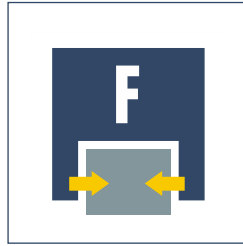




**Sizes**  
80 .. 280



**Weight**  
0.25 kg .. 4.2 kg



**Gripping force**  
88 N .. 540 N



**Stroke per finger**  
15 mm .. 60 mm



**Workpiece weight**  
0.44 kg .. 2.7 kg

### Application example



Unload unit for small components, which require an especially long gripper stroke due to their great variation in size

**1** KGG 140 2-Finger Parallel Gripper with workpiece-specific fingers

**2** FST-S 25-40 Mini-slide for horizontal movement

**3** FST-S 16-60 Mini-slide for vertical movement

## Grippers for small components

Compact 2-finger parallel gripper with long stroke

### Area of application

for universal use in clean environments with light to medium work-piece weights and a long stroke range

### Your advantages and benefits

#### Robust T-slot guide

for high maximum moments

#### Pneumatic 2-piston drive design

for direct power transmission and high efficiency

#### Rack and pinion principle

for centric clamping, even with long strokes

#### Mounting on two 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

Directly driven base jaws, synchronized by rack and pinion

#### Housing material

Aluminum alloy, hard-anodized

#### Base jaw material

Aluminum alloy, hard-anodized

#### Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated

Pressure medium: Required quality class of compressed air according to DIN ISO

8573-1: Quality class 4

#### Warranty

24 months

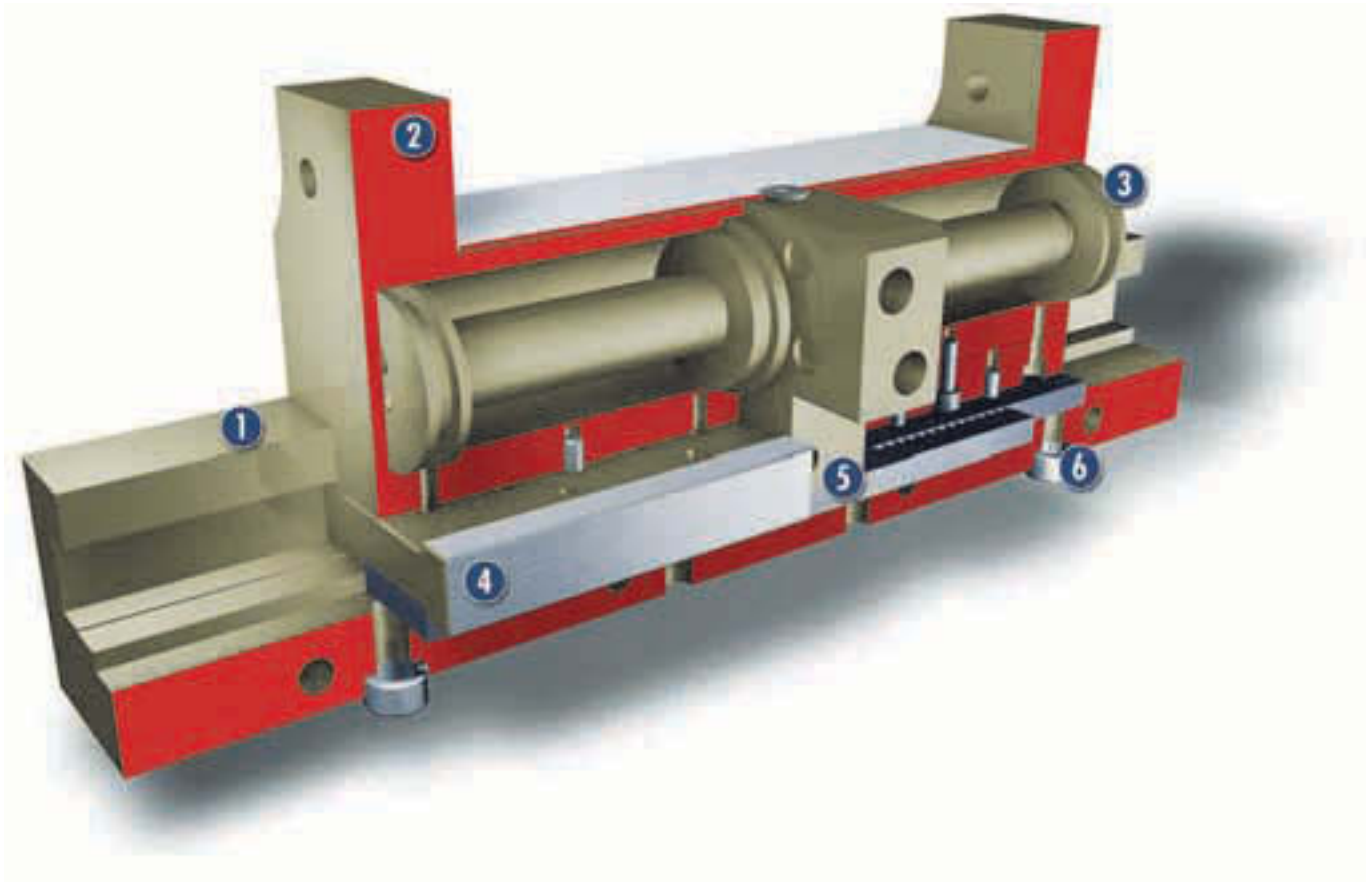
#### Scope of delivery

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

#### Maintenance of gripping force

possible with SDV-P pressure maintenance valve

### Sectional diagram



- 1 Housing**  
weight-reduced through the use of a hard-anodized, high-strength aluminum alloy
- 2 Base jaws**  
for the connection of workpiece-specific gripper fingers
- 3 Drive**  
pneumatic 2-piston system
- 4 Guidance**  
high maximum moments through robust T-slot guide
- 5 Kinematics**  
rack and pinion principle for centric clamping, even with long strokes
- 6 Centering and mounting possibilities**  
for mounting the gripper on the base surface and the side surface

### Function description

The base jaws, arranged in a line, are introduced with compressed air directly by the fixed piston, which causes them to open and close. The base jaws are synchronized by the internal rack and pinion arrangement.

### Options and special information

Please note that the mass moment of inertia of the gripper fingers must be kept to a minimum in the case of long-stroke grippers.

### Accessories

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

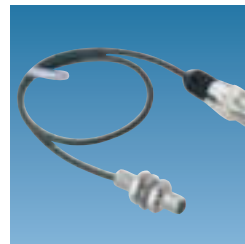
**Centering sleeves**



**Fittings**



**IN inductive proximity switches**



**W/WK/KV/GK sensor cables**



**HM carbide inserts**



**V sensor distributors**



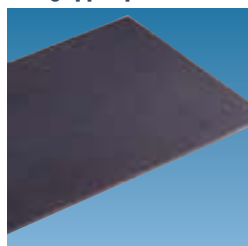
**Quentes plastic inserts**



**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 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

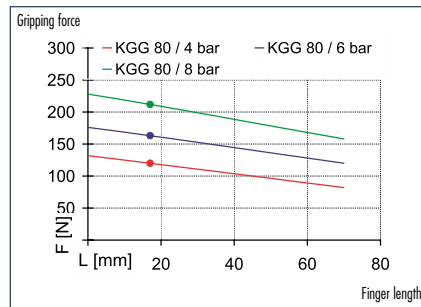
The recommended workpiece weight is calculated for a force-fit type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

#### Closing and opening times

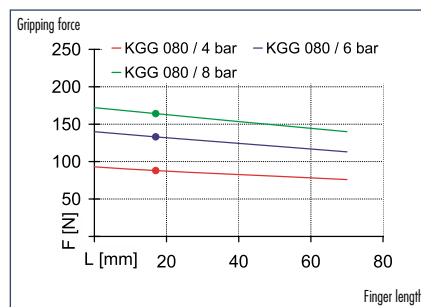
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



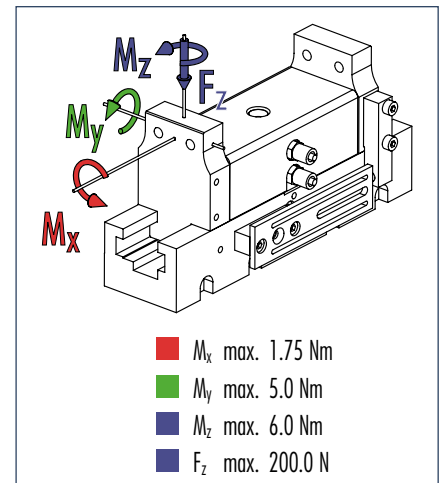
### Gripping force, I.D. gripping



### Gripping force, O.D. gripping



### Finger load

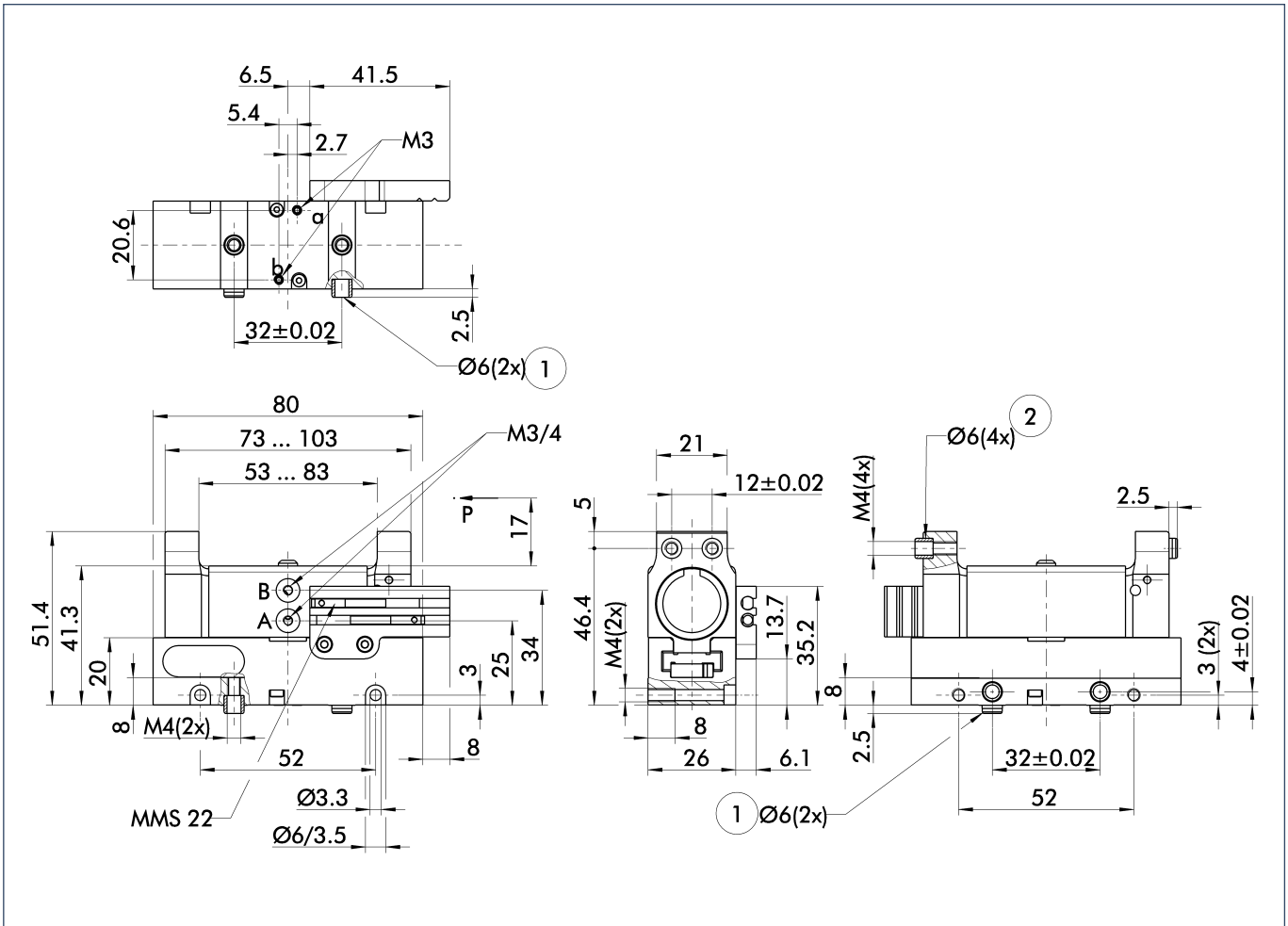


① Moments and forces apply per base jaw and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting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

## Technical data

Description	KGG 80	
ID	0340310	
Stroke per finger	[mm]	15.0
Closing force	[N]	88.0
Opening force	[N]	140.0
Weight	[kg]	0.25
Recommended workpiece weight	[kg]	0.44
Air consumption per double stroke	[cm <sup>3</sup> ]	11.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	2.5
Maximum pressure	[bar]	8.0
Closing time	[s]	0.06
Opening time	[s]	0.045
Max. permitted finger length	[mm]	70.0
Max. permitted weight per finger	[kg]	0.15
IP rating		40
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.05

### Main views

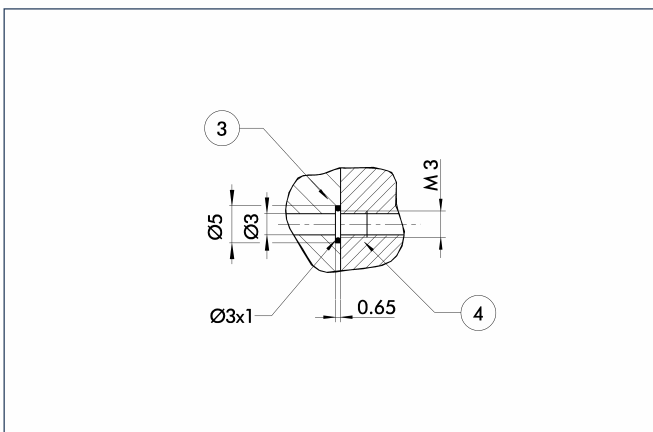


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

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.

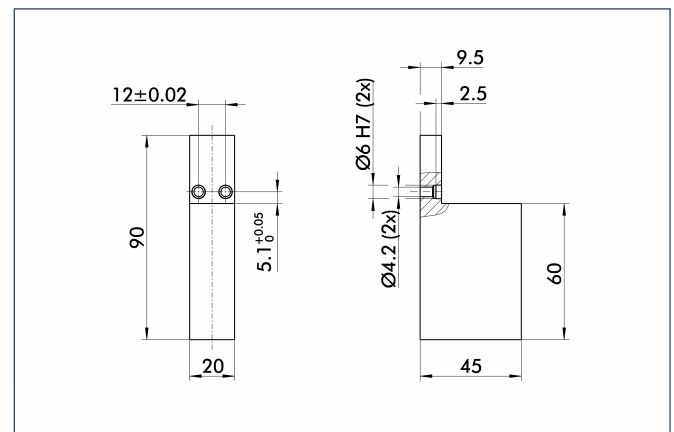
### Hoseless direct connection



- ③ Adapter
- ④ Gripper

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

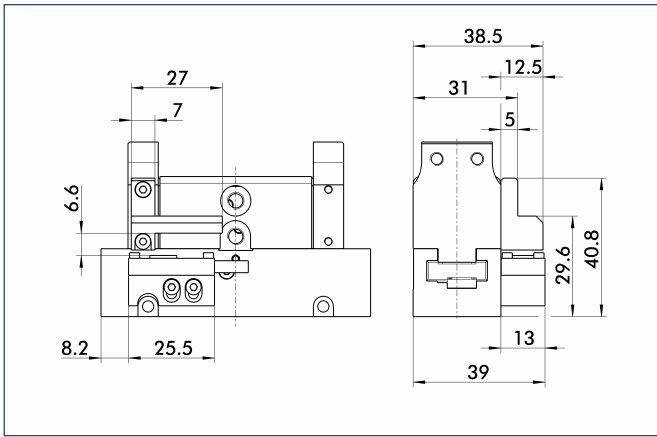
### Finger blanks



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

Description	Material	Scope of delivery	ID
RB 80	Aluminum	2	0300284

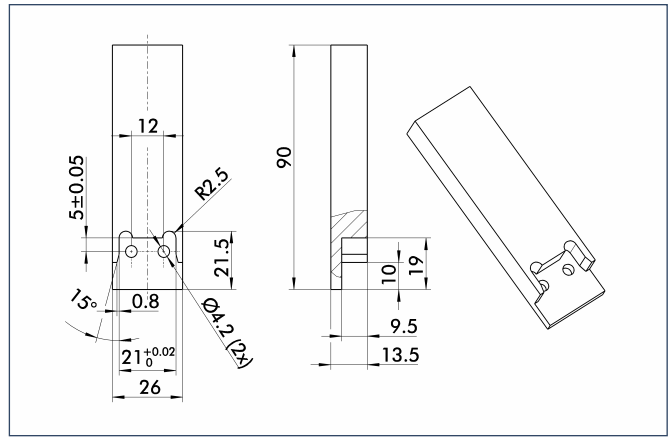
### Mounting kit for FPS



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-KGG 80	0301731

### Finger design

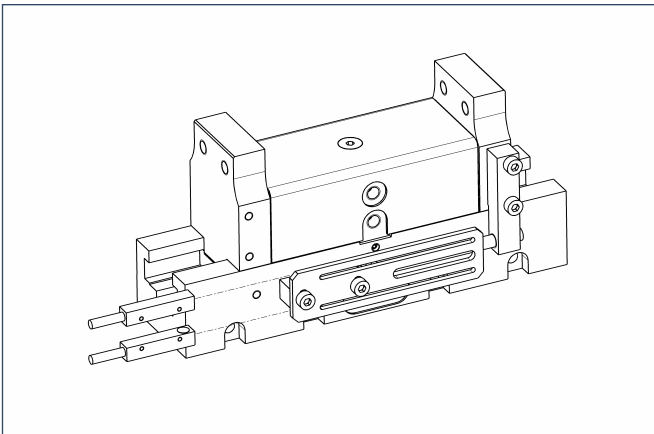


Suggested connection dimensions for gripper fingers



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

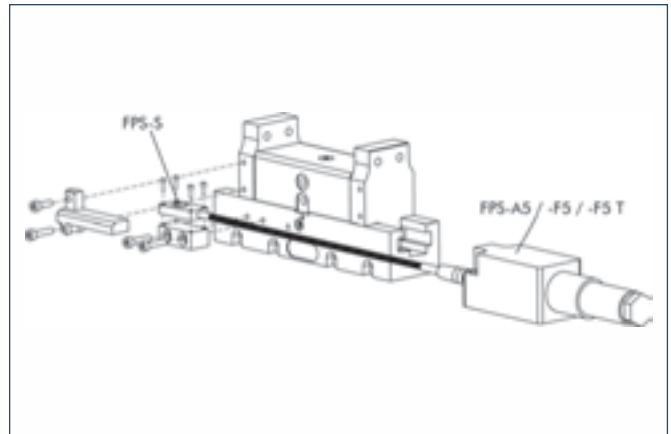
### Sensor system



#### End position monitoring: Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 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.



#### Measuring system: FPS position monitor

Description	ID
AS-KGG 80	0301731
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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
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

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

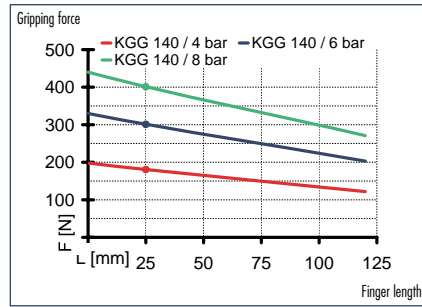


You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.

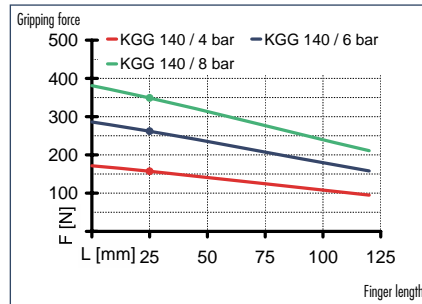




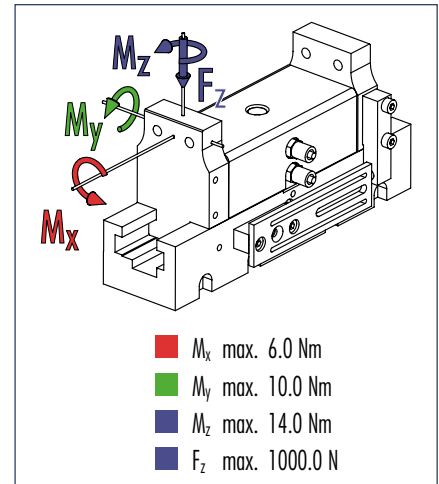
### Gripping force, I.D. gripping



### Gripping force, O.D. gripping



### Finger load

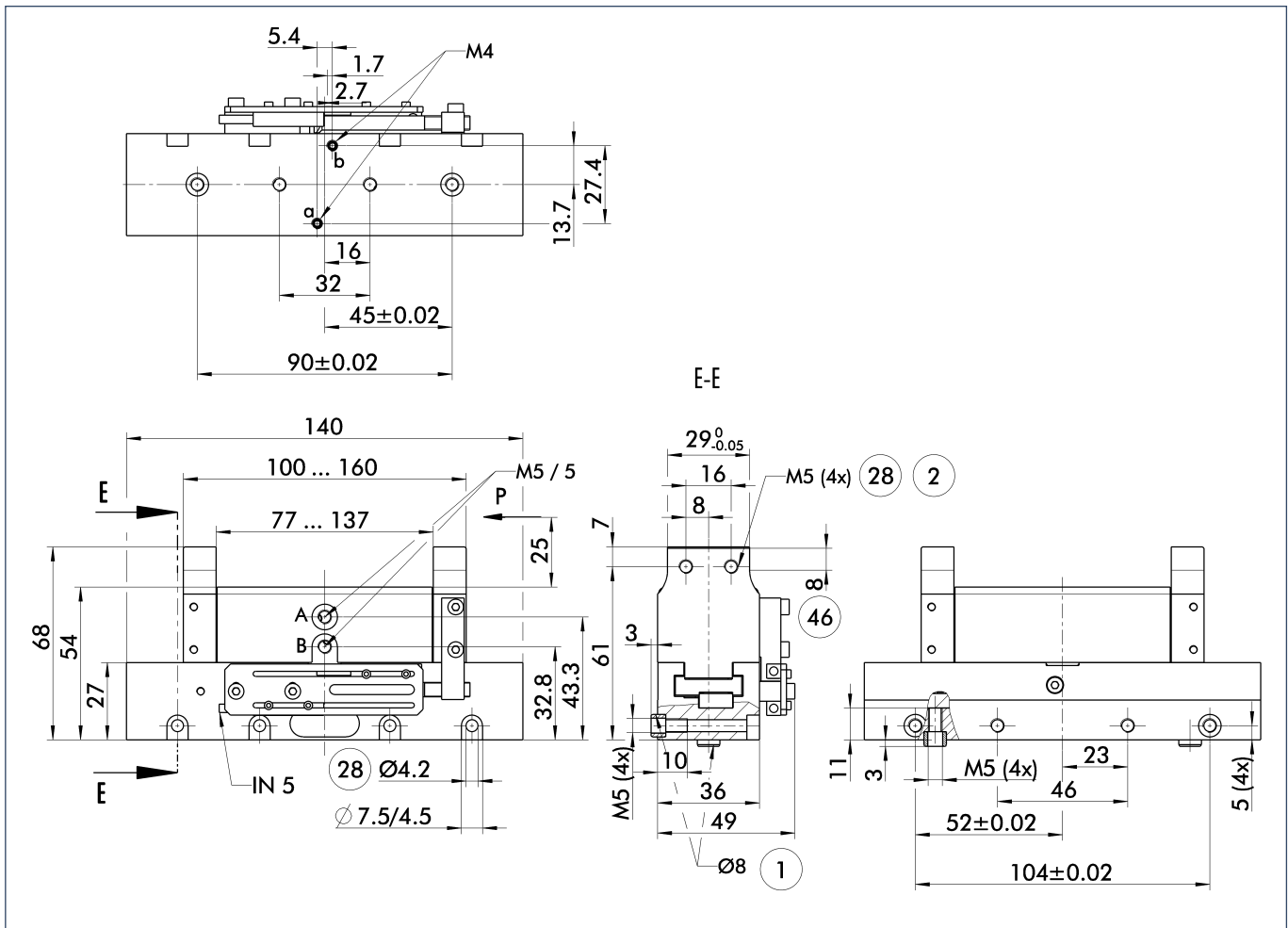


ⓘ Moments and forces apply per base jaw and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting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

## Technical data

Description	ID	KGG 140
		0340311
Stroke per finger	[mm]	30.0
Closing force	[N]	260.0
Opening force	[N]	300.0
Weight	[kg]	0.72
Recommended workpiece weight	[kg]	1.3
Air consumption per double stroke	[cm <sup>3</sup> ]	41.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	2.5
Maximum pressure	[bar]	8.0
Closing time	[s]	0.12
Opening time	[s]	0.12
Max. permitted finger length	[mm]	100.0
Max. permitted weight per finger	[kg]	0.5
IP rating		40
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.05

### Main views

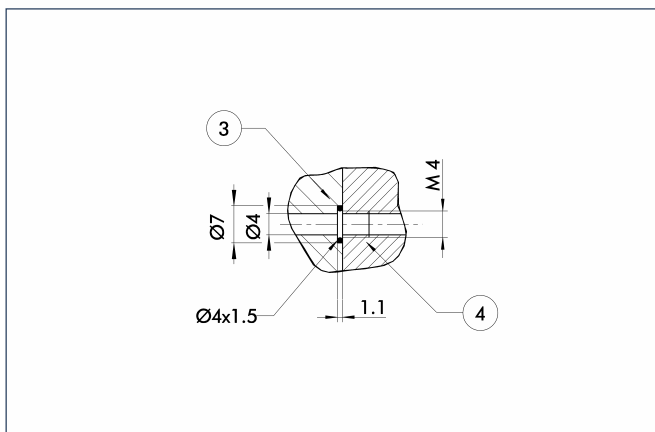


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ⊘ Through-bore
- ⊘ Fitting length

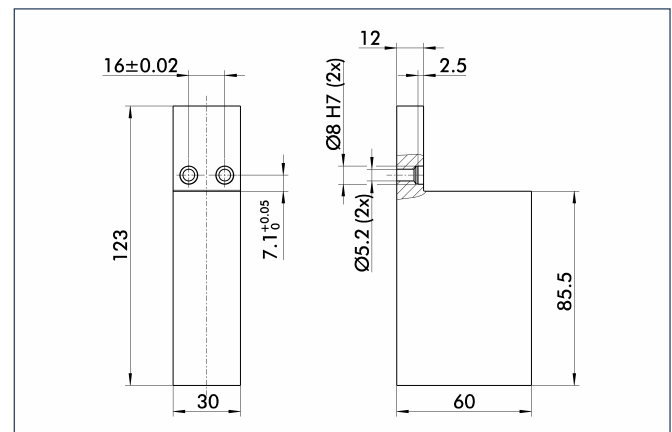
### Hoseless direct connection



- ③ Adapter
- ④ Gripper

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

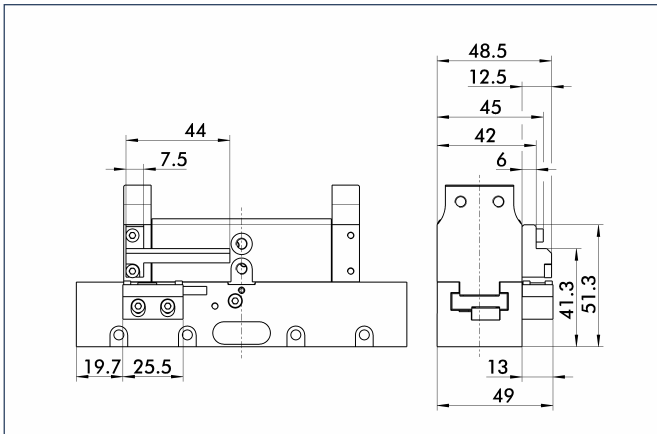
### Finger blanks



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

Description	Material	Scope of delivery	ID
RB 140	Aluminum	2	0300285

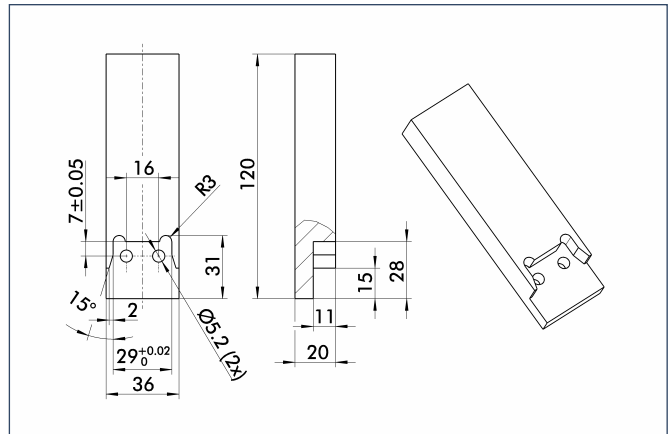
### Mounting kit for FPS



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.

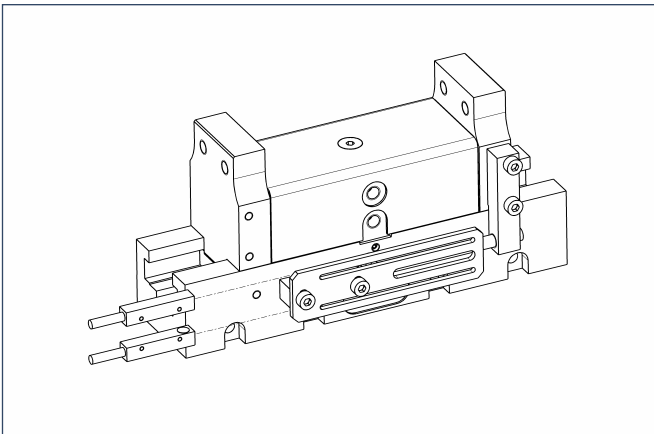
Description	ID
AS-KGG 140	0301735

### Finger design



Suggested connection dimensions for gripper fingers

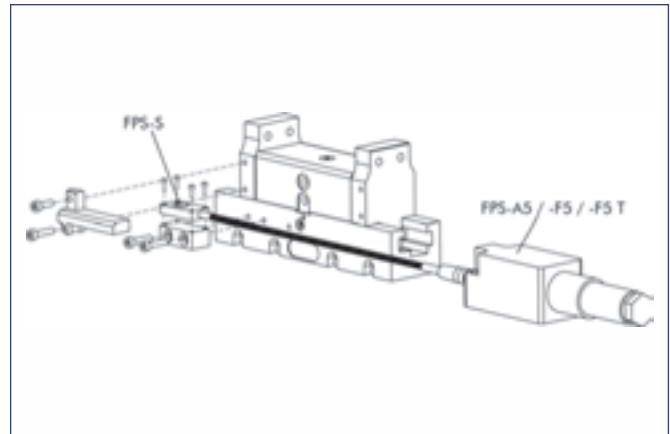
### Sensor system



#### End position monitoring: Inductive proximity switches, for direct mounting

Description	ID	Recommended product
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.



#### Measuring system: FPS position monitor

Description	ID
AS-KGG 140	0301735
FPS-A5	0301802
FPS-F5	0301805
FPS-F5 T	0301807
FPS-S 13	0301705

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (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

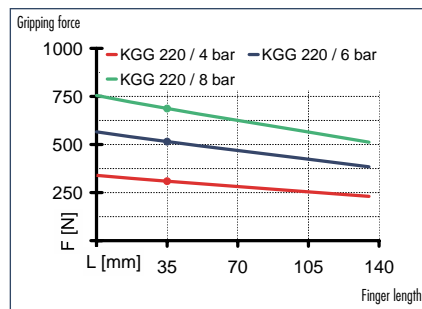
Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

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

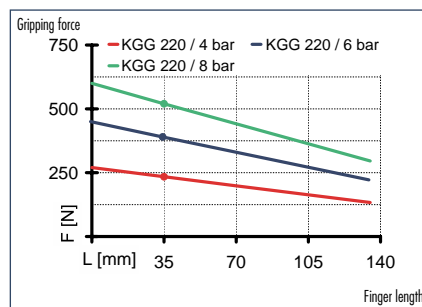
 You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.



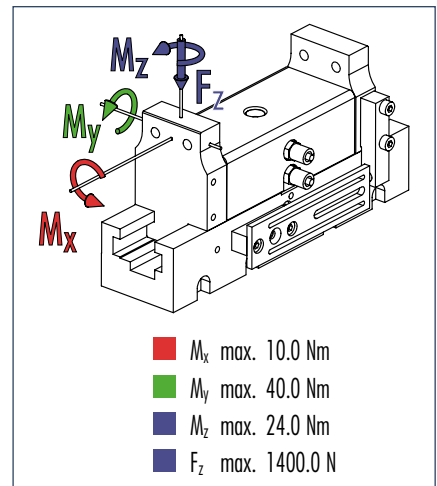
### Gripping force, I.D. gripping



### Gripping force, O.D. gripping



### Finger load

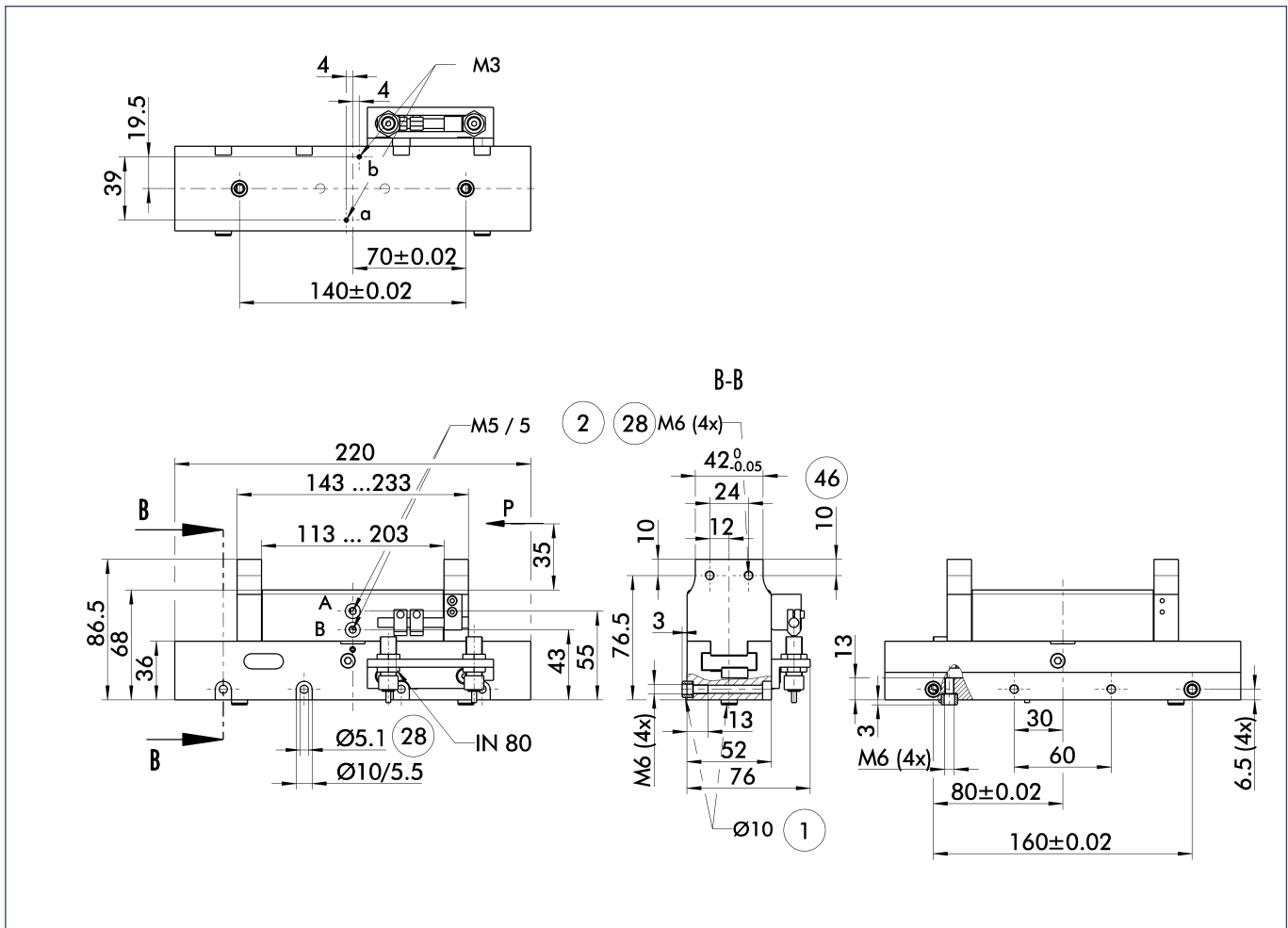


ⓘ Moments and forces apply per base jaw and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting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

## Technical data

Description	ID	KGG 220
		0340312
Stroke per finger	[mm]	45.0
Closing force	[N]	390.0
Opening force	[N]	515.0
Weight	[kg]	2.0
Recommended workpiece weight	[kg]	1.95
Air consumption per double stroke	[cm <sup>3</sup> ]	98.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	2.5
Maximum pressure	[bar]	8.0
Closing time	[s]	0.25
Opening time	[s]	0.25
Max. permitted finger length	[mm]	130.0
Max. permitted weight per finger	[kg]	1.0
IP class		30
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.05

### Main views

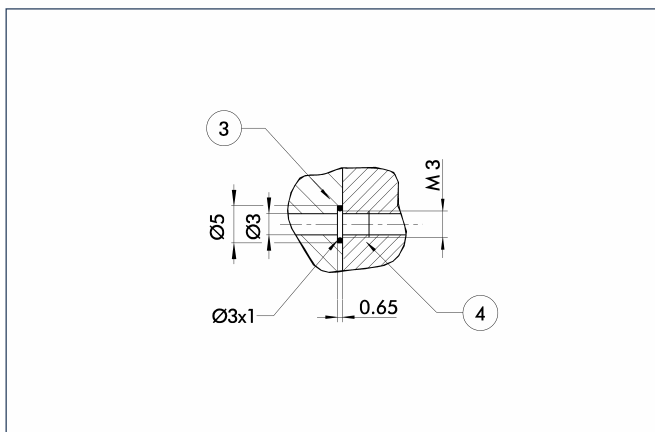


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- 28 Through-bore
- 46 Fitting length

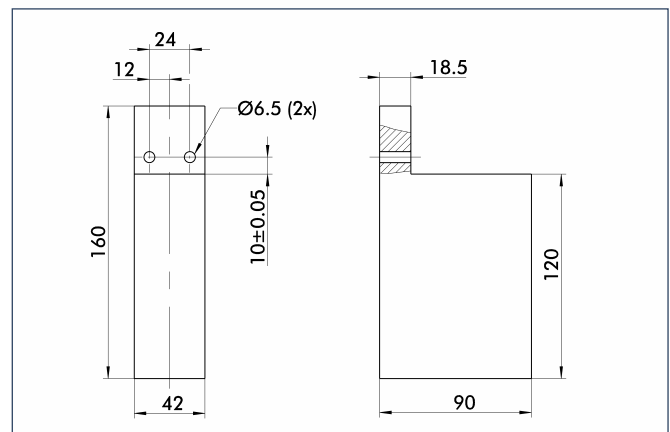
### Hoseless direct connection



- ③ Adapter
- ④ Gripper

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

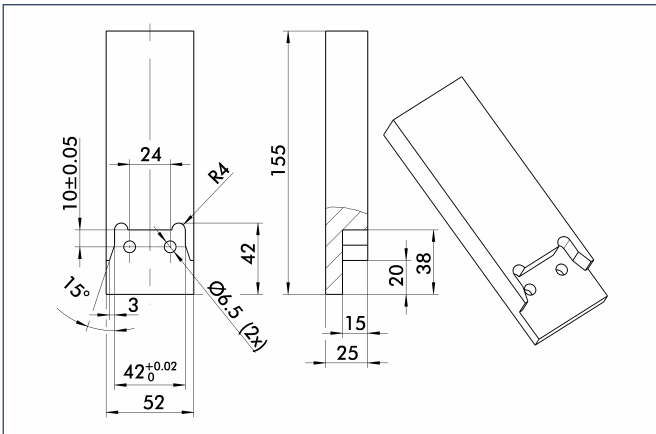
### Finger blanks



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

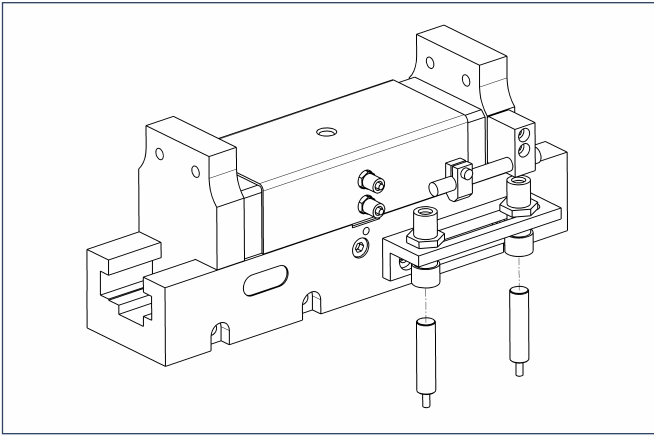
Description	Material	Scope of delivery	ID
RB 220	Aluminum	2	0300286

### Finger design



Suggested connection dimensions for gripper fingers

### Sensor system



#### End position monitoring: Inductive proximity switches, for direct mounting

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

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

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

Description	ID
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

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

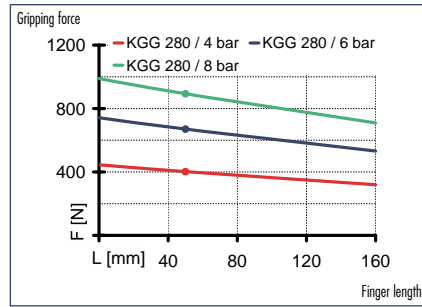


You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.

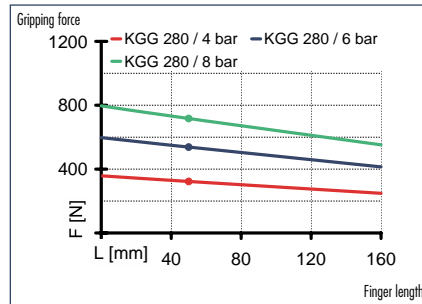




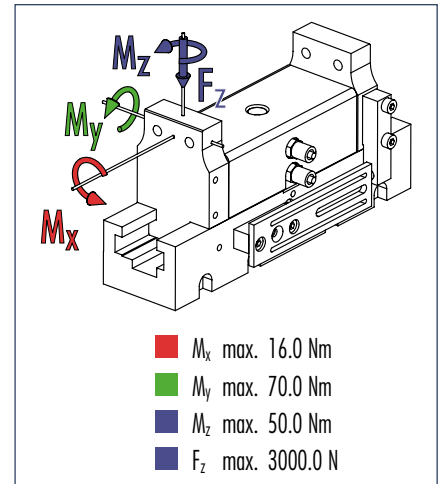
### Gripping force, I.D. gripping



### Gripping force, O.D. gripping



### Finger load

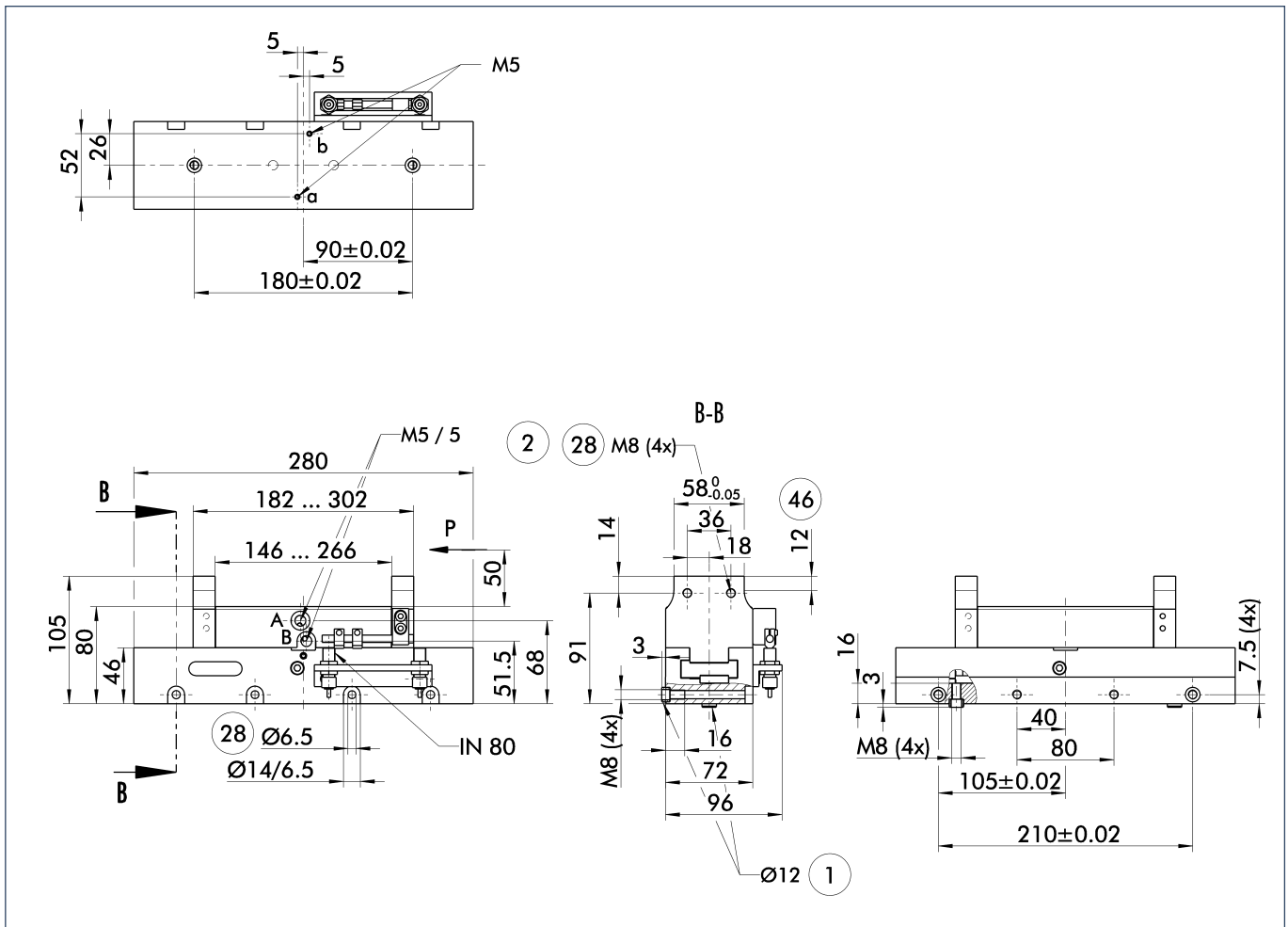


① Moments and forces apply per base jaw and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting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

## Technical data

Description	KGG 280	
ID	0340313	
Stroke per finger	[mm]	60.0
Closing force	[N]	540.0
Opening force	[N]	670.0
Weight	[kg]	4.2
Recommended workpiece weight	[kg]	2.7
Air consumption per double stroke	[cm <sup>3</sup> ]	170.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	2.5
Maximum pressure	[bar]	8.0
Closing time	[s]	0.29
Opening time	[s]	0.25
Max. permitted finger length	[mm]	160.0
Max. permitted weight per finger	[kg]	2.0
IP rating		30
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

### Main views

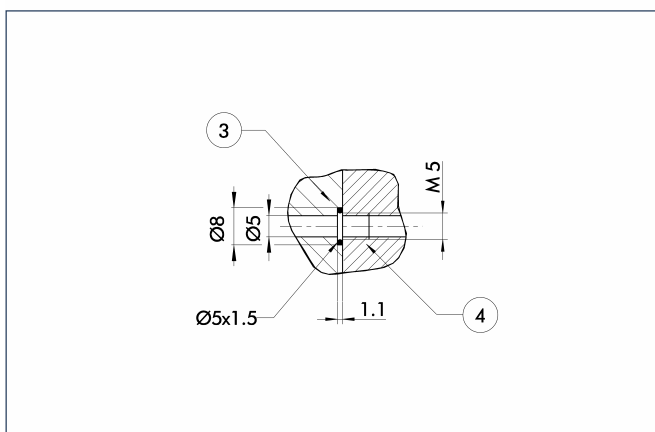


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- 28 Through-bore
- 46 Fitting length

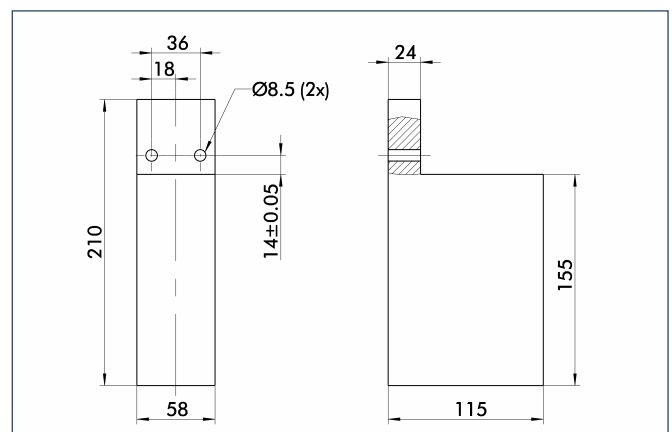
### Hoseless direct connection



- ③ Adapter
- ④ Gripper

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

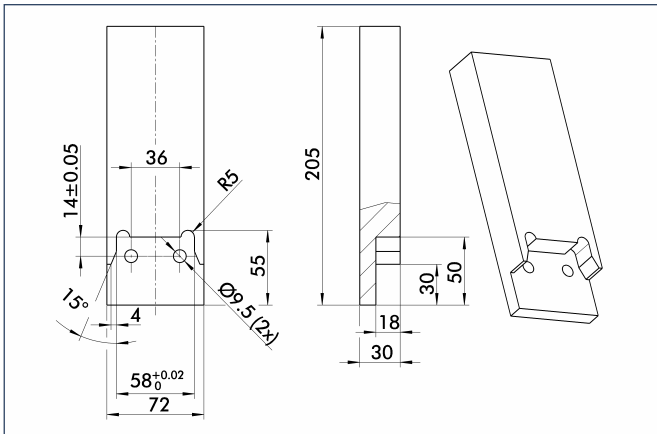
### Finger blanks



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

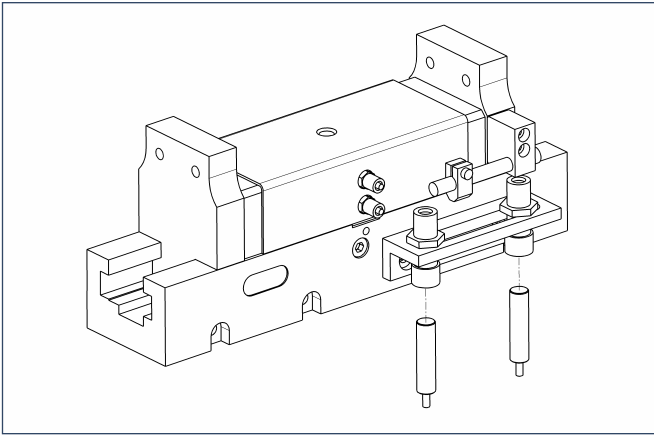
Description	Material	Scope of delivery	ID
RB 280	Aluminum	2	0300287

### Finger design



Suggested connection dimensions for gripper fingers

### Sensor system



#### End position monitoring: Inductive proximity switches, for direct mounting

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

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

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

Description	ID
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

- ① 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.