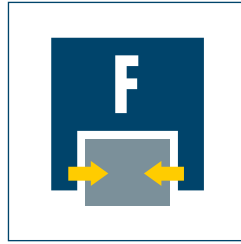




Sizes
85 .. 205



Mass
0.48 kg .. 2.7 kg



Gripping force
120 N .. 595 N

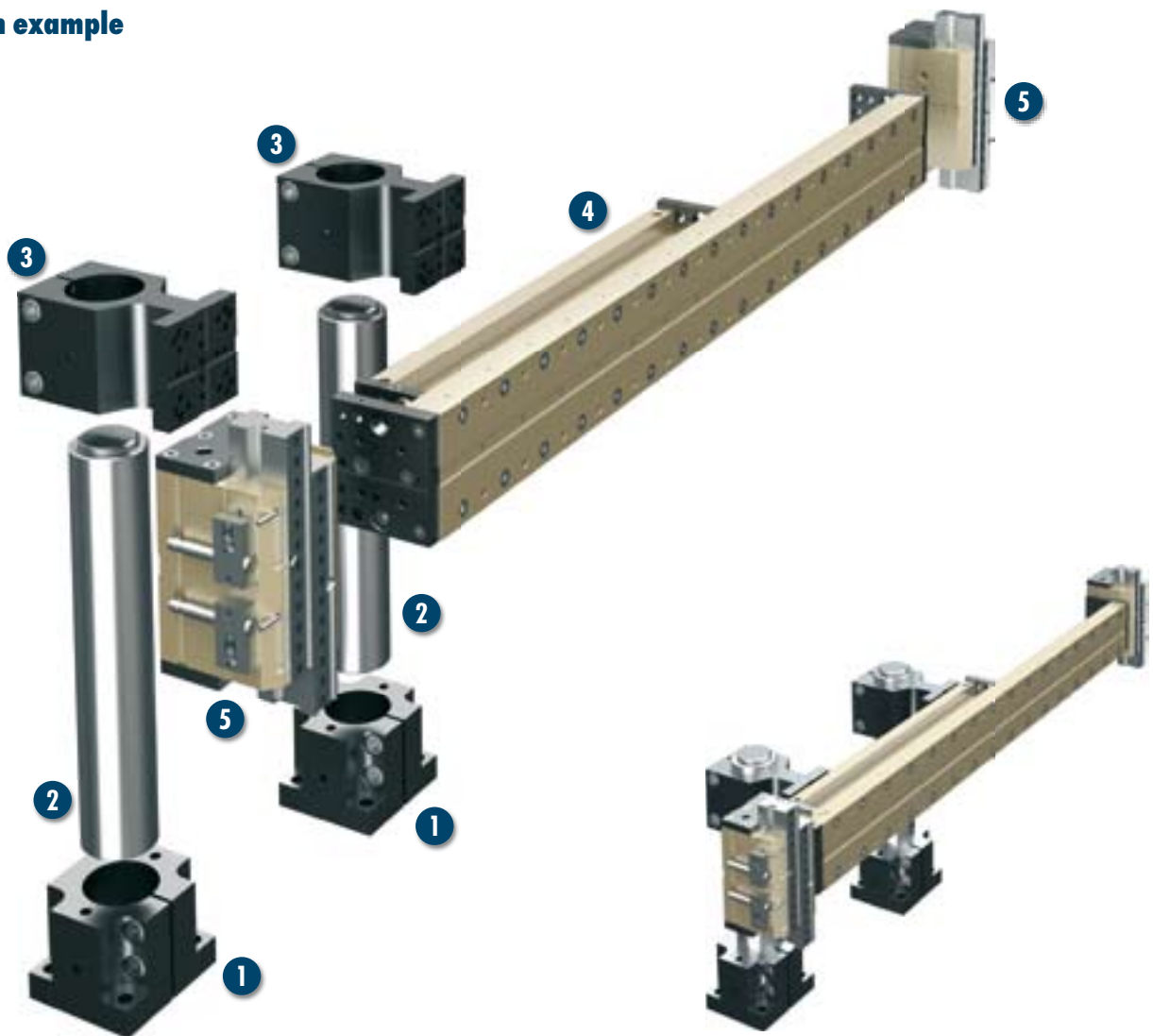


Stroke per finger
16 mm .. 30 mm



Workpiece weight, force-fit gripping
Up to 2.3 kg

Application example



Pneumatic double pick & place unit with pillar assembly for medium workpieces

- 1 Single base support, SOE 055
- 2 Hollow pillar, SLH 055-0300
- 3 Single mounting plate, APEV 085

- 4 Linear module, LM 200-H350
- 5 Parallel gripping module, GM 205-S

Long-stroke gripper for small components

2-finger parallel grippers with surface-guided base jaws

Area of application

Suitable for clean work environments as well as for large varieties of parts due to the relatively long jaw stroke and the high gripping forces.

Advantages – your benefits

Precise flat guidance

For very good guidance characteristics

Base jaw guide over the entire length of the housing

For high load bearing capacity and the attachment of longer gripper fingers

Large stroke with a compact design

For minimum interfering contours

Choice of I.D. or O.D. gripping

For maximum flexibility in applications

End-position monitoring

Using an optional standardized monitoring set

Integration of a gripping force safety device without additional parts is optional

For firm grip even in the event of power failure

Standardized mounting bores

For numerous combinations with other GEMOTEC system elements



General information about the series

Working principle

Pneumatic direct acting double piston drive principle with synchronizing lever

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Steel

Actuation

Pneumatic, via filtered compressed air (10 µm): dry, lubricated, or non-lubricated
Pressurizing medium: requirements for compressed air quality class according to DIN ISO 8573-1: Quality class 4

Scope of delivery

Completely ready for operation
without bracket for proximity switch and without proximity switch

Warranty

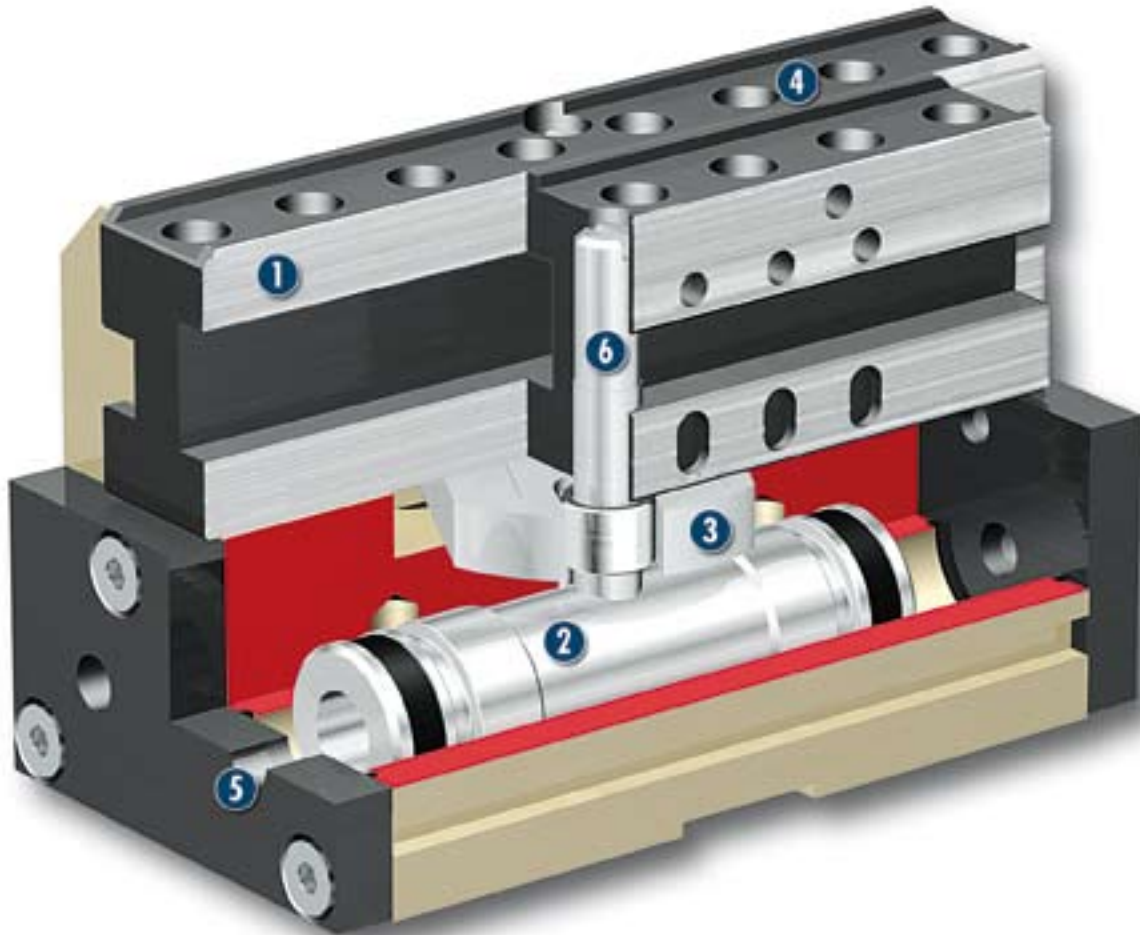
24 months

Gripping force retaining device

Can be integrated without additional interfering contour in the standard gripper

For production reasons, the colors may vary from those shown in the catalog.

Cross-section of function



- | | | |
|--|---|---|
| <p>1 Guidance
Precise gripper with minimal-backlash flat guide over the entire housing length</p> | <p>3 Kinematics
Synchronization by leverage principle for centric gripping</p> | <p>5 Fluid connection
Possibility of connection on one side or on both sides</p> |
| <p>2 Drive
No piston rod, so the effective surface is the same in both directions</p> | <p>4 Base jaws
For adaptation of the workpiece-specific gripper fingers</p> | <p>6 Driver
For transmission of the finger movement without any backlash</p> |

Description of function

By the application of pressure to the opposite pistons, each base jaw is moved by a driver on its guiding piston. The synchronization of the jaw stroke is done with a lever.

Options and special information

This module can be combined as standard with many elements from the modular system. You can find more information in the "Accessories" chapter.

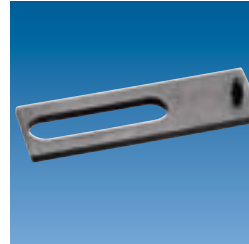
Accessories

Accessories from SCHUNK – the ideal components for the best functionality, reliability, and controlled production for all automation modules.

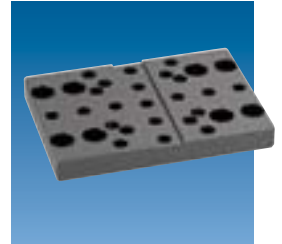
Fittings



Centering strips



Adapter plates



Inductive proximity switch, NI



Pillar assembly systems



Sensor cable



Pressure maintenance valve



① Please see the side views at the end of the respective size for information concerning specific sizes, accessories availability for that size, designation, and ID numbers. You can find more information about our accessories program in the "Accessories" part of the catalog.

General information about the series

Gripping force

This is the arithmetic sum of the gripping forces applied to each claw jaw, measured at a distance of 20 mm from the upper edge of the gripper.

Finger length

The finger length is measured from the upper edge of the base jaw in the direction of the main axis.

Repeat accuracy

This is defined as the distribution of the end positions of 100 successive strokes.

Workpiece weight

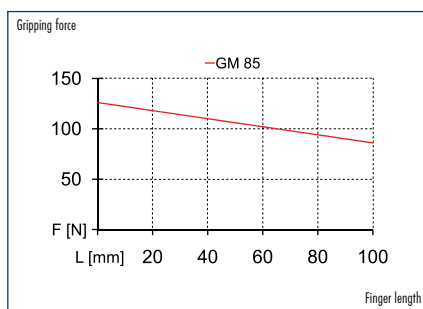
The recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slip-page at acceleration due to gravity only. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times

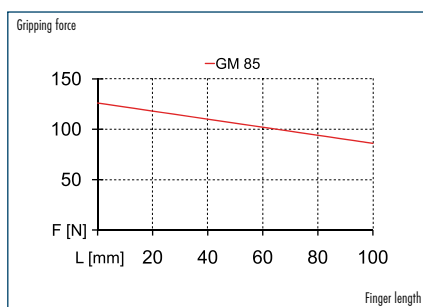
Closing and opening times are only movement times of the base jaws or fingers. Valve switching times, hose filling times, or PLC reaction times are not a part of this and are to be considered when cycle times are calculated.



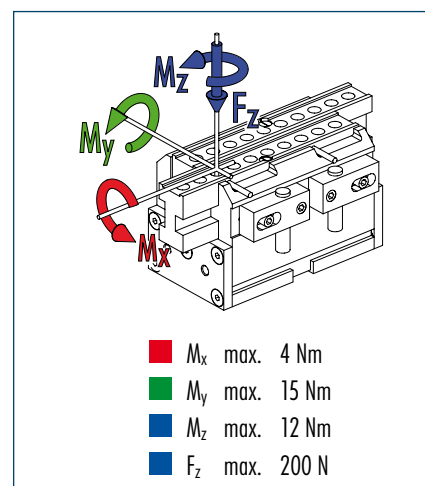
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

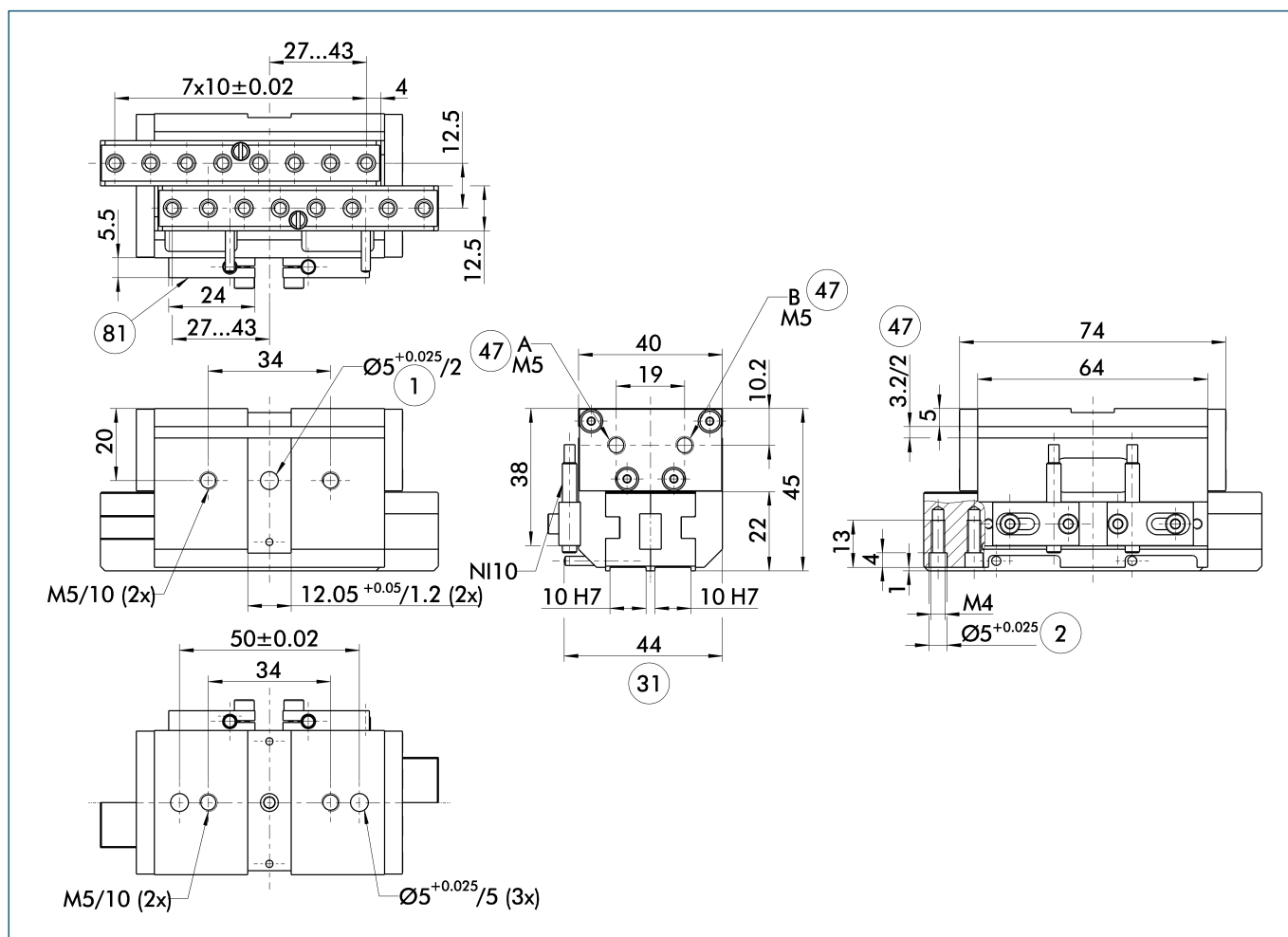


① Moments and forces apply per base jaw and may occur among themselves at the same time. M_y may occur additionally to the moment produced by the gripping force itself.

Technical data

Designation	GM 85	
	ID	0313066
Stroke per jaw	[mm]	16
Closing grip force	[N]	120
Opening grip force	[N]	120
Min. grip force applied by spring	[N]	
Mass	[kg]	0.48
Recommended workpiece weight	[kg]	0.6
Fluid consumption for double stroke	[cm ³]	11
Minimum pressure	[bar]	3
Maximum pressure	[bar]	8
Nominal operating pressure	[bar]	6
Closing time	[s]	0.1
Opening time	[s]	0.1
Max. permissible finger length	[mm]	100
IP rating		40
Min. ambient temperature	[°C]	5
Max. ambient temperature	[°C]	60
Repeat accuracy	[mm]	± 0.03

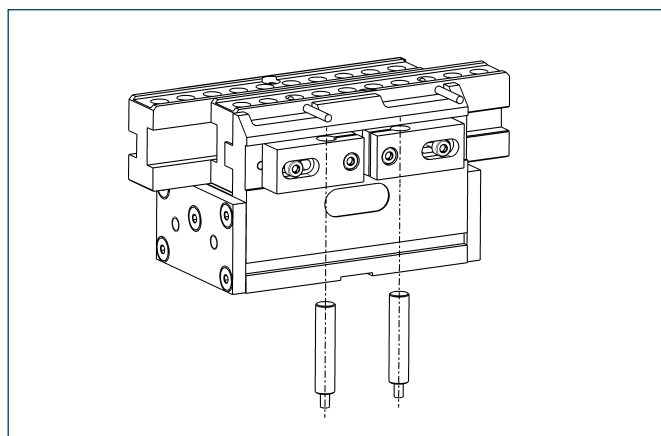
Main views



- A, a Main and direct connections, gripper open
 B, b Main and direct connections, gripper close
 ① Gripper connection
 ② Finger connection
 ③ Interfering contour, operating cam
 ④ on both sides
 ⑤ Not included in the scope of delivery

The gripper can be attached to the base side or to the side. Unused thread may not be used for other purposes, since this could lead to warping.

Sensor systems



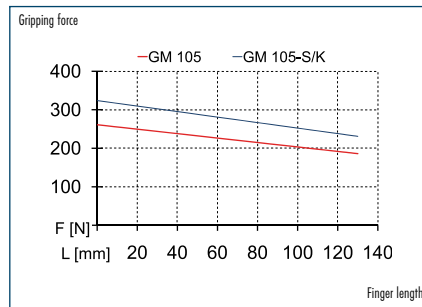
End-position monitoring:
 Inductive proximity switch, can be directly mounted

Designation	ID	Scope of delivery	Recommended product
GMNS 50-X	0313339	Bracket, sensor	
GMNS 50-G	0313340	Bracket, sensor, straight cable extension	•
GMNS 50-W	0313341	Bracket, sensor, angled cable extension	

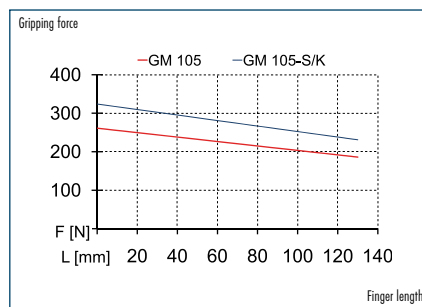
① Two sensors are needed for each gripper



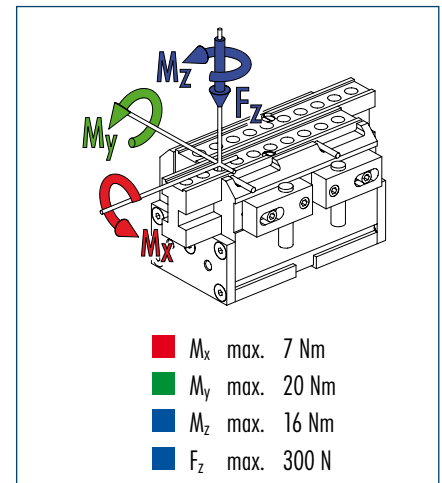
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

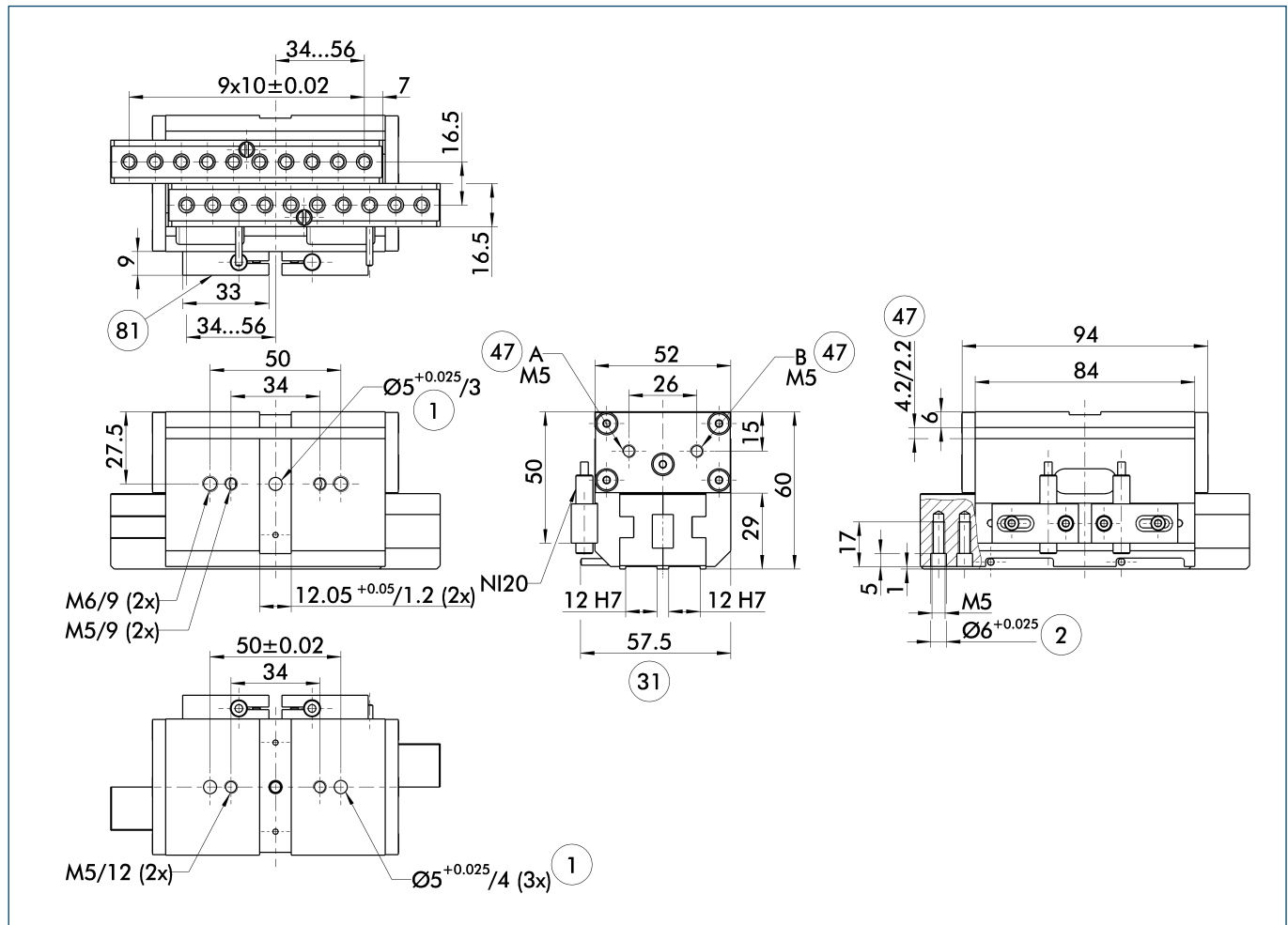


① Moments and forces apply per base jaw and may occur among themselves at the same time. M_y may occur additionally to the moment produced by the gripping force itself.

Technical data

Designation		GM 105	GM 105-K	GM 105-S
	ID	0313075	0313077	0313076
Stroke per jaw	[mm]	22	22	22
Closing grip force	[N]	250	310	
Opening grip force	[N]	250		310
Min. grip force applied by spring	[N]		60	60
Mass	[kg]	1.08	1.08	1.08
Recommended workpiece weight	[kg]	1.25	1.25	1.25
Fluid consumption for double stroke	[cm ³]	30.56	30.56	30.56
Minimum pressure	[bar]	3	5.5	5.5
Maximum pressure	[bar]	8	8	8
Nominal operating pressure	[bar]	6	6	6
Closing time	[s]	0.15	0.15	0.15
Opening time	[s]	0.15	0.15	0.15
Max. permissible finger length	[mm]	130	130	130
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy	[mm]	± 0.03	± 0.03	± 0.03

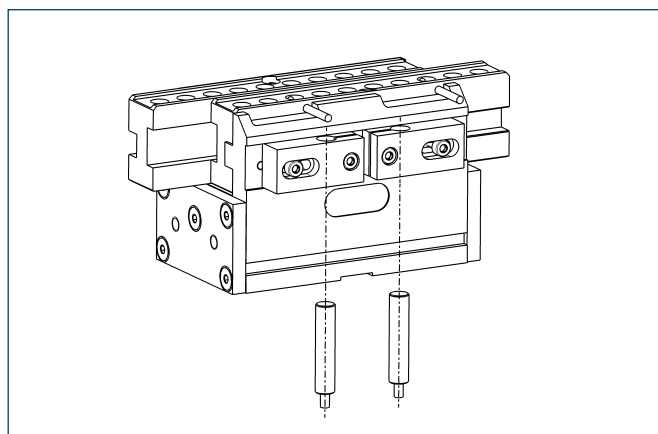
Main views



- A, a Main and direct connections, gripper open
 B, b Main and direct connections, gripper close
 ① Gripper connection
 ② Finger connection
 ③ Interfering contour, operating cam
 ④ on both sides
 ⑤ Not included in the scope of delivery

The gripper can be attached to the base side or to the side. Unused thread may not be used for other purposes, since this could lead to warping.

Sensor systems



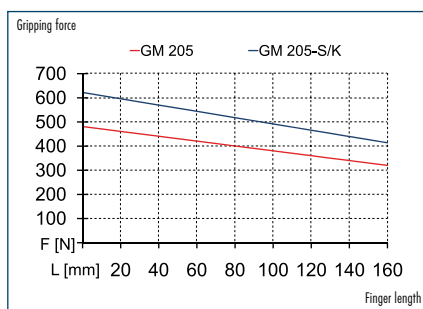
End-position monitoring:
 Inductive proximity switch, can be directly mounted

Designation	ID	Scope of delivery	Recommended product
GMNS 100-X	0313342	Bracket, sensor	
GMNS 100-G	0313343	Bracket, sensor, straight cable extension	•
GMNS 100-W	0313344	Bracket, sensor, angled cable extension	

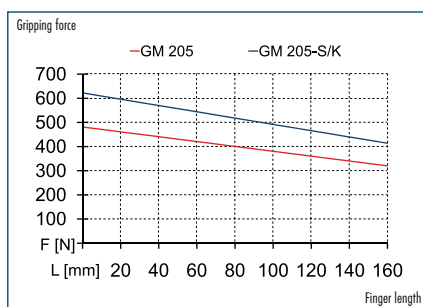
① Two sensors are needed for each gripper



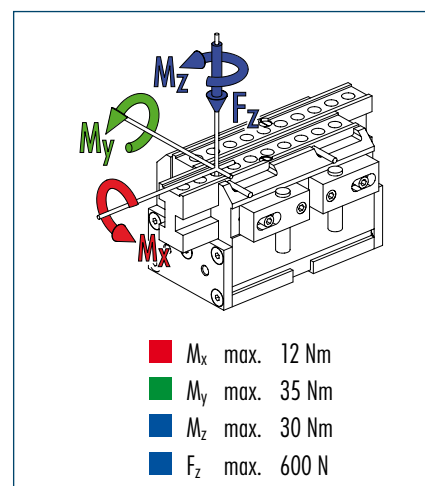
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

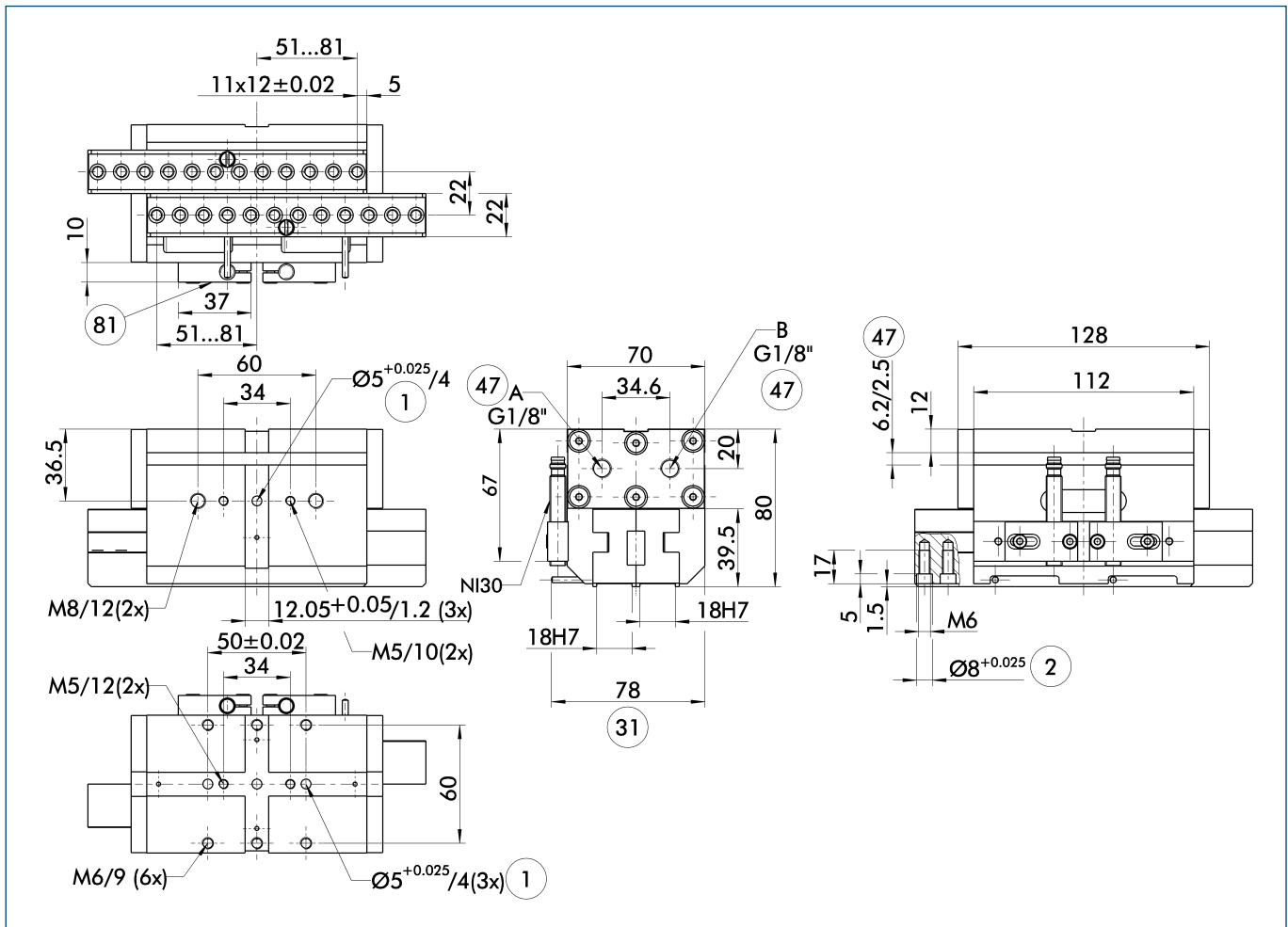


① Moments and forces apply per base jaw and may occur among themselves at the same time. M_y may occur additionally to the moment produced by the gripping force itself.

Technical data

Designation		GM 205	GM 205-K	GM 205-S
	ID	0313084	0313086	0313085
Stroke per jaw	[mm]	30	30	30
Closing grip force	[N]	460	595	
Opening grip force	[N]	460		595
Min. grip force applied by spring	[N]		135	135
Mass	[kg]	2.7	2.7	2.7
Recommended workpiece weight	[kg]	2.3	2.3	2.3
Fluid consumption for double stroke	[cm ³]	82.68	82.68	82.68
Minimum pressure	[bar]	3	4.5	4.5
Maximum pressure	[bar]	8	8	8
Nominal operating pressure	[bar]	6	6	6
Closing time	[s]	0.25	0.25	0.25
Opening time	[s]	0.25	0.25	0.25
Max. permissible finger length	[mm]	160	160	160
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy	[mm]	± 0.03	± 0.03	± 0.03

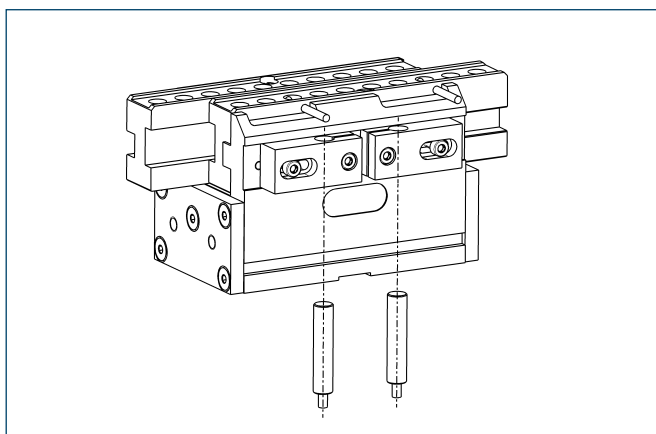
Main views



- A, a Main and direct connections, gripper open
 B, b Main and direct connections, gripper close
 ① Gripper connection
 ② Finger connection
 ③ Interfering contour, operating cam
 ④ on both sides
 ⑤ Not included in the scope of delivery

The gripper can be attached to the base side or to the side. Unused thread may not be used for other purposes, since this could lead to warping.

Sensor systems



End-position monitoring:
 Inductive proximity switch, can be directly mounted

Designation	ID	Scope of delivery	Recommended product
GMNS 200-X	0313345	Bracket, sensor	
GMNS 200-G	0313346	Bracket, sensor, straight cable extension	•
GMNS 200-W	0313347	Bracket, sensor, angled cable extension	

① Two sensors are needed for each gripper