



**Sizes** 29 .. 140



**Weight** 0.025 kg .. 2.55 kg



**Gripping force** 30 N .. 1180 N

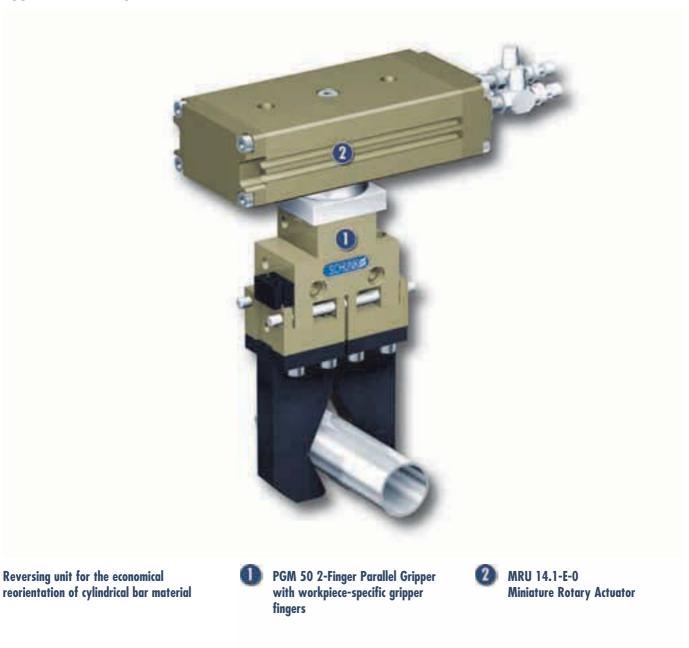


Stroke per finger 2 mm .. 15 mm



**Workpiece weight** 0.15 kg .. 5.9 kg

## **Application example**





## **Universal Gripper**

Universal, economical 2-finger parallel gripper

## Area of application

for universal use in clean environments

## Your advantages and benefits

Economical gripper series for material handling

**Rod guide for base jaws** for excellent guidance characteristics

**Cylinder rod guidance** for versatility and a long tool life

**Compact design** for minimal interfering contours in the application



## General information on the series

Working principle Internal wedge-hook kinematics

Housing material Aluminum alloy, hard-anodized

**Guide** Steel guide, ground and hardened

Actuation Pneumatic, with filtered compressed air (10  $\mu$ m): Dry, lubricated or non-lubricated

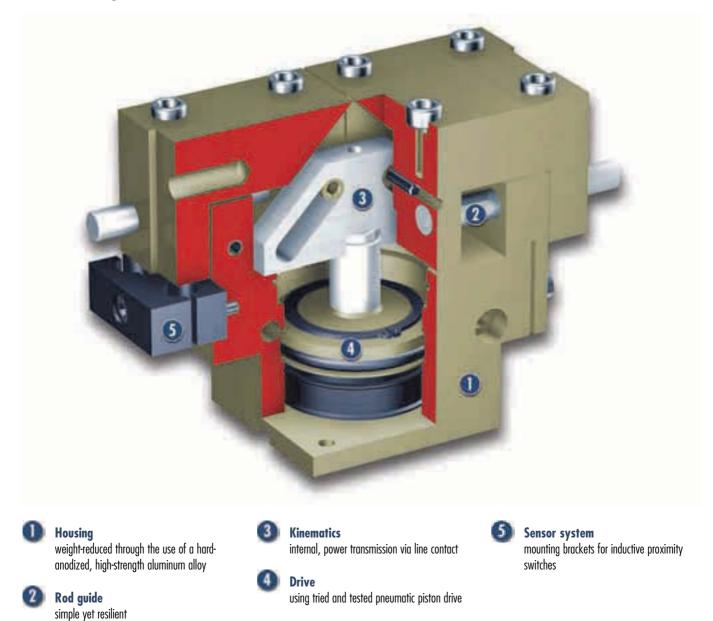
## Warranty

24 months

**Scope of delivery** Brackets for proximity switches, centering sleeves, assembly and operating manual with manufacturer's declaration



## Sectional diagram



## **Function description**

The piston is moved up and down by compressed air. The wedge hook, together with the transverse rods of the base jaws, transforms the piston motion into synchronized opening and closing.

## **Options and special information**

The PGM series is a product line with an important cost/benefit ratio.



## Accessories

SCHUNK accessories — the suitable complement for the highest level of functionality, reliability and controlled production of all automation modules.











W/WK/KV/GK

sensor cables





SDV-P pressure maintenance valves



Tor 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 can 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 base 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-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 clamping.

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

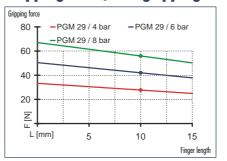
Closing and opening times are purely the times that the base jaws or base fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



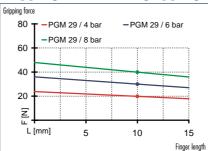
# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



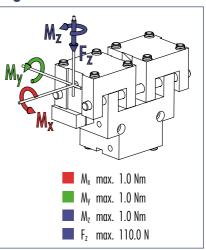
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

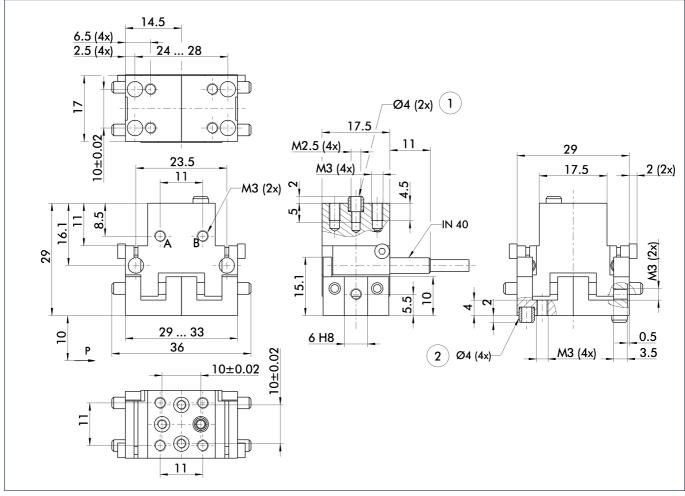


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 29	
	ID	0302680	
Stroke per finger	[mm]	2.0	
Closing force	[N]	30.0	
Opening force	[N]	40.0	
Weight	[kg]	0.025	
Recommended workpiece weight	[kg]	0.15	
Air consumption per double stroke	[cm <sup>3</sup> ]	0.16	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.03	
Opening time	[s]	0.03	
Max. permitted finger length	[mm]	15.0	
Max. permitted weight per finger	[kg]	0.01	
IP rating		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[° <b>(</b> ]	90.0	
Repeat accuracy	[mm]	0.02	



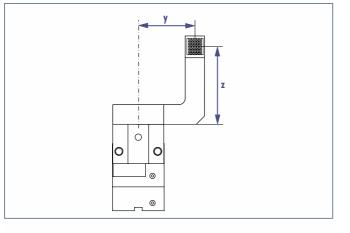
## **Main views**

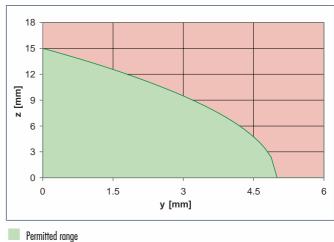


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- $\check{(2)}$  Finger connection

### **Maximum permitted overhang**



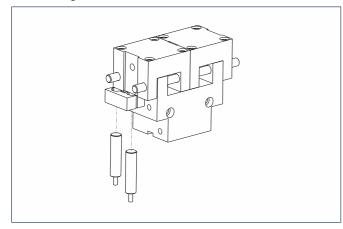


Non-permissible range



# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



### End position monitoring:

Inductive proximity switches, for direct mounting				
Description	ID	Recommended product		
IN 40/S-M12	0301574			
IN 40/S-M8	0301474	•		
INK 40/S	0301555			

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

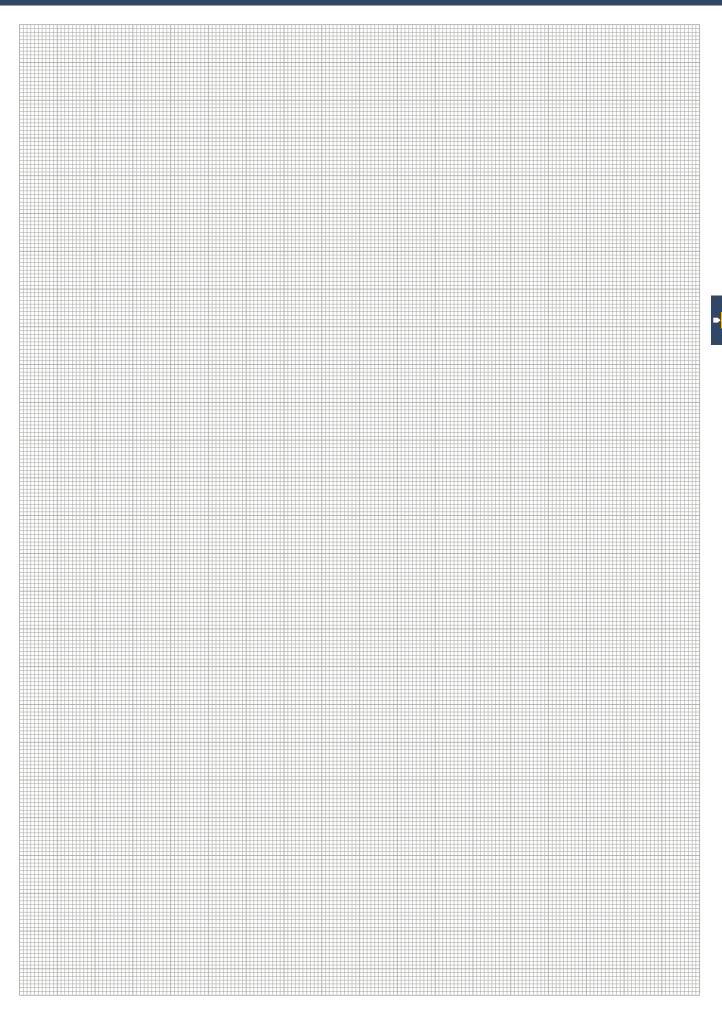
#### Extension cables for proximity switches/magnetic switches

Description	ID ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

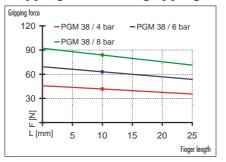




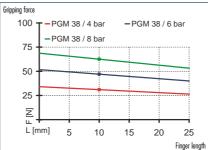




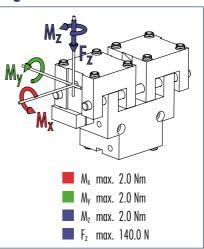
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

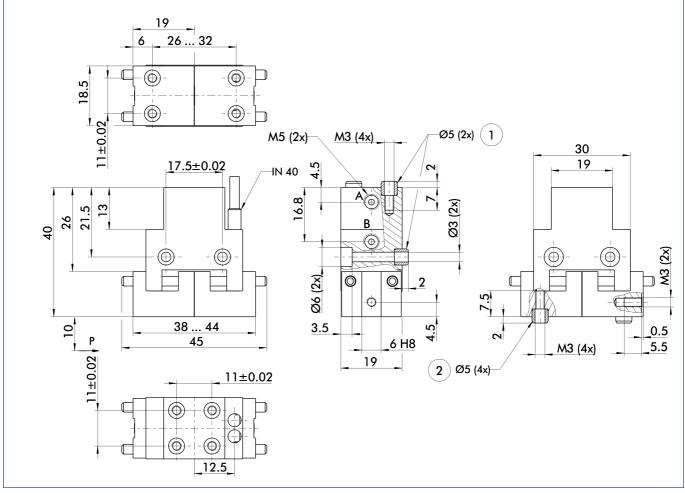


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 38	
	ID	0302681	
Stroke per finger	[mm]	3.0	
Closing force	[N]	47.0	
Opening force	[N]	63.0	
Weight	[kg]	0.05	
Recommended workpiece weight	[kg]	0.235	
Air consumption per double stroke	[cm <sup>3</sup> ]	0.34	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.03	
Opening time	[s]	0.03	
Max. permitted finger length	[mm]	25.0	
Max. permitted weight per finger	[kg]	0.017	
IP rating		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[° <b>(</b> ]	90.0	
Repeat accuracy	[mm]	0.02	



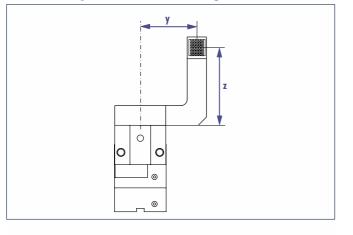
## Main views

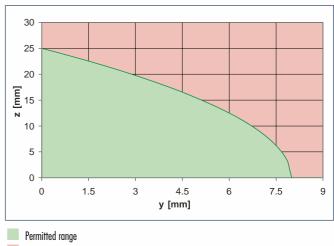


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- Finger connection

## **Maximum permitted overhang**



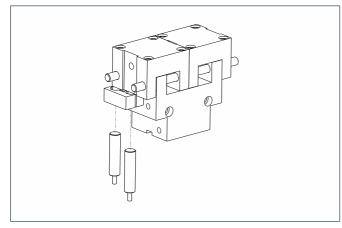






# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## Sensor system



#### End position monitoring:

Inductive proximity switches, for direct mounting				
Description	ID	Recommended product		
IN 40/S-M12	0301574			
IN 40/S-M8	0301474	•		
INK 40/S	0301555			

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

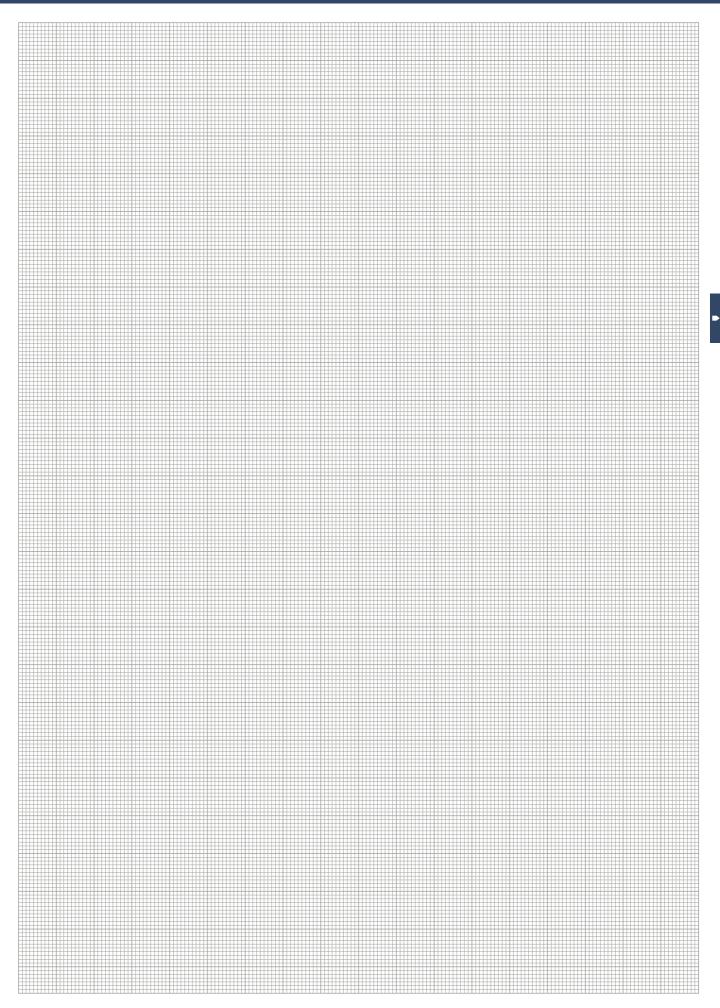
#### Extension cables for proximity switches/magnetic switches

Description	ID ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



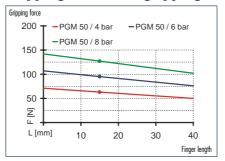




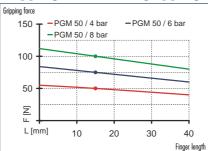
# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



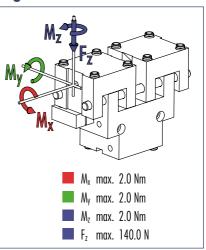
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

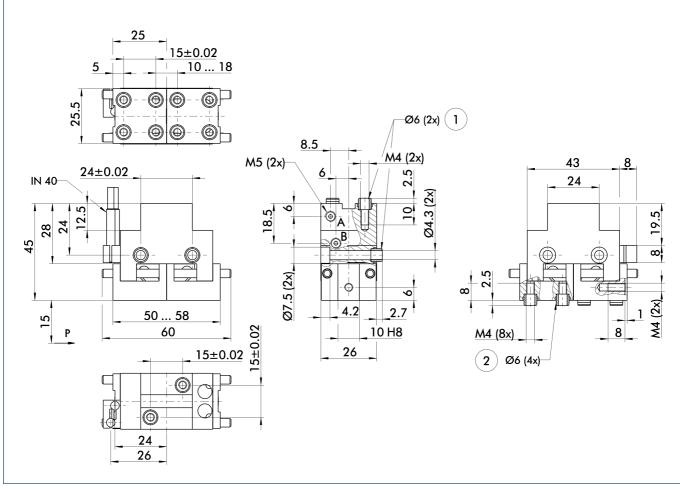


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 50	
i	ID	0302682	
Stroke per finger	[mm]	4.0	
Closing force	[N]	75.0	
Opening force	[N]	95.0	
Weight	[kg]	0.105	
Recommended workpiece weight	[kg]	0.375	
Air consumption per double stroke	[cm <sup>3</sup> ]	0.8	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[S]	0.04	
Opening time	[S]	0.04	
Max. permitted finger length	[mm]	40.0	
Max. permitted weight per finger	[kg]	0.035	
IP rating		30	
Min. ambient temperature	[°[]	-10.0	
Max. ambient temperature	[°[]	90.0	
Repeat accuracy	[mm]	0.02	



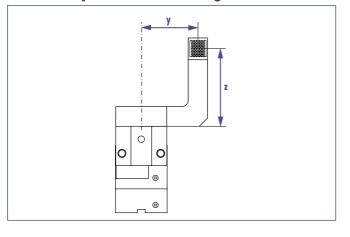
## **Main views**

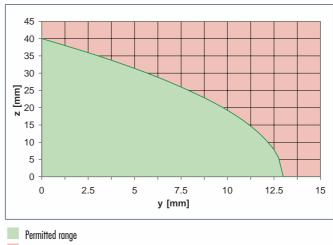


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- $\check{(2)}$  Finger connection

### **Maximum permitted overhang**



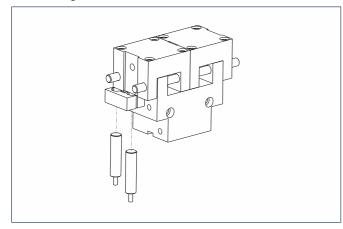






# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



#### End position monitoring:

Inductive proximity switches, for direct mounting				
Description	ID	Recommended product		
IN 40/S-M12	0301574			
IN 40/S-M8	0301474	•		
INK 40/S	0301555			

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

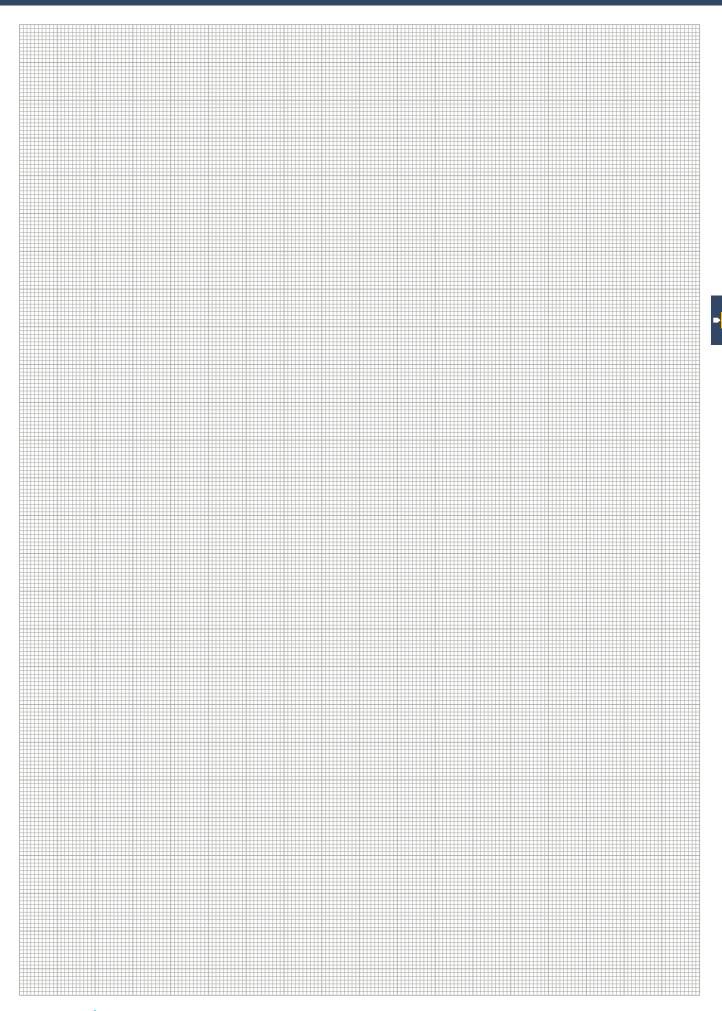
#### Extension cables for proximity switches/magnetic switches

Description	ID ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



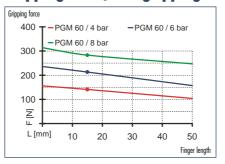




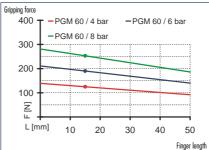
## Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



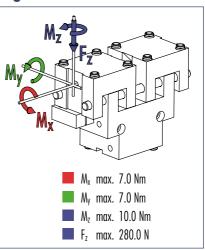
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

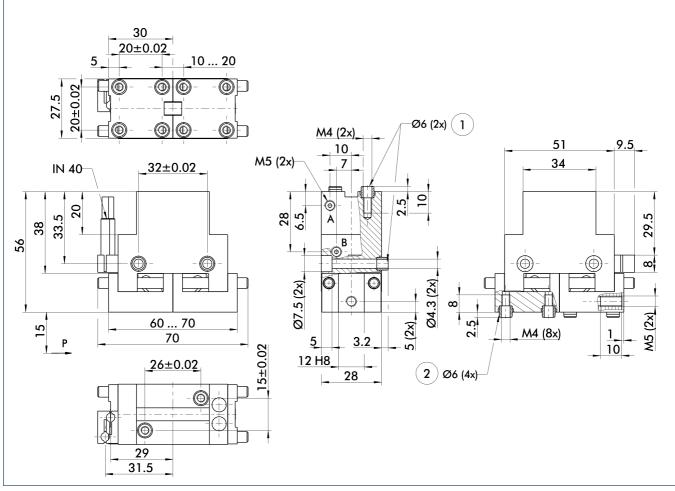


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 60	
	ID	0302683	
Stroke per finger	[mm]	5.0	
Closing force	[N]	190.0	
Opening force	[N]	210.0	
Weight	[kg]	0.21	
Recommended workpiece weight	[kg]	0.95	
Air consumption per double stroke	[cm <sup>3</sup> ]	2.5	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.05	
Opening time	[s]	0.05	
Max. permitted finger length	[mm]	50.0	
Max. permitted weight per finger	[kg]	0.07	
IP rating		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[° <b>(</b> ]	90.0	
Repeat accuracy	[mm]	0.02	



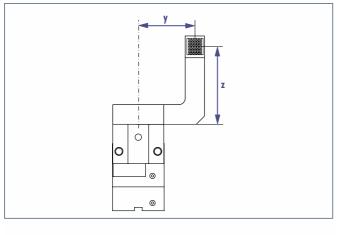
## **Main views**

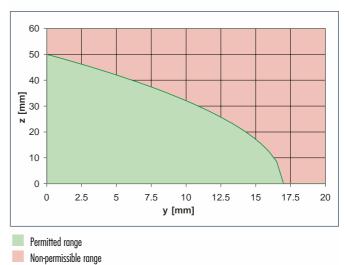


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- Finger connection

## **Maximum permitted overhang**

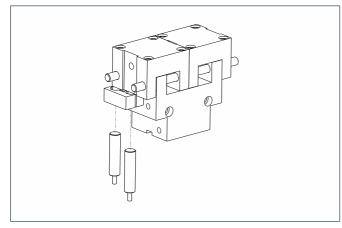






## Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## Sensor system



### End position monitoring:

Inductive proximity switches, for direct mounting				
Description	ID	Recommended product		
IN 40/S-M12	0301574			
IN 40/S-M8	0301474	•		
INK 40/S	0301555			

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

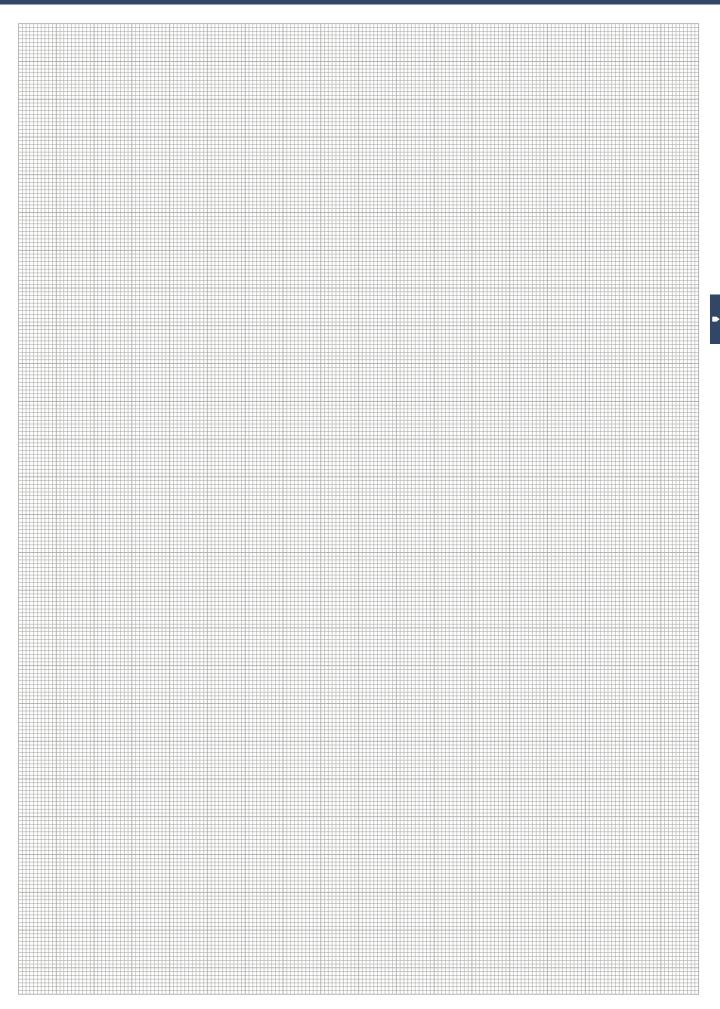
#### Extension cables for proximity switches/magnetic switches

Description	ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



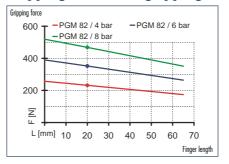




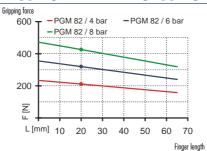
## Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



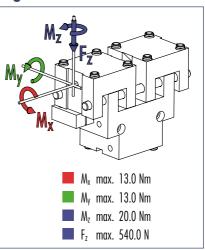
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

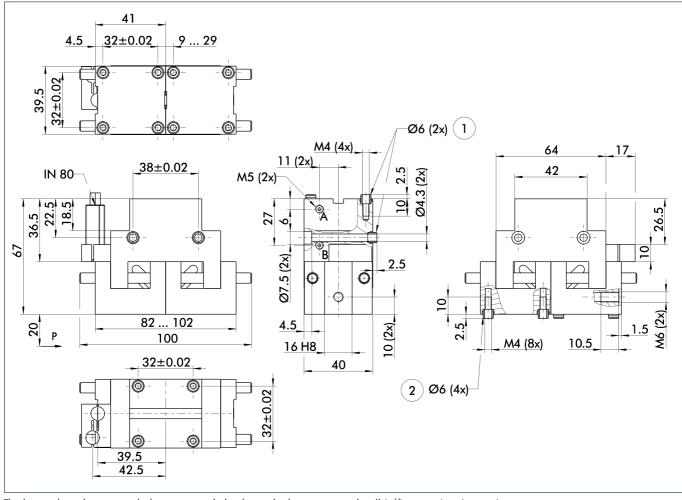


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 82	
	ID	0302684	
Stroke per finger	[mm]	10.0	
Closing force	[N]	320.0	
Opening force	[N]	350.0	
Weight	[kg]	0.6	
Recommended workpiece weight	[kg]	1.6	
Air consumption per double stroke	[cm <sup>3</sup> ]	8.0	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[S]	0.07	
Opening time	[S]	0.07	
Max. permitted finger length	[mm]	65.0	
Max. permitted weight per finger	[kg]	0.17	
IP rating		30	
Min. ambient temperature	[°[]	-10.0	
Max. ambient temperature	[°[]	90.0	
Repeat accuracy	[mm]	0.03	



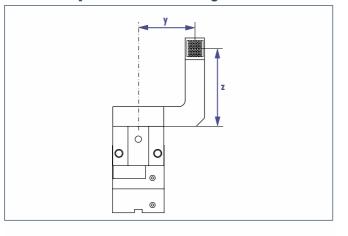
## **Main views**

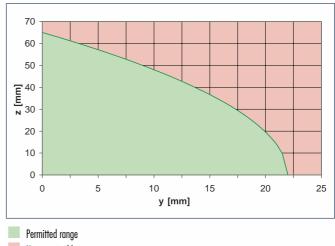


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- Finger connection

### **Maximum permitted overhang**



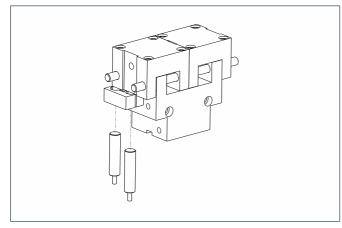






# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



#### End position monitoring:

Inductive	proximity	switches	for	direct	mounting
muociivo	provining	JWIICHUJ,	101	unour	nioonining

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

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

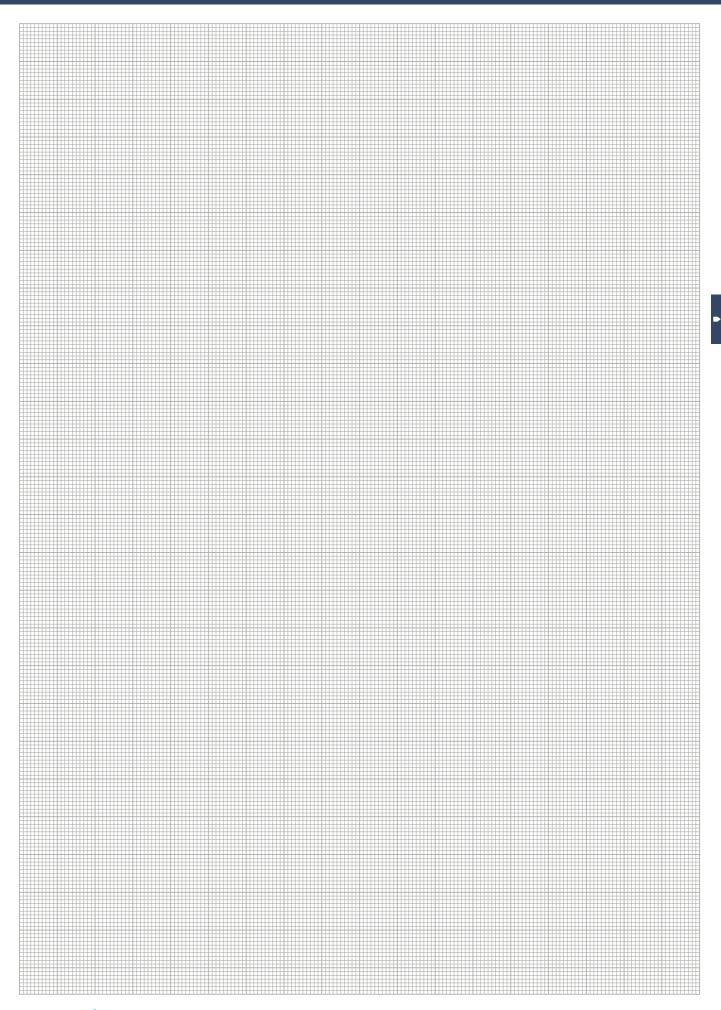
#### Extension cables for proximity switches/magnetic switches

Description	ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
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W 3-M12	0301503	
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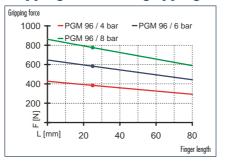




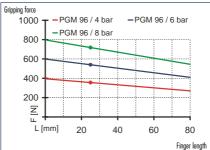
Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



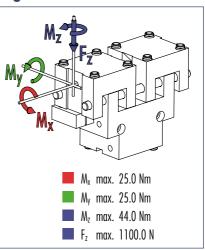
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

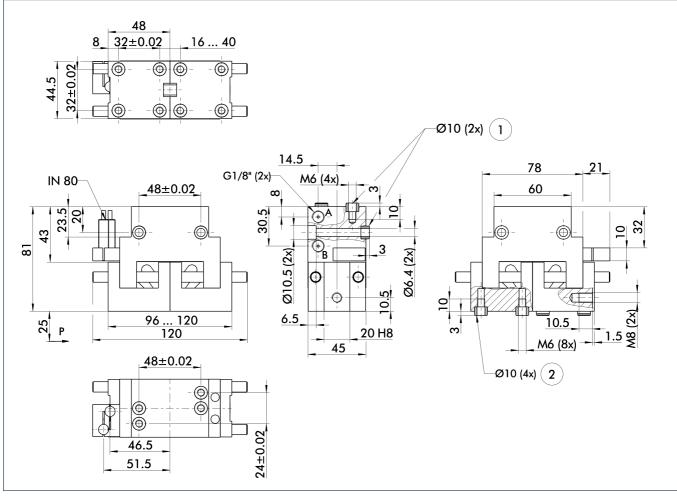


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 96	
i	ID	0302685	
Stroke per finger	[mm]	12.0	
Closing force	[N]	540.0	
Opening force	[N]	580.0	
Weight	[kg]	0.84	
Recommended workpiece weight	[kg]	2.7	
Air consumption per double stroke	[cm <sup>3</sup> ]	15.1	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.08	
Opening time	[s]	0.08	
Max. permitted finger length	[mm]	80.0	
Max. permitted weight per finger	[kg]	0.28	
IP rating		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[° <b>(</b> ]	90.0	
Repeat accuracy	[mm]	0.03	



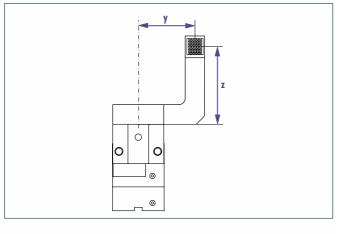
## **Main views**

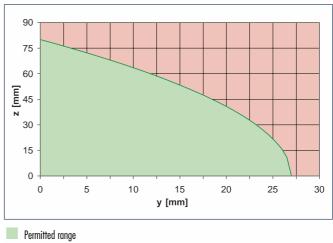


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- Finger connection

### **Maximum permitted overhang**



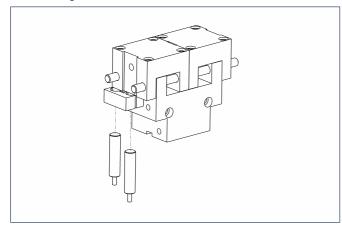






# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



### End position monitoring:

Inductive proximity swit	tches, for direct mou	nting	
Description	ID	Recommended product	
IN 80/S-M12	0301578	· · · ·	
IN 80/S-M8	0301478	•	
INK 80/S	0301550		

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

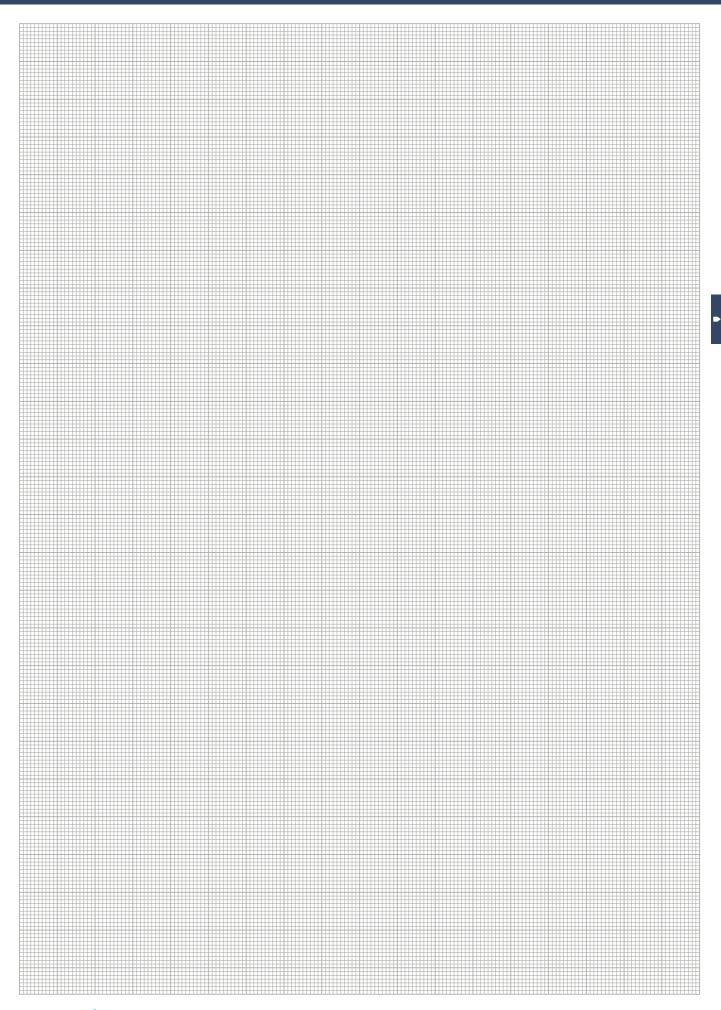
#### Extension cables for proximity switches/magnetic switches

Description	ID ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



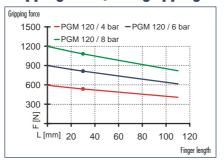




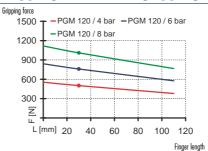
Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



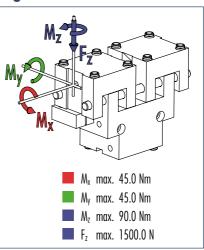
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

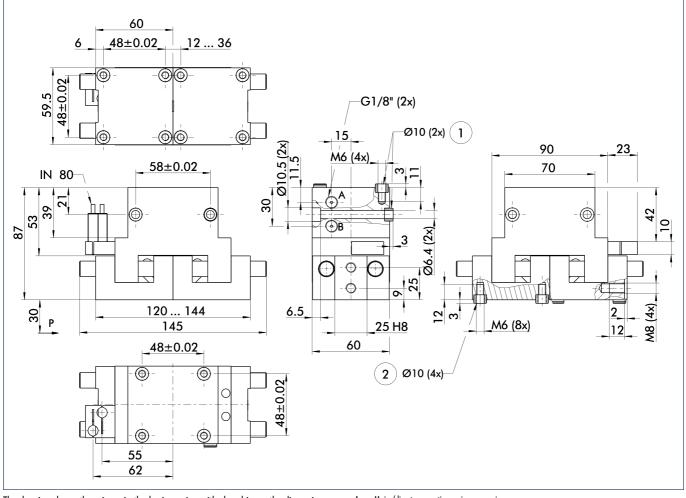


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 120	
	ID	0302686	
Stroke per finger	[mm]	12.0	
Closing force	[N]	760.0	
Opening force	[N]	810.0	
Weight	[kg]	1.26	
Recommended workpiece weight	[kg]	3.8	
Air consumption per double stroke	[cm <sup>3</sup> ]	23.6	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.1	
Opening time	[s]	0.1	
Max. permitted finger length	[mm]	110.0	
Max. permitted weight per finger	[kg]	0.58	
IP rating		30	
Min. ambient temperature	[°[]	-10.0	
Max. ambient temperature	[°C]	90.0	
Repeat accuracy	[mm]	0.03	



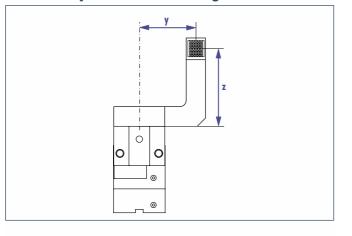
## **Main views**

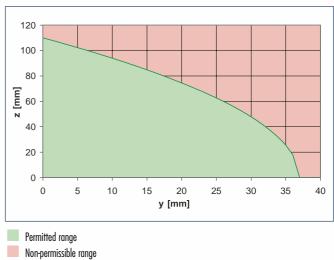


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- Finger connection

### **Maximum permitted overhang**

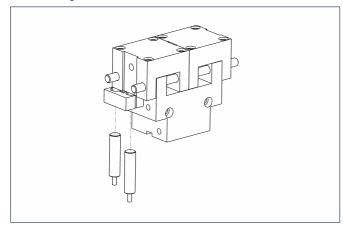






# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



#### End position monitoring:

Inductive proximity swi	tches, for direct mou	nting	
Description	ID	Recommended product	
IN 80/S-M12	0301578	· · · ·	
IN 80/S-M8	0301478	•	
INK 80/S	0301550		

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

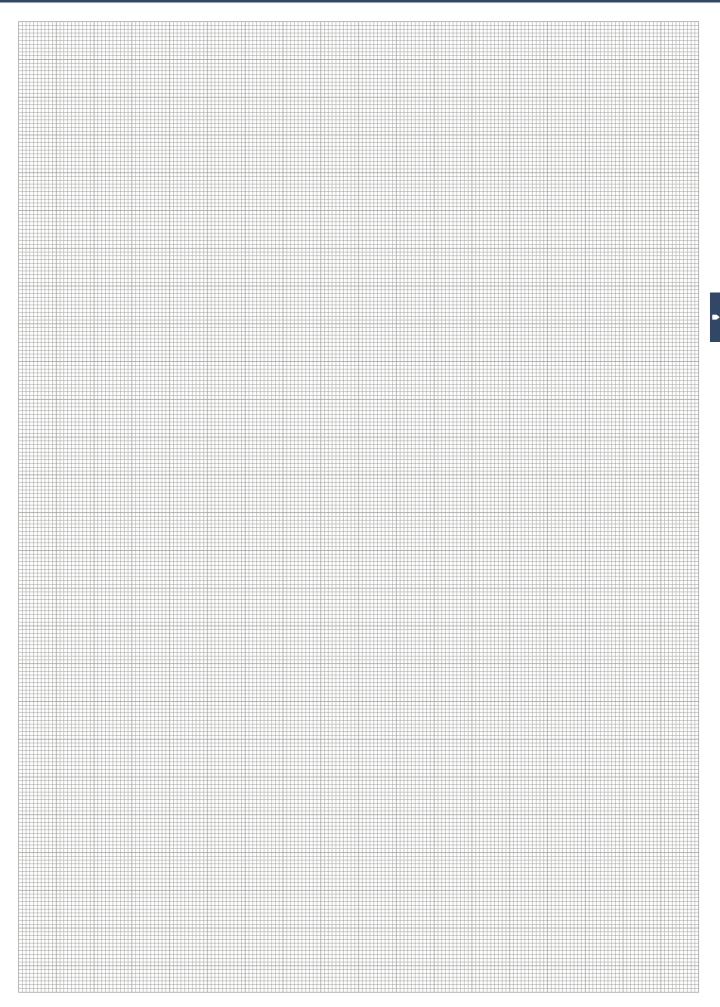
#### Extension cables for proximity switches/magnetic switches

Description	ID ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



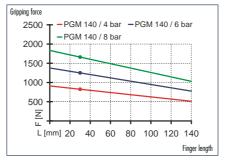




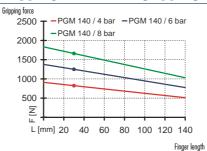
Pneumatic • 2-Finger Parallel Grippers • Universal Grippers



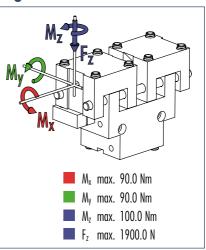
## Gripping force, I.D. gripping



## Gripping force, O.D. gripping



## **Finger load**

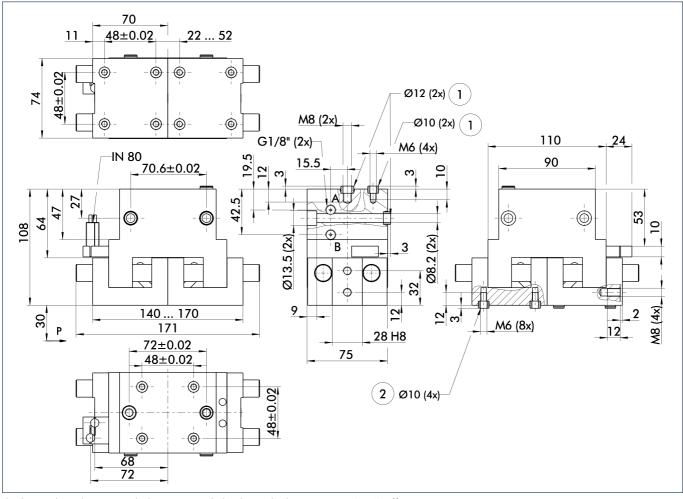


① Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Description		PGM 140	
	ID	0302687	
Stroke per finger	[mm]	15.0	
Closing force	[N]	1180.0	
Opening force	[N]	1250.0	
Weight	[kg]	2.55	
Recommended workpiece weight	[kg]	5.9	
Air consumption per double stroke	[cm <sup>3</sup> ]	46.8	
Nominal pressure	[bar]	6.0	
Minimum pressure	[bar]	2.0	
Maximum pressure	[bar]	8.0	
Closing time	[s]	0.12	
Opening time	[s]	0.12	
Max. permitted finger length	[mm]	140.0	
Max. permitted weight per finger	[kg]	1.0	
IP rating		30	
Min. ambient temperature	[° <b>(</b> ]	-10.0	
Max. ambient temperature	[°[]	90.0	
Repeat accuracy	[mm]	0.03	



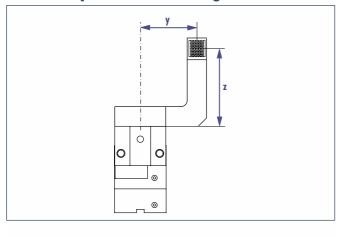
## **Main views**

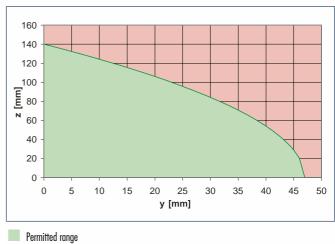


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- (2) Finger connection

### **Maximum permitted overhang**



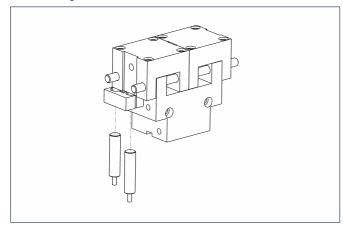


Non-permissible range



# Pneumatic • 2-Finger Parallel Grippers • Universal Grippers

## **Sensor system**



#### End position monitoring:

Inductive proximity swi	tches, for direct mou	nting	
Description	ID	Recommended product	
IN 80/S-M12	0301578	· · · ·	
IN 80/S-M8	0301478	•	
INK 80/S	0301550		

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

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

Description	ID	
GK 3-M8	0301622	
KV 10-M12	0301596	
KV 10-M8	0301496	
KV 20-M12	0301597	
KV 20-M8	0301497	
KV 3-M12	0301595	
KV 3-M8	0301495	
W 3-M12	0301503	
W 5-M12	0301507	
WK 3-M8	0301594	
WK 5-M8	0301502	

③ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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



