



Sizes
44 .. 100



Weight
0.5 kg .. 4.46 kg



Gripping moment
8 Nm .. 143 Nm



Opening angle per finger
10° .. 90°



Workpiece weight
0.9 kg .. 6.0 kg

Application example



Linear gripping unit for removing
workpieces from a pallet-loading station

① DWG 100 2-Finger Angular Gripper

② PHE 100-80 Linear Unit

Sealed Radial Grippers

Sealed 180° angular gripper for use in dirty environments

Area of application

For applications requiring a large opening range. Specially suitable for use in dirty environments.

Your advantages and benefits

Completely sealed gripper version

making it suitable for use in dirty environments

Air supply via hose-free direct connection or screw connections

for the flexible supply of compressed air in all automation systems

Equipped with gripping force safety device

ensuring that the workpiece stays gripped in case of pressure loss

Opening angle adjustable from 20° to 180°

for a varied range of applications

Kinematics

Toggle system for centric gripping with large opening and closing movements



General information on the series

Working principle

Toggle drive system

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

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

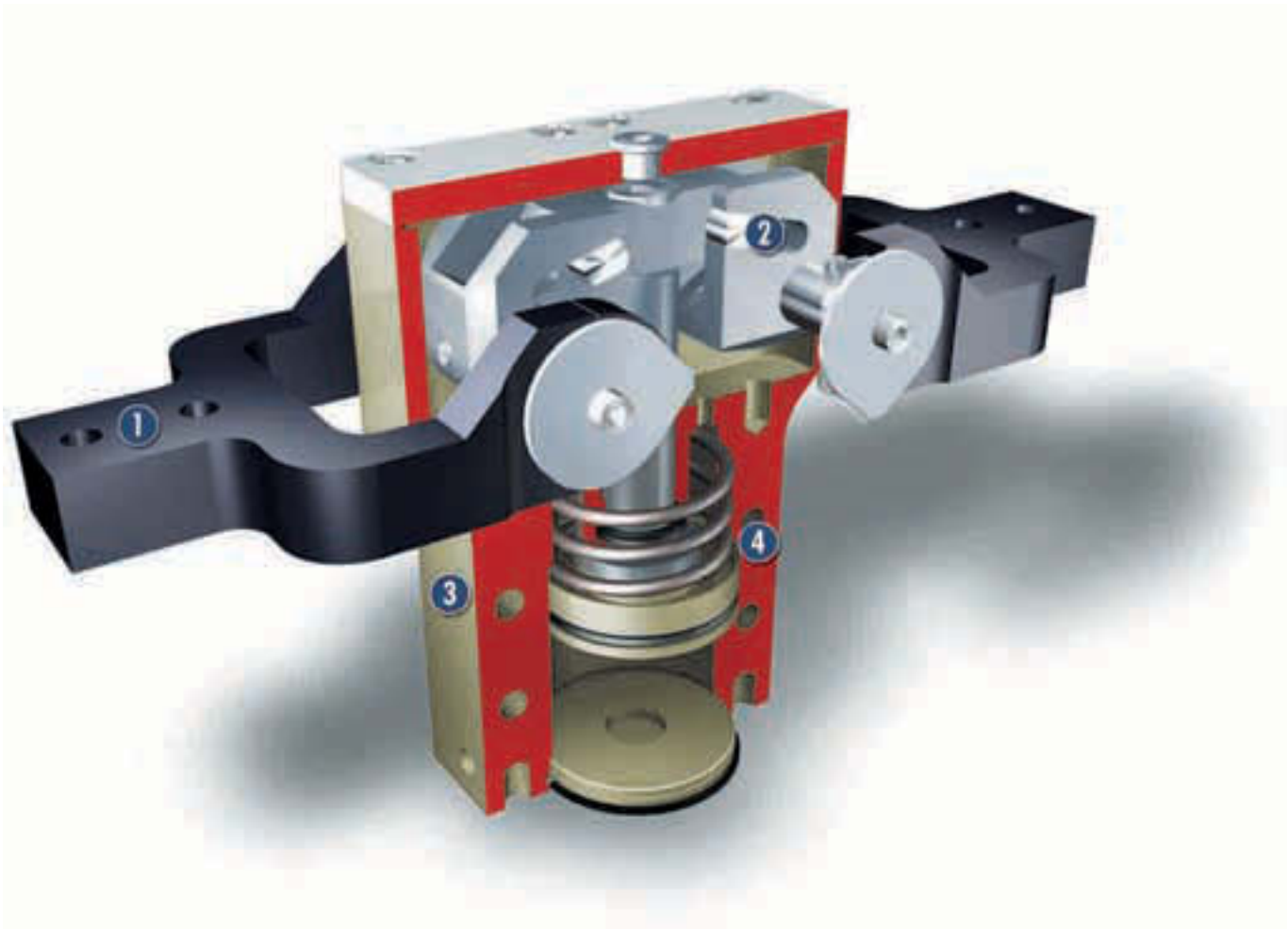
Warranty

24 months

Scope of delivery

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

Sectional diagram



- 1 Base jaws**
for the connection of workpiece-specific gripper fingers
- 2 Kinematics**
toggle system for centric gripping with large opening and closing movements
- 3 Housing**
weight-reduced through the use of a hard-anodized, high-strength aluminum alloy
- 4 Centering and mounting possibilities**
for universal gripper mount

Function description

The round piston is moved up or down by means of compressed air. The two pins of the toggle system are moved at the same time relative to the groove in the top jaws. When gripping, both pins achieve the greatest leverage.

Options and special information

180° angular grippers (radial grippers) bring advantages by saving an additional stroke movement. As each jaw swivels away by 90°, it is mostly out of the work area, and one stroke movement to draw back the entire gripper can be eliminated.

Accessories

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

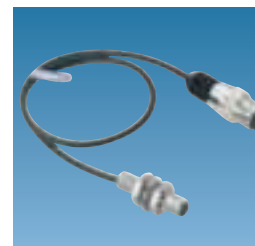
Centering sleeves



Fittings



IN inductive proximity switches



Quentes plastic inserts



HKI gripper pads



SDV-P pressure maintenance valves



W/WK/KV/GK sensor cables



V sensor distributors



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

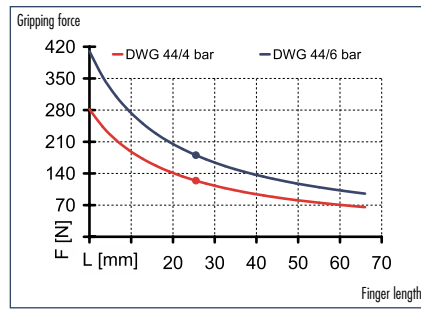
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g . Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

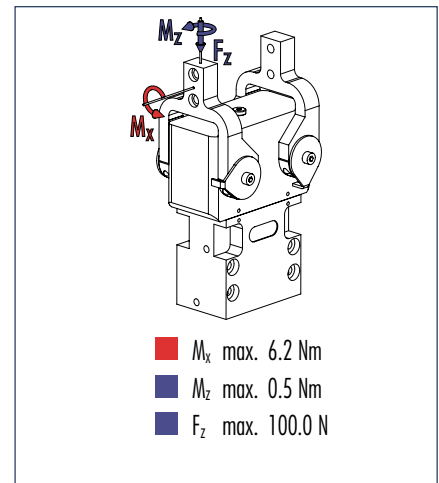
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



Gripping force, O.D. gripping



Finger load



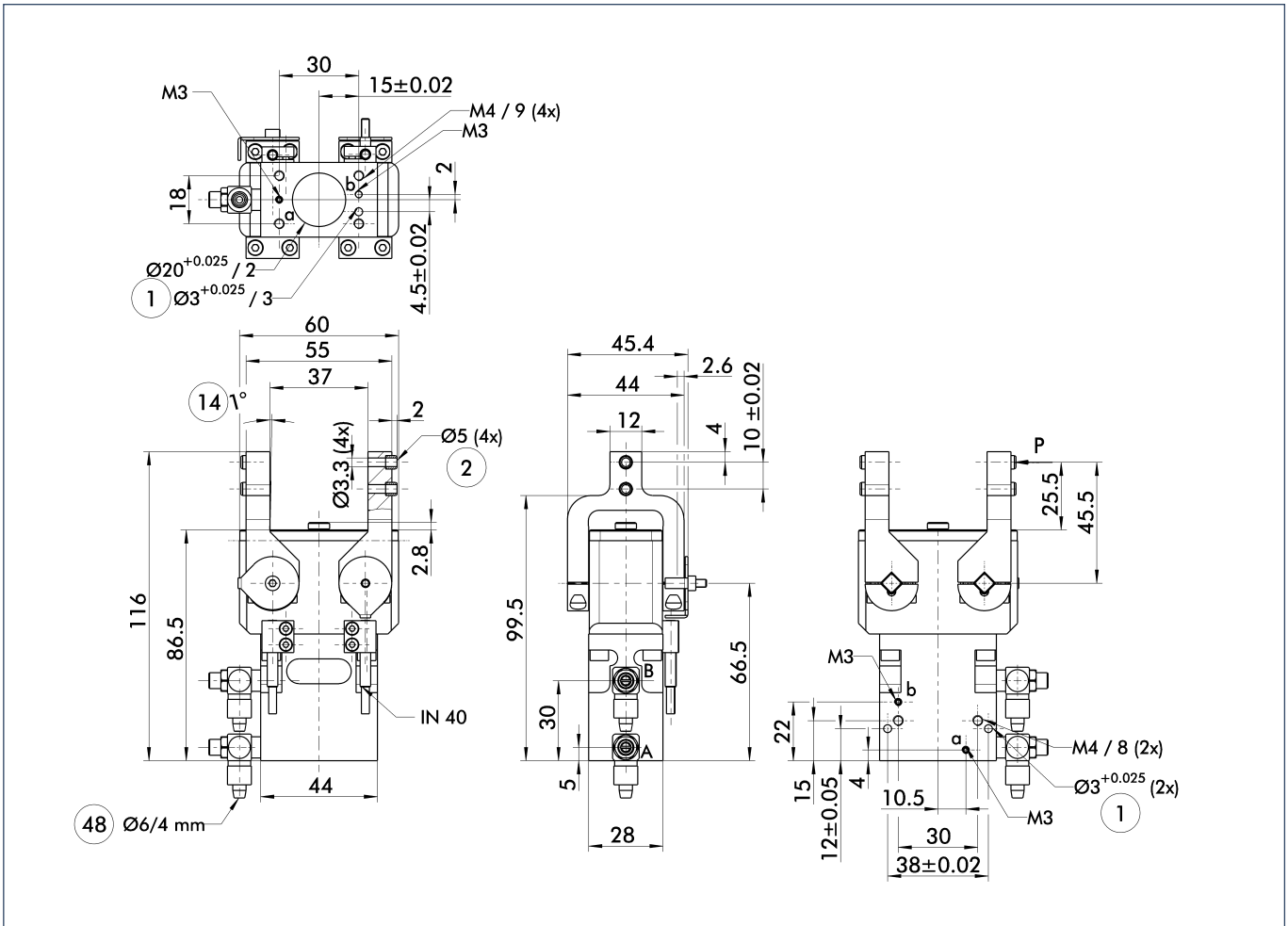
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	DWG 44	
ID	0307146	
Opening angle per jaw	[°]	90.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	8.2
Closing moment ensured by spring	[Nm]	1.8
Weight	[kg]	0.5
Recommended workpiece weight	[kg]	0.9
Air consumption per double stroke	[cm ³]	16.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.4
Opening time	[s]	0.5
Max. permitted finger length	[mm]	50.0
Max. permitted weight per finger	[kg]	0.09
IP class		67
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

① The opening angle of the base jaws can be limited.

Main views

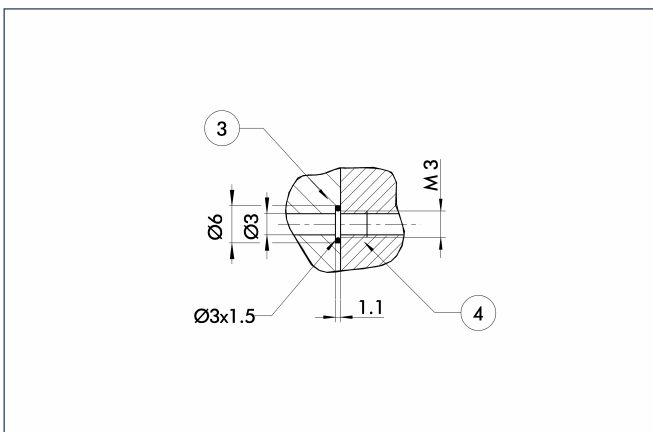


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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
- ⑭ Clamping reserve per finger
- ④ Hose

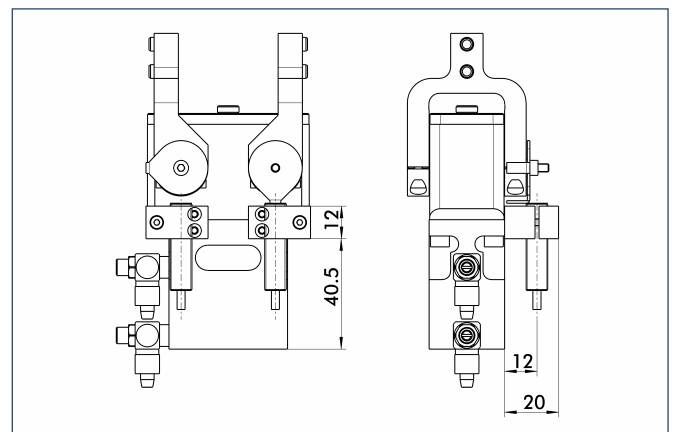
Hoseless direct connection



- 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.

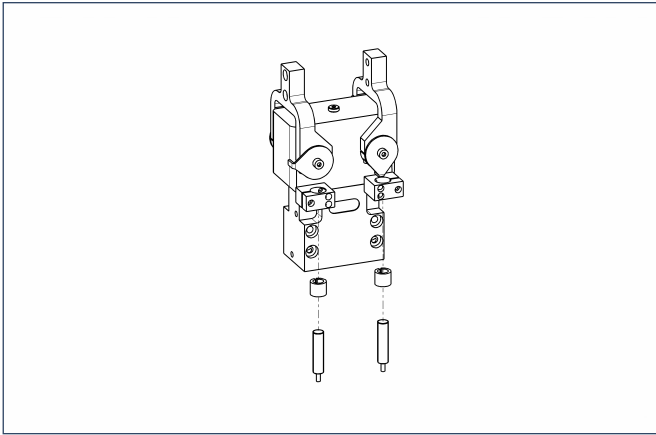
Mounting kit for M8/M12 proximity switches



The mounting kit consists of 2 brackets, 2 intermediate sleeves and small components. The proximity switches must be ordered separately.

Description	ID
HG-DWG 44-64	0300748

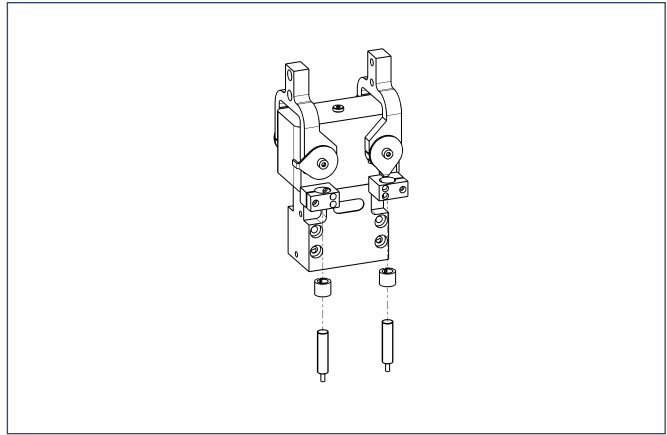
Sensor system



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	

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



End position monitoring:
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
HG-DWG 44-64	0300748	
IN 120/S-M12	0301592	
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
IN-B 80/S-M8	0301477	
INK 120/S	0301562	
INK 80/S	0301550	
INK 80/SL	0301579	

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

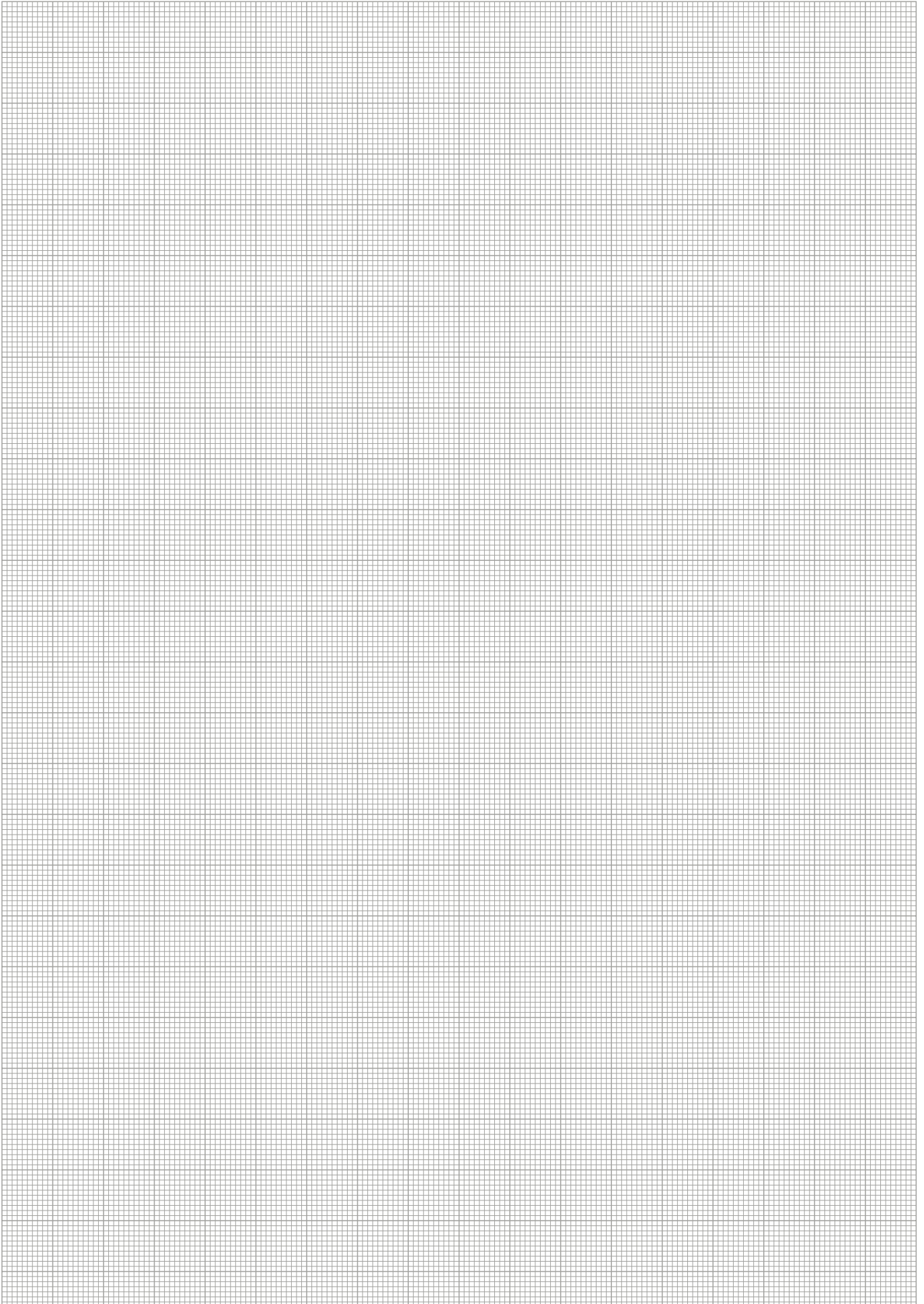
Extension cables for proximity switches/magnetic switches

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.

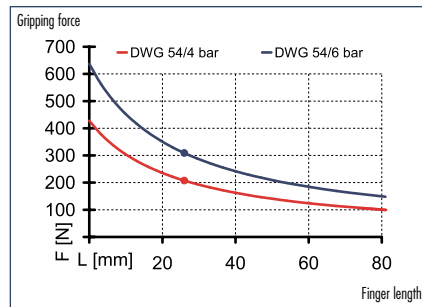


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

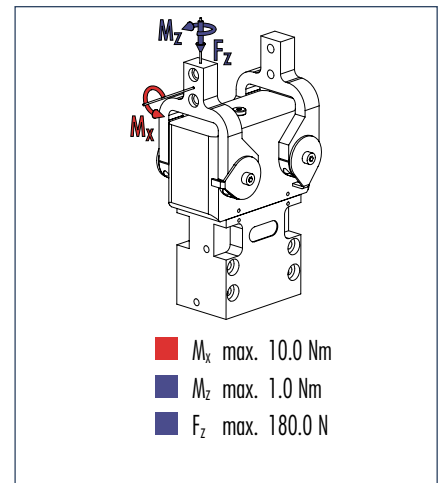




Gripping force, O.D. gripping



Finger load



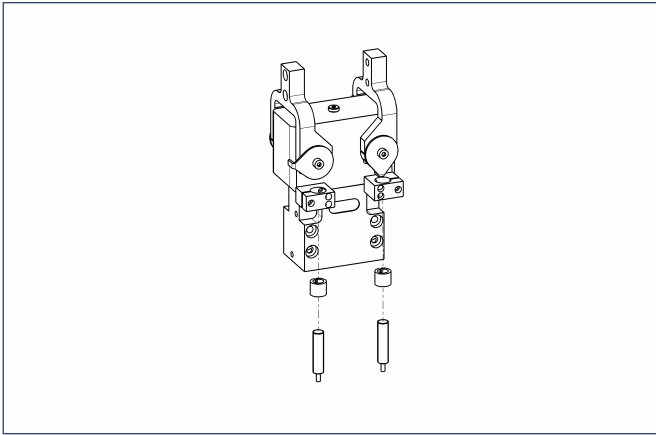
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	ID	DWG 54
		0307147
Opening angle per jaw	[°]	90.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	15.6
Closing moment ensured by spring	[Nm]	2.8
Weight	[kg]	0.77
Recommended workpiece weight	[kg]	1.4
Air consumption per double stroke	[cm ³]	36.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.4
Opening time	[s]	0.5
Max. permitted finger length	[mm]	60.0
Max. permitted weight per finger	[kg]	0.15
IP class		67
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

① The opening angle of the base jaws can be limited.

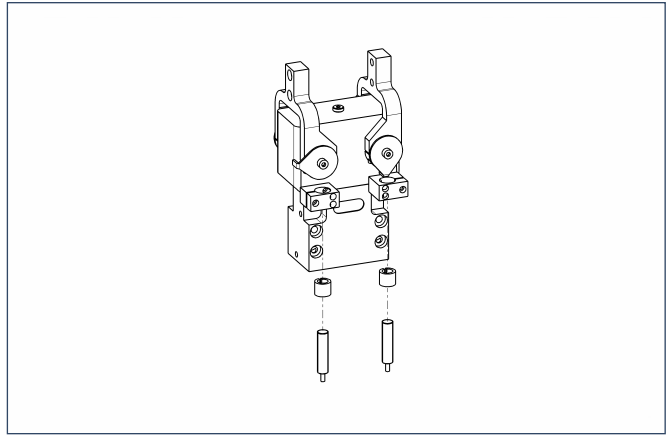
Sensor system



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	

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



End position monitoring:
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
HG-DWG 44-64	0300748	
IN 120/S-M12	0301592	
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
IN-B 80/S-M8	0301477	
INK 120/S	0301562	
INK 80/S	0301550	
INK 80/SL	0301579	

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

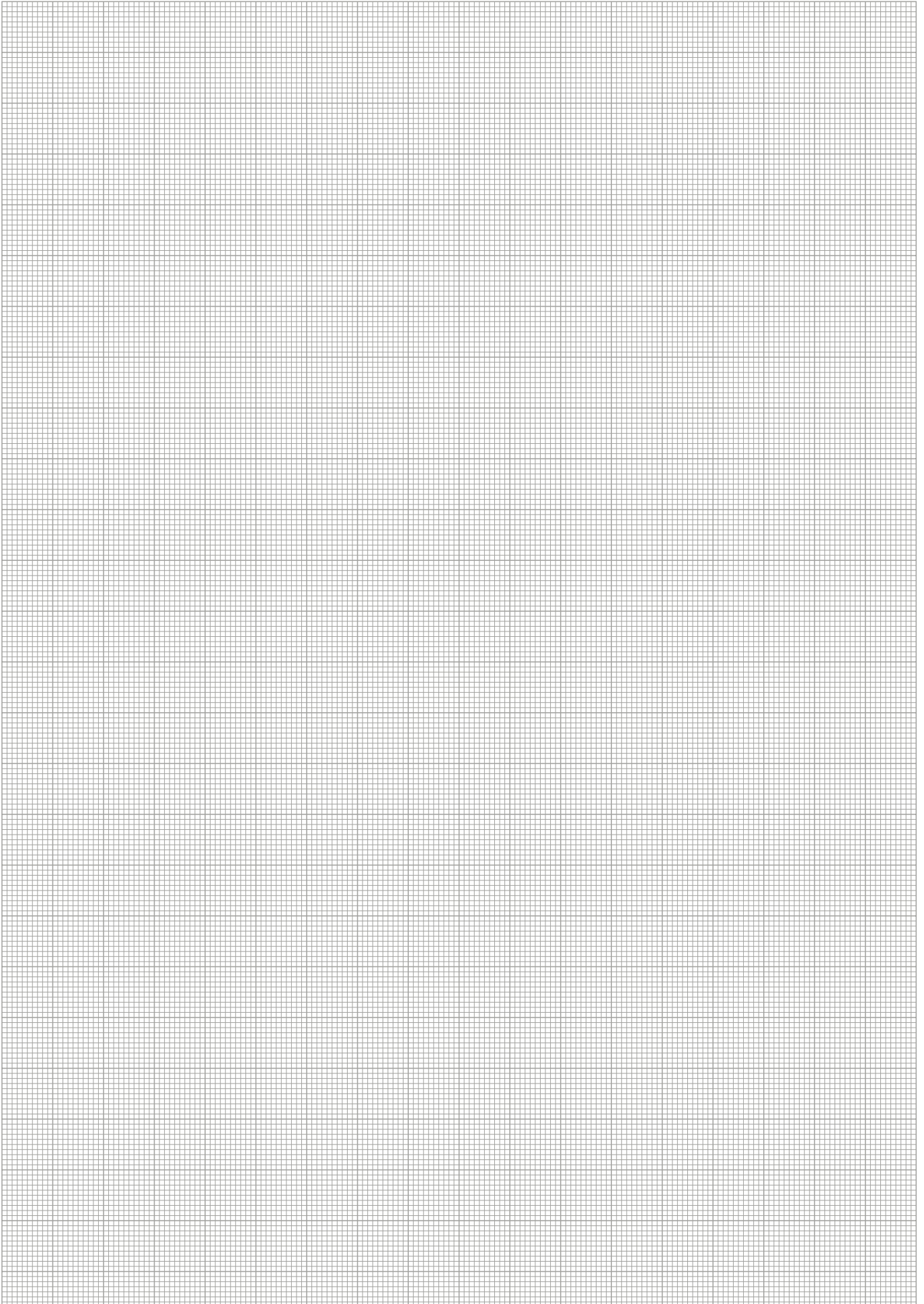
Extension cables for proximity switches/magnetic switches

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.

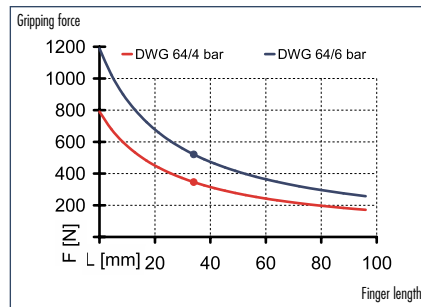


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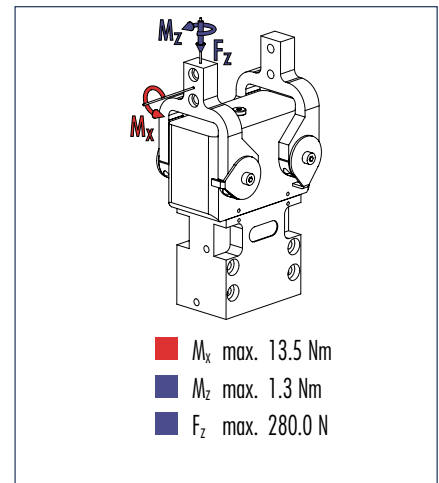




Gripping force, O.D. gripping



Finger load



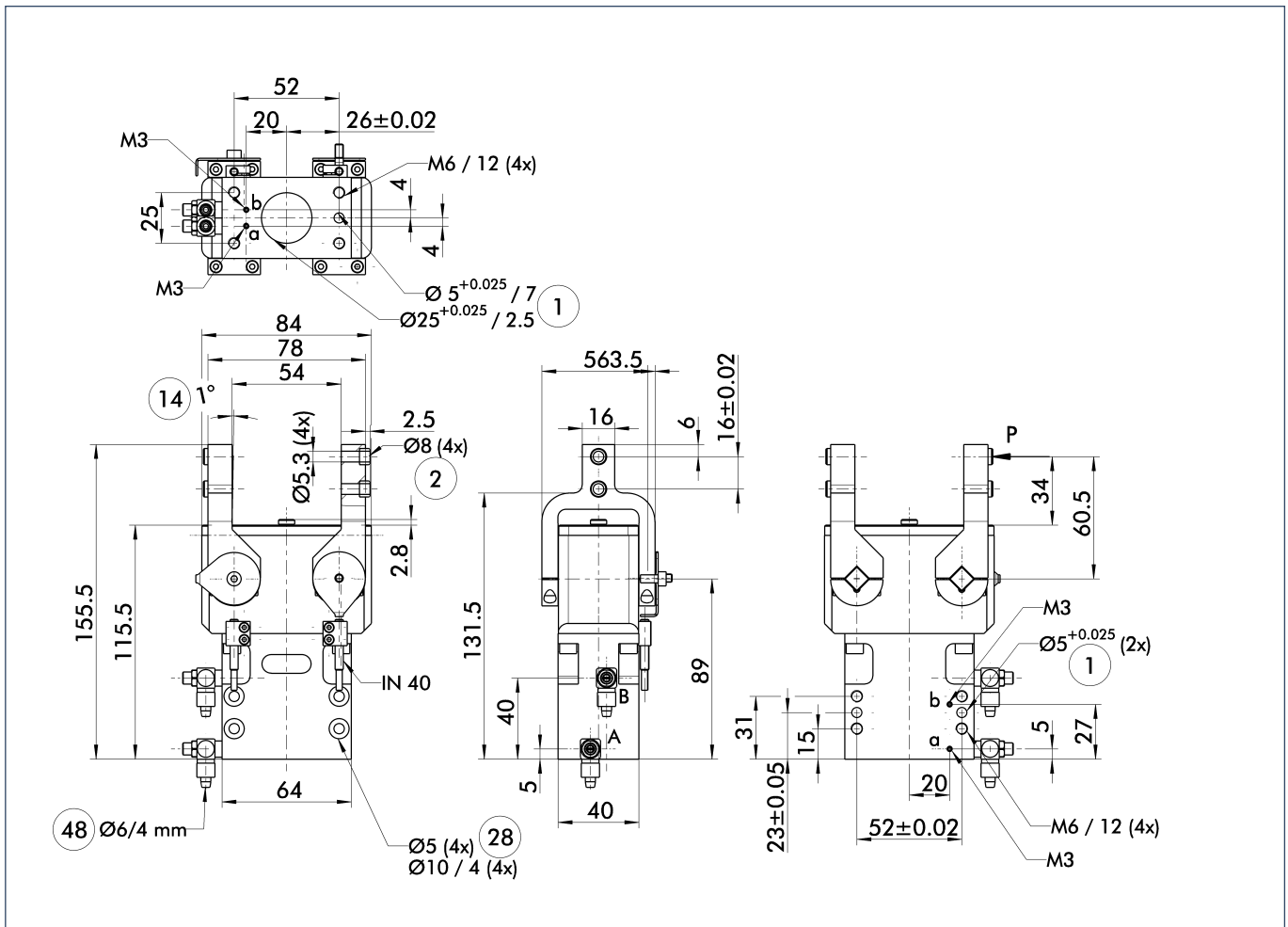
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	DWG 64	
ID	0307148	
Opening angle per jaw	[°]	90.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	31.5
Closing moment ensured by spring	[Nm]	5.1
Weight	[kg]	1.15
Recommended workpiece weight	[kg]	2.2
Air consumption per double stroke	[cm ³]	57.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.4
Opening time	[s]	0.5
Max. permitted finger length	[mm]	80.0
Max. permitted weight per finger	[kg]	0.26
IP class		67
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

① The opening angle of the base jaws can be limited.

Main views

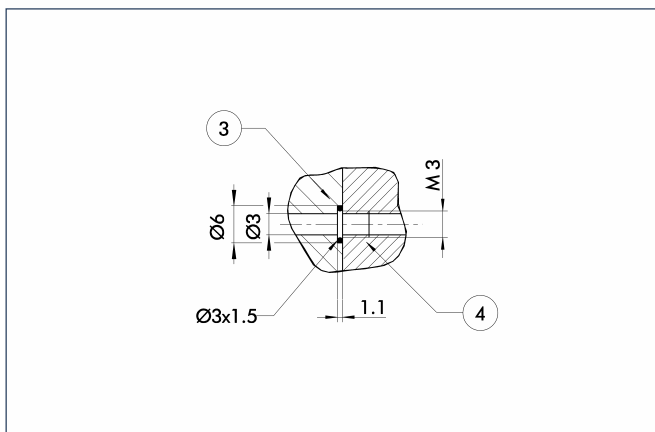


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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
- ⑭ Clamping reserve per finger
- ⑳ Through-bore
- ④⑧ Hose

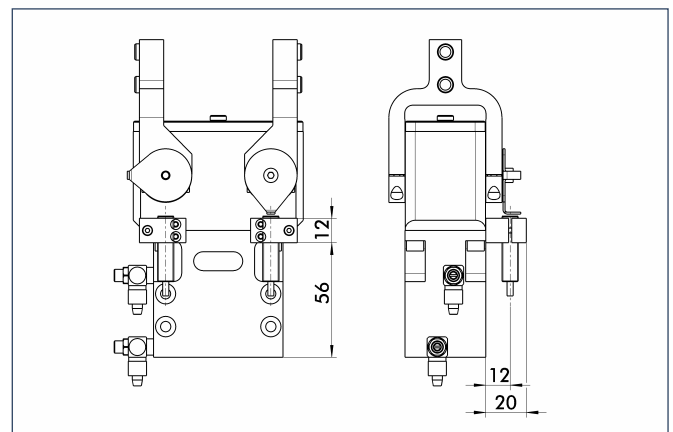
Hoseless direct connection



- 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.

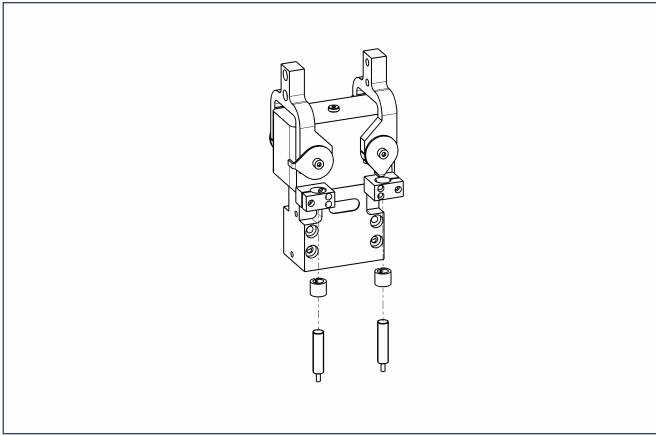
Mounting kit for proximity switch



The mounting kit consists of 2 brackets, 2 intermediate sleeves and small components. The proximity switches must be ordered separately.

Description	ID
HG-DWG 44-64	0300748

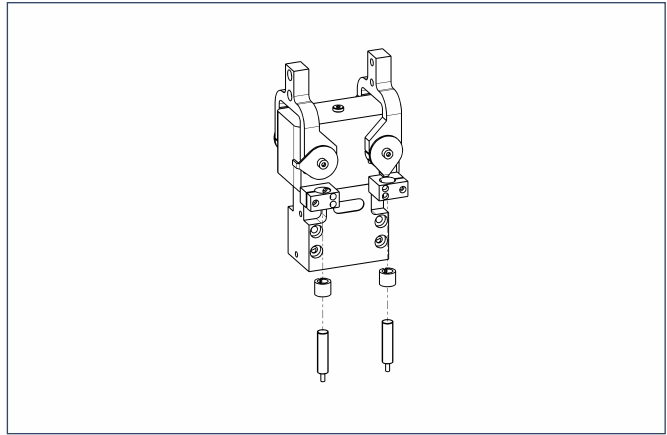
Sensor system



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	

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



End position monitoring:
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
HG-DWG 44-64	0300748	
IN 120/S-M12	0301592	
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
IN-B 80/S-M8	0301477	
INK 120/S	0301562	
INK 80/S	0301550	
INK 80/SL	0301579	

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

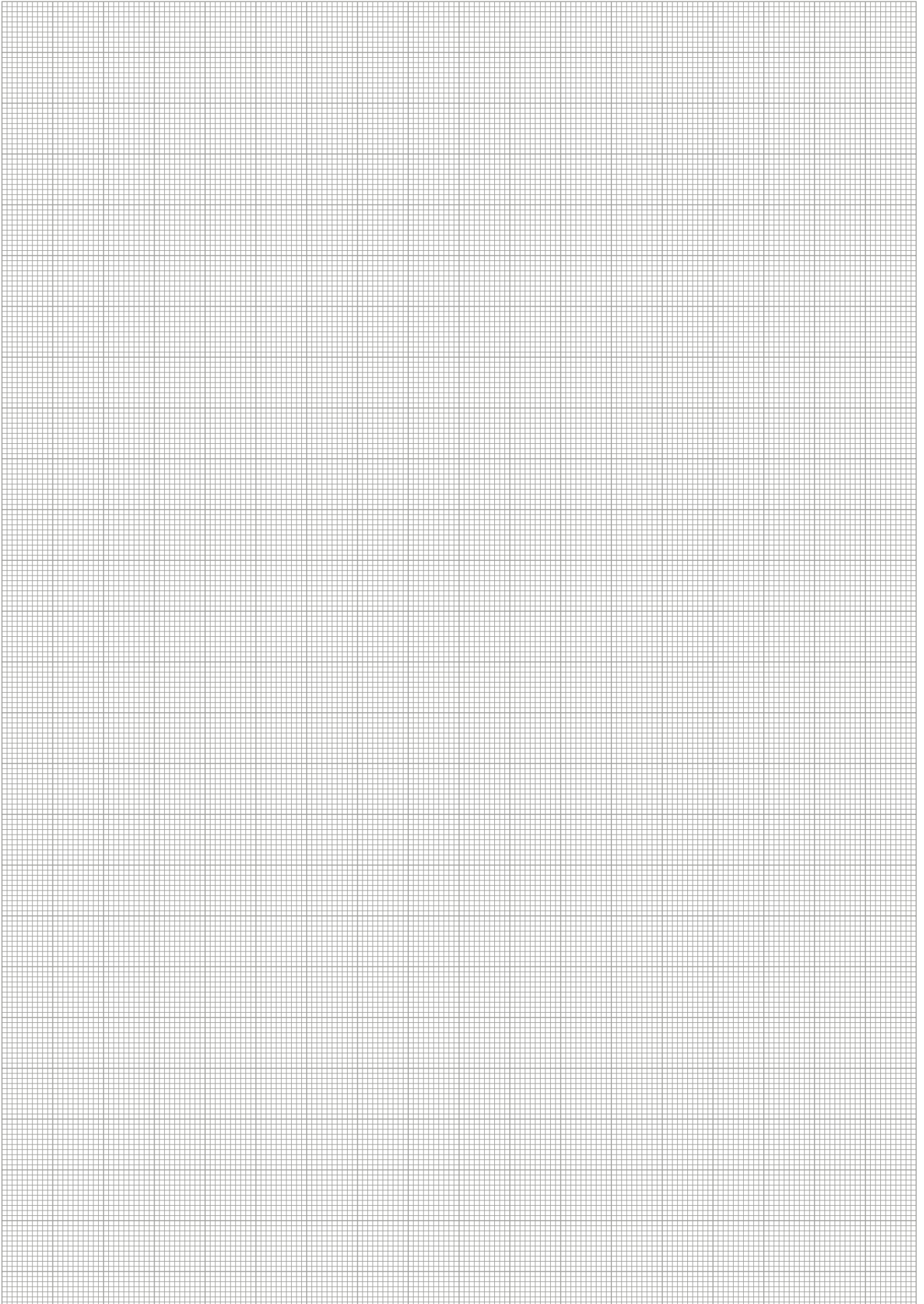
Extension cables for proximity switches/magnetic switches

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.

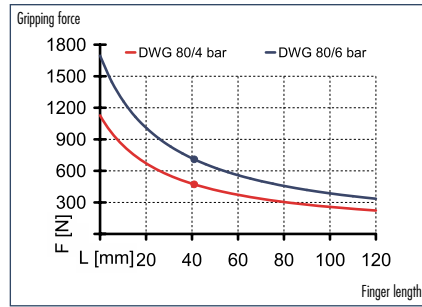


You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

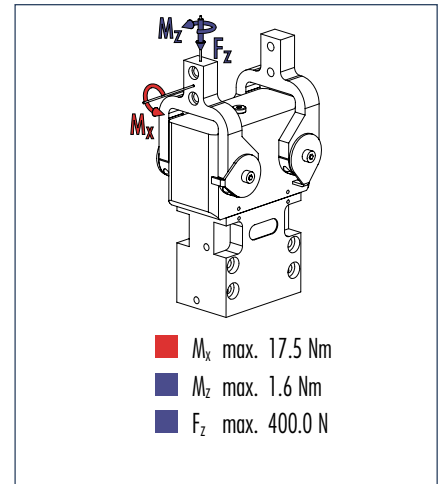




Gripping force, O.D. gripping



Finger load



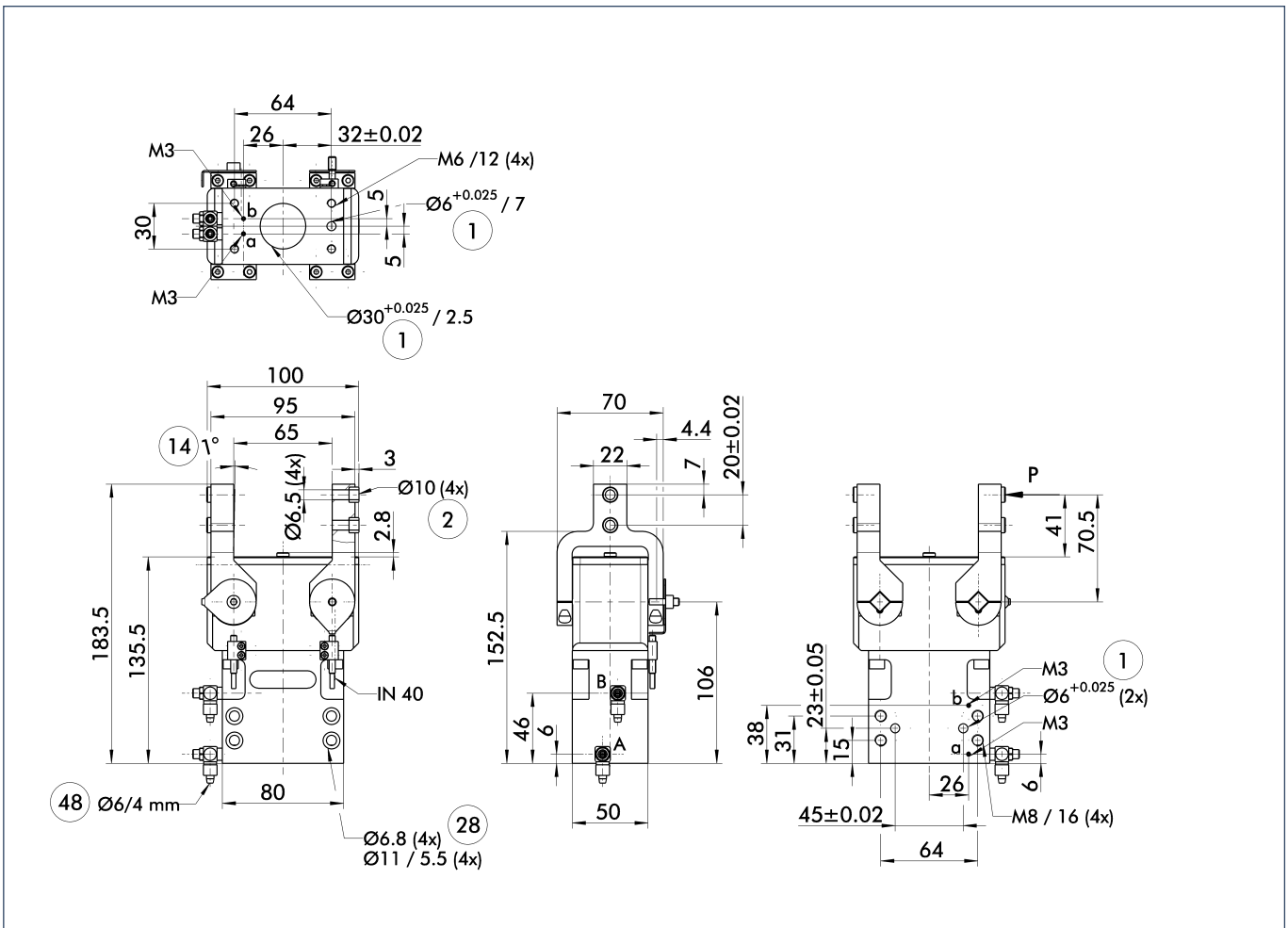
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	ID	DWG 80
		0307149
Opening angle per jaw	[°]	90.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	50.0
Closing moment ensured by spring	[Nm]	8.1
Weight	[kg]	2.0
Recommended workpiece weight	[kg]	2.7
Air consumption per double stroke	[cm ³]	110.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.5
Opening time	[s]	0.6
Max. permitted finger length	[mm]	100.0
Max. permitted weight per finger	[kg]	0.5
IP class		67
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

① The opening angle of the base jaws can be limited.

Main views

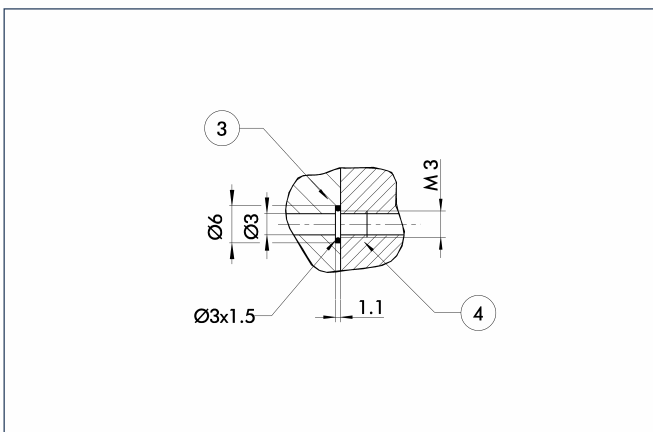


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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
- ⑭ Clamping reserve per finger
- ⑳ Through-bore
- ④⑧ Hose

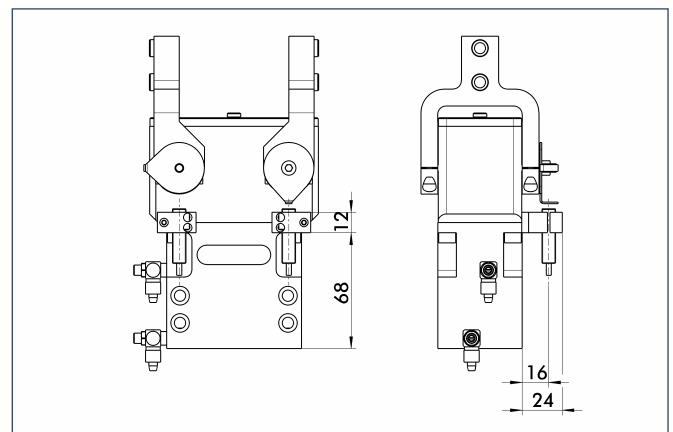
Hoseless direct connection



- 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.

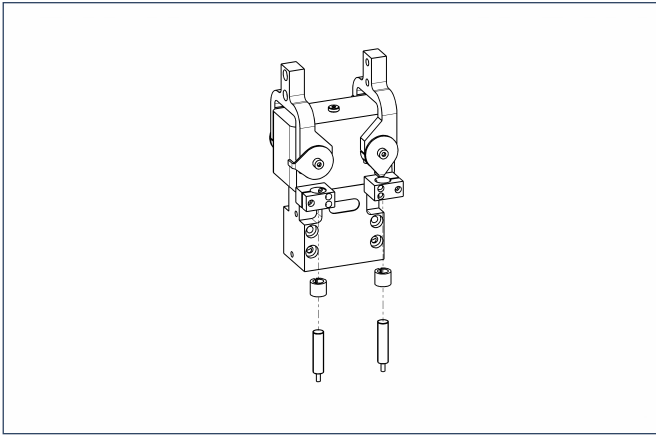
Mounting kit for M8/M12 proximity switches



The mounting kit consists of 2 brackets, 2 intermediate sleeves and small components. The proximity switches must be ordered separately.

Description	ID
HG-DWG 80	0300749

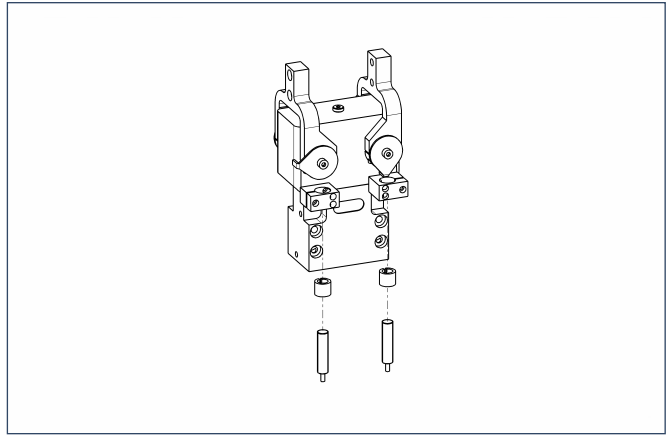
Sensor system



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	

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



End position monitoring:
Inductive proximity switches, mounted with mounting kit

Description	ID	Recommended product
HG-DWG 80	0300749	
IN 120/S-M12	0301592	
IN 80/S-M12	0301578	
IN 80/S-M8	0301478	•
IN-B 80/S-M8	0301477	
INK 120/S	0301562	
INK 80/S	0301550	
INK 80/SL	0301579	

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

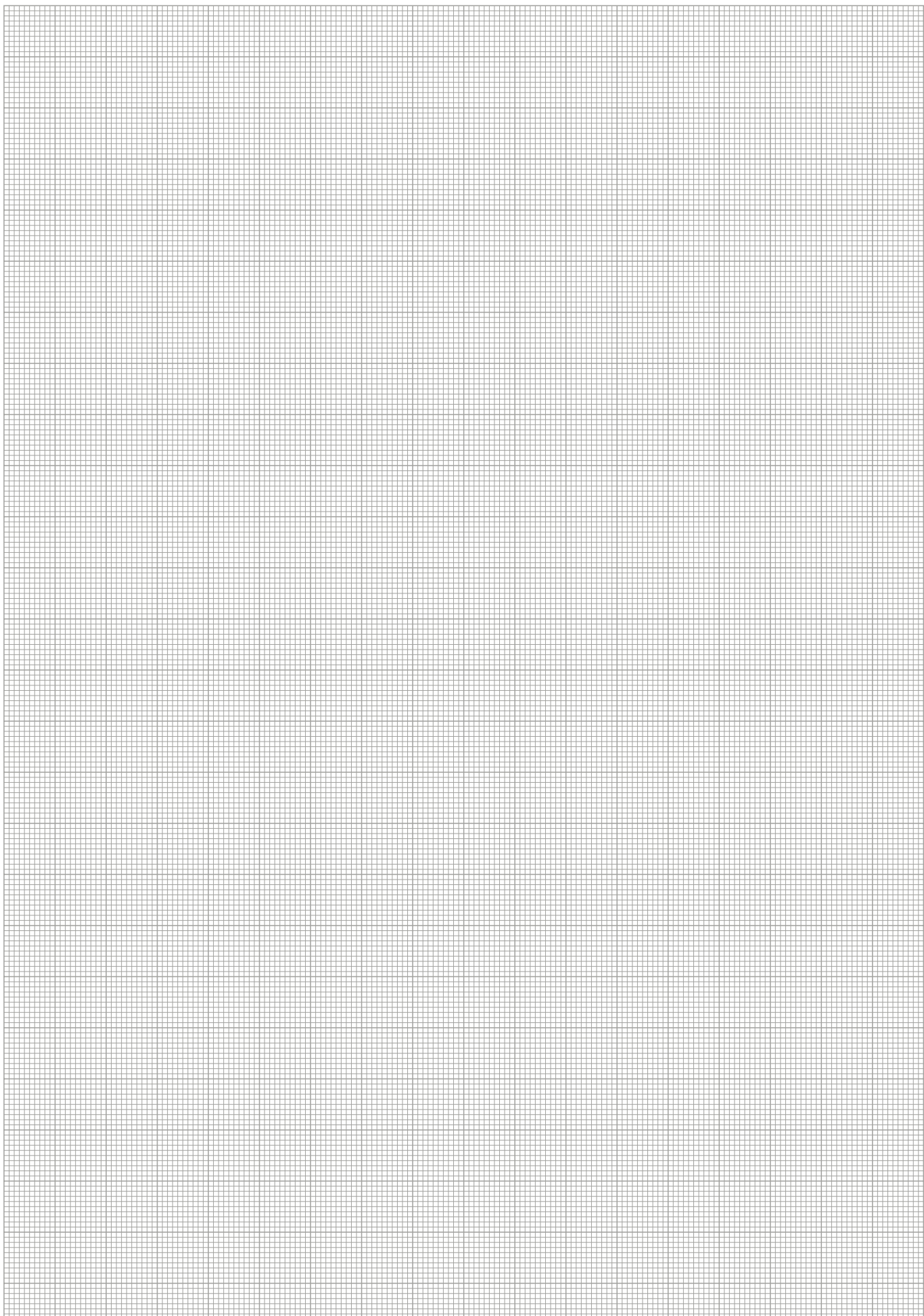
Extension cables for proximity switches/magnetic switches

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.

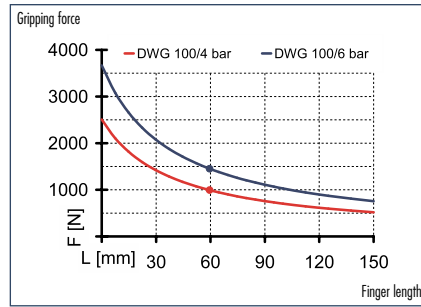


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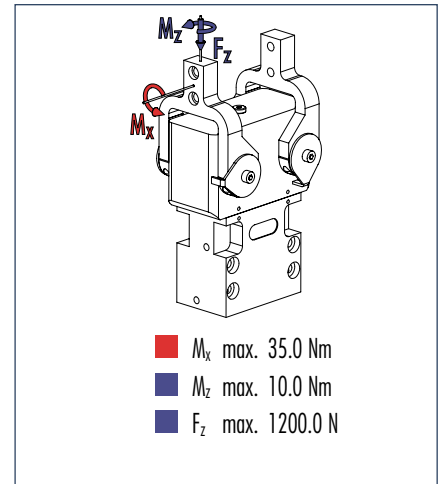




Gripping force, O.D. gripping



Finger load



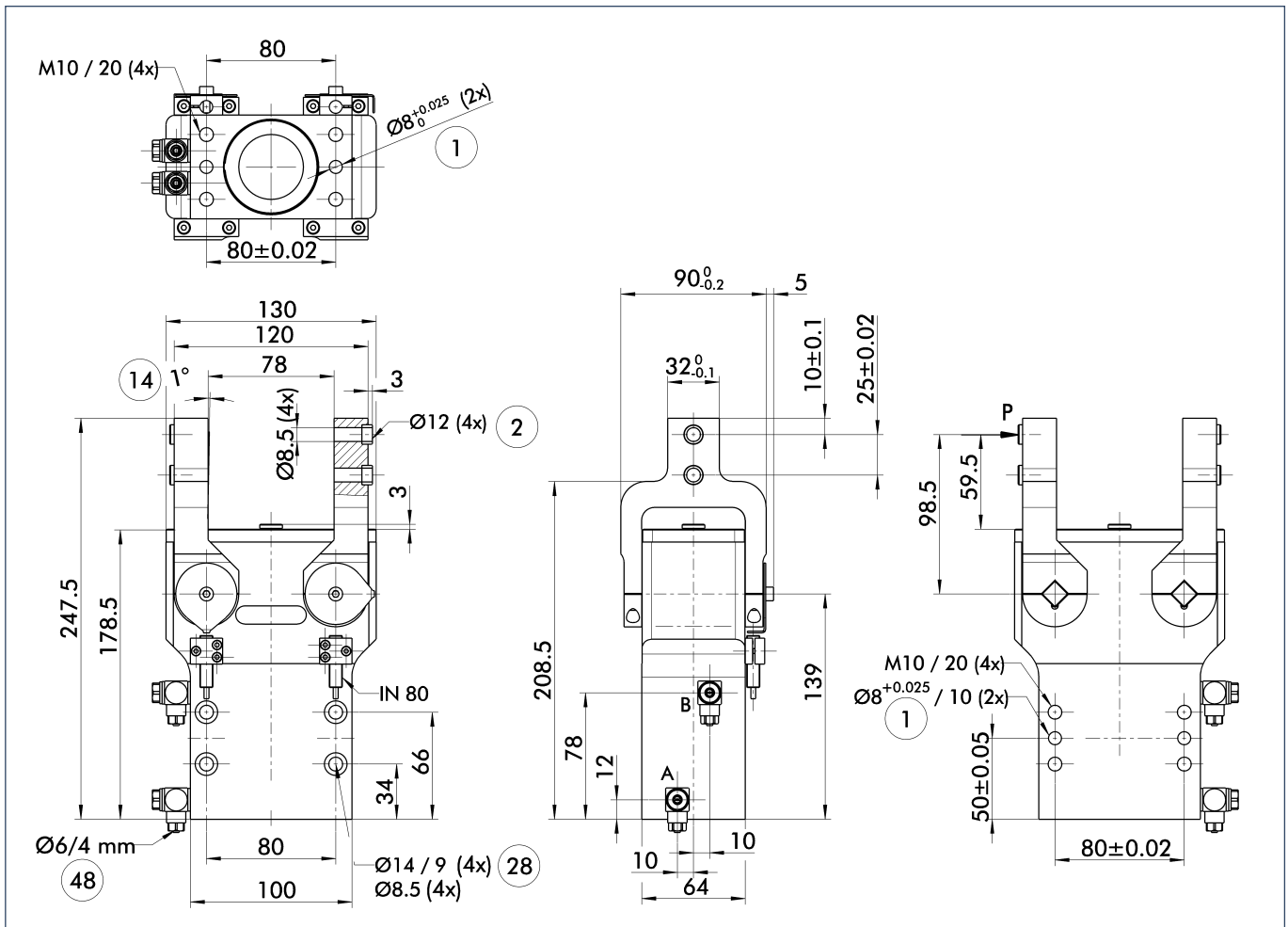
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	ID	DWG 100
		0307150
Opening angle per jaw	[°]	90.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	143.0
Closing moment ensured by spring	[Nm]	30.0
Weight	[kg]	4.46
Recommended workpiece weight	[kg]	6.0
Air consumption per double stroke	[cm ³]	217.0
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.3
Opening time	[s]	0.6
Max. permitted finger length	[mm]	125.0
Max. permitted weight per finger	[kg]	1.0
IP class		67
Min. ambient temperature	[°C]	-10.0
Max. ambient temperature	[°C]	90.0
Repeat accuracy	[mm]	0.1

① The opening angle of the base jaws can be limited.

Main views

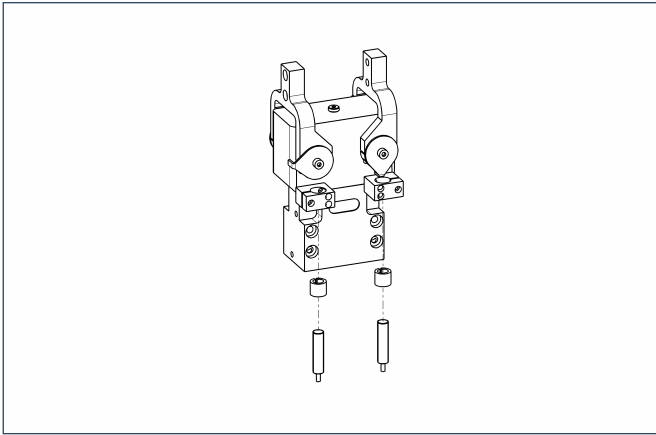


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

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
- ⑭ Clamping reserve per finger
- ⑳ Through-bore
- ④⑧ Hose

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	•
IN-B 80/S-M8	0301477	
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.

