



Sizes
40 ... 80



Weight
0.21 kg ... 1.2 kg



Gripping moment
5.98 Nm ... 50.82 Nm



Angle per jaw
20°



Workpiece weight
1.1 kg ... 4.8 kg

Application example



Rotating/gripping combination for flexible handling of sheet metal components

- 1 2-Finger Angular Gripper PWG-S
- 2 Rotary Actuator SRU-plus

Universal Gripper

robust 2-finger angular gripper with spring-supported gripping force maintenance device

Field of application

for universal use in clean and slightly dirty environments

Your advantages and benefits

Spring-supported gripping force maintenance for O.D. gripping

holds the workpiece in case of pressure drop, always integrated

Proximity switch mounted directly without additional brackets

Eliminating unnecessary interfering contours

Minimum gripper dimensions at a maximum gripping force

thus achieves an excellent power density

Robust gripper design

for a versatile field of applications

Kinematics

for high power transmission and synchronized gripping



General note to the series

Principle of function

Toggle drive system

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

pneumatic, with filtered compressed air (10 microns): dry, lubricated or non-lubricated

Pressure medium: Required quality class of compressed air according to

DIN ISO 8573-1: 6 4 4

Warranty

24 months (details, general terms and conditions and operation manuals can be downloaded under www.schunk.com)

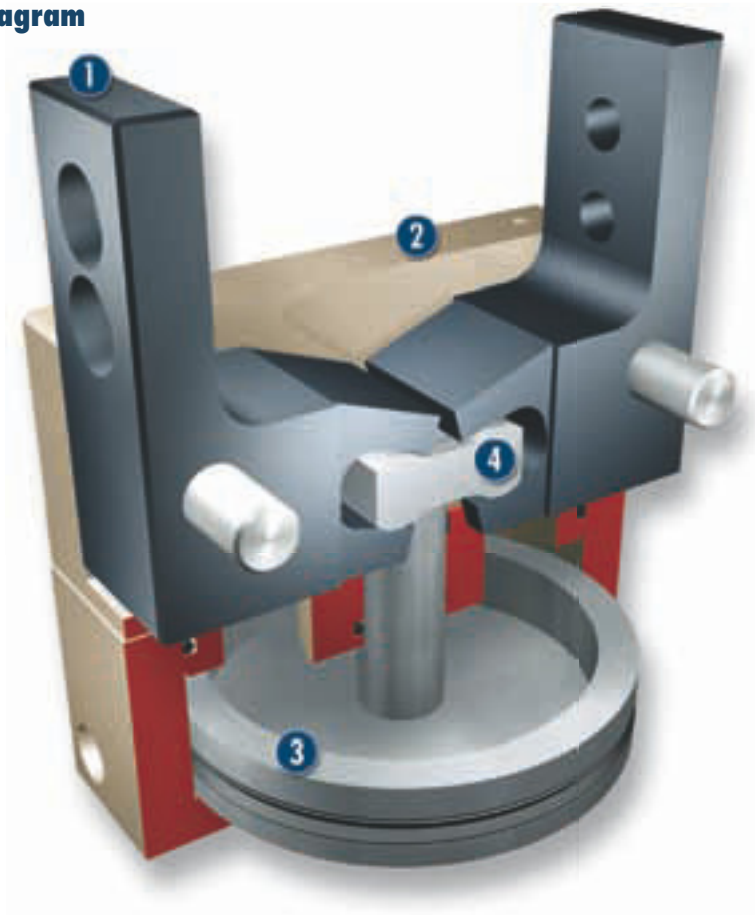
Scope of delivery

O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force maintenance device

always equipped with a mechanic gripping force maintenance device for O.D. gripping

Sectional diagram



- 1 Base jaw**
for the connection of workpiece-specific gripper fingers
- 2 Housing**
weight-optimized through application of hard-anodized, high-strength aluminum alloy
- 3 Drive**
pneumatic, powerful and easy to handle
- 4 Lever mechanism**
for precise and synchronized gripping

Functional description

The piston is moved up and down by compressed air.
The kinematics transforms this vertical motion into a synchronous and rotatory gripping motion of the base jaws.

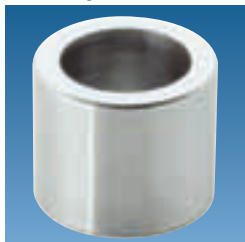
Options and special information

Reduced opening angle available on request.

Accessories

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

Centering sleeves



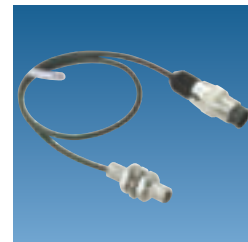
Fittings



Pressure maintenance valve



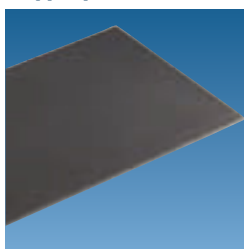
Inductive proximity switches



Plastic inserts



Gripper pads



Sensor cables



Sensor Distributor



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 note to the series

Gripping moment

Gripping moment is the arithmetic total of gripping moments for each claw jaw.

Finger length

The finger length is measured from the upper edge of the gripper housing in direction to the main axis. If the max. admissible finger length is exceeded, the speed of jaw motions have to be reduced and/or the opening angle has to be diminished, as it is done with heavy fingers. The service life of the gripper can shorten.

Repeat accuracy

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

Workpiece weight

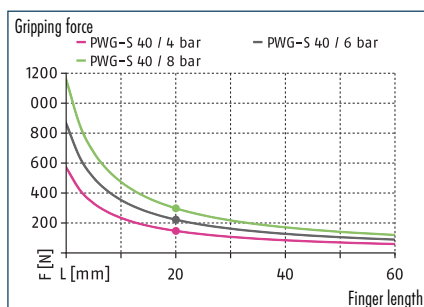
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g . Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

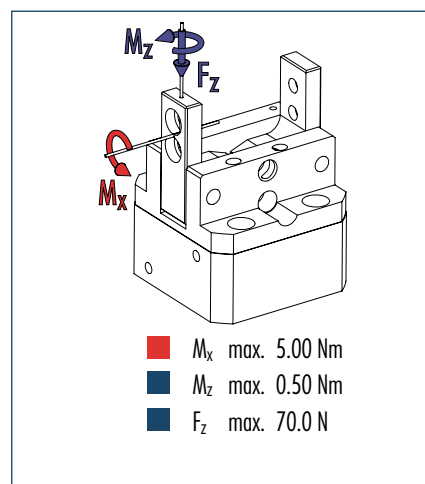
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



Gripping force, O.D. gripping



Finger load

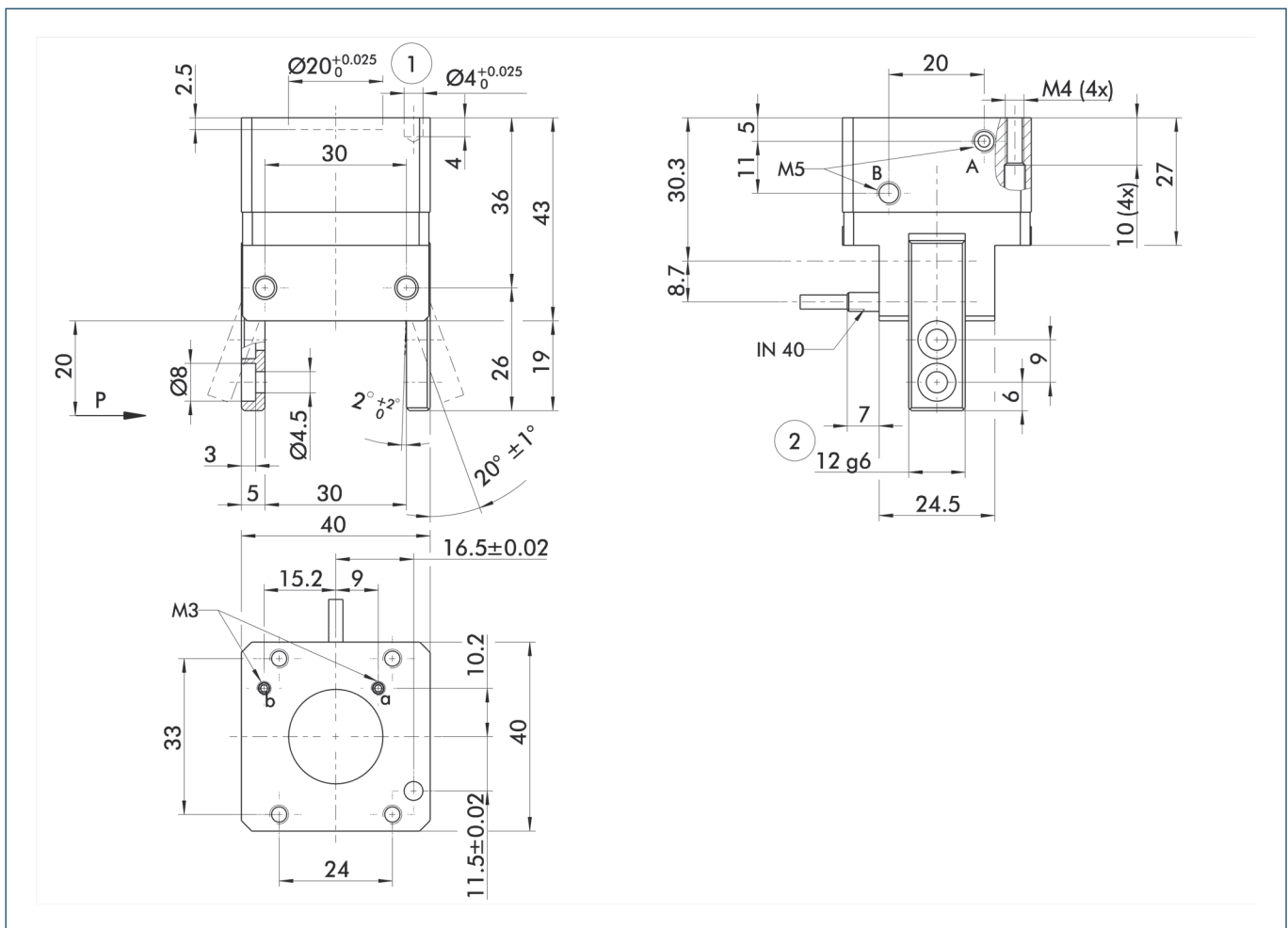


① The indicated moments and forces are static values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description	PWG-S 40
ID	0302611
Opening angle per jaw	20°
Closed angle per jaw up to	4°
Closing moment	5.98 Nm
Spring-actuated closing moment	0.9 Nm
Weight	0.21 kg
Recommended workpiece weight	1.1 kg
Air consumption per double stroke	7.5 cm³
Min./max. operating pressure	4/8 bar
Nominal operating pressure	6 bar
Closing/opening time	0.01/0.01 s
Max. permitted finger length	40 mm
Max. permitted weight per finger	0.15 kg
IP class	20
Min./max. ambient temperature	-10/90 °C
Repeat accuracy	0.05 mm

Main view



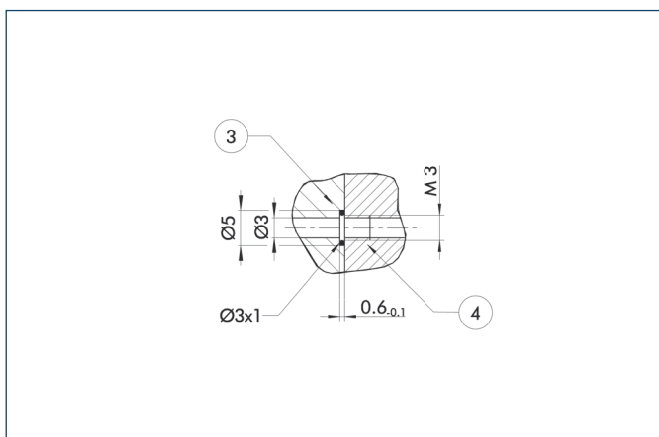
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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 be used to hold the position in case of pressure drop (see "Accessories" catalog section).

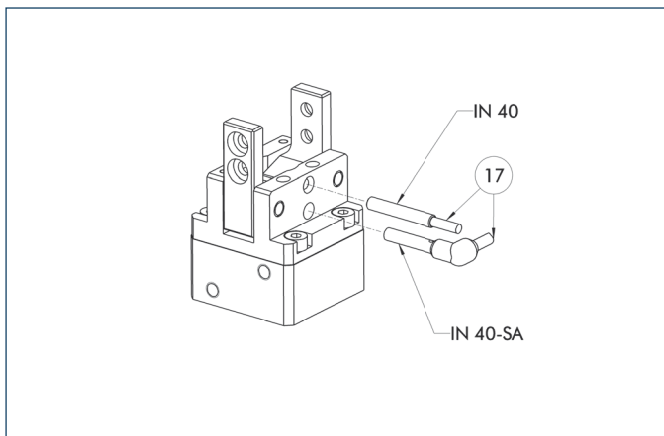
Hose-free direct connection



③ Adapter
④ Gripper

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

Inductive proximity switches



17 Cable outlet

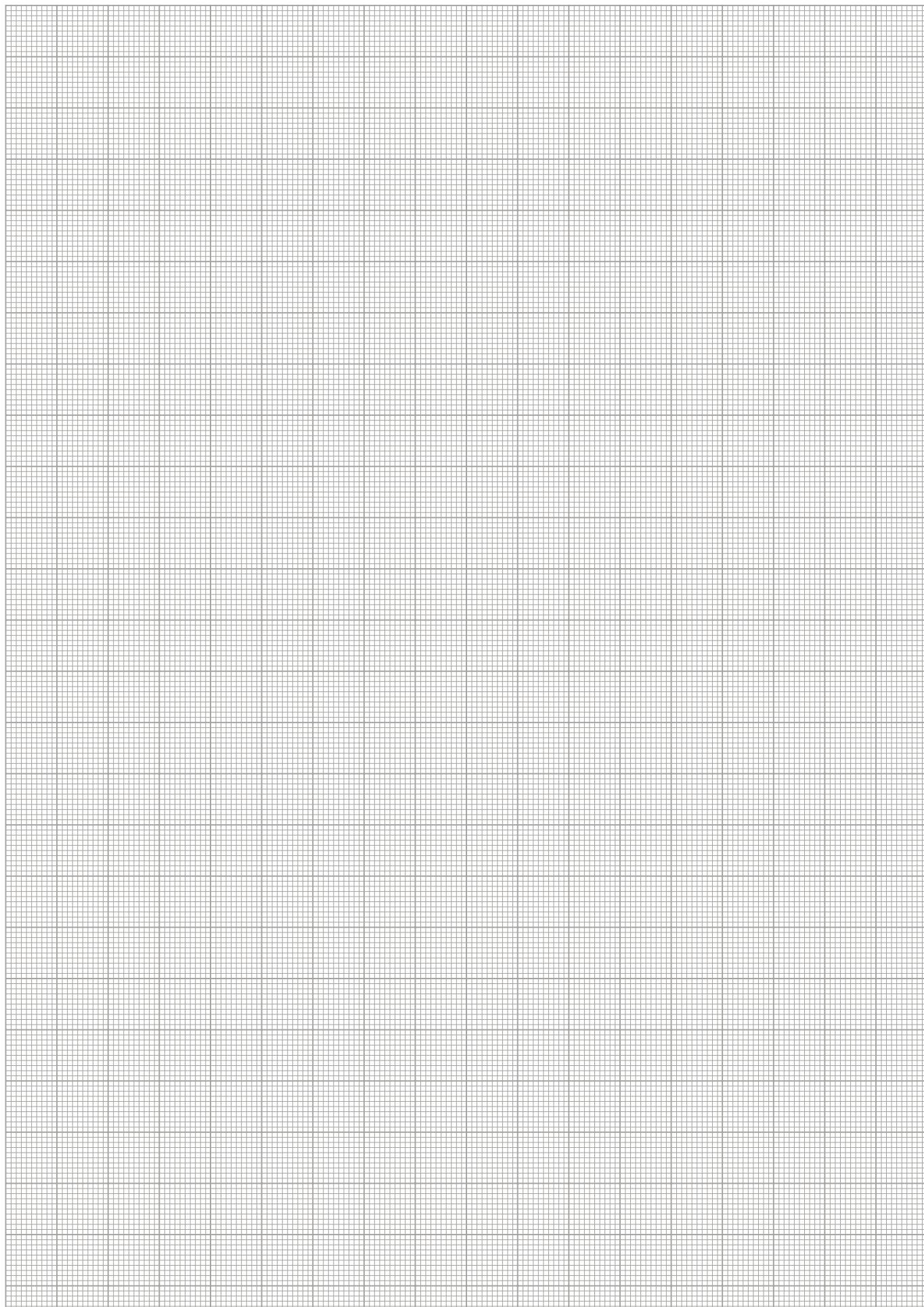
End position monitoring for direct mounting

Description	ID	Recommended product
Inductive proximity switches		
IN 40-S-M8	0301474	•
IN 40-S-M12	0301574	
INK 40-S	0301555	
IN 40-S-M5-PNP	0301491	
IN 40-S-M5-NPN	0301492	
Inductive proximity switch with lateral outlet		
IN 40-S-M12-SA	0301577	
IN 40-S-M8-SA	0301473	•
INK 40-S-SA	0301565	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
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	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
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 Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.

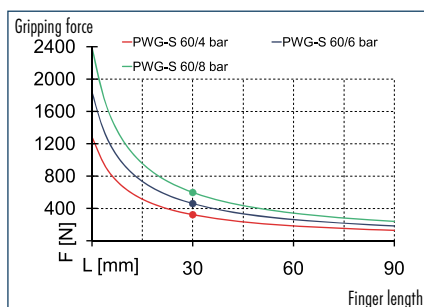
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

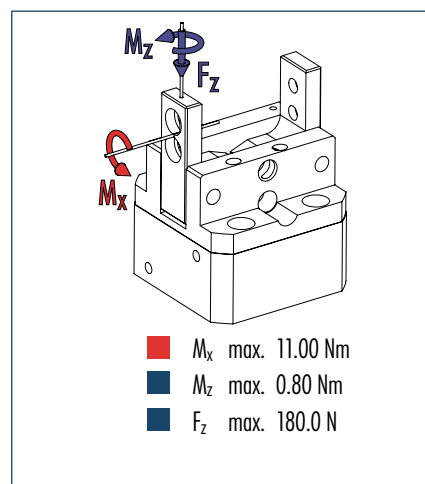




Gripping force, O.D. gripping



Finger load

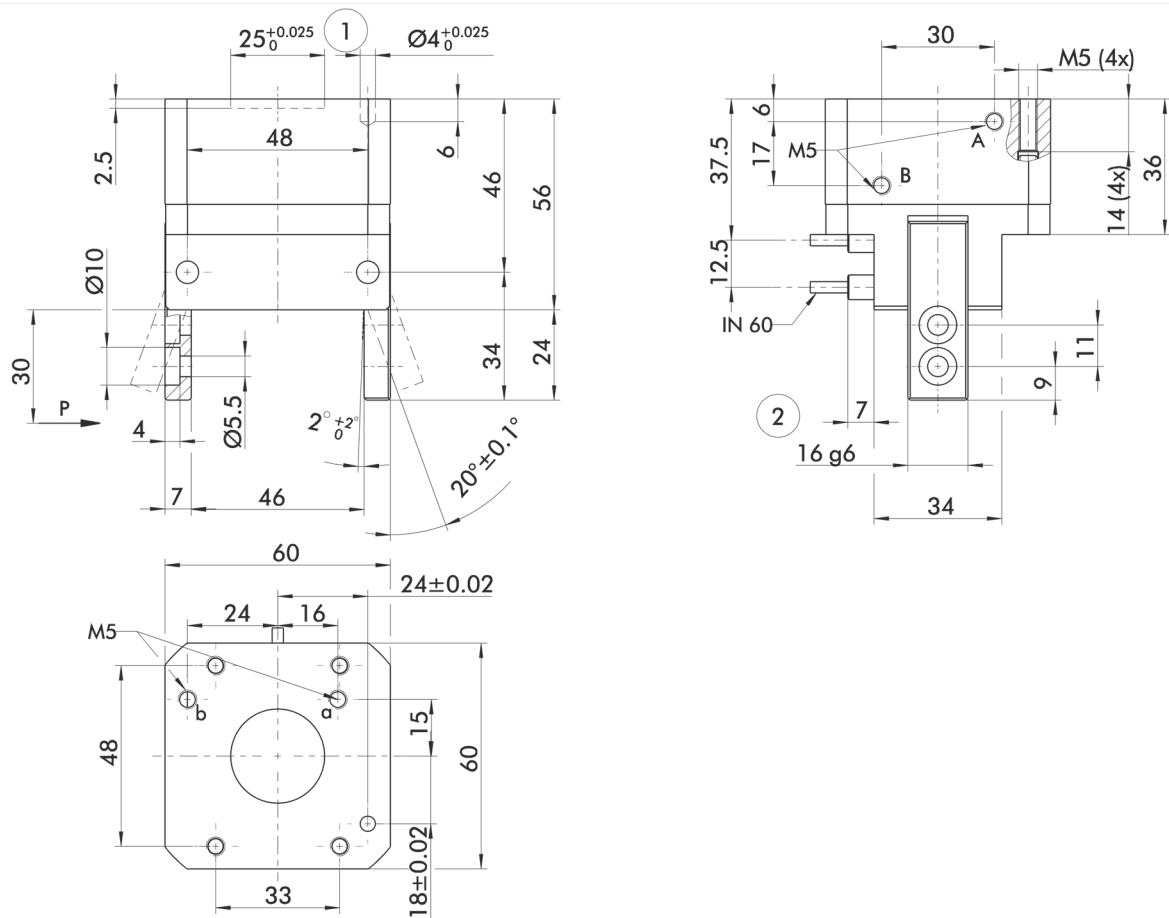


① The indicated moments and forces are static values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description	PWG-S 60
ID	0302612
Opening angle per jaw	20°
Closed angle per jaw up to	4°
Closing moment	18.36 Nm
Spring-actuated closing moment	2.4 Nm
Weight	0.62 kg
Recommended workpiece weight	2.3 kg
Air consumption per double stroke	29 cm³
Min./max. operating pressure	4/8 bar
Nominal operating pressure	6 bar
Closing/opening time	0.03/0.03 s
Max. permitted finger length	60 mm
Max. permitted weight per finger	0.4 kg
IP class	20
Min./max. ambient temperature	-10/90 °C
Repeat accuracy	0.05 mm

Main view



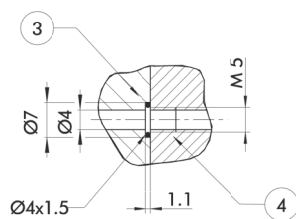
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing

- ① Gripper connection
- ② Finger connection

- The SDV-P pressure maintenance valve can be used to hold the position in case of pressure drop (see “Accessories” catalog section).

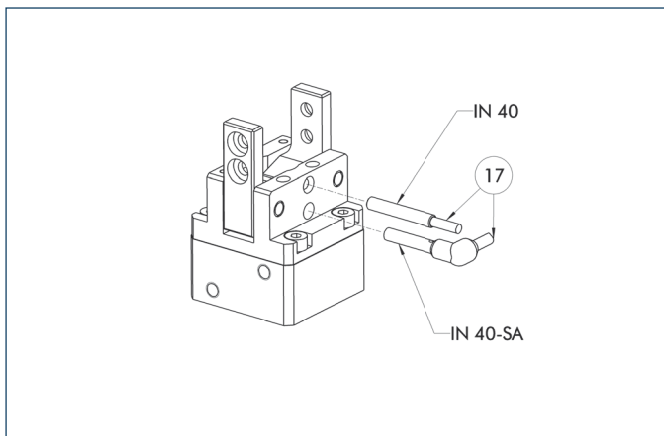
Hose-free direct connection



- 3 Adapter
- 4 Gripper

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

Inductive proximity switches



17 Cable outlet

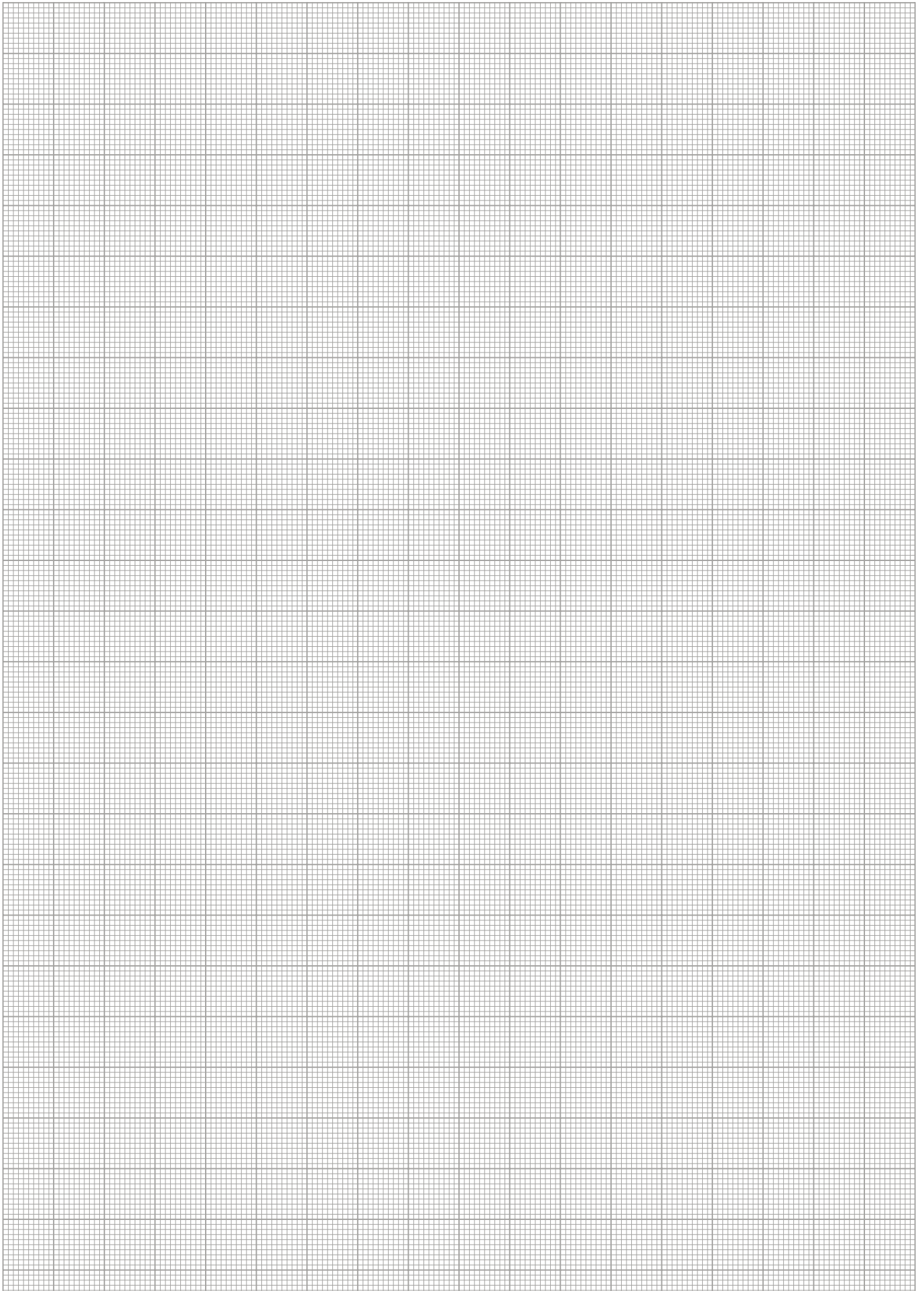
End position monitoring for direct mounting

Description	ID	Recommended product
Inductive proximity switches		
IN 60-S-M8	0301485	•
IN 60-S-M12	0301585	
INK 60-S	0301553	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
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	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
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 Two sensors (closer/NO) are required for each gripper, plus extension cables as an option.

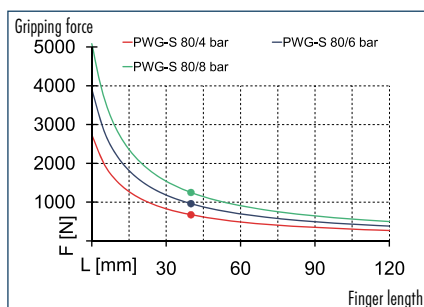
① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

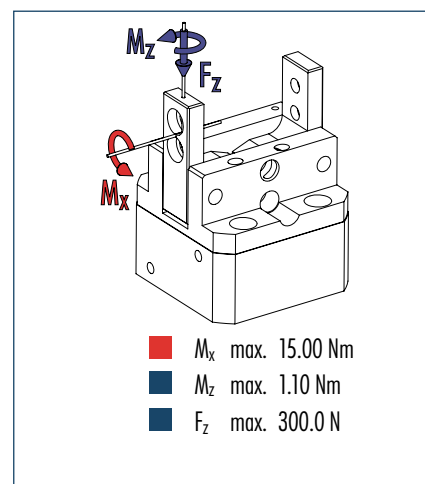




Gripping force, O.D. gripping



Finger load

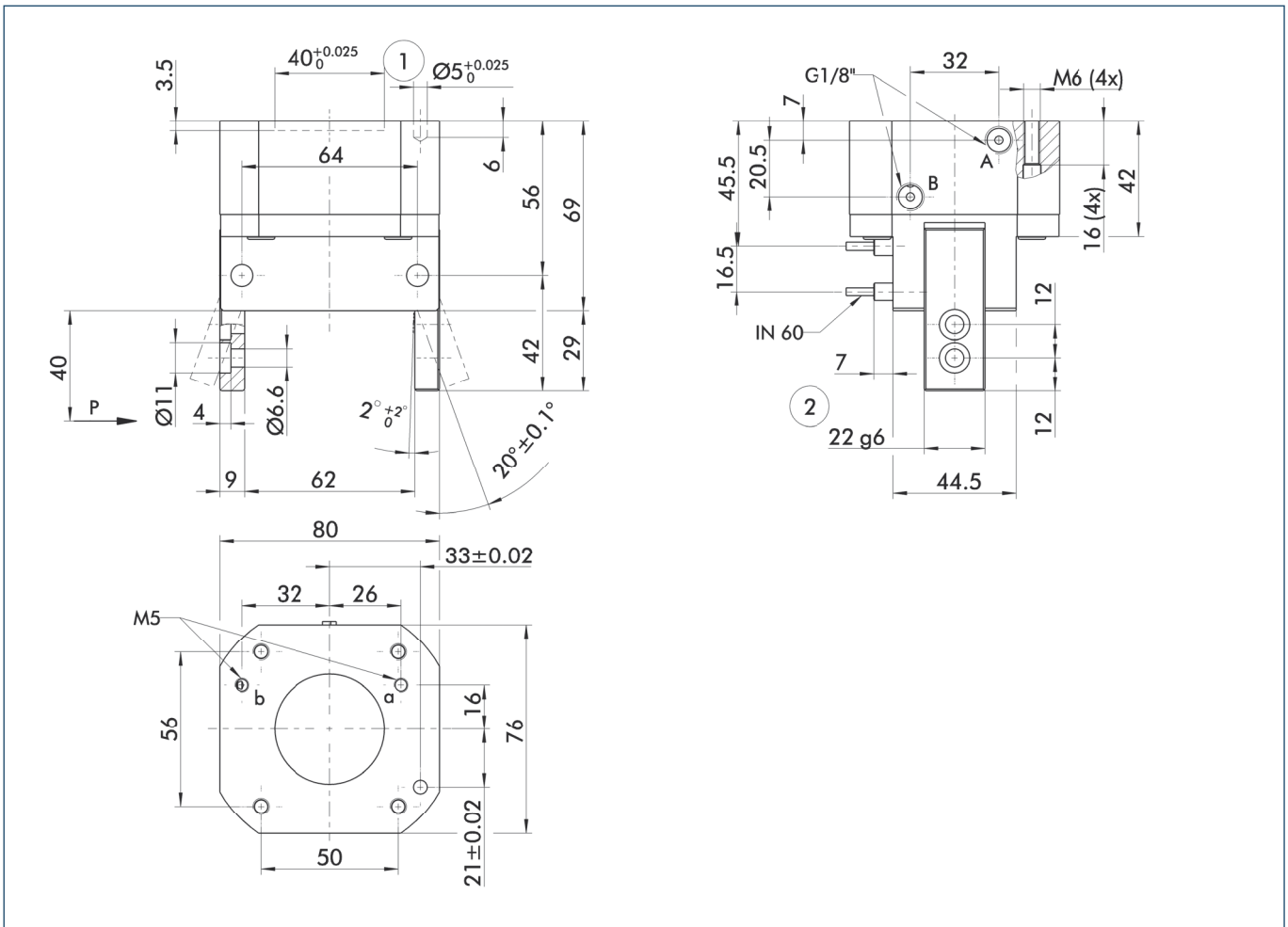


① The indicated moments and forces are static values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description	PWG-S 80
ID	0302613
Opening angle per jaw	20°
Closed angle per jaw up to	4°
Closing moment	50.82 Nm
Spring-actuated closing moment	10.1 Nm
Weight	1.2 kg
Recommended workpiece weight	4.8 kg
Air consumption per double stroke	60 cm³
Min./max. operating pressure	4/8 bar
Nominal operating pressure	6 bar
Closing/opening time	0.05/0.05 s
Max. permitted finger length	80 mm
Max. permitted weight per finger	0.8 kg
IP class	20
Min./max. ambient temperature	-10/90 °C
Repeat accuracy	0.05 mm

Main view



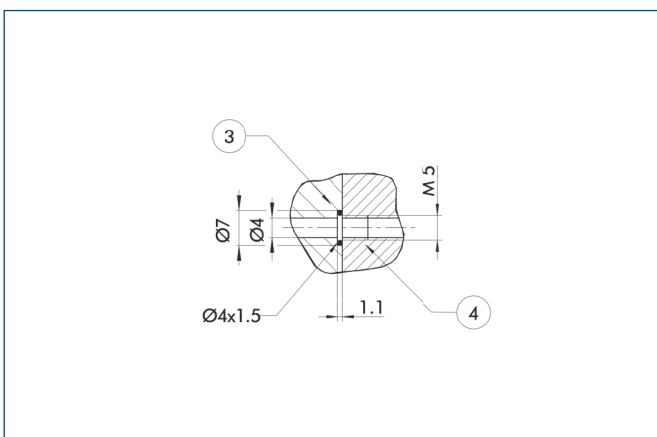
The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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 be used to hold the position in case of pressure drop (see "Accessories" catalog section).

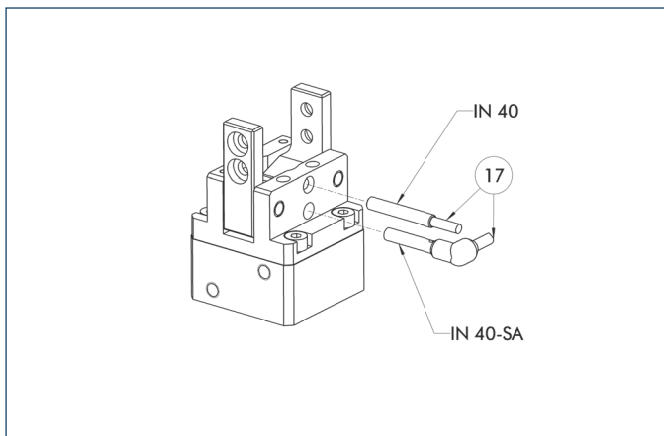
Hose-free direct connection



③ Adapter
④ Gripper

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

Inductive proximity switches



17 Cable outlet

End position monitoring for direct mounting

Description	ID	Recommended product
Inductive proximity switches		
IN 60-S-M8	0301485	•
IN 60-S-M12	0301585	
INK 60-S	0301553	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
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	
Cable extensions		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
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KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	

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

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