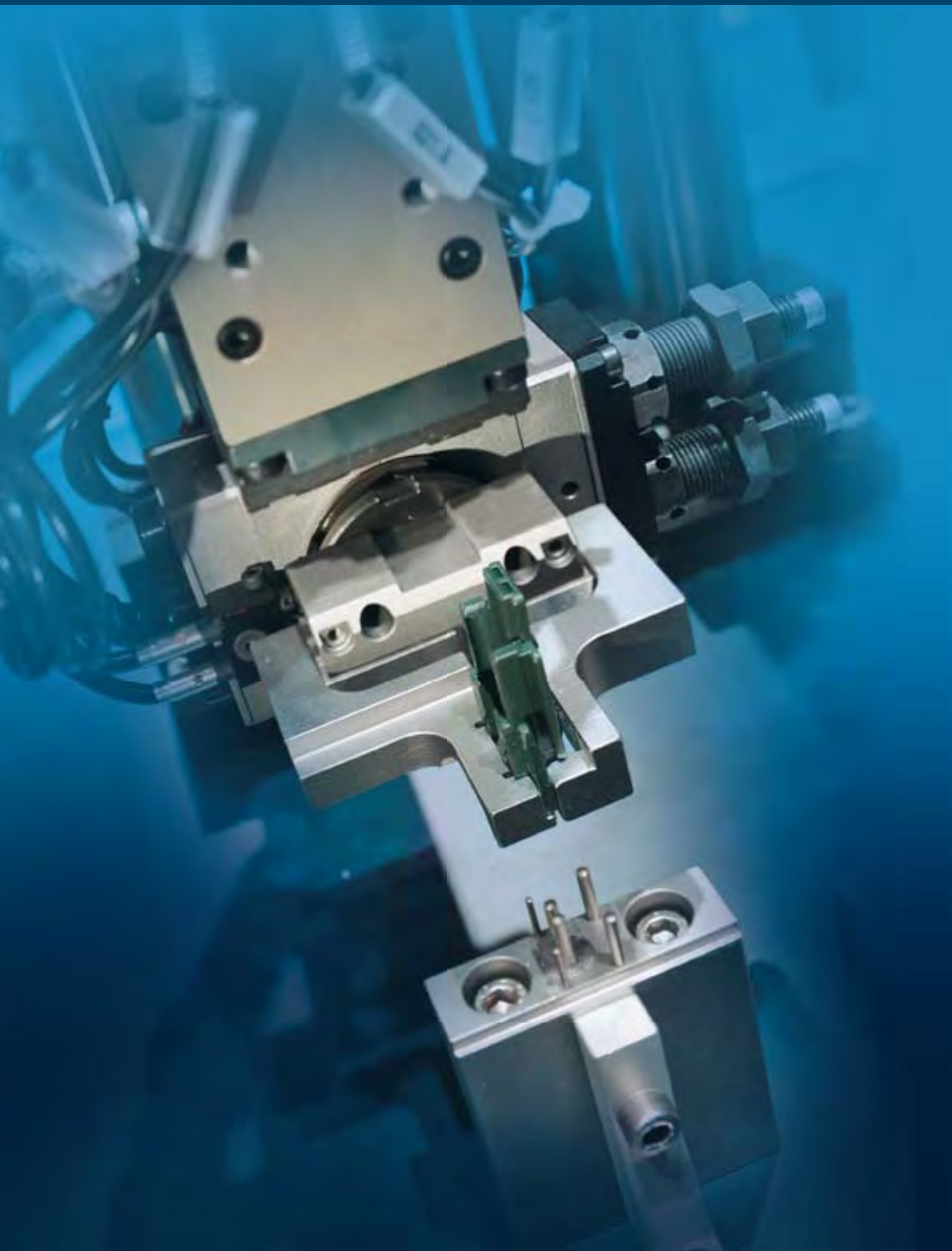


Gripping rotary modules



GRIPPING ROTARY MODULES

Series	Size	Page
Gripping rotary modules		
RP		314
RP	1212	318
RP	1216	322
RP	1520	326
RP	2120	330
RP	2128	334
RC		338
RC	1212	342
RC	1216	346
RC	1520	350
RC	2120	354
RC	2128	358
RW		362
RW	1212	366
RW	1216	370
RW	1520	374
RW	2120	378
RW	2128	382

SCHUNK offers you the most extensive program of gripping modules and gripping rotary modules.

From pneumatically or electrically driven grippers to small-component, universal, and long-stroke grippers and industry-specific gripping solutions.

Please consult our main catalog for further information about SCHUNK gripping modules.

Here is an extract from our range of products about gripping rotary modules.



Gripping rotary modules



Swivel actuator with integrated 2-finger parallel gripper



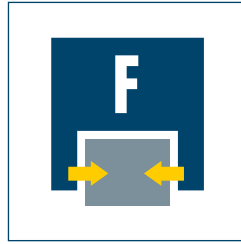
Swivel actuator with integrated 3-finger centric gripper



Sizes
1212 .. 2128



Mass
0.50 kg .. 2.02 kg



Gripping force
50 N .. 420 N

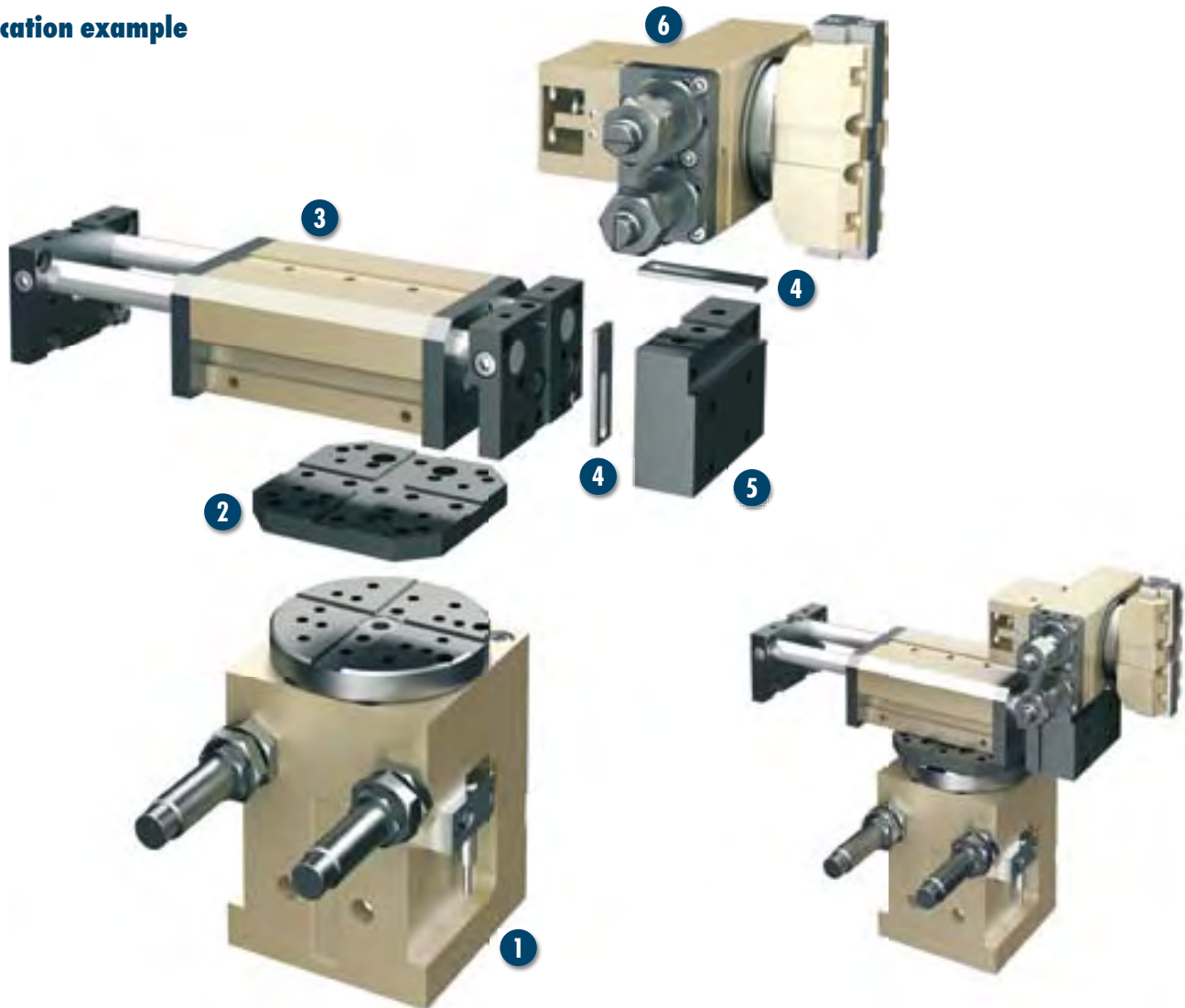


Stroke per finger
2.5 mm .. 8.0 mm



Torque
0.38 Nm .. 1.9 Nm

Application example



Pneumatic converting/turning-over unit for small components

- 1 Rotary module, RM 200-W180-2
- 2 Adapter plate, APL 320
- 3 Linear module, KLM 050-H050

- 4 Centering strip, LMZL 50
- 5 Adapter plate, APL 103
- 6 Gripping rotary module, RP 1520

Rotary module with parallel gripper

Rotary gripping combination, consisting of a rotary module and a 2-finger parallel gripper

Area of application

Gripping and rotating combined in one module for small to medium workpieces in low-contamination environments.
Also for places where space is limited

Advantages – your benefits

Constant clamping force

Over the entire range of stroke

Gripping rotary modules without rotating power lines

For maximum reliability

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

For maximum flexibility in applications

Integration of a gripping force retaining device is optional

For firm grip even in the event of power failure

Continuous angle of rotation adjustment

Over the entire range of rotation

Double piston design in the swivel unit

For elimination of backlash at the end positions and high repeat accuracy

Integrated shock absorbers with adjustable absorption characteristic

For optimal dampening

“Continuously adjustable intermediate position” option

Can be done using an intermediate stop which can be integrated

End-position monitoring

Up to four monitoring sets possible

Standardized mounting bores

For numerous combinations with other GEMOTEC system elements



General information about the series

Working principle

Combination of rack/pinion with piston actuation

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

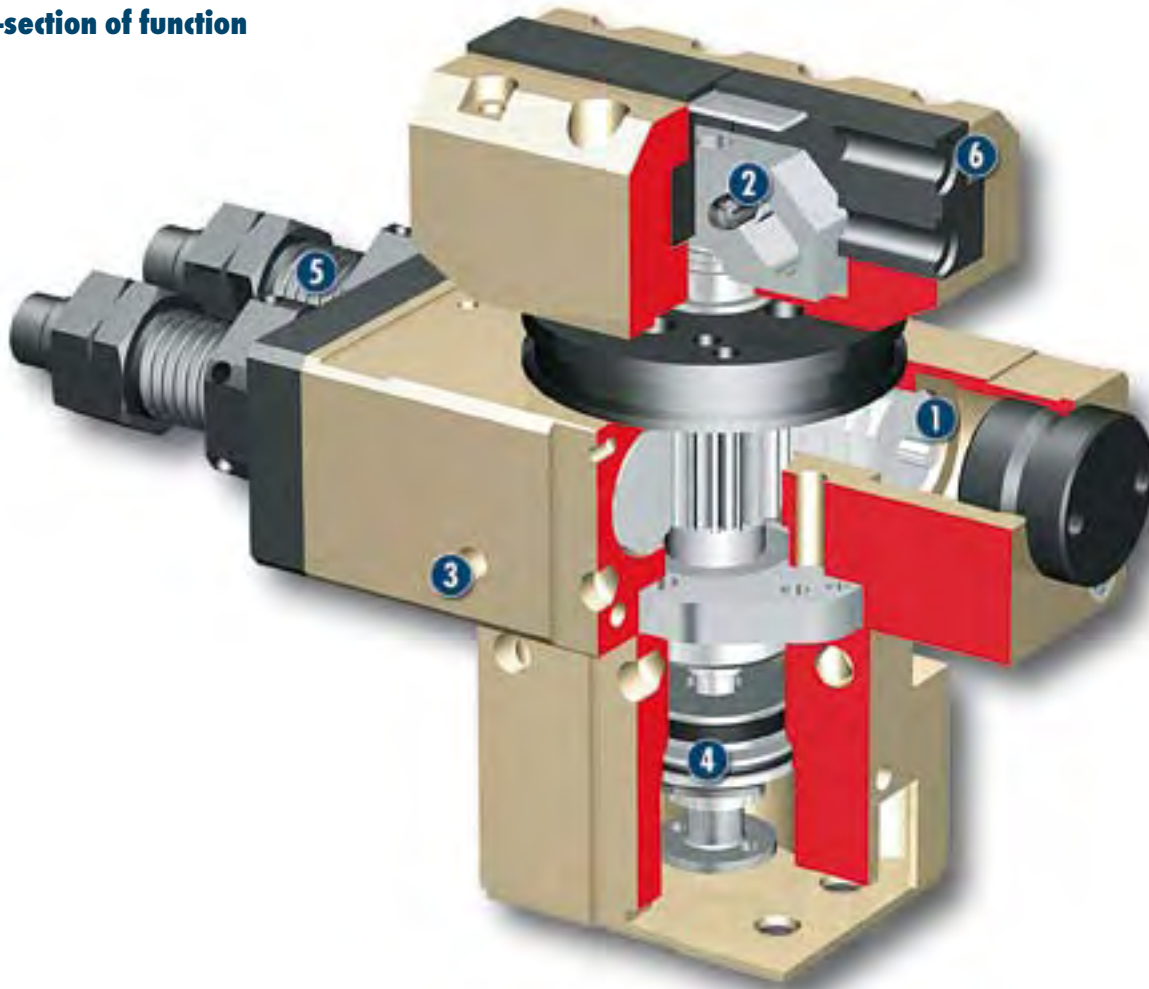
Possible with variants with mechanical gripping force safety devices or pressure maintenance valves

Modular design

Gripping rotary modules are designed to be modular and consist of flat swivel units, RM 12 - 21, and GMP grippers

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

Cross-section of function



- | | | |
|---|--|---|
| <p>1 Drive, turning
Pneumatic, rack and pinion design</p> <p>2 Kinematics
Inside, power transmission via line contact</p> | <p>3 Modular design hole pattern
Completely integrated in the module system</p> <p>4 Drive, gripping
Double pressurized piston-actuated system</p> | <p>5 Rotating angle adjustment
For a flexible end position, with hydraulic shock absorber</p> <p>6 Base jaws
For adaptation of the workpiece-specific gripper fingers</p> |
|---|--|---|

Description of function

The rotary movement is done by the two pneumatic piston racks when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks. For the gripping movement, the piston is moved up or down using compressed air. The wedge links the piston movement in a synchronized opening and closing together with the guidance of the base jaws.

Options and special information

Rotation adapter version

The gripping head can be continuously adjusted and indexed in relation to the drive.

No power lines are rotated with the unit.

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.

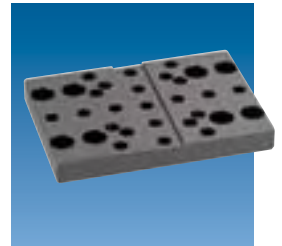
Fittings



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 iAccessories 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 10 mm from the upper edge of the gripper.

Pinion position

The position of the pinion is always shown in the left end position. The pinion rotates from here to the right in the clockwise direction. The arrow makes the direction of rotation clear.

Screw connection diagram at the pinion

Please note that when the rotating angle is to be set for less than 90°, the left stop will generally be completely turned in. The left end position therefore has a

screw connection diagram which has been rotated by 90° in the clockwise direction in relation to the drawing, which is shown at a 180° angle of rotation.

Finger length

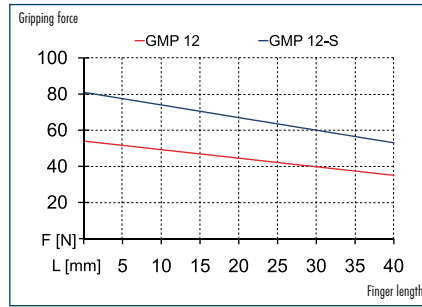
The finger length is measured from the upper edge of the gripper housing in the direction of the main axis.

Layout or sizing

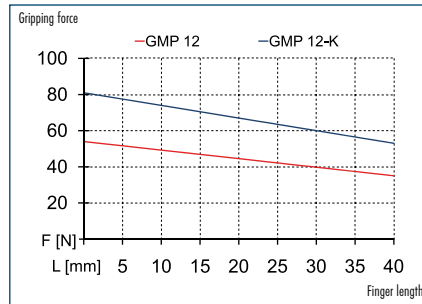
For layout or sizing of rotary modules, we recommend using our TOOLBOX sizing software, which can be obtained at www.schunk.com. Sizing the selected unit is absolutely necessary, since otherwise overloading can result.



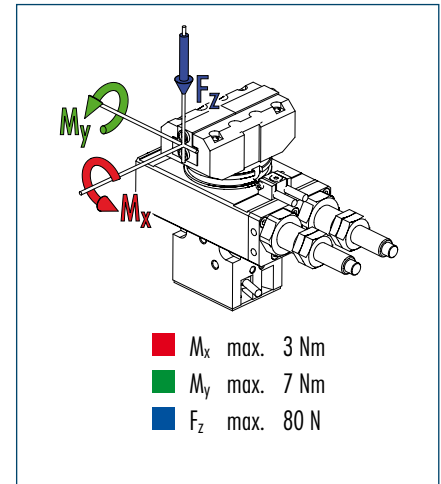
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RP 1212	RP 1212-K	RP 1212-S
	ID	0313220	0313222	0313221
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing grip force	[N]	50	75	
Opening grip force	[N]	50		75
Min. grip force applied by spring	[N]		25	25
Torque	[Nm]	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.25	0.25	0.25
Fluid consumption for gripping per cycle	[cm³]	0.87	0.87	0.87
Fluid consumption for swiveling per cycle	[cm³]	4.8	4.8	4.8
Mass	[kg]	0.5	0.52	0.52
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025
Opening time for gripping	[s]	0.02	0.025	0.015
Max. permissible finger length	[mm]	40	40	40
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049

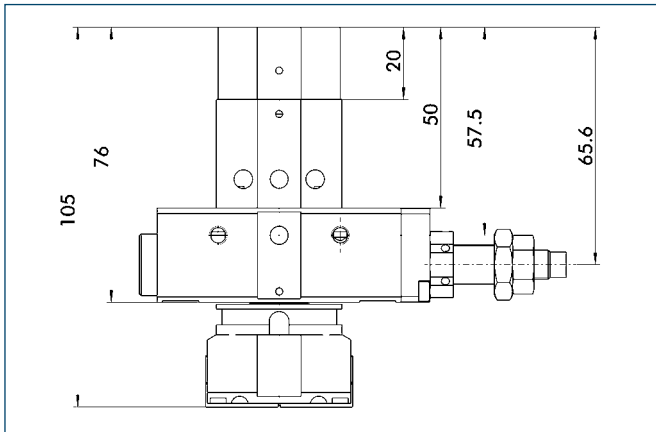
OPTIONS and their characteristics

Designation		RP 1212-D	RP 1212-Z	RP 1212-X
	ID	0313223	0313225	0313224
Mass	[kg]	0.52	0.54	0.54

[illegible]

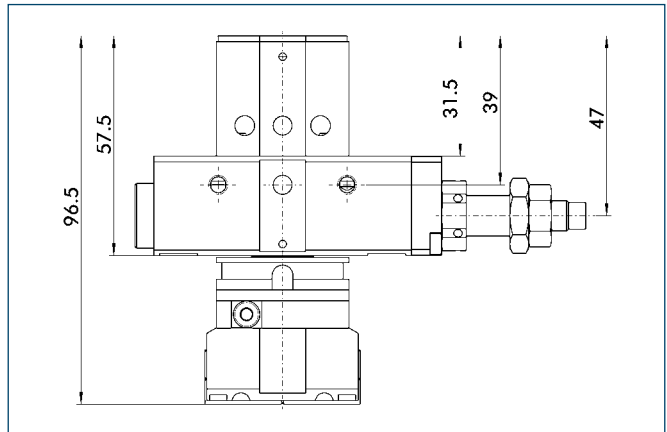
- 319

Gripping force safety device, K/S



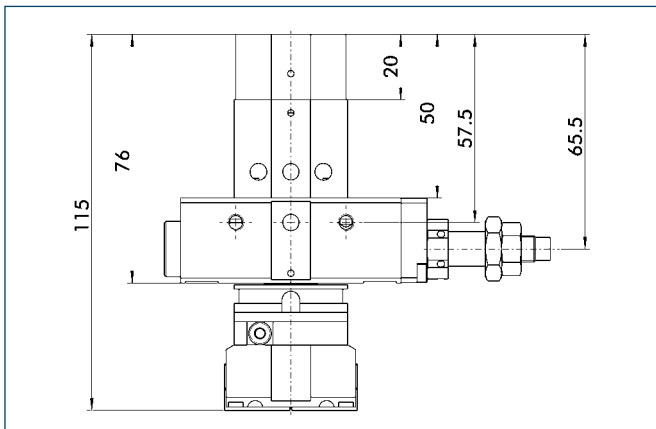
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

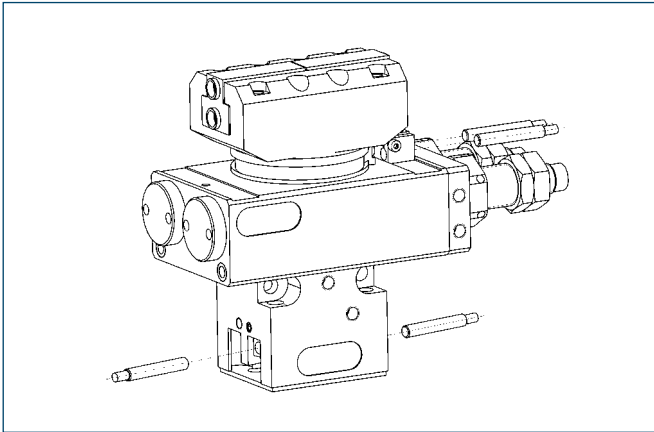


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

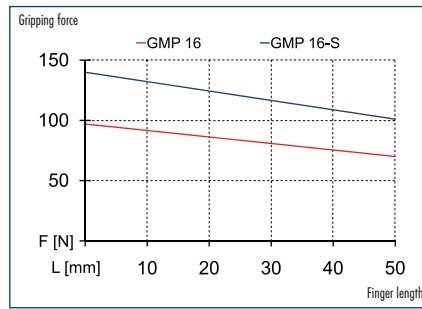
Designation	ID	Scope of delivery	Recommended product
GMNS 12-X	0313330	Bracket, sensor	
GMNS 12-G	0313331	Bracket, sensor, straight cable extension	•
GMNS 12-W	0313332	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

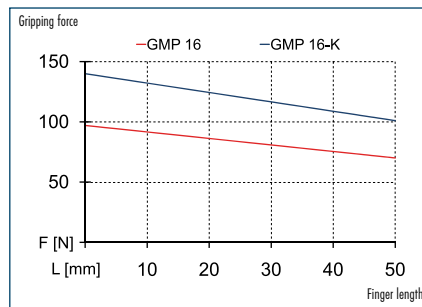
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



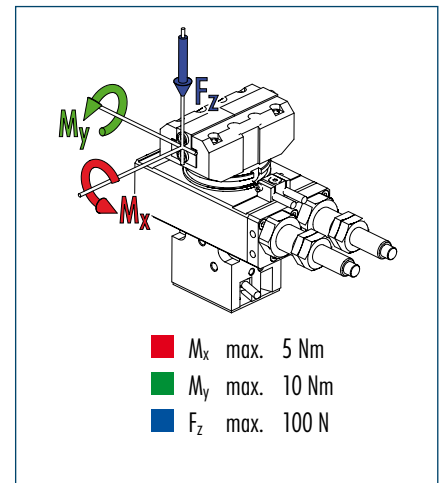
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

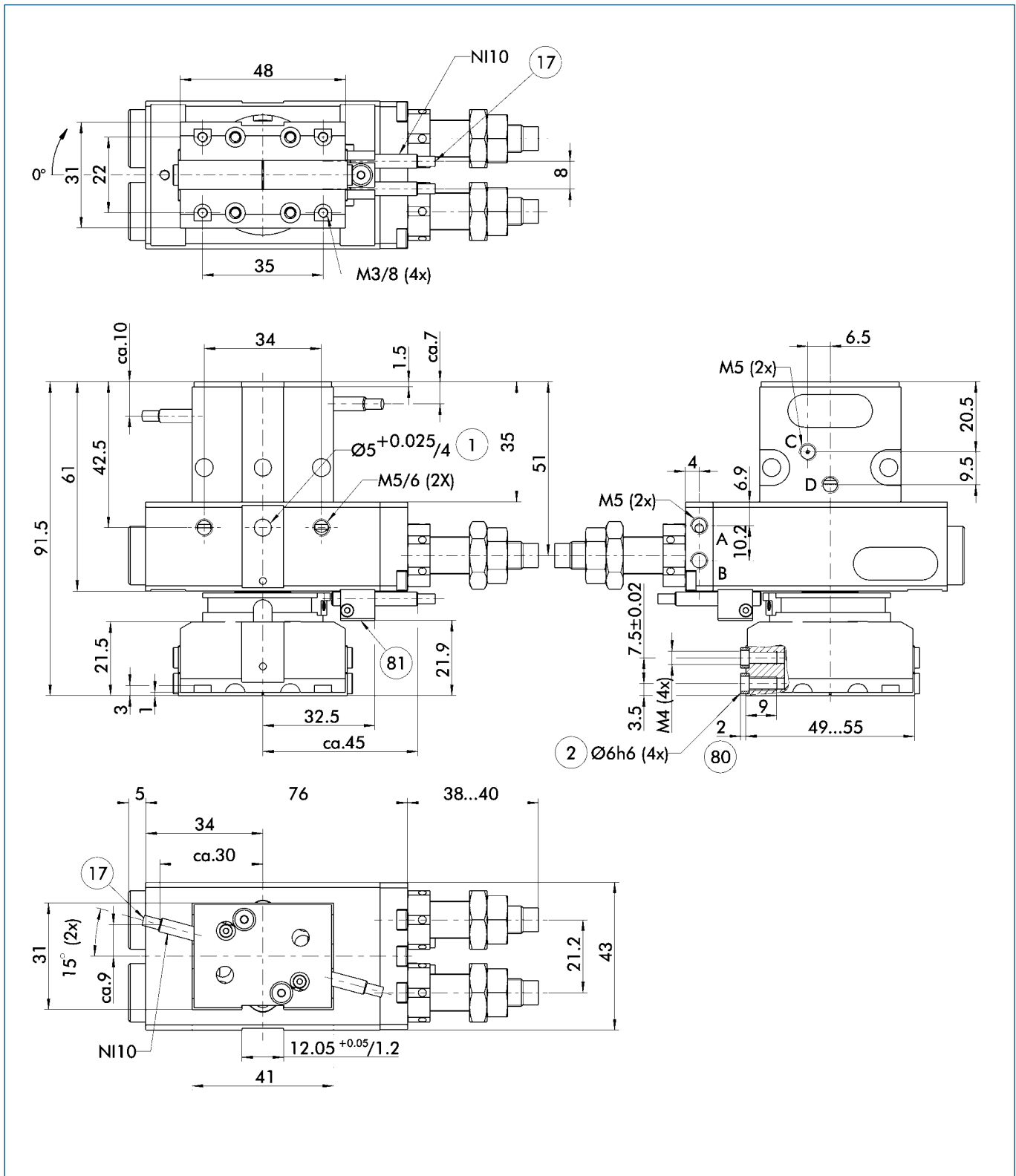
Technical data

Designation		RP 1216	RP 1216-K	RP 1216-S
	ID	0313242	0313244	0313243
Stroke per jaw	[mm]	3	3	3
Closing grip force	[N]	90	130	
Opening grip force	[N]	90		130
Min. grip force applied by spring	[N]		40	40
Torque	[Nm]	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.45	0.45	0.45
Fluid consumption for gripping per cycle	[cm ³]	1.1	1.1	1.1
Fluid consumption for swiveling per cycle	[cm ³]	4.8	4.8	4.8
Mass	[kg]	0.56	0.62	0.62
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025
Opening time for gripping	[s]	0.02	0.025	0.015
Max. permissible finger length	[mm]	50	50	50
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049

OPTIONS and their characteristics

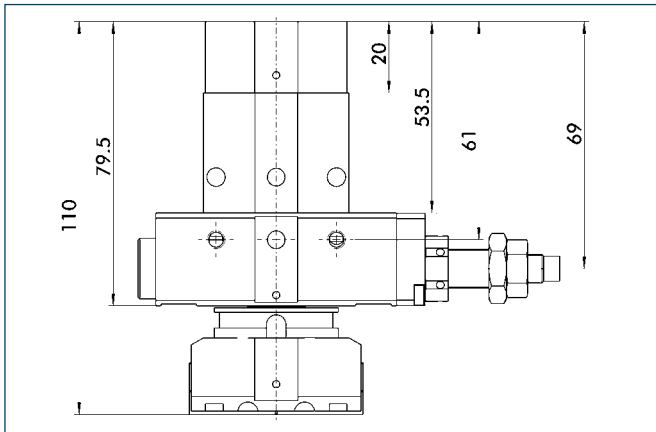
Designation		RP 1216-D	RP 1216-Z	RP 1216-X
	ID	0313245	0313247	0313246
Mass	[kg]	0.6	0.64	0.64

Main views



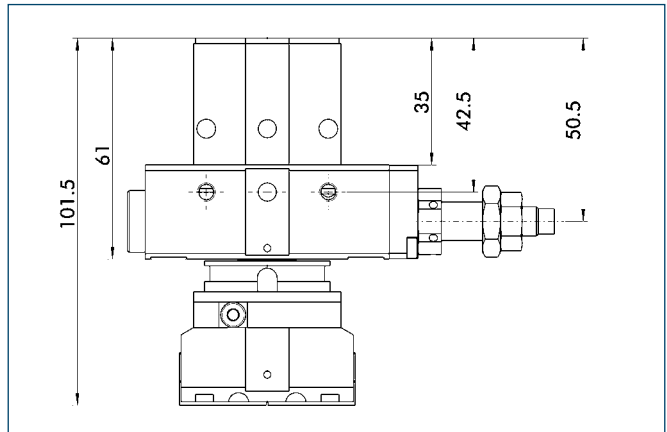
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- ①⑦ Cable outlet
- ⑧⑩ Depth of the centering sleeve in the counter piece
- ⑧⑩ Not included in the scope of delivery

Gripping force safety device, K/S



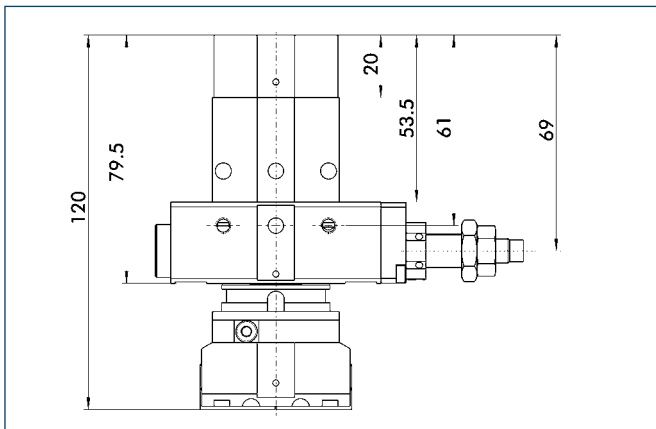
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

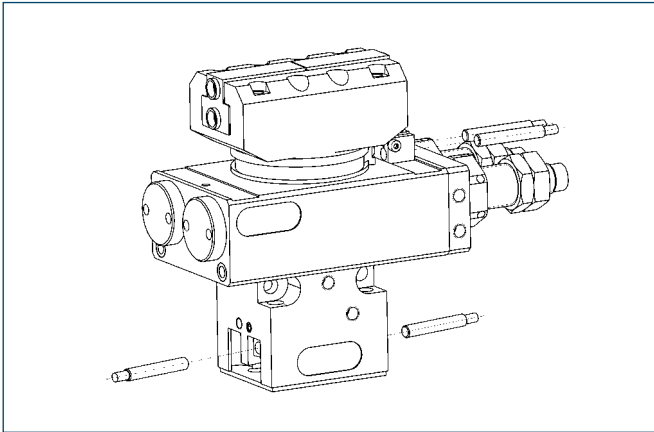


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

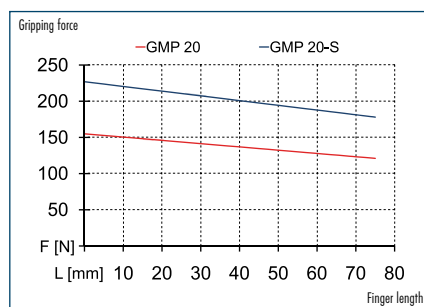
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

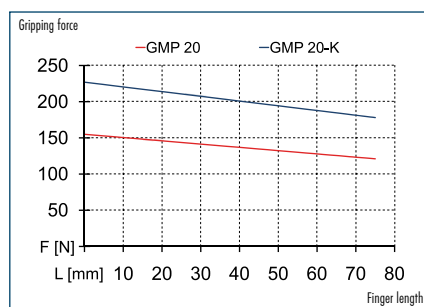
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



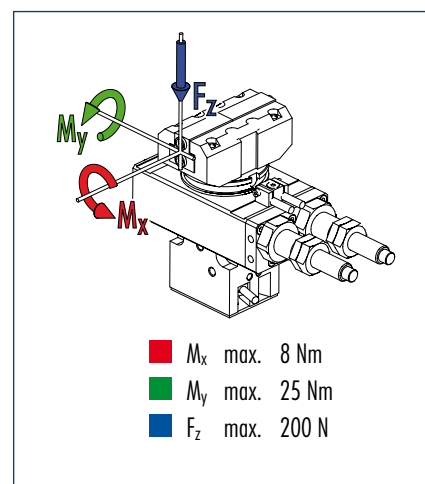
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RP 1520	RP 1520-K	RP 1520-S
	ID	0313264	0313266	0313265
Stroke per jaw	[mm]	5	5	5
Closing grip force	[N]	150	220	
Opening grip force	[N]	150		220
Min. grip force applied by spring	[N]		70	70
Torque	[Nm]	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Fluid consumption for gripping per cycle	[cm³]	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm³]	9.6	9.6	9.6
Mass	[kg]	0.92	1.0	1.0
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04
Opening time for gripping	[s]	0.03	0.04	0.025
Max. permissible finger length	[mm]	75	75	75
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.05	± 0.05	± 0.05

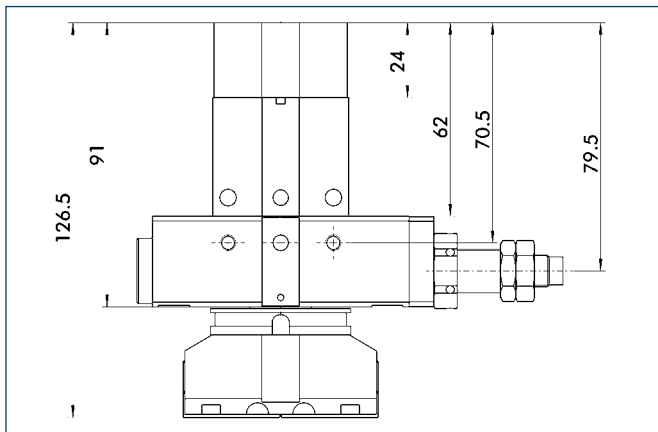
OPTIONS and their characteristics

Designation		RP 1520-D	RP 1520-Z	RP 1520-X
	ID	0313267	0313269	0313268
Mass	[kg]	0.98	1.06	1.06

[illegible]

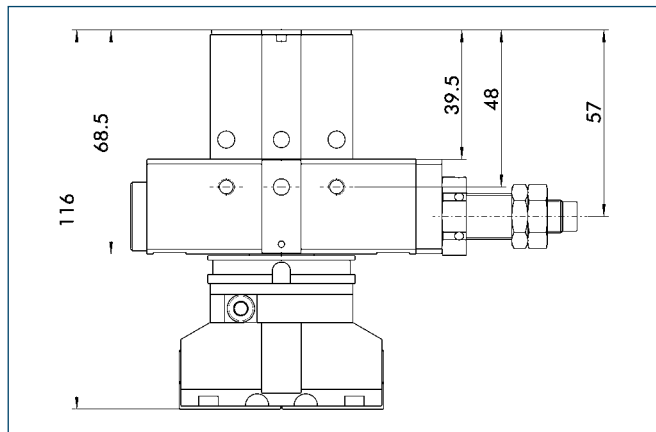
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Gripping force safety device, K/S



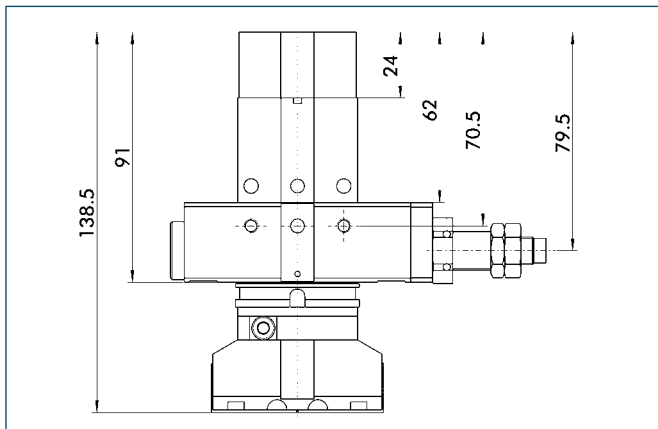
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

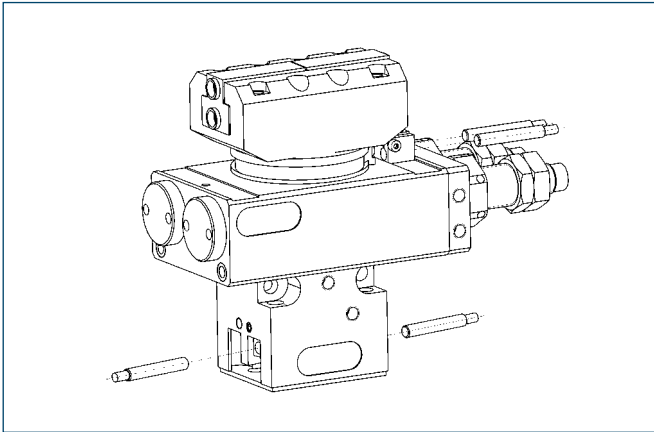


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

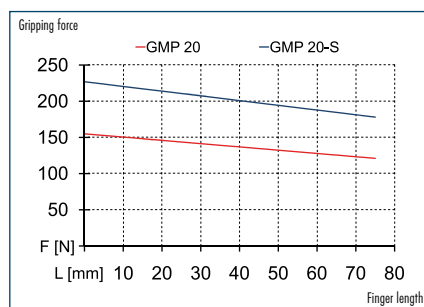
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

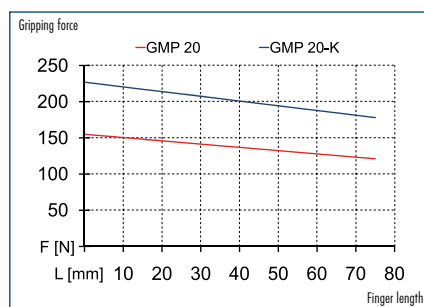
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



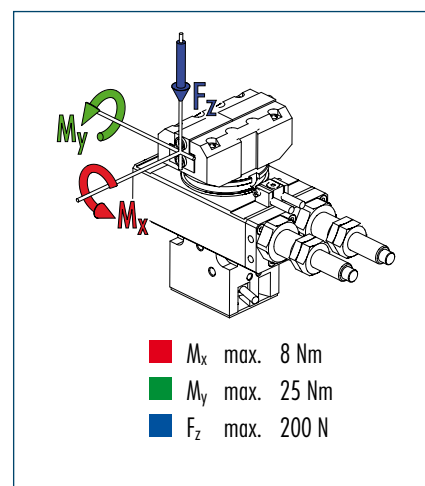
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RP 2120	RP 2120-K	RP 2120-S
	ID	0313286	0313288	0313287
Stroke per jaw	[mm]	5	5	5
Closing grip force	[N]	150	220	
Opening grip force	[N]	150		220
Min. grip force applied by spring	[N]		70	70
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Fluid consumption for gripping per cycle	[cm ³]	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm ³]	23.8	23.8	23.8
Mass	[kg]	1.5	1.58	1.58
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04
Opening time for gripping	[s]	0.03	0.04	0.025
Max. permissible finger length	[mm]	75	75	75
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044

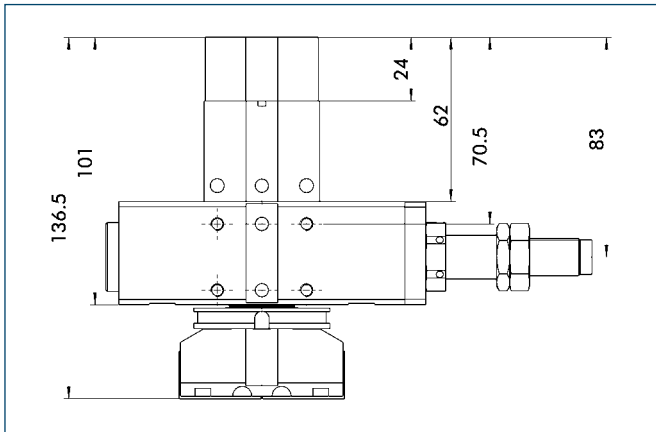
OPTIONS and their characteristics

Designation		RP 2120-D	RP 2120-Z	RP 2120-X
	ID	0313289	0313291	0313290
Mass	[kg]	1.56	1.64	1.64

[illegible]

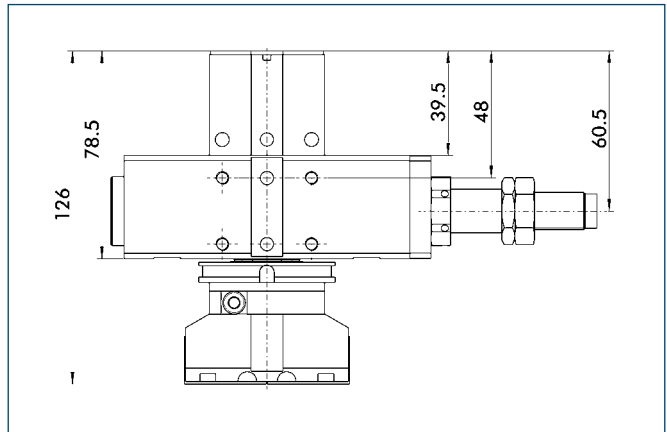
- 331

Gripping force safety device, K/S



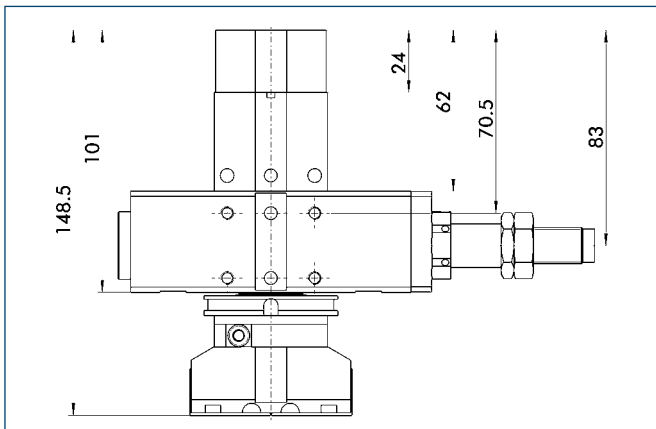
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

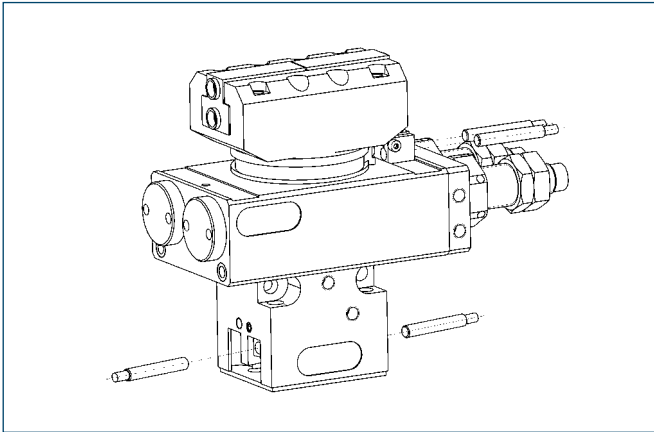


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

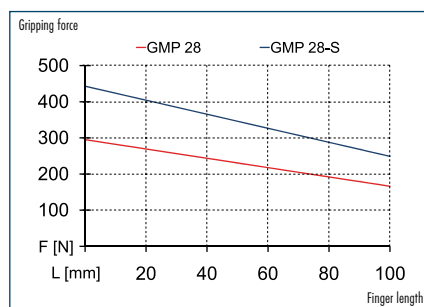
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

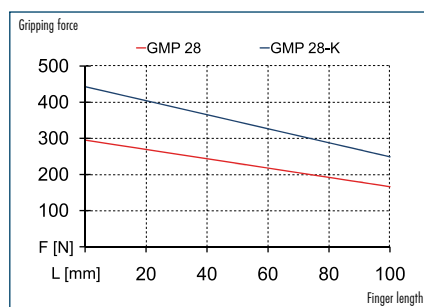
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



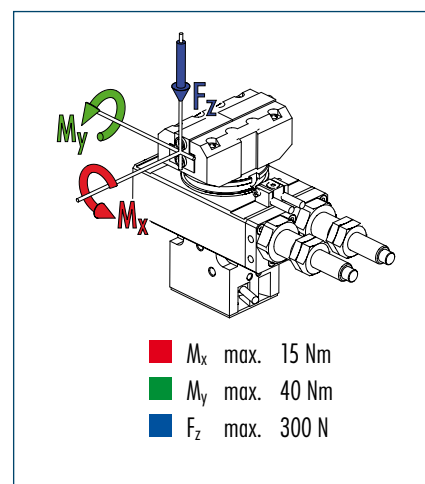
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RP 2128	RP 2128-K	RP 2128-S
	ID	0313308	0313310	0313309
Stroke per jaw	[mm]	8	8	8
Closing grip force	[N]	280	420	
Opening grip force	[N]	280		420
Min. grip force applied by spring	[N]		140	140
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	1.4	1.4	1.4
Fluid consumption for gripping per cycle	[cm ³]	9.05	9.05	9.05
Fluid consumption for swiveling per cycle	[cm ³]	23.8	23.8	23.8
Mass	[kg]	1.78	1.94	1.94
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.05	0.04	0.06
Opening time for gripping	[s]	0.05	0.06	0.04
Max. permissible finger length	[mm]	100	100	100
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044

OPTIONS and their characteristics

Designation		RP 2128-D	RP 2128-Z	RP 2128-X
	ID	0313311	0313313	0313312
Mass	[kg]	1.84	2.02	2.02

Technical drawing of the 1000 series solenoid valve, showing three views: front, side, and top. The drawing includes detailed dimensions and part numbers.

Front View Dimensions:

- Overall width: 78
- Mounting flange diameter: 60
- Mounting flange thickness: 8
- Mounting flange material: NI10
- Mounting flange part number: 17
- Mounting flange material: M4/10 (4x)

Side View Dimensions:

- Overall height: 130.5
- Mounting flange diameter: 48
- Mounting flange thickness: 1.5
- Mounting flange material: NI10
- Mounting flange part number: 17
- Mounting flange material: M5/6 (4x)
- Mounting flange material: Ø5 $+0.025/2.5$ (1)
- Mounting flange material: ca.15
- Mounting flange material: 34
- Mounting flange material: 1.5
- Mounting flange material: ca.7
- Mounting flange material: 48
- Mounting flange material: 69
- Mounting flange material: 25
- Mounting flange material: 87
- Mounting flange material: 56.5
- Mounting flange material: 34.5
- Mounting flange material: 4
- Mounting flange material: 1
- Mounting flange material: 43
- Mounting flange material: ca.53
- Mounting flange material: 35
- Mounting flange material: 81

Top View Dimensions:

- Overall width: 117
- Mounting flange diameter: 62...66
- Mounting flange thickness: 8
- Mounting flange material: NI10
- Mounting flange part number: 17
- Mounting flange material: M4/10 (4x)
- Mounting flange material: 12.05 $+0.05/1.2$
- Mounting flange material: 52
- Mounting flange material: 54.5
- Mounting flange material: ca.33
- Mounting flange material: 15° (2x)
- Mounting flange material: ca.10
- Mounting flange material: 38
- Mounting flange material: 42
- Mounting flange material: 65

Side View Dimensions:

- Overall height: 130.5
- Mounting flange diameter: 48
- Mounting flange thickness: 1.5
- Mounting flange material: NI10
- Mounting flange part number: 17
- Mounting flange material: M5/6 (4x)
- Mounting flange material: Ø5 $+0.025/2.5$ (1)
- Mounting flange material: ca.15
- Mounting flange material: 34
- Mounting flange material: 1.5
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- Mounting flange material: ca.10
- Mounting flange material: 38
- Mounting flange material: 42
- Mounting flange material: 65

Side View Dimensions:

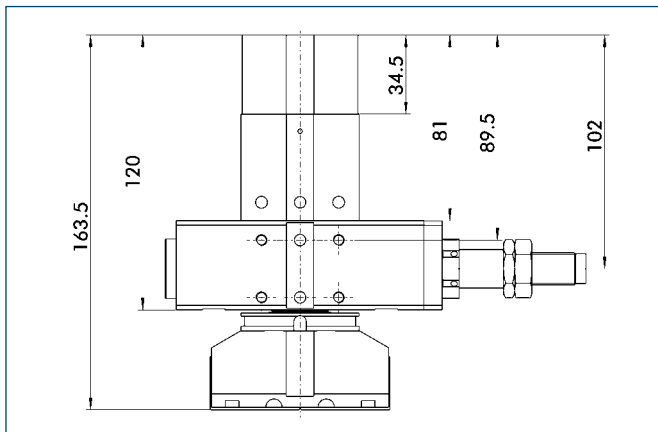
- Overall height: 130.5
- Mounting flange diameter: 48
- Mounting flange thickness: 1.5
- Mounting flange material: NI10
- Mounting flange part number: 17
- Mounting flange material: M5/6 (4x)
- Mounting flange material: Ø5 $+0.025/2.5$ (1)
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Top View Dimensions:

- Overall width: 117
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- Mounting flange part number: 17
- Mounting flange material: M4/10 (4x)
- Mounting flange material: 12.05 $+0.05/1.2$
- Mounting flange material: 52
- Mounting flange material: 54.5
- Mounting flange material: ca.33
- Mounting flange material: 15° (2x)
- Mounting flange material: ca.10
- Mounting flange material: 38
- Mounting flange material: 42
- Mounting flange material: 65

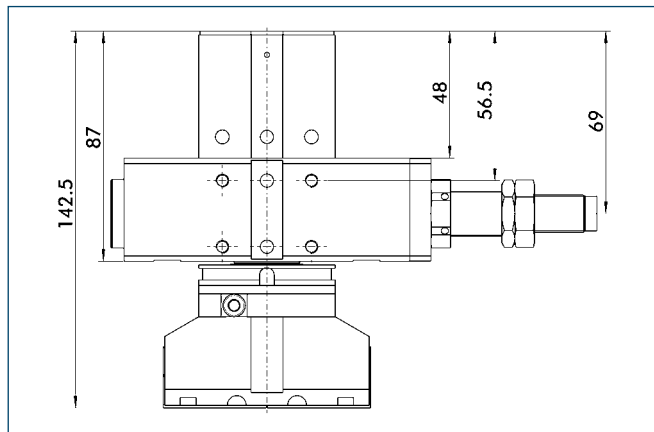
- 335

Gripping force safety device, K/S



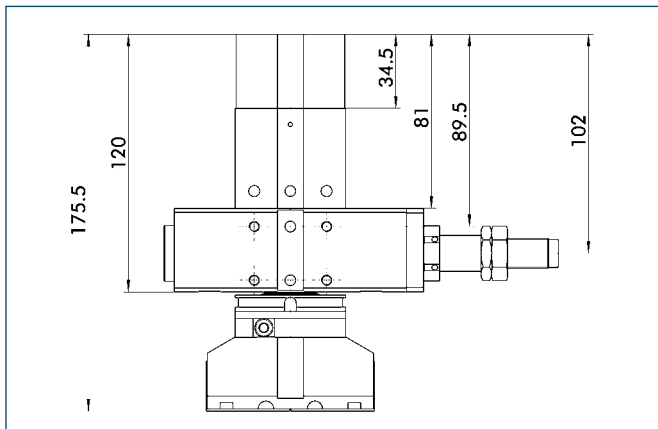
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



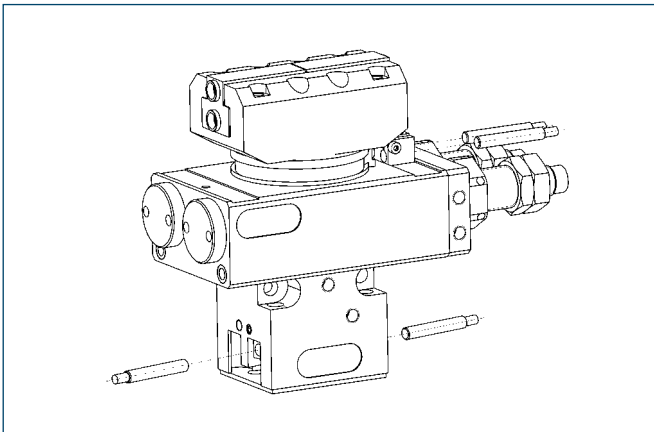
The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X



This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 28-X	0313336	Bracket, sensor	
GMNS 28-G	0313337	Bracket, sensor, straight cable extension	•
GMNS 28-W	0313338	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

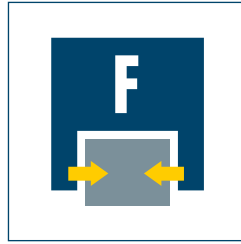
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



Sizes
1212 .. 2128



Mass
0.54 kg .. 2.33 kg



Gripping force
50 N .. 420 N

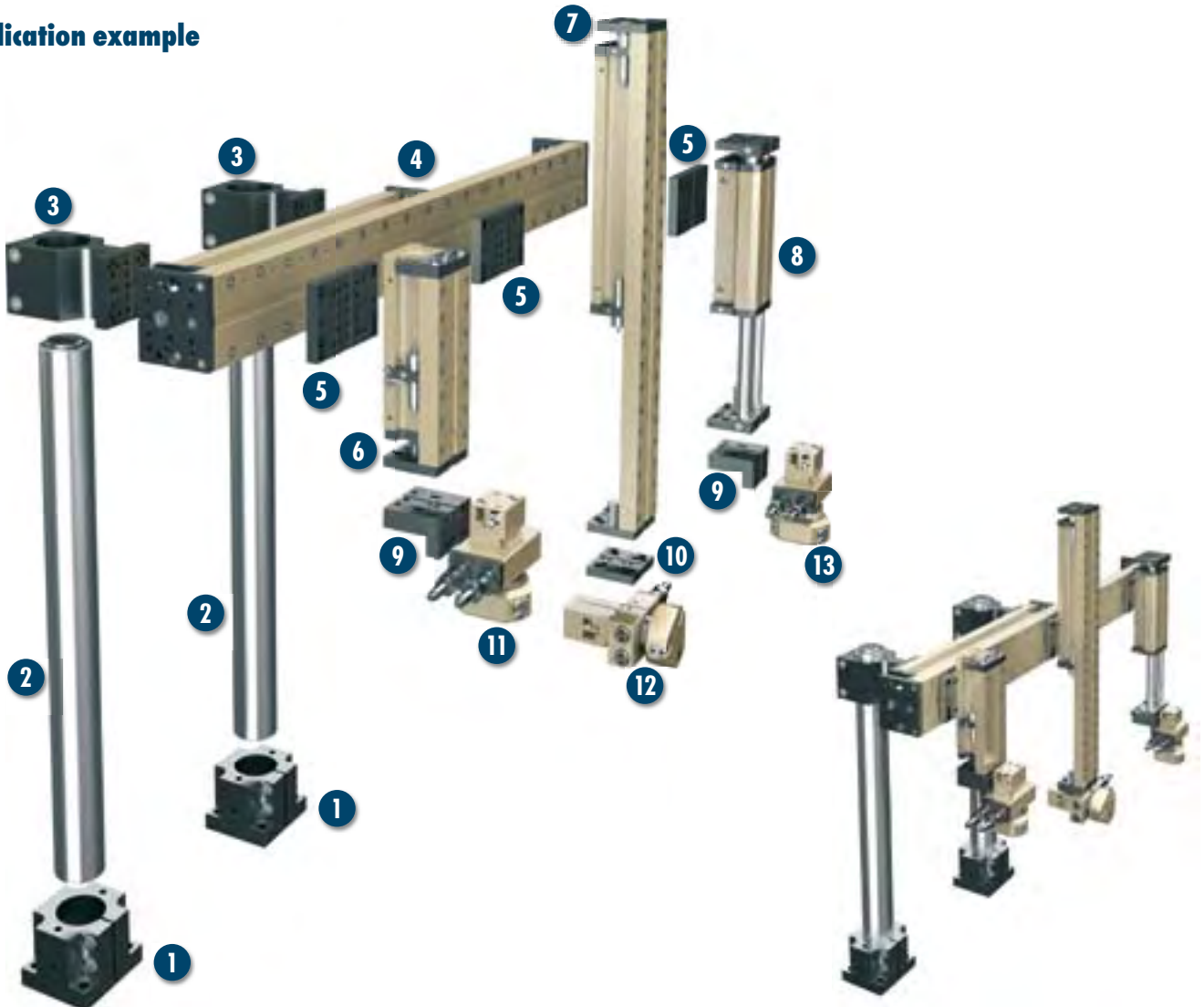


Stroke per finger
2.5 mm .. 8.0 mm



Torque
0.38 Nm .. 1.9 Nm

Application example



Pneumatic cross gantry with three vertical axes and two rotational axes for workpiece turning of small components

- | | | | |
|---|---------------------------------|----|-----------------------------------|
| 1 | Single base support, SOE 055 | 8 | Linear module, KLM 100-H100 |
| 2 | Hollow pillar, SLH 055-0600 | 9 | Adapter plate, APL 123 |
| 3 | Single mounting plate, APEV 085 | 10 | Adapter plate, APL 120 |
| 4 | Linear module, LM 300-H450 | 11 | Gripping rotary module, RC 1520 |
| 5 | Adapter plate, APL 220 | 12 | Gripping rotary module, RC 1520-K |
| 6 | Linear module, CLM 100-H075 | 13 | Gripping rotary module, RC 1520-D |
| 7 | Linear module, LM 100-H200 | | |

Rotary module with centric gripper

Rotary gripping combination, consisting of a rotary module and a 3-finger centric gripper

Area of application

Gripping and rotating combined in one module for small to medium workpieces in low-contamination environments. Also for places where space is limited

Advantages – your benefits

T-slot guidance

For precise gripping at high bearing load capacities

Constant clamping force

Over the entire range of stroke

Gripping rotary modules without rotating power lines

For maximum reliability

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

For maximum flexibility in applications

Integration of a gripping force retaining device is optional

For firm grip even in the event of power failure

Continuous angle of rotation adjustment

Over the entire range of rotation

Double piston design in the swivel unit

For elimination of backlash at the end positions and high repeat accuracy

Integrated shock absorbers with adjustable absorption characteristic

For optimal dampening

“Continuously adjustable intermediate position” option

Can be done using an intermediate stop which can be integrated

End-position monitoring

Up to four monitoring sets possible

Standardized mounting bores

For numerous combinations with other GEMOTEC system elements



General information about the series

Working principle

Combination of rack/pinion with piston actuation

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

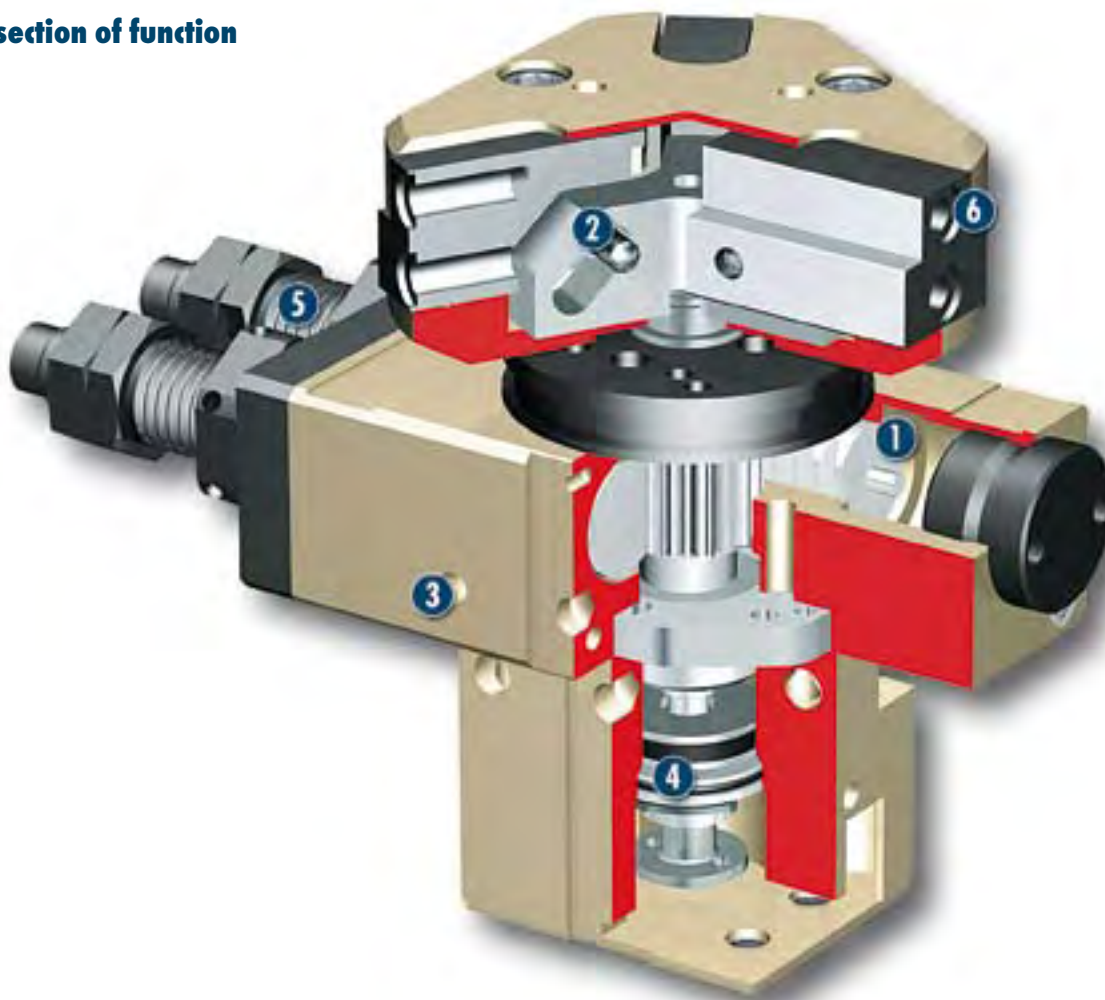
Gripping force retaining device

Possible with variants with mechanical gripping force safety devices or pressure maintenance valves

Modular design

Gripping rotary modules are designed to be modular and consist of flat swivel units, RM 12 - 21, and GMC grippers

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

Cross-section of function

- | | | |
|---|--|---|
| <p>1 Drive, turning
Pneumatic, rack and pinion design</p> <p>2 Kinematics
Inside, power transmission via line contact</p> | <p>3 Modular design hole pattern
Completely integrated in the module system</p> <p>4 Drive, gripping
Double pressurized piston-actuated system</p> | <p>5 Rotating angle adjustment
For a flexible end position, with hydraulic shock absorber</p> <p>6 Base jaws
For adaptation of the workpiece-specific gripper fingers</p> |
|---|--|---|

Description of function

The rotary movement is done by the two pneumatic piston racks when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks. For the gripping movement, the piston is moved up or down using compressed air. The wedge links the piston movement in a synchronized opening and closing together with the guidance of the base jaws.

Options and special information**Rotation adapter version**

The gripping head can be continuously adjusted and indexed in relation to the drive.

No power lines are rotated with the unit.

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.

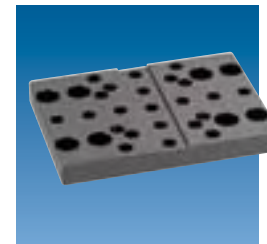
Fittings



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 iAccessories 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 10 mm from the upper edge of the gripper.

Pinion position

The position of the pinion is always shown in the left end position. The pinion rotates from here to the right in the clockwise direction. The arrow makes the direction of rotation clear.

Screw connection diagram at the pinion

Please note that when the rotating angle is to be set for less than 90°, the left stop will generally be completely turned in. The left end position therefore has a

screw connection diagram which has been rotated by 90° in the clockwise direction in relation to the drawing, which is shown at a 180° angle of rotation.

Finger length

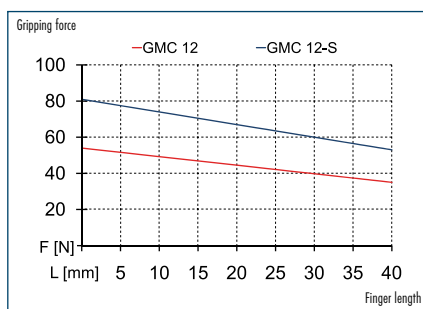
The finger length is measured from the upper edge of the gripper housing in the direction of the main axis.

Layout or sizing

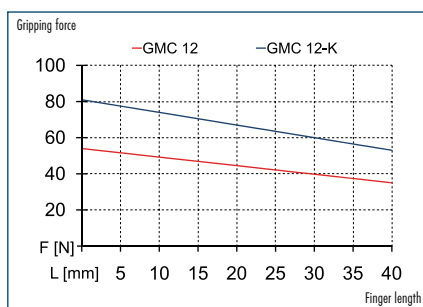
For layout or sizing of rotary modules, we recommend using our TOOLBOX sizing software, which can be obtained at www.schunk.com. Sizing the selected unit is absolutely necessary, since otherwise overloading can result.



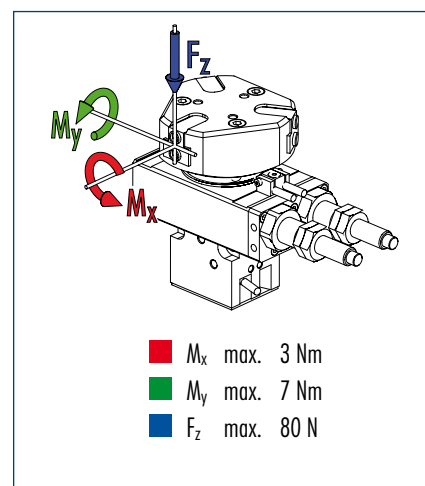
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

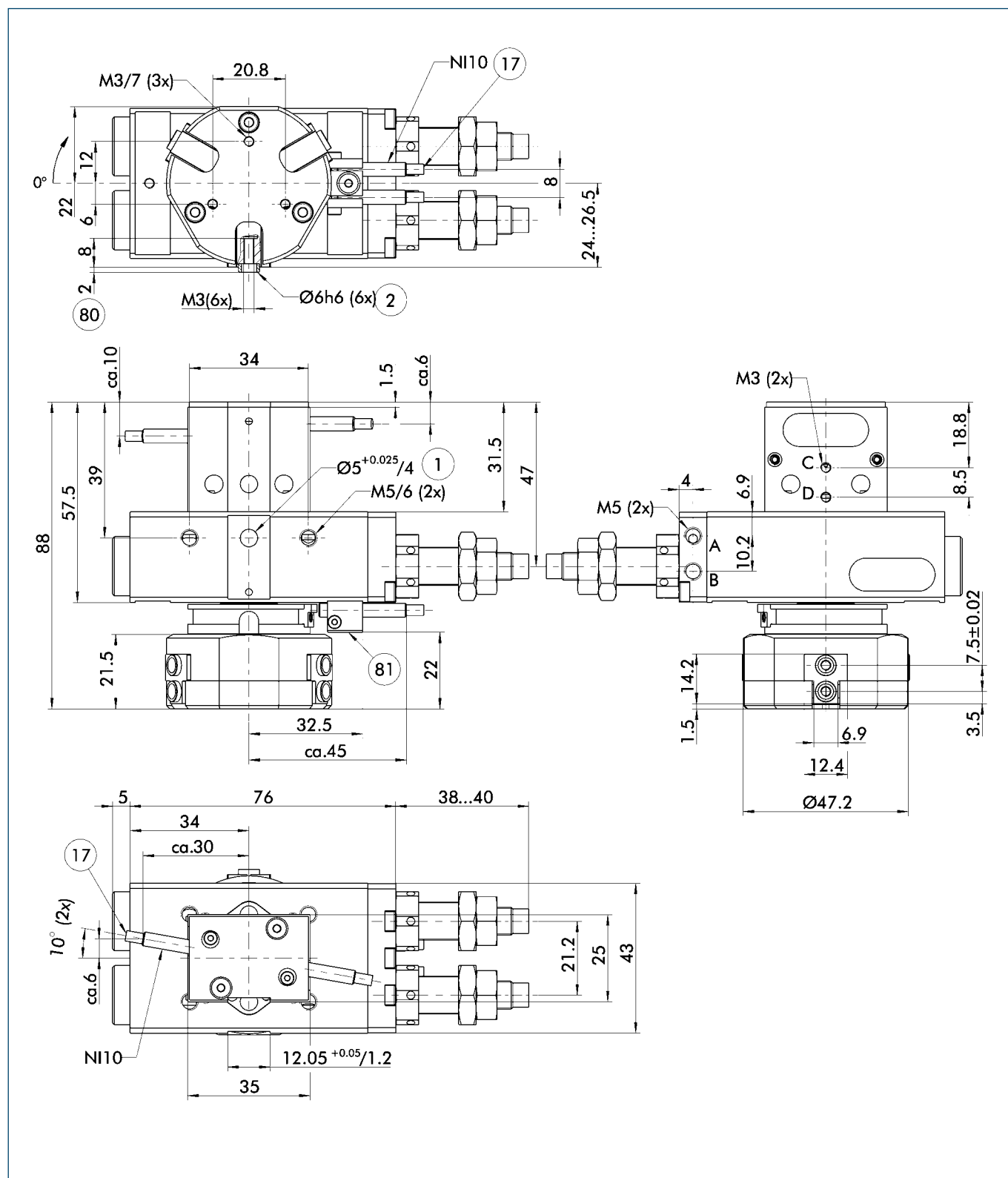
Technical data

Designation		RC 1212	RC 1212-K	RC 1212-S
	ID	0313236	0313238	0313237
Stroke per jaw	[mm]	2.5	2.5	2.5
Closing grip force	[N]	50	75	
Opening grip force	[N]	50		75
Min. grip force applied by spring	[N]		25	25
Torque	[Nm]	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.25	0.25	0.25
Fluid consumption for gripping per cycle	[cm³]	0.87	0.87	0.87
Fluid consumption for swiveling per cycle	[cm³]	4.8	4.8	4.8
Mass	[kg]	0.54	0.56	0.56
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025
Opening time for gripping	[s]	0.02	0.025	0.015
Max. permissible finger length	[mm]	40	40	40
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049

OPTIONS and their characteristics

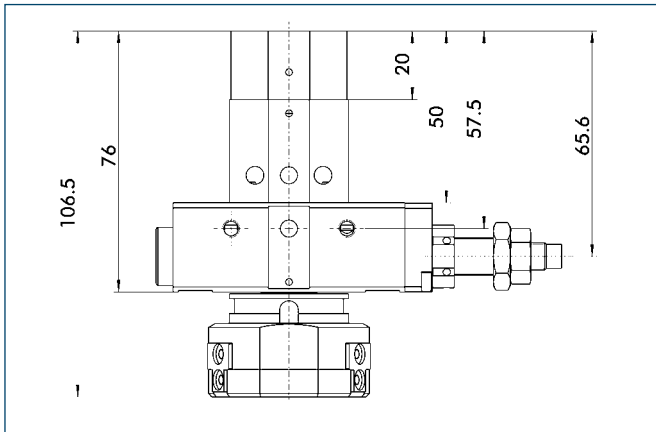
Designation		RC 1212-D	RC 1212-Z	RC 1212-X
	ID	0313239	0313241	0313240
Mass	[kg]	0.56	0.58	0.58

Main views



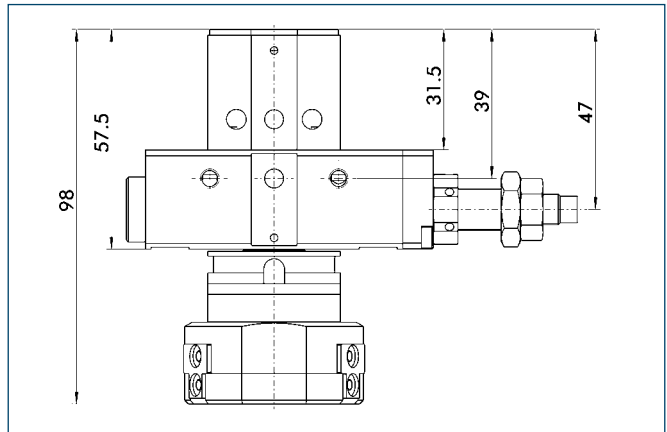
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- ①⑦ Cable outlet
- ⑧⑩ Depth of the centering sleeve in the counter piece
- ⑧① Not included in the scope of delivery

Gripping force safety device, K/S



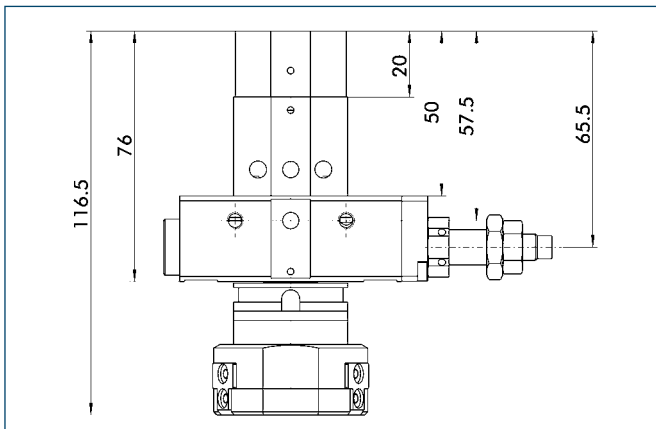
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

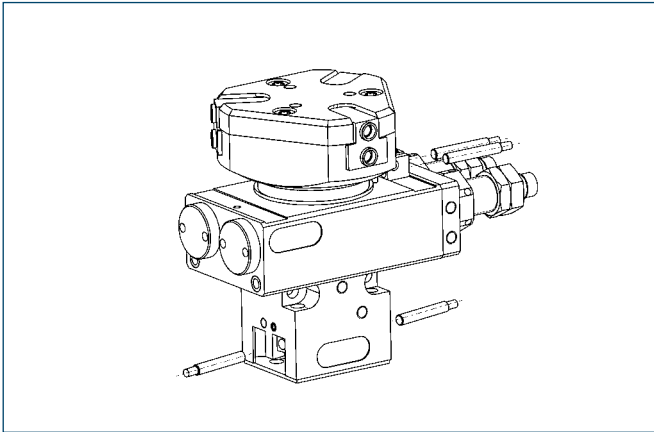


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

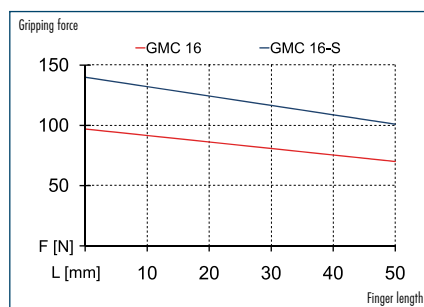
Designation	ID	Scope of delivery	Recommended product
GMNS 12-X	0313330	Bracket, sensor	
GMNS 12-G	0313331	Bracket, sensor, straight cable extension	•
GMNS 12-W	0313332	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

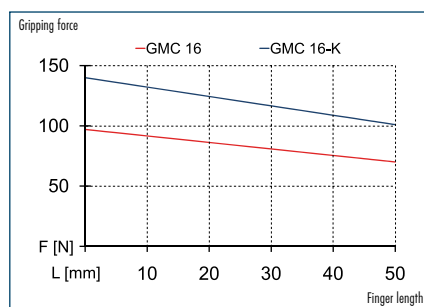
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



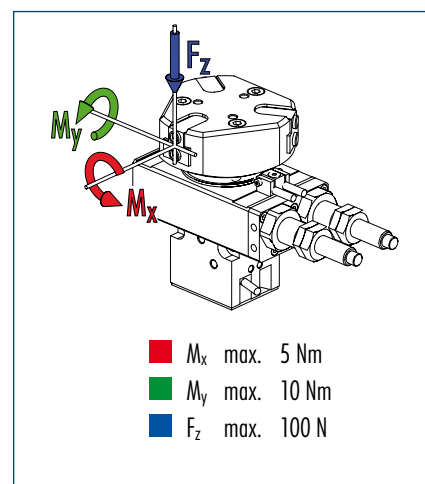
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

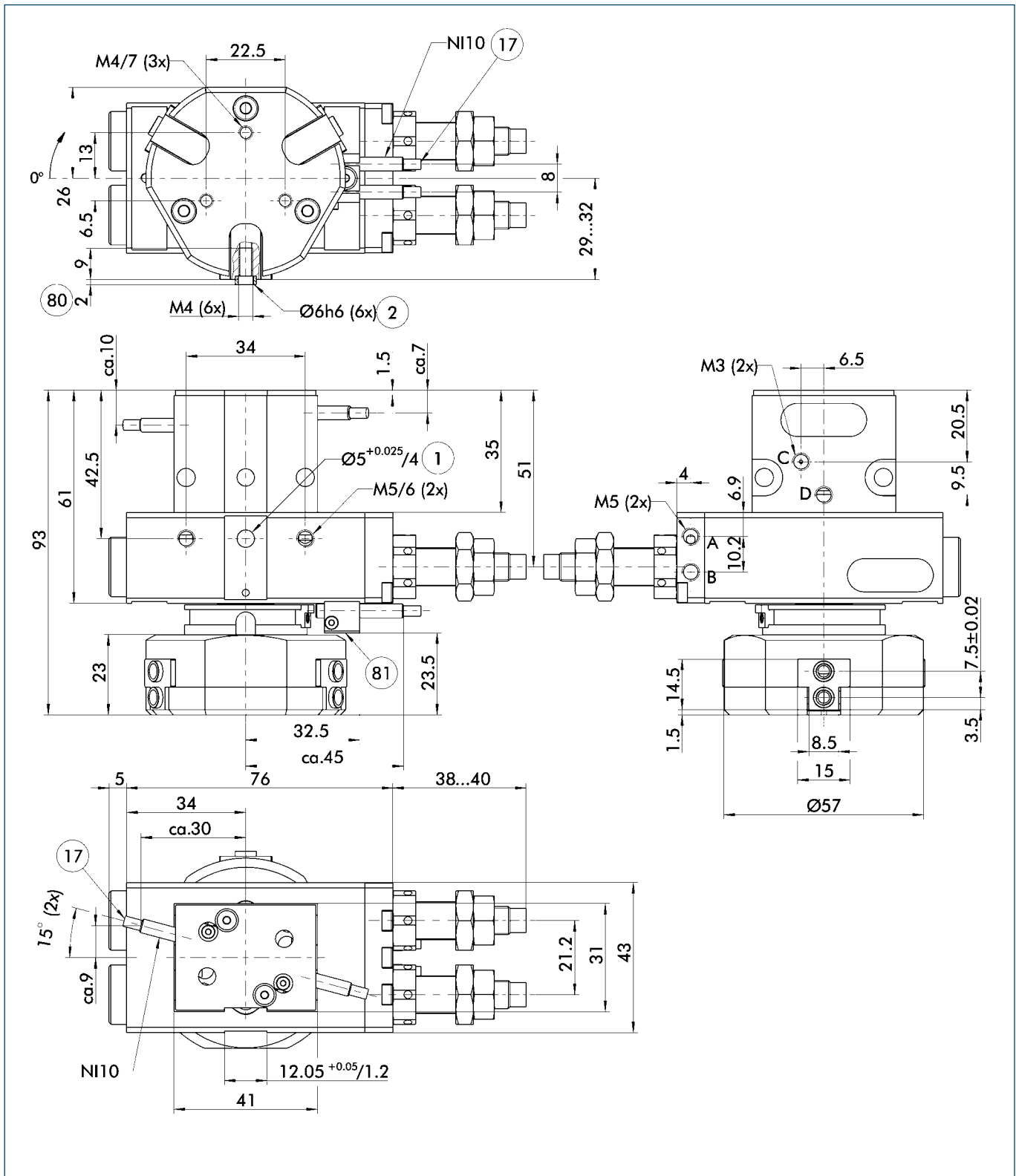
Technical data

Designation		RC 1216	RC 1216-K	RC 1216-S
	ID	0313258	0313260	0313259
Stroke per jaw	[mm]	3	3	3
Closing grip force	[N]	90	130	
Opening grip force	[N]	90		130
Min. grip force applied by spring	[N]		40	40
Torque	[Nm]	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.45	0.45	0.45
Fluid consumption for gripping per cycle	[cm³]	1.1	1.1	1.1
Fluid consumption for swiveling per cycle	[cm³]	4.8	4.8	4.8
Mass	[kg]	0.65	0.71	0.71
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025
Opening time for gripping	[s]	0.02	0.025	0.015
Max. permissible finger length	[mm]	50	50	50
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049

OPTIONS and their characteristics

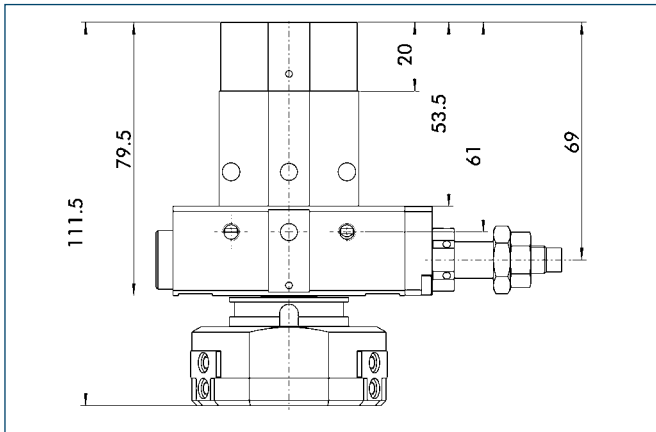
Designation		RC 1216-D	RC 1216-Z	RC 1216-X
	ID	0313261	0313263	0313262
Mass	[kg]	0.69	0.73	0.73

Main views



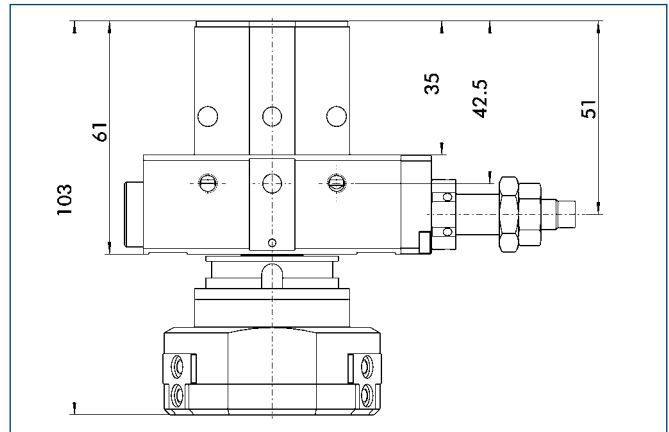
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery

Gripping force safety device, K/S



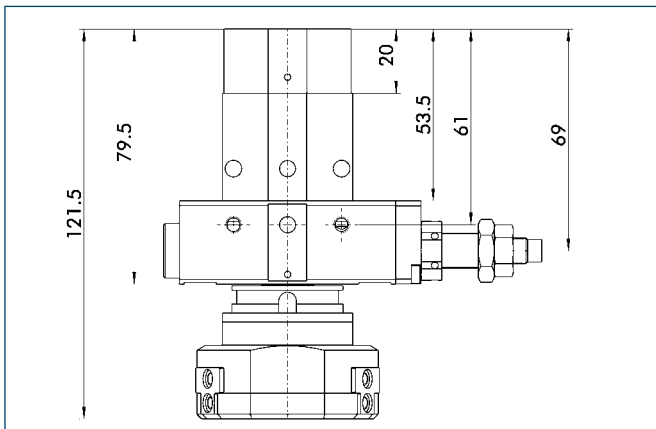
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

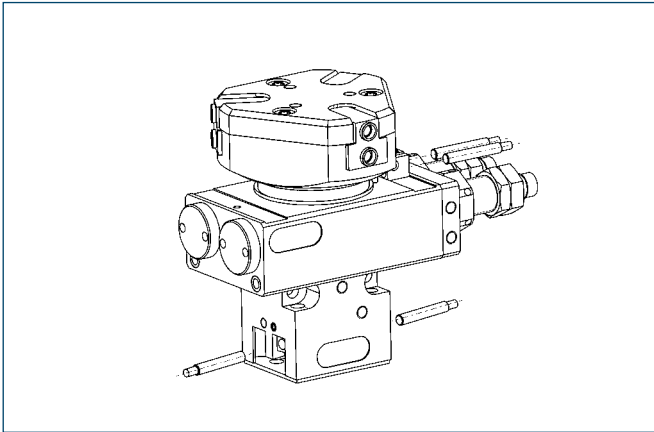


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

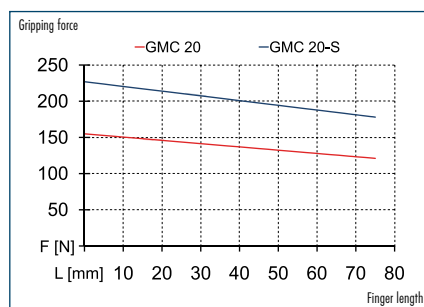
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

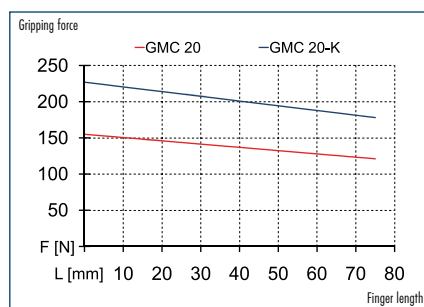
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



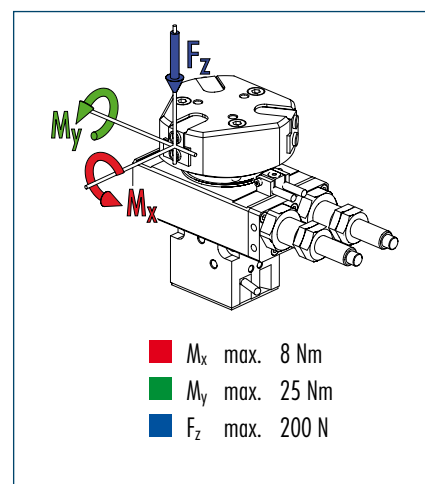
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

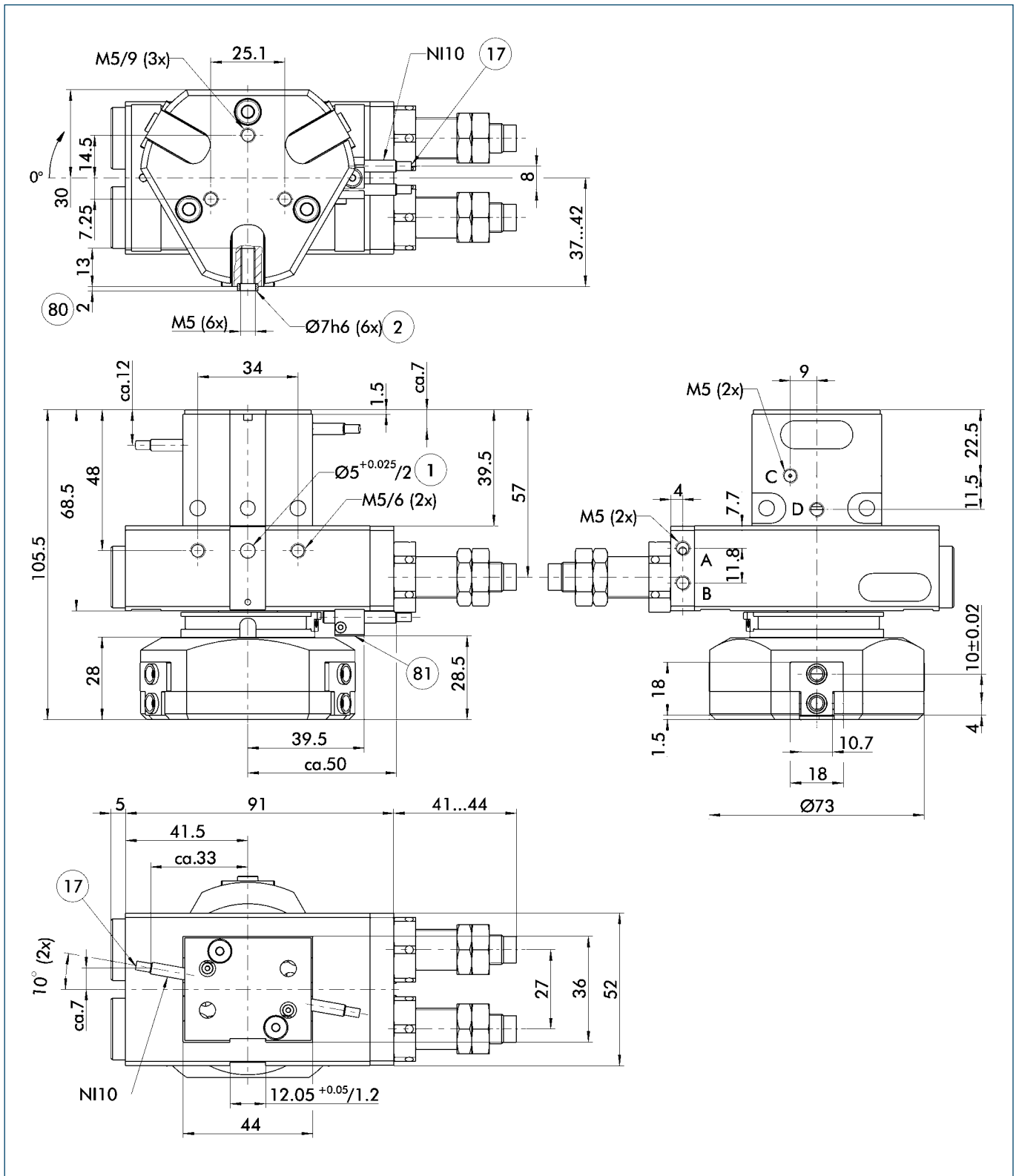
Technical data

Designation		RC 1520	RC 1520-K	RC 1520-S
	ID	0313280	0313282	0313281
Stroke per jaw	[mm]	5	5	5
Closing grip force	[N]	150	220	
Opening grip force	[N]	150		220
Min. grip force applied by spring	[N]		70	70
Torque	[Nm]	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Fluid consumption for gripping per cycle	[cm³]	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm³]	9.6	9.6	9.6
Mass	[kg]	1.08	1.16	1.16
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04
Opening time for gripping	[s]	0.03	0.04	0.025
Max. permissible finger length	[mm]	75	75	75
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.05	± 0.05	± 0.05

OPTIONS and their characteristics

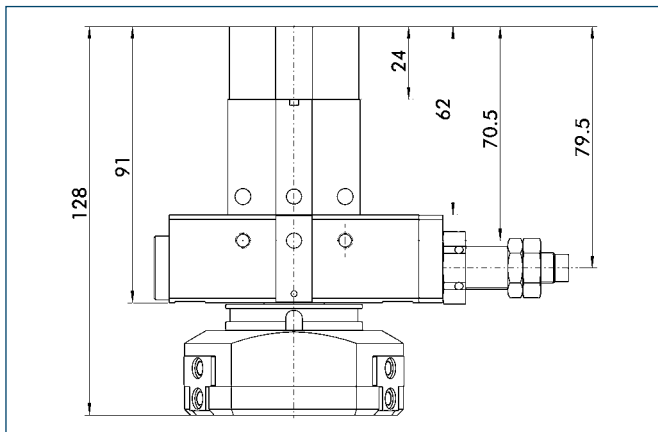
Designation		RC 1520-D	RC 1520-Z	RC 1520-X
	ID	0313283	0313285	0313284
Mass	[kg]	1.14	1.22	1.22

Main views



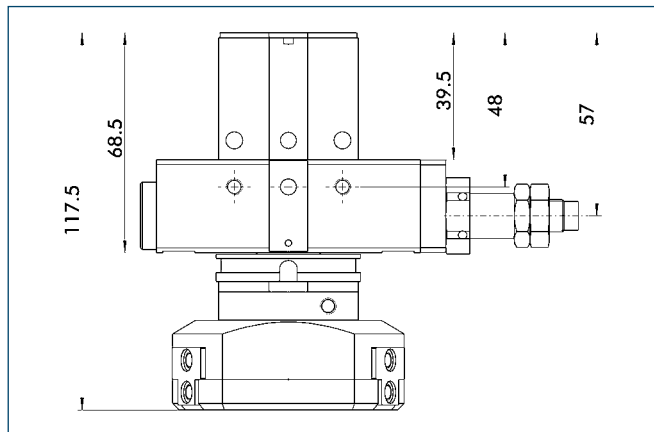
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery

Gripping force safety device, K/S



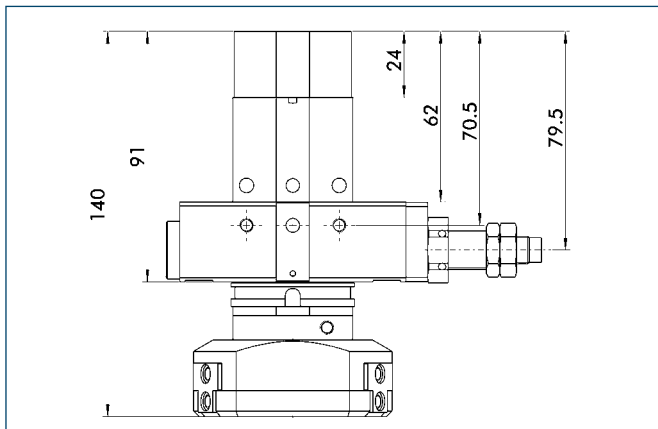
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



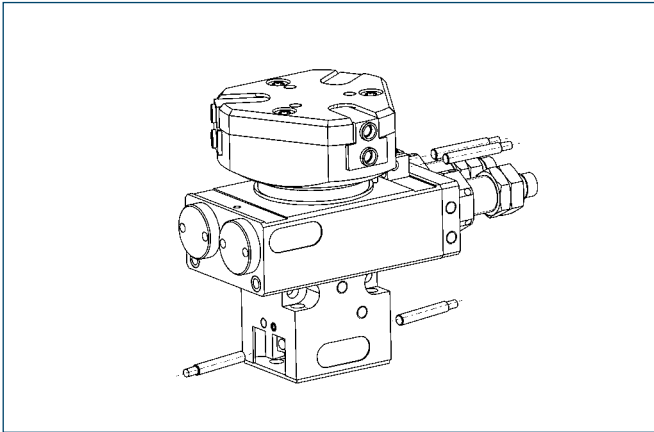
The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X



This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

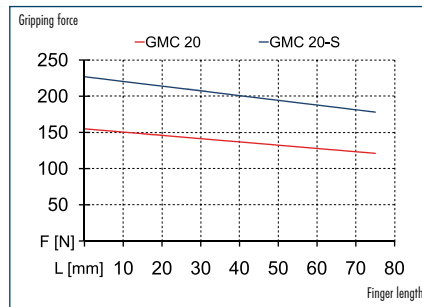
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

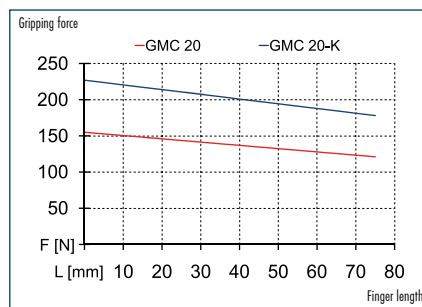
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



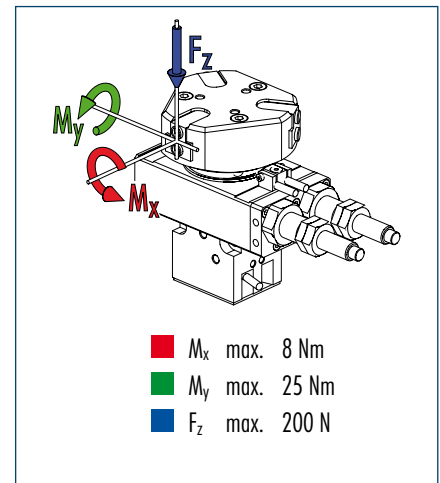
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

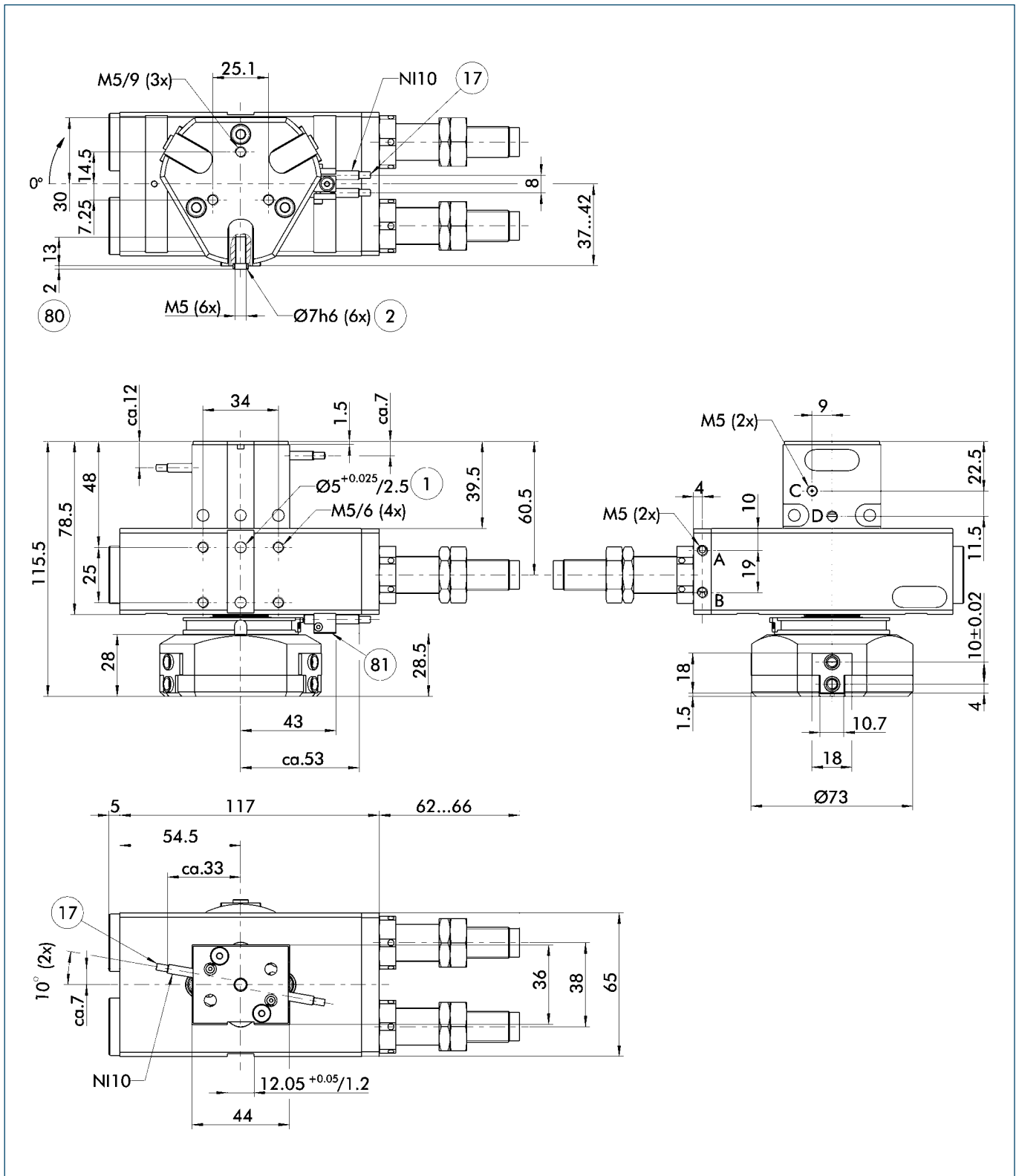
Technical data

Designation		RC 2120	RC 2120-K	RC 2120-S
	ID	0313302	0313304	0313303
Stroke per jaw	[mm]	5	5	5
Closing grip force	[N]	150	220	
Opening grip force	[N]	150		220
Min. grip force applied by spring	[N]		70	70
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	0.75	0.75	0.75
Fluid consumption for gripping per cycle	[cm³]	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm³]	23.8	23.8	23.8
Mass	[kg]	1.50	1.58	1.58
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04
Opening time for gripping	[s]	0.03	0.04	0.025
Max. permissible finger length	[mm]	75	75	75
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044

OPTIONS and their characteristics

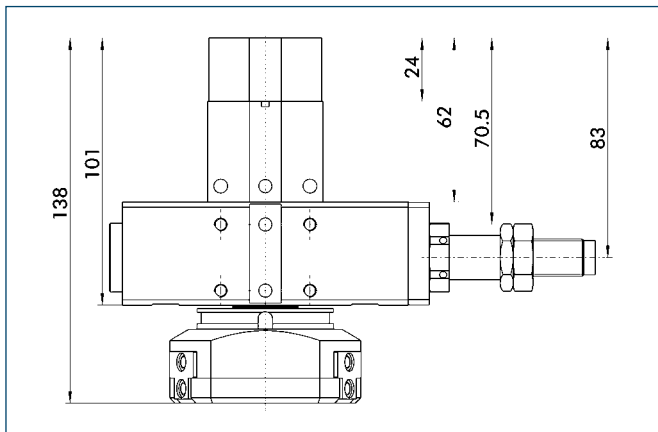
Designation		RC 2120-D	RC 2120-Z	RC 2120-X
	ID	0313305	0313307	0313306
Mass	[kg]	1.56	1.64	1.64

Main views



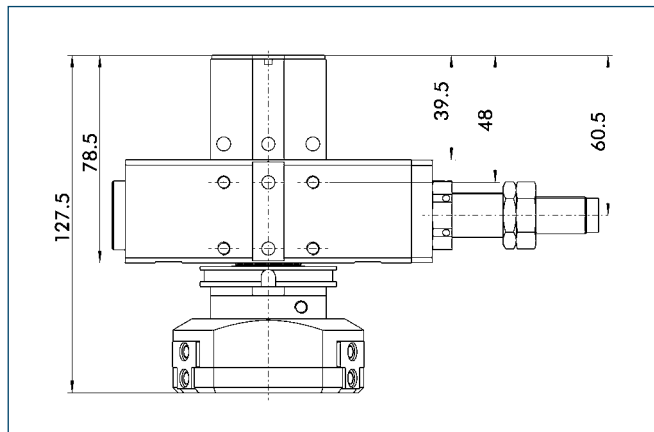
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery

Gripping force safety device, K/S



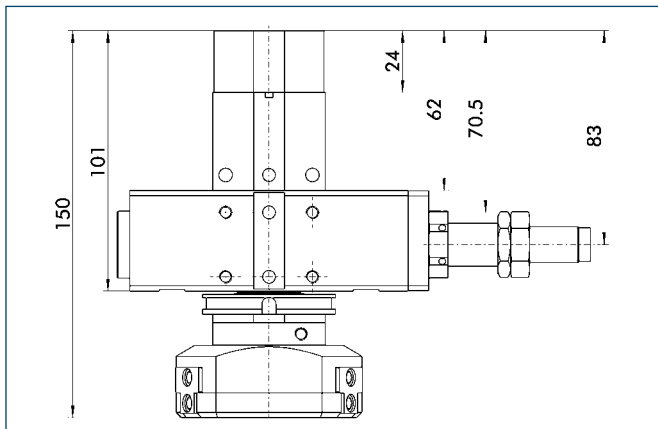
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



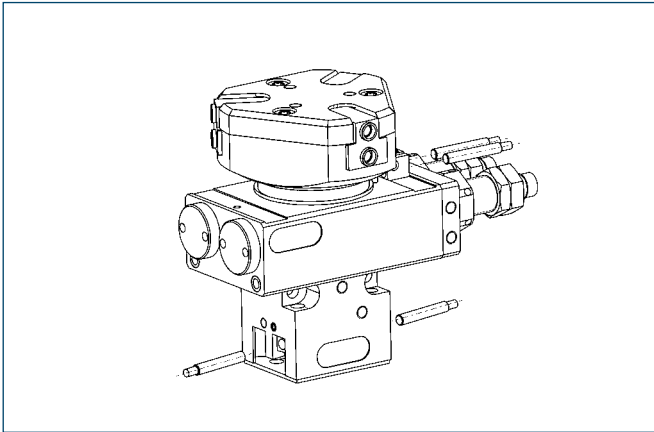
The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X



This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

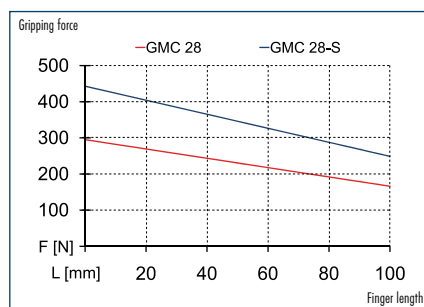
Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

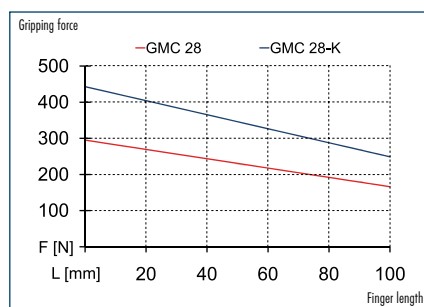
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



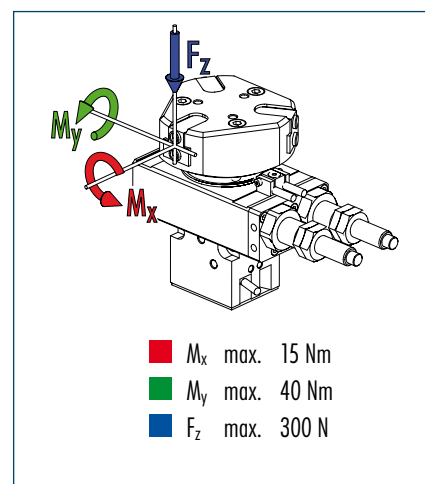
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. M_y may occur additionally to the moment produced by the gripping force itself. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RC 2128	RC 2128-K	RC 2128-S
	ID	0313320	0313322	0313321
Stroke per jaw	[mm]	8	8	8
Closing grip force	[N]	280	420	
Opening grip force	[N]	280		420
Min. grip force applied by spring	[N]		140	140
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Recommended workpiece weight	[kg]	1.4	1.4	1.4
Fluid consumption for gripping per cycle	[cm³]	9.05	9.05	9.05
Fluid consumption for swiveling per cycle	[cm³]	23.8	23.8	23.8
Mass	[kg]	2.09	2.25	2.25
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.05	0.04	0.06
Opening time for gripping	[s]	0.05	0.06	0.04
Max. permissible finger length	[mm]	100	100	100
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044

OPTIONS and their characteristics

Designation		RC 2128-D	RC 2128-Z	RC 2128-X
	ID	0313323	0313325	0313324
Mass	[kg]	2.15	2.33	2.33

Technical drawing of the 3000 series hydraulic cylinder, showing four views: front, side, end, and detail. The drawing includes dimensions in millimeters and various callouts for components and tolerances.

Front View (Top): Shows the cylinder head with dimensions: 32.9, 19, 37, 9.5, 13, 2, 80, 17, NI10, M6/13 (3x), M5 (6x), Ø7h6 (6x) 2, 46...54, 8.

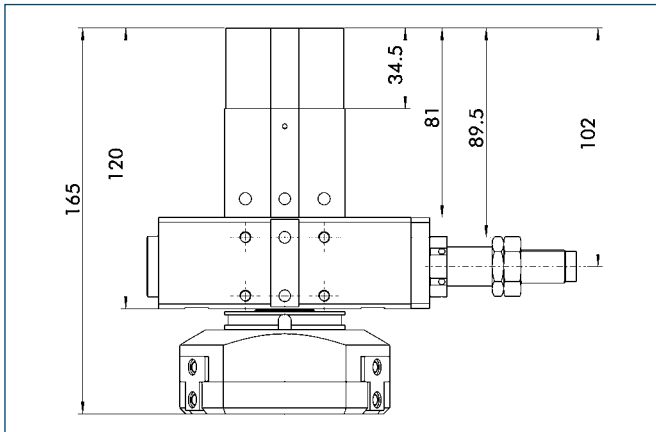
Side View (Middle): Shows the cylinder body with dimensions: 132, 87, 56.5, 25, 36, 43, ca.53, 69, 48, 1.5, ca.7, 34, 1, Ø5^{+0.025}/2.5, M5/6 (4x), 81, 36.5.

End View (Bottom): Shows the cylinder end with dimensions: 5, 117, 62...66, 54.5, ca.33, 17, 15° (2x), ca.10, NI10, 12.05^{+0.05}/1.2, 52, 38, 42, 65.

Detail View (Right): Shows a detail of the cylinder head with dimensions: 9.5, 27.5, 14.5, 14±0.02, 4.5, 21.5, Ø91, 12, 23.2, 1.5, 19, 10, 4, M5 (2x), A, B, C, D, M5 (2x).

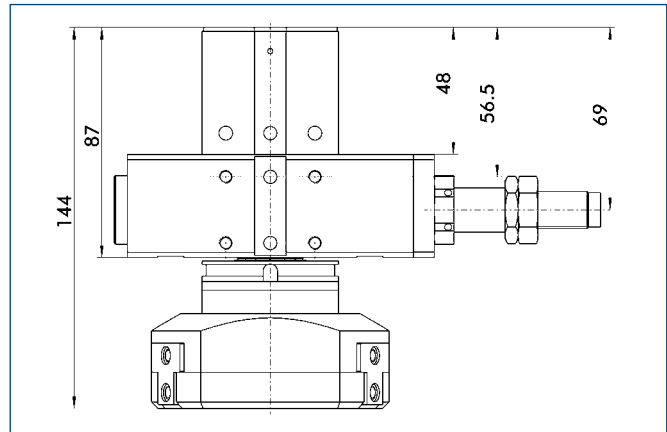
- 359

Gripping force safety device, K/S



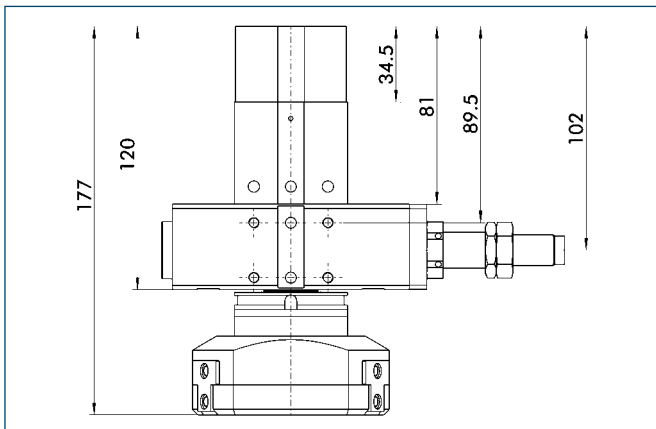
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



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Gripping force safety device + rotation adapter Z/X

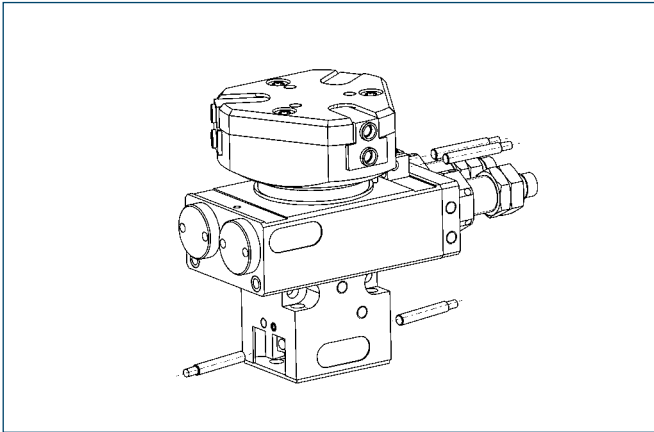


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 28-X	0313336	Bracket, sensor	
GMNS 28-G	0313337	Bracket, sensor, straight cable extension	•
GMNS 28-W	0313338	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper

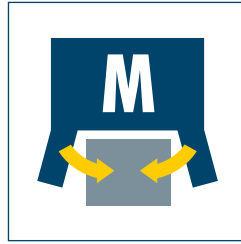
 You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



Sizes
1212 .. 2128



Mass
0.50 kg .. 1.92 kg



Gripping moment
0.6 Nm .. 6.0 Nm

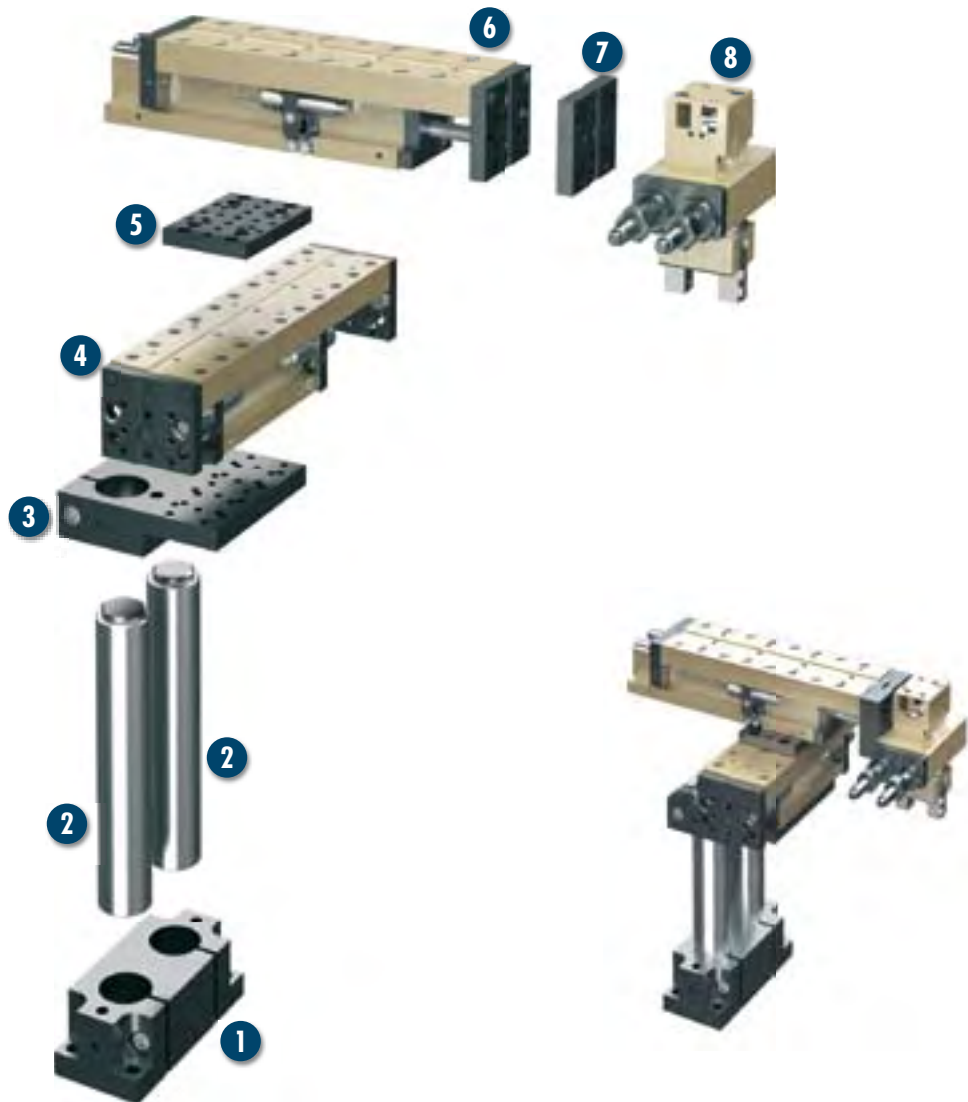


Opening angle per finger
3° .. 16°



Torque
0.38 Nm .. 1.9 Nm

Application example



Pneumatic conversion station with additional rotational axis for fast workpiece turning and pillar assembly

1 Double socket, SOD 035

2 Hollow pillar, SLH 035-0200

3 Double mounting plate, APDH 035

4 Linear module, LM 100-H075

5 Adapter plate, APL 210

6 Linear module, CLM 100-H100

7 Adapter plate, APL 120

8 Gripping rotary module, RW 1520

Rotary module with angular gripper

Rotary gripping combination, consisting of a rotary module and a 2-finger angular gripper

Area of application

Gripping and rotating combined in one module for small to medium workpieces in low-contamination environments. Also for places where space is limited.

Advantages – your benefits

Gripping rotary modules without rotating power lines

For maximum reliability

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

For maximum flexibility in applications

Integration of a gripping force retaining device is optional

For firm grip even in the event of power failure

Continuous angle of rotation adjustment

Over the entire range of rotation

Double piston design in the swivel unit

For elimination of backlash at the end positions and high repeat accuracy

Integrated shock absorbers with adjustable absorption characteristic

For optimal dampening

“Continuously adjustable intermediate position” option

Can be done using an intermediate stop which can be integrated

End-position monitoring

Up to four monitoring sets possible

Standardized mounting bores

For numerous combinations with other GEMOTEC system elements



General information about the series

Working principle

Combination of rack/pinion with piston actuation

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

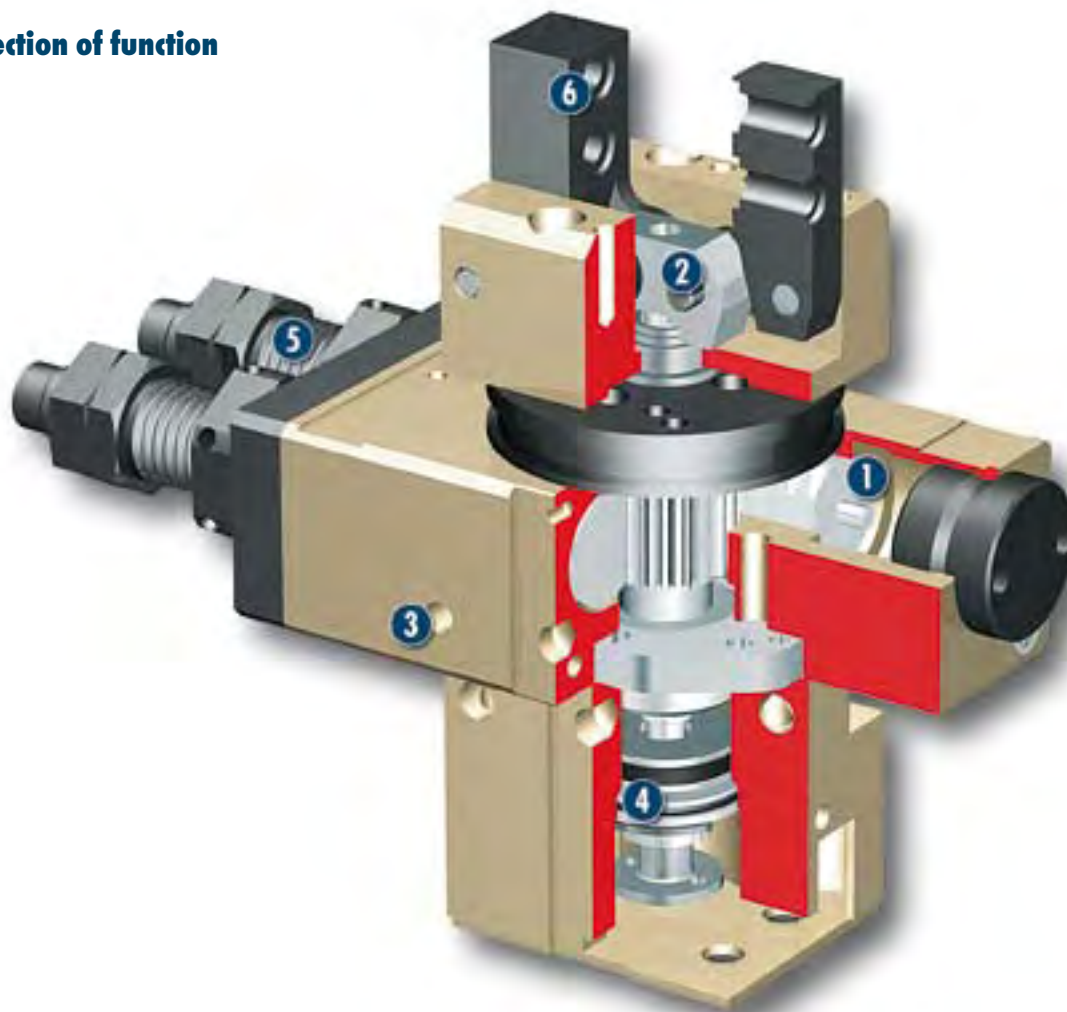
Gripping force retaining device

Possible with variants with mechanical gripping force safety devices or pressure maintenance valves

Modular design

Gripping rotary modules are designed to be modular and consist of flat swivel units, RM 12 - 21, and GMW grippers

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

Cross-section of function

- | | | |
|---|--|--|
| <p>1 Drive, turning
Pneumatic, rack and pinion design</p> | <p>3 Modular design hole pattern
Completely integrated in the module system</p> | <p>5 Rotating angle adjustment
For a flexible end position, with hydraulic shock absorber</p> |
| <p>2 Kinematics
Synchronization by leverage principle for centric gripping</p> | <p>4 Drive, gripping
Double pressurized piston-actuated system</p> | <p>6 Base jaws
For adaptation of the workpiece-specific gripper fingers</p> |

Description of function

The rotary movement is done by the two pneumatic piston racks when pressure is applied to their end faces, causing them to move in a straight line in their bore holes and turn the pinion by way of the teeth machined on the side of the racks. For the gripping movement, the piston is moved up or down using compressed air. The kinematics links the piston movement in a synchronized, rotatory opening and closing together with the bolt bearings of the base jaws.

Options and special information**Rotation adapter version**

The gripping head can be continuously adjusted and indexed in relation to the drive.

No power lines are rotated with the unit.

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.

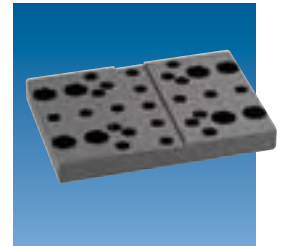
Fittings



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 iAccessories part of the catalog.

General information about the series

Gripping moment

This is the arithmetic sum of the gripping forces applied to each claw jaw, measured at a distance of 10 mm from the upper edge of the gripper.

Pinion position

The position of the pinion is always shown in the left end position. The pinion rotates from here to the right in the clockwise direction. The arrow makes the direction of rotation clear.

Screw connection diagram at the pinion

Please note that when the rotating angle is to be set for less than 90°, the left stop will generally be completely turned in. The left end position therefore has a

screw connection diagram which has been rotated by 90° in the clockwise direction in relation to the drawing, which is shown at a 180° angle of rotation.

Finger length

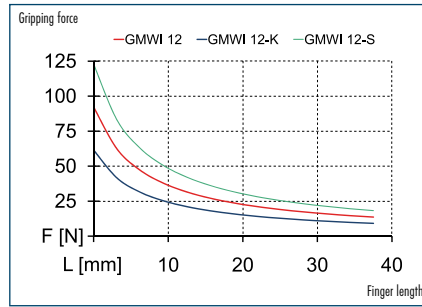
The finger length is measured from the upper edge of the gripper housing in the direction of the main axis.

Layout or sizing

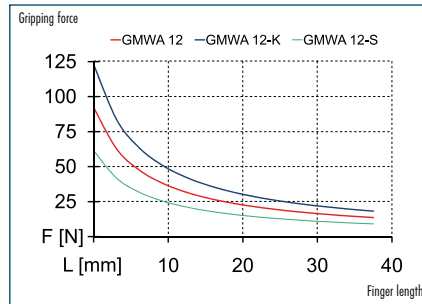
For layout or sizing of rotary modules, we recommend using our TOOLBOX sizing software, which can be obtained at www.schunk.com. Sizing the selected unit is absolutely necessary, since otherwise overloading can result.



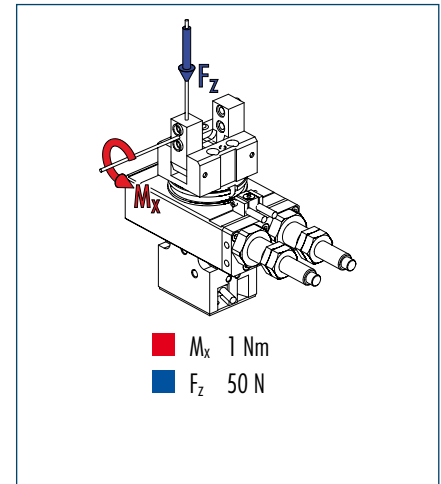
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. The jaw movement might have to be limited and be free from striking and bouncing. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

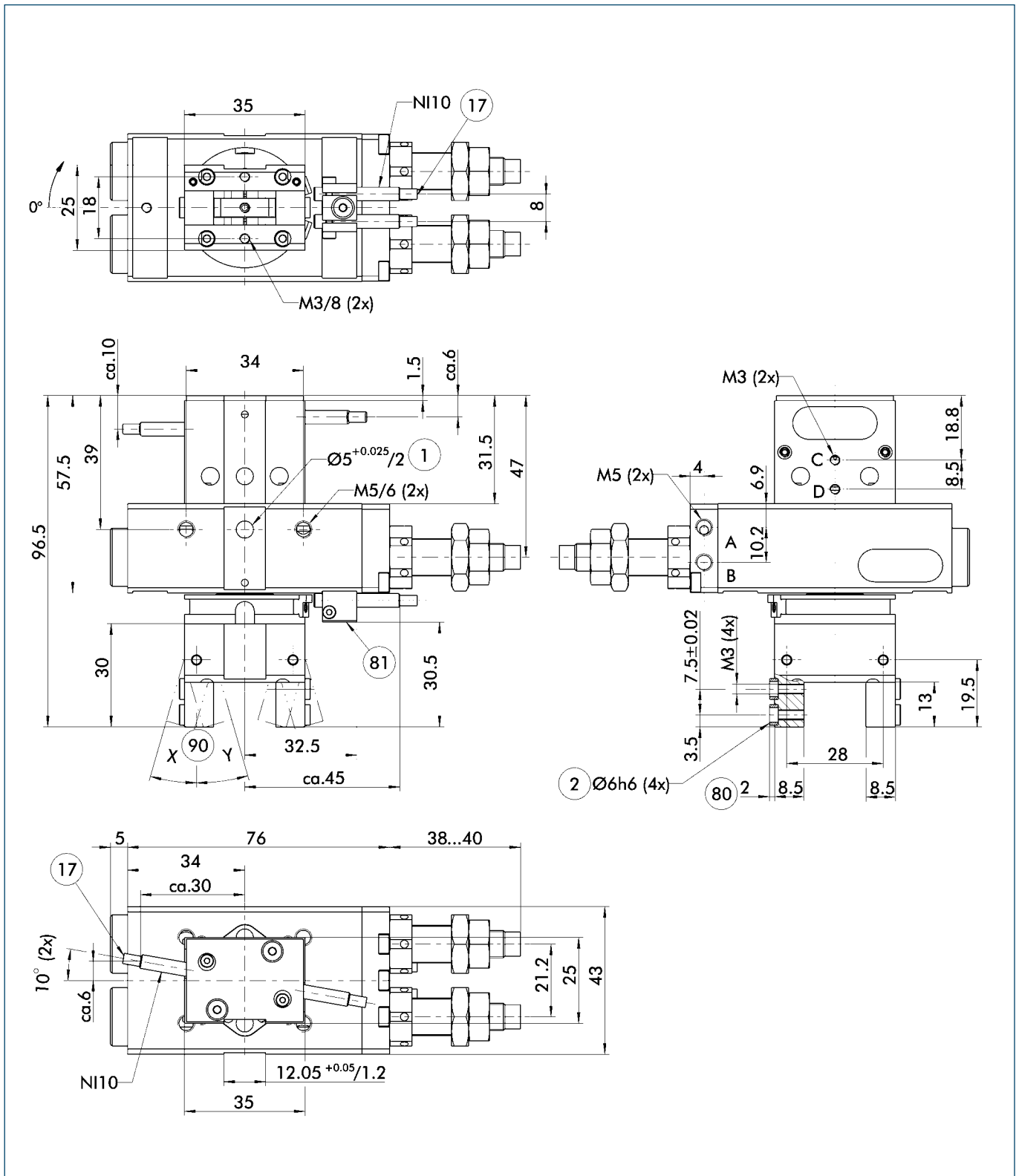
Technical data

Designation		RWA 1212	RWA 1212-K	RWA 1212-S	RWI 1212	RWI 1212-S
	ID	0313226	0313228	0313227	0313232	0313233
Closing angle per jaw:	[°]	3	3	3	16	16
Opening angle per jaw	[°]	16	16	16	3	3
Closing moment	[Nm]	0.6	0.8			
Opening moment	[Nm]	0.6		0.8	0.6	0.8
Protected by spring against closing moment	[Nm]		0.2			
Protected by spring against opening moment	[Nm]			0.2		0.2
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous	Continuous	Continuous
Fluid consumption for gripping per cycle	[cm ³]	0.87	0.87	0.87	0.87	0.87
Fluid consumption for swiveling per cycle	[cm ³]	4.8	4.8	4.8	4.8	4.8
Mass	[kg]	0.5	0.52	0.52	0.5	0.52
Nominal operating pressure	[bar]	6	6	6	6	6
Minimum pressure for gripping	[bar]	3	5	5	3	5
Maximum pressure for gripping	[bar]	8	8	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025	0.02	0.025
Opening time for gripping	[s]	0.02	0.025	0.015	0.02	0.015
Max. permissible finger length	[mm]	25	25	25	25	25
IP rating		40	40	40	40	40
Min. ambient temperature	[°C]	5	5	5	5	5
Max. ambient temperature	[°C]	60	60	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049	± 0.049	± 0.049

OPTIONS and their characteristics

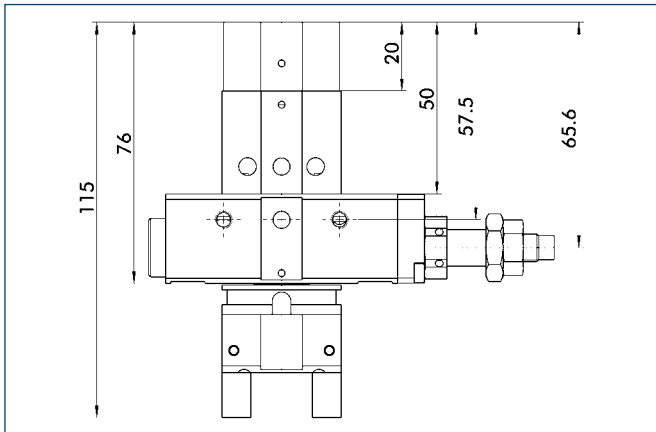
Designation		RWA 1212-D	RWA 1212-Z	RWA 1212-X	RWI 1212-D	RWI 1212-X
	ID	0313229	0313231	0313230	0313234	0313235
Mass	[kg]	0.52	0.54	0.54	0.52	0.54

Main views



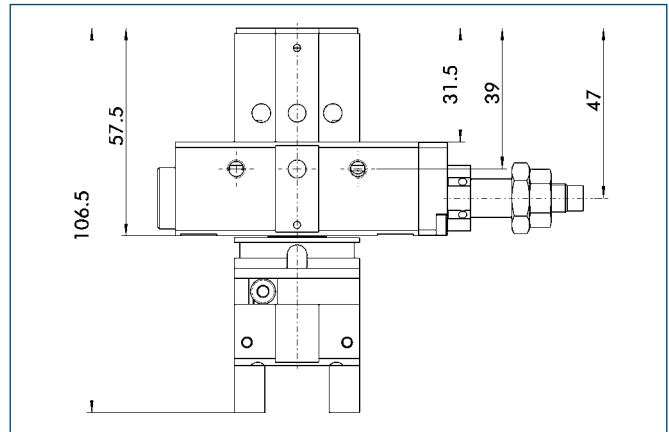
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery
- 90 See technical data for closing angle "Y" and opening angle "X" per jaw

Gripping force safety device, K/S



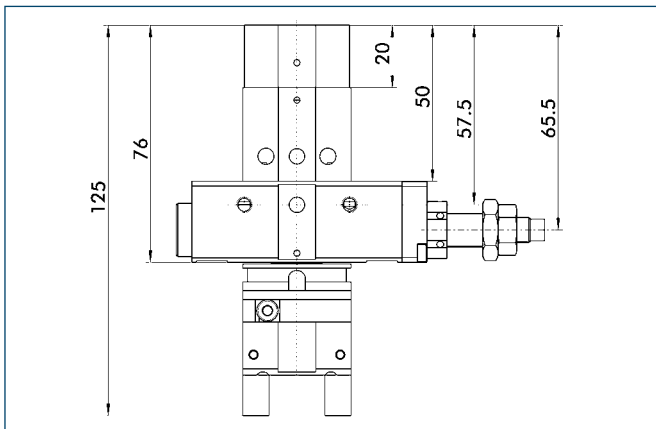
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

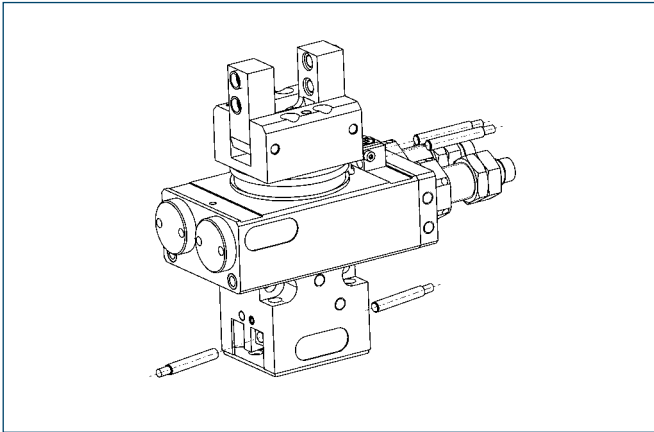


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



End-position monitoring:

Inductive proximity switch, can be directly mounted

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 12-X	0313330	Bracket, sensor	
GMNS 12-G	0313331	Bracket, sensor, straight cable extension	•
GMNS 12-W	0313332	Bracket, sensor, angled cable extension	

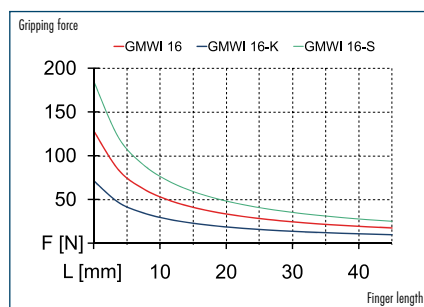
❗ Two sensors are needed for each gripper



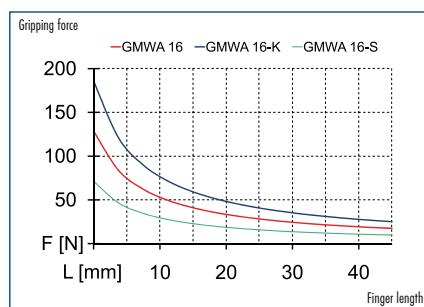
You can find further information and components for the accessories mentioned here in the “Accessories” part of the catalog.



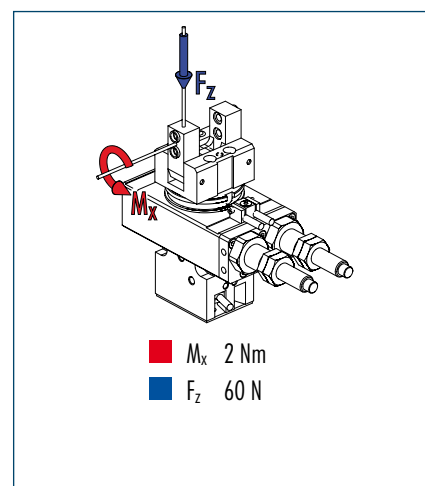
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. The jaw movement might have to be limited and be free from striking and bouncing. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

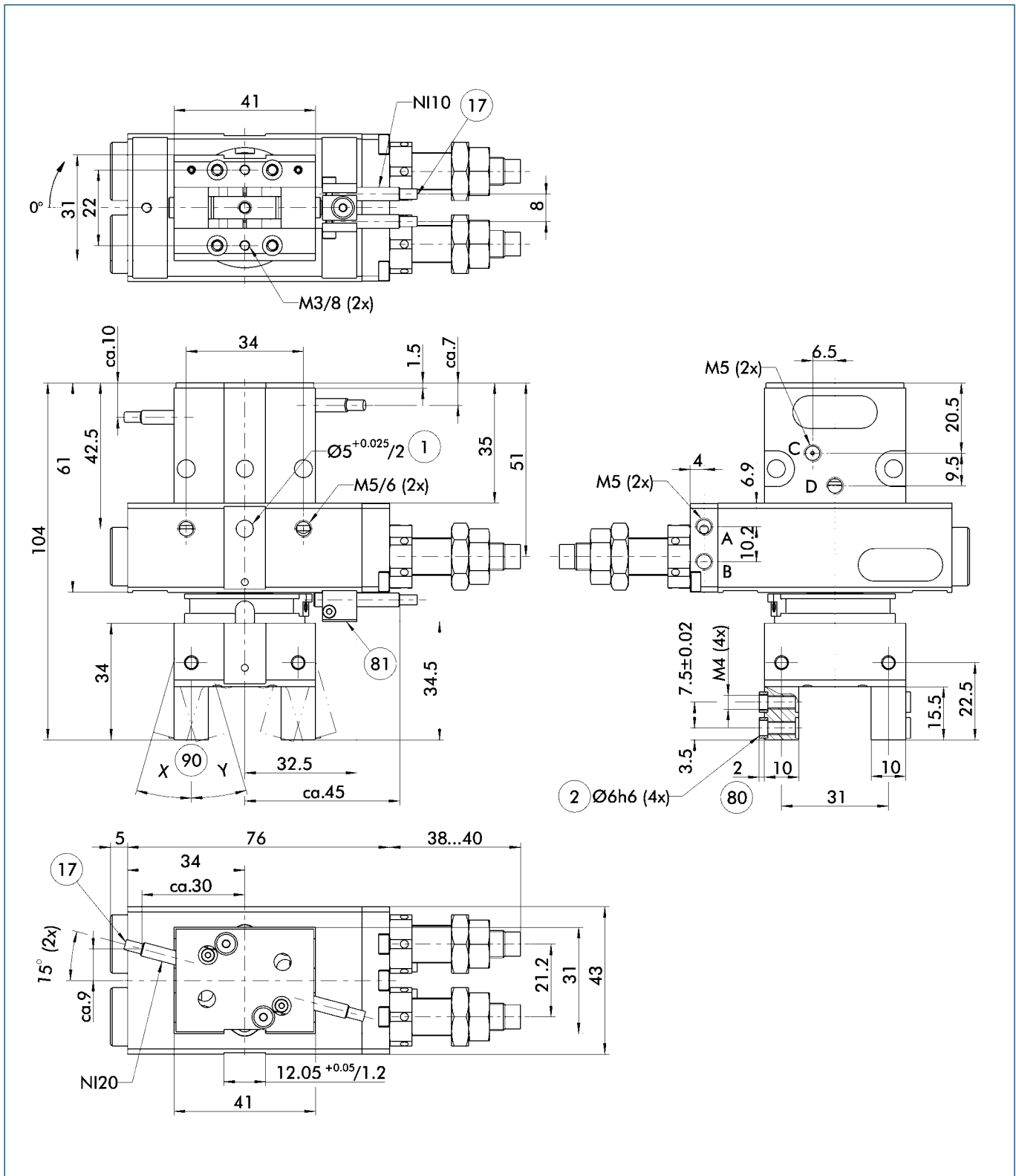
Technical data

Designation		RWA 1216	RWA 1216-K	RWA 1216-S	RWI 1216	RWI 1216-S
	ID	0313248	0313250	0313249	0313254	0313255
Closing angle per jaw:	[°]	3	3	3	14	14
Opening angle per jaw	[°]	14	14	14	3	3
Closing moment	[Nm]	0.9	1.3			
Opening moment	[Nm]	0.9		1.3	0.9	1.3
Protected by spring against closing moment	[Nm]		0.4			
Protected by spring against opening moment	[Nm]			0.4		0.4
Torque	[Nm]	0.38	0.38	0.38	0.38	0.38
Angle of rotation	[°]	190	190	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous	Continuous	Continuous
Fluid consumption for gripping per cycle	[cm ³]	1.1	1.1	1.1	1.1	1.1
Fluid consumption for swiveling per cycle	[cm ³]	4.8	4.8	4.8	4.8	4.8
Mass	[kg]	0.56	0.62	0.62	0.56	0.62
Nominal operating pressure	[bar]	6	6	6	6	6
Minimum pressure for gripping	[bar]	3	5	5	3	5
Maximum pressure for gripping	[bar]	8	8	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8	8	8
Closing time for gripping	[s]	0.02	0.015	0.025	0.02	0.025
Opening time for gripping	[s]	0.02	0.025	0.015	0.02	0.015
Max. permissible finger length	[mm]	30	30	30	30	30
IP rating		40	40	40	40	40
Min. ambient temperature	[°C]	5	5	5	5	5
Max. ambient temperature	[°C]	60	60	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.049	± 0.049	± 0.049	± 0.049	± 0.049

OPTIONS and their characteristics

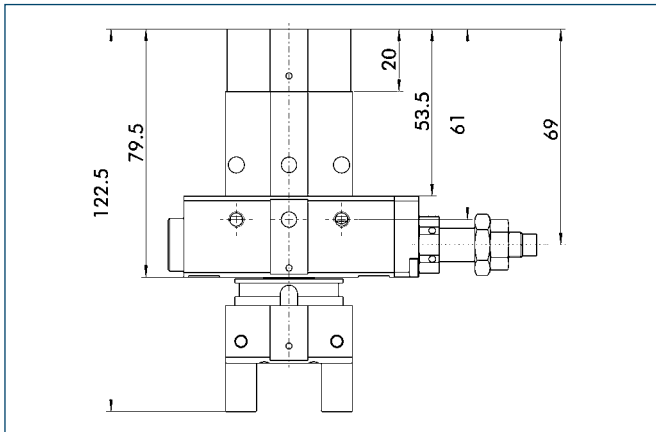
Designation		RWA 1216-D	RWA 1216-Z	RWA 1216-X	RWI 1216-D	RWI 1216-X
	ID	0313251	0313253	0313252	0313256	0313257
Mass	[kg]	0.6	0.64	0.64	0.6	0.64

Main views



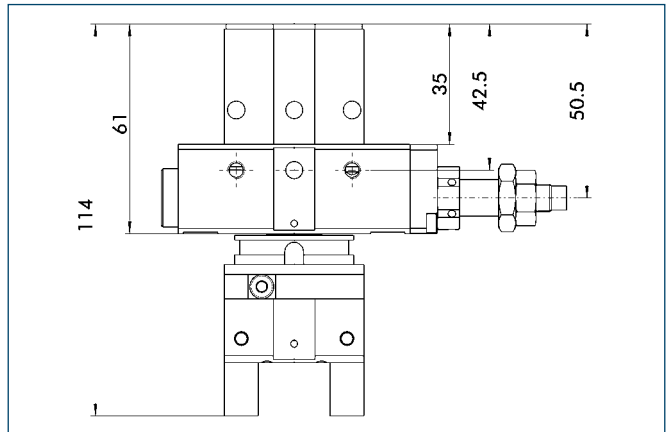
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery
- 90 See technical data for closing angle "Y" and opening angle "X" per jaw

Gripping force safety device, K/S



The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

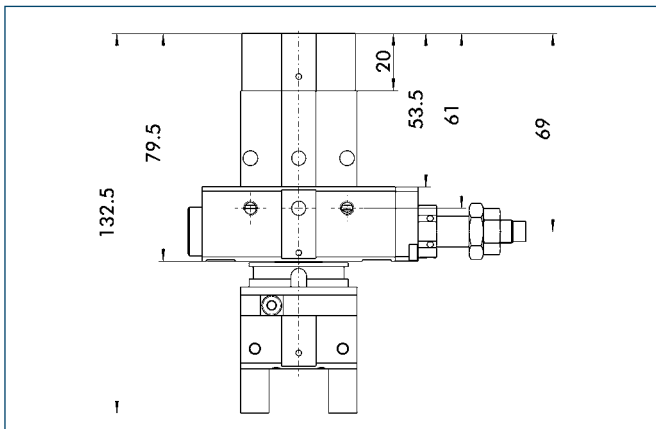
Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece.

Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

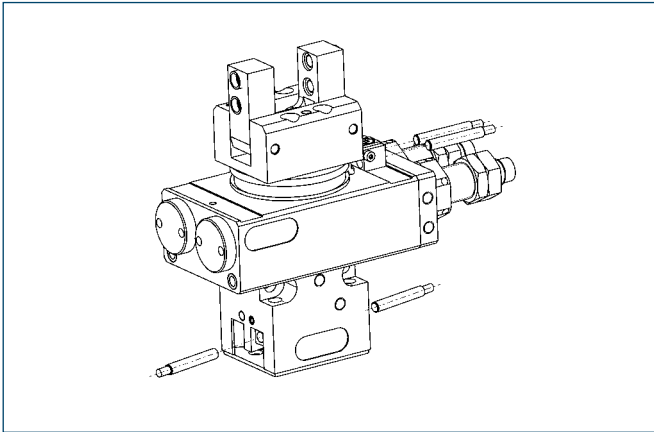


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



End-position monitoring:

Inductive proximity switch, can be directly mounted

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

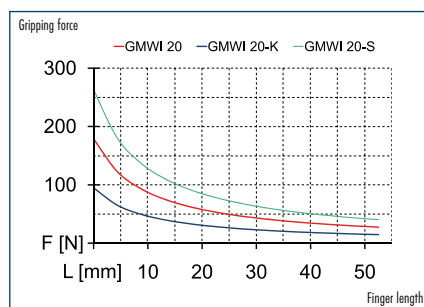
❗ Two sensors are needed for each gripper



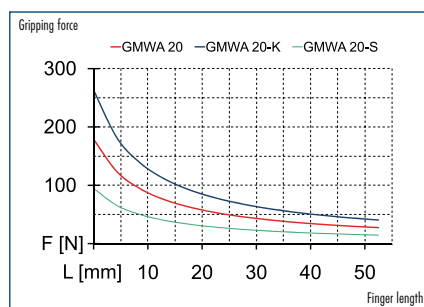
You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.



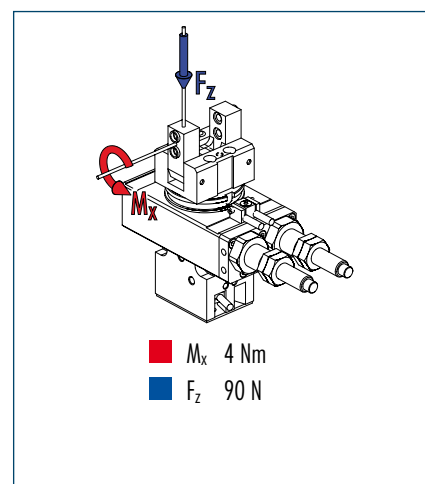
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. The jaw movement might have to be limited and be free from striking and bouncing. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

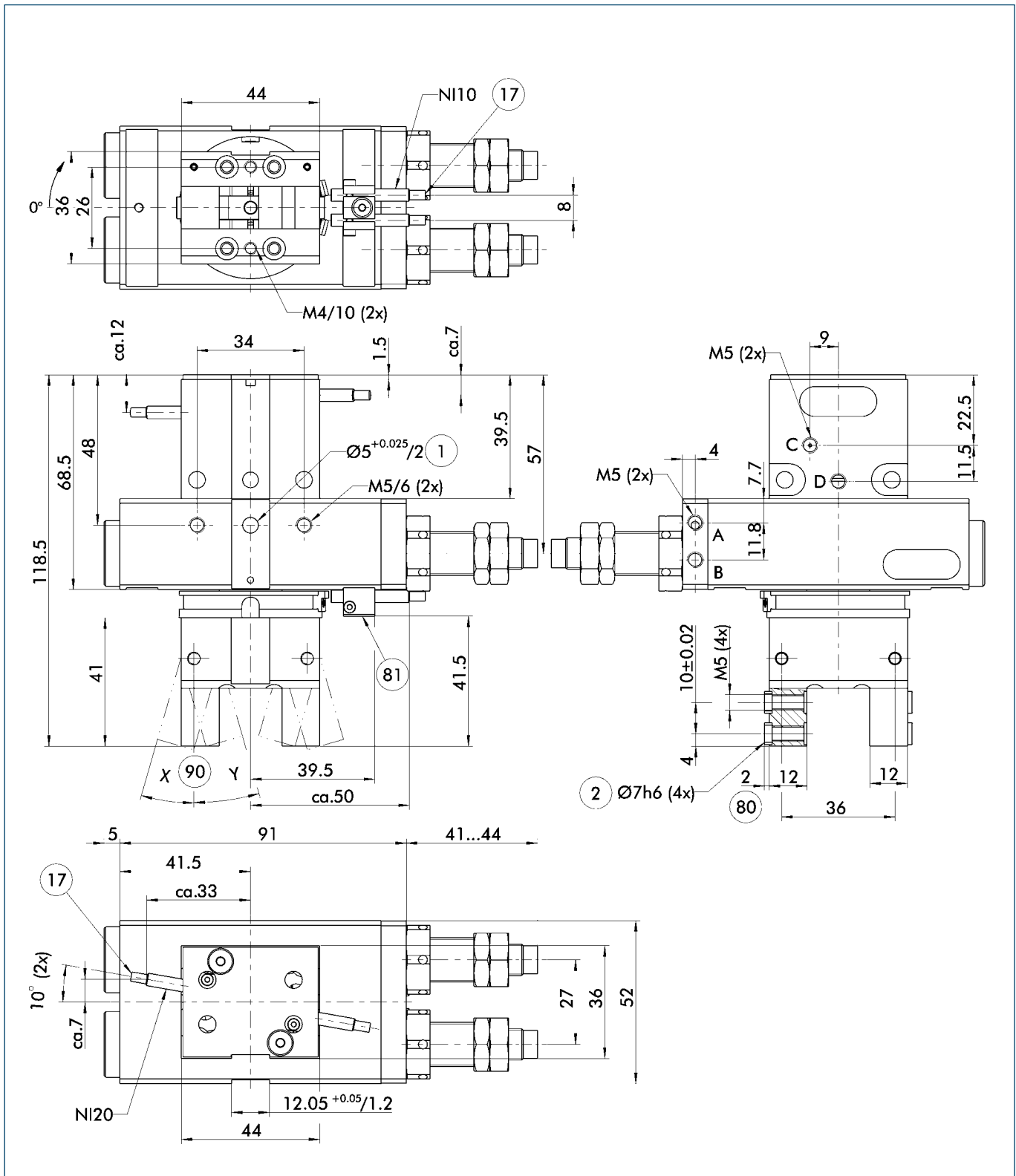
Technical data

Designation		RWA 1520	RWA 1520-K	RWA 1520-S	RWI 1520	RWI 1520-S
	ID	0313270	0313272	0313271	0313276	0313277
Closing angle per jaw:	[°]	7	7	7	16	16
Opening angle per jaw	[°]	16	16	16	7	7
Closing moment	[Nm]	1.7	2.5			
Opening moment	[Nm]	1.7		2.5	1.7	2.5
Protected by spring against closing moment	[Nm]		0.8			
Protected by spring against opening moment	[Nm]			0.8		0.8
Torque	[Nm]	0.76	0.76	0.76	0.76	0.76
Angle of rotation	[°]	190	190	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous	Continuous	Continuous
Fluid consumption for gripping per cycle	[cm³]	2.86	2.86	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm³]	9.6	9.6	9.6	9.6	9.6
Mass	[kg]	0.88	0.96	0.96	0.88	0.96
Nominal operating pressure	[bar]	6	6	6	6	6
Minimum pressure for gripping	[bar]	3	5	5	3	5
Maximum pressure for gripping	[bar]	8	8	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04	0.03	0.04
Opening time for gripping	[s]	0.03	0.04	0.025	0.03	0.025
Max. permissible finger length	[mm]	35	35	35	35	35
IP rating		40	40	40	40	40
Min. ambient temperature	[°C]	5	5	5	5	5
Max. ambient temperature	[°C]	60	60	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05

OPTIONS and their characteristics

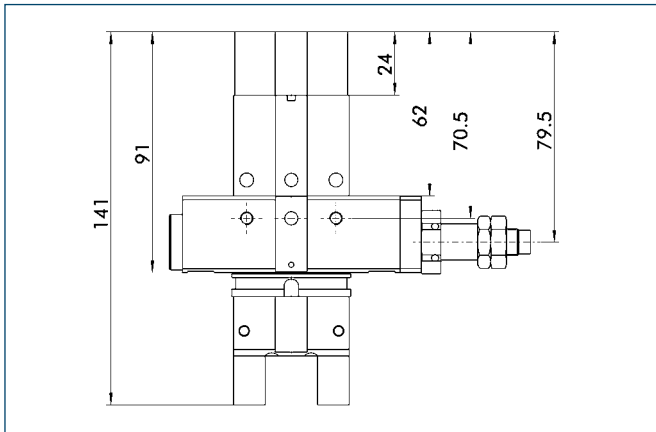
Designation		RWA 1520-D	RWA 1520-Z	RWA 1520-X	RWI 1520-D	RWI 1520-X
	ID	0313273	0313275	0313274	0313278	0313279
Mass	[kg]	0.94	1.02	1.02	0.94	1.02

Main views



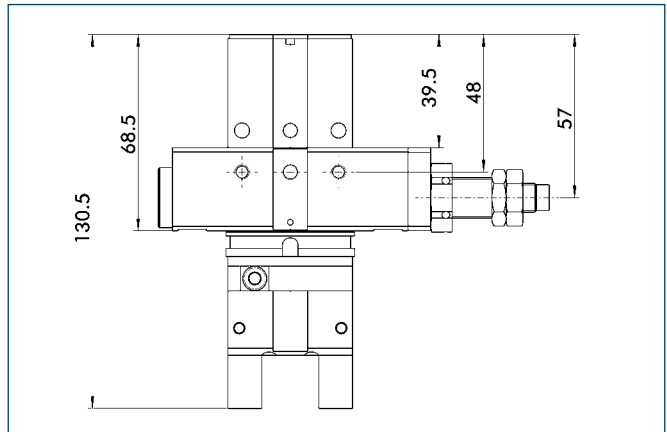
- A,a Main and direct connections, swivel unit, rotating to the right
- B,b Main and direct connections, swivel unit, rotating to the left
- C,c Main and direct connections, gripper open
- D,d Main and direct connections, gripper close
- ① Connections, gripping rotary module
- ② Finger connection
- 17 Cable outlet
- 80 Depth of the centering sleeve in the counter piece
- 81 Not included in the scope of delivery
- 90 See technical data for closing angle "Y" and opening angle "X" per jaw

Gripping force safety device, K/S



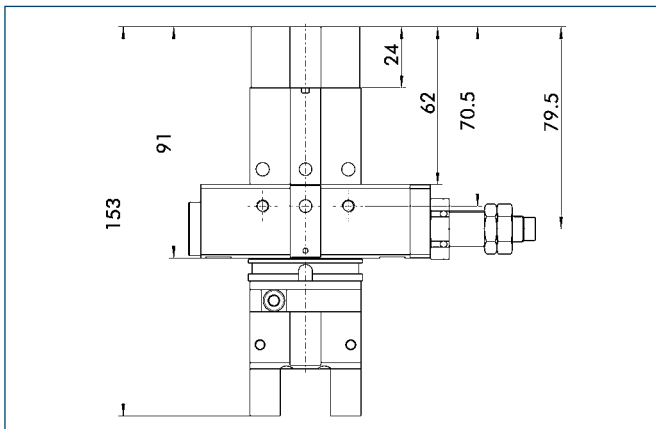
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

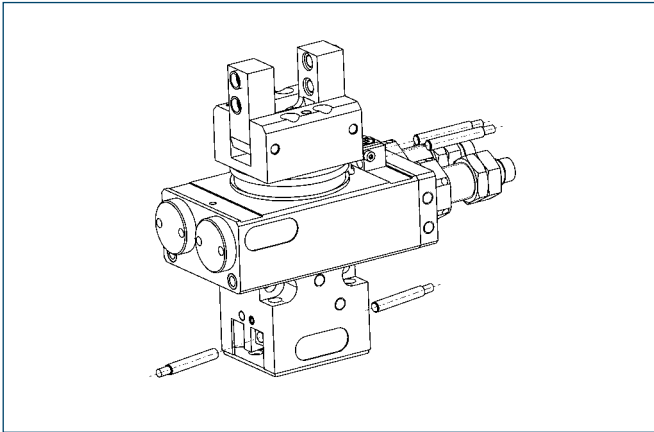


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

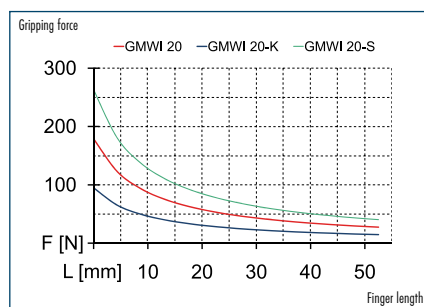
❗ Two sensors are needed for each gripper



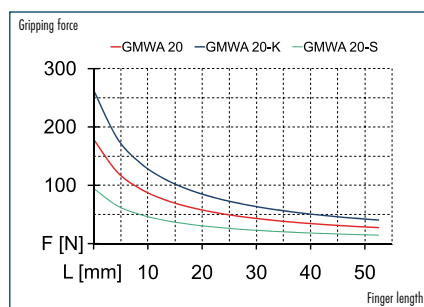
You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.



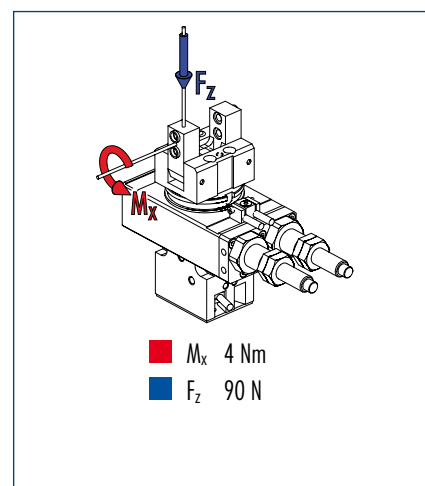
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. The jaw movement might have to be limited and be free from striking and bouncing. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RWA 2120	RWA 2120-K	RWA 2120-S	RWI 2120	RWI 2120-S
	ID	0313292	0313294	0313293	0313298	0313299
Closing angle per jaw:	[°]	7	7	7	16	16
Opening angle per jaw	[°]	16	16	16	7	7
Closing moment	[Nm]	1.7	2.5			
Opening moment	[Nm]	1.7		2.5	1.7	2.5
Protected by spring against closing moment	[Nm]		0.8			
Protected by spring against opening moment	[Nm]			0.8		0.8
Torque	[Nm]	1.9	1.9	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous	Continuous	Continuous
Fluid consumption for gripping per cycle	[cm³]	2.86	2.86	2.86	2.86	2.86
Fluid consumption for swiveling per cycle	[cm³]	23.8	23.8	23.8	23.8	23.8
Mass	[kg]	1.46	1.54	1.54	1.46	1.54
Nominal operating pressure	[bar]	6	6	6	6	6
Minimum pressure for gripping	[bar]	3	5	5	3	5
Maximum pressure for gripping	[bar]	8	8	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8	8	8
Closing time for gripping	[s]	0.03	0.025	0.04	0.03	0.04
Opening time for gripping	[s]	0.03	0.04	0.025	0.03	0.025
Max. permissible finger length	[mm]	35	35	35	35	35
IP rating		40	40	40	40	40
Min. ambient temperature	[°C]	5	5	5	5	5
Max. ambient temperature	[°C]	60	60	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044	± 0.044	± 0.044

OPTIONS and their characteristics

Designation		RWA 2120-D	RWA 2120-Z	RWA 2120-X	RWI 2120-D	RWI 2120-X
	ID	0313295	0313297	0313296	0313300	0313301
Mass	[kg]	1.52	1.6	1.6	1.52	1.6

Technical drawing of a 4/3-way solenoid valve, showing three views: front, side, and top.

Front View (Top): Shows the valve body with dimensions 44 (width), 36 (height), and 26 (height). Callouts include NI10 (17) for the solenoid coil and M4/10 (2x) for the mounting holes.

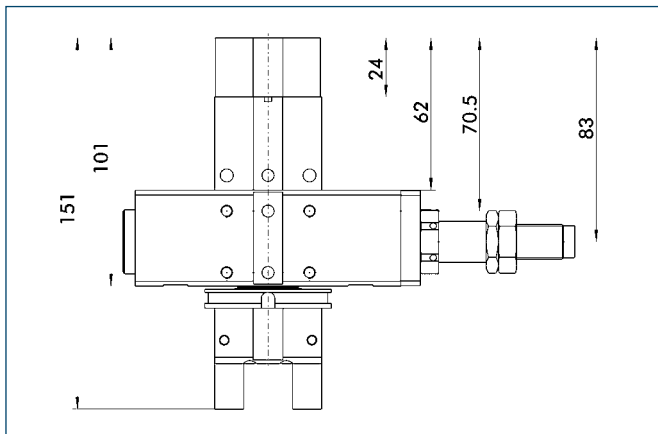
Side View (Middle): Shows the valve body with dimensions 128.5 (total height), 78.5 (height to top of coil), 48 (height to top of body), 25 (height to bottom of body), 41 (height to bottom of coil), 43 (width), and 41.5 (height to bottom of body). Callouts include Ø5^{+0.025}/2.5 (1) for the pilot line, M5/6 (4x) for the pilot line holes, and 81 for the bottom flange.

Top View (Bottom): Shows the valve body with dimensions 117 (width), 62...66 (width), 54.5 (width), and 36 (height). Callouts include 10°(2x) for the pilot line angle, NI10 (17) for the solenoid coil, and 12.05^{+0.05}/1.2 for the pilot line hole.

Side View (Right): Shows the valve body with dimensions 22.5 (height), 11.5 (height), 19 (height), 10 (height), 18.5 (height), and 28 (height). Callouts include M5 (2x) for the mounting holes, 9 (width), 4 (width), 10±0.02 (width), M5 (4x) for the pilot line holes, 2 Ø7h6 (4x) for the pilot line holes, 80 for the bottom flange, and 2 12 12 for the pilot line holes.

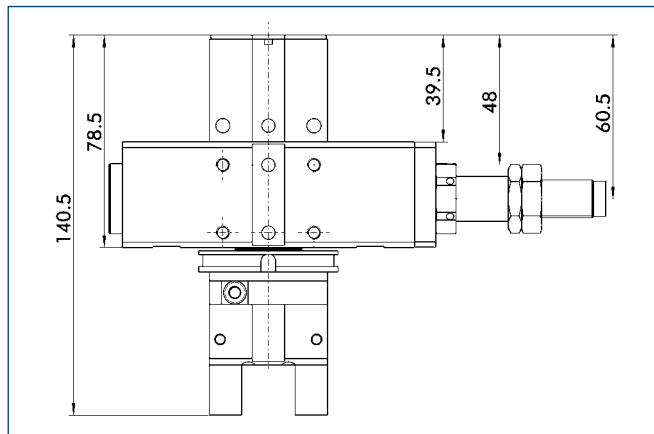
- 

Gripping force safety device, K/S



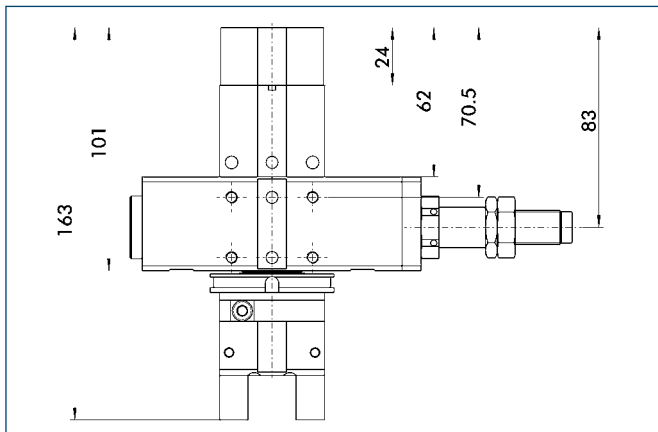
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X

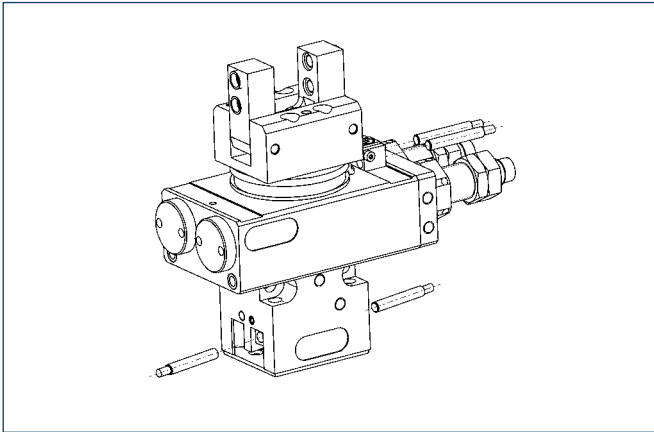


This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Sensor systems



End-position monitoring:

Inductive proximity switch, can be directly mounted

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 16-X	0313333	Bracket, sensor	
GMNS 16-G	0313334	Bracket, sensor, straight cable extension	•
GMNS 16-W	0313335	Bracket, sensor, angled cable extension	

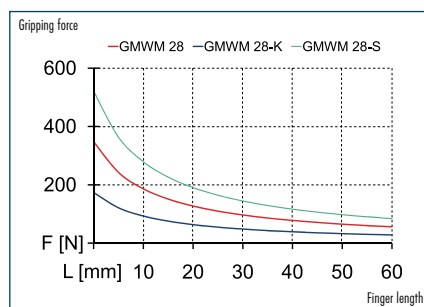
❗ Two sensors are needed for each gripper



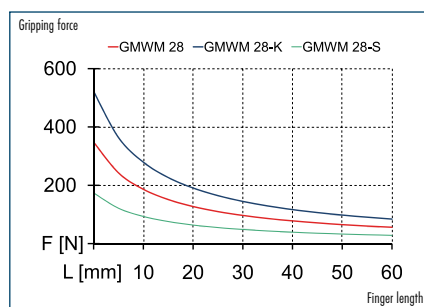
You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.



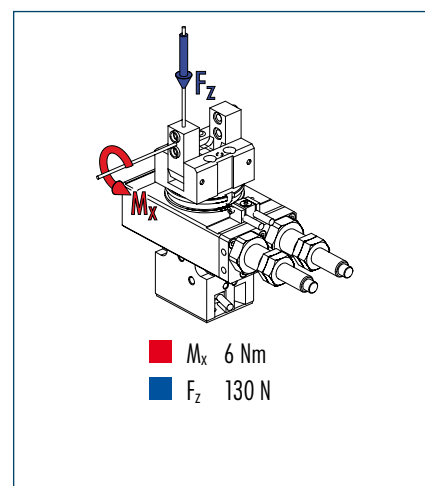
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Moment load



① Moments and forces apply per base jaw and may occur at the same time. The jaw movement might have to be limited and be free from striking and bouncing. For heavy structures or superstructures with high mass moment of inertia, limiting is necessary to ensure that rotary movement takes place without striking or bouncing.

Technical data

Designation		RWM 2128	RWM 2128-K	RWM 2128-S
	ID	0313314	0313316	0313315
Closing angle per jaw:	[°]	16	16	16
Opening angle per jaw	[°]	16	16	16
Closing moment	[Nm]	4.0	6.0	
Opening moment	[Nm]	4.0		6.0
Protected by spring against closing moment	[Nm]		2.0	
Protected by spring against opening moment	[Nm]			2.0
Torque	[Nm]	1.9	1.9	1.9
Angle of rotation	[°]	190	190	190
End position adjustability	[°]	Continuous	Continuous	Continuous
Fluid consumption for gripping per cycle	[cm ³]	9.05	9.05	9.05
Fluid consumption for swiveling per cycle	[cm ³]	23.8	23.8	23.8
Mass	[kg]	1.68	1.84	1.84
Nominal operating pressure	[bar]	6	6	6
Minimum pressure for gripping	[bar]	3	5	5
Maximum pressure for gripping	[bar]	8	8	8
Minimum pressure for swiveling	[bar]	3	3	3
Maximum pressure for swiveling	[bar]	8	8	8
Closing time for gripping	[s]	0.05	0.04	0.06
Opening time for gripping	[s]	0.05	0.06	0.04
Max. permissible finger length	[mm]	40	40	40
IP rating		40	40	40
Min. ambient temperature	[°C]	5	5	5
Max. ambient temperature	[°C]	60	60	60
Repeat accuracy for gripping	[mm]	± 0.02	± 0.02	± 0.02
Repeat accuracy for swiveling	[°]	± 0.044	± 0.044	± 0.044

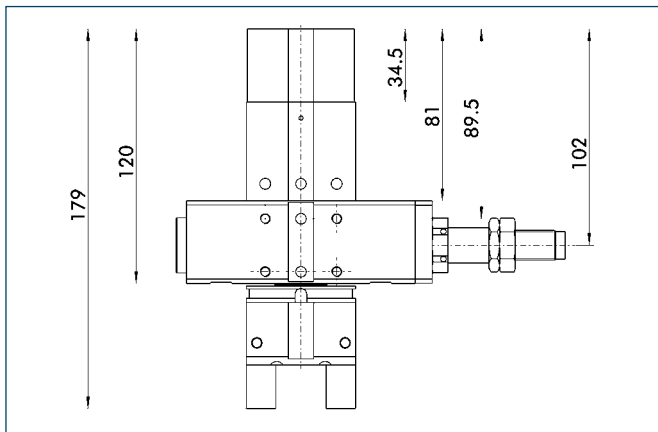
OPTIONS and their characteristics

Designation		RWM 2128-D	RWM 2128-Z	RWM 2128-X
	ID	0313317	0313319	0313318
Mass	[kg]	1.74	1.92	1.92

[illegible]

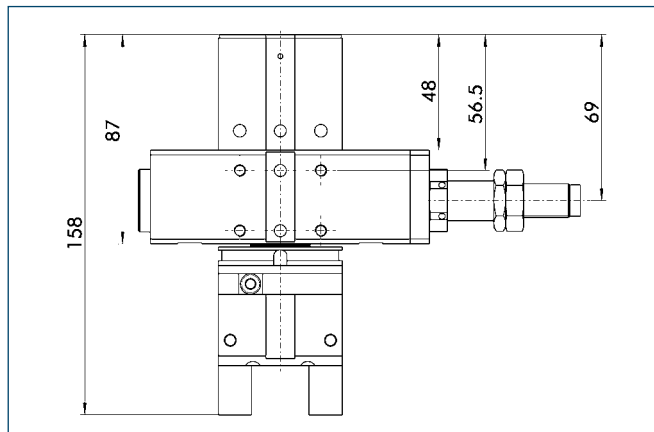
- 

Gripping force safety device, K/S



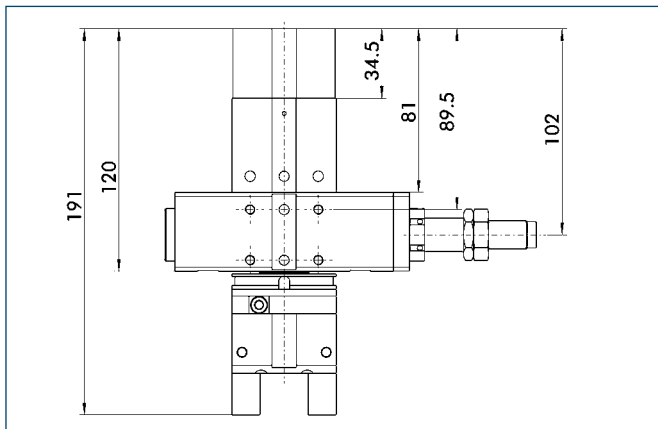
The mechanical gripping force safety device ensures that a minimum clamping force will be applied even if there is a drop in pressure. This acts as closing grip force for the K variant and as opening grip force for the S variant. The gripping force safety device can be installed without other components from the K variant into the S variant and vice versa. Besides this, the gripping force safety device can be used to increase gripping force or for single actuated gripping.

Rotation adapter D



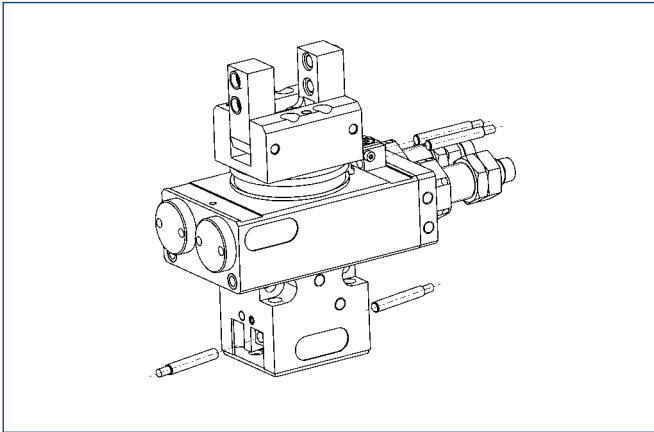
The two-part rotation adapter enables the gripping head to be continuously rotated in order to flexibly adjust the position of the gripper fingers on the workpiece. Only the clamping screw has to be released to do this. After the adjustment has been made, a hole can be drilled out to place a cylindrical pin or a fixing thread for clamping.

Gripping force safety device + rotation adapter Z/X



This variant combines the functions of the gripping force safety device with that of the rotation adapter. The gripping force safety device acts as closing grip force for the Z variant and as opening grip force for the X variant.

Sensor systems



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

Rotating motion

Designation	ID	Scope of delivery	Recommended product
RMNS 12-X	0313041	1 x bracket, 2 x sensors, 2 x operating targets	
RMNS 12-G	0313042	1 x bracket, 2 x sensors, 2 x operating targets, 2 x straight cable extensions	•
RMNS 12-W	0313043	1 x bracket, 2 x sensors, 2 x operating targets, 2 x angled cable extensions	

Gripping movement

Designation	ID	Scope of delivery	Recommended product
GMNS 28-X	0313336	Bracket, sensor	
GMNS 28-G	0313337	Bracket, sensor, straight cable extension	•
GMNS 28-W	0313338	Bracket, sensor, angled cable extension	

❗ Two sensors are needed for each gripper



You can find further information and components for the accessories mentioned here in the "Accessories" part of the catalog.

Assembly systems



ASSEMBLY SYSTEMS

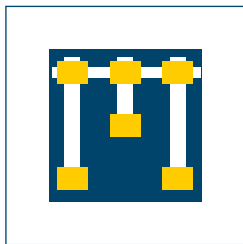
Series	Size	Page
Assembly systems		
Pillar profile modular system		
Pillars	Ø 20 mm	390
Pillars	Ø 35 mm	394
Pillars	Ø 55 mm	398

Assembly systems

Assembly systems · Pillar profile modular system



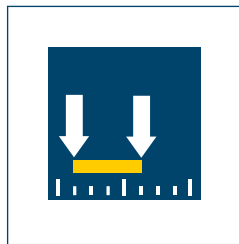
Sizes
020 .. 055



Clamping elements
max. 9

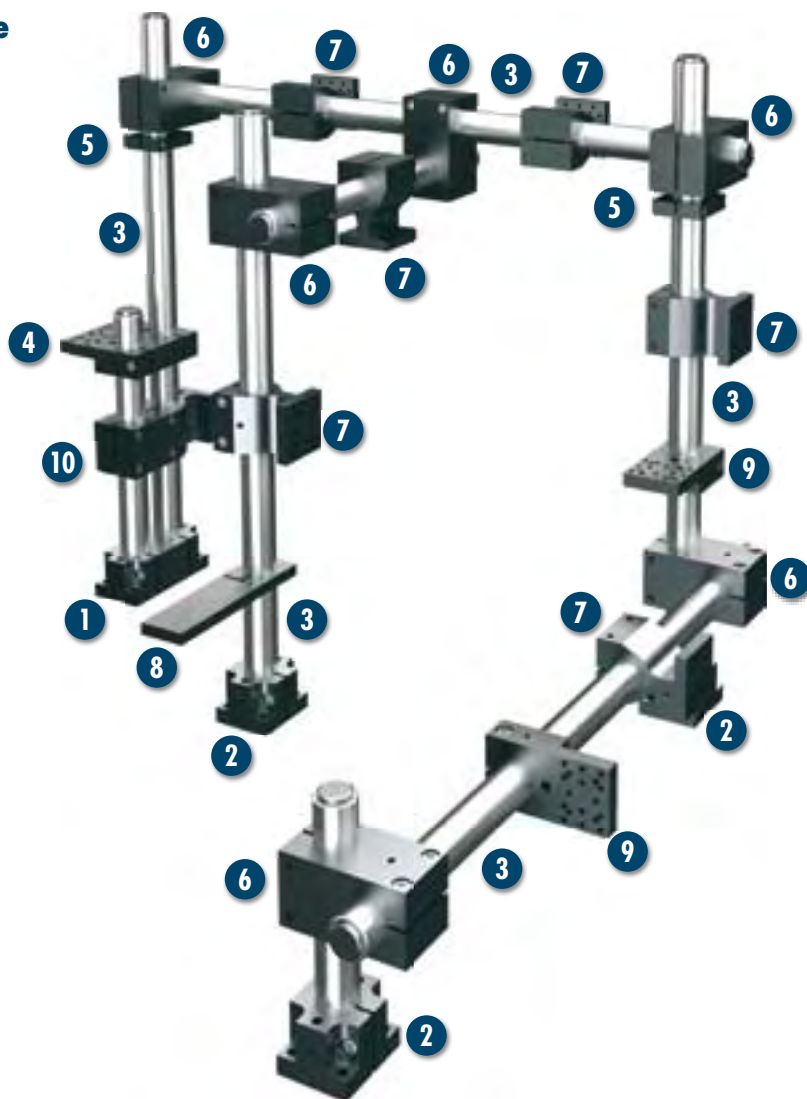


Pillar length
max. 3000 mm



Shape and positional tolerances
0.05

Application example



Versatile pillar profile modular system, Ø 35 mm, with horizontal and vertical mounting plates which can be used for the GEMOTEC system or for other assemblies

1 Double socket, SOD 035

2 Single base support, SOE 035

3 Hollow pillar, SLH 035-...

4 Double mounting plate, horizontal, APDH 035

5 Set collar, STR 035

6 Cross connector, KVB 035

7 Single mounting plate, vertical, APEV 035

8 Mounting plate, MPL 035

9 Single mounting plate, horizontal, APEH 035

10 Double mounting plate, vertical, APDV 035

Assembly system

Pillars, hard-chromium plated, ground

Area of application

For the assembly of GEMOTEC modular system units as well as for structures of all types in clean or contaminated environments. The many clamping elements permit numerous combinations of pillars and mounting plates.

Advantages – your benefits

Steel pillars

For a high degree of rigidity and low-vibration movements

Precise shape and positional tolerances

For high accuracy even for long pillars

Several pillar diameters

For minimum interfering contours of the entire system at optimal rigidity

Many clamping elements

Standardized, with a large variety of combinations possible

Assembly and centering bore holes

Reproducible, precisely angled assembly of the elements



General information about the series

Pillars

Steel, hard-chromium plated, ground

Sockets, mounting plates

Aluminum, anodized

Scope of delivery

Including attachment screws

Warranty

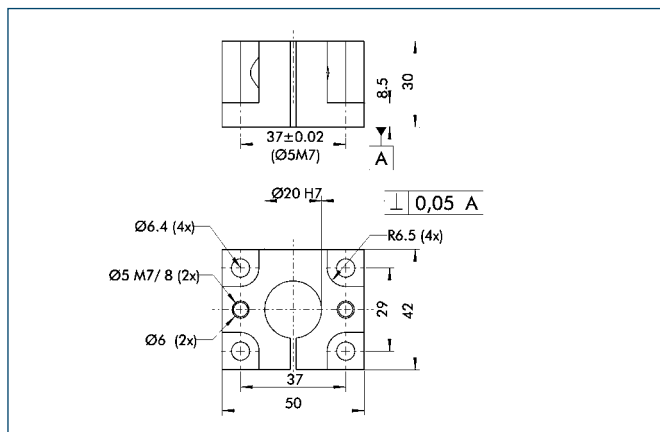
24 months

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

Pillar diameter, 20 mm

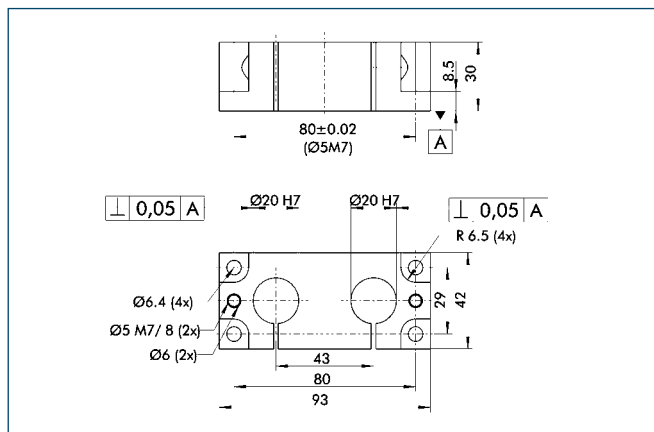
Assembly systems • Pillar profile modular system

Single base support, SOE 020



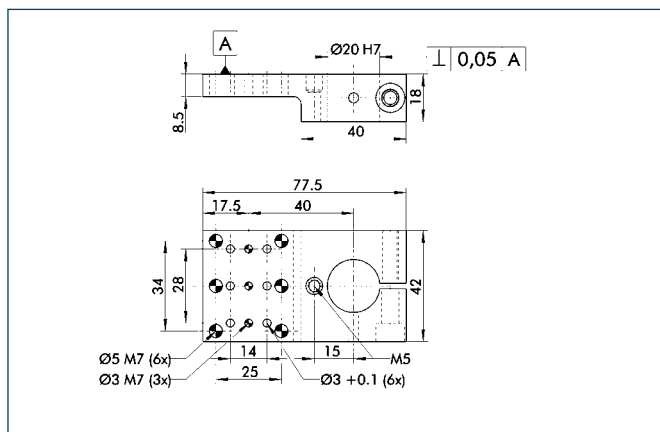
Designation	ID	Material
SOE 020	0313611	Aluminum

Double socket, SOD 020



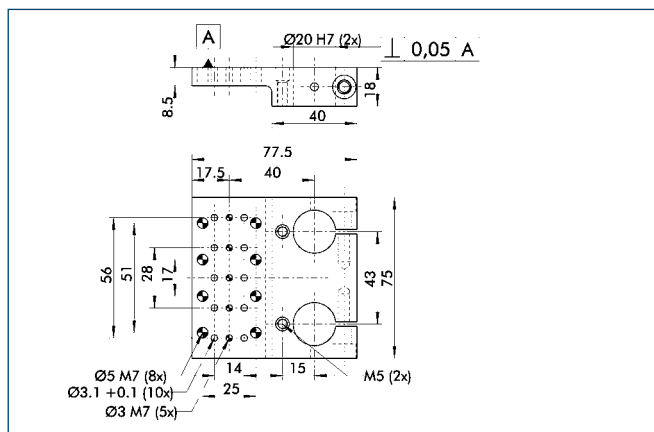
Designation	ID	Material
SOD 020	0313612	Aluminum

Single mounting plate, horizontal, APEH 020



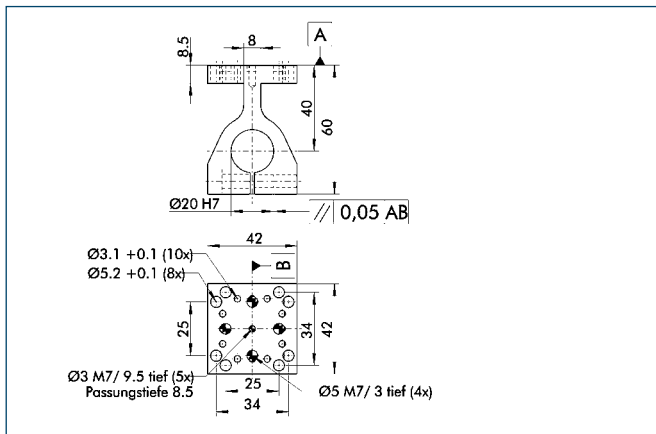
Designation	ID	Material
APEH 020	0313613	Aluminum

Double mounting plate, horizontal, APDH 020



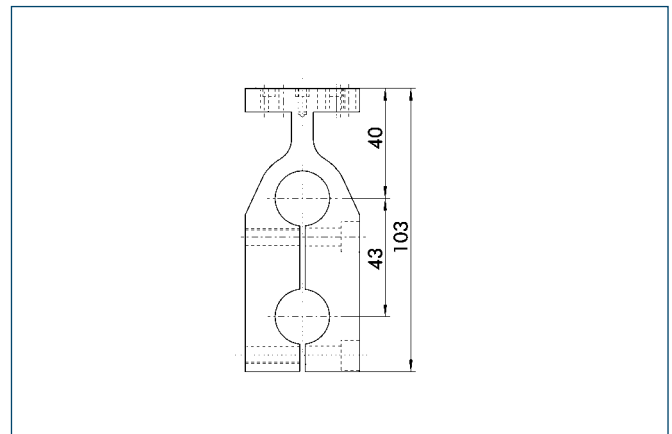
Designation	ID	Material
APDH 020	0313614	Aluminum

Single mounting plate, vertical, APEV 020



Designation	ID	Material
APEV 020	0313615	Aluminum

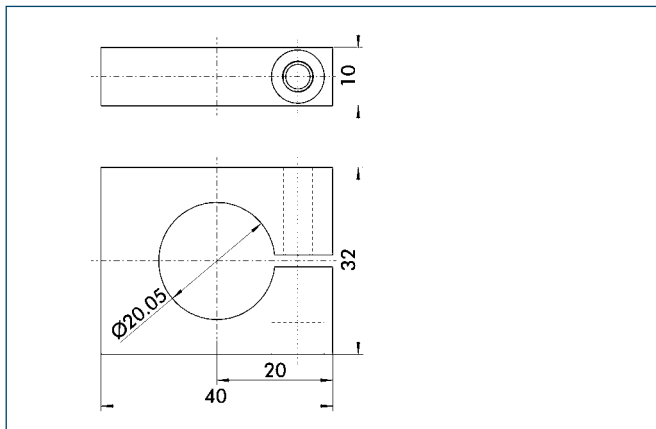
Double mounting plate, vertical, APDV 020



Missing dimensions: see APEV 020

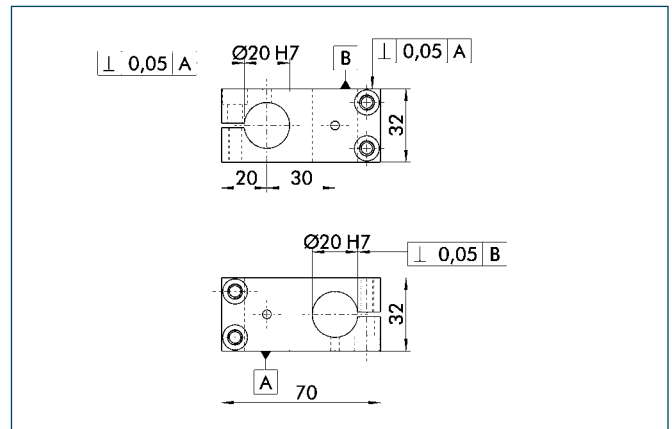
Designation	ID	Material
APDV 020	0313616	Aluminum

Set collar, STR 020



Designation	ID	Material
STR 020	0313617	Aluminum

Cross connector, KVB 020

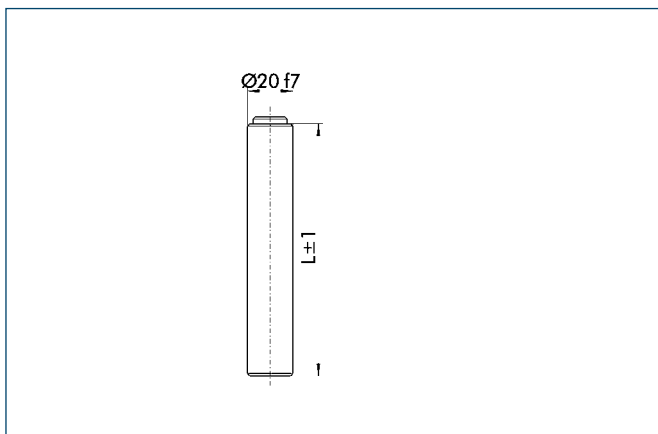


Designation	ID	Material
KVB 020	0313618	Aluminum

Pillar diameter, 20 mm

Assembly systems · Pillar profile modular system

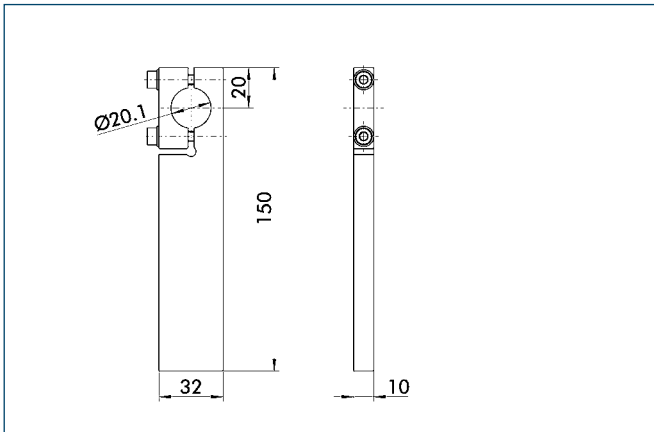
Hollow pillar, SLH 020



Designation	ID	Material	L [mm]
SLH-020-0100	0313620	Steel	100
SLH-020-0110	0313621	Steel	110
SLH-020-0120	0313622	Steel	120
SLH-020-0130	0313623	Steel	130
SLH-020-0140	0313624	Steel	140
SLH-020-0150	0313625	Steel	150
SLH-020-0160	0313626	Steel	160
SLH-020-0170	0313627	Steel	170
SLH-020-0180	0313628	Steel	180
SLH-020-0190	0313629	Steel	190
SLH-020-0200	0313630	Steel	200
SLH-020-0210	0313631	Steel	210
SLH-020-0220	0313632	Steel	220
SLH-020-0230	0313633	Steel	230
SLH-020-0240	0313634	Steel	240
SLH-020-0250	0313635	Steel	250
SLH-020-0260	0313636	Steel	260
SLH-020-0270	0313637	Steel	270
SLH-020-0280	0313638	Steel	280
SLH-020-0290	0313639	Steel	290
SLH-020-0300	0313640	Steel	300
SLH-020-0310	0313641	Steel	310
SLH-020-0320	0313642	Steel	320
SLH-020-0330	0313643	Steel	330
SLH-020-0340	0313644	Steel	340
SLH-020-0350	0313645	Steel	350
SLH-020-0360	0313646	Steel	360
SLH-020-0370	0313647	Steel	370
SLH-020-0380	0313648	Steel	380
SLH-020-0390	0313649	Steel	390
SLH-020-0400	0313650	Steel	400
SLH-020-0410	0313651	Steel	410
SLH-020-0420	0313652	Steel	420
SLH-020-0430	0313653	Steel	430
SLH-020-0440	0313654	Steel	440
SLH-020-0450	0313655	Steel	450
SLH-020-0460	0313656	Steel	460

Designation	ID	Material	L [mm]
SLH-020-0470	0313657	Steel	470
SLH-020-0480	0313658	Steel	480
SLH-020-0490	0313659	Steel	490
SLH-020-0500	0313660	Steel	500

Mounting plate, MPL 020

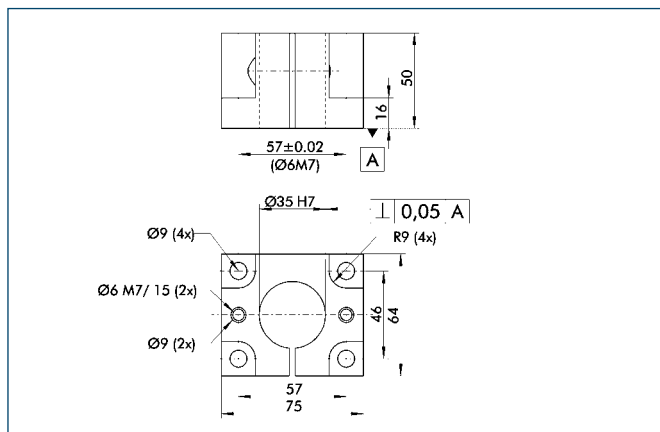


Designation	ID	Material
MPL 020	0313619	Aluminum

Pillar diameter, 35 mm

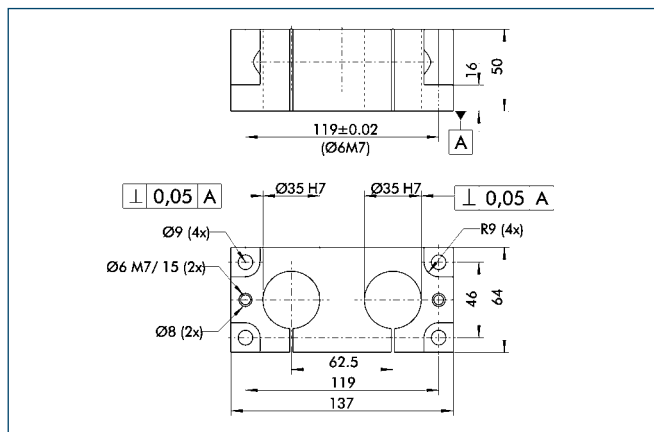
Assembly systems • Pillar profile modular system

Single base support, SOE 035



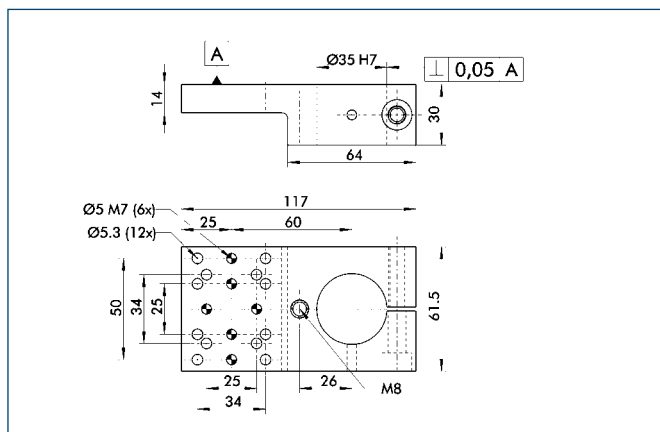
Designation	ID	Material
SOE 035	0313891	Aluminum

Double socket, SOD 035



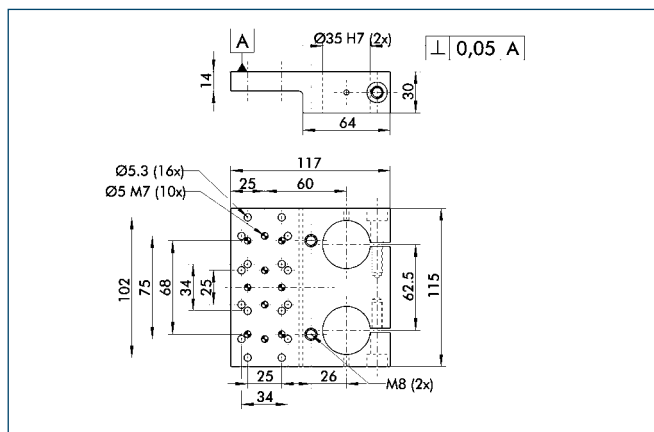
Designation	ID	Material
SOD 035	0313892	Aluminum

Single mounting plate, horizontal, APEH 035



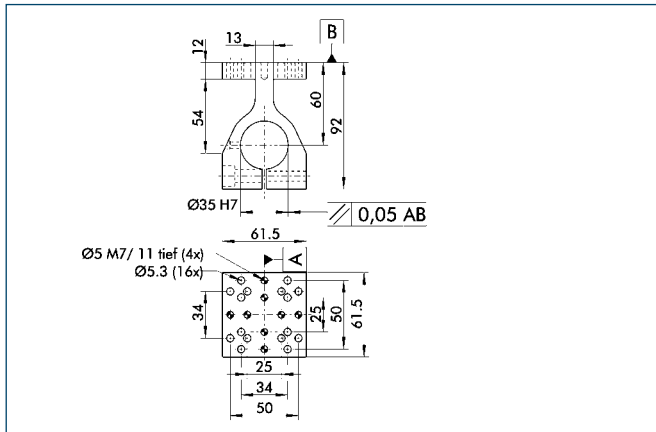
Designation	ID	Material
APEH 035	0313893	Aluminum

Double mounting plate, horizontal, APDH 035



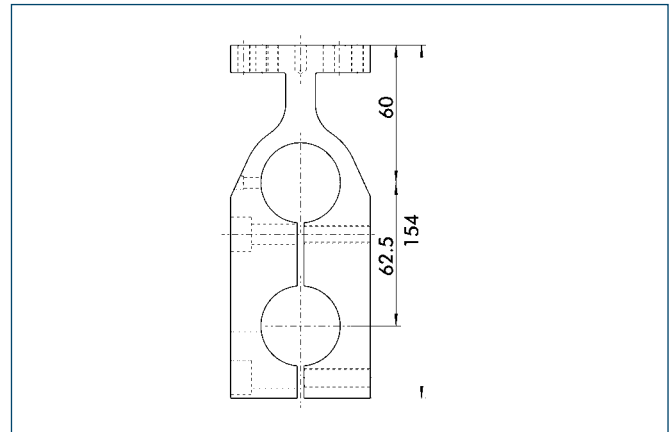
Designation	ID	Material
APDH 035	0313894	Aluminum

Single mounting plate, vertical, APEV 035



Designation	ID	Material
APEV 035	0313895	Aluminum

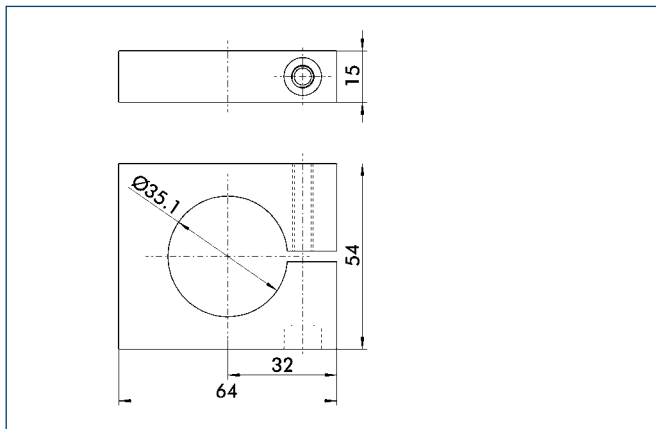
Double mounting plate, vertical, APDV 035



Missing dimensions: see APEV 035

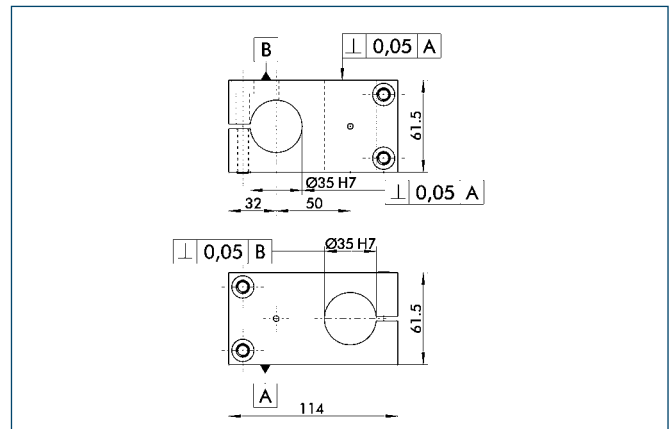
Designation	ID	Material
APDV 035	0313896	Aluminum

Set collar, STR 035



Designation	ID	Material
STR 035	0313897	Aluminum

Cross connector, KVB 035

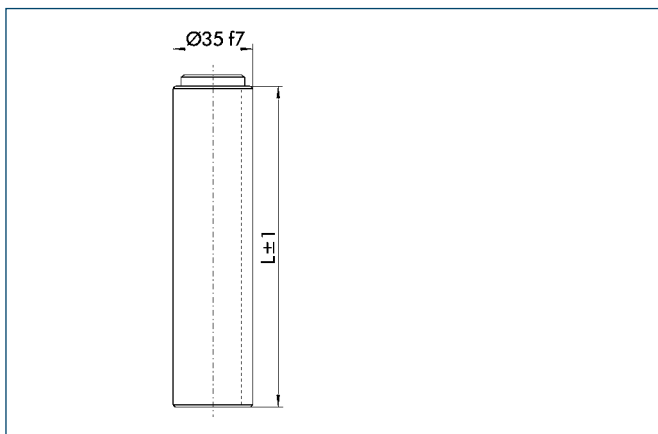


Designation	ID	Material
KVB 035	0313898	Aluminum

Pillar diameter, 35 mm

Assembly systems · Pillar profile modular system

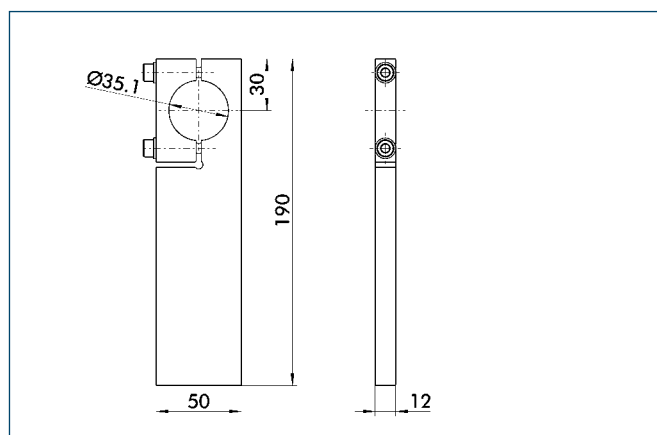
Hollow pillar, SLH 035



Designation	ID	Material	L [mm]
SLH-035-0100	0313800	Steel	100
SLH-035-0110	0313801	Steel	110
SLH-035-0120	0313802	Steel	120
SLH-035-0130	0313803	Steel	130
SLH-035-0140	0313804	Steel	140
SLH-035-0150	0313805	Steel	150
SLH-035-0160	0313806	Steel	160
SLH-035-0170	0313807	Steel	170
SLH-035-0180	0313808	Steel	180
SLH-035-0190	0313809	Steel	190
SLH-035-0200	0313810	Steel	200
SLH-035-0210	0313811	Steel	210
SLH-035-0220	0313812	Steel	220
SLH-035-0230	0313813	Steel	230
SLH-035-0240	0313814	Steel	240
SLH-035-0250	0313815	Steel	250
SLH-035-0260	0313816	Steel	260
SLH-035-0270	0313817	Steel	270
SLH-035-0280	0313818	Steel	280
SLH-035-0290	0313819	Steel	290
SLH-035-0300	0313820	Steel	300
SLH-035-0310	0313821	Steel	310
SLH-035-0320	0313822	Steel	320
SLH-035-0330	0313823	Steel	330
SLH-035-0340	0313824	Steel	340
SLH-035-0350	0313825	Steel	350
SLH-035-0360	0313826	Steel	360
SLH-035-0370	0313827	Steel	370
SLH-035-0380	0313828	Steel	380
SLH-035-0390	0313829	Steel	390
SLH-035-0400	0313830	Steel	400
SLH-035-0410	0313831	Steel	410
SLH-035-0420	0313832	Steel	420
SLH-035-0430	0313833	Steel	430
SLH-035-0440	0313834	Steel	440
SLH-035-0450	0313835	Steel	450
SLH-035-0460	0313836	Steel	460

Designation	ID	Material	L [mm]
SLH-035-0470	0313837	Steel	470
SLH-035-0480	0313838	Steel	480
SLH-035-0490	0313839	Steel	490
SLH-035-0500	0313840	Steel	500
SLH-035-0510	0313841	Steel	510
SLH-035-0520	0313842	Steel	520
SLH-035-0530	0313843	Steel	530
SLH-035-0540	0313844	Steel	540
SLH-035-0550	0313845	Steel	550
SLH-035-0560	0313846	Steel	560
SLH-035-0570	0313847	Steel	570
SLH-035-0580	0313848	Steel	580
SLH-035-0590	0313849	Steel	590
SLH-035-0600	0313850	Steel	600
SLH-035-0610	0313851	Steel	610
SLH-035-0620	0313852	Steel	620
SLH-035-0630	0313853	Steel	630
SLH-035-0640	0313854	Steel	640
SLH-035-0650	0313855	Steel	650
SLH-035-0660	0313856	Steel	660
SLH-035-0670	0313857	Steel	670
SLH-035-0680	0313858	Steel	680
SLH-035-0690	0313859	Steel	690
SLH-035-0700	0313860	Steel	700
SLH-035-0710	0313861	Steel	710
SLH-035-0720	0313862	Steel	720
SLH-035-0730	0313863	Steel	730
SLH-035-0740	0313864	Steel	740
SLH-035-0750	0313865	Steel	750
SLH-035-0760	0313866	Steel	760
SLH-035-0770	0313867	Steel	770
SLH-035-0780	0313868	Steel	780
SLH-035-0790	0313869	Steel	790
SLH-035-0800	0313870	Steel	800
SLH-035-0810	0313871	Steel	810
SLH-035-0820	0313872	Steel	820
SLH-035-0830	0313873	Steel	830

Mounting plate, MPL 035



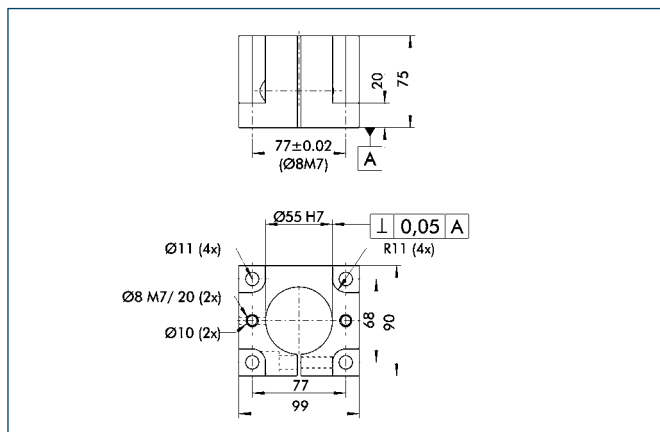
Designation	ID	Material	L [mm]
SLH-035-0840	0313874	Steel	840
SLH-035-0850	0313875	Steel	850
SLH-035-0860	0313876	Steel	860
SLH-035-0870	0313877	Steel	870
SLH-035-0880	0313878	Steel	880
SLH-035-0890	0313879	Steel	890
SLH-035-0900	0313880	Steel	900
SLH-035-0910	0313881	Steel	910
SLH-035-0920	0313882	Steel	920
SLH-035-0930	0313883	Steel	930
SLH-035-0940	0313884	Steel	940
SLH-035-0950	0313885	Steel	950
SLH-035-0960	0313886	Steel	960
SLH-035-0970	0313887	Steel	970
SLH-035-0980	0313888	Steel	980
SLH-035-0990	0313889	Steel	990
SLH-035-1000	0313890	Steel	1000

Designation	ID	Material
MPL 035	0313899	Aluminum

Pillar diameter, 55 mm

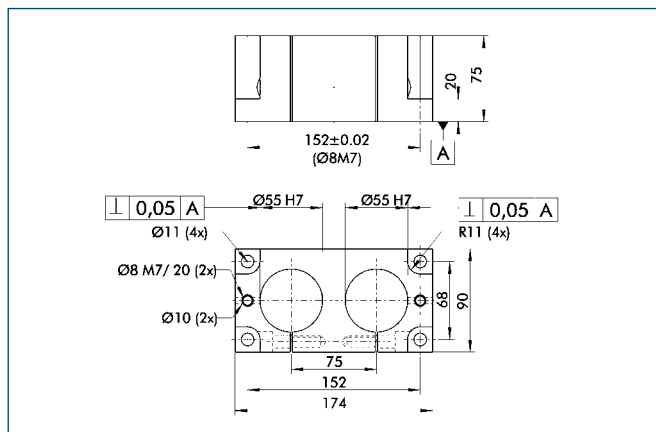
Assembly systems • Pillar profile modular system

Single base support, SOE 055



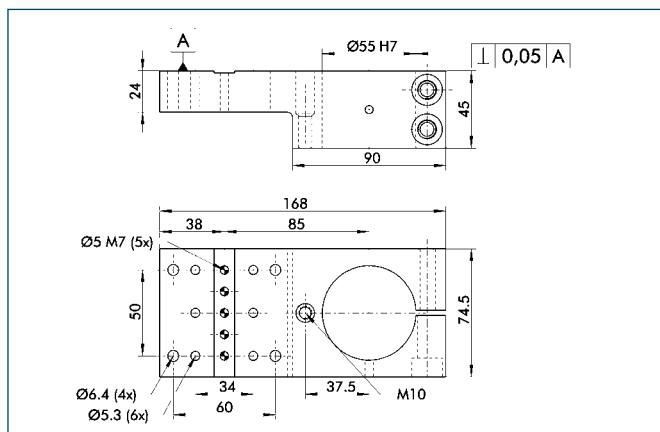
Designation	ID	Material
SOE 055	0313408	Aluminum

Double socket, SOD 055



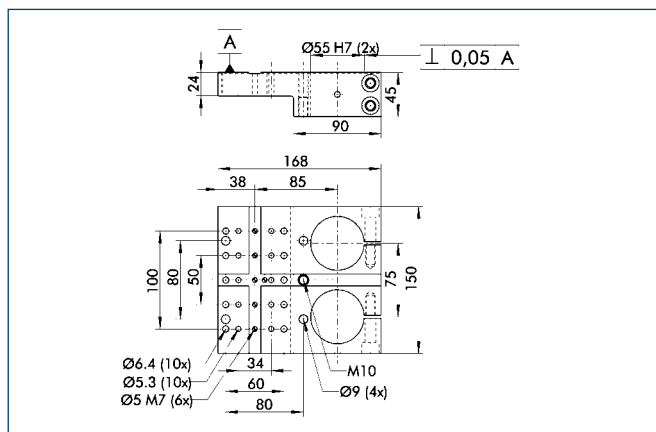
Designation	ID	Material
SOD 055	0313409	Aluminum

Single mounting plate, horizontal, APEH 085



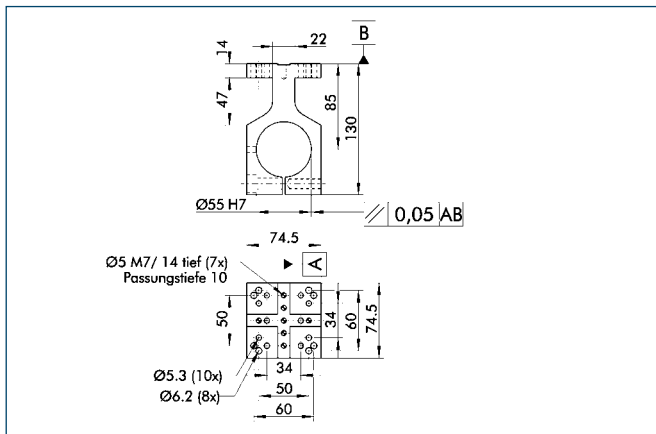
Designation	ID	Material
APEH 085	0313413	Aluminum

Double mounting plate, horizontal, APDH 085



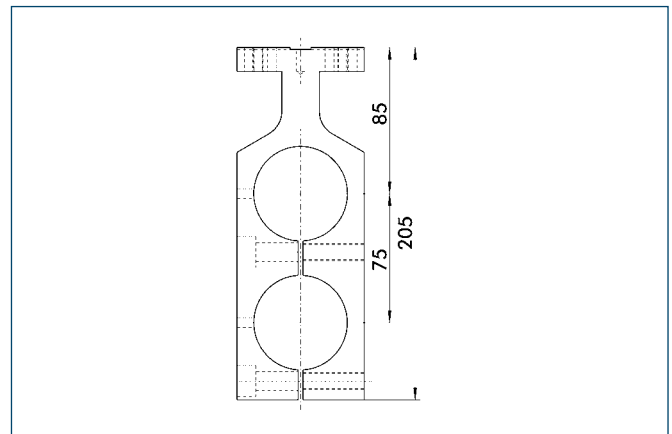
Designation	ID	Material
APDH 085	0313414	Aluminum

Single mounting plate, vertical, APEV 085



Designation	ID	Material
APEV 085	0313415	Aluminum

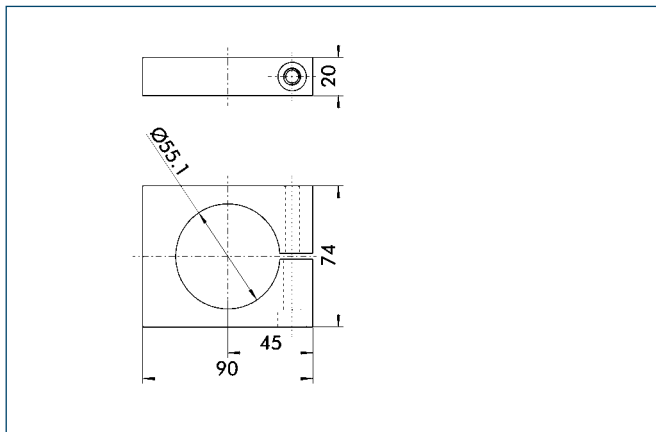
Double mounting plate, vertical, APDV 085



Missing dimensions: see APEV 035

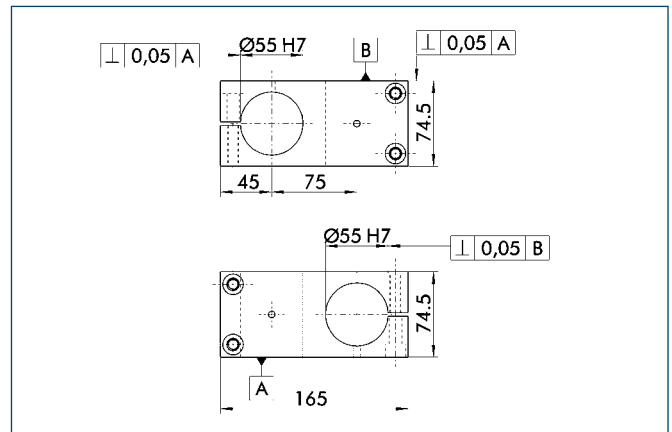
Designation	ID	Material
APDV 085	0313416	Aluminum

Set collar, STR 055



Designation	ID	Material
STR 055	0313417	Aluminum

Cross connector, KVB 075

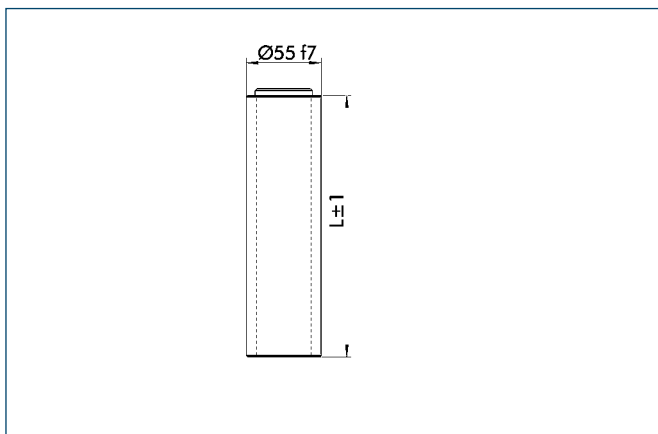


Designation	ID	Material
KVB 075	0313418	Aluminum

Pillar diameter, 55 mm

Assembly systems · Pillar profile modular system

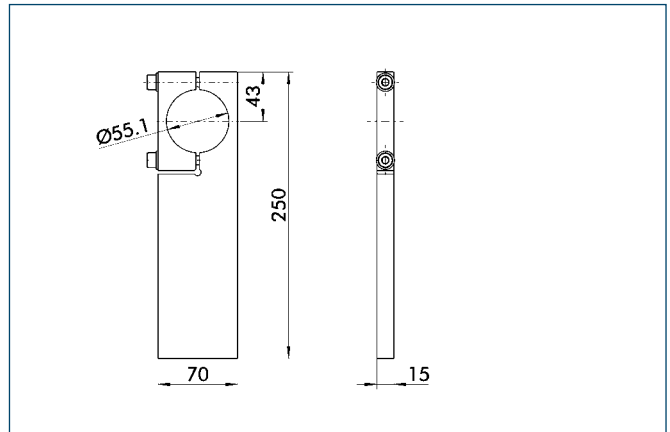
Hollow pillar, SLH 055



Designation	ID	Material	L [mm]
SLH 055-0150	0313700	Steel	150
SLH 055-0160	0313701	Steel	160
SLH 055-0170	0313702	Steel	170
SLH 055-0180	0313703	Steel	180
SLH 055-0190	0313704	Steel	190
SLH 055-0200	0313705	Steel	200
SLH 055-0210	0313706	Steel	210
SLH 055-0220	0313707	Steel	220
SLH 055-0230	0313708	Steel	230
SLH 055-0240	0313709	Steel	240
SLH 055-0250	0313710	Steel	250
SLH 055-0260	0313711	Steel	260
SLH 055-0270	0313712	Steel	270
SLH 055-0280	0313713	Steel	280
SLH 055-0290	0313714	Steel	290
SLH 055-0300	0313715	Steel	300
SLH 055-0310	0313716	Steel	310
SLH 055-0320	0313717	Steel	320
SLH 055-0330	0313718	Steel	330
SLH 055-0340	0313719	Steel	340
SLH 055-0350	0313720	Steel	350
SLH 055-0360	0313721	Steel	360
SLH 055-0370	0313722	Steel	370
SLH 055-0380	0313723	Steel	380
SLH 055-0390	0313724	Steel	390
SLH 055-0400	0313725	Steel	400
SLH 055-0410	0313726	Steel	410
SLH 055-0420	0313727	Steel	420
SLH 055-0430	0313728	Steel	430
SLH 055-0440	0313729	Steel	440
SLH 055-0450	0313730	Steel	450
SLH 055-0460	0313731	Steel	460
SLH 055-0470	0313732	Steel	470
SLH 055-0480	0313733	Steel	480
SLH 055-0490	0313734	Steel	490
SLH 055-0500	0313735	Steel	500
SLH 055-0510	0313736	Steel	510

Designation	ID	Material	L [mm]
SLH 055-0520	0313737	Steel	520
SLH 055-0530	0313738	Steel	530
SLH 055-0540	0313739	Steel	540
SLH 055-0550	0313740	Steel	550
SLH 055-0560	0313741	Steel	560
SLH 055-0570	0313742	Steel	570
SLH 055-0580	0313743	Steel	580
SLH 055-0590	0313744	Steel	590
SLH 055-0600	0313745	Steel	600
SLH 055-0610	0313746	Steel	610
SLH 055-0620	0313747	Steel	620
SLH 055-0630	0313748	Steel	630
SLH 055-0640	0313749	Steel	640
SLH 055-0650	0313750	Steel	650
SLH 055-0660	0313751	Steel	660
SLH 055-0670	0313752	Steel	670
SLH 055-0680	0313753	Steel	680
SLH 055-0690	0313754	Steel	690
SLH 055-0700	0313755	Steel	700
SLH 055-0710	0313756	Steel	710
SLH 055-0720	0313757	Steel	720
SLH 055-0730	0313758	Steel	730
SLH 055-0740	0313759	Steel	740
SLH 055-0750	0313760	Steel	750
SLH 055-0760	0313761	Steel	760
SLH 055-0770	0313762	Steel	770
SLH 055-0780	0313763	Steel	780
SLH 055-0790	0313764	Steel	790
SLH 055-0800	0313765	Steel	800
SLH 055-0810	0313766	Steel	810
SLH 055-0820	0313767	Steel	820
SLH 055-0830	0313768	Steel	830
SLH 055-0840	0313769	Steel	840
SLH 055-0850	0313770	Steel	850
SLH 055-0860	0313771	Steel	860
SLH 055-0870	0313772	Steel	870
SLH 055-0880	0313773	Steel	880

Mounting plate, MPL 250



Designation	ID	Material	L
			[mm]
SLH 055-0890	0313774	Steel	890
SLH 055-0900	0313775	Steel	900
SLH 055-0910	0313776	Steel	910
SLH 055-0920	0313777	Steel	920
SLH 055-0930	0313778	Steel	930
SLH 055-0940	0313779	Steel	940
SLH 055-0950	0313780	Steel	950
SLH 055-0960	0313781	Steel	960
SLH 055-0970	0313782	Steel	970
SLH 055-0980	0313783	Steel	980
SLH 055-0990	0313784	Steel	990
SLH 055-1000	0313785	Steel	1000

Designation	ID	Material
MPL 250	0313419	Aluminum

Accessories



ACCESSORIES

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ASG		442
Inductive proximity switch		
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STV		450
Centering elements		
ZHU		452

Overview of variants

Accessories • Combination variants • Overview of variants

Your fast route to standard combinations

With pneumatically and electrically driven linear, rotary, and gripping modules, the GEMOTEC system offers individual handling solutions in many versions and sizes. An enormous variety of automated systems can be made out of modular components by using a few standard modules – fast, simple and professional.

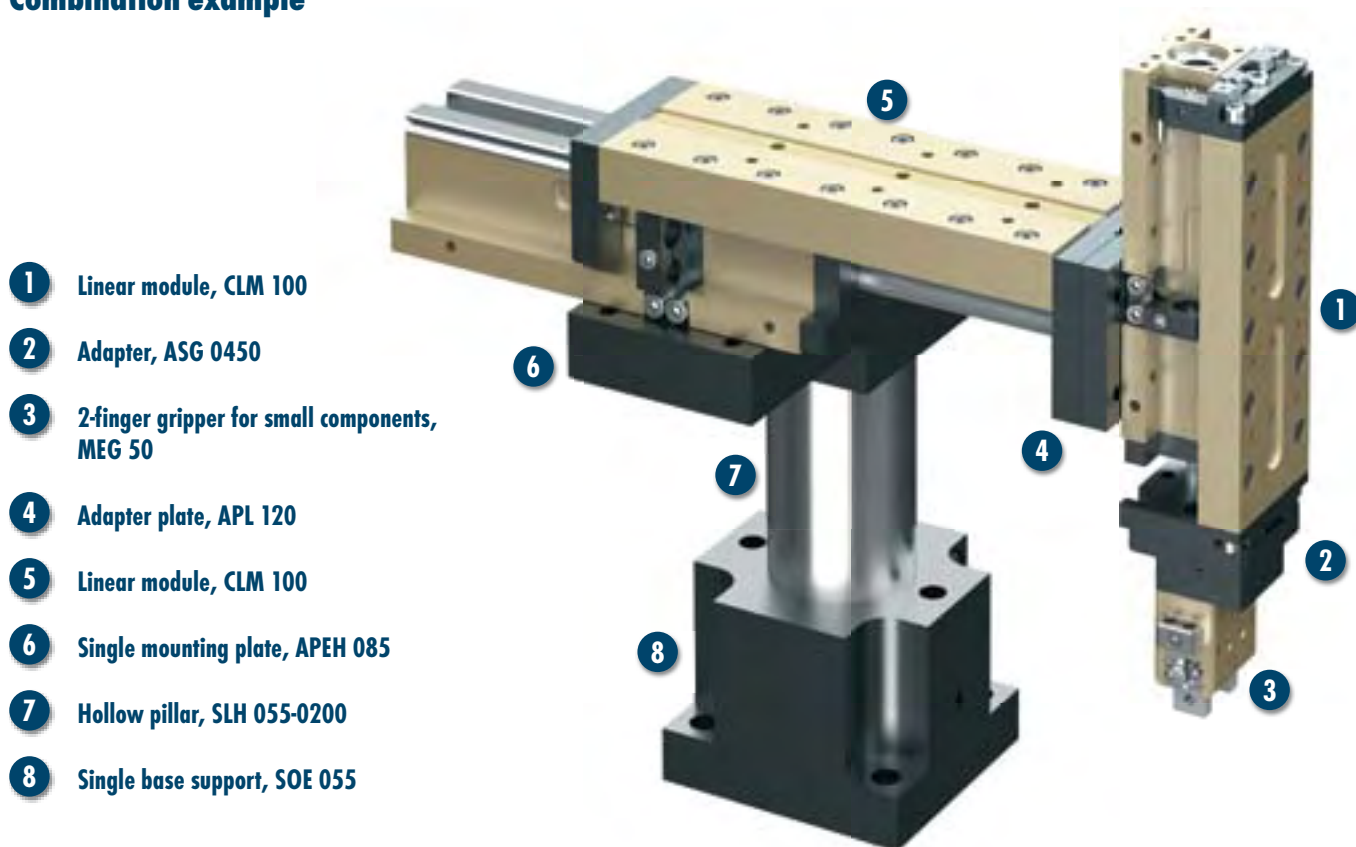
To ensure that it is possible to have several thousand variants without mechanical machining, the individual standard modules can be freely and precisely combined with adapter plates and centering parts.

Select your combination variants

On pages 406/407 you will find an overview of the variants with possible combinations made from standard modules. Once you have selected a basic module, you can find the right standardized adapter plates and centering parts on the pages following 408.

For automatic calculation of combination coordinates as well as the necessary centering and standard parts and screws, please use the KOMBIBOX software at www.schunk.com.

Combination example

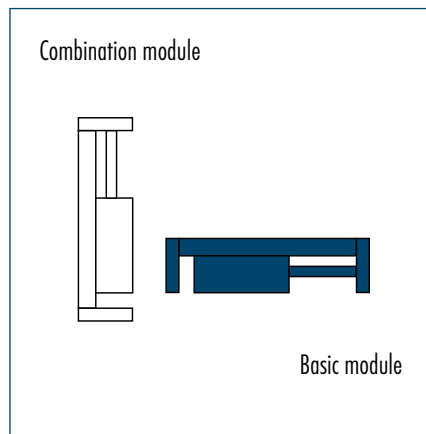


① The different variants always show the relative arrangement of the combinations to each other. When combining modules, it is irrelevant how the basic module (or the combination module) is configured in the application.

Overview of variants

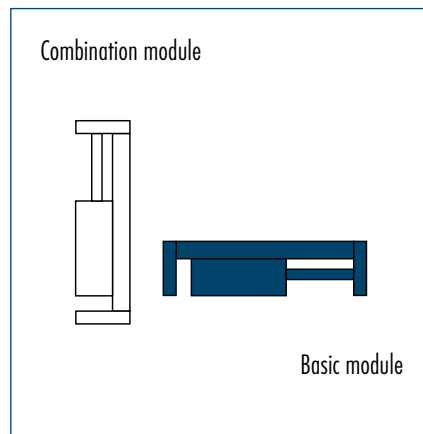
Accessories • Combination variants • Overview of variants

Variant 1



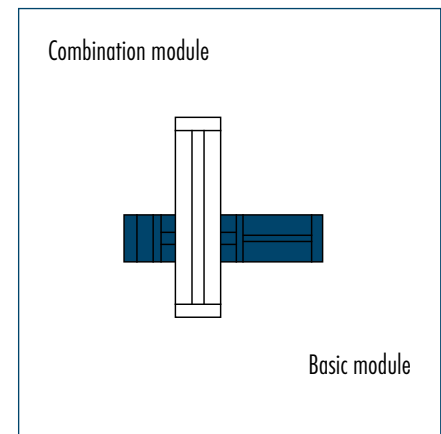
Linear module base body on the linear module face plate

Variant 2



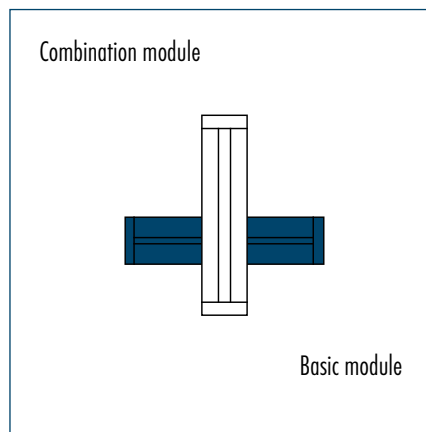
Linear module slide on the linear module face plate

Variant 3



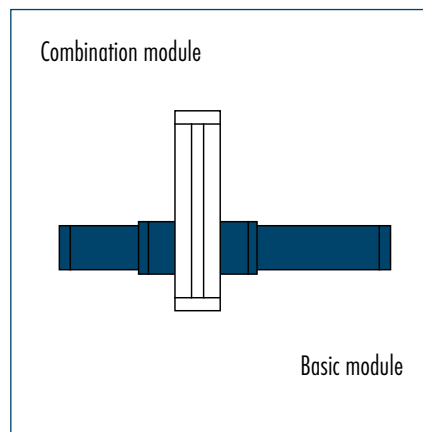
Linear module base body or the slide on the linear module base body

Variant 4



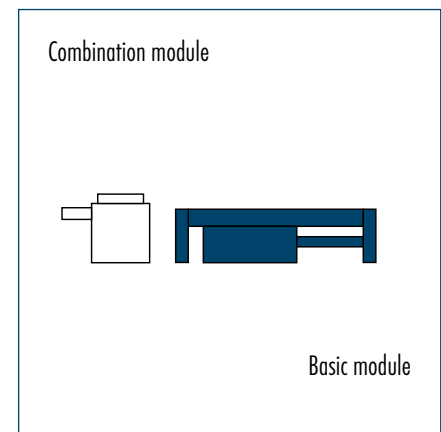
Linear module base body or the slide on the linear module slide

Variant 5



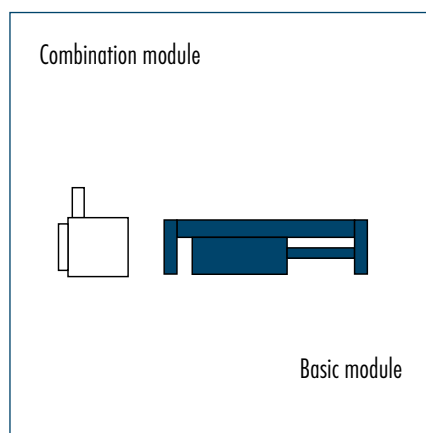
Linear module base body or the slide on the portal module slide

Variant 6



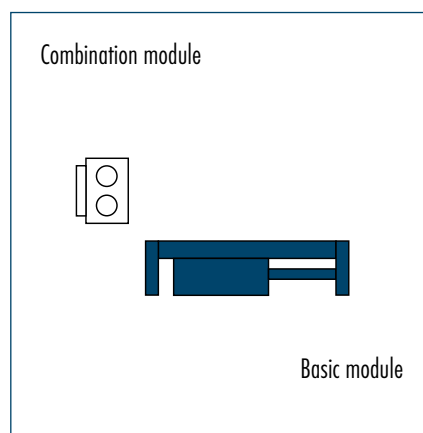
Rotary module side surface on the linear module face plates

Variant 7



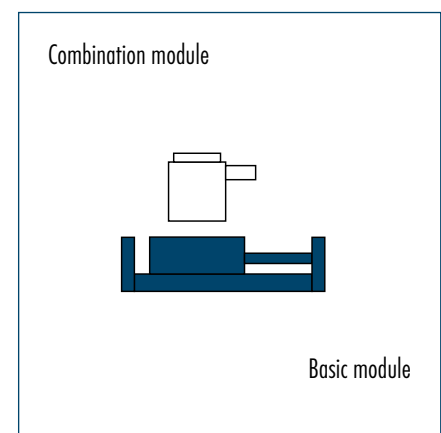
Rotary module bottom on the linear module face plates

Variant 8



Rotary module side surface on the linear module face plates

Variant 9

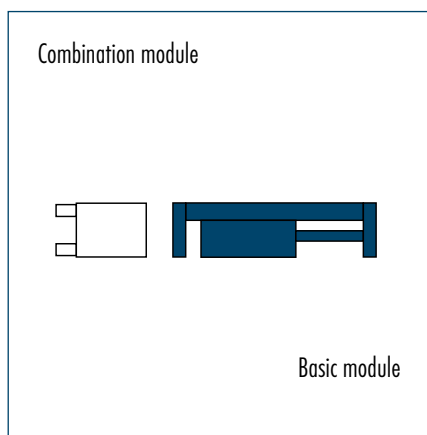


Rotary module bottom on the linear module base body

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

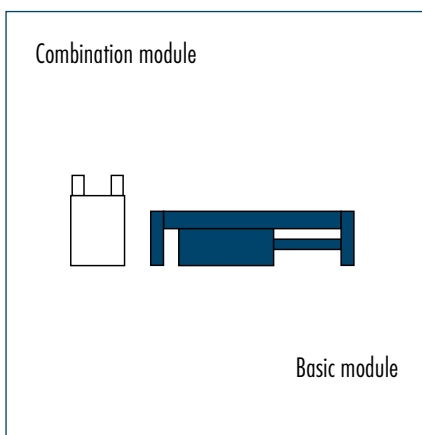
① The different variants always show the relative arrangement of the combinations to each other. When combining modules, it is irrelevant how the basic module (or the combination module) is configured in the application.

Variant 10



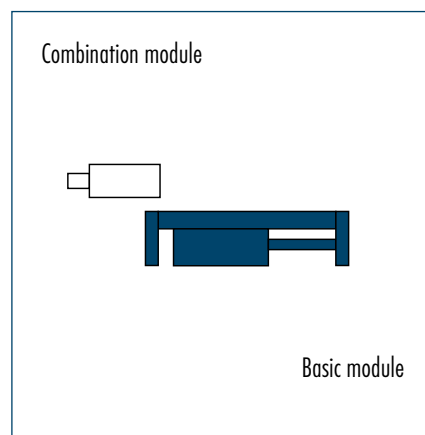
Gripping module bottom on the linear module face plates

Variant 11



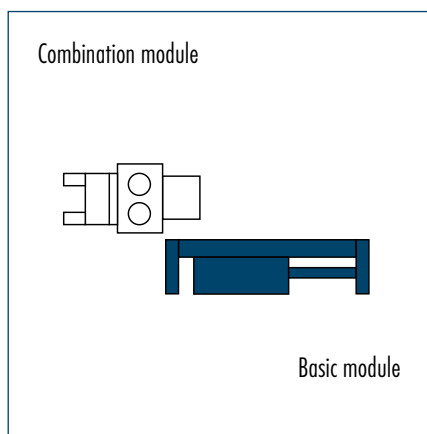
Gripping module side surface on the linear module face plate

Variant 12



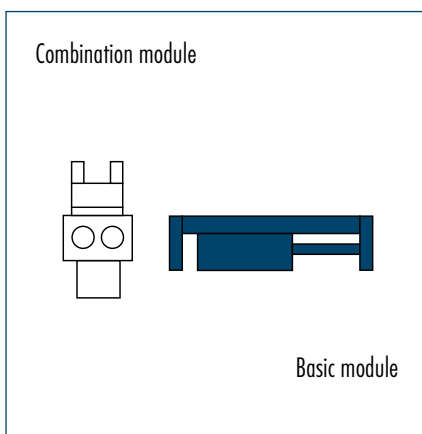
Gripping module side surface on the linear module face plates

Variant 13



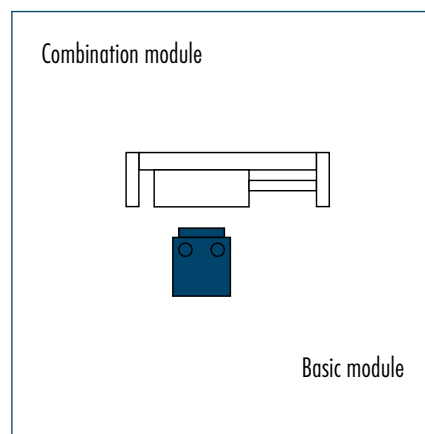
Gripping rotary module side surface on the linear module face plates

Variant 14



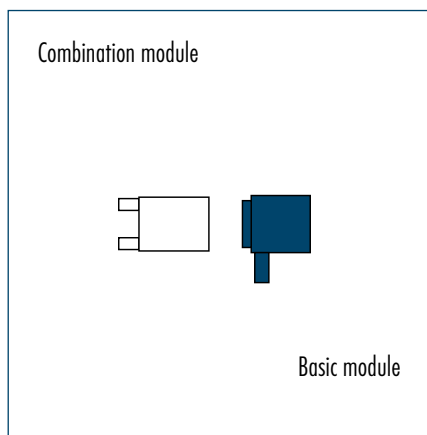
Gripping rotary module side surface on the linear module face plates

Variant 15



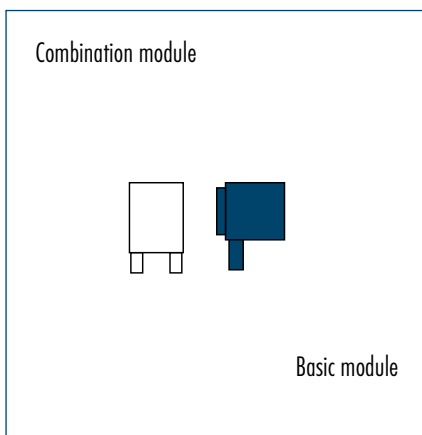
Linear module base body on the rotary module flange

Variant 16



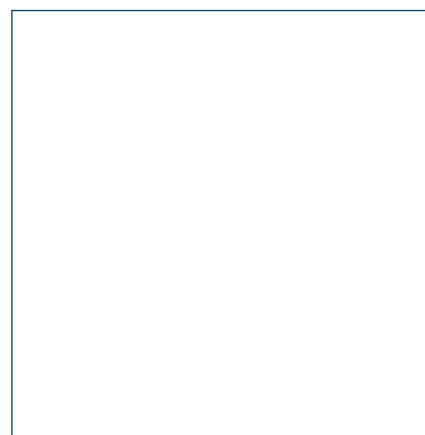
Gripping module bottom on the rotary module flange

Variant 17



Gripping module side surface on the rotary module flange

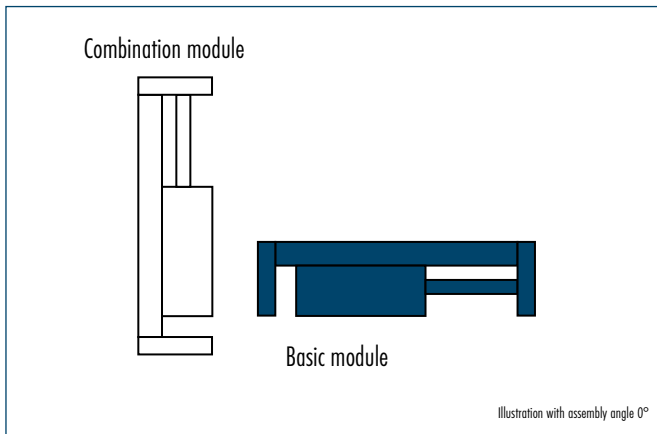
Special variants on request



The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

① The different variants always show the relative arrangement of the combinations to each other. When combining modules, it is irrelevant how the basic module (or the combination module) is configured in the application.

Linear module base body on the linear module face plate

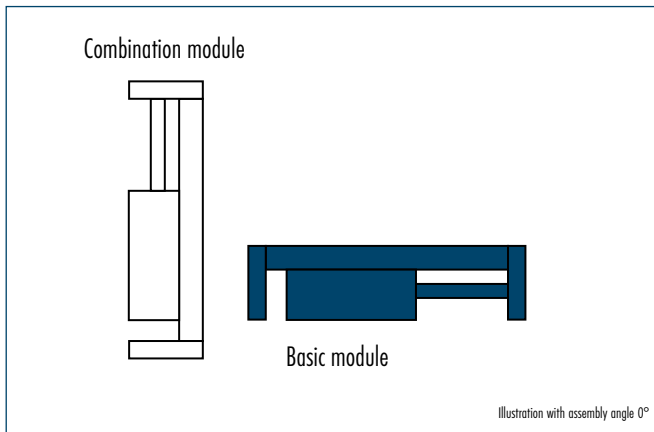


- ¹⁾ Only required for assembly angles 0°/180°
²⁾ Only required for the LM basic module
³⁾ Only required for the CLM combination module
⁴⁾ Only required for the LM/CLM basic module
 * direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
CLM 08	CLM 08	APL 030	APL 030			1xVW 30 ¹⁾
CLM 10	CLM 08	APL 030	APL 030			1xVW 30 ¹⁾
	CLM 10	APL 030	APL 030			1xVW 30 ¹⁾
LM/CLM/KLM 25	CLM 08	APL 052	APL 052			
	CLM 10	APL 052	APL 052			
	LM/CLM/KLM 25	APL 050	APL 050			
LM/CLM 50	LM/CLM/KLM 25	APL 101	APL 100	1xLMZL 50		
	LM/CLM/KLM 50	APL 100	APL 101	1xLMZL 50	1xLMZL 50 ³⁾	1xVW 50 ¹⁾
	ELM 23	APL 101	APL 100	1xLMZL 50		
KLM 50	LM/CLM/KLM 25	APL 111	APL 110	1xLMZL 50		
	LM/CLM/KLM 50	APL 110	APL 111	1xLMZL 50	1xLMZL 50 ³⁾	
	ELM 23	APL 111	APL 110	1xLMZL 50		
LM/CLM/KLM 100	LM/CLM/KLM 25	APL 121	APL 120	1xLMZL 100		1xVW 50 ^{1,4)} , 1xLM 100-99 ²⁾
	LM/CLM/KLM 50	APL 120	APL 121	1xLMZL 100	1xLMZL 50 ³⁾	1xVW 50 ^{1,4)} , 1xLM 100-99 ²⁾
	LM/CLM/KLM 100	APL 120	APL 121	1xLMZL 100	1xLMZL 50 ³⁾	1xVW 50 ^{1,4)} , 1xLM 100-99 ²⁾
	ELM 23	APL 121	APL 120	1xLMZL 100		1xVW 50 ^{1,4)}
	ELM 37	APL 120	APL 121	1xLMZL 100		1xVW 50 ^{1,4)}
LM/CLM 200	LM/CLM/KLM 25	APL 131	APL 130	1xLMZL 100		
	LM/CLM/KLM 50	*	APL 131	1xLMZL 100		
	LM/CLM/KLM 100	*	APL 131	1xLMZL 100		1xVW 100 ¹⁾
	LM/CLM 200	APL 130	APL 131	1xLMZL 100	1xLMZL 100 ³⁾	1xVW 100 ¹⁾
	LM 300	APL 130	APL 131	1xLMZL 100		1xVW 100 ¹⁾
	ELM 23	APL 131	APL 130	1xLMZL 100		
	ELM 37	*	APL 131	1xLMZL 100		1xVW 100 ¹⁾
LM 300	LM/CLM/KLM 25	APL 141	APL 140	1xLMZL 100		
	LM/CLM/KLM 50	*	APL 141	1xLMZL 100		
	LM/CLM/KLM 100	*	APL 141	1xLMZL 100		1xVW 100 ¹⁾
	LM/CLM 200	APL 140	APL 141	1xLMZL 100	1xLMZL 100 ³⁾	1xVW 100 ¹⁾
	LM 300	APL 140	APL 141	1xLMZL 100		1xVW 100 ¹⁾
	ELM 23	APL 141	APL 140	1xLMZL 100		
ELM 23	ELM 37	*	APL 141	1xLMZL 100		1xVW 100 ¹⁾
	CLM 08	APL 052	APL 052			
	CLM 10	APL 052	APL 052			
	LM/CLM/KLM 25	APL 050	APL 050			
	LM/CLM/KLM 50	APL 050	APL 050		1xLMZL 50 ³⁾	1xVW 50 ¹⁾
ELM 37	ELM 23	APL 050	APL 050			
	LM/CLM/KLM 25	APL 101	APL 100	1xLMZL 50		1xVW 50 ¹⁾
	LM/CLM/KLM 50	APL 100	APL 101	1xLMZL 50	1xLMZL 50 ¹⁾	1xVW 50 ¹⁾
	ELM 23	APL 101	APL 100	1xLMZL 50		1xVW 50 ¹⁾
	ELM 37	APL 100	APL 101	1xLMZL 50		1xVW 50 ¹⁾

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Linear module slide on the linear module face plate



¹⁾ Only required for assembly angles 0°/180°

²⁾ Only required for the LM basic module

³⁾ For direct assembly, 1xLMZL 50

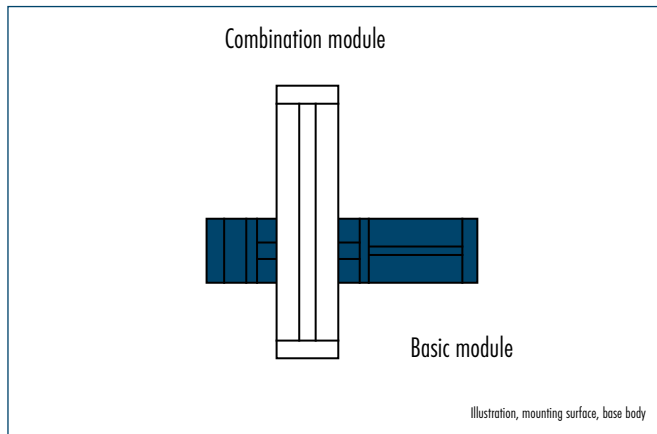
⁴⁾ Only required for the LM/CLM basic module

* direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
CLM 08	CLM 08	APL 030	APL 030			1xVW 30 ¹⁾
CLM 10	CLM 08	APL 030	APL 030			1xVW 30 ¹⁾
	CLM 10	APL 030	APL 030			1xVW 30 ¹⁾
LM/CLM/KLM 25	CLM 08	APL 052	APL 052			
	CLM 10	APL 052	APL 052			
	LM/CLM 25	APL 050	APL 050			
LM/CLM 50	LM/CLM 25	APL 101	APL 100	1xLMZL 50		
	LM/CLM 50	APL 100	APL 101	1xLMZL 50		1xVW 50 ¹⁾
	ELM 23	APL 101	APL 100	1xLMZL 50		
KLM 50	LM/CLM 25	APL 111	APL 110	1xLMZL 50		
	LM/CLM 50	APL 110	APL 111	1xLMZL 50		
	ELM 23	APL 111	APL 110	1xLMZL 50		
LM/CLM/KLM 100	LM/CLM 25	APL 121	APL 120	1xLMZL 100		1xVW 50 ^{1,4)} ; 1xLM 100-99 ²⁾
	LM/CLM 50	APL 120	APL 121	1xLMZL 100		1xVW 50 ^{1,4)} ; 1xLM 100-99 ²⁾
	LM/CLM 100	-	APL 121	1xLMZL 100		1xLM 100-99 ²⁾
	ELM 23	APL 121	APL 120	1xLMZL 100		1xVW 50 ^{1,4)}
LM/CLM 200	LM/CLM 25	APL 131	APL 130	1xLMZL 100		
	LM/CLM 50	*	APL 131	1xLMZL 100 ³⁾		
	LM/CLM 100	APL 130	APL 131	1xLMZL 100		1xVW 100 ¹⁾
	LM/CLM 200	APL 130	APL 131	1xLMZL 100		1xVW 100 ¹⁾
	LM 300	APL 130	APL 131	1xLMZL 100		1xVW 100 ¹⁾
	ELM 23	APL 131	APL 130	1xLMZL 100		
	ELM 37	APL 130	APL 131	1xLMZL 100	1xLMZL 100	1xVW 100 ¹⁾
LM 300	LM/CLM 25	APL 141	APL 140	1xLMZL 100		
	LM/CLM 50	*	APL 141	1xLMZL 100		
	LM/CLM 100	*	APL 141	1xLMZL 100 ³⁾		1xVW 100 ¹⁾
	LM/CLM 200	APL 140	APL 141	1xLMZL 100		1xVW 100 ¹⁾
	LM 300	APL 140	APL 141	1xLMZL 100		1xVW 100 ¹⁾
	ELM 23	APL 141	APL 140	1xLMZL 100		
	ELM 37	*	APL 141	1xLMZL 100	1xLMZL 100	1xVW 100 ¹⁾
ELM23	CLM 08	APL 052	APL 052			
	CLM 10	APL 052	APL 052			
	LM/CLM 25	APL 050	APL 050			
	LM/CLM 50	APL 050	APL 050			1xVW 50 ¹⁾
	ELM 23	APL 050	APL 050			
ELM 37	LM/CLM 25	APL 101	APL 100	1xLMZL 50		1xVW 50 ¹⁾
	LM/CLM 50	APL 100	APL 101	1xLMZL 50		1xVW 50 ¹⁾
	ELM 23	APL 101	APL 100	1xLMZL 50		1xVW 50 ¹⁾

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Linear module base body or the slide on the linear module base body



¹⁾ Only required for the CLM combination module

²⁾ Only required for slide assembly

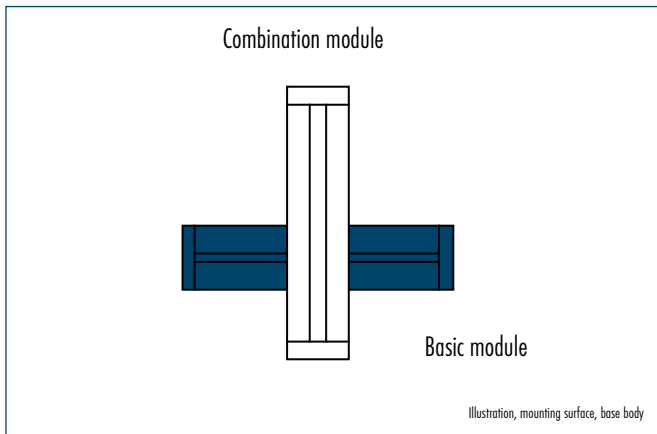
Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		
		G	S	Centering, basic module	Centering, combination module	Other
CLM 08	CLM 08	APL 032	APL 032			
CLM 10	CLM 08	APL 032	APL 032			
	CLM 10	APL 032	APL 032			
LM/CLM/KLM 25	CLM 08	APL 053	APL 053			
	CLM 10	APL 053	-			
	LM/CLM 25	APL 310	APL 310			
	KLM 25	APL 310	-			
LM/CLM/KLM 50	LM/CLM 25	APL 200	APL 200			
	KLM 25	APL 200	-			
	LM/CLM 50	APL 200	APL 200			
	KLM 50	APL 200	-			
	ELM 23	APL 200	APL 200			
LM/CLM/KLM 100	LM/CLM 25	APL 210	APL 210			
	KLM 25	APL 210	-			
	LM/CLM 50	APL 210	APL 210		1xLMZL 50 ¹⁾	
	KLM 50	APL 210	-			
	LM/CLM 100	APL 210	APL 210		1xLMZL 50 ¹⁾	
	KLM 100	APL 210	-			
	ELM 23	APL 210	APL 210			
	ELM 37	APL 210	APL 210		1xLMZL 100	
LM/CLM 200 LM 300	LM/CLM 50	APL 220	APL 220			
	KLM 50	APL 220	-			
	LM/CLM 100	APL 220	APL 220		1xLMZL 50 ¹⁾	
	KLM 100	APL 220	-			
	LM/CLM 200	APL 220	APL 220			
	LM 300	APL 220	APL 220			
	ELM 37	APL 220	APL 220		1xLMZL 100 ²⁾	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		
		G	S	Centering, basic module	Centering, combination module	Other
ELM23	CLM 08	APL 053	APL 053			
	CLM 10	APL 053	-			
	LM/CLM 25	APL 310	APL 310			
	KLM 25	APL 310	-			
	ELM 23	APL 310	APL 310			
ELM 37	LM/CLM 25	APL 200	APL 200			
	KLM 25	APL 200	-			
	LM/CLM 50	APL 200	APL 200			
	KLM 50	APL 200	-			
	LM/CLM 100	APL 210	APL 210		1xLMZL 50 ¹⁾	
	KLM 100	APL 210	-			
	ELM 23	APL 210	APL 210			
	ELM 37	APL 210	APL 210		1xLMZL 100 ²⁾	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Linear module base body or the slide on the linear module slide



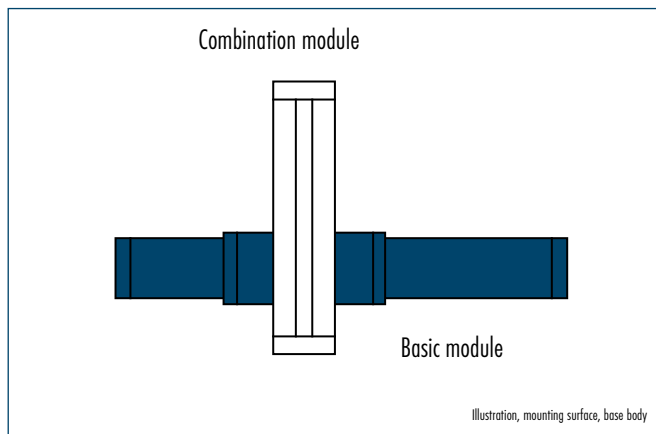
¹⁾ Only required for the CLM combination module

²⁾ Only required for slide assembly

Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		Remark
		G	S	Centering, basic module	Centering, combination module	
CLM 08	CLM 08	APL 032	APL 032			
CLM 10	CLM 08	APL 032	APL 032			
	CLM 10	APL 032	APL 032			
LM/CLM 25	CLM 08	APL 053	APL 053			
	CLM 10	APL 053	-			
	LM/CLM 25	APL 310	APL 310			
	KLM 25	APL 310	-			
LM/CLM 50	LM/CLM 25	APL 200	APL 200			CLM basic module starting from 50 mm stroke
	KLM 25	APL 200	-			CLM basic module starting from 50 mm stroke
	LM/CLM 50	APL 200	APL 200			CLM basic module starting from 50 mm stroke
	KLM 50	APL 200	-			CLM basic module starting from 50 mm stroke
	ELM 23	APL 200	APL 200			CLM basic module starting from 50 mm stroke
LM/CLM 100	LM/CLM 25	APL 210	APL 210			
	KLM 25	APL 210	-			
	LM 50	APL 210	APL 210			
	KLM 50	APL 210	-			
	ELM 23	APL 210	APL 210			
LM/CLM 200 LM 300	LM/CLM 50	APL 220	APL 220		1xLMZL 50 ¹⁾	CLM basic module starting from 100 mm stroke
	KLM 50	APL 220	-			CLM basic module starting from 100 mm stroke
	LM/CLM 100	APL 220	APL 220		1xLMZL 50 ¹⁾	CLM basic module starting from 100 mm stroke
	KLM 100	APL 220	-			CLM basic module starting from 100 mm stroke
	LM/CLM 200	APL 220	APL 220			CLM basic module starting from 100 mm stroke
	LM 300	APL 220	APL 220			CLM basic module starting from 100 mm stroke
	ELM 37	APL 220	APL 220		1xLMZL 100 ²⁾	CLM basic module starting from 100 mm stroke
ELM23	CLM08	APL 053	APL 053			
	CLM10	APL 053	-			
	LM/CLM 25	APL 310	APL 310			
	KLM 25	APL 310	-			
	ELM 23	APL 310	APL 310			
ELM 37	LM/CLM 25	APL 200	APL 200			
	KLM 25	APL 200	-			
	LM/CLM 50	APL 200	APL 200			
	KLM 50	APL 200	-			
	ELM 23	APL 210	APL 210			

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Linear module base body or the slide on the portal module slide

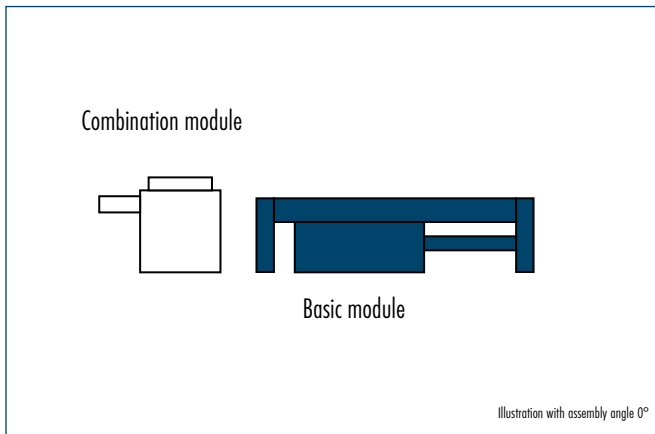


¹⁾ Only required for the CLM combination module

Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		
		G	S	Centering, basic module	Centering, combination module	Other
PMP 16 EPM 37	LM/CLM 50	APL 220	APL 220		1xLMZL 50 ¹⁾	
	KLM 50	APL 220	-			
	LM/CLM 100	APL 220	APL 220		1xLMZL 50 ¹⁾	
	KLM 100	APL 220	-			
	ELM 37	APL 220	APL 220			
PMP 25 EPM 48	LM/CLM 50	APL 220	APL 220		1xLMZL 50 ¹⁾	
	KLM 50	APL 220	-			
	LM/CLM 100	APL 230	APL 230		1xLMZL 50 ¹⁾	
	KLM 100	APL 230	-			
	LM/CLM 200	APL 230	APL 230			
	LM 300	APL 230	APL 230			
	ELM 37	APL 230	APL 230			

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Rotary module side surface on the linear module face plates



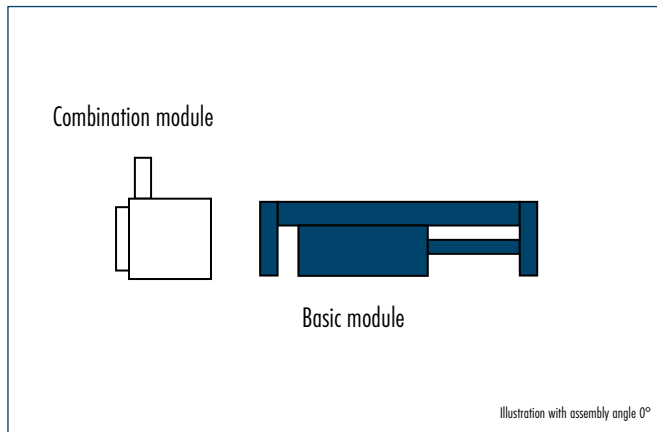
- ¹⁾ Only required for the LM basic module
²⁾ Only required for assembly angles 90°/270°
³⁾ For direct assembly, 1xLMZL 50
 * direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
CLM 08	RM 08	APL 031	APL 031			
CLM 10	RM 08	APL 031	APL 031			
	RM 10	APL 031	APL 031			
LM/CLM/KLM 25	RM 08	APL 052	APL 052			
	RM 10	APL 052	APL 052			
	RM 12	APL 050	APL 050		1xLMZL 50	
LM/CLM 50	RM 12	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RM 15	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RM 21	APL 100	APL 101	1xLMZL 50		
	RM 50	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
KLM 50	RM 12	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	RM 15	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	RM 21	APL 110	APL 111	1xLMZL 50		
	RM 50	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
LM/CLM/KLM 100	RM 12	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 15	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 21	APL 120	APL 121	1xLMZL 100		1xLM 100-99 ¹⁾
	RM 50	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 110	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 200	APL 120	APL 120	1xLMZL 100	1xLMZL 100	1xLM 100-99 ¹⁾
LM/CLM 200	RM 12	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	RM 15	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	RM 21	APL 130	APL 131	1xLMZL 100		
	RM 50	*	APL 131	1xLMZL 100 ³⁾	1xLMZL 50 ²⁾	
	RM 110	*	APL 131	1xLMZL 100 ³⁾	1xLMZL 50 ²⁾	
	RM 200	APL 130	APL 130	1xLMZL 100		

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM 300	RM 12	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	RM 15	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	RM 21	APL 140	APL 141	1xLMZL 100		
	RM 50	*	APL 141	1xLMZL 100 ³⁾	1xLMZL 50 ²⁾	
	RM 110	*	APL 141	1xLMZL 100 ³⁾	1xLMZL 50 ²⁾	
	RM 200	APL 140	APL 140	1xLMZL 100		
ELM23	RM 08	APL 052	APL 052			
	RM 10	APL 052	APL 052			
	RM 12	APL 050	APL 050		1xLMZL 50	
	RM 15	APL 050	APL 050		1xLMZL 50	
	RM 50	APL 050	APL 050		1xLMZL 50	
ELM 37	RM 12	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RM 15	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RM 21	APL 100	APL 101	1xLMZL 50		
	RM 50	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RM 110	APL 100	APL 101	1xLMZL 50	1xLMZL 50	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Rotary module bottom on the linear module face plates



¹⁾ Only required for the LM basic module

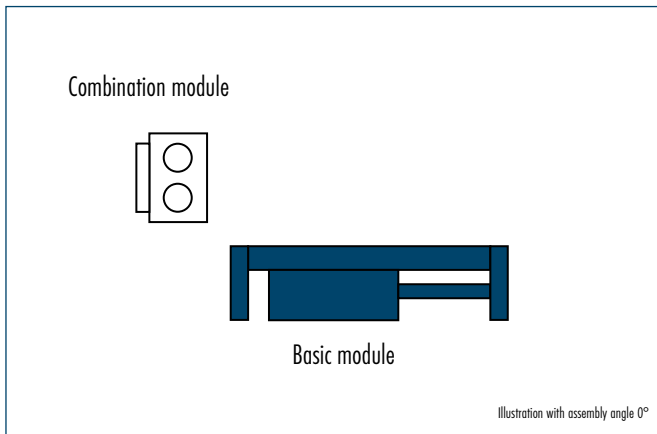
²⁾ Only required for assembly angles 90/270°

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
CLM 08	RM 08	APL 031	APL 031			
CLM 10	RM 08	APL 031	APL 031			
	RM 10	APL 031	APL 031			
LM/CLM/KLM 25	RM 08	APL 052	APL 052			
	RM 10	APL 052	APL 052			
	RM 12	APL 050	APL 050			
LM/CLM 50	RM 12	APL 101	APL 100	1xLMZL 50		
	RM 15	APL 101	APL 100	1xLMZL 50		
	RM 21	APL 101	APL 100	1xLMZL 50		
	RM 50	APL 101	APL 100	1xLMZL 50		
KLM 50	RM 12	APL 111	APL 110	1xLMZL 50		
	RM 15	APL 111	APL 110	1xLMZL 50		
	RM 21	APL 111	APL 110	1xLMZL 50		
	RM 50	APL 111	APL 110	1xLMZL 50		
LM/CLM/KLM 100	RM 12	APL 121	APL 120	1xLMZL 100		1xLM 100-99 ¹⁾
	RM 15	APL 121	APL 120	1xLMZL 100		1xLM 100-99 ¹⁾
	RM 21	APL 121	APL 120	1xLMZL 100		1xLM 100-99 ¹⁾
	RM 50	APL 121	APL 120	1xLMZL 100		1xLM 100-99 ¹⁾
	RM 110	APL 121	-	1xLMZL 100		1xLM 100-99 ¹⁾
LM/CLM 200	RM 12	APL 131	APL 130	1xLMZL 100		
	RM 15	APL 131	APL 130	1xLMZL 100		
	RM 21	APL 131	APL 130	1xLMZL 100		
	RM 50	APL 131	APL 130	1xLMZL 100		
	RM 110	APL 131	APL 130	1xLMZL 100	1xRMZ 110 ²⁾	
	RM 200	APL 130	APL 131	1xLMZL 100		

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM 300	RM 12	APL 141	APL 140	1xLMZL 100		
	RM 15	APL 141	APL 140	1xLMZL 100		
	RM 21	APL 141	APL 140	1xLMZL 100		
	RM 50	APL 141	APL 140	1xLMZL 100		
	RM 110	APL 141	APL 140	1xLMZL 100	1xRMZ 110 ²⁾	
	RM 200	APL 140	APL 141	1xLMZL 100		
ELM 23	RM 08	APL 052	APL 052			
	RM 10	APL 052	APL 052			
	RM 12	APL 050	APL 050			
	RM 15	APL 050	APL 050			
	RM 50	APL 050	APL 050			
ELM 37	RM 12	APL 101	APL 100	1xLMZL 50		
	RM 15	APL 101	APL 100	1xLMZL 50		
	RM 21	APL 101	APL 100	1xLMZL 50		
	RM 50	APL 101	APL 100	1xLMZL 50		

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

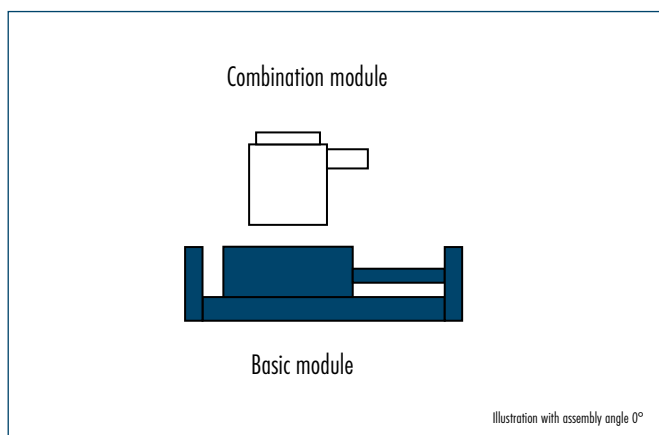
Rotary module side surface on the linear module face plates



¹⁾ Only required for the LM basic module

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
CLM 08	RM 08	APL 033	-			
CLM 10	RM 08	APL 033	-			
	RM 10	APL 033	-			
LM/CLM/KLM 25	RM 08	APL 054	-			
	RM 10	APL 054	-			
	RM 12	APL 051	-		1xLMZL 50	
	RM 15	APL 051	-		1xLMZL 50	
LM/CLM/KLM 50	RM 12	APL 103	-	1xLMZL 50	1xLMZL 50	
	RM 15	APL 103	-	1xLMZL 50	1xLMZL 50	
LM/CLM/KLM 100	RM 12	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 15	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RM 21	APL 123	-	1xLMZL 100		1xLM 100-99 ¹⁾
LM/CLM 200 LM 300	RM 12	APL 132	-	1xLMZL 100	1xLMZL 50	
	RM 15	APL 132	-	1xLMZL 100	1xLMZL 50	
	RM 21	APL 132	-	1xLMZL 100		
ELM 23	RM 08	APL 054	-			
	RM 10	APL 054	-			
	RM 12	APL 051	-		1xLMZL 50	
	RM 15	APL 051	-		1xLMZL 50	
ELM 37	RM 12	APL 123	-	1xLMZL 100	1xLMZL 50	
	RM 15	APL 123	-	1xLMZL 100	1xLMZL 50	
	RM 21	APL 123	-	1xLMZL 100		

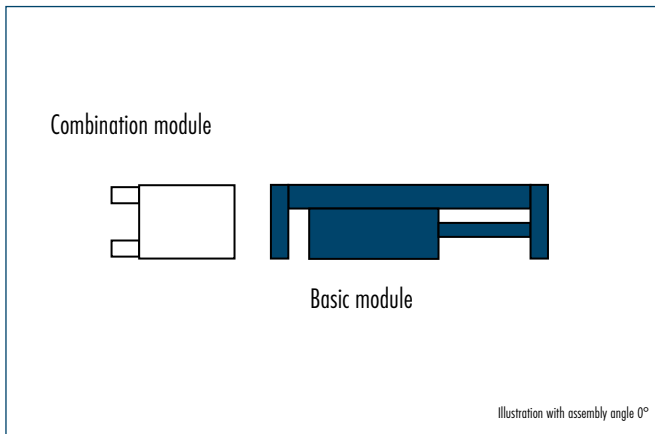
Rotary module bottom on the linear module base body



¹⁾ Combination is not possible for the LM 300 basic module

Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		Remark
		0/180°	90/270°	Centering, basic module	Centering, combination module	
CLM 08	RM 08	-	APL 032			
CLM 10	RM 08	-	APL 032			
	RM 10	-	APL 032			
LM/CLM/KLM 25	RM 12	APL 310	APL 310			
LM/CLM/KLM 50	RM 12	-	APL 200			
LM/CLM/KLM 100	RM 12	-	APL 210			Basic module starting from 50 mm
	RM 15	-	APL 210			Basic module starting from 50 mm
	RM 21	-	APL 210			Basic module starting from 50 mm
	RM 50	APL 210	APL 210			Basic module starting from 50 mm
	RM 110	APL 210	-			Basic module starting from 50 mm
LM/CLM 200 LM 300	RM 12	APL 220	-			
	RM 15	APL 220	-			
	RM 50	APL 220	-			
	RM 110	APL 220	-			
	RM 200	-	APL 220			
	RM 310	APL 330 ¹⁾	APL 330 ¹⁾		1xLMZL 50	
ELM 23	RM 12	APL 310	APL 310			
ELM 37	RM 12	-	APL 210			

Gripping module bottom on the linear module face plates



- ¹⁾ Only required for the LM basic module
²⁾ Assembly angle can be continuously set
³⁾ Assembly angle of 180° is not possible
 * direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		Remark
		0/180°	90/270°	Centering, basic module	Centering, combination module	
CLM 08	MPG 16	ASG 0850	ASG 0850			
	MPG 20	ASG 0780	ASG 0780			FPS measuring system excepted
	MPG 25	ASG 0792	ASG 0790			FPS measuring system excepted
	SWG 16	ASG 0860	ASG 0860			
	SWG 20	ASG 0810	ASG 0810			
CLM 10	MPG 20	ASG 0780	ASG 0780			FPS measuring system excepted
	MPG 25	ASG 0792	ASG 0790			FPS measuring system excepted
	MPG 32	ASG 0802	ASG 0800			FPS measuring system excepted
	SWG 20	ASG 0810	ASG 0810			
	SWG 25	ASG 0820	ASG 0820			
	MPZ 30	ASG 0830 ²⁾	ASG 0830 ²⁾			FPS measuring system excepted
	PGN-plus40	ASG 0842	ASG 0840			
LM/CLM/KLM 25	MPG 20	ASG 0010	ASG 0010			FPS measuring system excepted
	MPG 25	ASG 0020	ASG 0020			FPS measuring system excepted
	MPG 32	ASG 0032 ³⁾	ASG 0030			FPS measuring system excepted
	MPG 40	ASG 0042	ASG 0040			FPS measuring system excepted
	PGN-plus 40	ASG 0052	ASG 0050			
	PGN-plus 50	ASG 0062	ASG 0060			
	MPZ 30	ASG 0070 ²⁾	ASG 0070 ²⁾			FPS measuring system excepted
	MPZ 38	ASG 0080 ²⁾	ASG 0080 ²⁾			
	SWG 16	ASG 0090	ASG 0090			
	SWG 20	ASG 0100	ASG 0100			
	SWG 25	ASG 0110	ASG 0110			
	SWG 32	ASG 0122	ASG 0120			
	SWG 40	ASG 0132	ASG 0130			
	GM 80/81	APL 050	APL 050		1xLMZL 50	
	GM 85	APL 050	-		1xLMZL 50	
	GM 100/101	APL 050	APL 050		1xLMZL 50	
	GM 280	APL 050	APL 050			

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		Remark
		0/180°	90/270°	Centering, basic module	Centering, combination module	
LM/CLM 50	MPG 25	ASG 0140	ASG 0140	1xLMZL 50		FPS measuring system excepted
	MPG 32	ASG 0150	ASG 0150	1xLMZL 50		FPS measuring system excepted
	MPG 40	ASG 0160	ASG 0160	1xLMZL 50		FPS measuring system excepted
	MPG 50	ASG 0170	ASG 0170	1xLMZL 50		FPS measuring system excepted
	PGN-plus 40	ASG 0180	ASG 0180	1xLMZL 50		
	PGN-plus 50	ASG 0190	ASG 0190	1xLMZL 50		
	PGN-plus 64	ASG 0762	ASG 0760	1xLMZL 50		
	KGG 80	ASG 0282	ASG 0280	1xLMZL 50		
	MPZ 30	ASG 0200 ²⁾	ASG 0200 ²⁾	1xLMZL 50		FPS measuring system excepted
	MPZ 38	ASG 0210 ²⁾	ASG 0210 ²⁾	1xLMZL 50		FPS measuring system excepted
	MPZ 45	ASG 0220 ²⁾	ASG 0220 ²⁾	1xLMZL 50		FPS measuring system excepted
	PZN-plus 50	ASG 0270 ²⁾	ASG 0270 ²⁾	1xLMZL 50		
	SWG 25	ASG 0230	ASG 0230	1xLMZL 50		
	SWG 32	ASG 0240	ASG 0240	1xLMZL 50		
	SWG 40	ASG 0250	ASG 0250	1xLMZL 50		
	SWG 50	ASG 0260	ASG 0260	1xLMZL 50		
	GM 80/81	APL 102	APL 102	1xLMZL 50		
	GM 85	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 105	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 280	APL 100	APL 101	1xLMZL 50	1xGMZ280	
	GM 300	APL 100	APL 101	1xLMZL 50	1xGMZ300	
KLM 50	MPG 25	ASG 0290	ASG 0290			FPS measuring system excepted
	MPG 32	ASG 0300	ASG 0300			FPS measuring system excepted
	MPG 40	ASG 0310	ASG 0310			FPS measuring system excepted
	MPG 50	ASG 0320	ASG 0320			FPS measuring system excepted
	PGN-plus 40	ASG 0330	ASG 0330			
	PGN-plus 50	ASG 0340	ASG 0340			
	PGN-plus 64	ASG 0772	ASG 0770			
	KGG 80	ASG 0432	ASG 0280			
	MPZ 30	ASG 0350 ²⁾	ASG 0350 ²⁾			FPS measuring system excepted
	MPZ 38	ASG 0360 ²⁾	ASG 0360 ²⁾			FPS measuring system excepted
	MPZ 45	ASG 0370 ²⁾	ASG 0370 ²⁾			FPS measuring system excepted
	PZN-plus 50	ASG 0420 ²⁾	ASG 0420 ²⁾			
	SWG 25	ASG 0380	ASG 0380			
	SWG 32	ASG 0390	ASG 0390			
	SWG 40	ASG 0400	ASG 0400			
	SWG 50	ASG 0410	ASG 0410			
	GM 80/81	APL 112	APL 112	1xLMZL 50		
	GM 85	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 105	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 280	APL 110	APL 111	1xLMZL 50	1xGMZ280	
	GM 300	APL 110	APL 111	1xLMZL 50	1xGMZ300	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Gripping module bottom on the linear module face plates

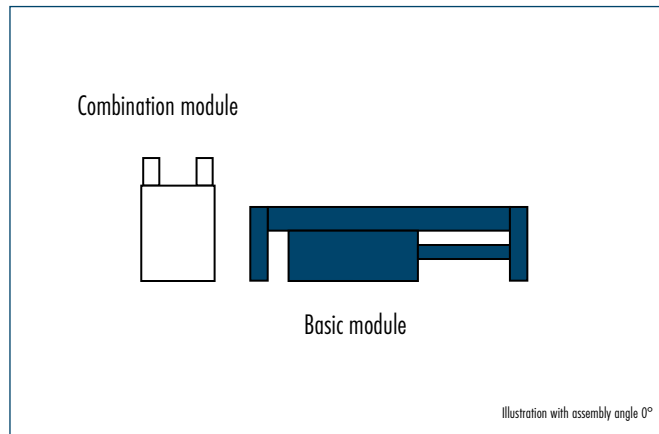
Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		Remark
		0/180°	90/270°	Centering, basic module	Centering, combination module	
LM/CLM/KLM 100	MPG 40	ASG 0440	ASG 0440		1xLM 100-99 ¹⁾	FPS measuring system excepted
	MPG 50	ASG 0450	ASG 0450		1xLM 100-99 ¹⁾	FPS measuring system excepted
	MPG 64	ASG 0462	ASG 0460		1xLM 100-99 ¹⁾	FPS measuring system excepted
	PGN-plus 50	ASG 0470	ASG 0470		1xLM 100-99 ¹⁾	
	PGN-plus 64	ASG 0480	ASG 0480		1xLM 100-99 ¹⁾	
	PGN-plus 80	ASG 0490	ASG 0490		1xLM 100-99 ¹⁾	
	KGG 80	ASG 0572	ASG 0570		1xLM 100-99 ¹⁾	
	KGG 140	ASG 0582	ASG 0580		1xLM 100-99 ¹⁾	
	MPZ 38	ASG 0500 ²⁾	ASG 0500 ²⁾		1xLM 100-99 ¹⁾	
	MPZ 45	ASG 0510 ²⁾	ASG 0510 ²⁾		1xLM 100-99 ¹⁾	
	PZN-plus 50	ASG 0550 ²⁾	ASG 0550 ²⁾		1xLM 100-99 ¹⁾	
	PZN-plus 64	ASG 0560 ²⁾	ASG 0560 ²⁾		1xLM 100-99 ¹⁾	
	SWG 32	ASG 0520	ASG 0520		1xLM 100-99 ¹⁾	
	SWG 40	ASG 0530	ASG 0530		1xLM 100-99 ¹⁾	
	SWG 50	ASG 0540	ASG 0540		1xLM 100-99 ¹⁾	
	GM 80/81	APL 122	APL 122	1xLMZL 100	1xLM 100-99 ¹⁾	
	GM 85	APL 120	APL 121	1xLMZL 100	1xLM 100-99 ¹⁾ , 1xLMZL 50	
	GM 100/101	APL 120	APL 121	1xLMZL 100	1xLM 100-99 ¹⁾ , 1xLMZL 50	
	GM 105	APL 120	APL 121	1xLMZL 100	1xLM 100-99 ¹⁾ , 1xLMZL 50	
	GM 280	APL 120	APL 121	1xLMZL 100	1xLM 100-99 ¹⁾	
	GM 300	APL 120	APL 121	1xLMZL 100	1xLM 100-99 ¹⁾	
	GM 400	APL 120	APL 120	1xLMZL 100	1xLM 100-99 ¹⁾	
LM/CLM 200	MPG 40	ASG 0590	ASG 0590			FPS measuring system excepted
	MPG 50	ASG 0600	ASG 0600			FPS measuring system excepted
	MPG 64	ASG 0610	ASG 0610			FPS measuring system excepted
	PGN-plus 64	ASG 0620	ASG 0620			
	PGN-plus 80	ASG 0630	ASG 0630			
	PGN-plus 100	ASG 0640	ASG 0640			
	PGN-plus 125	ASG 0652	ASG 0650			
	KGG 80	ASG 0740	ASG 0740			
	KGG 140	ASG 0752	ASG 0750			
	MPZ 38	ASG 0660 ²⁾	ASG 0660 ²⁾			FPS measuring system excepted
	MPZ 45	ASG 0670 ²⁾	ASG 0670 ²⁾			FPS measuring system excepted
	PZN-plus 50	ASG 0700 ²⁾	ASG 0700 ²⁾			
	PZN-plus 64	ASG 0710 ²⁾	ASG 0710 ²⁾			
	PZN-plus 80	ASG 0720 ²⁾	ASG 0720 ²⁾			
	PZN-plus 100	ASG 0730 ²⁾	ASG 0730 ²⁾			
	SWG 40	ASG 0680	ASG 0680			
	SWG 50	ASG 0690	ASG 0690			
	GM 85	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	GM 100/101	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	GM 105	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	GM 200/201	APL 130	APL 131	1xLMZL 100	1xLMZL 100	
	GM 205	APL 131	APL 130	1xLMZL 100	1xLMZL 100	
	GM 280	*	APL 131	1xLMZL 100	1xGMZ 280	
	GM 300	*	APL 131	1xLMZL 100	1xGMZ 300	
	GM 400	APL 130	APL 130	1xLMZL 100	1xGMZ 400	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		Remark
		0/180°	90/270°	Centering, basic module	Centering, combination module	
LM 300	GM 85	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	GM 100/101	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	GM 105	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	GM 200/201	APL 140	APL 141	1xLMZL 100	1xLMZL 100	
	GM 205	APL 141	APL 140	1xLMZL 100	1xLMZL 100	
	GM 280	*	APL 141	1xLMZL 100	1xGMZ 280	
	GM 300	*	APL 141	1xLMZL 100	1xGMZ 300	
	GM 400	APL 140	APL 140	1xLMZL 100	1xGMZ 400	
ELM 23	MPG 25	ASG 0140	ASG 0140			FPS measuring system excepted
	MPG 32	ASG 0150	ASG 0150			FPS measuring system excepted
	MPG 40	ASG 0160	ASG 0160			FPS measuring system excepted
	MPG 50	ASG 0170	ASG 0170			FPS measuring system excepted
	PGN-plus 40	ASG 0180	ASG 0180			
	PGN-plus 50	ASG 0190	ASG 0190			
	PGN-plus 64	ASG 0762	ASG 0760			
	KGG 80	ASG 0282	ASG 0280			
	MPZ 30	ASG 0200 ²⁾	ASG 0200 ²⁾			FPS measuring system excepted
	MPZ 38	ASG 0210 ²⁾	ASG 0210 ²⁾			FPS measuring system excepted
	MPZ 45	ASG 0220 ²⁾	ASG 0220 ²⁾			FPS measuring system excepted
	PZN-plus 50	ASG 0270 ²⁾	ASG 0270 ²⁾			
	SWG 25	ASG 0230	ASG 0230			
	SWG 32	ASG 0240	ASG 0240			
	SWG 40	ASG 0250	ASG 0250			
	SWG 50	ASG 0260	ASG 0260			
	GM 80/81	APL 050	APL 050		1xLMZL 50	
	GM 85	APL 050	-		1xLMZL 50	
	GM 100/101	APL 050	APL 050		1xLMZL 50	
	GM 280	APL 050	APL 050			
ELM 37	MPG 40	ASG 0440	ASG 0440			FPS measuring system excepted
	MPG 50	ASG 0450	ASG 0450			FPS measuring system excepted
	MPG 64	ASG 0462	ASG 0460			FPS measuring system excepted
	PGN-plus 50	ASG 0470	ASG 0470			
	PGN-plus 64	ASG 0480	ASG 0480			
	PGN-plus 80	ASG 0490	ASG 0490			
	KGG 80	ASG 0572	ASG 0570			
	KGG 140	ASG 0582	ASG 0580			
	MPZ 38	ASG 0500 ²⁾	ASG 0500 ²⁾			FPS measuring system excepted
	MPZ 45	ASG 0510 ²⁾	ASG 0510 ²⁾			FPS measuring system excepted
	PZN-plus 50	ASG 0550 ²⁾	ASG 0550 ²⁾			
	PZN-plus 64	ASG 0560 ²⁾	ASG 0560 ²⁾			
	SWG 32	ASG 0520	ASG 0520			
	SWG 40	ASG 0530	ASG 0530			
	SWG 50	ASG 0540	ASG 0540			
	GM 80/81	APL 102	APL 102			
	GM 85	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 105	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 280	APL 100	APL 101	1xLMZL 50	1xGMZ 280	
	GM 300	APL 100	APL 101	1xLMZL 50	1xGMZ 300	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Gripping module side surface on the linear module face plate



- ¹⁾ GMC only possible for the index -D, -X and -Z.
²⁾ GMP/W not possible for the index -D, -X and -Z.
³⁾ GMC not possible
⁴⁾ For direct assembly, 1xLMZL 50
⁵⁾ Only required for the LM basic module
 * direct assembly

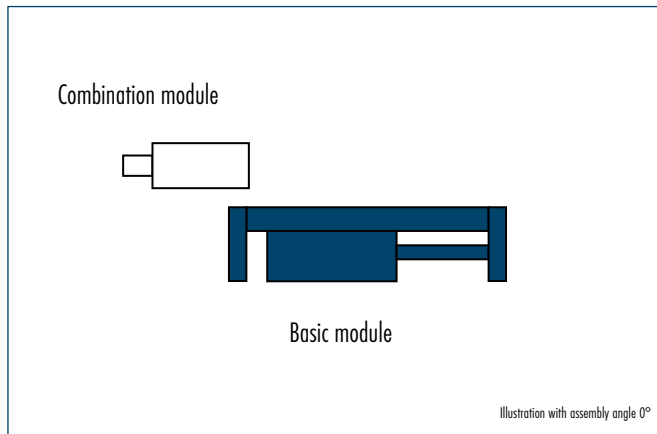
Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM/CLM/KLM 25	GMP/C/W 12	APL 050	APL 050		1xLMZL 50	
	GMP/C/W 16	APL 050 ¹⁾	APL 050 ¹⁾		1xLMZL 50	
	GM 80/81	APL 050	APL 050		1xLMZL 50	
	GM 85	APL 050	APL 050		1xLMZL 50	
	GM 280	APL 050	APL 050		1xLMZL 50	
LM/CLM 50	GMP/W 12	APL 100 ²⁾	APL 101	1xLMZL 50	1xLMZL 50	
	GMP/C/W 16	APL 100	APL 101 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GMP/C/W 20	APL 100	APL 101 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GMP/C/W 28	APL 100	APL 101 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GM 80/81	APL 102	APL 102	1xLMZL 50	1xLMZL 50	
	GM 85	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 105	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 280	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 300	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
KLM 50	GMP/W 12	APL 102 ²⁾	APL 112	1xLMZL 50	1xLMZL 50	
	GMP/C/W 16	APL 110	APL 111 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GMP/C/W 20	APL 110	APL 111 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GMP/C/W 28	APL 110	APL 111 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GM 80/81	APL 112	APL 112	1xLMZL 50	1xLMZL 50	
	GM 85	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 105	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 280	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	GM 300	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
LM/CLM/KLM 100	GMP/C/W 16	APL 120 ^{2,3)}	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GMP/C/W 20	APL 120 ^{2,3)}	APL 121 ¹⁾	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GMP/C/W 28	APL 120 ^{2,3)}	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 80/81	APL 122	APL 122	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 85	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 100/101	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 105	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 280	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ⁵⁾
	GM 400	APL 120	APL 121	1xLMZL 100	1xLMZL 100	1xLM 100-99 ⁵⁾

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM/CLM 200	GMP/C/W 20	APL 130 ¹⁾	APL 131 ^{2,3)}	1xLMZL 100	1xLMZL 50	
	GMP/C/W 28	APL 130 ¹⁾	APL 131 ^{2,3)}	1xLMZL 100	1xLMZL 50	
	GM 85	*	APL 131	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 100/101	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	GM 105	*	APL 131	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 200/201	APL 130	APL 131	1xLMZL 100	1xLMZL 100	
	GM 205	APL 130	APL 131	1xLMZL 100	1xLMZL 100	
	GM 300	*	APL 131	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 400	*	APL 131	1xLMZL 100	1xLMZL 100	
LM 300	GMP/W 20	APL 140 ²⁾	APL 141 ²⁾	1xLMZL 100	1xLMZL 50	
	GMP/W 28	APL 140 ²⁾	APL 141 ²⁾	1xLMZL 100	1xLMZL 50	
	GM 85	*	APL 141	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 100/101	APL 140	APL 141	1xLMZL 100	1xLMZL 50	
	GM 105	*	APL 141	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 200/201	APL 140	APL 141	1xLMZL 100	1xLMZL 100	
	GM 205	APL 140	APL 141	1xLMZL 100	1xLMZL 100	
	GM 300	*	APL 141	1xLMZL 100 ⁴⁾	1xLMZL 50	
	GM 400	*	APL 141	1xLMZL 100	1xLMZL 100	
ELM 23	GMP/C/W 12	APL 050	APL 050		1xLMZL 50	
	GMP/C/W 16	APL 050 ¹⁾	APL 050		1xLMZL 50	
	GMP/C/W 20	APL 050 ^{2,3)}	APL 050 ¹⁾		1xLMZL 50	
	GM 80/81	APL 050	APL 050		1xLMZL 50	
	GM 85	APL 050	APL 050		1xLMZL 50	
	GM 100/101	APL 050	APL 050		1xLMZL 50	
	GM 105	APL 050	APL 050		1xLMZL 50	
	GM 280	APL 050	APL 050		1xLMZL 50	
	GM 300	APL 050	APL 050		1xLMZL 50	
ELM 37	GMP/C/W 16	APL 100 ¹⁾	APL 100 ^{2,3)}	1xLMZL 50	1xLMZL 50	
	GMP/W 20	APL 100 ²⁾	APL 100 ²⁾	1xLMZL 50	1xLMZL 50	
	GMP/W 28	APL 100 ²⁾	APL 101 ²⁾	1xLMZL 50	1xLMZL 50	
	GM 80/81	APL 102	APL 102	1xLMZL 50	1xLMZL 50	
	GM 85	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 100/101	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 105	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 280	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 300	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	GM 400	APL 100	APL 101	1xLMZL 50	1xLMZL 100	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Gripping module side surface on the linear module face plates



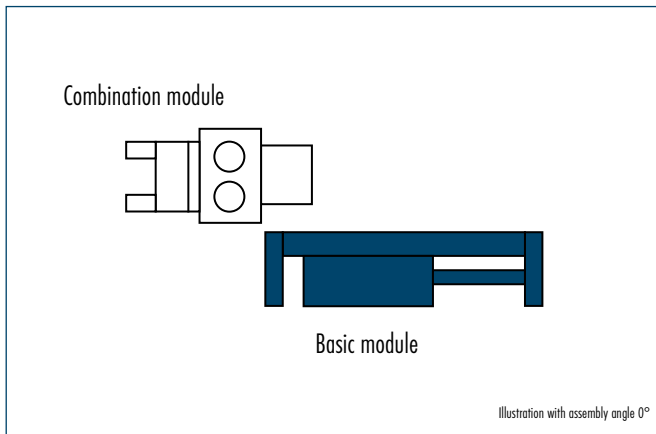
¹⁾ Only required for the LM basic module

²⁾ GMC only possible for the index -D, -X and -Z.

* direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM/CLM/KLM 25	GMP/C/W 12	APL 051 ²⁾	-		1xLMZL 50	
	GMP/C/W 16	APL 051	-		1xLMZL 50	
	GMP/C/W 20	APL 051 ²⁾	-		1xLMZL 50	
LM/CLM/KLM 50	GMP/C/W 12	APL 103	-		1xLMZL 50	
	GMP/C/W 16	APL 103 ²⁾	-		1xLMZL 50	
	GMP/C/W 20	APL 103 ²⁾	-		1xLMZL 50	
LM/CLM/KLM 100	GMP/C/W 16	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	GMP/C/W 20	APL 123 ²⁾	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	GMP/C/W 28	APL 123 ²⁾	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
LM/CLM 200 LM 300	GMP/C/W 16	APL 132 ²⁾	-	1xLMZL 100	1xLMZL 50	
	GMP/C/W 20	APL 132 ²⁾	-	1xLMZL 100	1xLMZL 50	
	GMP/C/W 28	APL 132 ²⁾	-	1xLMZL 100	1xLMZL 50	
ELM 23	GMP/C/W 12	APL 051 ²⁾	-		1xLMZL 50	
	GMP/C/W 16	APL 051	-		1xLMZL 50	
	GMP/C/W 20	APL 051 ²⁾	-		1xLMZL 50	
ELM 37	GMP/C/W 16	APL 123	-	1xLMZL 100	1xLMZL 50	
	GMP/C/W 20	APL 123 ²⁾	-	1xLMZL 100	1xLMZL 50	
	GMP/C/W 28	APL 123 ²⁾	-	1xLMZL 100	1xLMZL 50	

Gripping rotary module side surface on the linear module face plates

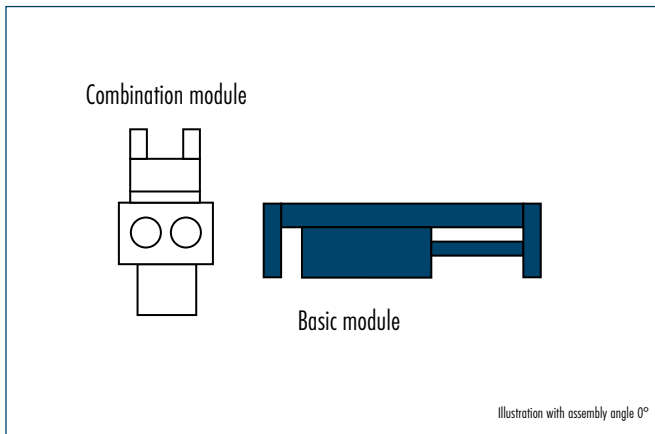


¹⁾ Only required for the LM basic module

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM/CLM/KLM 25	RP/C/W 1212	APL 051	-		1xLMZL 50	
	RP/C/W 1216	APL 051	-		1xLMZL 50	
	RP/C/W 1520	APL 051	-		1xLMZL 50	
LM/CLM/KLM 50	RP/C/W 1212	APL 103	-	1xLMZL 50	1xLMZL 50	
	RP/C/W 1216	APL 103	-	1xLMZL 50	1xLMZL 50	
	RP/C/W 1520	APL 103	-	1xLMZL 50	1xLMZL 50	
LM/CLM/KLM 100	RP/C/W 1212	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RP/C/W 1216	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RP/C/W 1520	APL 123	-	1xLMZL 100	1xLMZL 50	1xLM 100-99 ¹⁾
	RP/C/W 2120	APL 123	-	1xLMZL 100		1xLM 100-99 ¹⁾
	RP/C/W 2128	APL 123	-	1xLMZL 100		1xLM 100-99 ¹⁾
LM/CLM 200 LM 300	RP/C/W 1212	APL 132	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 1216	APL 132	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 1520	APL 132	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 2120	APL 132	-	1xLMZL 100		
	RP/C/W 2128	APL 132	-	1xLMZL 100		
ELM 23	RP/C/W 1212	APL 051	-		1xLMZL 50	
	RP/C/W 1216	APL 051	-		1xLMZL 50	
	RP/C/W 1520	APL 051	-		1xLMZL 50	
ELM 37	RP/C/W 1212	APL 123	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 1216	APL 123	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 1520	APL 123	-	1xLMZL 100	1xLMZL 50	
	RP/C/W 2120	APL 123	-	1xLMZL 100		
	RP/C/W 2128	APL 123	-	1xLMZL 100		

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Gripping rotary module side surface on the linear module face plates

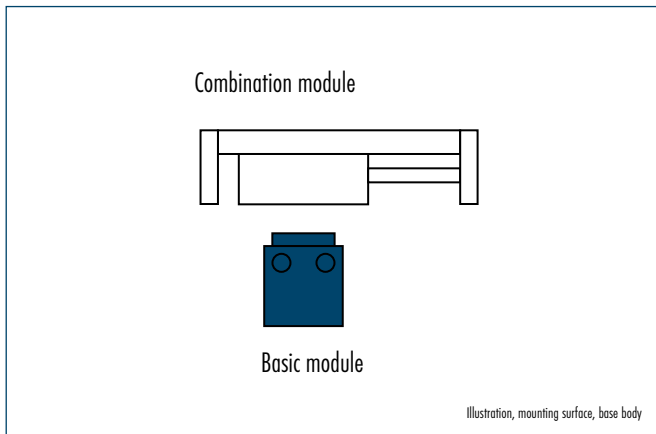


¹⁾ RP and RC not possible

²⁾ Only required for the LM basic module

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
LM/CLM/KLM 25	RP/C/W 1212	APL 050	APL 050		1xLMZL 50	
	RP/C/W 1216	APL 050	APL 050		1xLMZL 50	
LM/CLM 50	RP/C/W 1212	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RP/C/W 1216	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RP/C/W 1520	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
KLM 50	RP/C/W 1212	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	RP/C/W 1216	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
	RP/C/W 1520	APL 110	APL 111	1xLMZL 50	1xLMZL 50	
LM/CLM/KLM 100	RP/C/W 1212	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ²⁾
	RP/C/W 1216	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ²⁾
	RP/C/W 1520	APL 120	APL 121	1xLMZL 100	1xLMZL 50	1xLM 100-99 ²⁾
LM/CLM 200	RP/C/W 1212	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 1216	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 1520	APL 130	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 2120	APL 130	APL 131	1xLMZL 100		
	RP/C/W 2128	APL 130	APL 131	1xLMZL 100		
LM 300	RP/C/W 1212	APL 140	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 1216	APL 140	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 1520	APL 140	APL 131	1xLMZL 100	1xLMZL 50	
	RP/C/W 2120	APL 140	APL 131 ¹⁾	1xLMZL 100		
ELM 23	RP/C/W 1212	APL 050	APL 050		1xLMZL 50	
	RP/C/W 1216	APL 050	APL 050		1xLMZL 50	
	RP/C/W 1520	APL 050	APL 050		1xLMZL 50	
ELM 37	RP/C/W 1212	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RP/C/W 1216	APL 100	APL 101	1xLMZL 50	1xLMZL 50	
	RP/C/W 1520	APL 100	APL 101	1xLMZL 50	1xLMZL 50	

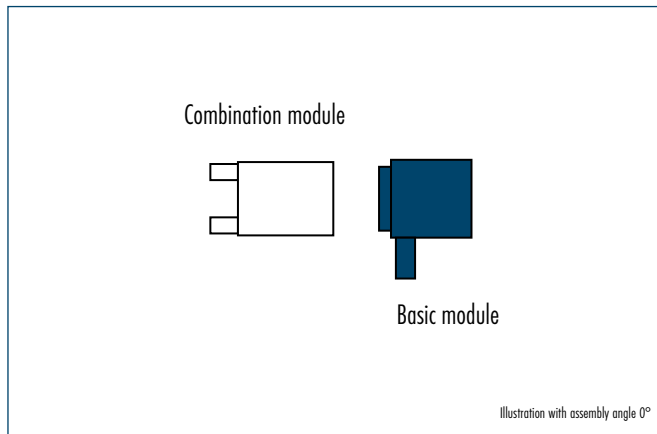
Linear module base body on the rotary module flange



- ¹⁾ KLM module not possible
- ²⁾ Only required for the CLM combination module
- ³⁾ Twisting APL by 90° in the grid is possible
- ⁴⁾ Twisting APL by 180° in the grid is possible

Basic module	Combination module	Mounting surface		Required SCHUNK standard parts		Remark
		G	S	Centering, basic module	Centering, combination module	
RM 15	LM/CLM/KLM 25	APL 310 ³⁾	APL 310 ^{1,3)}			
RM 21	LM/CLM/KLM 25	APL 310 ³⁾	APL 310 ^{1,3)}	1xLMZL 100		
RM 110	LM/KLM 50	APL 310 ³⁾	APL 310 ^{1,3)}	1xLMZL 100		
RM 200	LM/KLM 50	APL 320 ⁴⁾	APL 310 ^{1,4)}	1xLMZL 100		
	ELM 23	APL 310 ³⁾	APL 310 ³⁾	1xLMZL 100		
RM 310	LM/CLM/KLM 50	APL 330 ³⁾	APL 310 ^{1,3)}	1xLMZL 50	1xLMZL 50 ²⁾	
	LM/CLM/KLM 100	APL 330 ³⁾	APL 310 ^{1,3)}	1xLMZL 50	1xLMZL 50 ²⁾	
	LM/CLM 200	APL 330 ³⁾	-	1xLMZL 50		
	ELM 37	APL 330 ³⁾	APL 330 ³⁾	1xLMZL 50		

Gripping module bottom on the rotary module flange

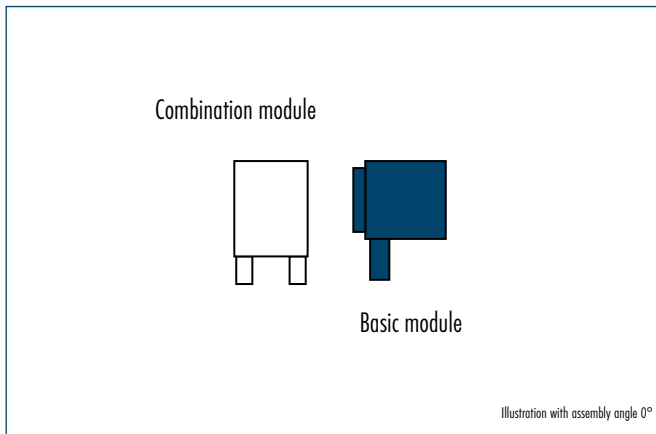


¹⁾ For basic module, RM 50, 1xLMZL 50

* direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
RM 15	GM 80/81	APL 300	APL 300			
	GM 85	APL 310	APL 310		1xLMZL 50	
	GM 105	APL 310	APL 310		1xLMZL 50	
	GM 280	APL 300	APL 300		1xGMZ 280	
RM 21	GM 80/81	APL 300	APL 300			
	GM 85	APL 310	APL 310		1xLMZL 50	
	GM 105	APL 310	APL 310		1xLMZL 50	
	GM 280	APL 300	APL 300		1xGMZ 280	
	GM 300	APL 310	APL 310		1xGMZ 300	
	GM 400	APL 310	APL 310		1xGMZ 400	
RM 50	GM 80/81	APL 300	APL 300	1xLMZL 100 ¹⁾		
RM 110	GM 85	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 100/101	-	*	1xLMZL 100 ¹⁾		
	GM 105	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 280	APL 300	APL 300	1xLMZL 100 ¹⁾	1xGMZ 280	
	GM 300	APL 310	APL 310	1xLMZL 100	1xGMZ 300	
	GM 400	APL 310	APL 310	1xLMZL 100	1xGMZ 400	
RM 200	GM 80/81	APL 300	APL 300	1xLMZL 100		
	GM 85	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 100/101	*	-	1xLMZL 100		
	GM 105	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 200/201	APL 320	APL 320		1xLMZL 100	
	GM 280	APL 310	APL 310	1xLMZL 100	1xGMZ 280	
	GM 300	APL 310	APL 310	1xLMZL 100	1xGMZ 300	
	GM 400	APL 310	APL 310	1xLMZL 100	1xGMZ 400	
RM 310	GM 105	APL 330	APL 330	1xLMZL 50	1xLMZL 50	
	GM 200/201	APL 330	APL 330	1xLMZL 50	1xLMZL 100	
	GM 205	APL 330	APL 330	1xLMZL 50	1xLMZL 100	

Gripping module side surface on the rotary module flange



¹⁾ GMP/W not possible for index -D, -X and -Z.

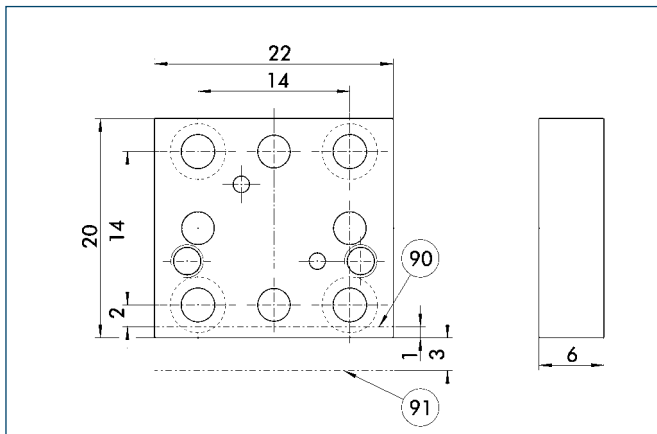
²⁾ Only possible for basic module, RM 200

* direct assembly

Basic module	Combination module	Assembly angle		Required SCHUNK standard parts		
		0/180°	90/270°	Centering, basic module	Centering, combination module	Other
RM 15 RM 21	GMP/W 12	APL 310 ¹⁾	APL 310 ¹⁾		1xLMZL 50	
	GMP/W 16	APL 310 ¹⁾	APL 310 ¹⁾		1xLMZL 50	
	GMP/W 20	APL 310 ¹⁾	APL 310 ¹⁾		1xLMZL 50	
	GM 80/81	APL 310	APL 310		1xLMZL 50	
	GM 85	APL 310	APL 310		1xLMZL 50	
	GM 280	APL 310	APL 310		1xLMZL 50	
	GM 300	APL 310	APL 310		1xLMZL 50	
RM 50	GMP/W 12	APL 300 ¹⁾	APL 300 ¹⁾	1xLMZL 50	1xLMZL 50	
	GM 80/81	APL 300	APL 300	1xLMZL 50	1xLMZL 50	
	GM 280	APL 300	APL 300	1xLMZL 50	1xLMZL 50	
	GM 300	*	-	1xLMZL 50	-	
RM 110 RM 200	GMP/W 12	APL 310 ¹⁾	APL 310 ¹⁾	1xLMZL 100	1xLMZL 50	
	GMP/W 16	APL 310 ¹⁾	APL 310 ¹⁾	1xLMZL 100	1xLMZL 50	
	GMP/W 20	APL 310 ¹⁾	APL 310 ¹⁾	1xLMZL 100	1xLMZL 50	
	GM 80/81	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 85	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 280	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 300	APL 310	APL 310	1xLMZL 100	1xLMZL 50	
	GM 400	APL 320 ²⁾	-		1xLMZL 100	
RM 310	GM 105	APL 330	APL 330	1xLMZL 50	1xLMZL 50	

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

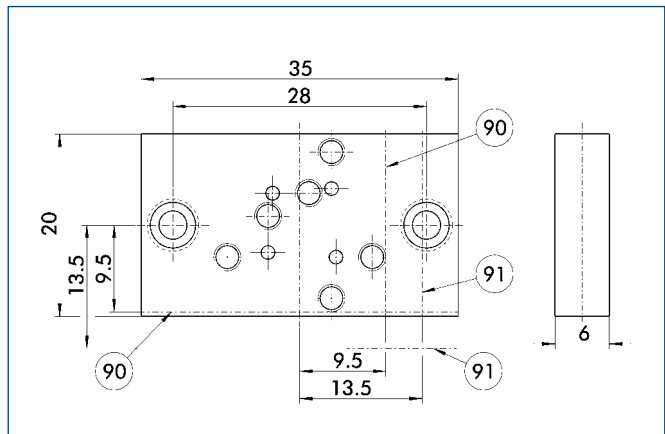
APL 030



- 90 Bottom edge, CLM 08 base body
91 Bottom edge, CLM 10 base body

Designation	ID	Material	Mass
			[kg]
APL 030	0313022	Aluminum	0.007

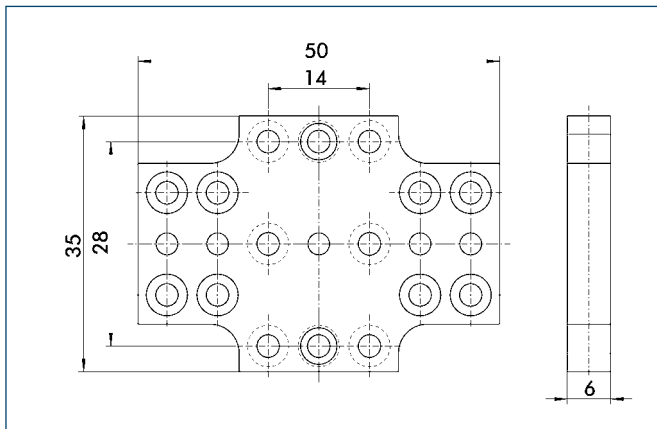
APL 031



- 90 RM swiveling axis to bottom edge, CLM 08 base body
91 RM swiveling axis to bottom edge, CLM 10 base body

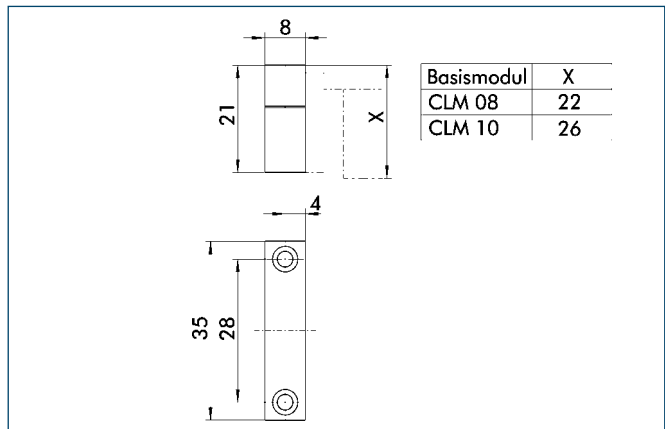
Designation	ID	Material	Mass
			[kg]
APL 031	0313023	Aluminum	0.011

APL 032



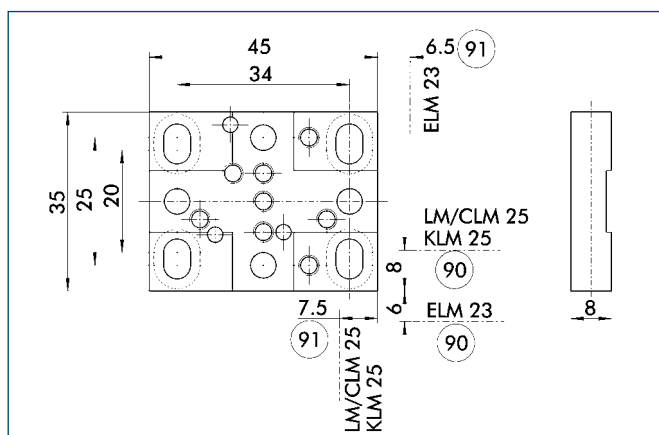
Designation	ID	Material	Mass
			[kg]
APL 032	0313024	Aluminum	0.018

APL 033



Designation	ID	Material	Mass
			[kg]
APL 033	0313025	Aluminum	0.009

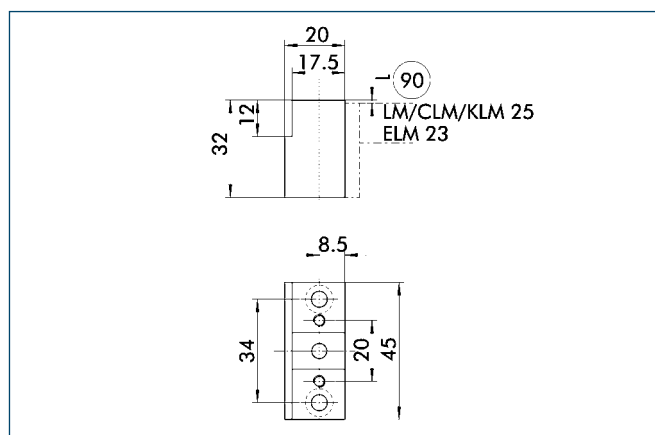
APL 050



- 90 Absolute dimension to the linear module bottom edge for APL attachment as drawn
90 Absolute dimension to the linear module bottom edge for APL attachment rotated by 90°

Designation	ID	Material	Mass
			[kg]
APL 050	0313369	Steel	0.096

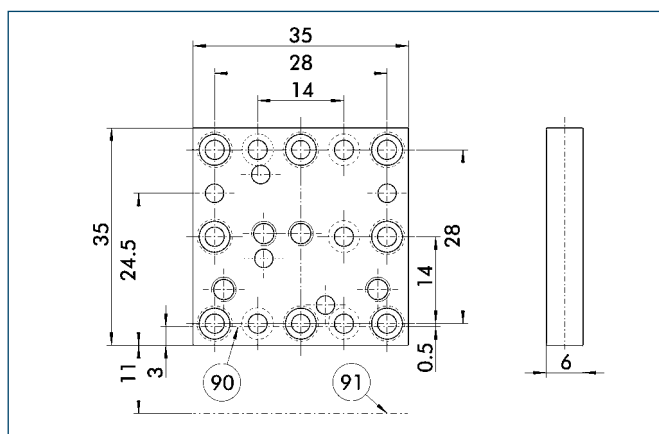
APL 051



- 90 Upper edge, linear module slide

Designation	ID	Material	Mass
			[kg]
APL 051	0313370	Aluminum	0.060

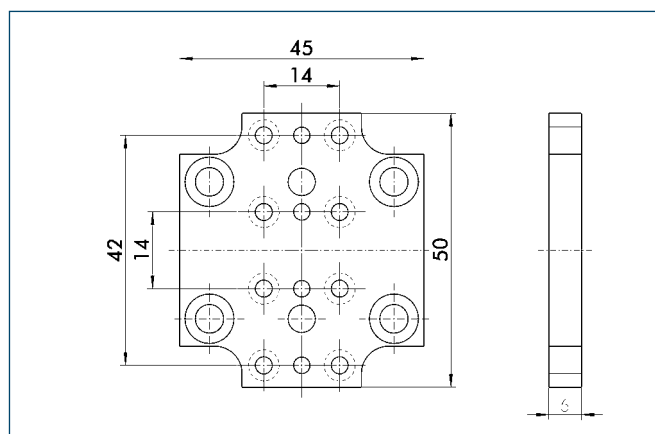
APL 052



- 90 Bottom edge, CLM/LM/KLM base body
90 Bottom edge, ELM base body

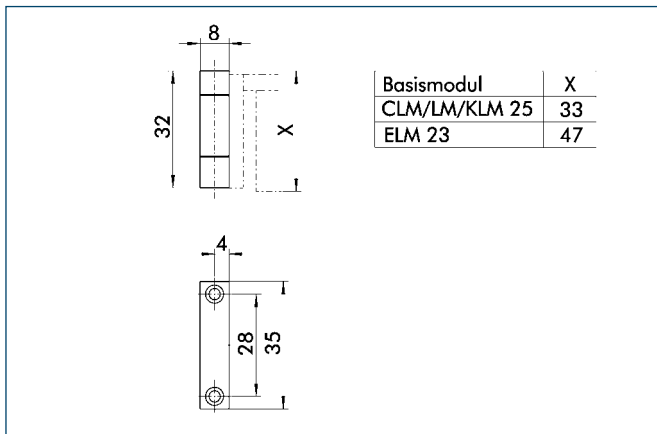
Designation	ID	Material	Mass
			[kg]
APL 052	0313026	Aluminum	0.02

APL 053



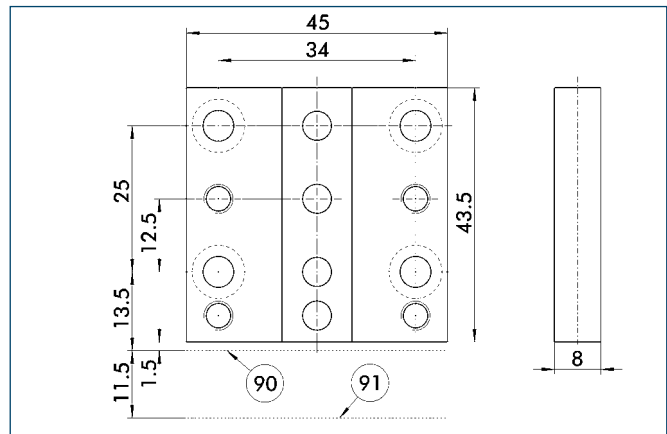
Designation	ID	Material	Mass
			[kg]
APL 053	0313027	Aluminum	0.023

APL 054



Designation	ID	Material	Mass
			[kg]
APL 054	0313028	Aluminum	0.019

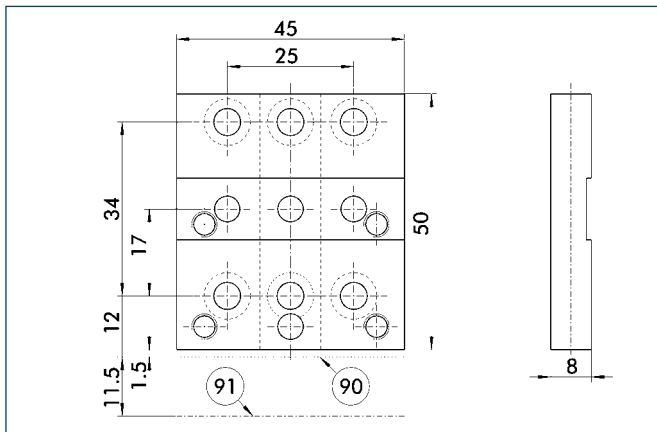
APL 100



- 90 Bottom edge, LM/CLM base body
- 90 Bottom edge, ELM base body

Designation	ID	Material	Mass
			[kg]
APL 100	0313371	Steel	0.100

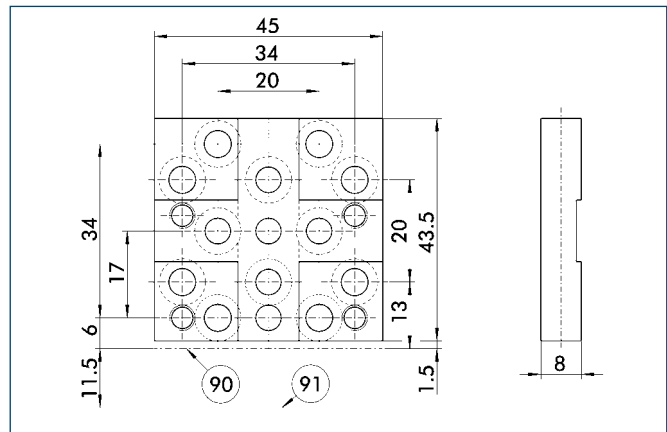
APL 101



- 90 Bottom edge, LM/CLM base body
- 90 Bottom edge, ELM base body

Designation	ID	Material	Mass
			[kg]
APL 101	0313372	Steel	0.120

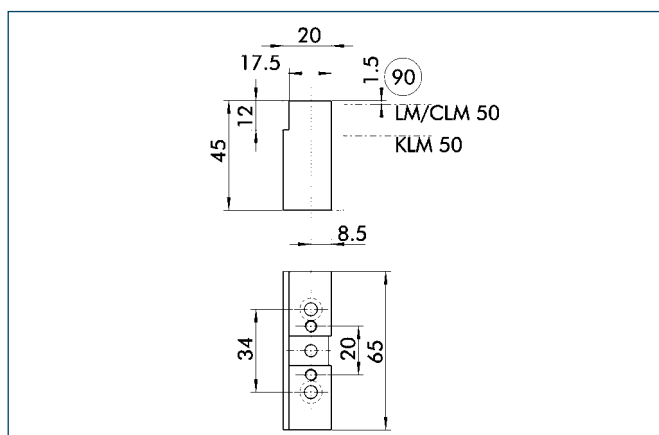
APL 102



- 90 Bottom edge, LM/CLM base body
- 90 Bottom edge, ELM base body

Designation	ID	Material	Mass
			[kg]
APL 102	0313373	Steel	0.080

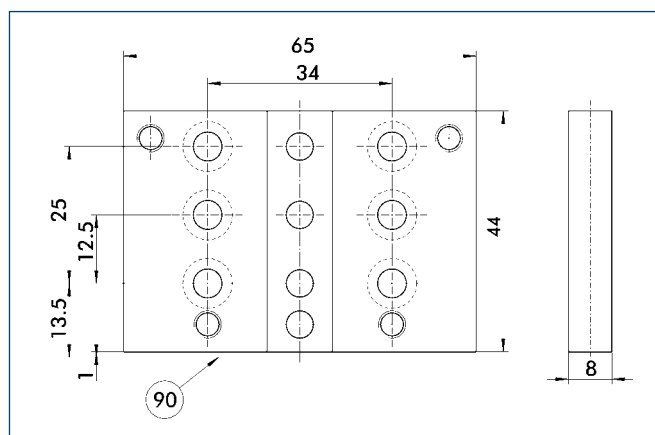
APL 103



90 Upper edge, LM/CLM/KLM slide

Designation	ID	Material	Mass
			[kg]
APL 103	0313374	Aluminum	0.133

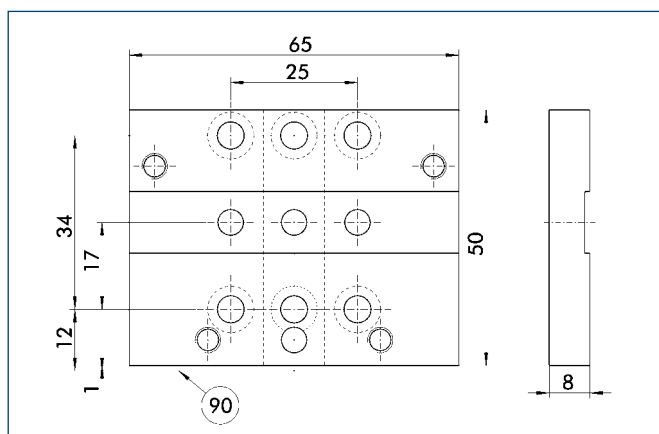
APL 110



90 Bottom edge, KLM base body

Designation	ID	Material	Mass
			[kg]
APL 110	0313375	Steel	0.160

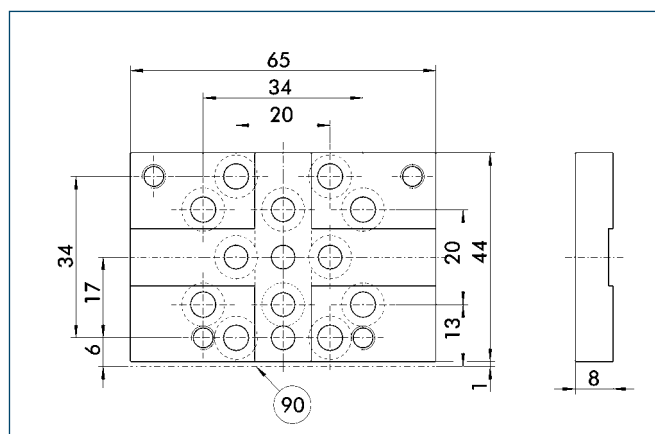
APL 111



90 Bottom edge, KLM base body

Designation	ID	Material	Mass
			[kg]
APL 111	0313376	Steel	0.180

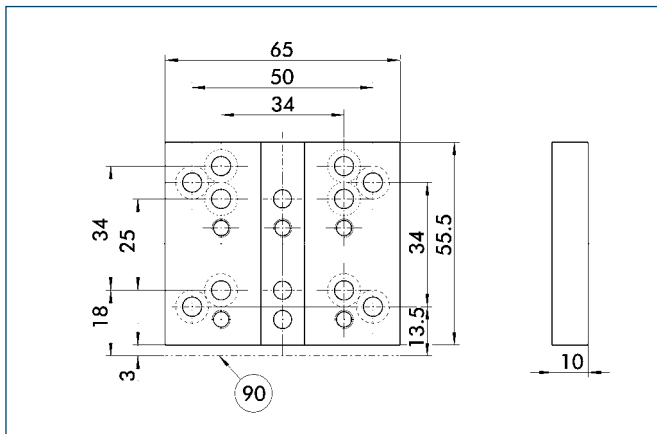
APL 112



90 Bottom edge, KLM base body

Designation	ID	Material	Mass
			[kg]
APL 112	0313377	Steel	0.120

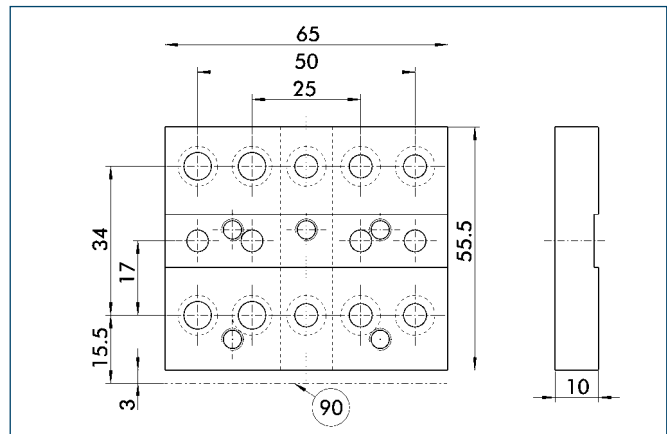
APL 120



90 Bottom edge, LM/CLM/KLM base body

Designation	ID	Material	Mass
			[kg]
APL 120	0313378	Steel	0.240

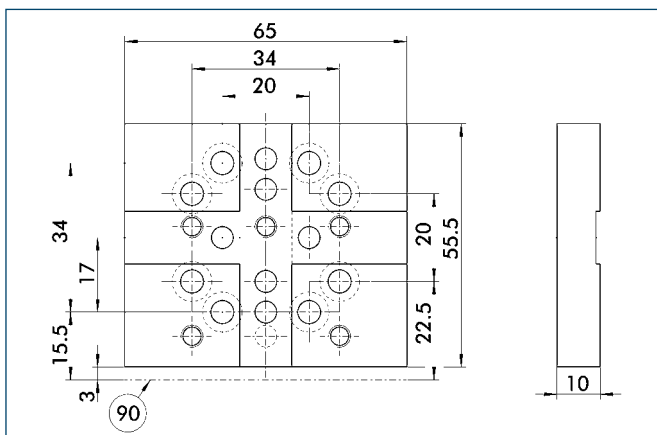
APL 121



90 Bottom edge, LM/CLM/KLM base body

Designation	ID	Material	Mass
			[kg]
APL 121	0313379	Steel	0.220

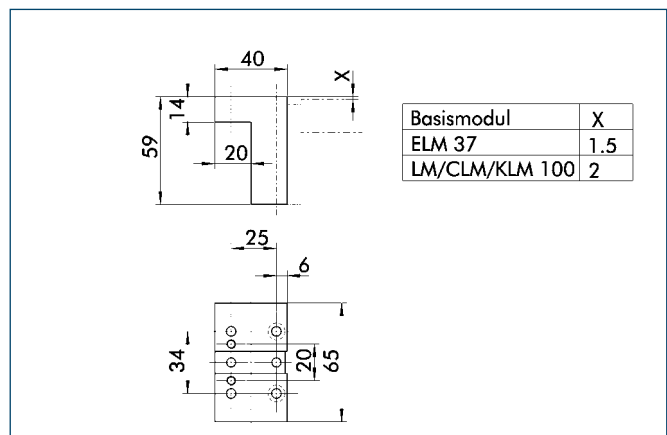
APL 122



90 Bottom edge, LM/CLM/KLM base body

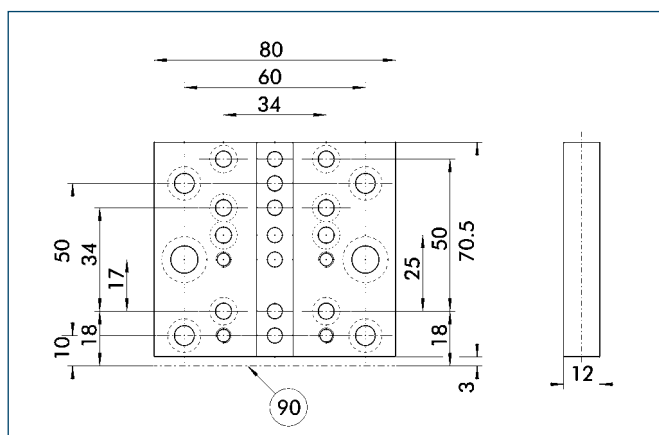
Designation	ID	Material	Mass
			[kg]
APL 122	0313380	Steel	0.220

APL 123



Designation	ID	Material	Mass
			[kg]
APL 123	0313381	Aluminum	0.233

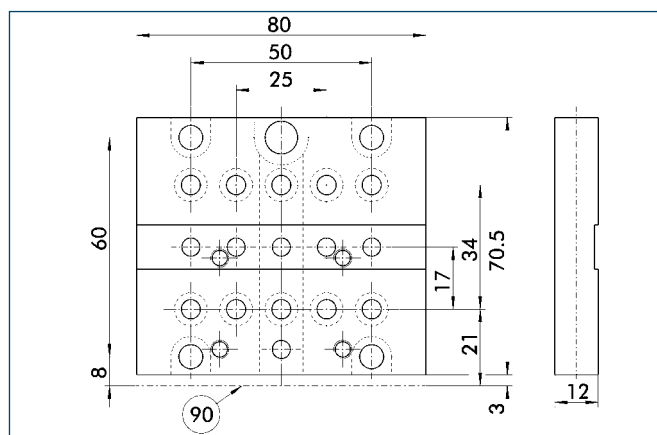
APL 130



90° Bottom edge, LM/CLM base body

Designation	ID	Material	Mass
			[kg]
APL 130	0313382	Steel	0.460

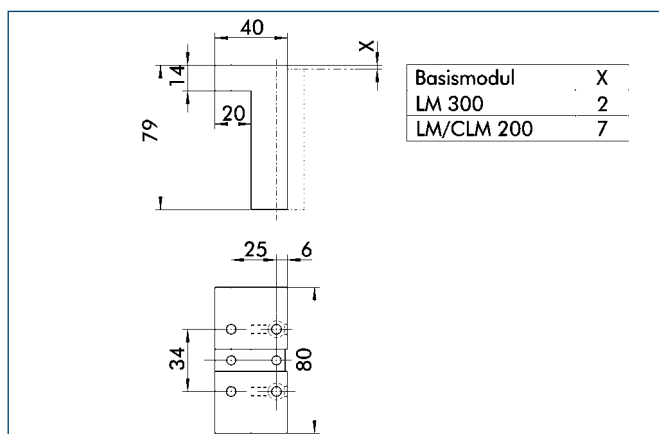
APL 131



90° Bottom edge, LM/CLM base body

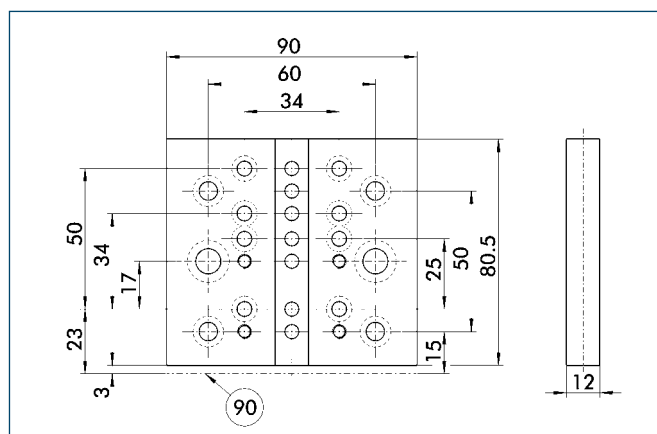
Designation	ID	Material	Mass
			[kg]
APL 131	0313383	Steel	0.420

APL 132



Designation	ID	Material	Mass
			[kg]
APL 132	0313384	Aluminum	0.374

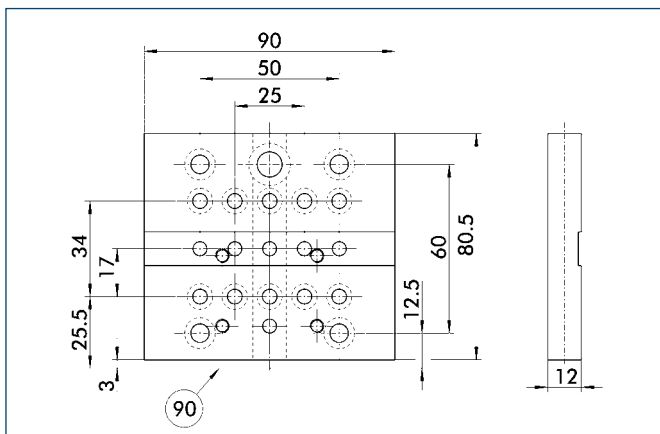
APL 140



90° Bottom edge, LM base body

Designation	ID	Material	Mass
			[kg]
APL 140	0313385	Steel	0.580

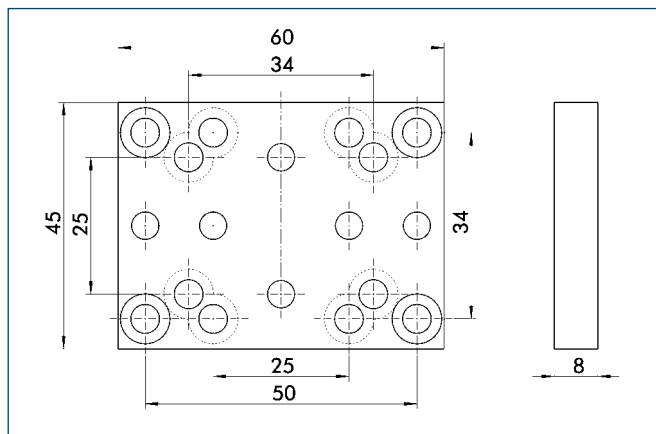
APL 141



90° Bottom edge, LM base body

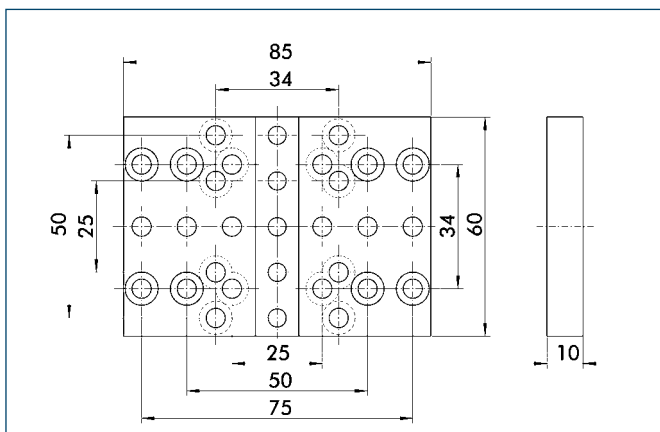
Designation	ID	Material	Mass
			[kg]
APL 141	0313386	Steel	0.560

APL 200



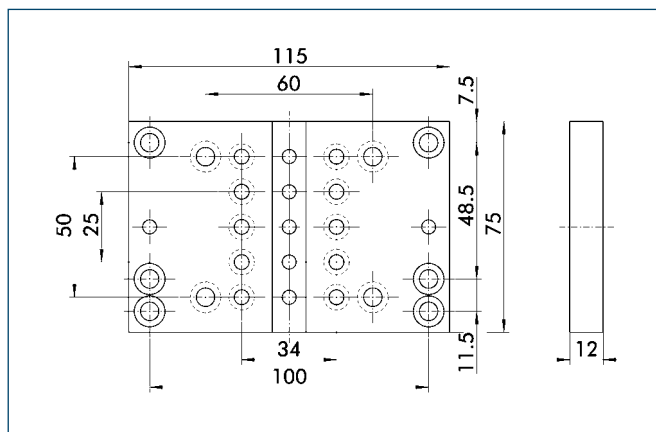
Designation	ID	Material	Mass
			[kg]
APL 200	0313387	Steel	0.140

APL 210



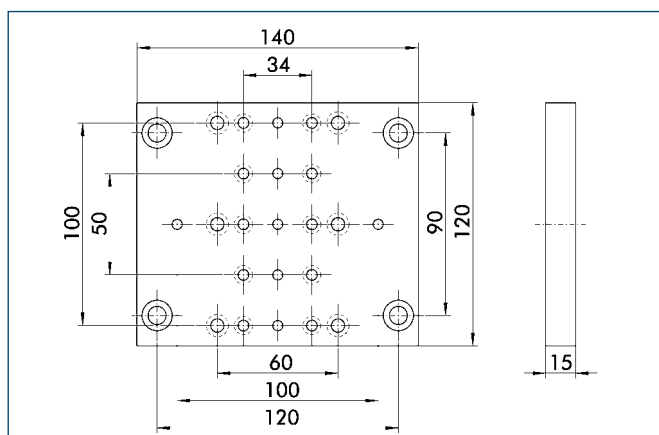
Designation	ID	Material	Mass
			[kg]
APL 210	0313388	Steel	0.320

APL 220



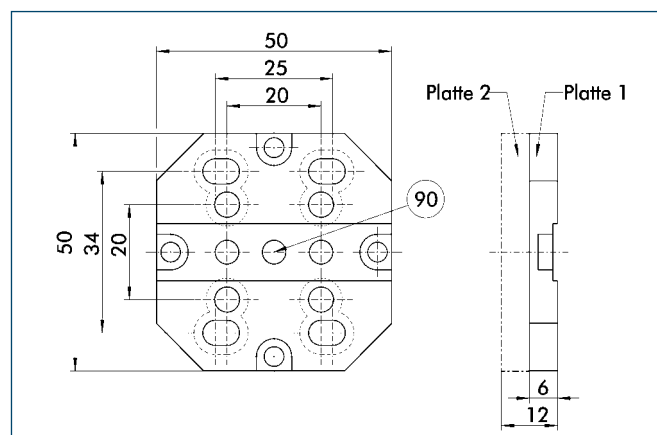
Designation	ID	Material	Mass
			[kg]
APL 220	0313389	Steel	0.700

APL 230



Designation	ID	Material	Mass
			[kg]
APL 230	0313390	Aluminum	0.620

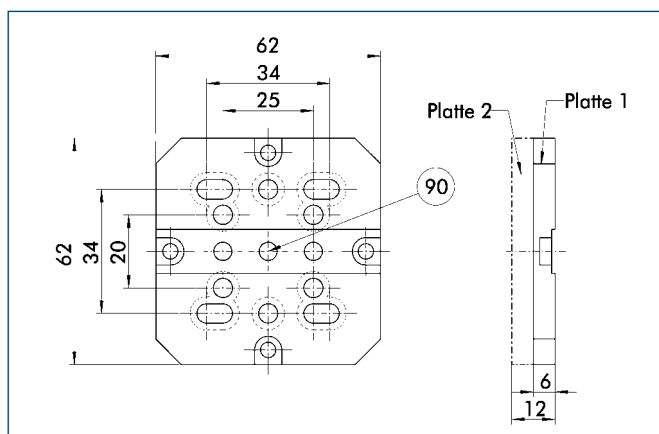
APL 300



90 Swiveling axis, RM

Designation	ID	Material	Mass
			[kg]
APL 300	0313391	Steel	0.160

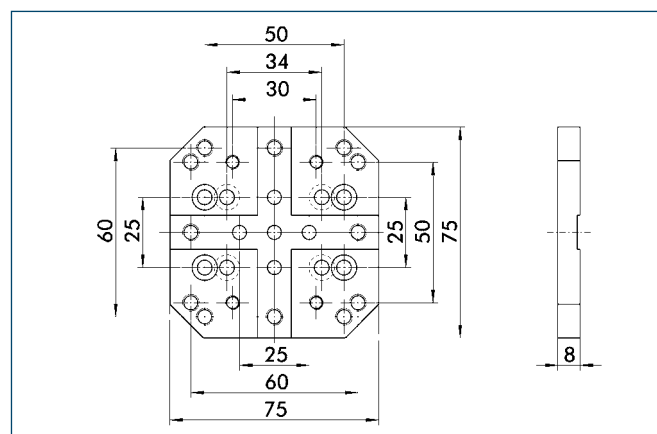
APL 310



90 Swiveling axis, RM

Designation	ID	Material	Mass
			[kg]
APL 310	0313392	Steel	0.280

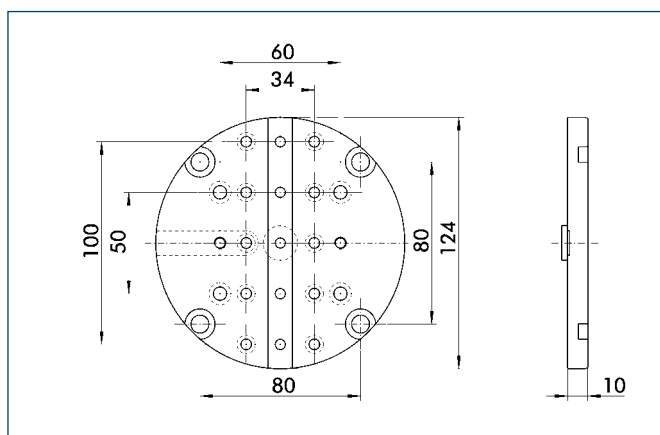
APL 320



Designation	ID	Material	Mass
			[kg]
APL 320	0313393	Steel	0.260

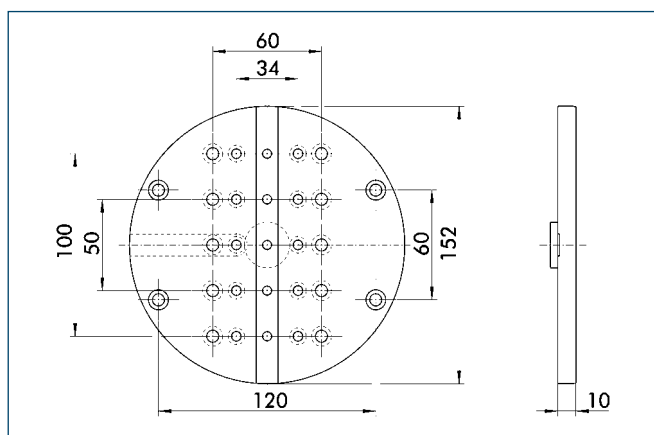
The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

APL 330



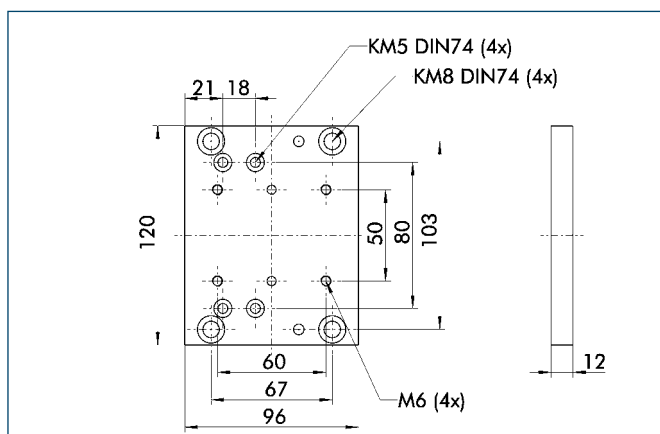
Designation	ID	Material	Mass
APL 330	0313394	Steel	[kg] 0.820

APL 340



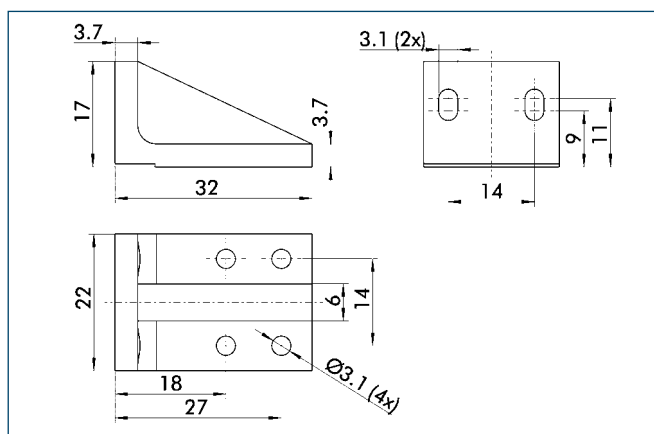
Designation	ID	Material	Mass
APL 340	0313395	Steel	[kg] 0.820

APPM



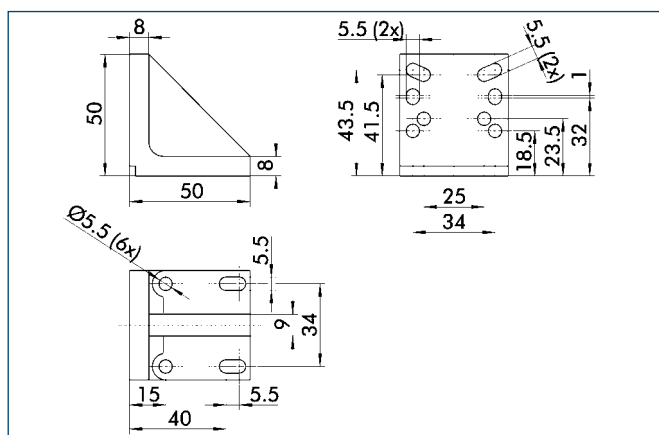
Designation	ID	Scope of delivery
APPM 160	0313397	4xNT-M5, 4xM5x12 DIN 912
APPM 250	0313398	4xNT-M8, 4xM8x16 DIN 912

VW 030



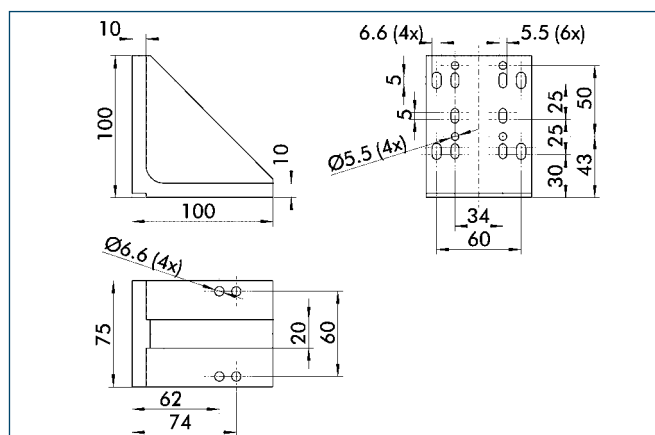
Designation	ID	Material	Mass
VW 030	0313029	Aluminum	[kg] 0.012

VW 050



Designation	ID	Material	Mass
			[kg]
VW 050	0313400	Aluminum	0.1

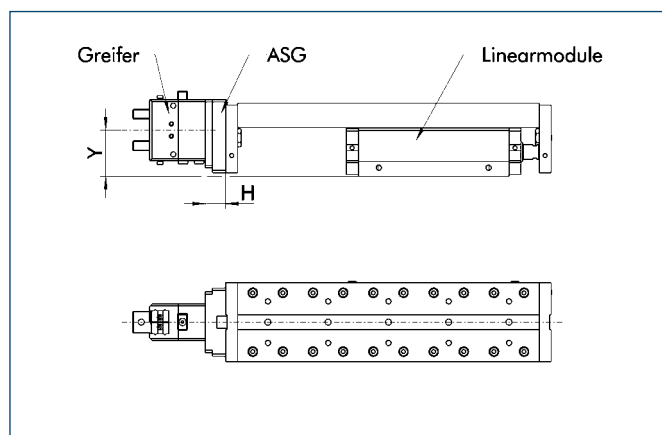
VW 100



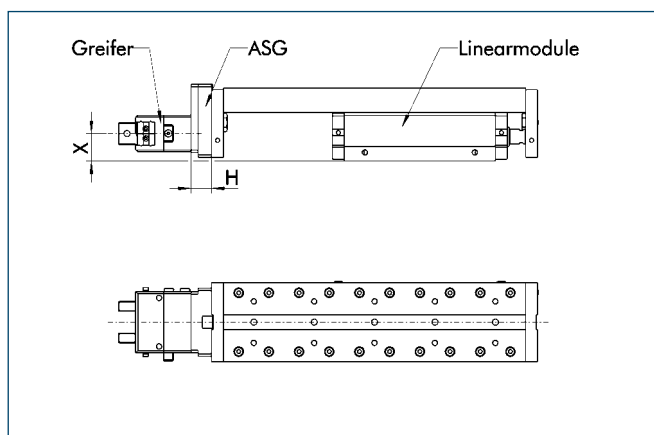
Designation	ID	Material	Mass
			[kg]
VW 100	0313401	Aluminum	0.6

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Assembly angles 0° / 180°



Assembly angles 90° / 270°



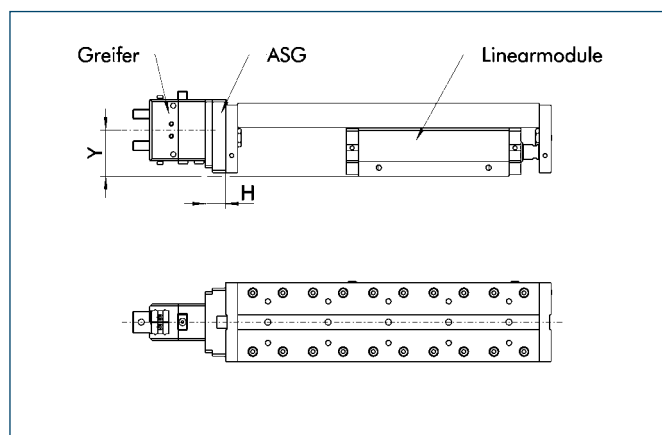
Adapter plate	ID	Basic module	Combination module	H	X	Y
ASG 0010	0313900	CLM / LM / KLM 25	MPG 20	23	20	16.5
ASG 0020	0313901	CLM / LM / KLM 25	MPG 25	22	20	16
ASG 0030	0313902	CLM / LM / KLM 25	MPG 32	15	16	-
ASG 0032	0313903	CLM / LM / KLM 25	MPG 32	15	-	12
ASG 0040	0313904	CLM / LM / KLM 25	MPG 40	15	16	-
ASG 0042	0313905	CLM / LM / KLM 25	MPG 40	15	-	15
ASG 0050	0313906	CLM / LM / KLM 25	PGN-plus 40	26	16	-
ASG 0052	0313907	CLM / LM / KLM 25	PGN-plus 40	26	-	16
ASG 0060	0313908	CLM / LM / KLM 25	PGN-plus 50	28	16	-
ASG 0062	0313909	CLM / LM / KLM 25	PGN-plus 50	28	16	16
ASG 0070	0313910	CLM / LM / KLM 25	MPZ 30	44	16	16
ASG 0080	0313911	CLM / LM / KLM 25	MPZ 38	42	16	16
ASG 0090	0313912	CLM / LM / KLM 25	SWG 16	39	18.5	16
ASG 0100	0313913	CLM / LM / KLM 25	SWG 20	38	18	16
ASG 0110	0313914	CLM / LM / KLM 25	SWG 25	40	17.5	16
ASG 0120	0313915	CLM / LM / KLM 25	SWG 32	31	16	-
ASG 0122	0313916	CLM / LM / KLM 25	SWG 32	31	-	16
ASG 0130	0313917	CLM / LM / KLM 25	SWG 40	31	18.5	-
ASG 0132	0313918	CLM / LM / KLM 25	SWG 40	31	-	16
ASG 0140	0313919	CLM / LM 50	MPG 25	30	22.5	23.5
		ELM 23	MPG 25	30	23	24
ASG 0150	0313920	CLM / LM 50	MPG 32	24	20.5	25.5
		ELM 23	MPG 32	24	21	26
ASG 0160	0313921	CLM / LM 50	MPG 40	19	19.5	29
		ELM 23	MPG 40	19	20	29.5
ASG 0170	0313922	CLM / LM 50	MPG 50	12	18.5	18
		ELM 23	MPG 50	12	19	18.5
ASG 0180	0313923	CLM / LM 50	PGN-plus 40	36	22.5	22.5
		ELM 23	PGN-plus 40	36	23	23
ASG 0190	0313924	CLM / LM 50	PGN-plus 50	37	22.5	22.5
		ELM 23	PGN-plus 50	37	23	23
ASG 0200	0313925	CLM / LM 50	MPZ 30	39	22.5	22.5
		ELM 23	MPZ 30	39	23	23
ASG 0210	0313926	CLM / LM 50	MPZ 38	39	22.5	22.5
		ELM 23	MPZ 38	39	23	23
ASG 0220	0313927	CLM / LM 50	MPZ 45	38	22.5	22.5
		ELM 23	MPZ 45	38	23	23
ASG 0230	0313928	CLM / LM 50	SWG 25	41	22.5	22.5
		ELM 23	SWG 25	41	23	23

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

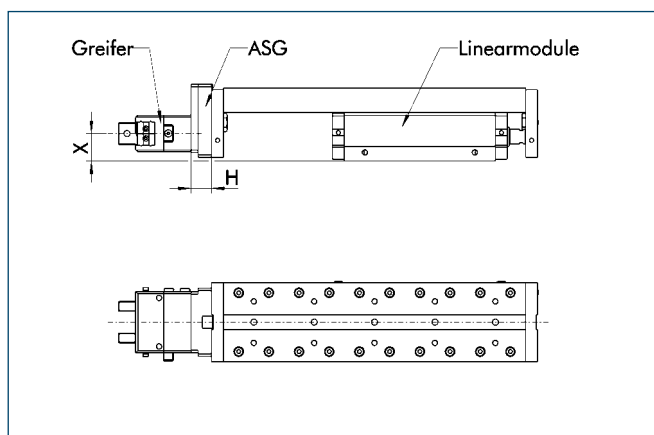
Adapter plate	ID	Basic module	Combination module	H	X	Y
ASG 0240	0313929	CLM / LM 50	SWG 32	39	17.5	23.5
		ELM 23	SWG 32	39	18	24
ASG 0250	0313930	CLM / LM 50	SWG 40	39	25.5	22.5
		ELM 23	SWG 40	39	26	23
ASG 0260	0313931	CLM / LM 50	SWG 50	38	40	27.5
		ELM 23	SWG 50	38	40.5	28
ASG 0270	0313932	CLM / LM 50	PZN-plus 50	38	22.5	22.5
		ELM 23	PZN-plus 50	38	23	23
ASG 0280	0313933	CLM / LM 50	KGG 80	11	19.5	-
		KLM 50	KGG 80	11	19.5	-
		ELM 23	KGG 80	11	20	-
ASG 0282	0313934	CLM / LM 50	KGG 80	11	-	29.5
		ELM 23	KGG 80	11	-	30
ASG 0290	0313935	KLM 50	MPG 25	32	22.5	22.5
ASG 0300	0313936	KLM 50	MPG 32	27	22.5	25.5
ASG 0310	0313937	KLM 50	MPG 40	22	22.5	29
ASG 0320	0313938	KLM 50	MPG 50	11	22.5	18
ASG 0330	0313939	KLM 50	PGN-plus 40	37	22.5	22.5
ASG 0340	0313940	KLM 50	PGN-plus 50	39	22.5	22.5
ASG 0350	0313941	KLM 50	MPZ 30	40	22.5	22.5
ASG 0360	0313942	KLM 50	MPZ 38	40	22.5	22.5
ASG 0370	0313943	KLM 50	MPZ 45	39	22.5	22.5
ASG 0380	0313944	KLM 50	SWG 25	43	22.5	22.5
ASG 0390	0313945	KLM 50	SWG 32	40	22.5	23.5
ASG 0400	0313946	KLM 50	SWG 40	40	22.5	22.5
ASG 0410	0313947	KLM 50	SWG 50	39	22.5	27.5
ASG 0420	0313948	KLM 50	PZN-plus 50	39	22.5	22.5
ASG 0432	0313949	KLM 50	KGG 80	11	-	29.5
ASG 0440	0313950	CLM 100	MPG 40	23	23	34
		LM 100	MPG 40	23	23	34
		KLM 100	MPG 40	23	23	34
		ELM 37	MPG 40	23	30.5	41.5
ASG 0450	0313951	CLM 100	MPG 50	17	22.5	38
		LM 100	MPG 50	17	22.5	38
		KLM 100	MPG 50	17	22.5	38
		ELM 37	MPG 50	17	30	45.5
ASG 0460	0313952	CLM 100	MPG 64	17	30	-
		LM 100	MPG 64	17	30	-
		KLM 100	MPG 64	17	30	-
		ELM 37	MPG 64	17	37.5	-
ASG 0462	0313953	CLM 100	MPG 64	17	-	26.5
		LM 100	MPG 64	17	-	26.5
		KLM 100	MPG 64	17	-	26.5
		ELM 37	MPG 64	17	-	34
ASG 0470	0313954	CLM 100	PGN-plus 50	40	30	30
		LM 100	PGN-plus 50	40	30	30
		KLM 100	PGN-plus 50	40	30	30
		ELM 37	PGN-plus 50	40	37.5	37.5
ASG 0480	0313955	CLM 100	PGN-plus 64	36	30	30
		LM 100	PGN-plus 64	36	30	30
		KLM 100	PGN-plus 64	36	30	30
		ELM 37	PGN-plus 64	36	37.5	37.5
ASG 0490	0313956	CLM 100	PGN-plus 80	36	30	30
		LM 100	PGN-plus 80	36	30	30

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Assembly angles 0° / 180°



Assembly angles 90° / 270°



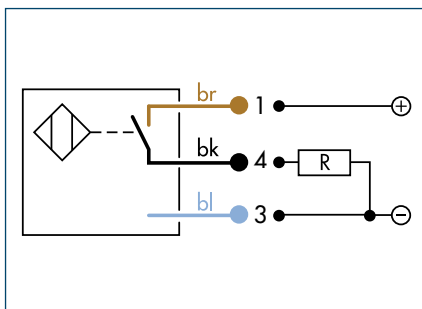
Adapter plate	ID	Basic module	Combination module	H	X	Y
ASG 0490	0313956	KLM 100	PGN-plus 80	36	30	30
		ELM 37	PGN-plus 80	36	37.5	37.5
ASG 0500	0313957	CLM 100	MPZ 38	41	30	30
		LM 100	MPZ 38	41	30	30
		KLM 100	MPZ 38	41	30	30
		ELM 37	MPZ 38	41	37.5	37.5
ASG 0510	0313958	CLM 100	MPZ 45	40	30	30
		LM 100	MPZ 45	40	30	30
		KLM 100	MPZ 45	40	30	30
		ELM 37	MPZ 45	40	37.5	37.5
ASG 0520	0313959	CLM 100	SWG 32	44	45.5	37.5
		LM 100	SWG 32	44	45.5	37.5
		KLM 100	SWG 32	44	45.5	37.5
		ELM 37	SWG 32	44	53	45
ASG 0530	0313960	CLM 100	SWG 40	44	47	37
		LM 100	SWG 40	44	47	37
		KLM 100	SWG 40	44	47	37
		ELM 37	SWG 40	44	54.5	44.5
ASG 0540	0313961	CLM 100	SWG 50	44	49	36.5
		LM 100	SWG 50	44	49	36.5
		KLM 100	SWG 50	44	49	36.5
		ELM 37	SWG 50	44	56.5	44
ASG 0550	0313962	CLM 100	PZN-plus 50	40	30	30
		LM 100	PZN-plus 50	40	30	30
		KLM 100	PZN-plus 50	40	49	36.5
		ELM 37	PZN-plus 50	40	37.5	37.5
ASG 0560	0313963	CLM 100	PZN-plus 64	39	30	30
		LM 100	PZN-plus 64	39	30	30
		KLM 100	PZN-plus 64	39	49	36.5
		ELM 37	PZN-plus 64	39	37.5	37.5
ASG 0570	0313964	CLM 100	KGG 80	12	23	-
		LM 100	KGG 80	12	23	-
		KLM 100	KGG 80	12	23	-
		ELM 37	KGG 80	12	30.5	-
ASG 0572	0313965	CLM 100	KGG 80	12	-	34
		LM 100	KGG 80	12	-	34
			KGG 80	12	-	34
		ELM 37	KGG 80	12	-	41.5

The necessary standard parts and dimensional arrangement of combinations can be obtained from the KOMBIBOX software, at www.schunk.com.

Adapter plate	ID	Basic module	Combination module	H	X	Y
ASG 0580	0313966	CLM 100	KGG 140	12	22	-
		LM 100	KGG 140	12	22	-
ASG 0580	0313966	KLM 100	KGG 140	12	22	-
		ELM 37	KGG 140	12	29.5	-
ASG 0582	0313967	CLM 100	KGG 140	12	-	35
		LM 100	KGG 140	12	-	35
		KLM 100	KGG 140	12	-	35
		ELM 37	KGG 140	12	-	42.5
ASG 0590	0313968	CLM / LM 200	MPG 40	23	42.5	37.5
ASG 0600	0313969	CLM / LM 200	MPG 50	17	42	38.5
ASG 0610	0313970	CLM / LM 200	MPG 64	12	42	44.5
ASG 0620	0313971	CLM / LM 200	PGN-plus 64	35	37.5	37.5
ASG 0630	0313972	CLM / LM 200	PGN-plus 80	35	37.5	37.5
ASG 0640	0313973	CLM / LM 200	PGN-plus 100	32	37.5	37.5
ASG 0650	0313974	CLM / LM 200	PGN-plus 125	32	37.5	-
ASG 0652	0313975	CLM / LM 200	PGN-plus 125	32	-	37.5
ASG 0660	0313976	CLM / LM 200	MPZ 38	40	37.5	37.5
ASG 0670	0313977	CLM / LM 200	MPZ 45	39	37.5	37.5
ASG 0680	0313978	CLM / LM 200	SWG 40	44	35	37.5
ASG 0690	0313979	CLM / LM 200	SWG 50	43	37.5	37.5
ASG 0700	0313980	CLM / LM 200	PZN-plus 50	39	37.5	37.5
ASG 0710	0313981	CLM / LM 200	PZN-plus 64	38	37.5	37.5
ASG 0720	0313982	CLM / LM 200	PZN-plus 80	46	37.5	37.5
ASG 0730	0313983	CLM / LM 200	PZN-plus 100	46	37.5	37.5
ASG 0740	0313984	CLM / LM 200	KGG 80	11	28	37.5
ASG 0750	0313985	CLM / LM 200	KGG 140	11	43.5	-
ASG 0752	0313986	CLM / LM 200	KGG 140	11	-	38
ASG 0760	0313540	CLM / LM 50	PGN-plus 64	33	22.5	-
		ELM 23	PGN-plus 64	33	23	-
ASG 0762	0313541	CLM / LM 50	PGN-plus 64	33	-	22.5
		ELM 23	PGN-plus 64	33	-	23
ASG 0770	0313542	KLM 50	PGN-plus 64	33	22.5	-
ASG 0772	0313543	KLM 50	PGN-plus 64	33	-	22.5
ASG 0780	0313544	CLM 08	MPG 20	19	10.5	10
		CLM 10	MPG 20	19	14.5	14
ASG 0790	0313545	CLM 08	MPG 25	12	10.5	-
		CLM 10	MPG 25	12	14.5	-
ASG 0792	0313546	CLM 08	MPG 25	12	-	10
		CLM 10	MPG 25	12	-	14
ASG 0800	0313547	CLM 10	MPG 32	9	14	-
ASG 0802	0313548	CLM 10	MPG 32	9	-	12.5
ASG 0810	0313549	CLM 08	SWG 20	28	12.5	10.5
		CLM 10	SWG 20	28	16.5	14.5
ASG 0820	0313550	CLM 10	SWG 25	25	17.5	13
ASG 0830	0313551	CLM 10	MPZ 30	35	12.5	12.5
ASG 0840	0313552	CLM 10	PGN-plus 40	21	13	-
ASG 0842	0313553	CLM 10	PGN-plus 40	23	-	16
ASG 0850	0313554	CLM 08	MPG 16	8	10.5	11
ASG 0860	0313555	CLM 08	SWG 16	26	14	11.5

¹⁾ Only required for assembly on the piston side

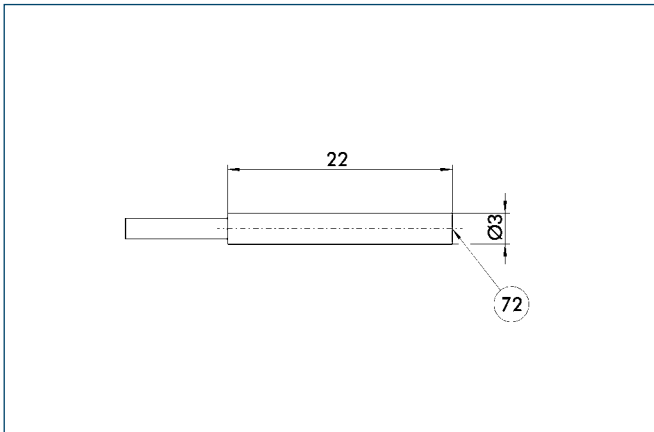
Circuit diagram, closer



Technical data

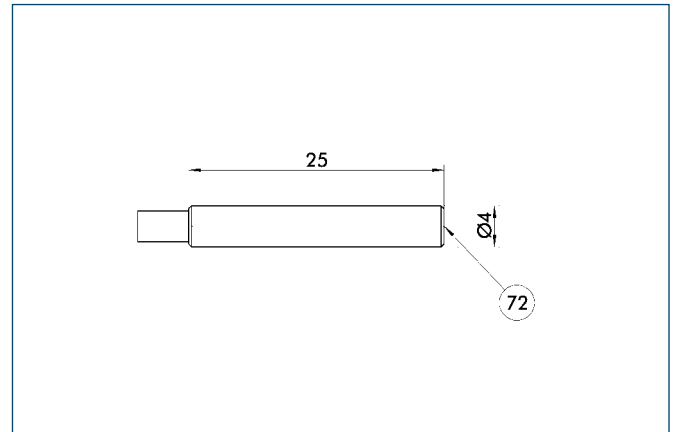
Designation		NI 03	NI 10	NI 20	NI 32
	ID	0313426	0313427	0313428	0313425
Switching function		Closer	Closer	Closer	Closer
Switching distance	[mm]	1	0.8	1.5	1.5
Switching hysteresis from nominal switch-		< 10 %	< 10 %	< 15 %	< 15 %
Type of switching		PNP	PNP	PNP	PNP
Cable lengths	[cm]	30	30	30	30
Cable connector		M8	M8	M8	M8
Voltage type		DC	DC	DC	DC
Rated voltage	[V]	24	24	24	24
Min. voltage	[V]	10	10	10	10
Max. voltage	[V]	30	30	30	30
Own current consumption	[mA]	< 10	< 10	< 15	< 15
Max. load current	[mA]	200	200	200	200
Min. ambient temperature	[°C]	-25	-25	-25	-25
Max. ambient temperature	[°C]	70	70	70	70
Max. switching frequency	[Hz]	3000	3000	5000	3000
IP rating (plug, plugged)		65	65	65	65
Cable diameter	[mm]	3.5	3.5	3.5	3.5
Min. bending radius (dynamic)	[mm]	35	35	35	35
Min. bending radius (static)	[mm]	17.5	17.5	17.5	17.5

Sensor, NI 03



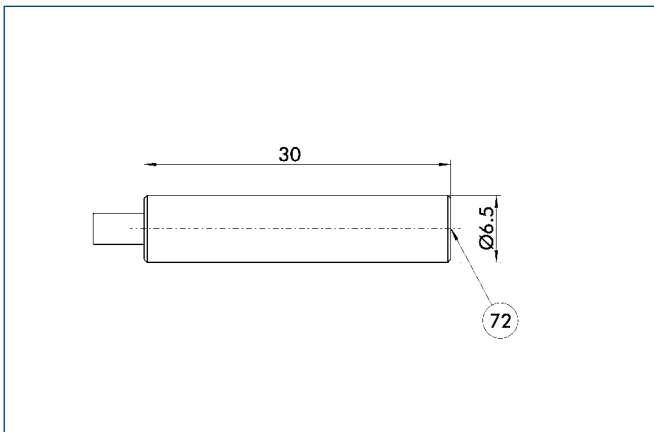
72 Active sensor surface

Sensor, NI 10



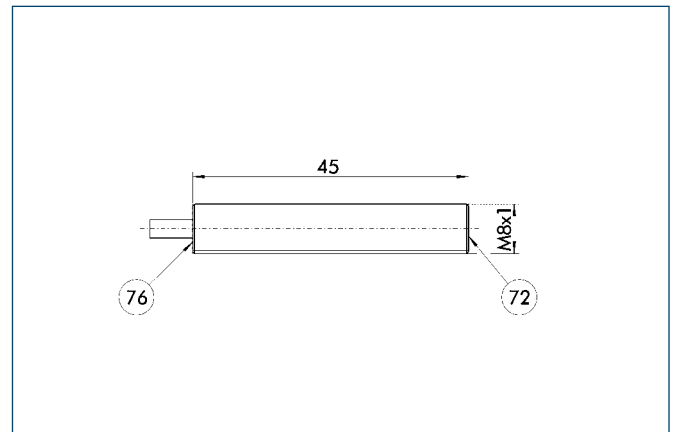
72 Active sensor surface

Sensor, NI 20



72 Active sensor surface

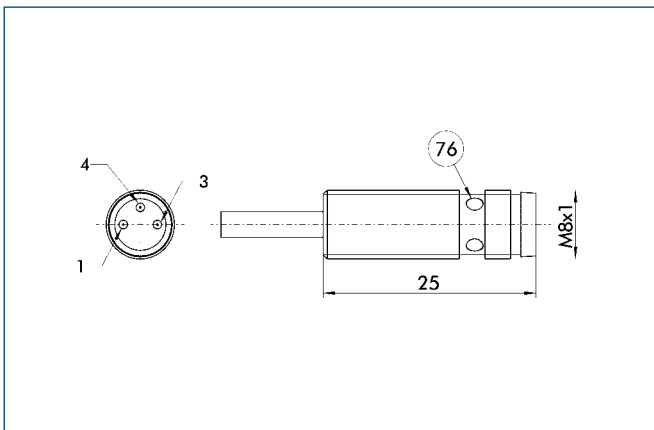
Sensor, NI 32



72 Active sensor surface

76 LED

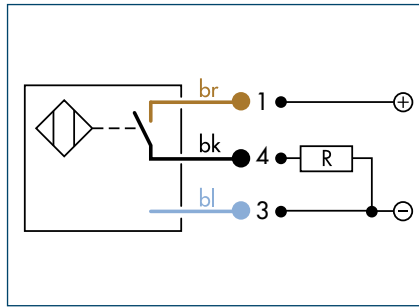
Plug, M8



76 LED

The plug has no coupling ring. The cable extension or the sensor distributor has to have a coupling ring.

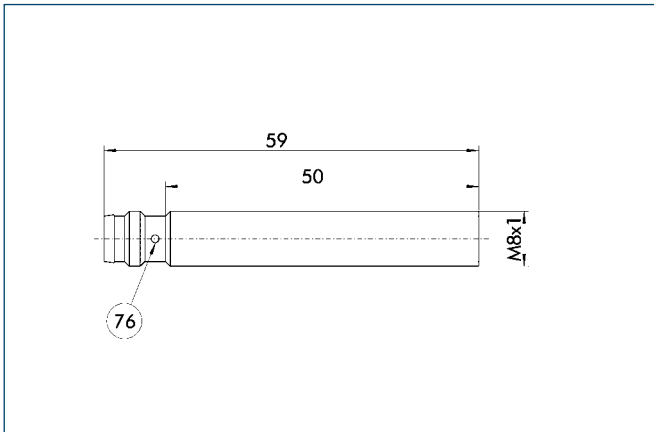
Circuit diagram, closer



Technical data

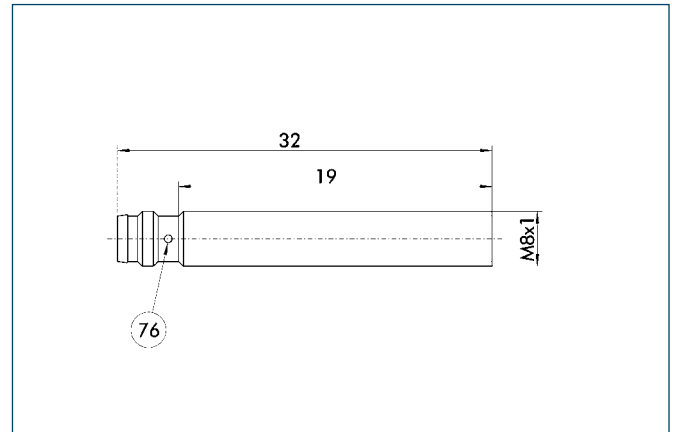
Designation		NI 30	NI 31	NI 40
	ID	0313430	0313505	0313431
Switching function		Closer	Closer	Closer
Switching distance	[mm]	1.5	1.5	1.5
Switching hysteresis from nominal switch-		< 15 %	< 15 %	< 20 %
Type of switching		PNP	PNP	PNP
Plugs		M8	M8	M8
Voltage type		DC	DC	DC
Rated voltage	[V]	24	24	24
Min. voltage	[V]	10	10	10
Max. voltage	[V]	35	35	30
Own current consumption	[mA]	< 15	< 15	< 10
Max. load current	[mA]	300	200	200
Min. ambient temperature	[°C]	-25	-25	-25
Max. ambient temperature	[°C]	70	70	70
Max. switching frequency	[Hz]	5000	5000	1000
IP rating (plug, plugged)		65	67	67

Sensor, NI 30



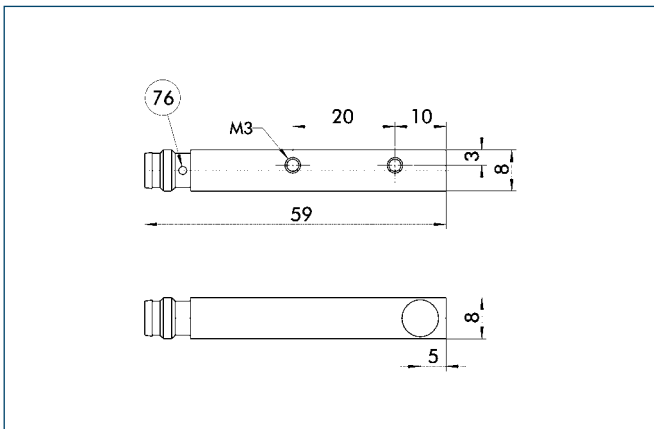
76 LED

Sensor, NI 31



76 LED

Sensor, NI 40



76 LED

Feed cable

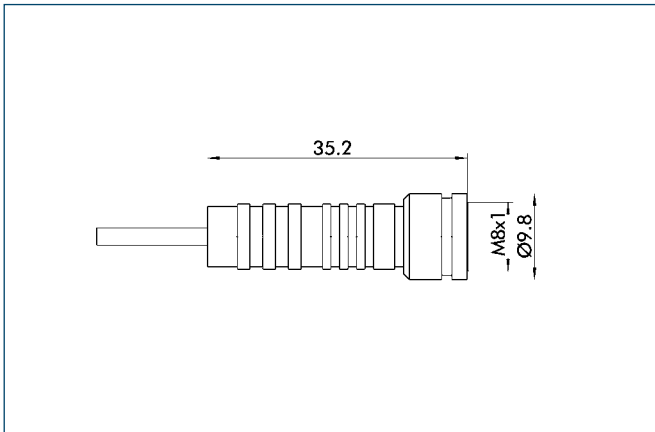
These have a cable connector (sensor side) as well as a wire strand on the other end of the cable. The switching state of the connected sensors can be seen on the LEDs integrated into the cable connector.



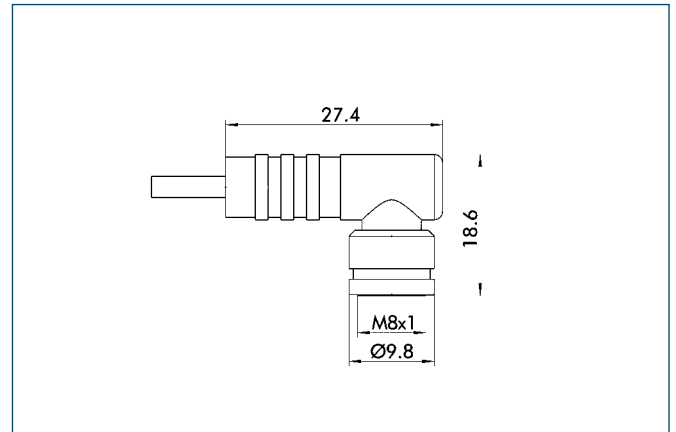
Technical data

Designation		STV 10	STV 20
	ID	0313432	0313433
Connection, sensor side		Sleeve	Sleeve
Thread, sensor side		M8	M8
Outgoing angle, sensor side	[°]	0	90
Connection, control cabinet side		Open wire strand	Open wire strand
Cable lengths	[m]	5	5
Number of wires		3	3
Wire cross section	[mm ²]	0.34	0.34
Cable jacket		PUR/PVC	PUR/PVC

STV 10

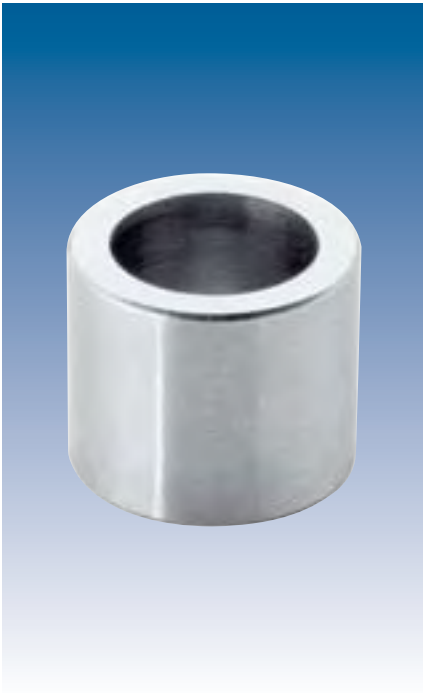


STV 20

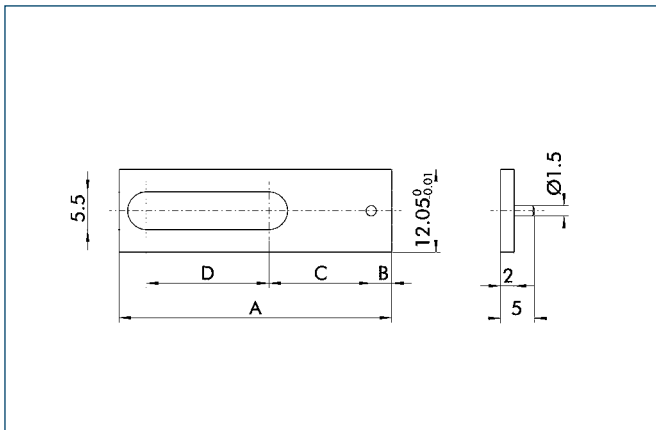


Area of application

Any centering tasks between the system's modular components.

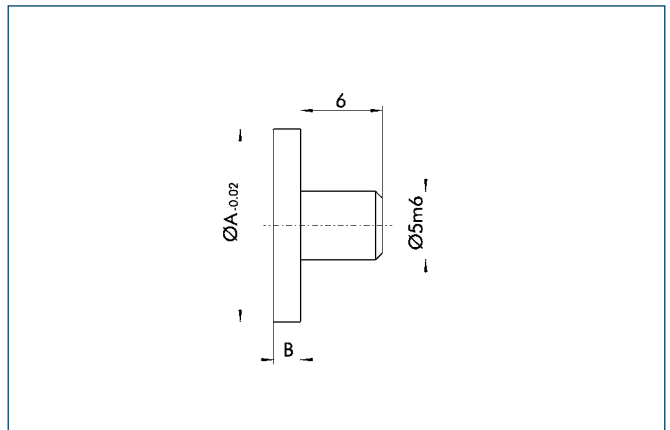


LMZL



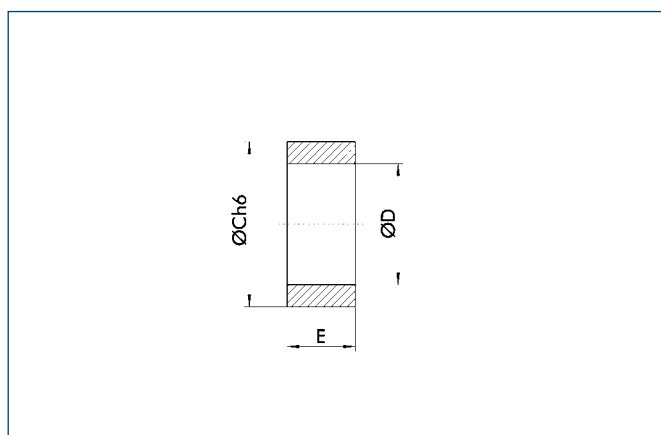
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LMZL 50	0314211	40	3	15	18
LMZL 100	0314212	55	5	18	26

RMZ/GMZ



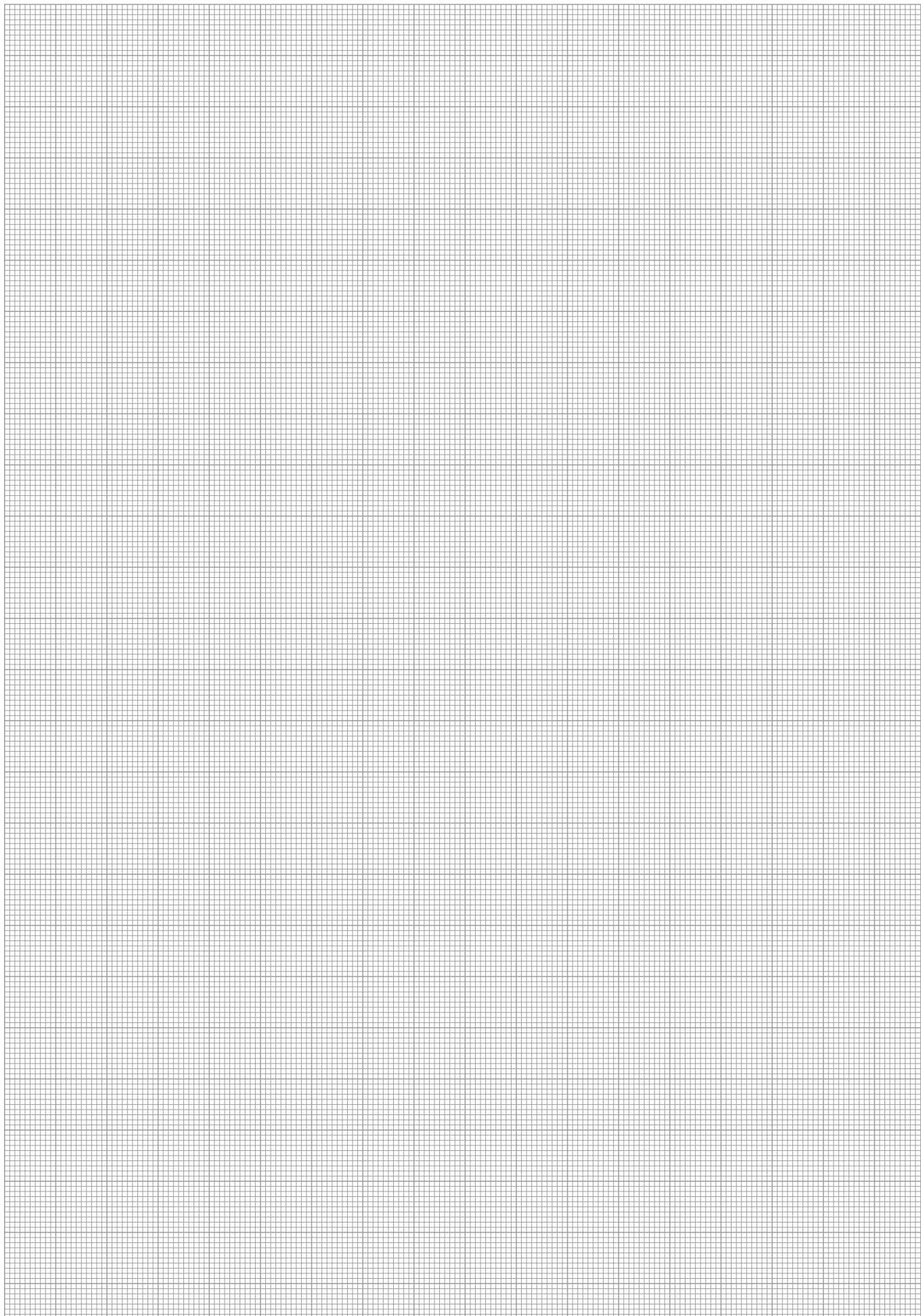
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RMZ 110	0313362	16.03	2
RMZ 200	0313363	20.03	2
GMZ 280	0313364	25.03	0.8
GMZ 300	0313365	29.03	1.1
GMZ 400	0313366	34.03	2.2

ZH



Designation	ID	C	D	E
		[mm]	[mm]	[mm]
ZH 500	0313399	5	3.2	2.5
ZH 600	0313367	6	4.4	2.5
ZH 700	0313368	7	5.4	2.5

A large rectangular area filled with a fine grid of light gray lines, intended for writing notes or drawing diagrams.



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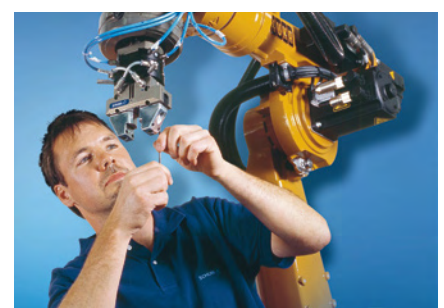
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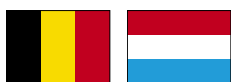
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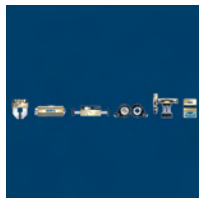
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