Sizes
10 .. 50

Weight
2.5 g .. 213 g

Gripping moment
0.01 Nm .. 2.8 Nm

Opening angle per finger
15°

Workpiece weight
0.007 kg .. 0.45 kg

Application example

Triple transfer unit for packaging with small boxboards

1 SWG 50 2-Finger Angular Gripper

2 OPR 101 Collision and Overload Protection

Angular Gripper for Small Components

Narrow 2-finger angular gripper with double actuation

Area of application

For universal use in clean and slightly dirty environments. Suitable for applications requiring stacked, space-saving gripper assemblies.

Your advantages and benefits

Slim design
allowing the grippers to be stacked

Spring-assisted gripping force maintenance
holds the workpiece even in case of a loss of pressure

Kinematics
for high power transmission and synchronized gripping

Light, compact design
for space-saving handling without interfering contours

Monitoring via electronic magnetic switches
a space-saving feature in a slot in the housing

General information on the series

Working principle
Double compressed air actuated, guided kinematics

Housing material
Aluminum alloy, hard-anodized

Base jaw material
Aluminum alloy, hard-anodized

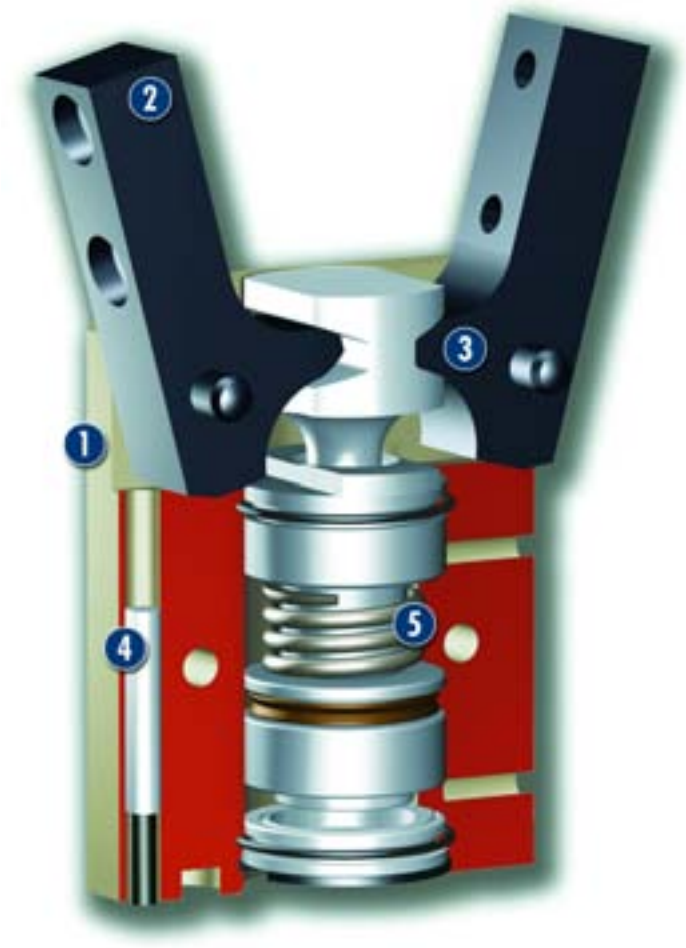
Actuation
Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated
Pressure medium: Requirements on quality of the compressed air according to DIN ISO 8573-1: 6 4 4.

Warranty
24 months

Scope of delivery
Pivot screw connections, centering sleeves, assembly and operating manual with manufacturer's declaration

Gripping force safety device
always integrated, also possible via 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 **Kinematics**
precise gear for centric gripping

4 **Monitoring**
electronic magnetic switch, space-saving feature in the housing slot

5 **Gripping force safety device**
mechanical gripping force maintenance for O.D. gripping

Function description

The piston is moved up or down by means of compressed air. The kinematics use the lever system to convert the vertical motion into the synchronous, rotating movement of the base jaws.

Options and special information

The SWG angular gripper can be stacked directly to reduce interfering contours.

Accessories

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

Centering sleeves

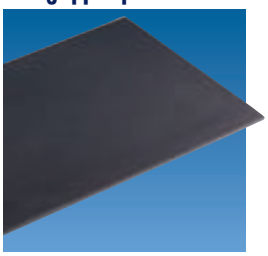
Fittings

MMS magnetic switches

Quentes plastic inserts

KV/KA sensor cables

HKI gripper pads



V sensor distributors

SDV-P pressure maintenance valves

ⓘ 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 information on the series

Gripping moment

is the arithmetic total of gripping moments for each claw 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

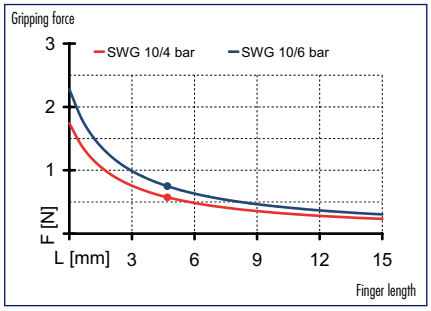
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

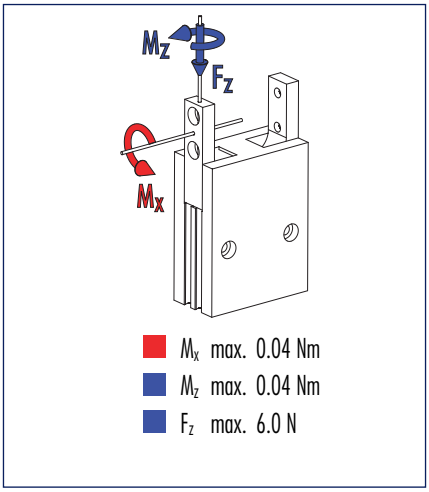
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

SWG 10

Gripping force, O.D. gripping



Finger load

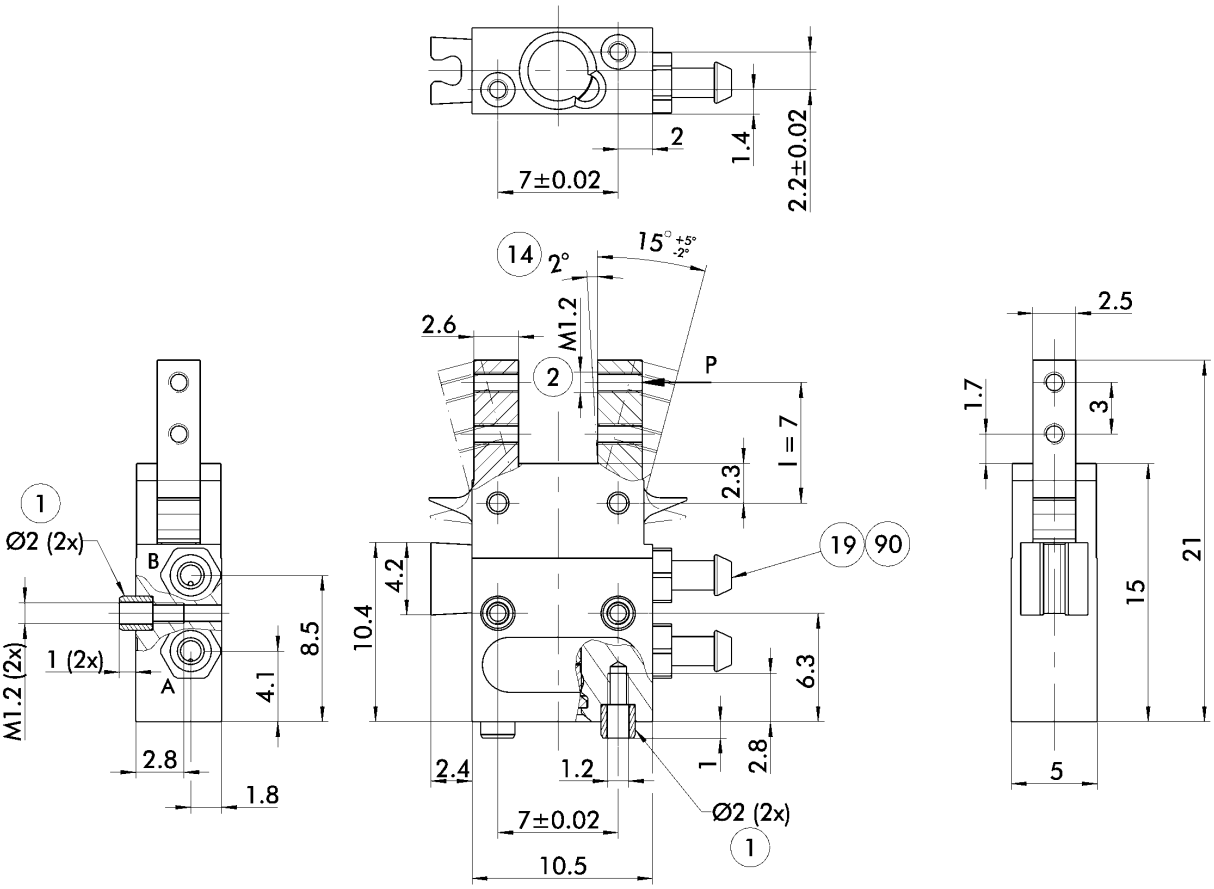


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 10
	ID	0305116
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.01
Closing moment ensured by spring	[Nm]	0.0027
Weight	[kg]	0.0025
Recommended workpiece weight	[kg]	0.007
Air consumption per double stroke	[cm^3]	0.055
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.015
Opening time	[s]	0.02
Max. permitted finger length	[mm]	10.0
Max. permitted weight per finger	[kg]	0.003
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

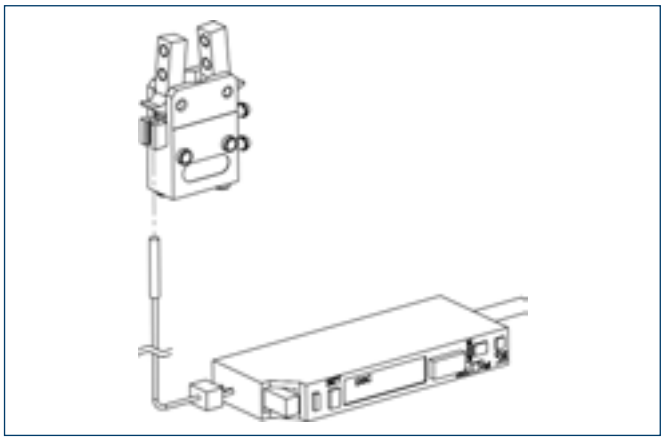


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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
⑲ Air connection
⑨⓪ Polyurethane-hose with an I.D. of 1.6 mm

Sensor system

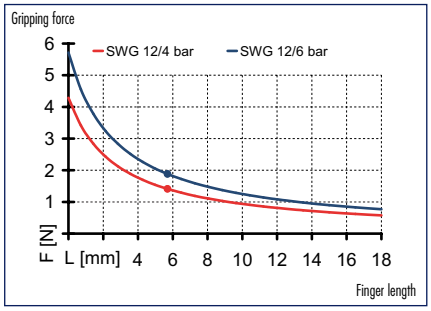


End position monitoring: Optical Proximity Switch

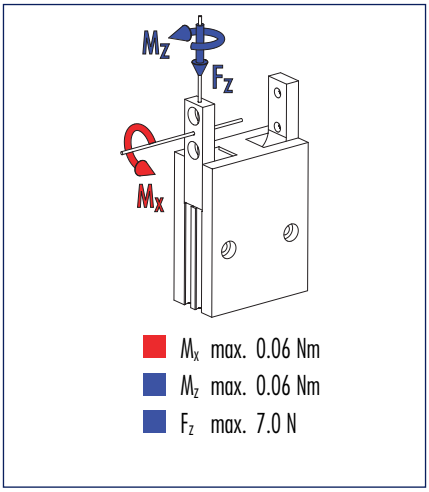
ⓘ One sensor is required per gripper (ONS 01), as well as an optic fiber (ONS 01-LWL) The optical sensor is mounted to the gripper with the plastic clip included in the delivery.

SWG 12

Gripping force, O.D. gripping



Finger load

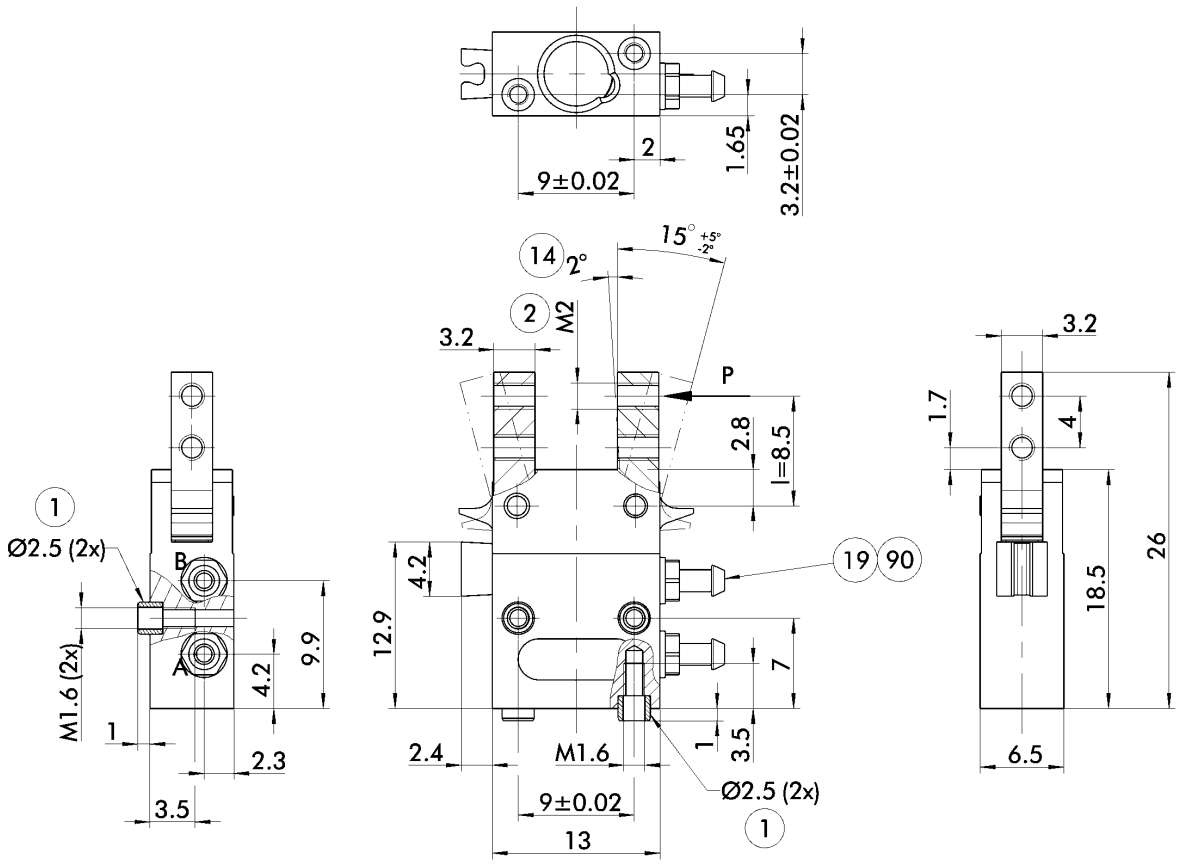


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 12
	ID	0305115
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.03
Closing moment ensured by spring	[Nm]	0.009
Weight	[kg]	0.0048
Recommended workpiece weight	[kg]	0.016
Air consumption per double stroke	[cm^3]	0.07
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.015
Opening time	[s]	0.02
Max. permitted finger length	[mm]	12.0
Max. permitted weight per finger	[kg]	0.006
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

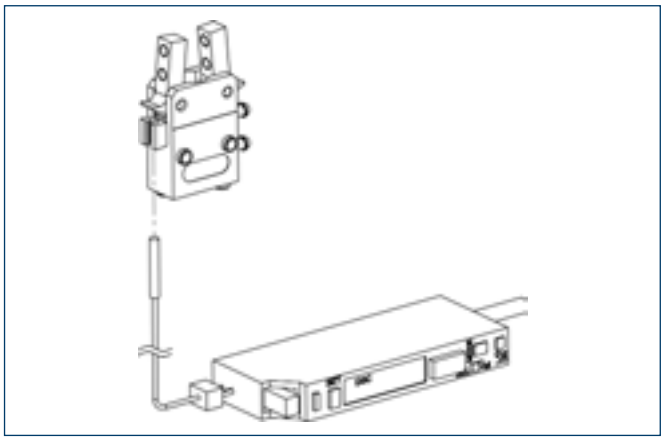


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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
⑲ Air connection
⑨⓪ Polyurethane-hose with an I.D. of 1.6 mm

Sensor system

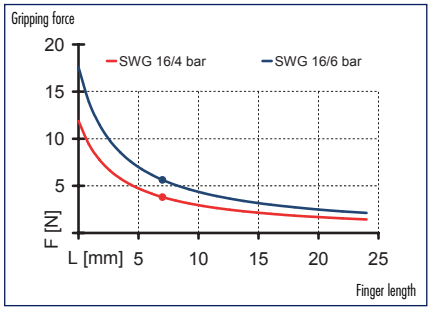


End position monitoring: Optical Proximity Switch

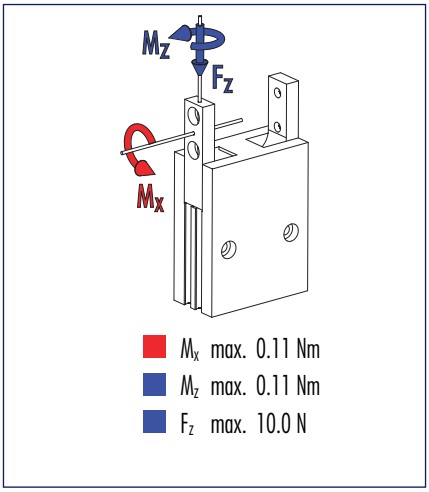
ⓘ One sensor is required per gripper (ONS 01), as well as an optic fiber (ONS 01-LWL)
The optical sensor is mounted to the gripper with the plastic clip included in the delivery.

SWG 16

Gripping force, O.D. gripping



Finger load

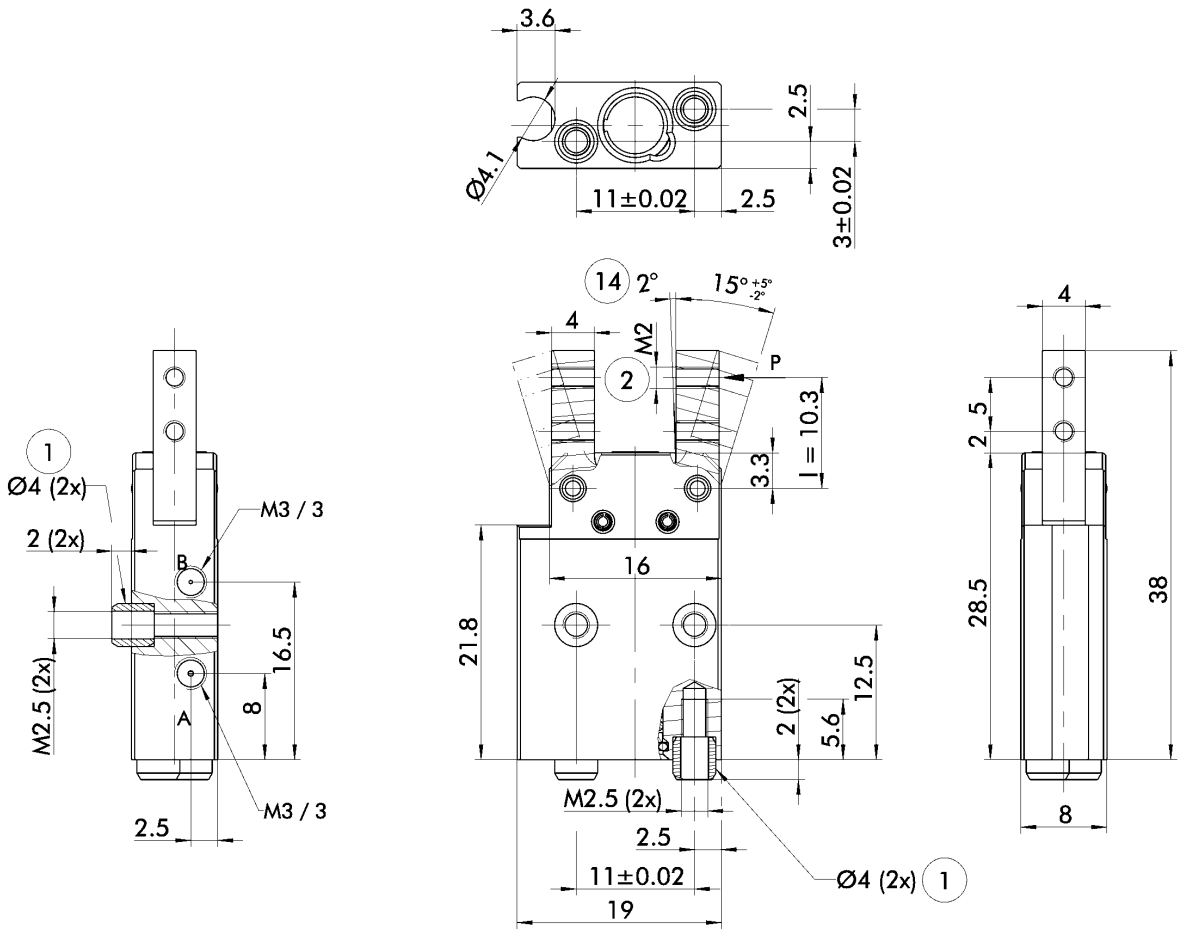


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 16
	ID	0305104
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.058
Closing moment ensured by spring	[Nm]	0.017
Weight	[kg]	0.011
Recommended workpiece weight	[kg]	0.028
Air consumption per double stroke	[cm^3]	0.12
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.015
Opening time	[s]	0.02
Max. permitted finger length	[mm]	15.0
Max. permitted weight per finger	[kg]	0.012
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

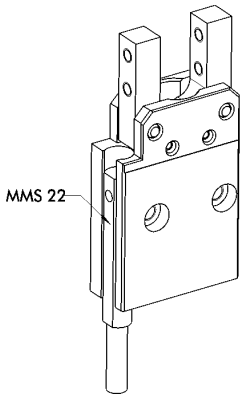


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

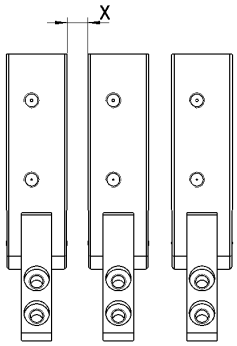
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



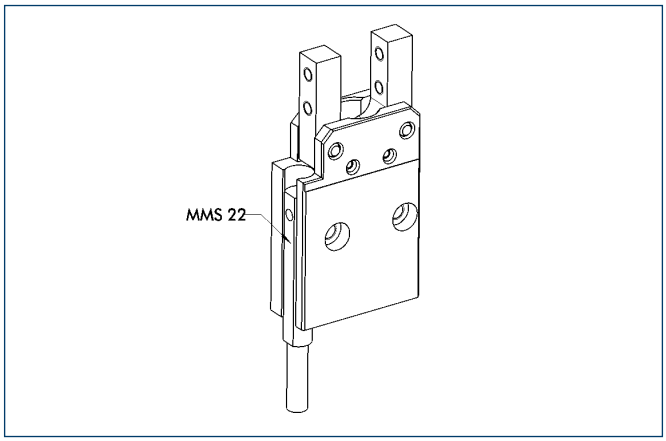
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

ⓘ 1 sensor (NO contact) is required for each gripper.

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

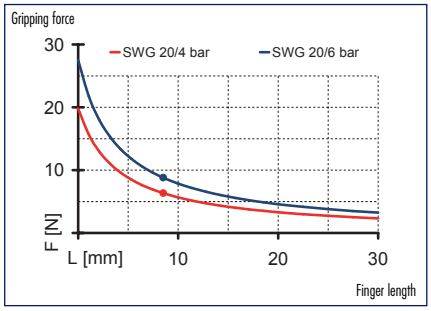
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

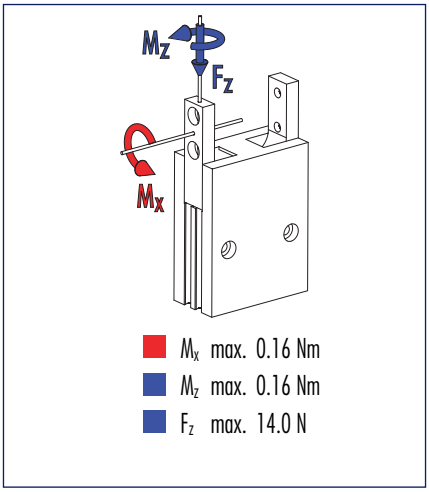
SWG 20

Pneumatic · 2-Finger Angular Gripper · Angular Gripper for Small Components

Gripping force, O.D. gripping



Finger load

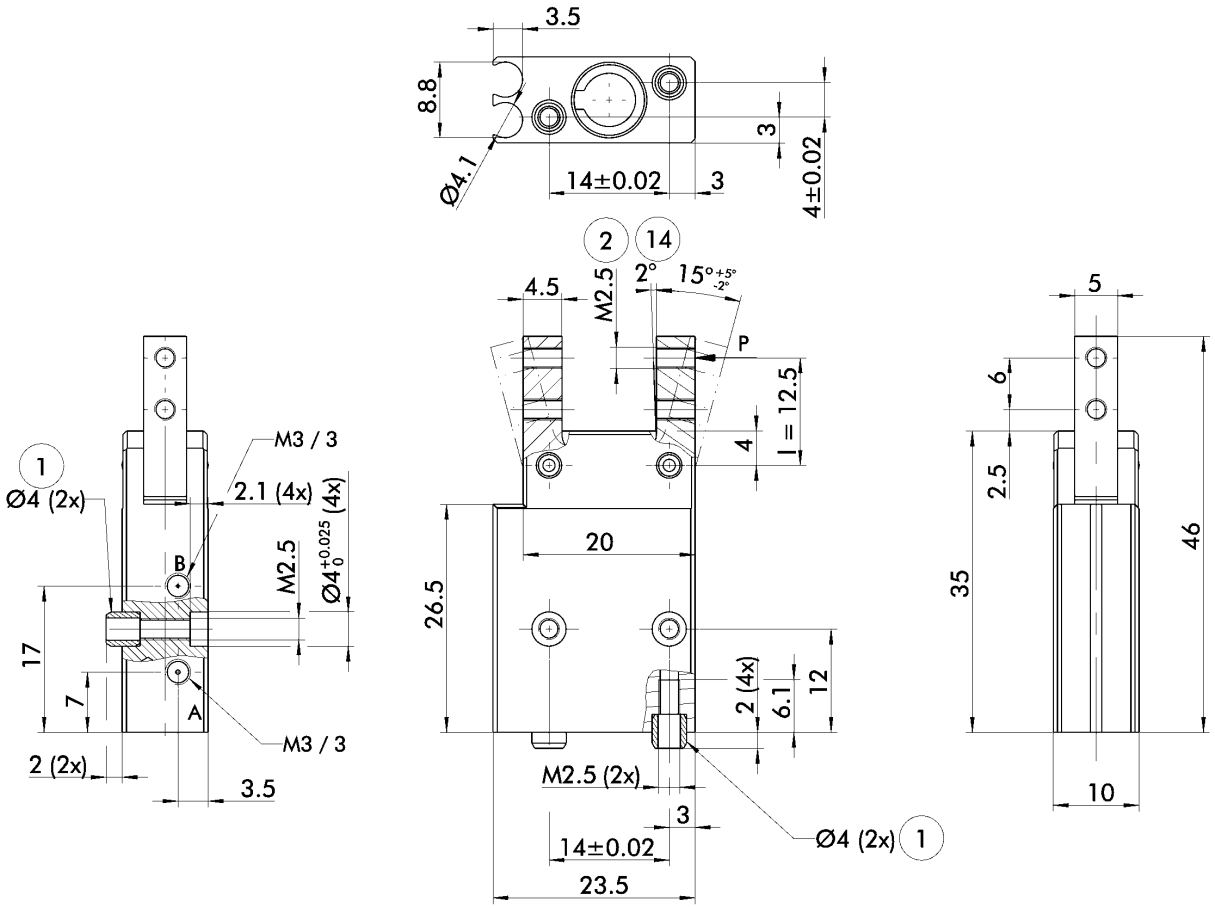


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 20
	ID	0305105
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.11
Closing moment ensured by spring	[Nm]	0.033
Weight	[kg]	0.019
Recommended workpiece weight	[kg]	0.044
Air consumption per double stroke	[cm^3]	0.25
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.015
Opening time	[s]	0.02
Max. permitted finger length	[mm]	18.0
Max. permitted weight per finger	[kg]	0.02
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

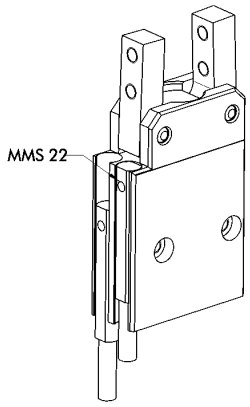


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

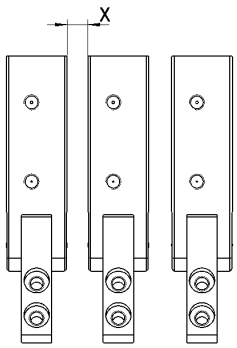
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



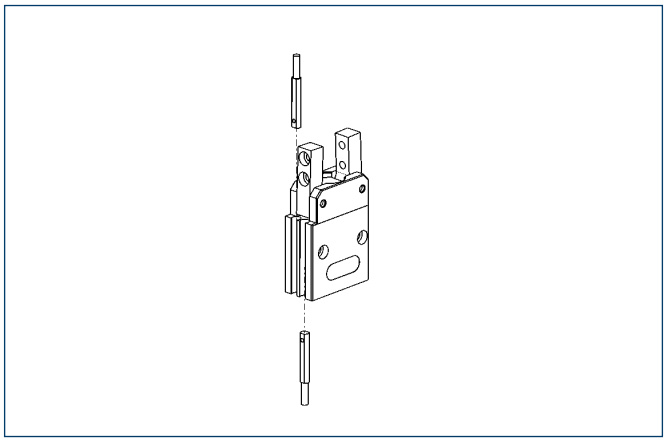
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

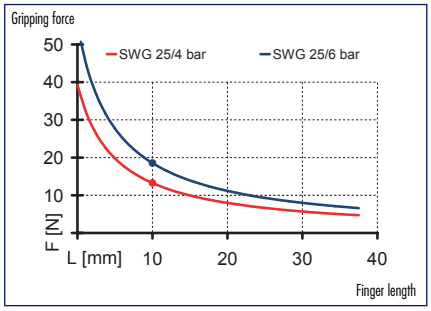
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

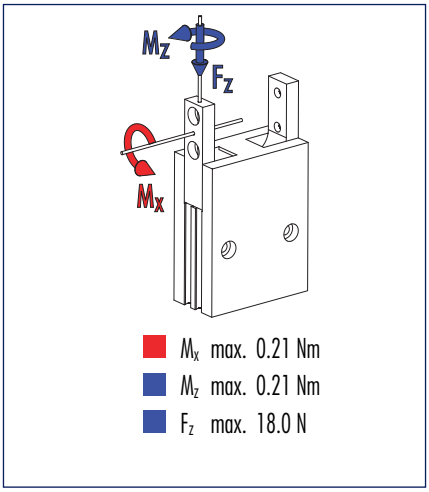
SWG 25

Pneumatic · 2-Finger Angular Gripper · Angular Gripper for Small Components

Gripping force, O.D. gripping



Finger load

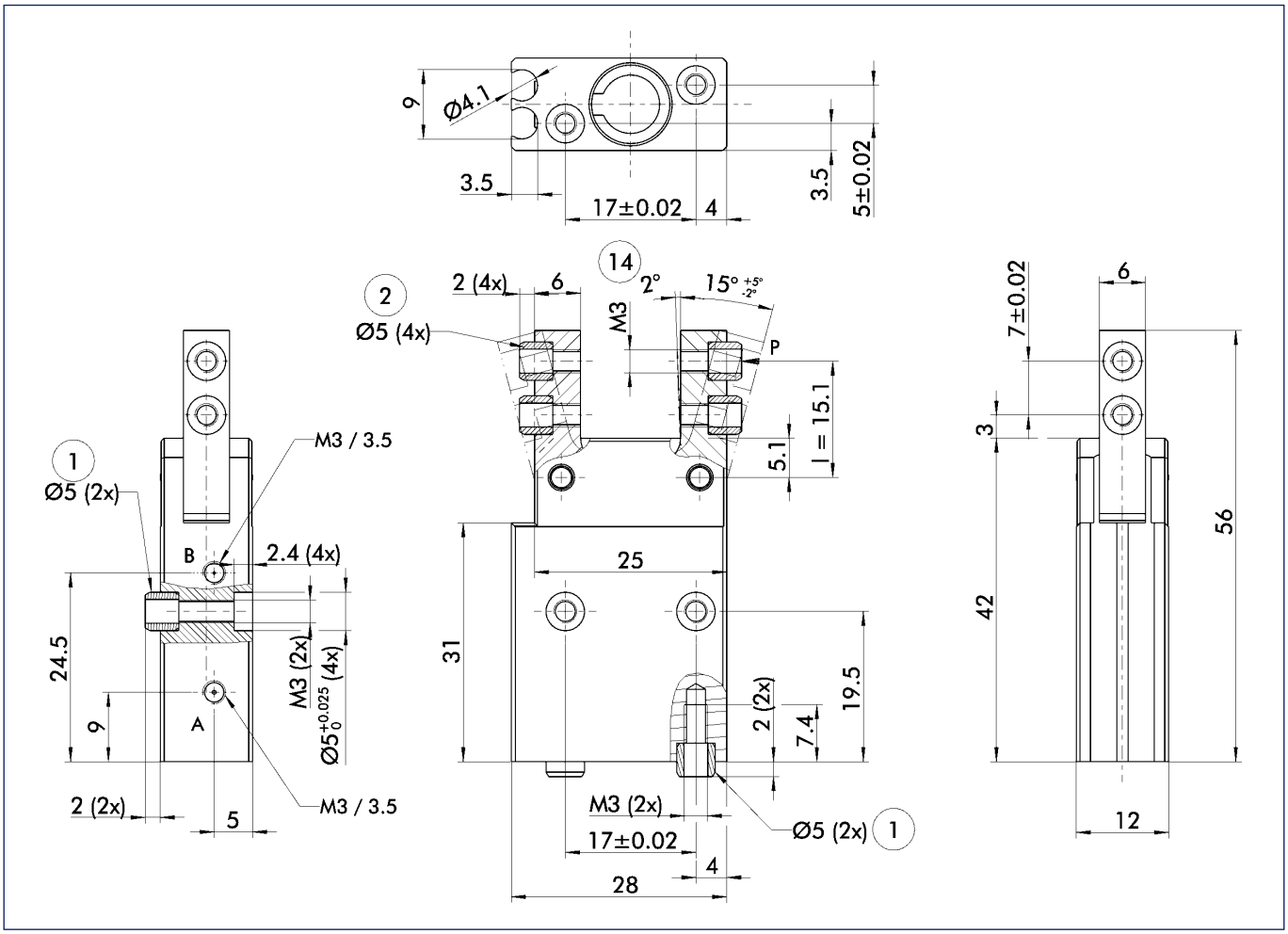


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 25
	ID	0305106
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.28
Closing moment ensured by spring	[Nm]	0.08
Weight	[kg]	0.035
Recommended workpiece weight	[kg]	0.09
Air consumption per double stroke	[cm^3]	0.4
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.015
Opening time	[s]	0.02
Max. permitted finger length	[mm]	22.0
Max. permitted weight per finger	[kg]	0.028
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

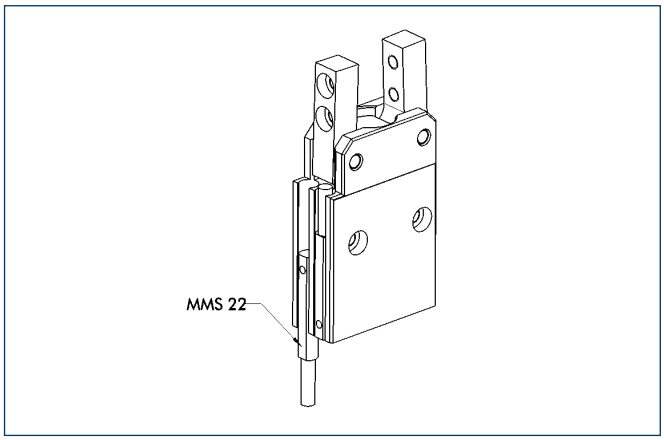


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

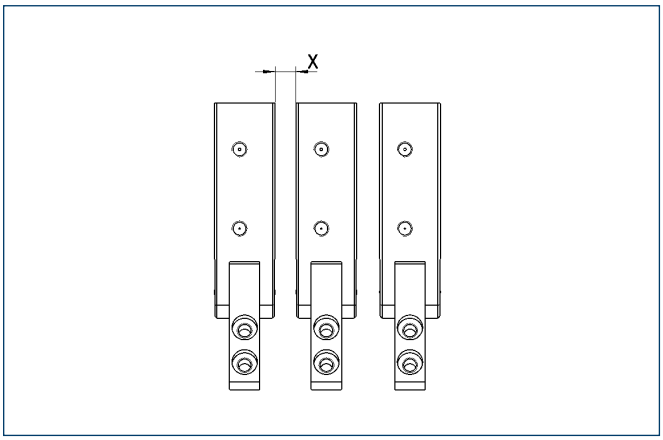
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



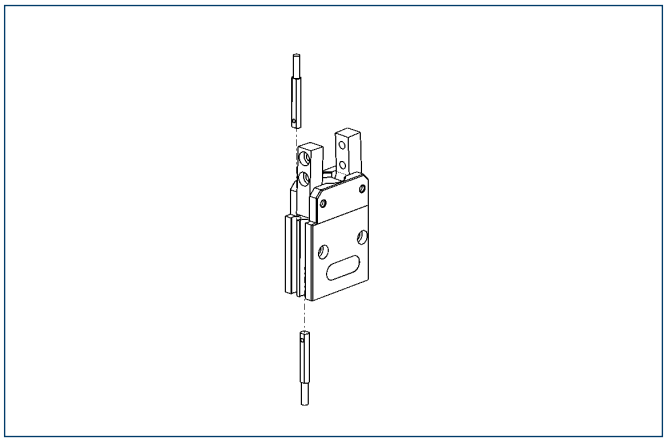
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

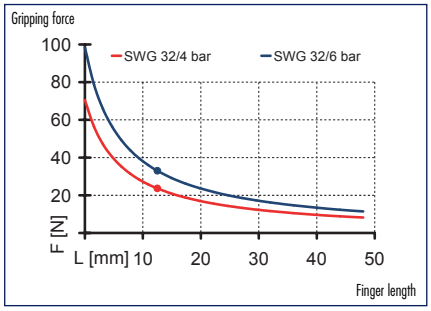
Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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

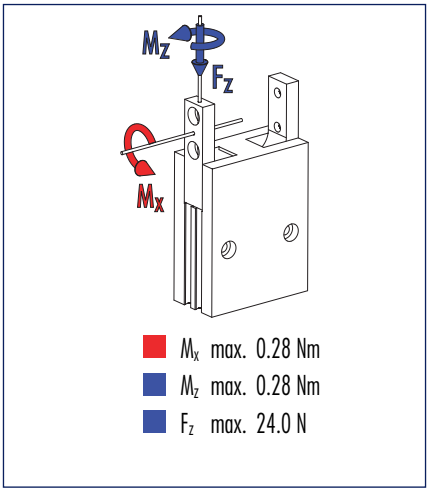
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

SWG 32

Gripping force, O.D. gripping



Finger load

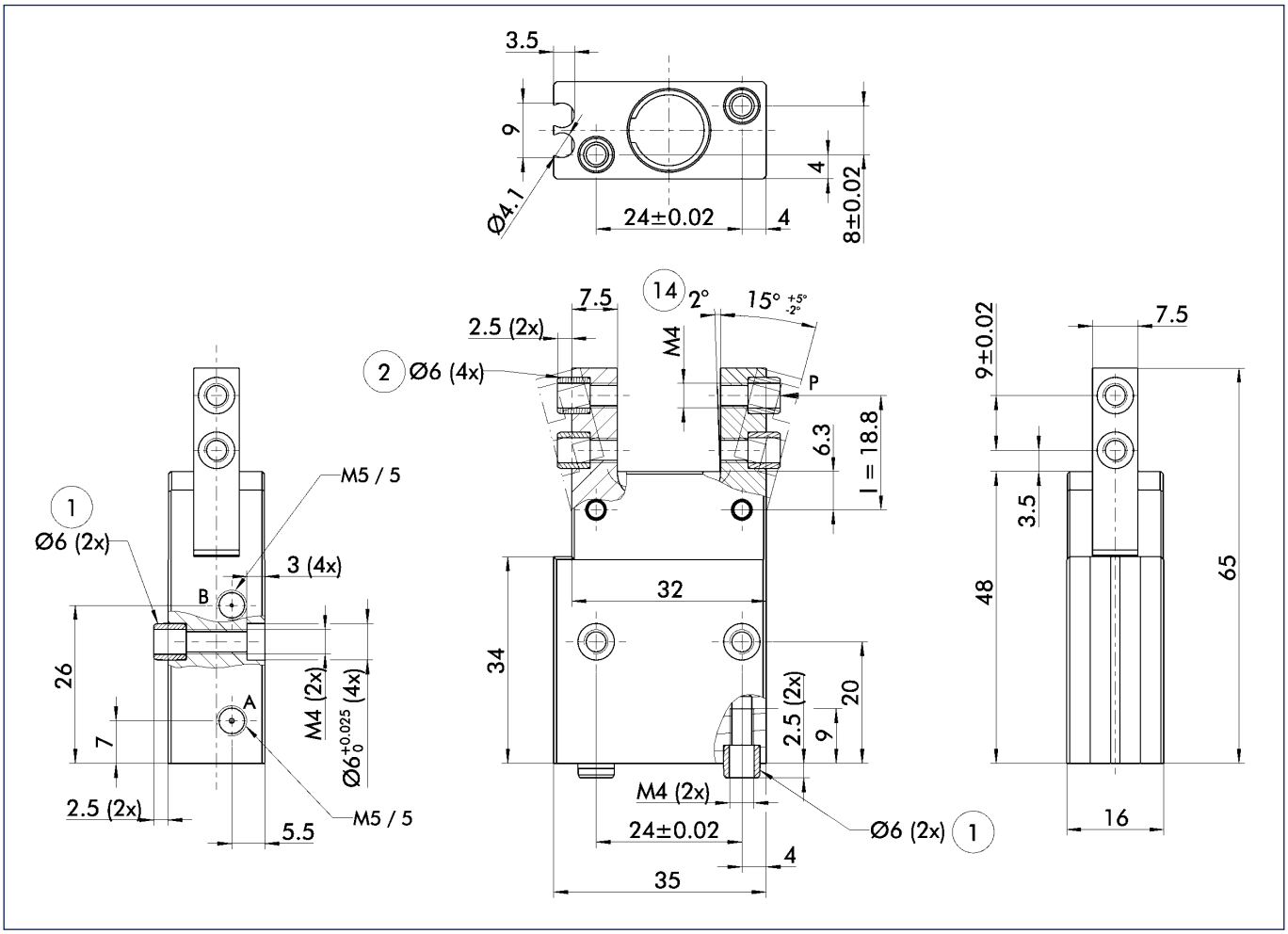


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 32
	ID	0305107
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	0.62
Closing moment ensured by spring	[Nm]	0.18
Weight	[kg]	0.069
Recommended workpiece weight	[kg]	0.165
Air consumption per double stroke	[cm^3]	0.85
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.02
Opening time	[s]	0.025
Max. permitted finger length	[mm]	28.0
Max. permitted weight per finger	[kg]	0.036
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

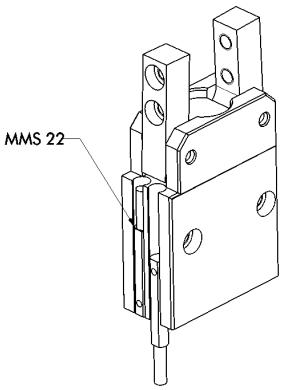


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

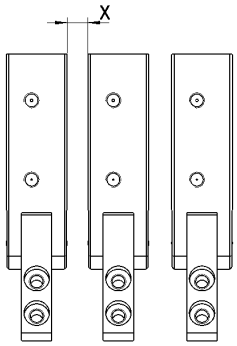
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



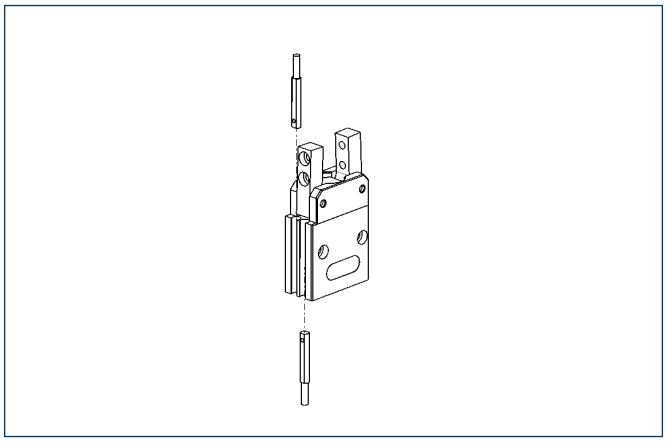
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

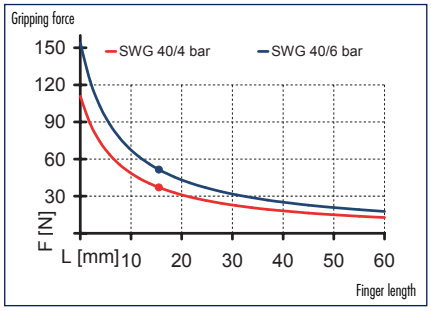
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

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

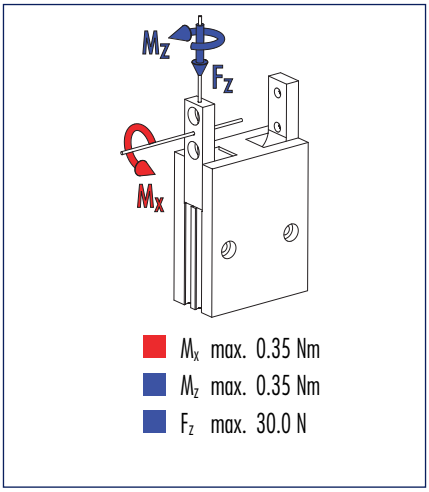
SWG 40

Pneumatic · 2-Finger Angular Gripper · Angular Gripper for Small Components

Gripping force, O.D. gripping



Finger load

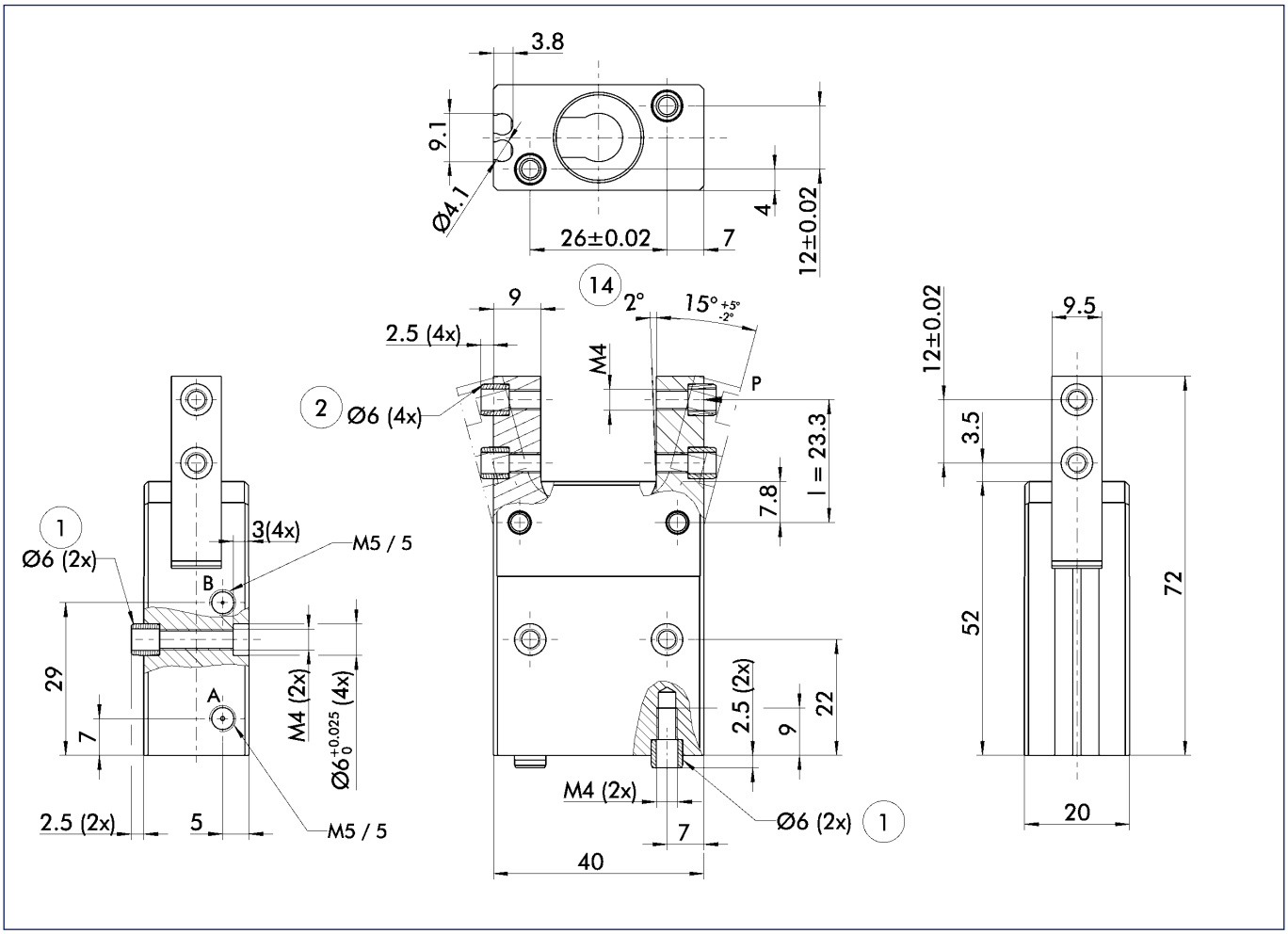


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 40
	ID	0305108
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	1.2
Closing moment ensured by spring	[Nm]	0.36
Weight	[kg]	0.106
Recommended workpiece weight	[kg]	0.3
Air consumption per double stroke	[cm³]	1.6
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.025
Opening time	[s]	0.03
Max. permitted finger length	[mm]	35.0
Max. permitted weight per finger	[kg]	0.05
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

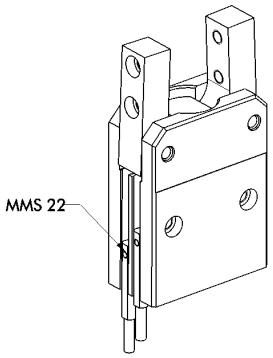


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

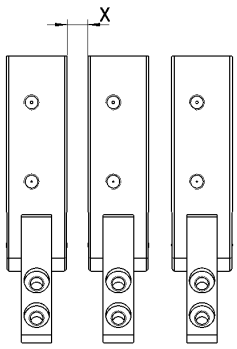
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



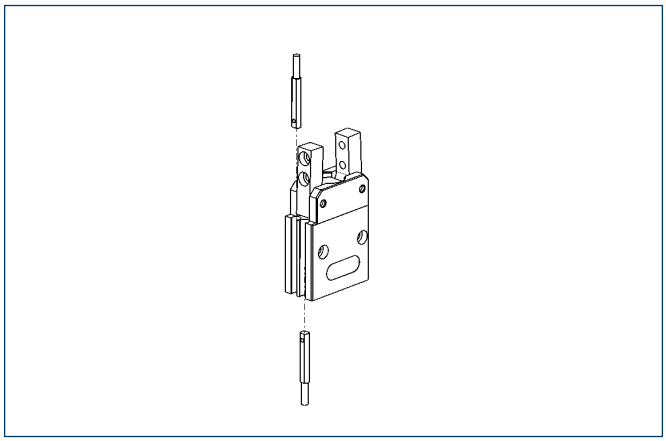
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring: Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

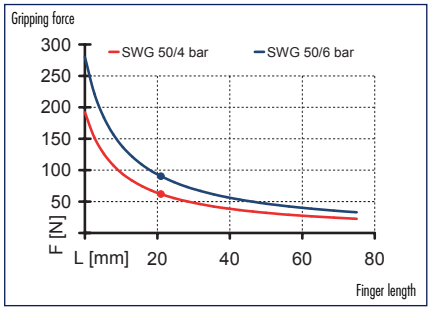
Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

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

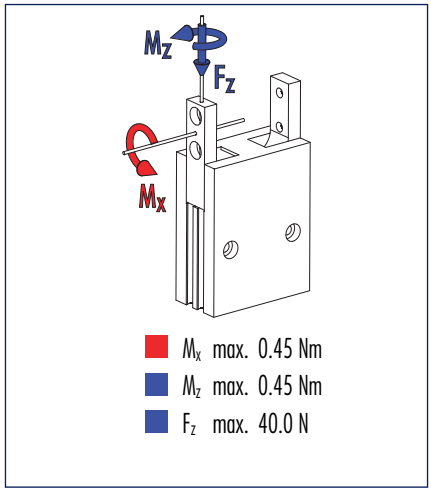
You can find more detailed information and individual parts of the above-mentioned accessories in the “Accessories” catalog section.

SWG 50

Gripping force, O.D. gripping



Finger load

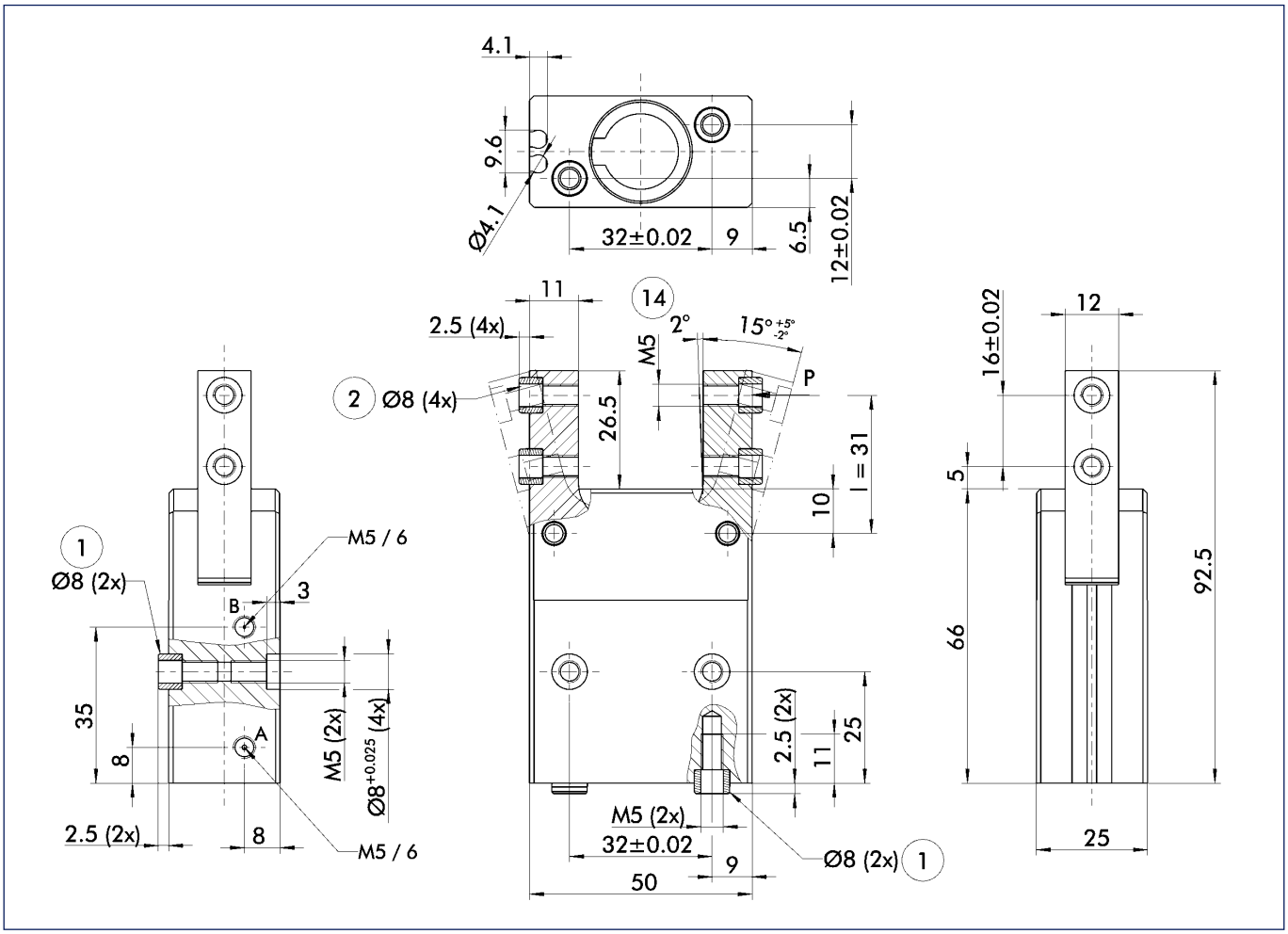


ⓘ Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description		SWG 50
	ID	0305109
Opening angle per jaw	[°]	15.0
Opening angle per jaw up to	[°]	2.0
Closing moment	[Nm]	2.8
Closing moment ensured by spring	[Nm]	0.6
Weight	[kg]	0.213
Recommended workpiece weight	[kg]	0.45
Air consumption per double stroke	[cm^3]	3.8
Nominal pressure	[bar]	6.0
Minimum pressure	[bar]	4.0
Maximum pressure	[bar]	6.5
Closing time	[s]	0.03
Opening time	[s]	0.06
Max. permitted finger length	[mm]	42.0
Max. permitted weight per finger	[kg]	0.08
IP rating		30
Min. ambient temperature	[°C]	-10.0
Température ambiante max.	[°C]	90.0
Repeat accuracy	[mm]	0.05

Main views

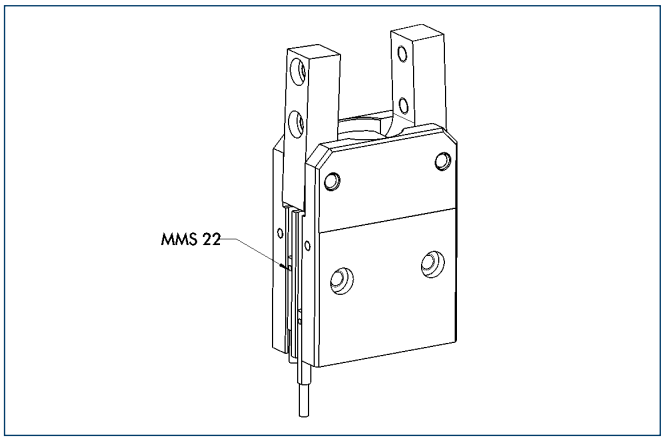


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ 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.

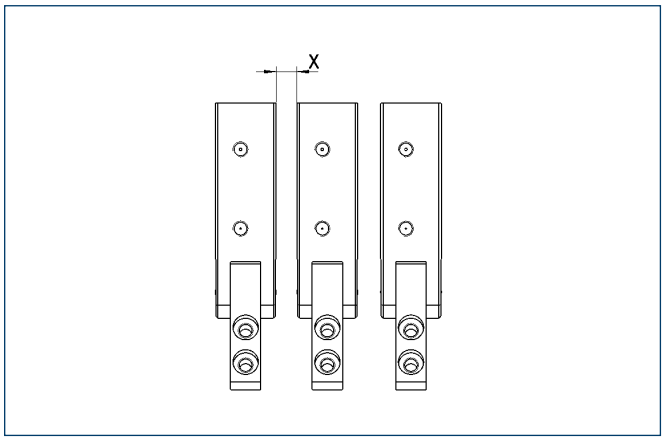
A,a Main/direct connection, gripper opening
B,b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
⑭ Clamping reserve per finger

Sensor assembly



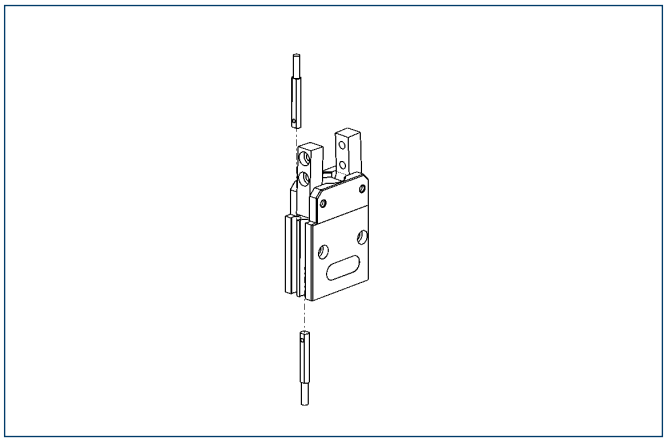
Suggestion for mounting the optical sensor on the gripper. Please note that the gripper must be mounted with non-magnetizable screws in order to ensure the correct functioning of the switches.

Stacked arrangement



If each SWG in a stacked arrangement is to be monitored by its own sensor, please bear in mind that a minimum distance of X = 2 mm must be left between the sensors. Otherwise, the magnets in the gripper piston will disturb the sensors of the neighboring grippers.

Sensor system



End position monitoring:
Electronic magnetic switches, for mounting in C-slot

Description	ID	Recommended product
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M5-PNP	0301438	
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M8-NPN	0301433	
MMS 22-S-M8-NPN-SA	0301443	
MMS 22-S-M8-PNP	0301432	•
MMS 22-S-M8-PNP-SA	0301442	
MMSK 22-S-NPN	0301435	
MMSK 22-S-NPN-SA	0301445	
MMSK 22-S-PNP	0301434	
MMSK 22-S-PNP-SA	0301444	

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

Extension cables for proximity switches/magnetic switches

Description	ID
KA BG05-L 3P-0300	0301652
KA BG08-L 3P-0300-PNP	0301622
KA BW05-L 3P-0300	0301650
KA BW08-L 3P-0300-NPN	0301602
KA BW08-L 3P-0300-PNP	0301594
KA BW08-L 3P-0500-NPN	9641116
KA BW08-L 3P-0500-PNP	0301502
KV BW08-SG08 3P-0030-PNP	0301495
KV BW08-SG08 3P-0100-PNP	0301496
KV BW08-SG08 3P-0200-PNP	0301497

ⓘ 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.