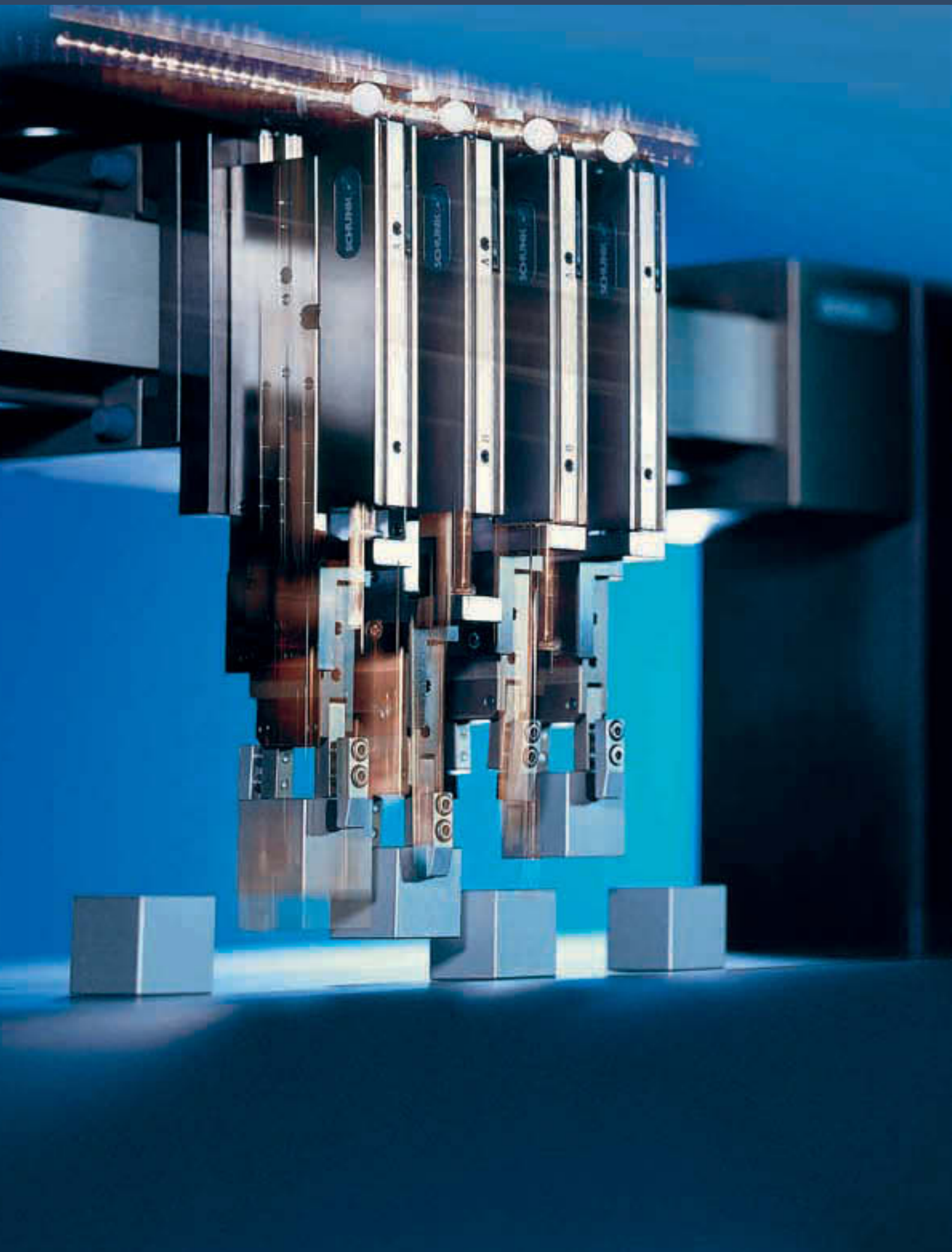


Pneumatic Gripping Modules

Pneumatic · 2-Finger Angular Grippers



2-FINGER ANGULAR GRIPPERS

Series	Size	Page
Angular Grippers for Small Components		
SGB		580
SGB	32	584
SGB	40	588
SGB	50	592
SWG		596
SWG	10	600
SWG	12	602
SWG	16	604
SWG	20	608
SWG	25	612
SWG	32	616
SWG	40	620
SWG	50	624
RHL		628
RHL	0	632
Universal Angular Grippers		
PWG-S		634
PWG-S	40	638
PWG-S	60	642
PWG-S	80	646
PWG		650
PWG	65	654
PWG	90	658
PWG	130	662
PWG	170	666
PWG	230	670

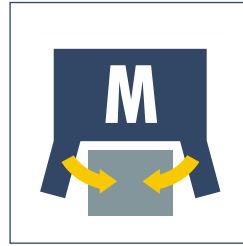




Sizes
32 .. 50



Weight
36 g .. 60 g



Gripping moment
0.90 Nm .. 4.95 Nm



Opening angle per finger
8°



Workpiece weight
0.2 kg .. 0.8 kg

Application example



Rotating unit for the simultaneous rotation of 3 small components by 90°

1 SGB 50 2-Finger Angular Gripper

2 MRU 12.1-E-4
Miniature Rotary Unit

Angular Gripper for small components

Small, plastic angular gripper with spring return and single-acting piston

Area of application

For universal use in clean and slightly dirty environments, with special requirements for the corrosion resistance and antistatic properties of the gripper unit

Your advantages and benefits

Housing of carbon-fiber-reinforced plastic
making the gripper extremely light and corrosion resistant

Wedge-hook design
for high power transmission and synchronized gripping

Basic version generally equipped with a pressure piece
for the spring-assisted pressing of workpieces

Low price
especially suitable for low-budget applications



General information on the series

Working principle
Single-acting cylinder piston with lever mechanism and spring return

Housing material
Carbon-fiber-reinforced plastic with metal functional parts

Base jaw material
Carbon-fiber-reinforced plastic

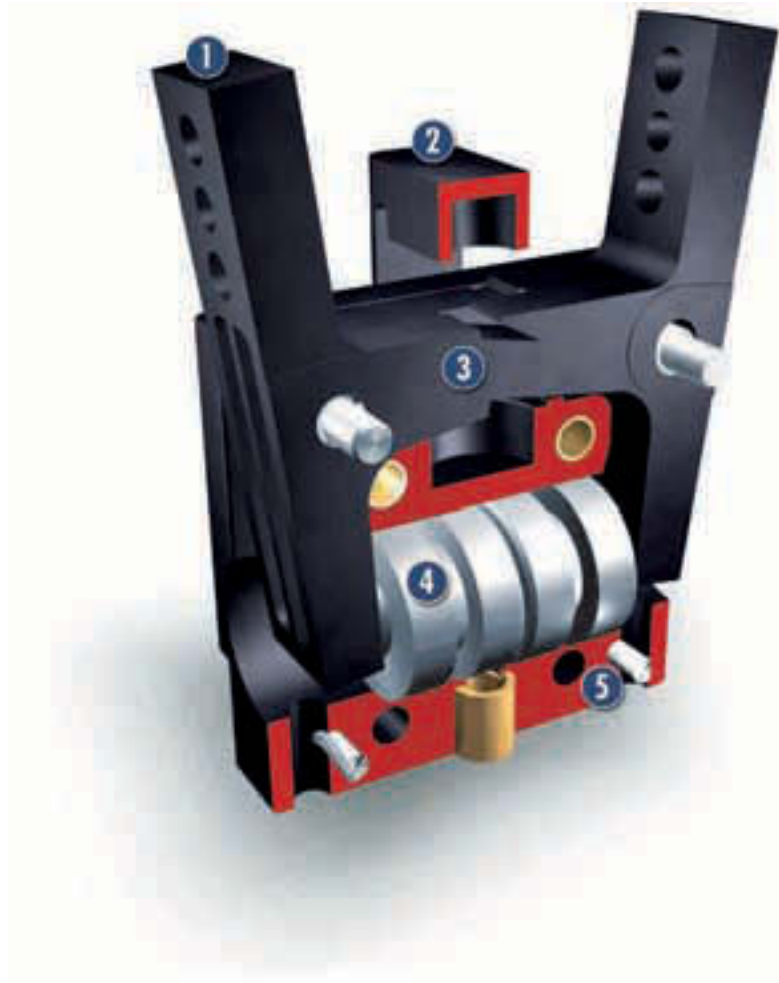
Actuation
Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Required quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Warranty
24 months

Scope of delivery
Integrated, spring-loaded locating plate, assembly and operating manual with manufacturer's declaration

Gripping force safety device
possible with SDV-P pressure maintenance valve

Sectional diagram



- 1 Base jaws**
for the connection of workpiece-specific gripper fingers
- 2 Pressure piece**
spring-loaded, for pressing workpieces into place
- 3 Kinematics**
lever mechanism for precise, synchronized gripping
- 4 Drive**
single-acting double piston system with spring return
- 5 Housing**
weight-reduced through the use of the use of carbon-fiber-reinforced plastic

Function description

The two horizontally arranged pistons are pressed away from each other by compressed air. The base jaws are opened at an angle and in a synchronized fashion by the bearing-mounted lever mechanism. Return is effected by a compression spring.

Options and special information

The use of carbon-fiber-reinforced plastics endows the SGB with a very low weight and a disproportionately high gripping force.

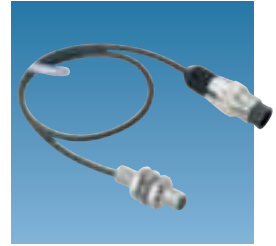
Accessories

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

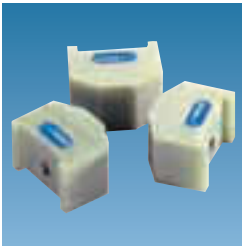
Fittings



IN inductive proximity switches



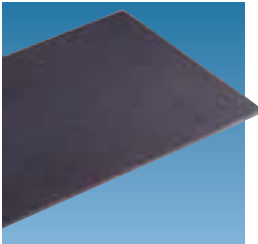
Quentes plastic inserts



W/WK/KV/GK sensor cables



HKI gripper pads



V sensor distributors



SDV-P pressure maintenance valves



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 moment

is the arithmetic total of gripping moments for each base jaw.

Finger length

is measured from the upper edge of the gripper housing in the direction of the main axis. If the max. permitted finger length is exceeded, as with heavy fingers, the speed of movement of the jaws must be restricted and/or the opening angle reduced. The service life of the gripper may be reduced.

Repeat accuracy

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

Workpiece weight

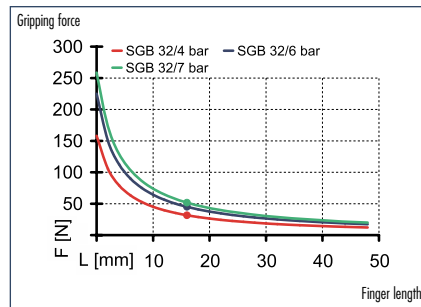
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

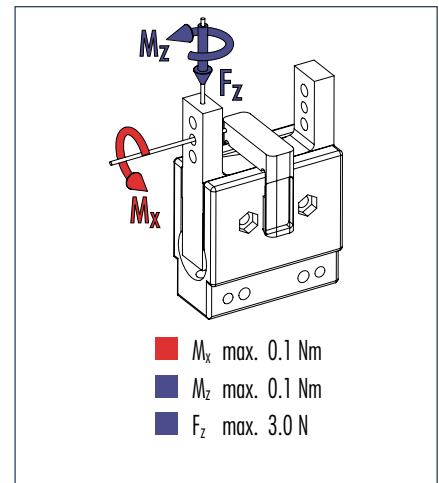
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or SPC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



Gripping force, O.D. gripping



Finger load

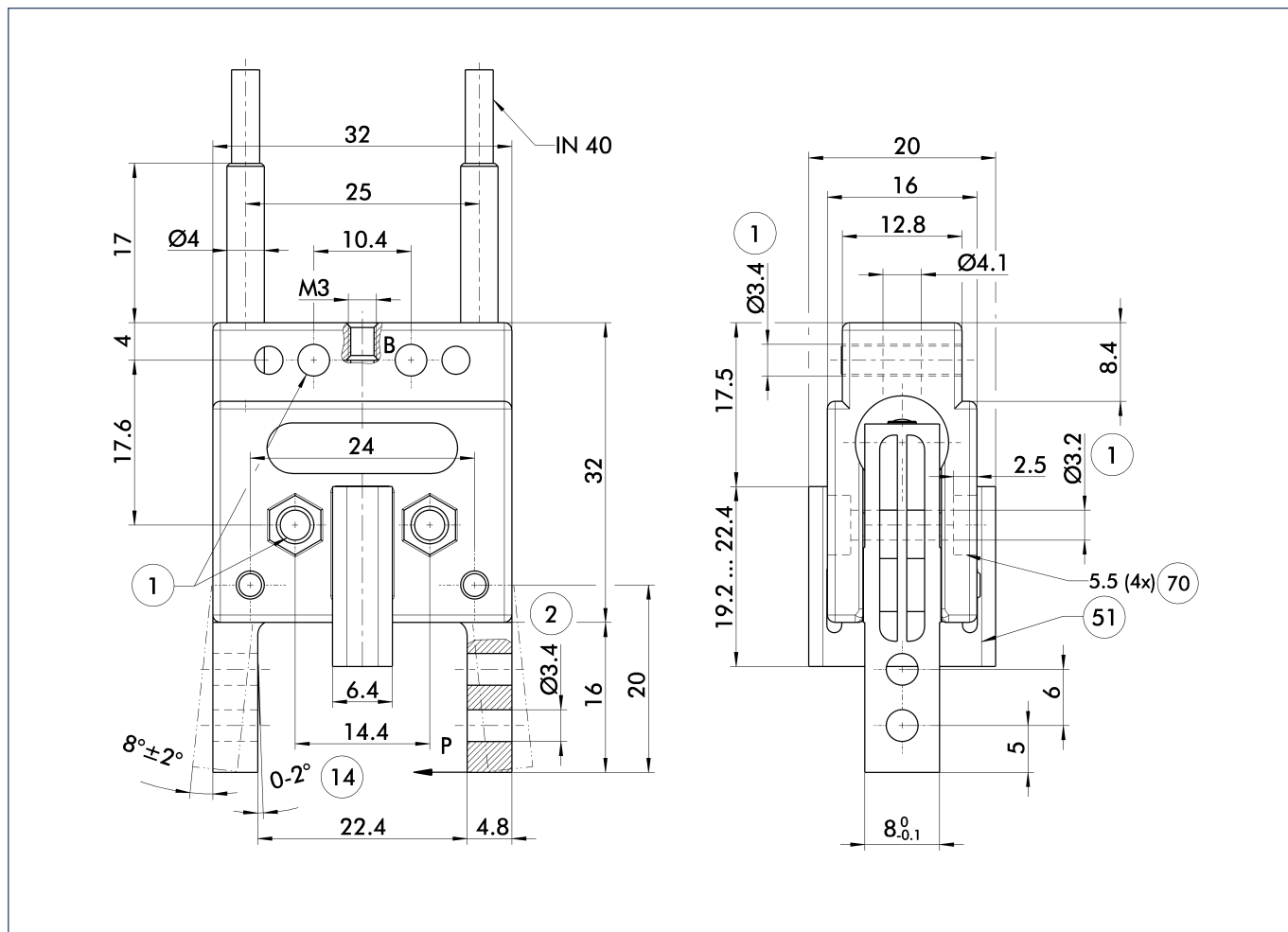


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	SGB 32
	0305199
Opening angle per jaw	[°] 8.0
Opening angle per jaw up to	[°] 2.0
Closing moment	[Nm] 0.9
Weight	[kg] 0.036
Recommended workpiece weight	[kg] 0.2
Air consumption per double stroke	[cm ³] 0.5
Nominal pressure	[bar] 6.0
Minimum pressure	[bar] 4.0
Maximum pressure	[bar] 7.0
Closing time	[s] 0.06
Opening time	[s] 0.04
Max. permitted finger length	[mm] 32.0
Max. permitted weight per finger	[kg] 0.03
IP class	20
Min. ambient temperature	[°C] -10.0
Max. ambient temperature	[°C] 90.0
Repeat accuracy	[mm] 0.1
Min. pressure force	[N] 2.0
Pressure stroke	[mm] 3.2

Main views



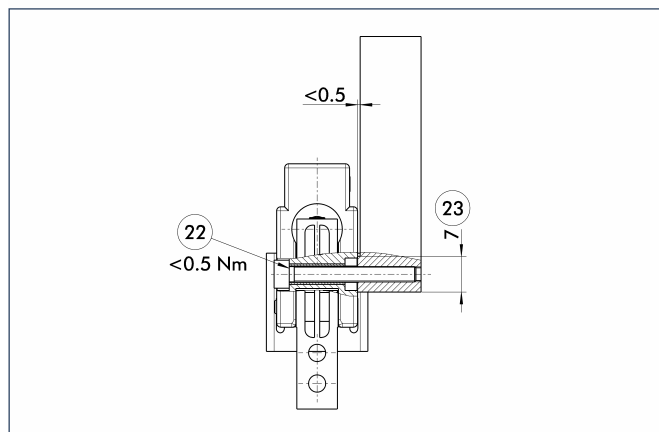
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can be used as a gripping force safety device (see "Accessories" catalog section).

B,b Main/direct connection, gripper closing

- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger
- ⑤① Pressure piece
- ⑦① Hex countersink

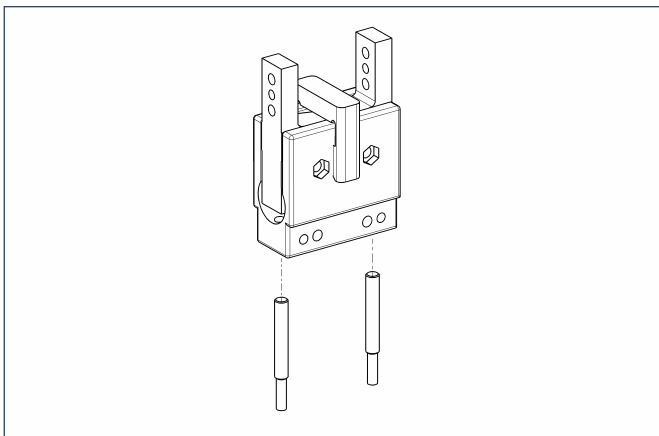
Mounting



- ②② Tightening torque
- ②③ Width of path

Recommended for achieving distortion-free gripper mounting

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40/O-M12	0301584	
IN 40/O-M8	0301484	•
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
INK 40/O	0301556	
INK 40/S	0301555	

- ① Two sensors, one NO and one NC contact, are required for each gripper, plus extension cables as an option.

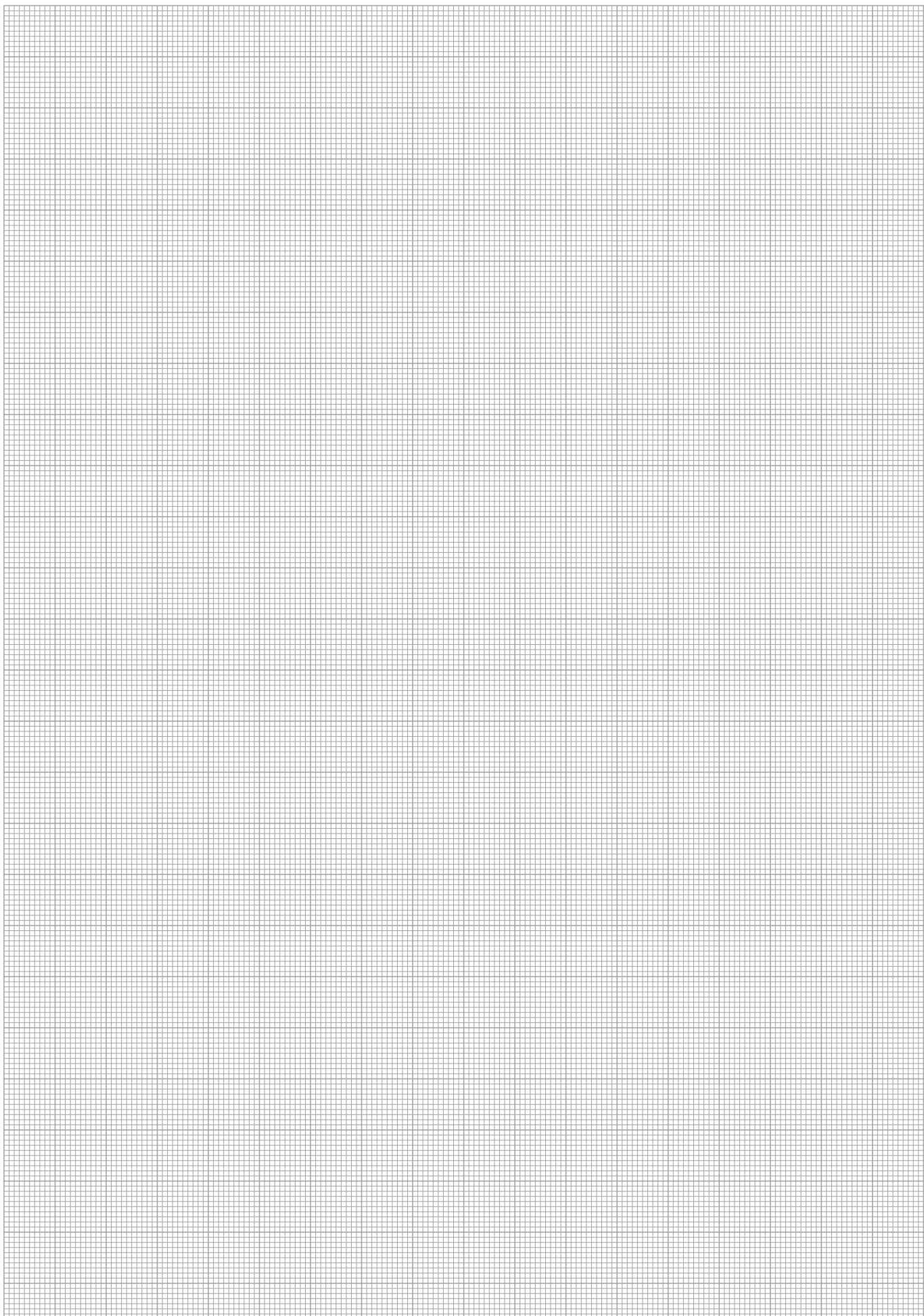
Extension cables for proximity switches/magnetic switches

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.

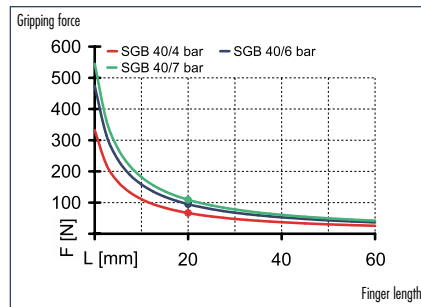


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

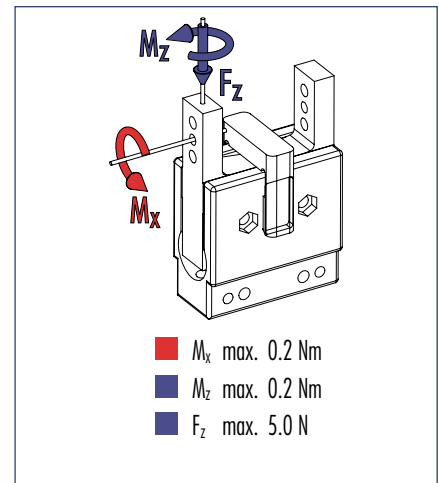




Gripping force, O.D. gripping



Finger load

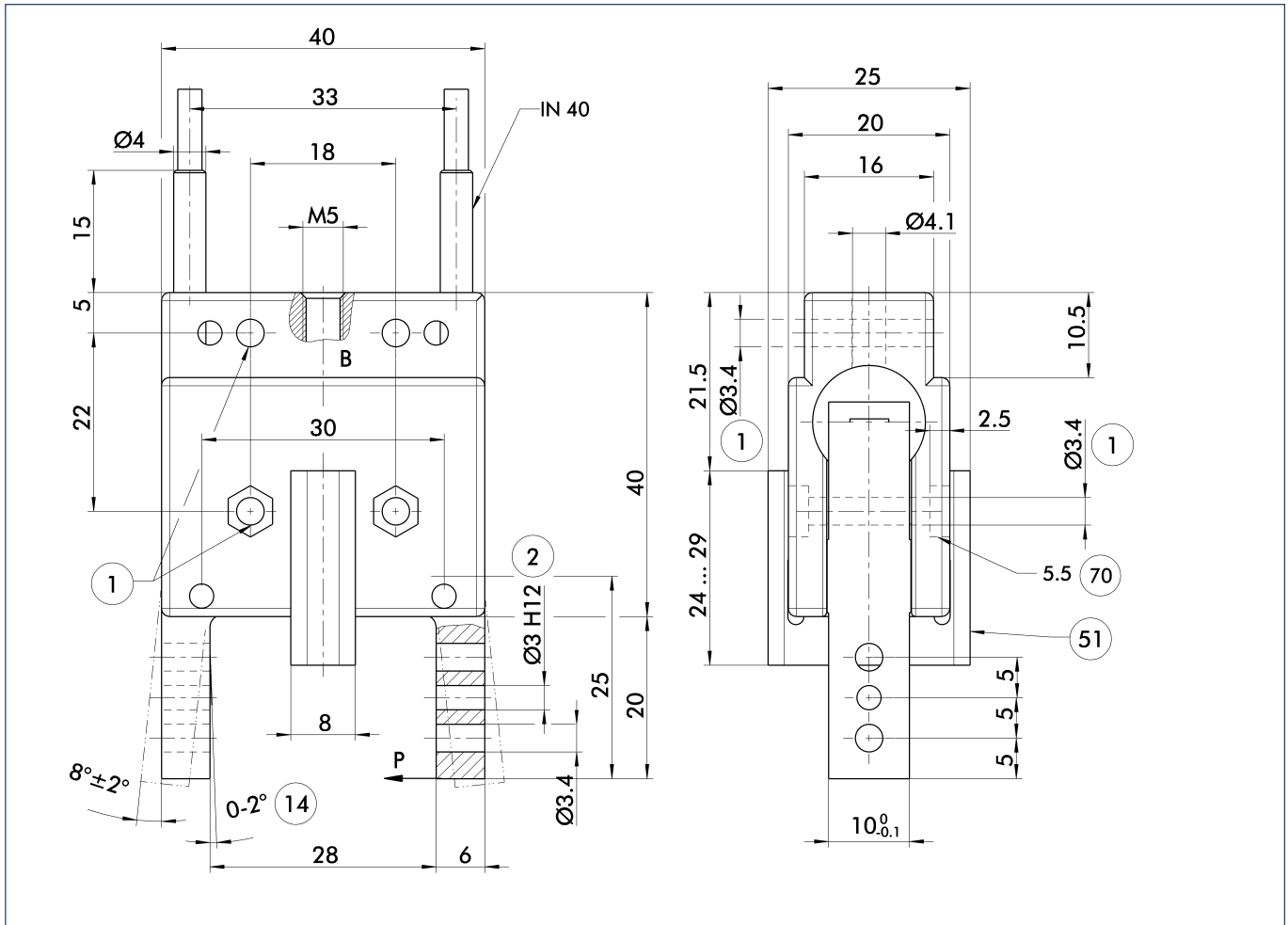


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	ID	SGB 40
		0305200
Opening angle per jaw	[°]	8.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	2.37
Weight	[kg]	0.045
Recommended workpiece weight	[kg]	0.4
Air consumption per double stroke	[cm ³]	1.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	7.0
Closing time	[s]	0.08
Opening time	[s]	0.05
Max. permitted finger length	[mm]	40.0
Max. permitted weight per finger	[kg]	0.045
IP class		20
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1
Min. pressure force	[N]	4.0
Pressure stroke	[mm]	4.0

Main views



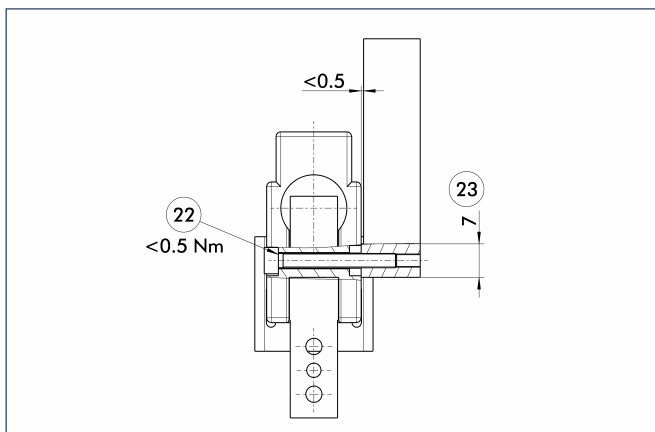
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can be used as a gripping force safety device (see "Accessories" catalog section).

B,b Main/direct connection, gripper closing

- ① Gripper connection
- ② Finger connection
- ⑭ Clamping reserve per finger
- ⑤① Pressure piece
- ⑦⑦ Hex countersink

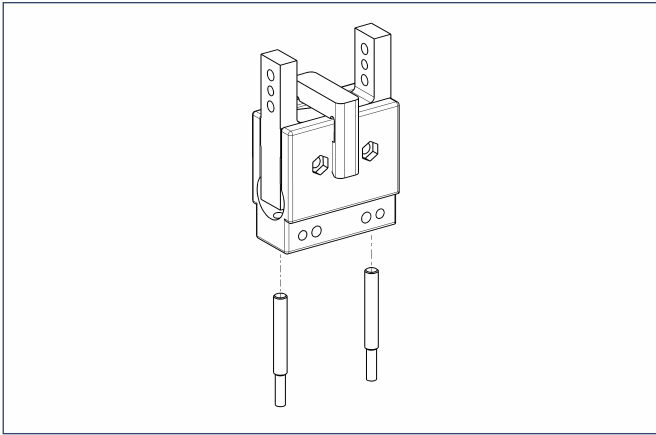
Mounting



- ②② Tightening torque
- ②③ Width of path

Recommended for achieving distortion-free gripper mounting

Sensor system



End position monitoring:

Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40/O-M12	0301584	
IN 40/O-M8	0301484	•
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
INK 40/O	0301556	
INK 40/S	0301555	

- ① Two sensors, one NO and one NC contact, are required for each gripper, plus extension cables as an option.

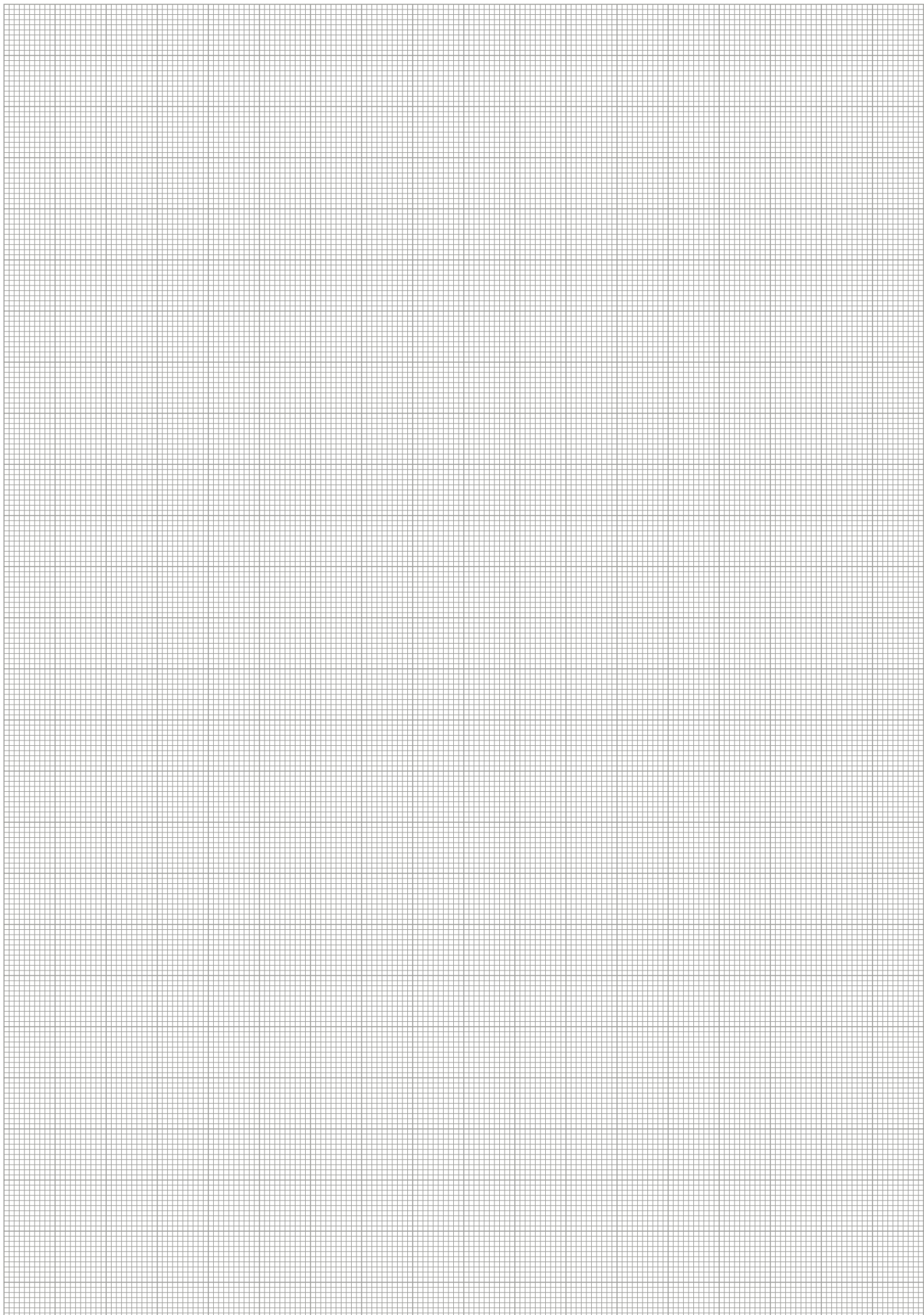
Extension cables for proximity switches/magnetic switches

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.

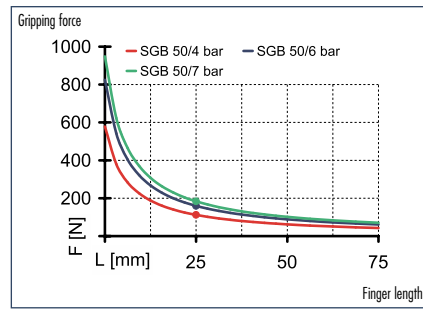


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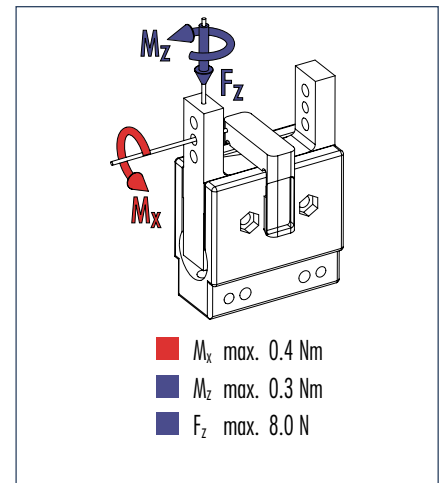




Gripping force, O.D. gripping



Finger load

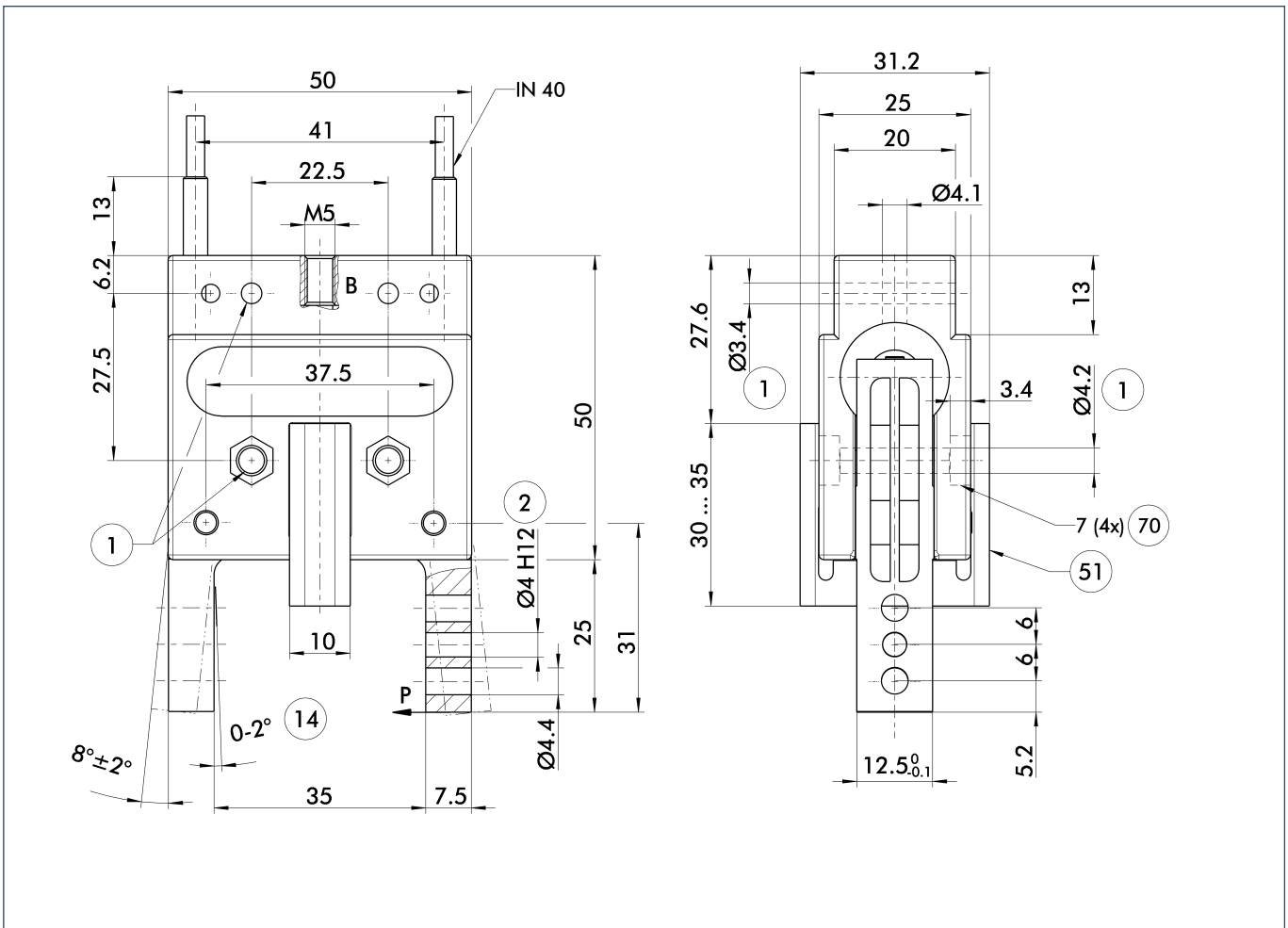


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	ID	SGB 50
		0305201
Opening angle per jaw	[°]	8.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	4.95
Weight	[kg]	0.06
Recommended workpiece weight	[kg]	0.8
Air consumption per double stroke	[cm ³]	1.8
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	7.0
Closing time	[s]	0.08
Opening time	[s]	0.05
Max. permitted finger length	[mm]	50.0
Max. permitted weight per finger	[kg]	0.07
IP class		20
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1
Min. pressure force	[N]	4.0
Pressure stroke	[mm]	5.0

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 be used as a gripping force safety device (see "Accessories" catalog section).

B,b Main/direct connection, gripper closing

① Gripper connection

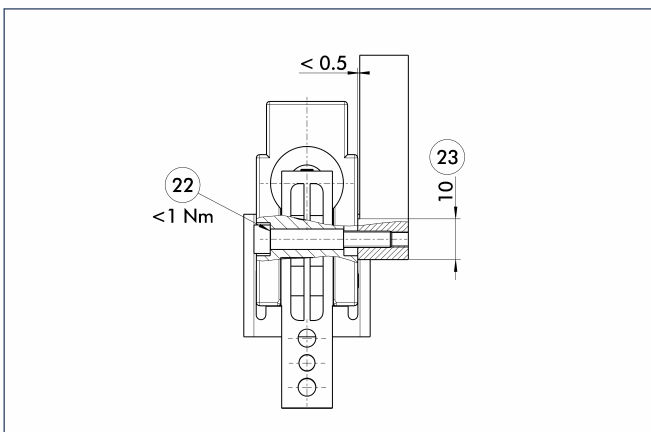
② Finger connection

⑭ Clamping reserve per finger

⑤① Pressure piece

⑦① Hex countersink

Mounting

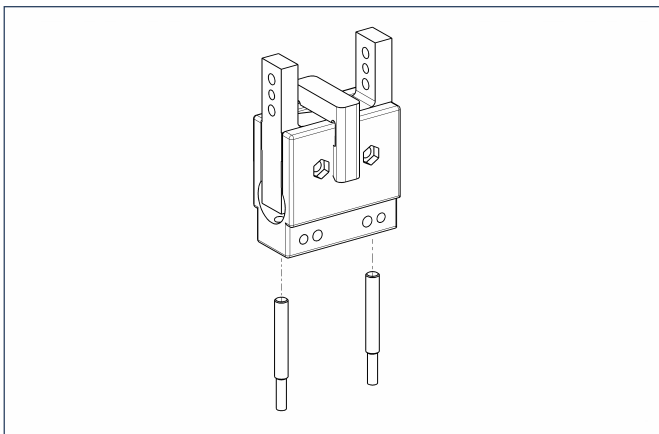


②② Tightening torque

②③ Width of path

Recommended for achieving distortion-free gripper mounting

Sensor system



End position monitoring:

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