

**Sizes** 10 .. 80



**Weight** 0.006 kg .. 1.35 kg



**Gripping force** 7 N .. 540 N



Stroke per finger 1 mm .. 14 mm



Workpiece weight 0.045 kg .. 1.9 kg

## **Application example**



Pneumatically driven, dual-axis automatic insertion unit for small components



MPG 32 2-Finger Parallel Gripper with standard finger blanks

FST-S 10-40 Mini-slide for vertical movement

FST-S 16-90 Mini-slide for horizontal movement

## **Gripper for Small Components**

2-Finger parallel gripper with smooth actuating base jaws guided on roller bearings

#### **Area of application**

Gripping and movement of small to medium-sized workpieces in clean environments, such as assembly, testing, laboratory and pharmaceutical applications

#### Your advantages and benefits

#### Roller bearing guide

for precise gripping through base jaw guide with minimum play

Base jaws guided on double roller bearings ensuring low friction and smooth running actuation

**Mounting from three sides in three screw directions** 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

#### **Cover material**

Steel

#### Base jaw material

Steel

#### **Actuation**

Pneumatic, with filtered compressed air (10  $\mu$ m): 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

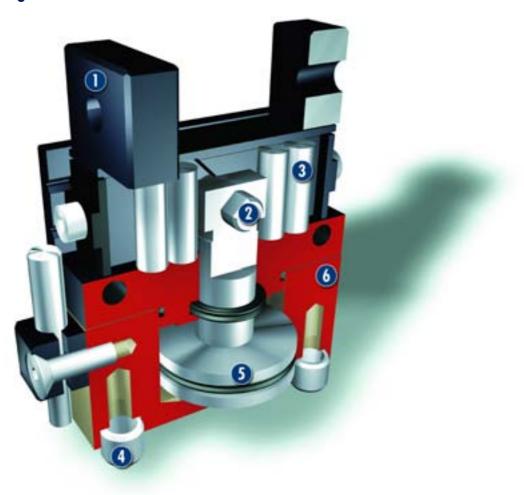
Brackets for proximity switches, centering sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

#### **Gripping force safety device**

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



#### Sectional diagram



- Base jaws
  for the connection of workpiece-specific
  gripper fingers
- Wedge-hook design
  for high power transmission and centric
  gripping
- Roller bearing guide

  precise gripping through base jaw guide with
  minimum play
- Centering and mounting possibilities for assembly of the gripper to a base area and at the long side
- **Drive** piston drive system for compressed air action
- Housing
  weight-reduced through the use of a hardanodized, high-strength aluminum alloy

#### **Function description**

The piston is moved up and down by compressed air. The side hooks at the upper end of the piston rod engage in the angular slots of the two base jaws, and in so doing transform this movement into the synchronized opening or closing of the base fingers.

# **Options and special information**

#### **Additional mounting bores**

for centering the fingers via sleeves, instead of normal mounting surfaces, are available on request as a special version.



#### **Accessories**

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





**Fittings** 



IN inductive proximity **switches** 



**KV/KA** sensor cables



**HM** carbide clamping inserts



V sensor distributors



**Quentes plastic inserts** 

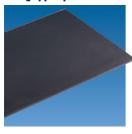




**FPS flexible position** sensor



**HKI** gripper pads



**SDV-P** pressure maintenance valves



Finger blanks



(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

#### 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-type 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.

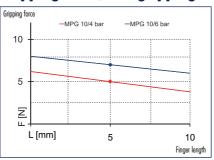
#### **Closing and opening times**

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.

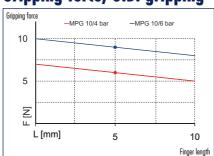




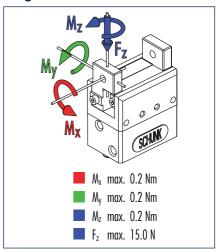
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

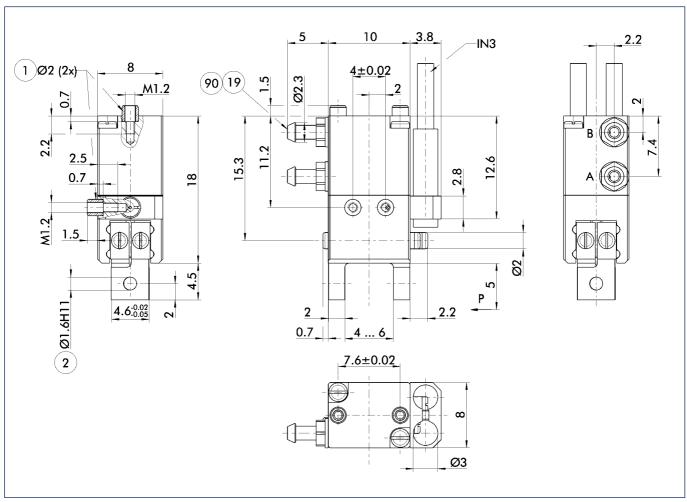


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

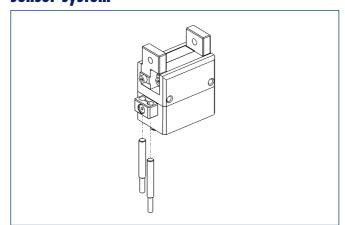
Description		MPG 10	
	ID	0340006	
Stroke per finger	[mm]	1.0	
Closing force	[N]	9.0	
Opening force	[N]	7.0	
Weight	[kg]	0.006	
Recommended workpiece weight	[kg]	0.045	
Air consumption per double stroke	[cm <sup>3</sup> ]	0.15	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	3.0	
Maximum pressure	[bar]	6.0	
Closing time	[s]	0.01	
Opening time	[s]	0.01	
Max. permitted finger length	[mm]	10.0	
Max. permitted weight per finger	[kg]	0.005	
IP class		30	
Min. ambient temperature	[°C]	-10.0	
Max. ambient temperature	[°C]	90.0	
Repeat accuracy	[mm]	0.02	



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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- Gripper connection
   Finger connection
- 19 Air connection
- Polyurethane-hose with an I.D. of 1.6 mm. From AC Aircontrols GmbH, Kempen, Germany

#### Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product	
IN 3-S-M8-PNP	0301466	•	
<b>⊘</b> T	(NO 1 1) . If I		

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

#### Extension cables for proximity switches/magnetic switches

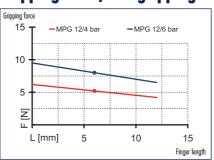
Description	ID	
KA BG08-L 3P-0300-PNP	0301622	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

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

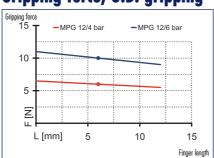




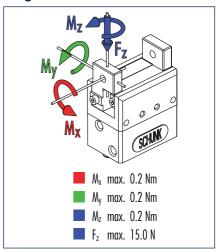
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

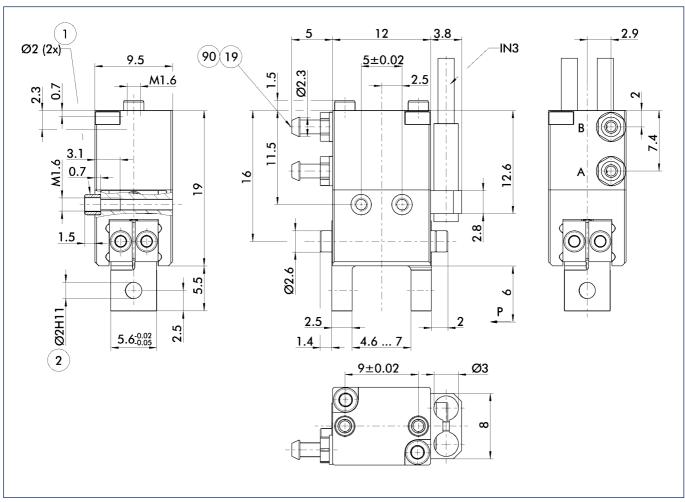


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

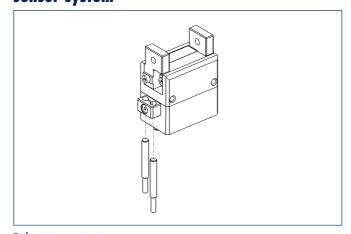
Description		MPG 12	
	ID	0340007	
Stroke per finger	[mm]	1.2	
Closing force	[N]	10.0	
Opening force	[N]	8.0	
Weight	[kg]	0.008	
Recommended workpiece weight	[kg]	0.05	
Air consumption per double stroke	[cm³]	0.2	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	3.0	
Maximum pressure	[bar]	6.0	
Closing time	[s]	0.01	
Opening time	[s]	0.01	
Max. permitted finger length	[mm]	12.0	
Max. permitted weight per finger	[kg]	0.008	
IP class		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[° <b>(</b> ]	90.0	
Repeat accuracy	[mm]	0.02	



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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- Gripper connection
   Finger connection
- 19 Air connection
- Polyurethane-hose with an I.D. of 1.6 mm. From AC Aircontrols GmbH, Kempen, Germany

#### Sensor system



#### End position monitoring:

Inductive proximity switches, for direct mounting

Description		ID	Rec	ommen	ded (	produ	ıct	
IN 3-S-M8-I	PNP	0301466		(	•			
	MO	 . 11					- 11	

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

#### Extension cables for proximity switches/magnetic switches

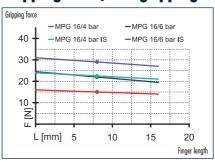
Description	ID	
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 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.

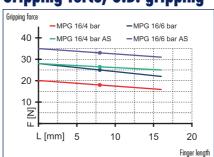




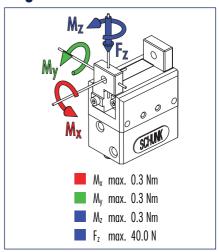
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

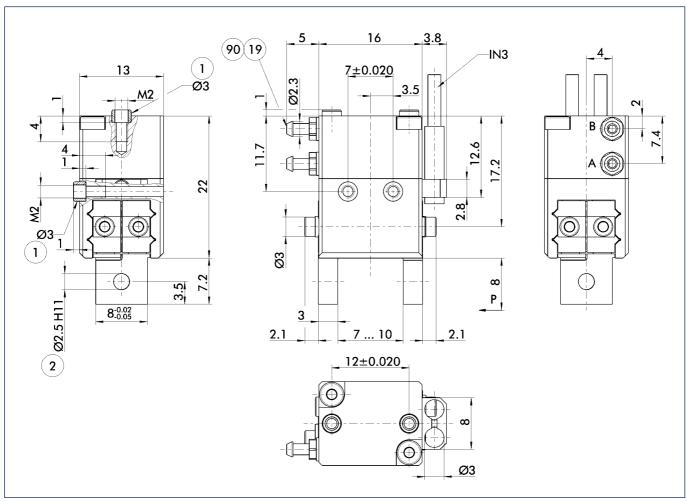


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. My 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.

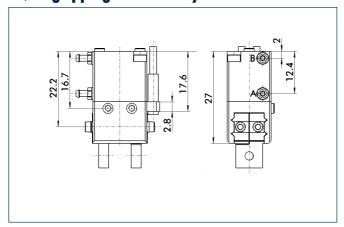
Description		MPG 16	MPG 16-AS	MPG 16-IS
	ID	0340008	0340038	0340058
Stroke per finger	[mm]	1.5	1.5	1.5
Closing force	[N]	25.0	33.0	
Opening force	[N]	22.0		29.0
Min. gripping force through spring	[N]		8.0	7.0
Weight	[kg]	0.025	0.028	0.028
Recommended workpiece weight	[kg]	0.12	0.12	0.12
Air consumption per double stroke	[cm³]	0.35	0.82	0.71
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.01	0.01	0.01
Opening time	[s]	0.01	0.01	0.01
Closing/opening time with spring only	[s]		0.1	0.1
Max. permitted finger length	[mm]	16.0	16.0	16.0
Max. permitted weight per finger	[kg]	0.01	0.01	0.01
IP class		30	30	30
Min. ambient temperature	[° <b>(</b> ]	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02



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

- 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
- Gripper connection
   Finger connection
- (19) Air connection
- Polyurethane-hose with an I.D. of 1.6 mm. From AC Aircontrols GmbH, Kempen, Germany

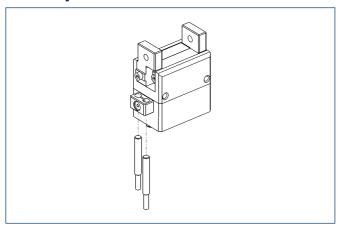
# AS/IS gripping force safety device



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.



# **Sensor system**



End position monitoring:

Inductive proximity switches, for direct mounting

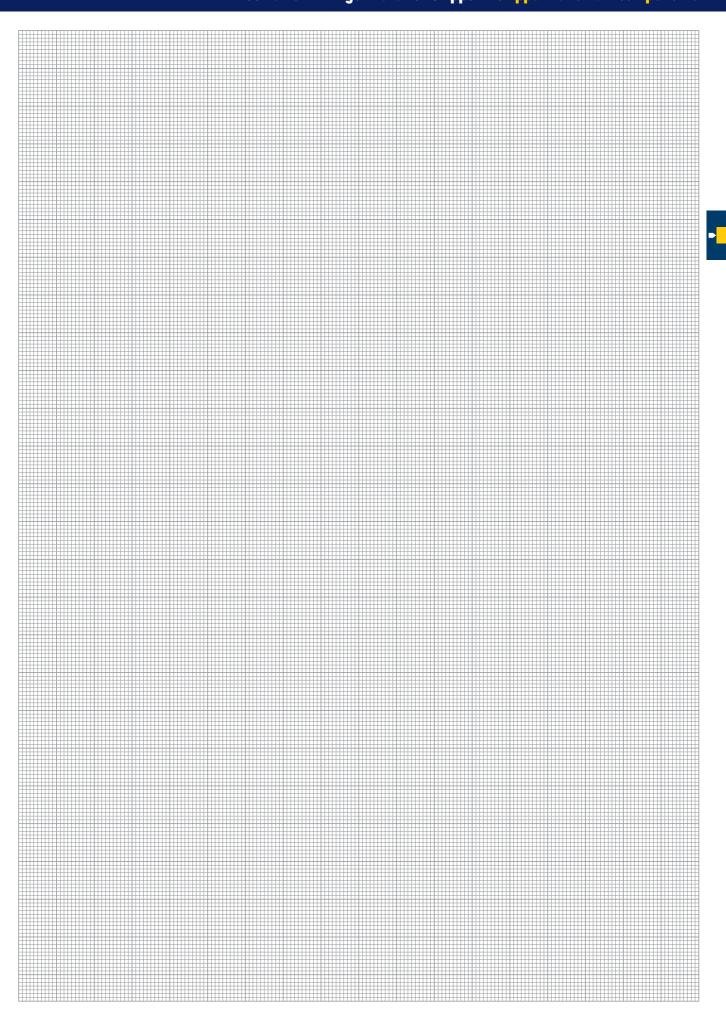
muderive proximity switches, for under modifying					
Description	ID	Recommended product			
IN 3-S-M8-PNP	0301466	•			

(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-PNP	0301594	
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-PNI	0301495	
KV BW08-SG08 3P-0100-PNI	0301496	
KV BW08-SG08 3P-0200-PNI	0301497	
KV BW12-SG12 3P-0030-PNI	0301595	
KV BW12-SG12 3P-0100-PNI	0301596	
KV BW12-SG12 3P-0200-PNI	0301597	

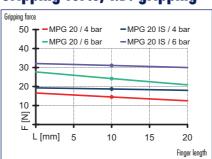
Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



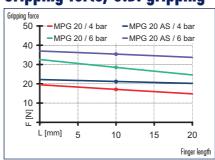




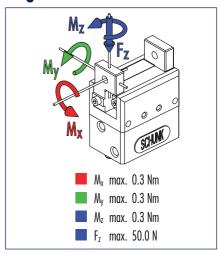
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping

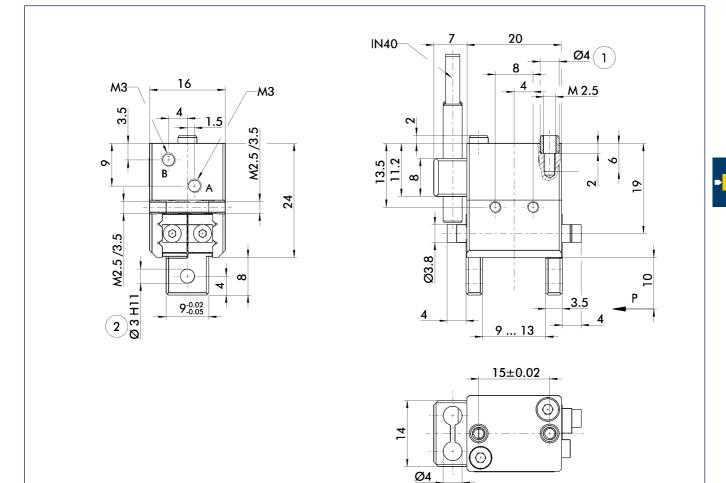


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

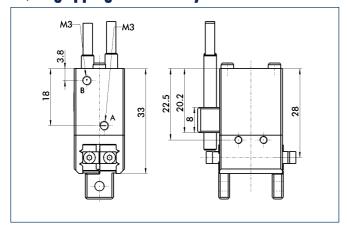
Description		MPG 20	MPG 20-AS	MPG 20-IS	MPG 20 FPS
	ID	0340009	0340039	0340059	0340069
Stroke per finger	[mm]	2.0	2.0	2.0	2.0
Closing force	[N]	28.0	36.0		28.0
Opening force	[N]	24.0		31.0	24.0
Min. gripping force through spring	[N]		8.0	7.0	
Weight	[kg]	0.038	0.045	0.045	0.045
Recommended workpiece weight	[kg]	0.14	0.14	0.14	0.14
Air consumption per double stroke	[cm <sup>3</sup> ]	0.6	1.35	1.07	0.62
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0	2.0
Maximum pressure	[bar]	8.0	6.5	6.5	8.0
Closing time	[s]	0.03	0.02	0.03	0.03
Opening time	[s]	0.03	0.03	0.02	0.03
Closing/opening time with spring only	[s]		0.1	0.1	
Max. permitted finger length	[mm]	20.0	20.0	20.0	20.0
Max. permitted weight per finger	[kg]	0.012	0.012	0.012	0.012
IP class		30	30	30	30
Min. ambient temperature	[° <b>C</b> ]	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°(]	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02



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

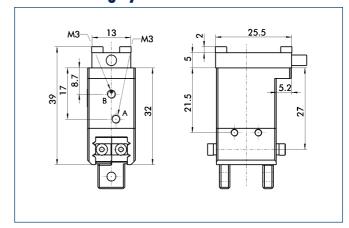
- (i) The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- 1 Gripper connection
- Finger connection

## 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.

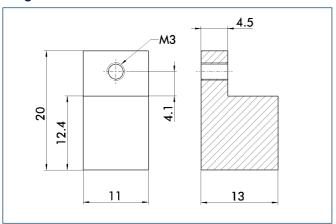
## **FPS measuring system**



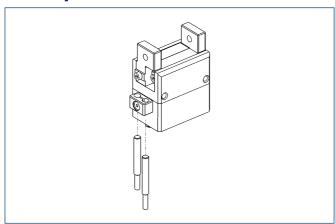
The FPS flexible position sensor can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.



# Finger blanks



#### **Sensor system**

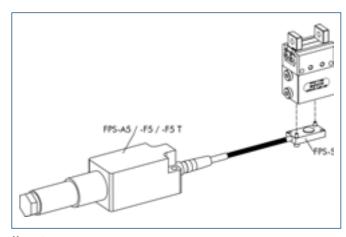


End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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



Measuring system: FPS Flexible position sensor

Description	ID	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

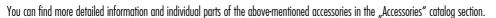
(i) When using an FPS system, an FPS sensor (FPS-S) and an control unit (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

Extension cables for proximity switches/magnetic switches

Description	ID	, <b>g</b>
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BW05-L 3P-0300	0301650	
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	
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	

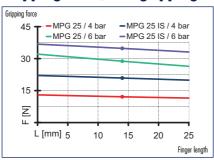
Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



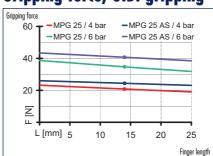




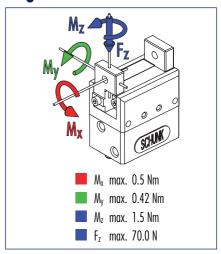
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

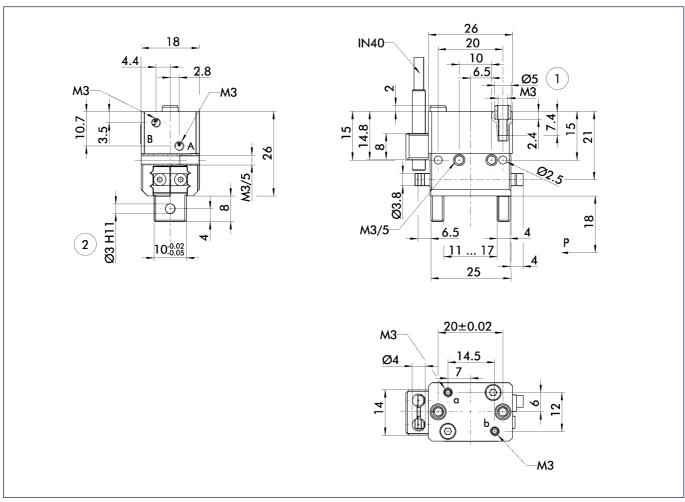


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

Description		MPG 25	MPG 25-AS	MPG 25-IS	MPG 25 FPS
	ID	0340010	0340040	0340060	0340070
Stroke per finger	[mm]	3.0	3.0	3.0	3.0
Closing force	[N]	31.0	41.0		31.0
Opening force	[N]	28.0		38.0	28.0
Min. gripping force through spring	[N]		10.0	9.0	
Weight	[kg]	0.06	0.075	0.075	0.065
Recommended workpiece weight	[kg]	0.15	0.15	0.15	0.15
Air consumption per double stroke	[cm³]	1.08	2.39	1.95	1.14
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0	2.0
Maximum pressure	[bar]	8.0	6.5	6.5	8.0
Closing time	[s]	0.03	0.02	0.03	0.03
Opening time	[s]	0.03	0.03	0.02	0.03
Closing/opening time with spring only	' [s]		0.1	0.1	
Max. permitted finger length	[mm]	25.0	25.0	25.0	25.0
Max. permitted weight per finger	[kg]	0.02	0.02	0.02	0.02
IP class		30	30	30	30
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°C]	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02

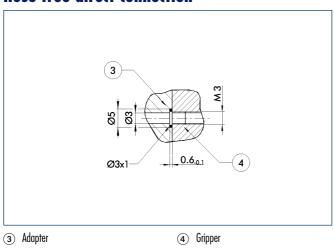


The drawing shows the gripper in the basic version with open jaws, the dimensions do not include the options described below.

- (i) 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
- Finger connection

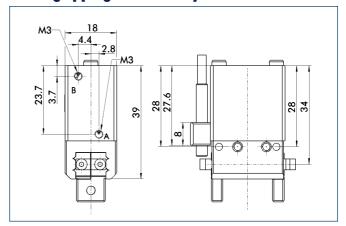
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#### **Hose-free direct connection**



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

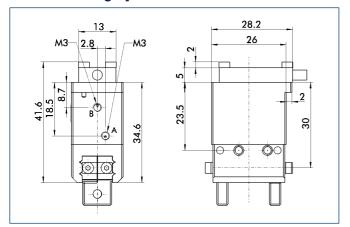


The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for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



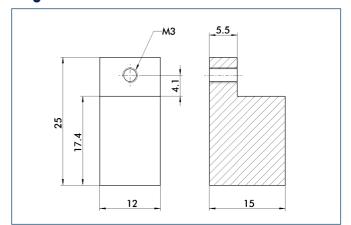
35

## FPS measuring system

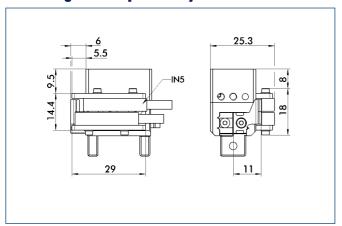


The FPS mounting kit is used for mounting the FPS sensor on the gripper. The FPS system can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

# Finger blanks



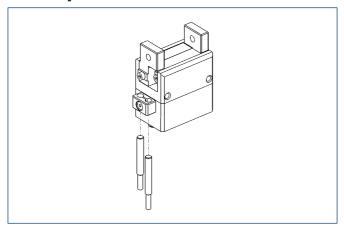
# Mounting kit for proximity switch

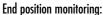


The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	, , ID	
AS-MPG 25	0340150	

#### **Sensor system**

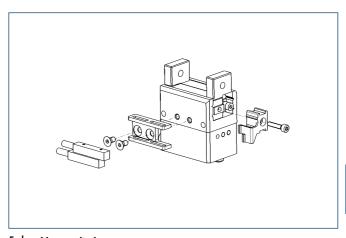




Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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



End position monitoring:

Inductive proximity switches, mounted with mounting kit

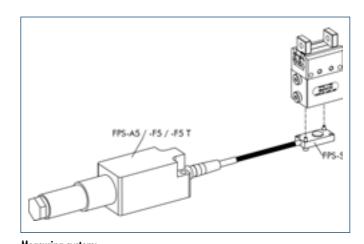
Description	ID	Recommended product	
AS-MPG 25	0340150		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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-PNP	0301594	
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	

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



Measuring system:

FPS Flexible position sensor

I I J I IOAIDIO	position solisor	
Description	ID	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

(i) 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.

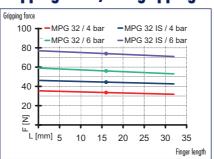


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

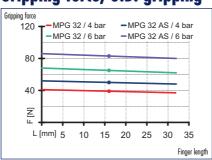




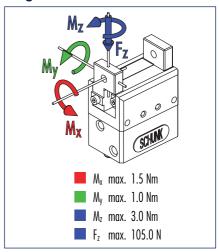
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

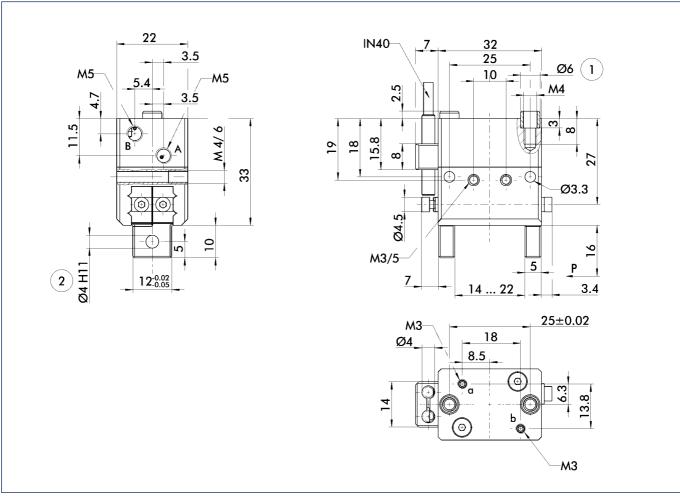


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

Description		MPG 32	MPG 32-AS	MPG 32-IS	MPG 32 FPS
	ID	0340011	0340041	0340061	0340071
Stroke per finger	[mm]	4.0	4.0	4.0	4.0
Closing force	[N]	65.0	85.0		65.0
Opening force	[N]	55.0		80.0	55.0
Min. gripping force through spring	[N]		20.0	25.0	
Weight	[kg]	0.12	0.14	0.14	0.14
Recommended workpiece weight	[kg]	0.325	0.325	0.325	0.325
Air consumption per double stroke	[cm <sup>3</sup> ]	2.55	5.03	4.49	2.59
Nominal pressure	[bar]	6.0	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0	2.0
Maximum pressure	[bar]	8.0	6.5	6.5	8.0
Closing time	[s]	0.04	0.03	0.04	0.04
Opening time	[s]	0.04	0.04	0.03	0.04
Closing/opening time with spring only	' [s]		0.2	0.2	
Max. permitted finger length	[mm]	32.0	32.0	32.0	32.0
Max. permitted weight per finger	[kg]	0.04	0.04	0.04	0.04
IP class		30	30	30	30
Min. ambient temperature	[°C]	-10.0	-10.0	-10.0	-10.0
Max. ambient temperature	[°(]	90.0	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02

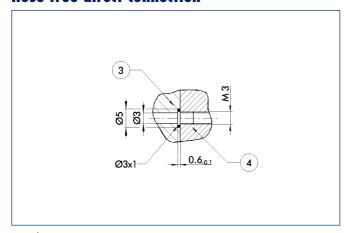


The drawing shows the gripper in the basic version with open jaws, the dimensions do not include the options described below.

- (i) 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
- Finger connection

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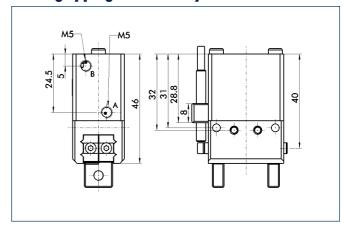
#### **Hose-free direct connection**



- 3 Adapter
- 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.

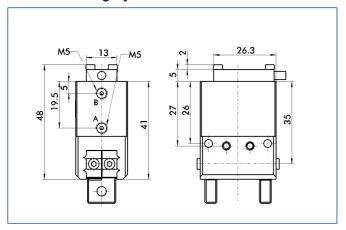
# AS/IS gripping force safety device



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.

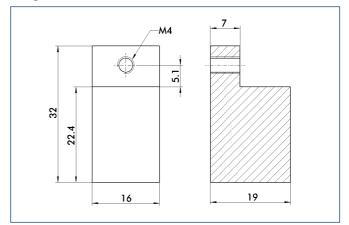


## FPS measuring system



The FPS mounting kit is used for mounting the FPS sensor on the gripper. The FPS system can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

# Finger blanks

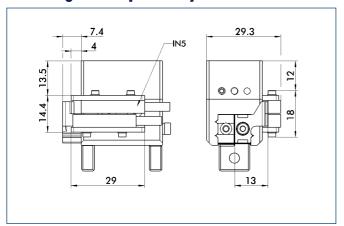


Finger blanks for customized subsequent machining, incl. screw connection diagram

Description Housing material Scope of delivery ID

ABR 32 Aluminum 2 0340212

# Mounting kit for proximity switch

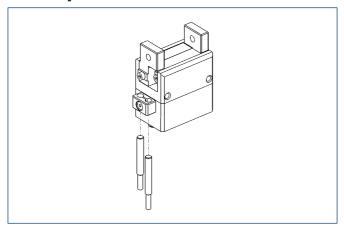


The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	' / ID	
AS-MPG 32	0340151	



#### **Sensor system**

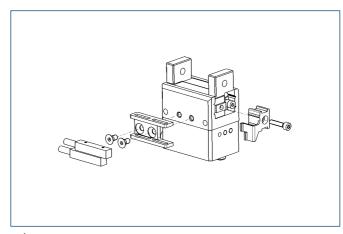




Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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

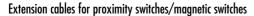


End position monitoring:

Inductive proximity switches, mounted with mounting kit

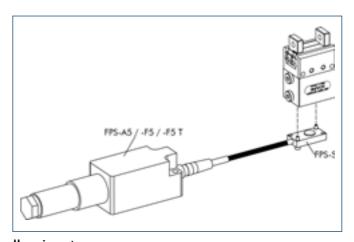
Description	ID	Recommended product	
AS-MPG 32	0340151		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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



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-PNP	0301594	
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	

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



Measuring system:

FPS Flexible position sensor

Description	ID	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

(i) 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.

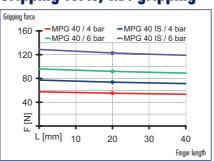


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

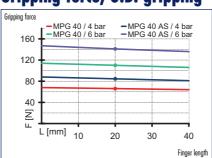




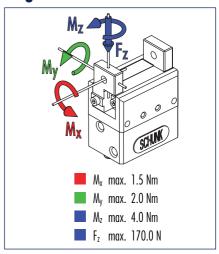
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

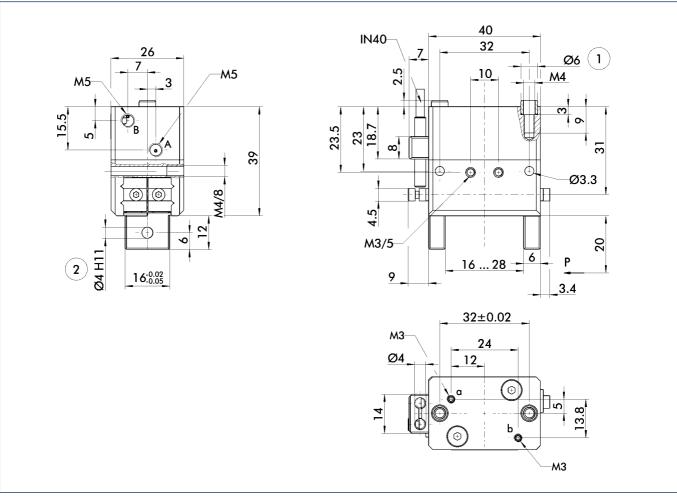


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

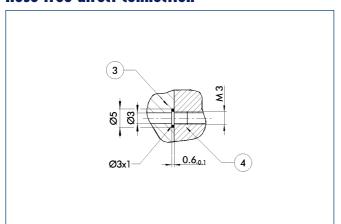
Description		MPG 40	MPG 40-AS	MPG 40-IS
	ID	0340012	0340042	0340062
Stroke per finger	[mm]	6.0	6.0	6.0
Closing force	[N]	110.0	145.0	
Opening force	[N]	90.0		115.0
Min. gripping force through spring	[N]		35.0	25.0
Weight	[kg]	0.2	0.26	0.26
Recommended workpiece weight	[kg]	0.55	0.55	0.55
Air consumption per double stroke	[cm³]	5.76	12.5	10.98
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.05	0.03	0.05
Opening time	[s]	0.05	0.05	0.03
Closing/opening time with spring only	[s]		0.2	0.2
Max. permitted finger length	[mm]	40.0	40.0	40.0
Max. permitted weight per finger	[kg]	0.08	0.08	0.08
IP class		30	30	30
Min. ambient temperature	[° <b>(</b> ]	-10.0	-10.0	-10.0
Max. ambient temperature	[° <b>(</b> ]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02



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

- (i) 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

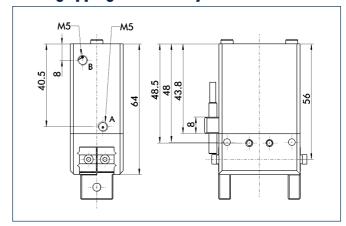
#### **Hose-free direct connection**



- 3 Adapter
- 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.

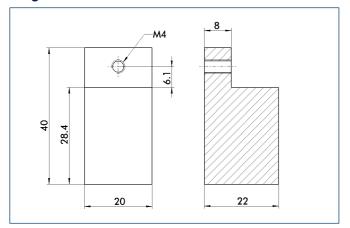
# AS/IS gripping force safety device



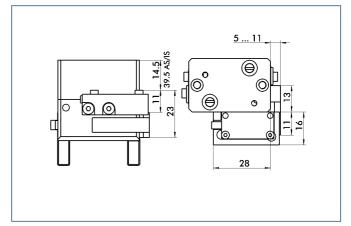
The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for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



# Finger blanks



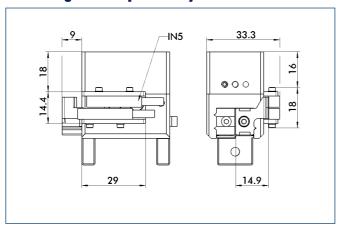
## **Mounting kit for FPS**



The FPS flexible position sensor can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Description	ID	
AS-MPG 40	0301762	

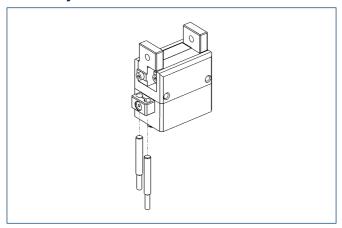
# Mounting kit for proximity switch

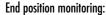


The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	' ' ID	
AS-MPG 40	0340152	

#### **Sensor system**

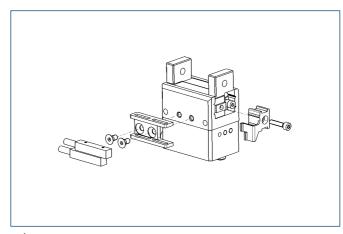




Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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



End position monitoring:

Inductive proximity switches, mounted with mounting kit

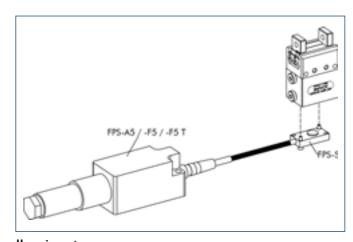
Description	ID	Recommended product	
AS-MPG 40	0340152		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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-PNP	0301594	
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	

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



Measuring system:

FPS Flexible position sensor

TI S TIOMINIO POSITIO	. 5011501	
Description	ID	
AS-MPG 40	0301762	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

(i) 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.

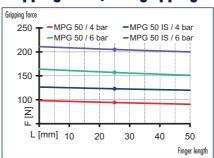


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

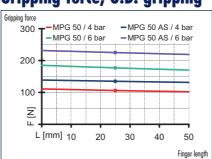




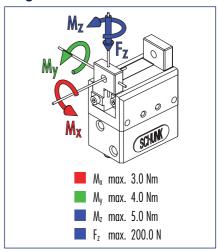
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

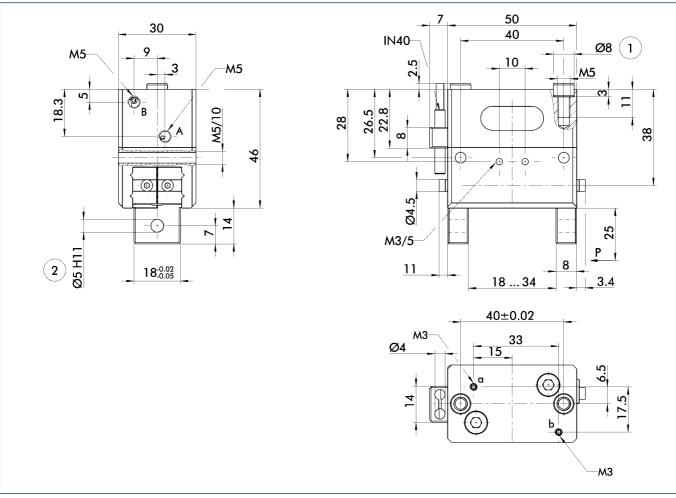


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. My 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.

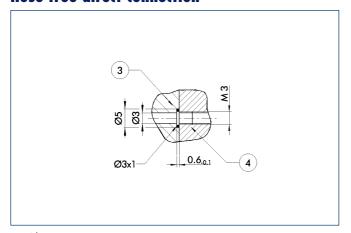
Description		MPG 50	MPG 50-AS	MPG 50-IS
	ID	0340013	0340043	0340063
Stroke per finger	[mm]	8.0	8.0	8.0
Closing force	[N]	175.0	225.0	
Opening force	[N]	155.0		190.0
Min. gripping force through spring	[N]		50.0	35.0
Weight	[kg]	0.35	0.4	0.4
Recommended workpiece weight	[kg]	0.85	0.85	0.85
Air consumption per double stroke	[cm³]	11.33	19.98	16.6
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.01	0.01	0.02
Opening time	[s]	0.01	0.02	0.01
Closing/opening time with spring only	[s]		0.3	0.3
Max. permitted finger length	[mm]	50.0	50.0	50.0
Max. permitted weight per finger	[kg]	0.14	0.14	0.14
IP class		30	30	30
Min. ambient temperature	[° <b>C</b> ]	-10.0	-10.0	-10.0
Max. ambient temperature	[° <b>C</b> ]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02



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

- (i) 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
- Finger connection

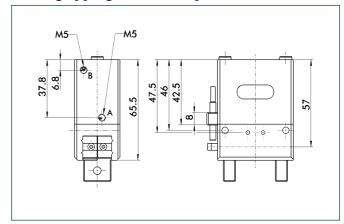
#### **Hose-free direct connection**



- 3 Adapter
- 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.

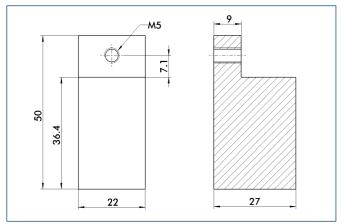
# AS/IS gripping force safety device



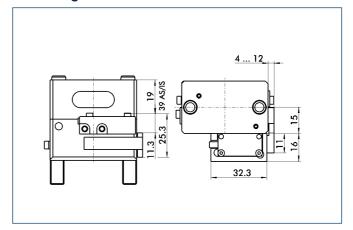
The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for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



# Finger blanks



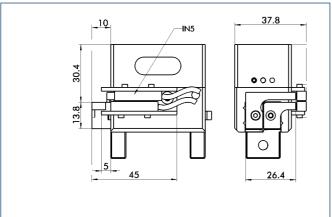
## **Mounting kit for FPS**



The FPS flexible position sensor can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Description	ID	
AS-MPG 50	0301763	

# Mounting kit for proximity switch

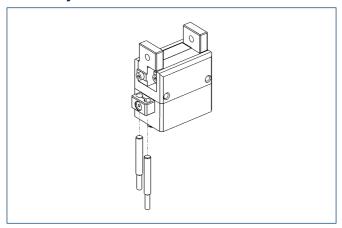


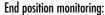
The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	' ' ID	
AS-MPG 50	0340153	



#### **Sensor system**

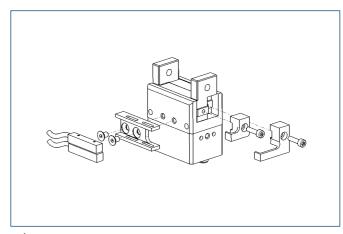




Inductive proximity switches, for direct mounting

Description	ID	Recommended product	
IN 40-S-M12	0301574		
IN 40-S-M5-NPN	0301492		
IN 40-S-M5-PNP	0301491		
IN 40-S-M8	0301474	•	
INK 40-S	0301555		

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



End position monitoring:

Inductive proximity switches, mounted with mounting kit

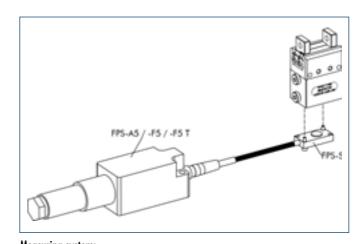
Description	ID	Recommended product	
AS-MPG 50	0340153		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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

#### Extension cables for proximity switches/magnetic switches

Description	IV	
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BW05-L 3P-0300	0301650	
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	
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	

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



Measuring system:

FPS Flexible position sensor

TI S TIOMINIO POSITIO	. 5011501	
Description	ID	
AS-MPG 50	0301763	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

(i) 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.

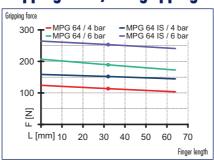


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

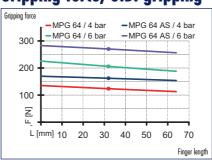




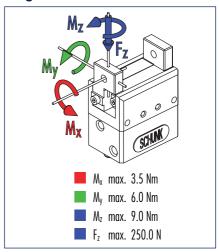
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

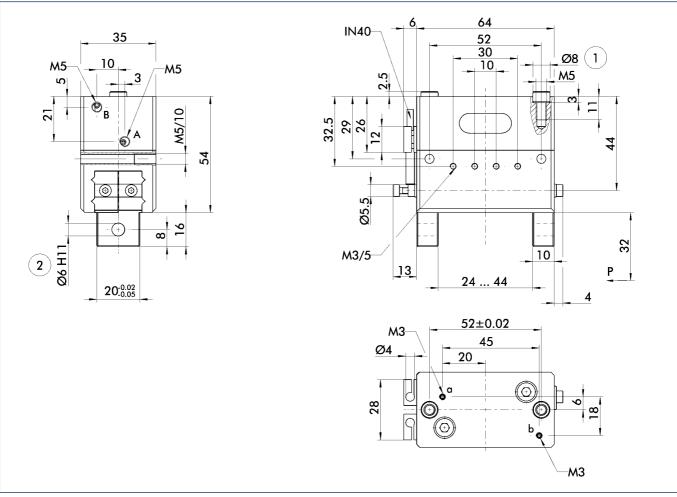


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. M<sub>V</sub> 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.

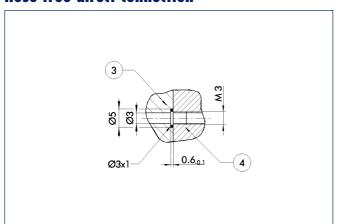
Description		MPG 64	MPG 64-AS	MPG 64-IS
	ID	0340014	0340044	0340064
Stroke per finger	[mm]	10.0	10.0	10.0
Closing force	[N]	200.0	270.0	
Opening force	[N]	190.0		245.0
Min. gripping force through spring	[N]		70.0	55.0
Weight	[kg]	0.6	0.7	0.7
Recommended workpiece weight	[kg]	1.0	1.0	1.0
Air consumption per double stroke	[cm³]	18.85	28.58	26.6
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.01	0.01	0.02
Opening time	[s]	0.01	0.02	0.01
Closing/opening time with spring only	[s]		0.3	0.3
Max. permitted finger length	[mm]	64.0	64.0	64.0
Max. permitted weight per finger	[kg]	0.24	0.24	0.24
IP class		30	30	30
Min. ambient temperature	[° <b>(</b> ]	-10.0	-10.0	-10.0
Max. ambient temperature	[° <b>(</b> ]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02



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

- (i) 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
- Finger connection

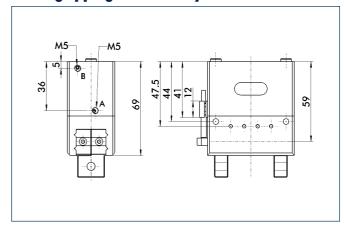
#### **Hose-free direct connection**



- 3 Adapter
- 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.

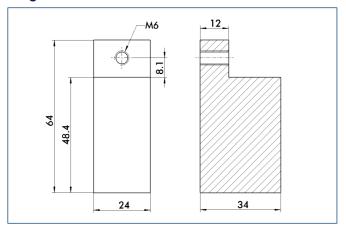
# AS/IS gripping force safety device



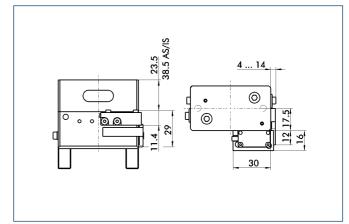
The mechanical gripping force safety device ensures a minimum gripping force even if there is a drop in pressure. This acts as closing force in the AS version, and as opening force in the IS version. In addition, the gripping force safety device can also be employed as a gripping force booster or for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



# Finger blanks



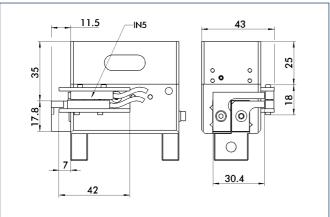
## **Mounting kit for FPS**



The FPS flexible position sensor can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

Description	ID	
AS-MPG 64	0301764	

# Mounting kit for proximity switch

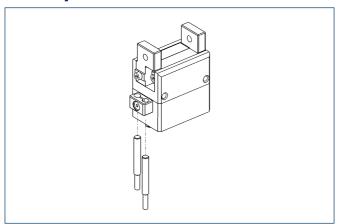


The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	' / ID	
AS-MPG 64	0340154	



#### **Sensor system**

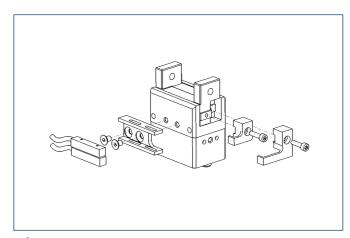


End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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

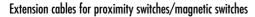


End position monitoring:

Inductive proximity switches, mounted with mounting kit

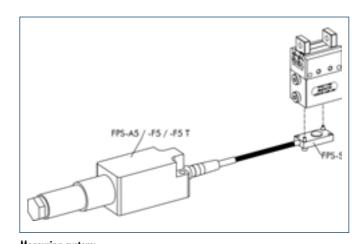
Description	ID	Recommended product	
AS-MPG 64	0340154		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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



Description	IV	
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BW05-L 3P-0300	0301650	
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	
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	

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



Measuring system:

FPS Flexible position sensor

TI S TIGHTIDIO POSITIO	. 5011501	
Description	ID	
AS-MPG 64	0301764	
FPS-F5	0301805	
FPS-F5 T	0301807	
FPS-S 13	0301705	

(i) 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.

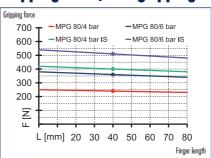


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

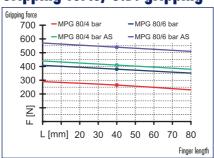




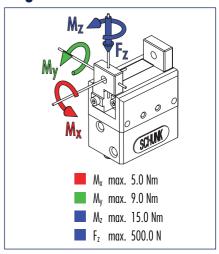
## Gripping force, I.D. gripping



#### Gripping force, O.D. gripping

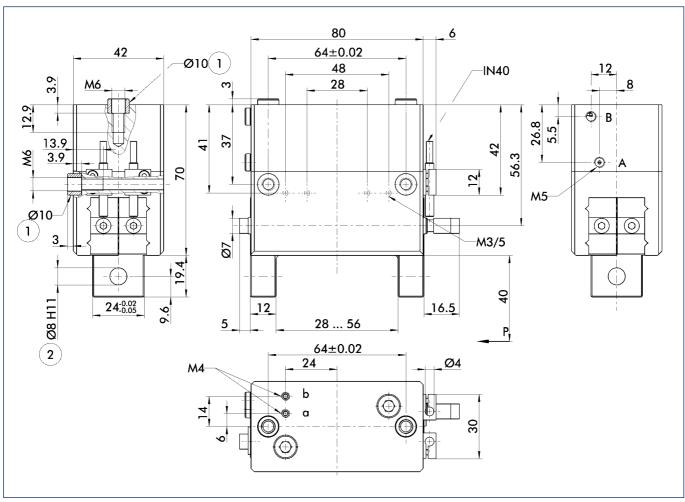


# **Finger load**



Moments and forces apply per base jaw and may occur simultaneously. My 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.

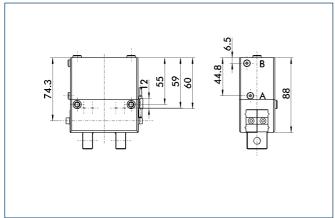
Description		MPG 80	MPG 80-AS	MPG 80-IS
	ID	0340015	0340045	0340065
Stroke per finger	[mm]	14.0	14.0	14.0
Closing force	[N]	380.0	540.0	
Opening force	[N]	360.0		510.0
Min. gripping force through spring	[N]		160.0	150.0
Weight	[kg]	1.2	1.35	1.35
Recommended workpiece weight	[kg]	1.9	1.9	1.9
Air consumption per double stroke	[cm³]	29.3	61.4	57.1
Nominal pressure	[bar]	6.0	6.0	6.0
Minimum pressure	[bar]	2.0	4.0	4.0
Maximum pressure	[bar]	8.0	6.5	6.5
Closing time	[s]	0.06	0.04	0.06
Opening time	[s]	0.06	0.06	0.04
Closing/opening time with spring only	[s]		0.3	0.3
Max. permitted finger length	[mm]	80.0	80.0	80.0
Max. permitted weight per finger	[kg]	0.4	0.4	0.4
IP class		30	30	30
Min. ambient temperature	[° <b>(</b> ]	-10.0	-10.0	-10.0
Max. ambient temperature	[° <b>(</b> ]	90.0	90.0	90.0
Repeat accuracy	[mm]	0.02	0.02	0.02



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

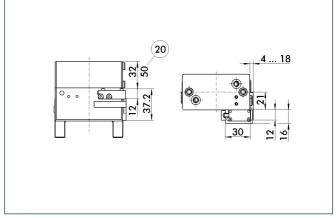
- (1) The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- (1) Gripper connection
- (2) Finger connection

## 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.

## FPS measuring system



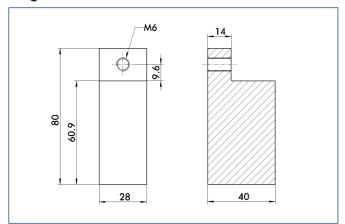
20 With AS / IS version

The FPS flexible position sensor can distinguish between five freely programmable ranges or switching points for the stroke of a gripper and can be used in conjunction with a PC as a measuring system.

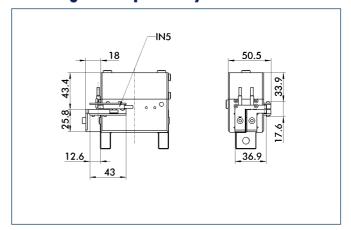
Description	ID	
AS-MPG 80	0301765	



# Finger blanks



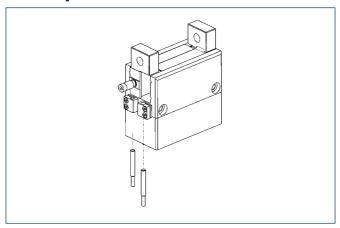
# Mounting kit for proximity switch

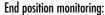


The mounting kit includes a bracket, switch cams and mounting screws. Proximity switches must be ordered separately.

Description	ID	
AS-MPG 80	0340155	

#### **Sensor system**

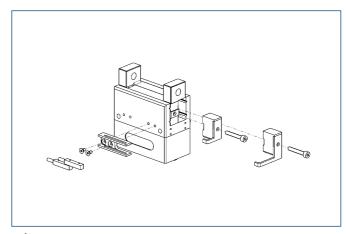




Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40-S-M12	0301574	
IN 40-S-M5-NPN	0301492	
IN 40-S-M5-PNP	0301491	
IN 40-S-M8	0301474	•
INK 40-S	0301555	

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



End position monitoring:

Inductive proximity switches, mounted with mounting kit

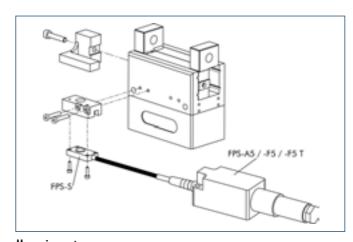
Description	ID	Recommended product	
AS-MPG 80	0340155		
IN 5-S-M12	0301569		
IN 5-S-M8	0301469	•	

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-PNP	0301594	
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	

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



Measuring system:

FPS Flexible position sensor

The Hexagon position source			
Description	ID		
AS-MPG 80	0301765		
FPS-F5	0301805		
FPS-F5 T	0301807		
FPS-S 13	0301705		

(i) 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.

