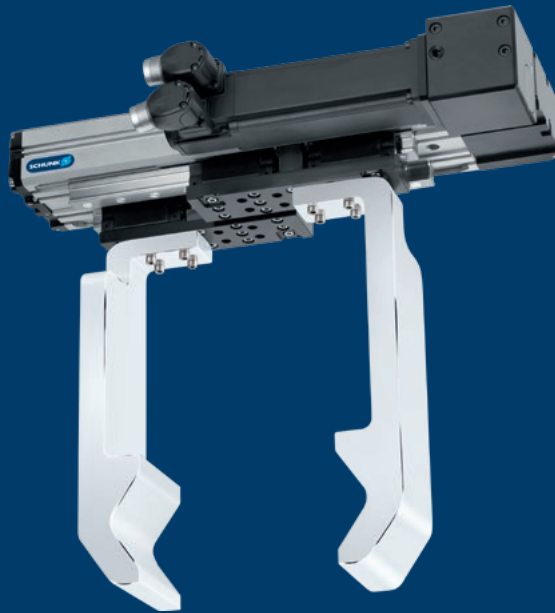




Superior Clamping and Gripping



Product Information

Long-stroke gripper EGA 25

Flexible. Modular. Robust.

Long-stroke gripper EGA

Electric 2-finger parallel gripper with lightweight profile rail guide and adaptable servomotor

Field of application

Optimal standard solution for applications with large workpiece geometries. Universal application in clean to slightly dirty environments, e.g. in the machine and plant building industry, assembly, and handling sectors as well as in the automotive industry.

Advantages – Your benefits

High moments due to profiled rail guide suitable for using long gripper fingers

Extremely flat design for minimal interfering contours

Adaptable drive motor for versatile approach and easy integration into existing control concepts

Position and torque-controlled movement of the gripper
For very flexible gripping of various geometries and types of components

Radial motor and parallel assembly for flexible adaptation to gantries or robots

Safety functions such as STO and SLS can be realized by the use of a suitable drive motor and controller



Sizes
Quantity: 2



Weight
1.8 .. 9.1 kg



Gripping force
500 .. 1300 N



Stroke per jaw
30 .. 100 mm

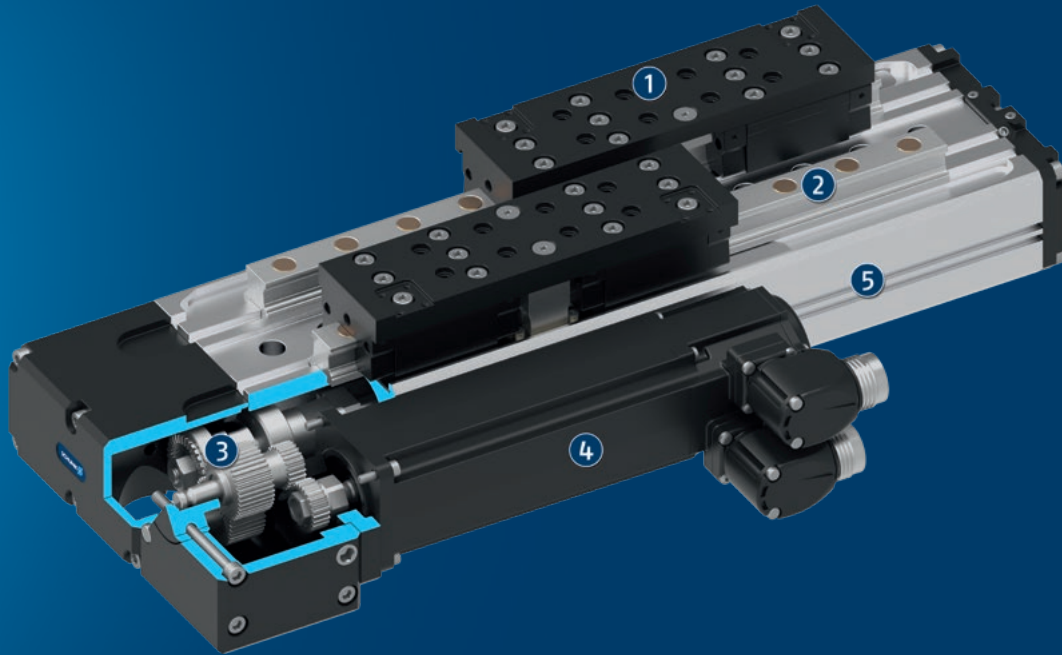


Workpiece weight
2.5 .. 6.5 kg

Functional description

The adaptable servomotor drives the base jaw via the gear spindle mechanism.

The jaw stroke is synchronized by means of rack and pinion kinematics.



- ① **Base Jaw**
for the connection of workpiece-specific gripper fingers
- ② **Profiled rail guide**
highly loadable, nearly backlash-free base jaw guidance for long finger lengths
- ③ **Special gear drive**
for two different motor attachment variants
- ④ **Drive**
Adaptable drive motor
- ⑤ **Housing**
with extremely flat design for low interfering contours

General notes about the series

Operating principle: Spindle drive, synchronized by rack and pinion principle

Housing material: Aluminum alloy, coated

Base jaw material: hard-anodized, high strength aluminum

Actuation: electrically via an adaptable servo drive

Warranty: 24 months

Scope of delivery: Enclosed accessory pack with centering sleeve, assembly and operating manual with declaration of incorporation. Depending on the variant, operation of the gripper requires a motor add-on kit, a servomotor, and a suitable controller. They are not included in the scope of delivery and must be ordered separately.

Gripping force: is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration).

Finger length: measured from the screw surface of the base jaw in the direction of the main axis. Failure to comply with the max. permissible finger length will result in increased wear.

Repeat accuracy: is defined as a distribution of the end Position for 100 consecutive strokes.

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

Closing and opening times: When gripping, the speed must be adapted as described in the operating manual so that the closing and opening times can increase. The times specified are only the movement times of the base jaws at max. speed, max. acceleration without electrical restrictions, and observance of the maximum permissible masses per finger.

Motor torque: Required motor torque may be permanently applied to achieve the maximum gripping force.



Application example

Completely electrically actuated line gantry for loading and unloading pallets with various greatly differing components.

① Line gantry LPE, electric

② Electric long-stroke gripper EGA

SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Rotation unit



Room gantry



Quick change system



Jaw quick-change system



Inductive proximity switches



Magnetic switches



Finger blank

① For more information on these products can be found on the following product pages or at schunk.com.

Options and special information

Flexible in motor and controller selection: The electrical control is carried out via an adaptable servo drive using common standard controller like Bosch or Siemens.

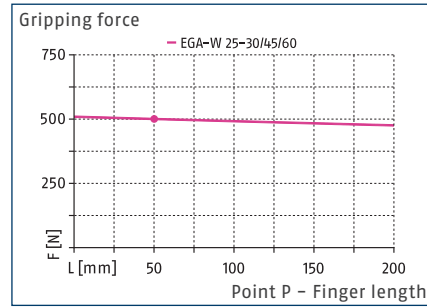
Easy integration: The easy integration into the control system is ensured by the possibility of attaching a common servomotor.

Identical control: Like a normal servo axis, the gripper can be directly controlled and interpolated with existing axes.

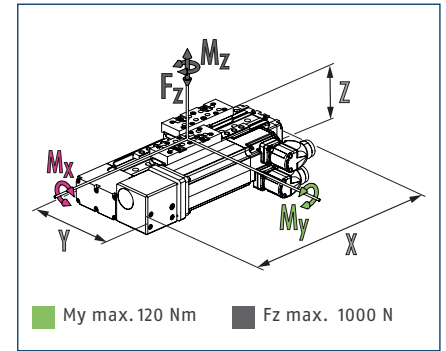
Complete solutions: On request, SCHUNK can supply complete drive solutions including motor, gears, controller, and cables.



Gripping force



Dimensions and maximum loads



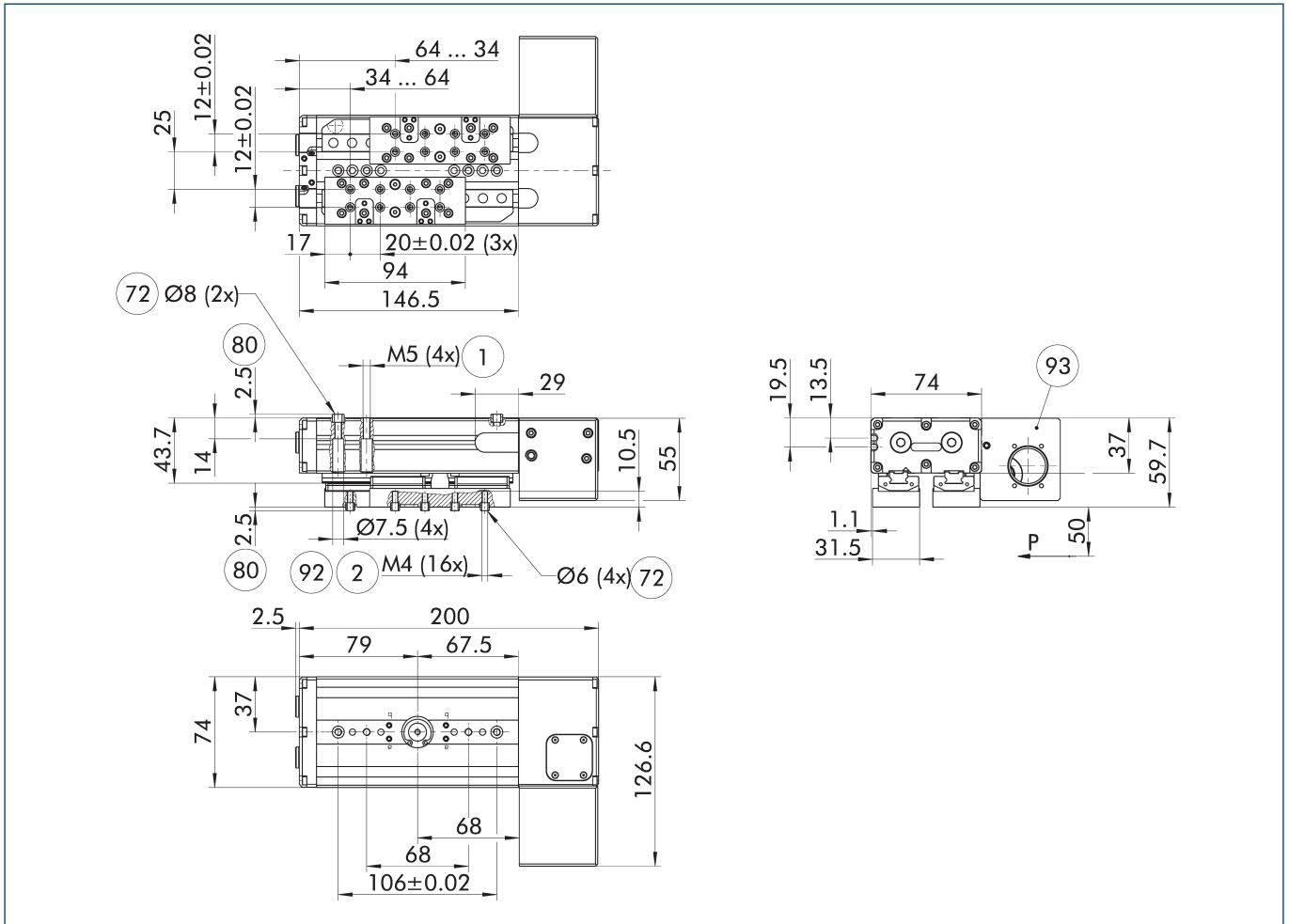
① The indicated torques and forces are static values, apply for each base jaw, and may occur simultaneously.

Technical data

Basic version, parallel		EGA-W 25-030-P-N-B	EGA-W 25-045-P-N-B	EGA-W 25-060-P-N-B
ID		0332000	0332010	0332020
General operating data				
Stroke per jaw	[mm]	30	45	60
Min./max. gripping force	[N]	150/500	150/500	150/500
Closing/opening time	[s]	0.42/0.42	0.6/0.6	0.79/0.79
Max. permissible speed positioning operation	[mm/s]	80	80	80
Max. permissible speed power operation	[mm/s]	30	30	30
Recommended workpiece weight	[kg]	2.5	2.5	2.5
Repeat accuracy	[mm]	0.05	0.05	0.05
Max. permissible finger length	[mm]	200	200	200
Max. permissible mass per finger	[kg]	1	1	1
Motor moment required	[Nm]	0.28	0.28	0.28
Motor speed required	[1/min]	2200	2200	2200
Weight	[kg]	2.2	2.4	2.7
Min./max. ambient temperature	[°C]	5/55	5/55	5/55
IP protection class		40	40	40
Dimensions X x Y x Z	[mm]	202.5 x 126.6 x 59.7	247.5 x 126.6 x 59.7	292.5 x 126.6 x 59.7
Moments M_x max./ M_z max.	[Nm]	25/27	29/33	33/46
Options and their characteristics				
Basic version, radially		EGA-W 25-030-R-N-B	EGA-W 25-045-R-N-B	EGA-W 25-060-R-N-B
ID		0332005	0332015	0332025
Weight	[kg]	1.8	2.1	2.3

① Motors are not included in the purchase price in the base variant. Please ask us for details about the integration of your motor type.

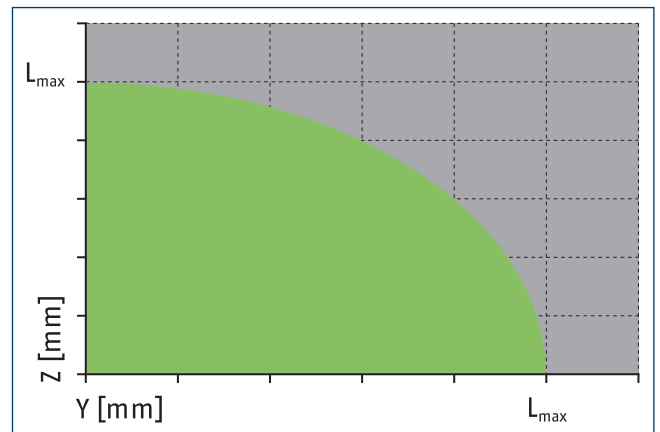
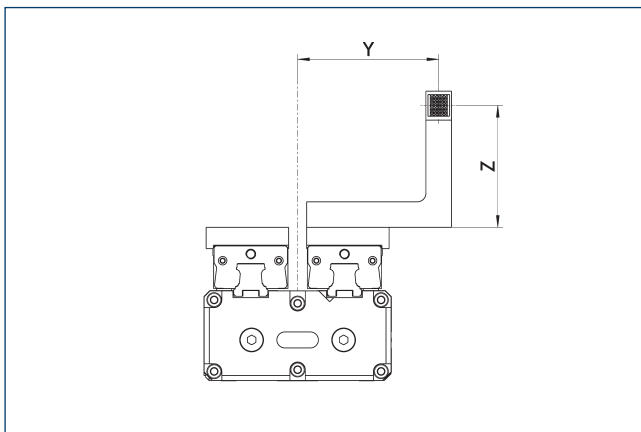
Main view EGA 25-030



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- ① Gripper connection
- ② Finger connection
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ Min. six screws per base jaw
- ⑩ Gear box for parallel motor mounting (not applicable for radial motor mounting)

Maximum permitted finger projection



■ Permitted range

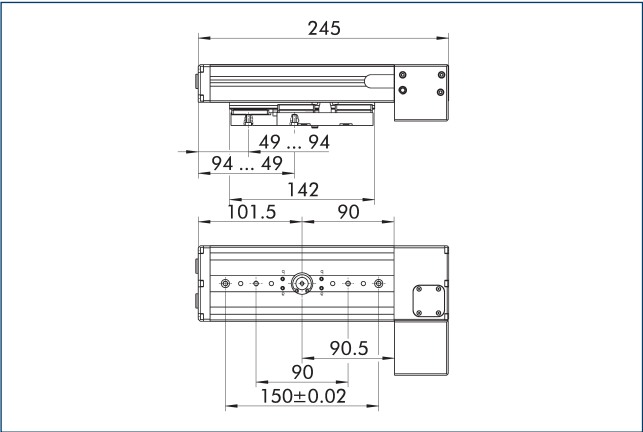
■ Inadmissible range

L_{max} is equivalent to the maximum permitted finger length, see the technical data table.

EGA 25

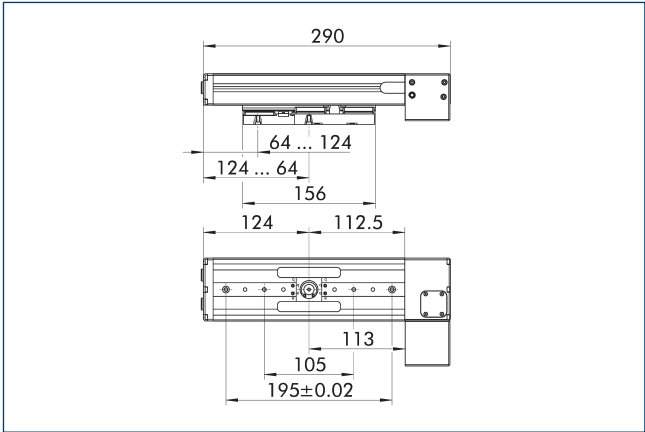
Long-stroke gripper

Stroke version EGA 25-045



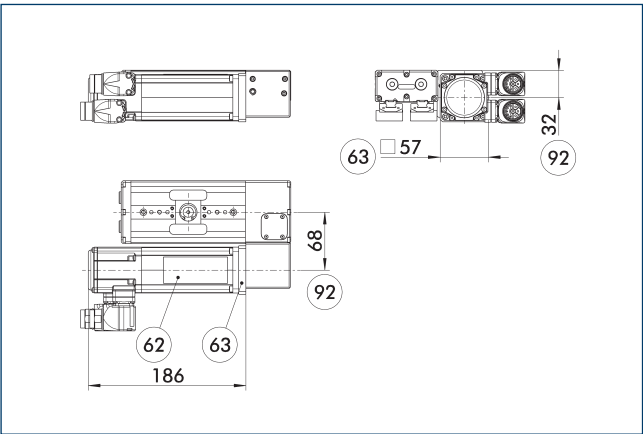
The drawing shows changes in dimensions of the version with a different stroke compared to the version shown in the main view.

Stroke version EGA 25-060



The drawing shows changes in dimensions of the version with a different stroke compared to the version shown in the main view.

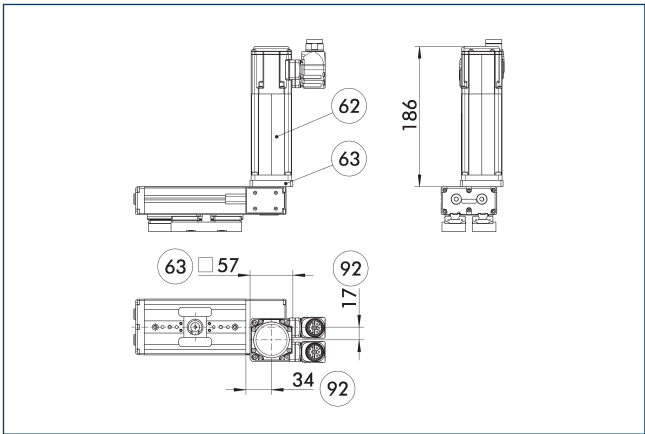
Motor version EGA parallel



- 62 Servomotor
- 63 Motor add-on kit
- 92 Motor and adapter connection position

The drawing shows the gripper in the variant with attached motor, as well as the exact position for motor adaptation.

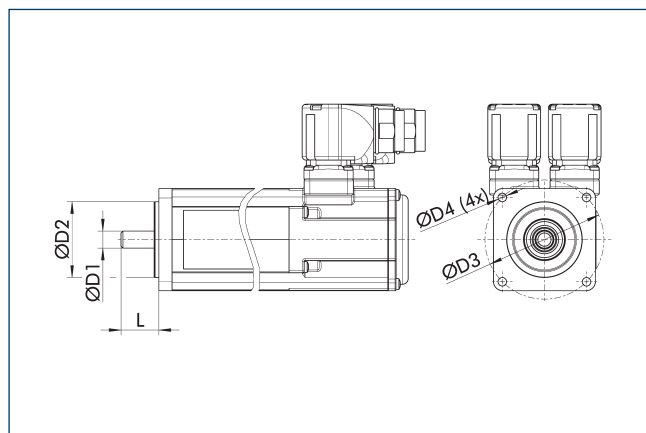
Motor version EGA radial



- 62 Servomotor
- 63 Motor add-on kit
- 92 Motor and adapter connection position

The drawing shows the gripper in the variant with attached motor, as well as the exact position for motor adaptation.

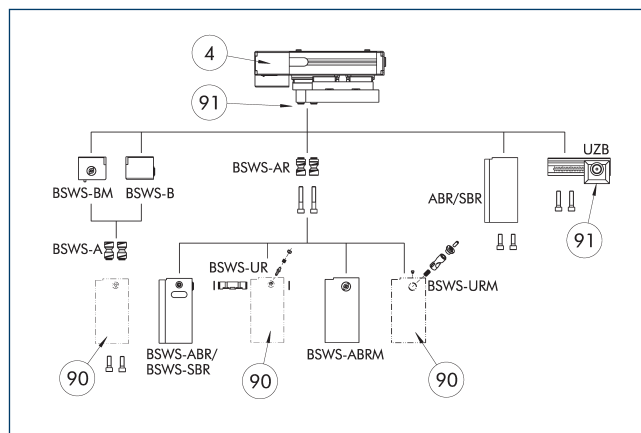
Motor add-on kit



The basic version without a drive motor (version B) can be equipped with the corresponding motor using a motor attachment kit. The motor itself is not part of the attachment kit, and must be provided by the customer.

Description	ID	D1	D2	D3	D4	L min/ max
		[mm]	[mm]	[mm]		[mm]
Motor add-on kits						
MAS-EGA 25-09-040-063-M04	0332033	9	40	63	M4	18/21.5
MAS-EGA 25-09-040-063-M05	0332034	9	40	63	M5	18/21.5
MAS-EGA 25-09-050-070-M05	0332035	9	50	70	M5	22/25.5

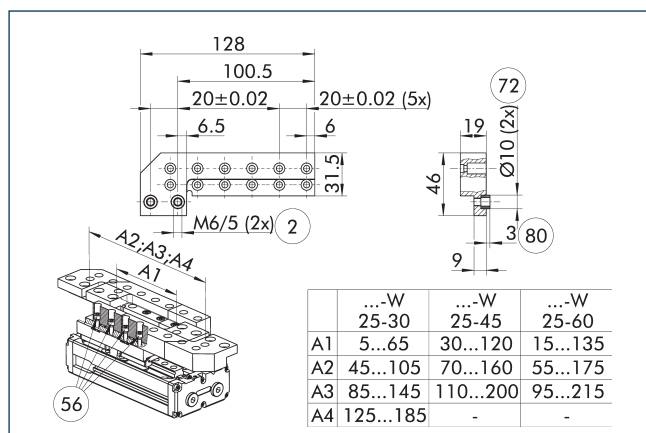
Intermediate jaw interface



- ④ Grippers
- ⑨① Uniform screw connection pattern
- ⑨① Customized gripper fingers

By using the intermediate jaw, you have the possibility of directly connecting a wide range of accessories directly. This includes jaw quick-change systems, finger blanks, and universal intermediate jaws.

ZBA PHL 25-100 intermediate jaw

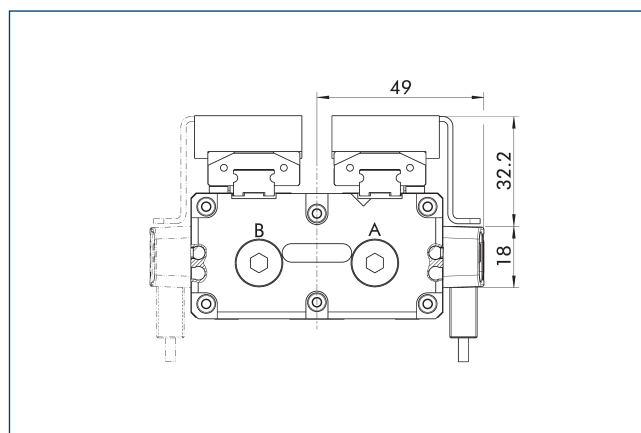


- ② Finger connection
- ⑦② Fit for centering sleeves
- ⑤⑥ Included in the scope of delivery
- ⑧① Depth of the centering sleeve hole in the counter part

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaw				
ZBA-PHL 25-100	0308129	Steel	PGN-plus 100	2

Attachment kit for proximity switch

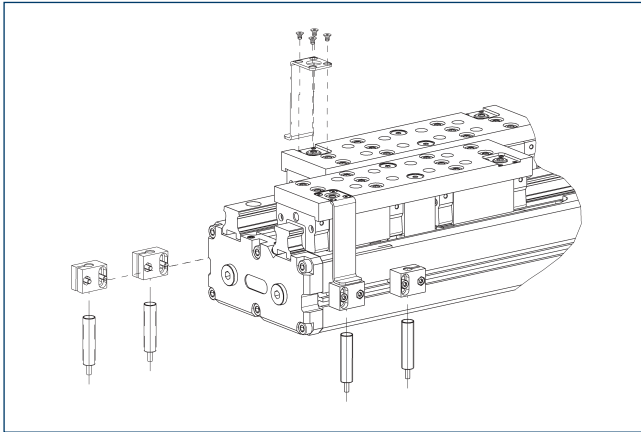


End position monitoring can be mounted with an attachment kit.

Description	ID
Attachment kit for proximity switch	
AS-PHL-G/W 25-IN80	0308830

- ① This attachment kit needs to be ordered optionally as an accessory.

IN 80 inductive proximity switches

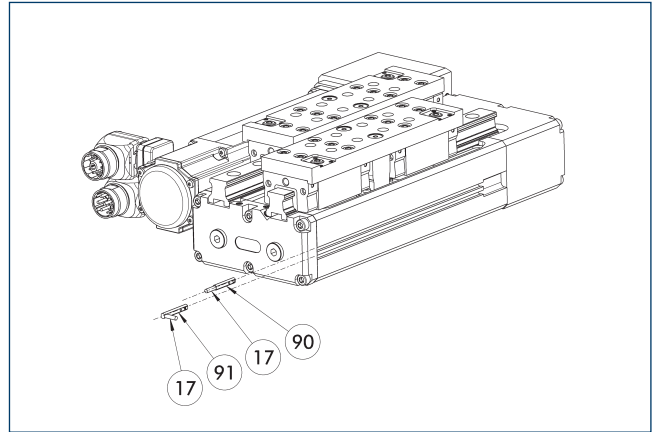


End position monitoring can be mounted with an attachment kit.

Description	ID	Often combined
Attachment kit for proximity switch		
AS-PHL-G/W 25-IN80	0308830	
Inductive proximity switches		
IN 80-S-M12	0301578	
IN 80-S-M8	0301478	●
INK 80-S	0301550	

- ① Two sensors (closer/S) are required for each unit and extension cables are available as an option. This attachment kit needs to be ordered optionally as an accessory. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

Electronic magnetic switch MMS



①7 Cable outlet

①91 Sensor MMS 22...-SA

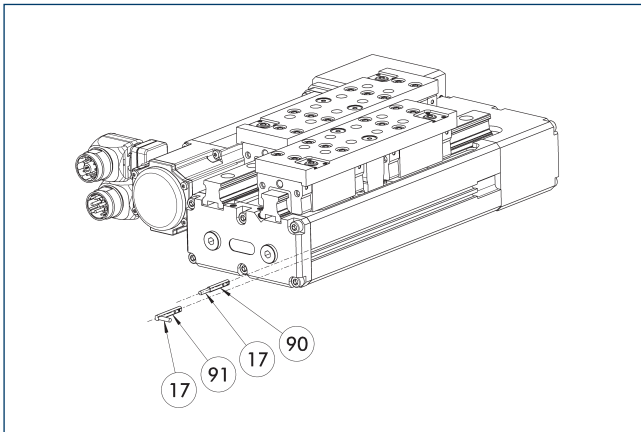
①90 Sensor MMS 22..

End position monitoring for mounting in the C-slot.

Description	ID	Often combined
Electronic magnetic switch		
MMS 22-S-M8-PNP	0301032	●
MMSK 22-S-PNP	0301034	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M8-PNP-SA	0301042	●
MMSK 22-S-PNP-SA	0301044	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
clip for plug/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

- ① Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.

Programmable magnetic switch MMS 22-PI1



- 17 Cable outlet
 91 Sensor MMS 22 ..-PI1-...-SA
 90 Sensor MMS 22 PI1-...

Position monitoring with one programmable position per sensor and integrated electronic system in the sensor. Can be programmed using MT magnetic teaching tool (included in the scope of delivery) or ST plug teaching tool (optional). End position monitoring for mounting in the C-slot. If the ST plug teaching tools are listed in the table provided, teaching is only possible with the ST teaching tools.

Description	ID	Often combined
Programmable magnetic switch		
MMS 22-PI1-S-M8-PNP	0301160	●
MMSK 22-PI1-S-PNP	0301162	
Programmable magnetic switch with lateral cable outlet		
MMS 22-PI1-S-M8-PNP-SA	0301166	●
MMSK 22-PI1-S-PNP-SA	0301168	
Programmable magnetic switch with stainless steel housing		
MMS 22-PI1-S-M8-PNP-HD	0301110	●
MMSK 22-PI1-S-PNP-HD	0301112	

- ⓘ Two sensors are required per unit for monitoring two positions. On option, extension cables and sensor distributors are available. Additional product variants of the sensor, and further information and technical data can be found in the catalog chapter sensor system.



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