

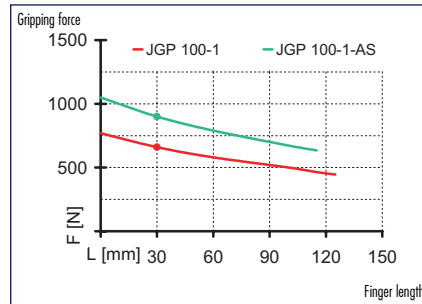




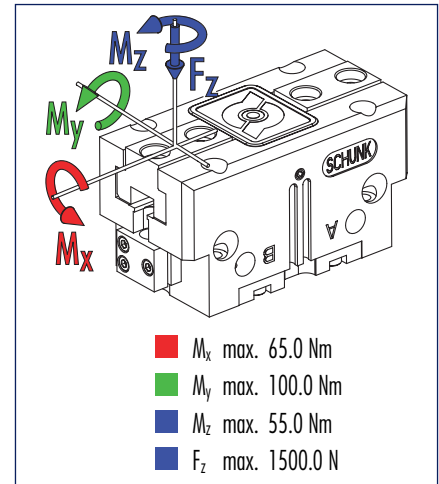
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

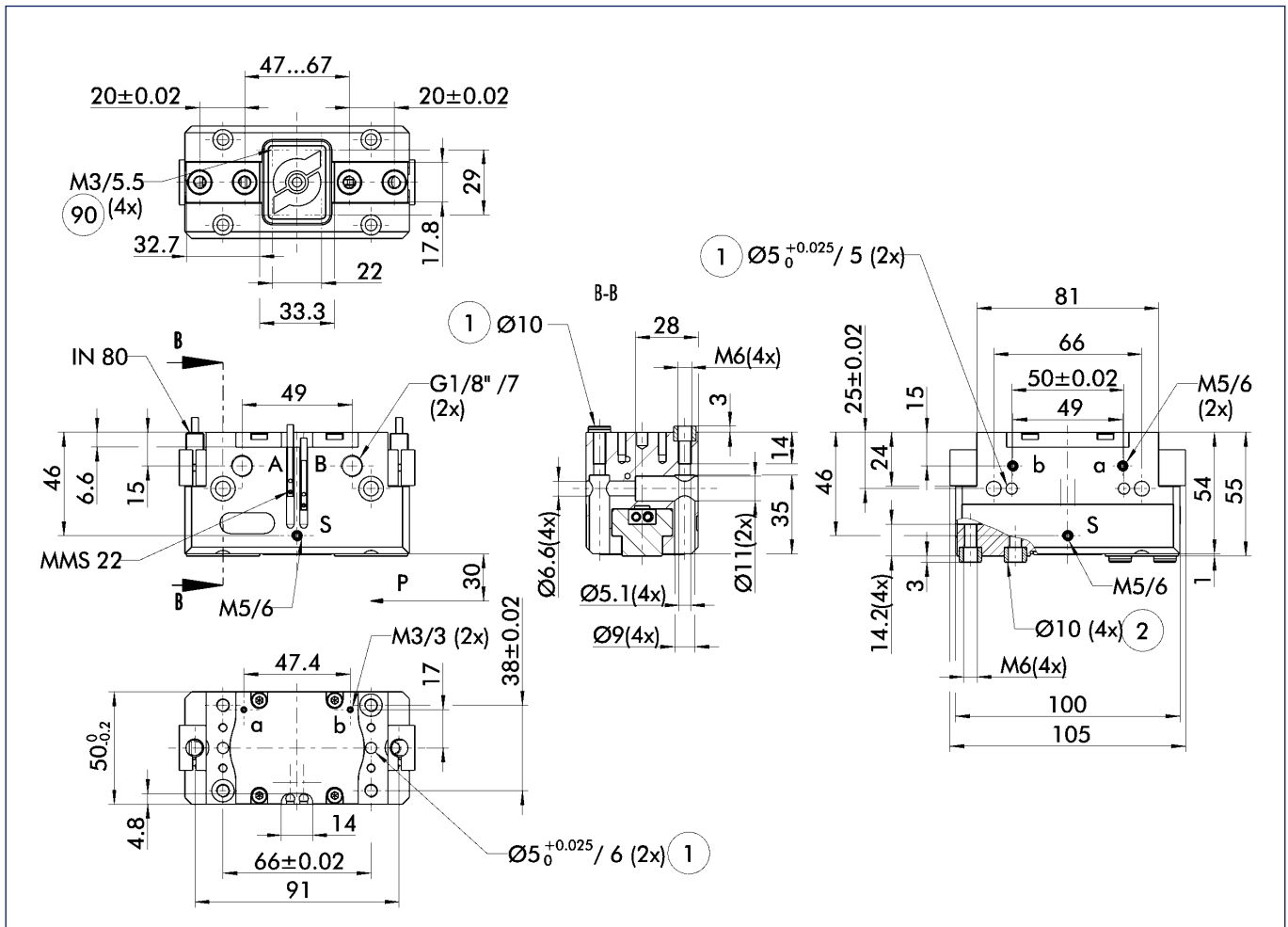


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 100-1	JGP 100-1-AS	JGP 100-1-IS
	ID	0308640	0308641	0308642
Stroke per jaw	[mm]	10.0	10.0	10.0
Closing force	[N]	660.0	900.0	
Opening force	[N]	725.0		965.0
Min. spring force	[N]		240.0	240.0
Weight	[kg]	0.81	1.0	1.0
Recommended workpiece weight	[kg]	3.3	3.3	3.3
Air consumption per double stroke	[cm ³]	40.0	40.0	40.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.07	0.05	0.09
Opening time	[s]	0.07	0.09	0.05
Max. permitted finger length	[mm]	125.0	115.0	115.0
Max. permitted weight per finger	[kg]	1.1	1.1	1.1
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

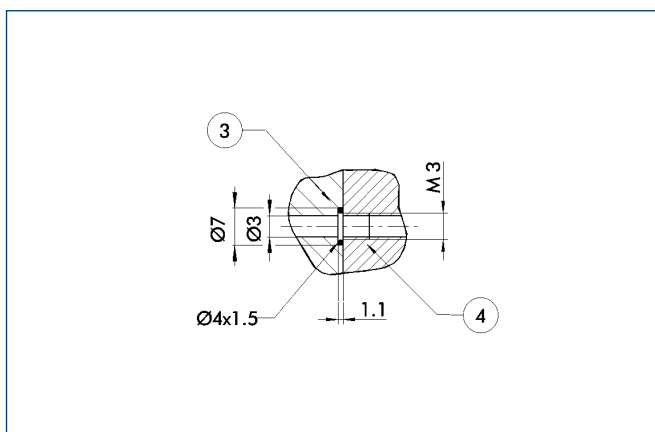


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

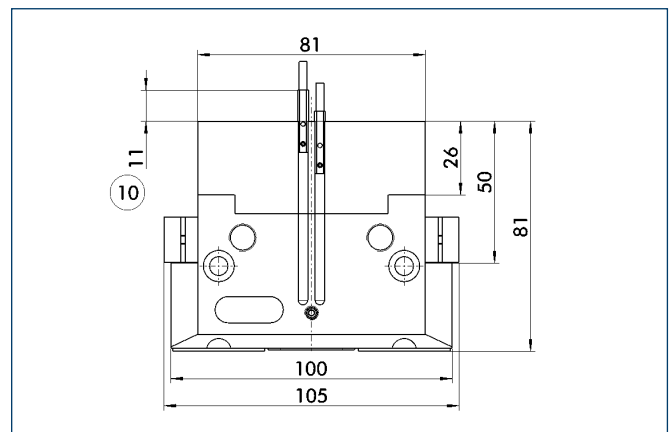
Hose-free direct connection



- ③ Adapter
- ④ Gripper

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

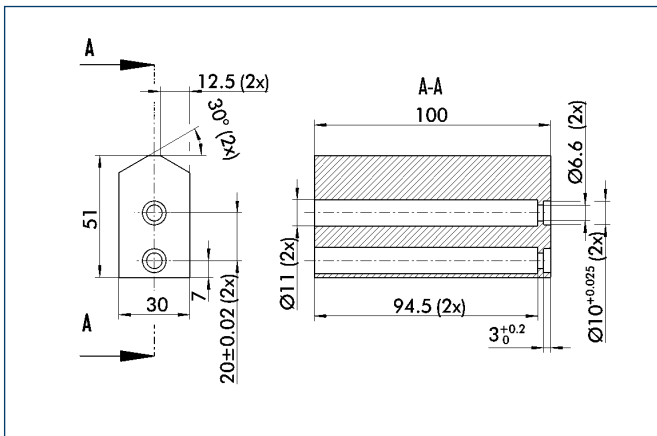
AS/IS gripping force safety device



- ⑩ Projection only with AS version

The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

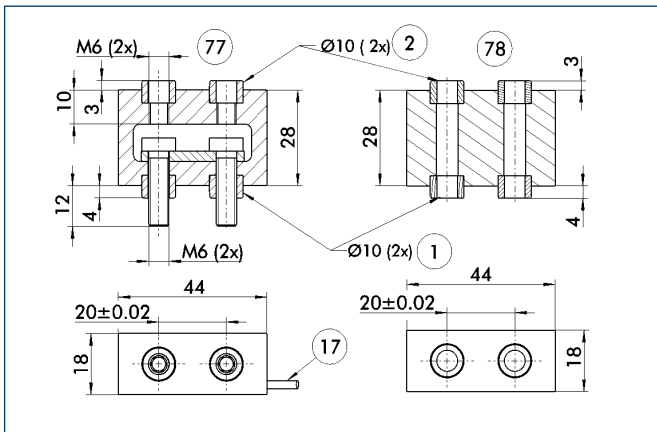
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 100	Aluminum	1	0300012
SBR-plus 100	16 MnCr 5	1	0300022

FMS force measuring jaws

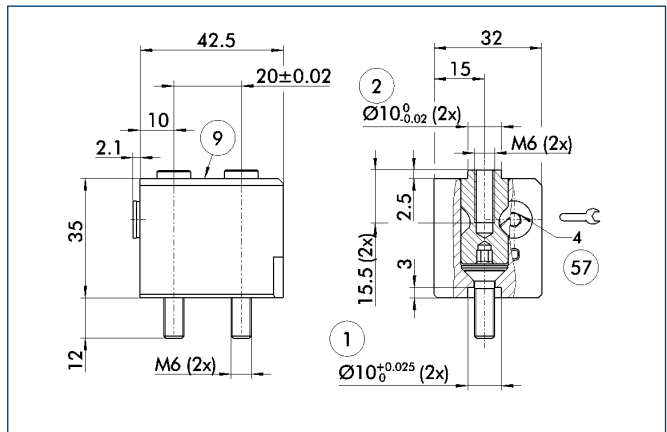


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passive intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A1	0301810
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 100	0301836
FMS-ZBP 100	0301837

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤⑦ Locking mechanism

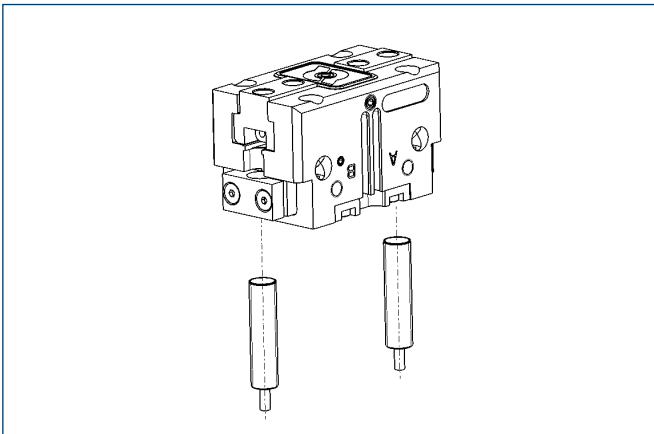
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 100	0303026
BSWS-B 100	0303027



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:
Inductive proximity switches, for direct mounting

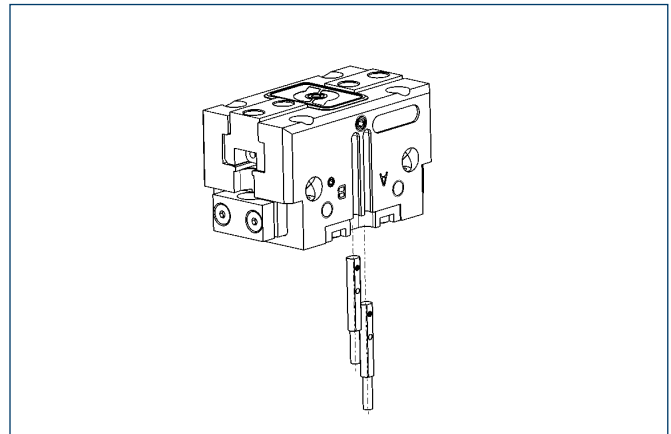
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
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

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

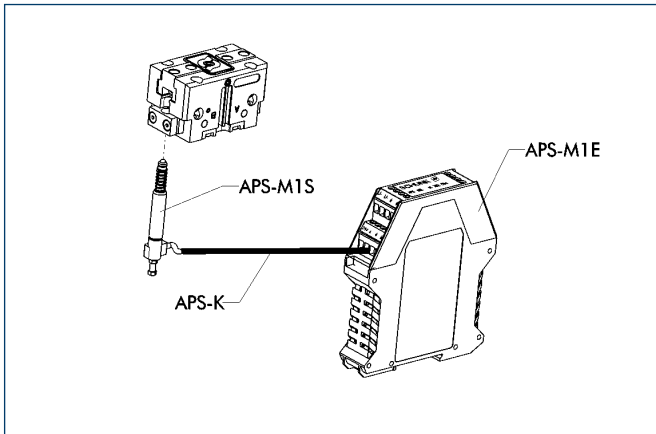
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system

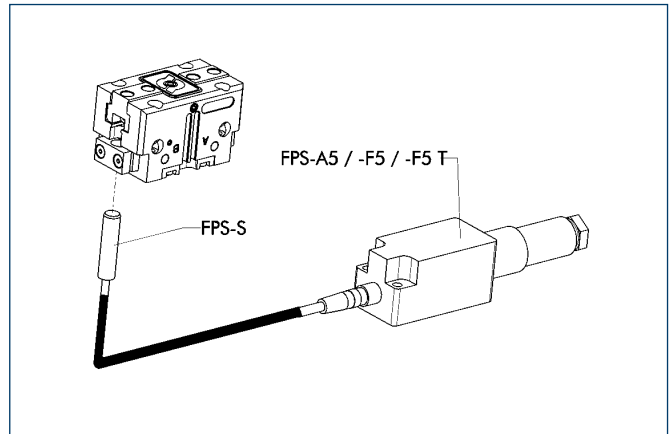


Measuring system:

APS Analog position sensor

Description	ID
APS-K0200	0302066
APS-K0700	0302068
APS-M1E	0302064
APS-M1S	0302062
AS-APS-M1-100/1	0302079

① When using an APS system, a mounting kit (AS-APS, incl. 3 m cable), an APS sensor (APS-M1S) and electronics (APS-M1E) are required for each gripper. An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.



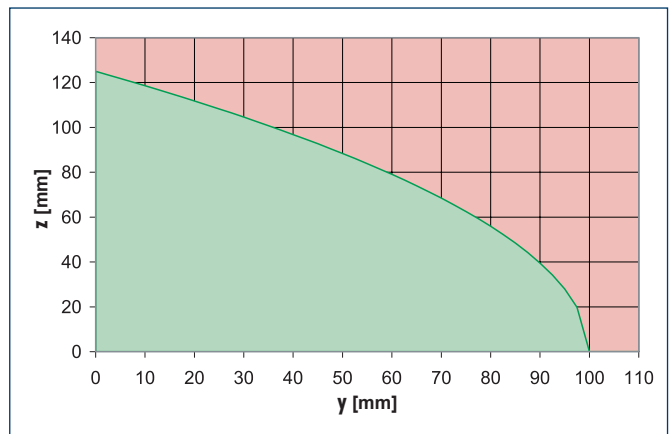
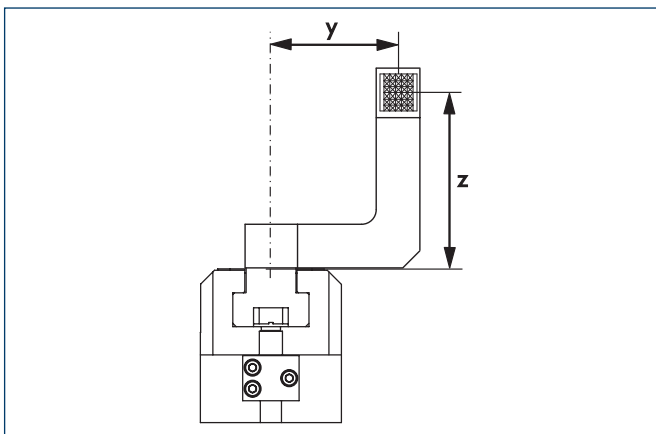
Measuring system:

FPS Flexible position sensor

Description	ID
AS-PGN/PZN-plus 100/1	0301634
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S M8	0301704

① When using an FPS system, an FPS sensor (FPS-S) and an control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the „Accessories“ catalog section.

Maximum permitted finger offset

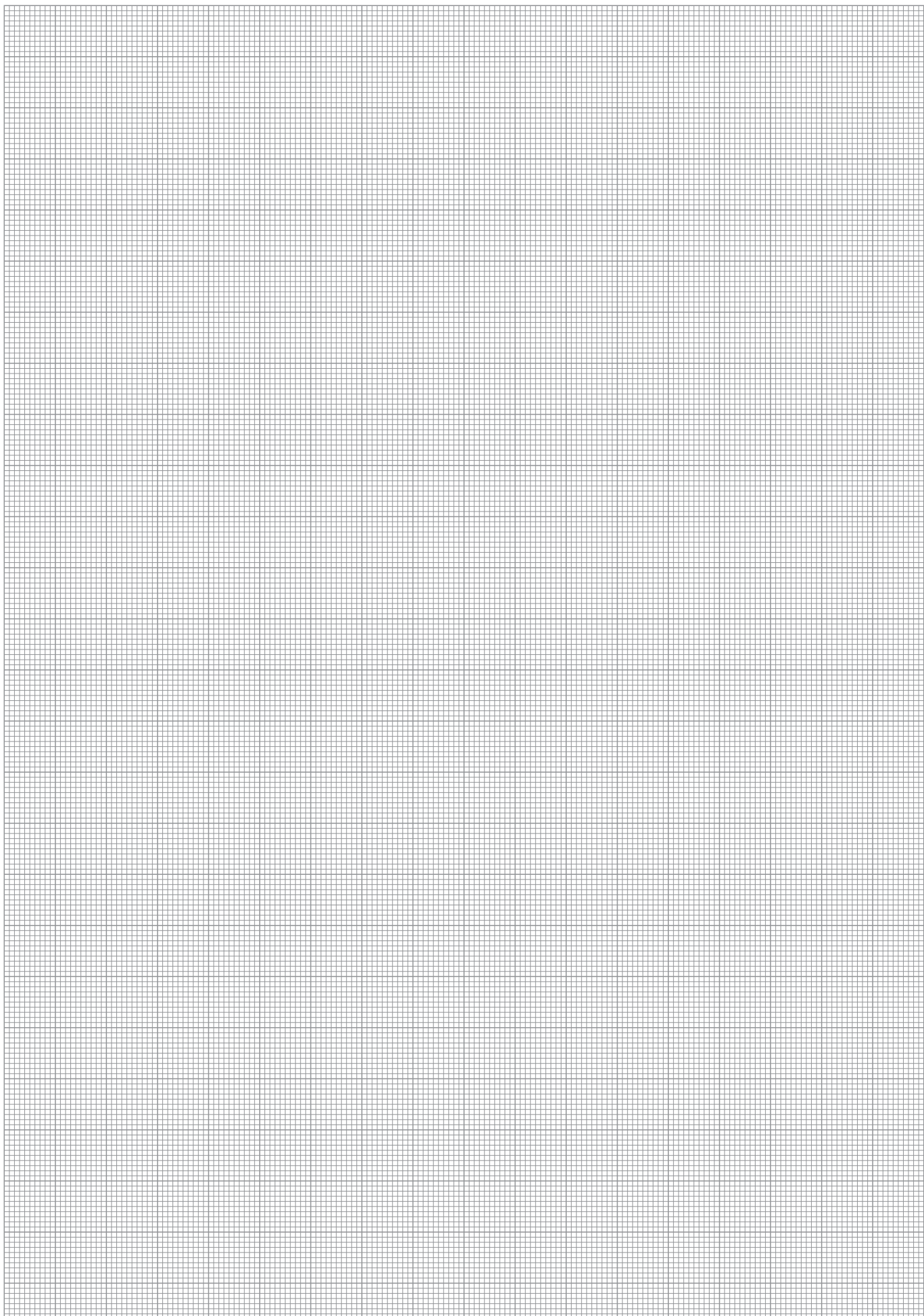


■ Permitted range
■ Non-permissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

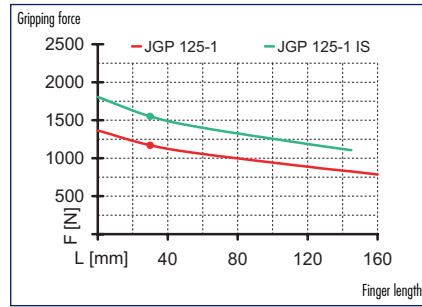


You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

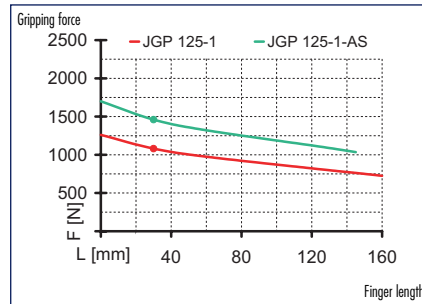




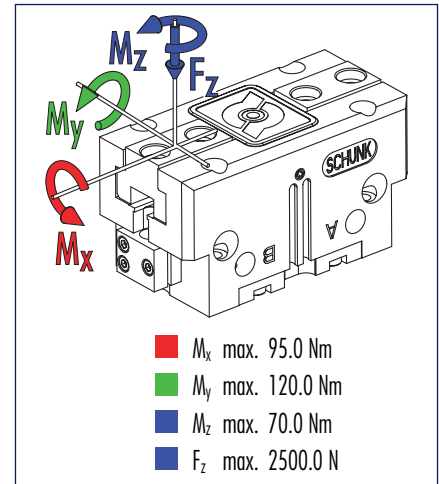
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

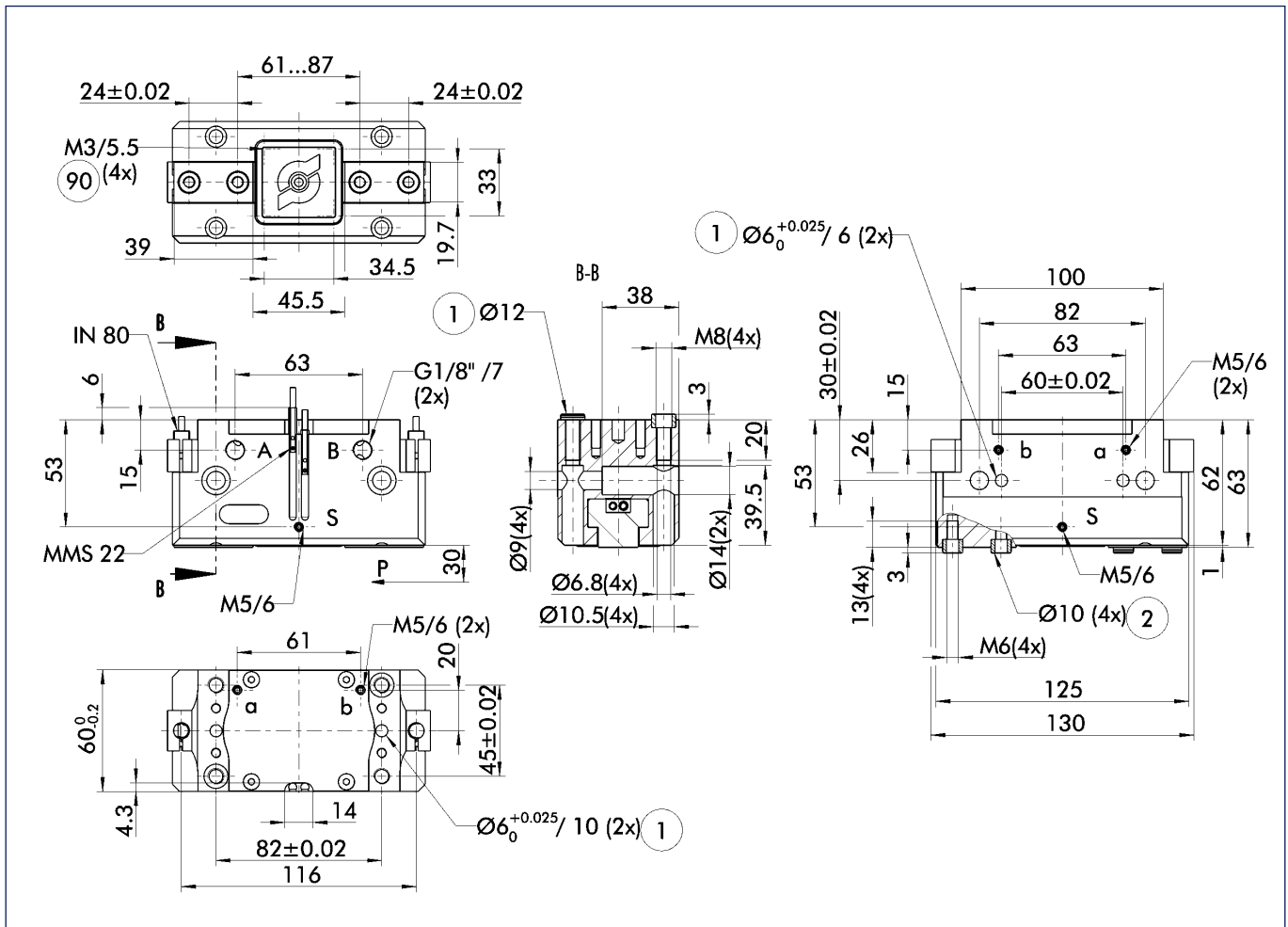


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 125-1	JGP 125-1-AS	JGP 125-1-IS
	ID	0308650	0308651	0308652
Stroke per jaw	[mm]	13.0	13.0	13.0
Closing force	[N]	1080.0	1470.0	
Opening force	[N]	1170.0		1560.0
Min. spring force	[N]		390.0	390.0
Weight	[kg]	1.35	1.85	1.85
Recommended workpiece weight	[kg]	5.4	5.4	5.4
Air consumption per double stroke	[cm ³]	81.0	81.0	81.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.1	0.08	0.12
Opening time	[s]	0.1	0.12	0.08
Max. permitted finger length	[mm]	160.0	145.0	145.0
Max. permitted weight per finger	[kg]	2.1	2.1	2.1
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

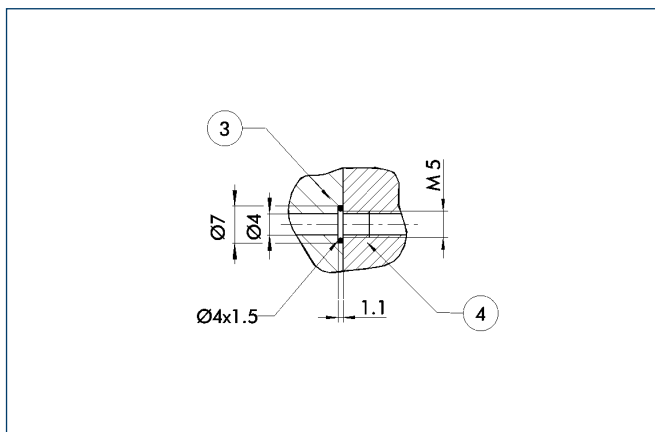


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- 90 Thread below the cover for fastening external attachments

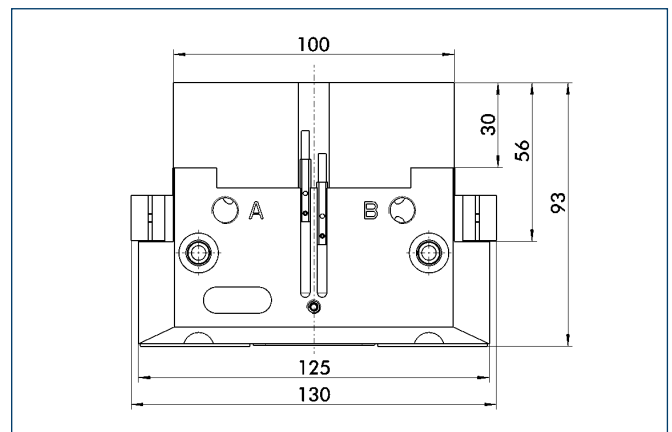
Hose-free direct connection



- ③ Adapter
- ④ Gripper

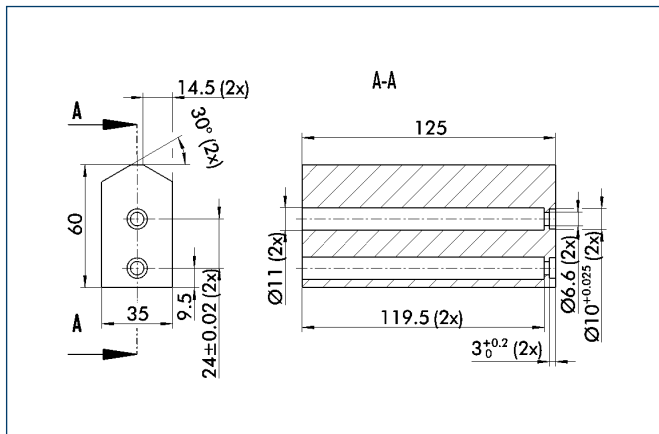
The direct connection is used for supplying compressed air to the gripper without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force safety device



The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

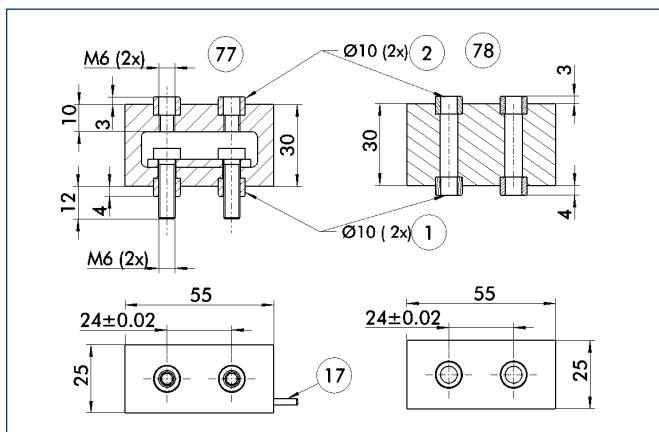
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 125	Aluminum	1	0300013
SBR-plus 125	16 MnCr 5	1	0300023

FMS force measuring jaws

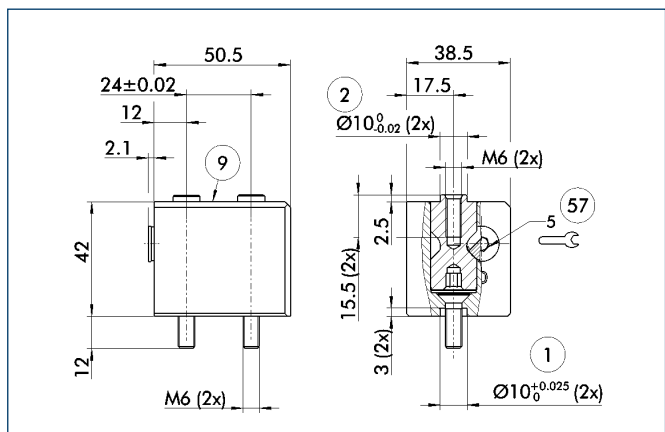


- ① Gripper connection
- ② Finger connection
- ①7 Cable outlet
- ⑦7 Active intermediate jaws
- ⑦8 Passiv intermediate jaws

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A1	0301810
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 125	0301838
FMS-ZBP 125	0301839

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤7 Locking mechanism

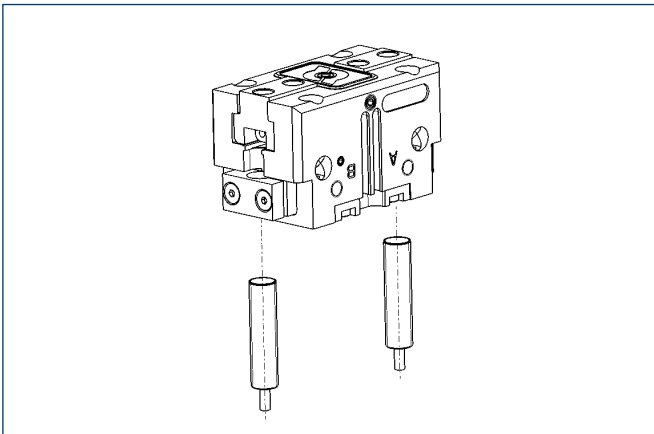
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 125	0303028
BSWS-B 125	0303029



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:
Inductive proximity switches, for direct mounting

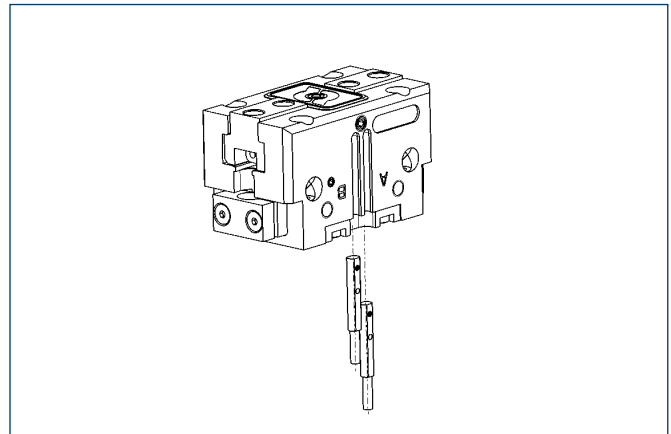
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
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

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

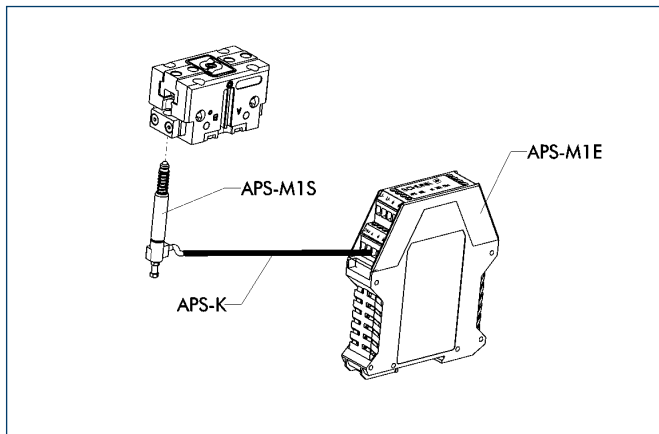
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system

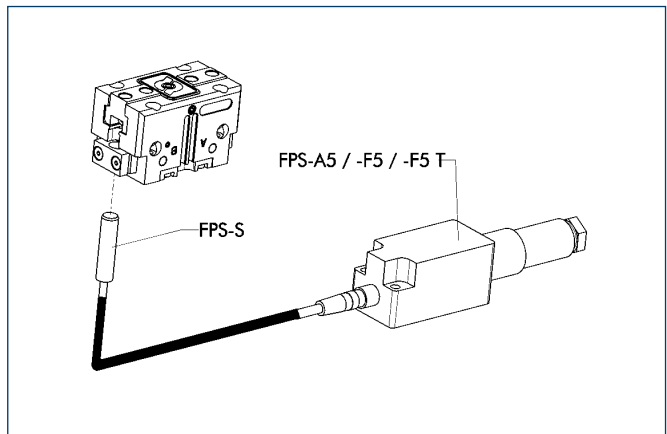


Measuring system:

APS Analog position sensor

Description	ID
APS-K0200	0302066
APS-K0700	0302068
APS-M1E	0302064
APS-M1S	0302062
AS-APS-M1-125/1	0302081

- ① When using an APS system, a mounting kit (AS-APS, incl. 3 m cable), an APS sensor (APS-M1S) and electronics (APS-M1E) are required for each gripper. An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.



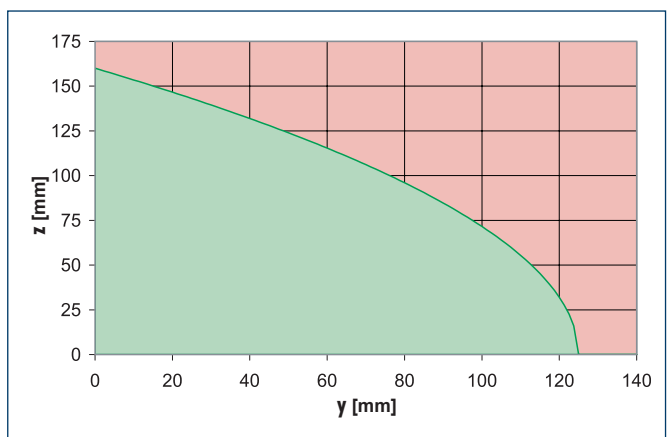
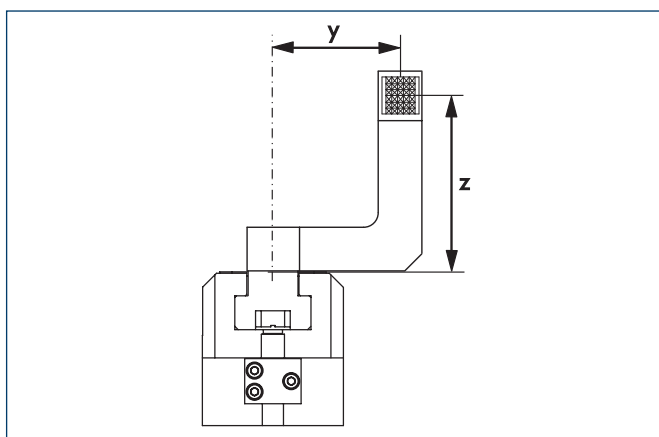
Measuring system:

FPS Flexible position sensor

Description	ID
AS-PGN/PZN-plus 125/1, PZB 160	0301636
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S M8	0301704

- ① When using an FPS system, an FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the „Accessories“ catalog section.

Maximum permitted finger offset

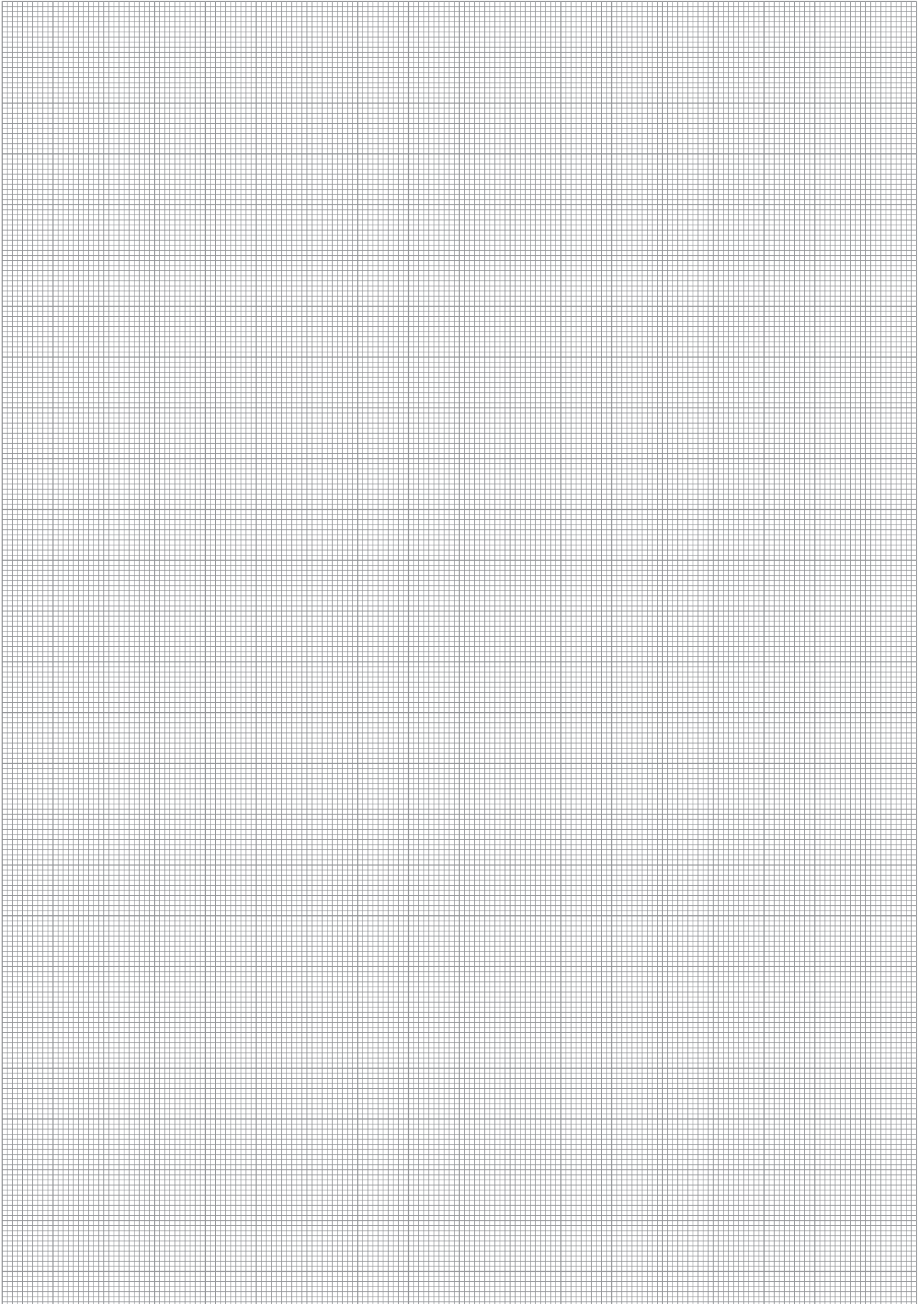


- Permitted range
- Non-permissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

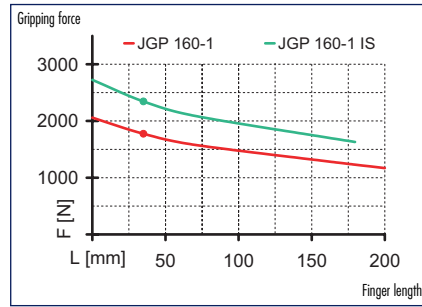


JGP 160

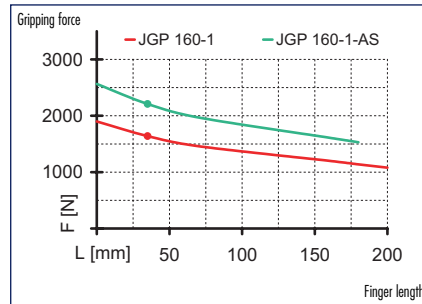
Pneumatic · 2-Finger Parallel Gripper · **Universal Gripper**



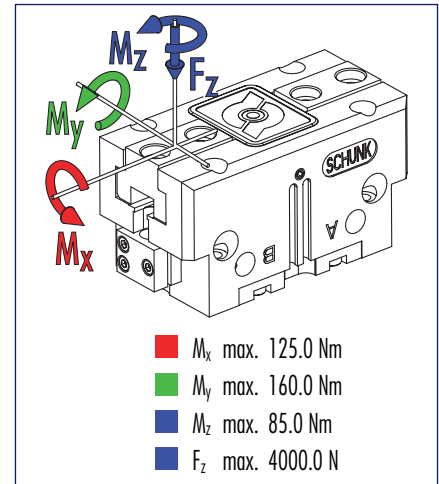
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

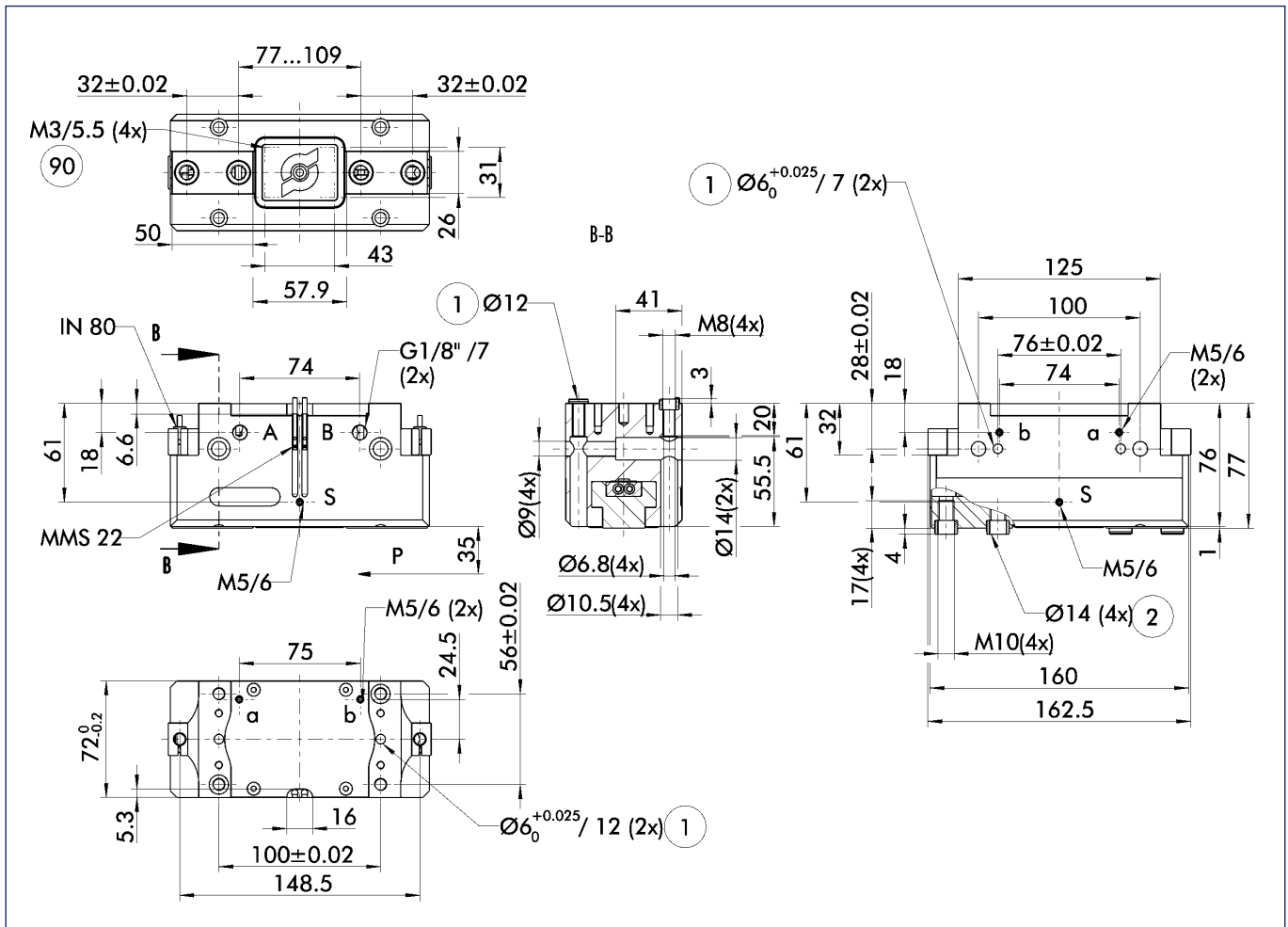


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may reduce.

Technical data

Description		JGP 160-1	JGP 160-1-AS	JGP 160-1-IS
	ID	0308660	0308661	0308662
Stroke per jaw	[mm]	16.0	16.0	16.0
Closing force	[N]	1640.0	2210.0	
Opening force	[N]	1770.0		2340.0
Min. spring force	[N]		570.0	570.0
Weight	[kg]	2.6	3.3	3.3
Recommended workpiece weight	[kg]	8.2	8.2	8.2
Air consumption per double stroke	[cm ³]	157.0	157.0	157.0
Minimum pressure	[bar]	2.5	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Nominal pressure	[bar]	6.0	6.0	6.0
Closing time	[s]	0.15	0.12	0.25
Opening time	[s]	0.15	0.25	0.12
Max. permitted finger length	[mm]	200.0	180.0	180.0
Max. permitted weight per finger	[kg]	3.5	3.5	3.5
IP rating		40	40	40
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.01	0.01	0.01

Main views

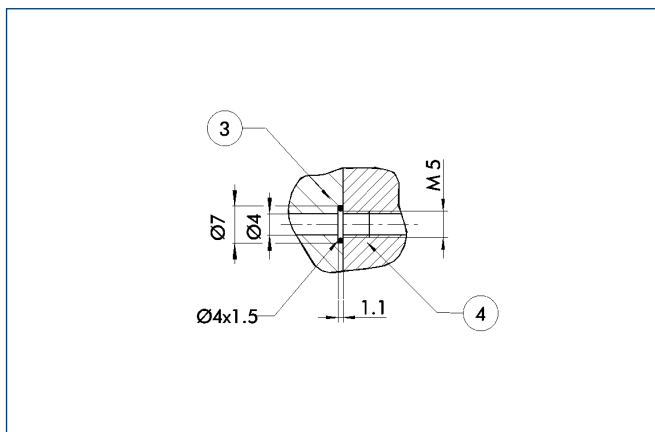


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can also be used (see „Accessories“ catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- S,s Air purge or ventilation hole
- ① Gripper connection
- ② Finger connection
- ⑨ Thread below the cover for fastening external attachments

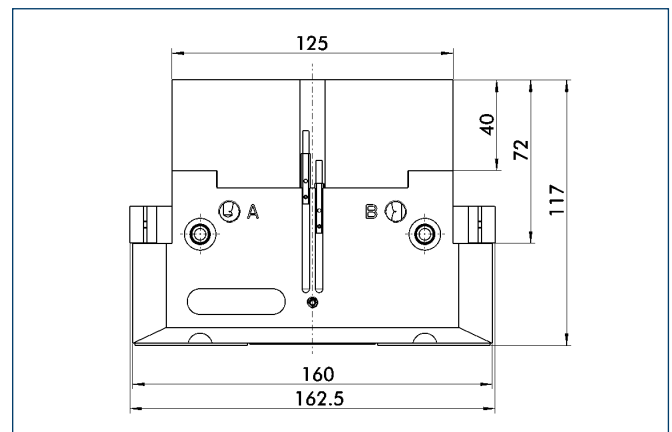
Hose-free direct connection



- ③ Adapter
- ④ Gripper

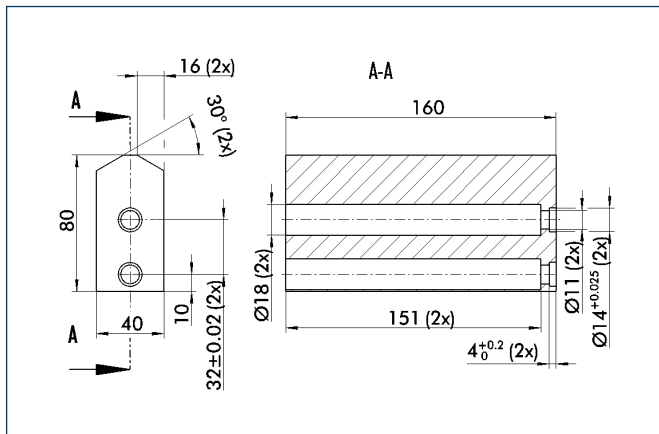
The direct connection is used for supplying compressed air to the gripper without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

AS/IS gripping force safety device



The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for single-acting gripping.

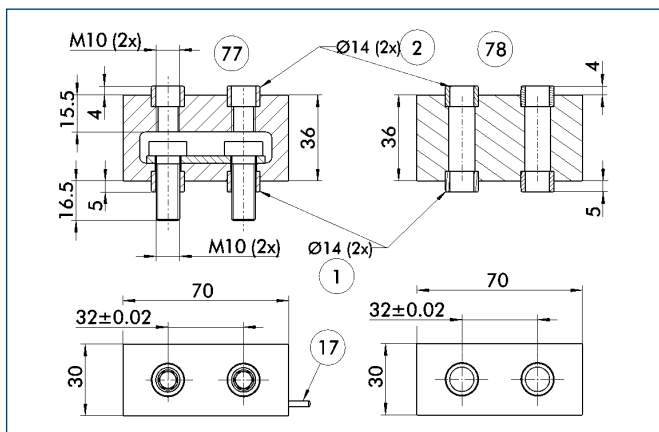
Finger blanks



Finger blanks for customized subsequent machining, incl. screw connection diagram

Description	Material	Scope of delivery	ID
ABR-plus 160	Aluminum	1	0300014
SBR-plus 160	16 MnCr 5	1	0300024

FMS force measuring jaws

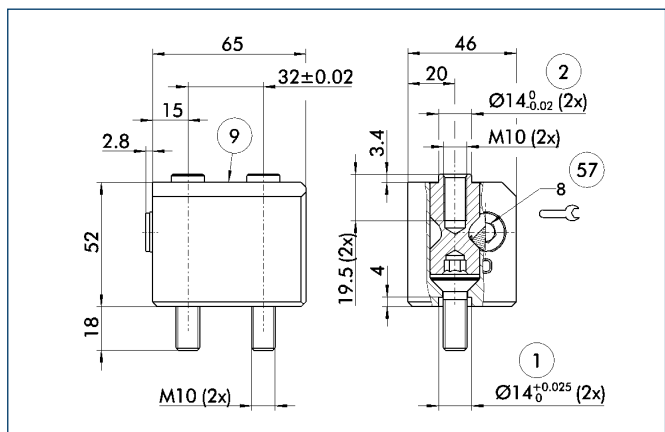


- ① Gripper connection
- ② Finger connection
- ⑦ Active intermediate jaws
- ⑧ Passiv intermediate jaws
- ⑰ Cable outlet

Force measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force measuring jaw is required per gripper, the rest can be passive. For each active jaw, an FMS-A1 control unit and an FMS-A connection cable are required.

Description	ID
FMS-A2	0301811
FMS-AK0200	0301820
FMS-AK0500	0301821
FMS-AK1000	0301822
FMS-AK2000	0301823
FMS-ZBA 160	0301840
FMS-ZBP 160	0301841

BSWS quick-change jaw system



- ① Gripper connection
- ② Finger connection
- ⑨ For screw connection diagram, see basic version
- ⑤⑦ Locking mechanism

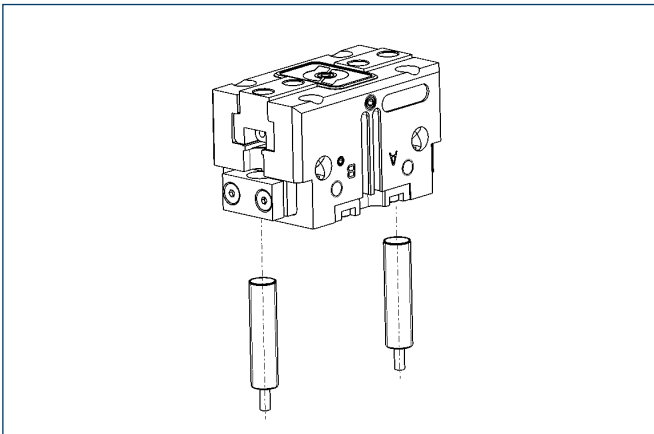
The BSWS quick-change jaw system enables top jaws to be changed on the gripper manually and rapidly. An adapter (BSWS-A) and a base (BSWS-B) are required for each gripper jaw.

Description	ID
BSWS-A 160	0303030
BSWS-B 160	0303031



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system



End position monitoring:
Inductive proximity switches, for direct mounting

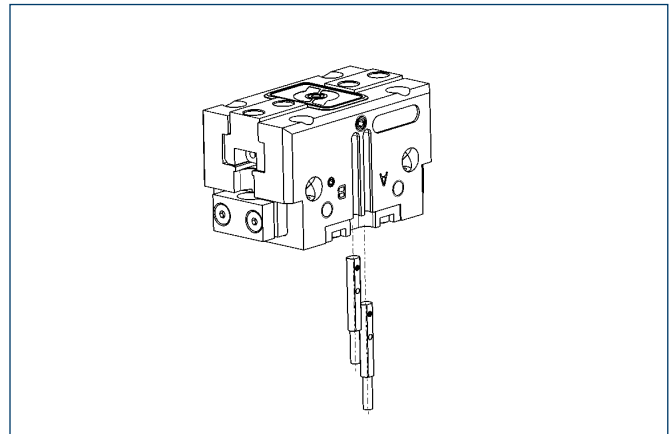
Description	ID	Recommended product
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	•
INK 80-S	0301550	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KA BW12-L 3P-0300-PNP	0301503
KA BW12-L 3P-0500-PNP	0301507
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

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

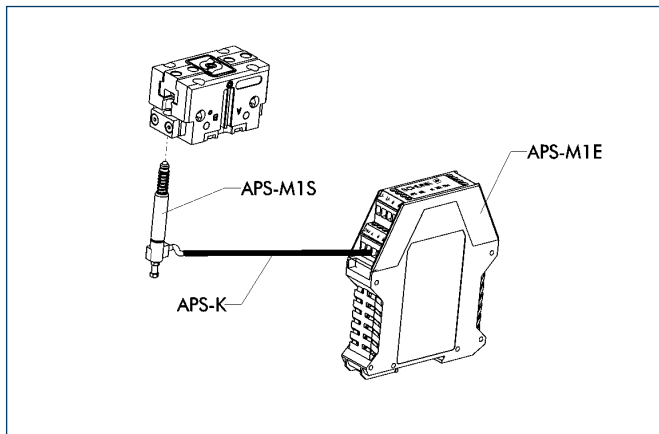
Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.

Sensor system

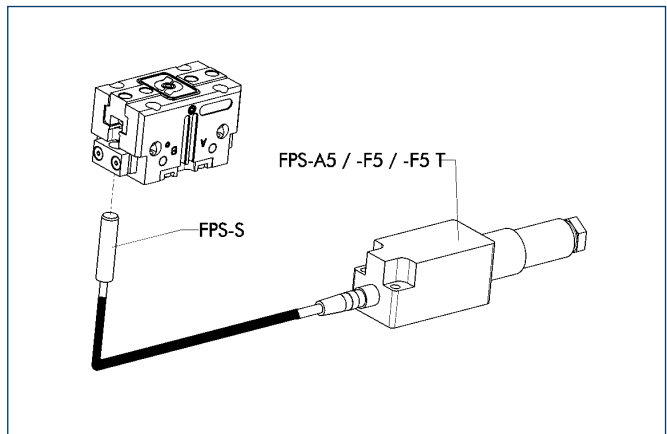


Measuring system:

APS Analog position sensor

Description	ID
APS-K0200	0302066
APS-K0700	0302068
APS-M1E	0302064
APS-M1S	0302062
AS-APS-M1-160/1 und 240/2	0302083

① When using an APS system, a mounting kit (AS-APS, incl. 3 m cable), an APS sensor (APS-M1S) and electronics (APS-M1E) are required for each gripper. An extension cable (APS-K) can be connected between the sensor and the electronics as an option. The max. cable length between the sensor and the electronics is 10 m, between the electronics and their control unit (PLC) it is max. 1 m.



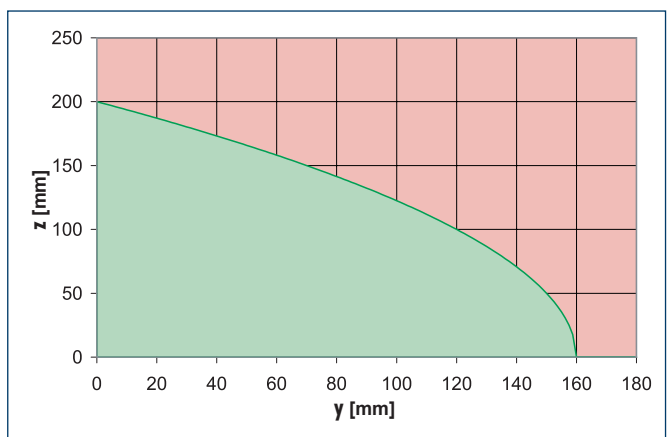
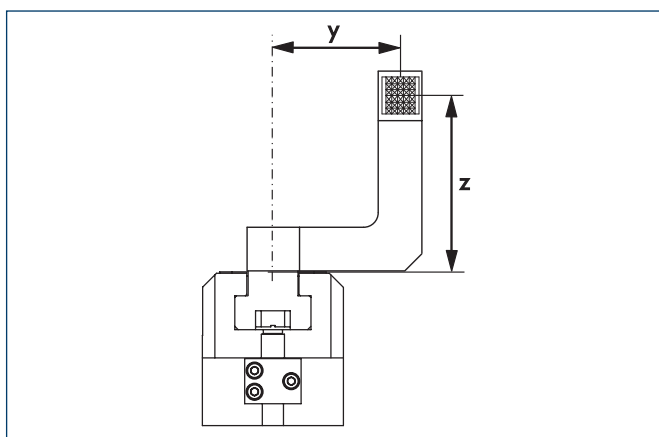
Measuring system:

FPS Flexible position sensor

Description	ID
AS-PGN/PZN-plus 160/1	0301638
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S M8	0301704

① When using an FPS system, an FPS sensor (FPS-S) and a control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the „Accessories“ catalog section.

Maximum permitted finger offset



■ Permitted range
■ Non-permissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.



You can find more detailed information and individual parts of the above-mentioned accessories in the „Accessories“ catalog section.