Hand in hand for tomorrow

SCHUNK

Product data sheet

Customized and configurable long-stroke gripper ELG

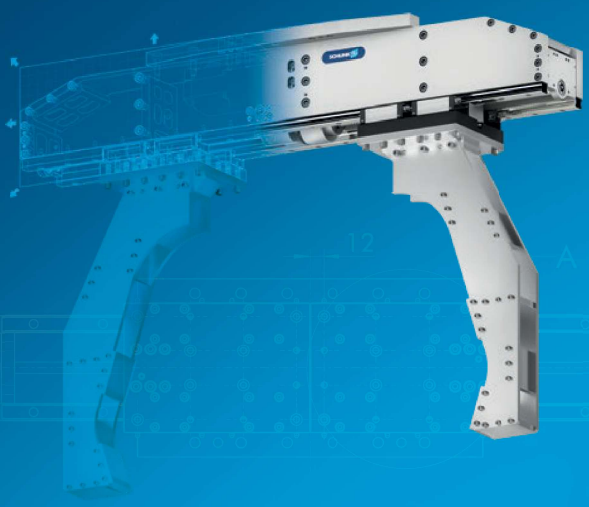
Individual. Powerful. Flexible.

Customized and configurable long-stroke gripper ELG

Electrical 2-finger parallel gripper with long jaw stroke, high gripping force and profiled rail guide for the use of long gripper fingers

Field of application

Individual solution for a wide range of applications through the customized configuration of the gripper in clean to slightly dirty environments



Advantages – Your benefits

High level of flexibility due to long jaw stroke and high gripping force

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

Use of long gripper fingers made possible due to the high maximum moments of the profiled rail guide

Application specific standard gripper through diverse variants and options and individual configuration

License-free and browser-based web tool can be used without its own CAD program

Attractive prices and short delivery times enable fast and efficient project processes

Reduced design effort Simple and fast construction of individual long-stroke grippers via the web tool

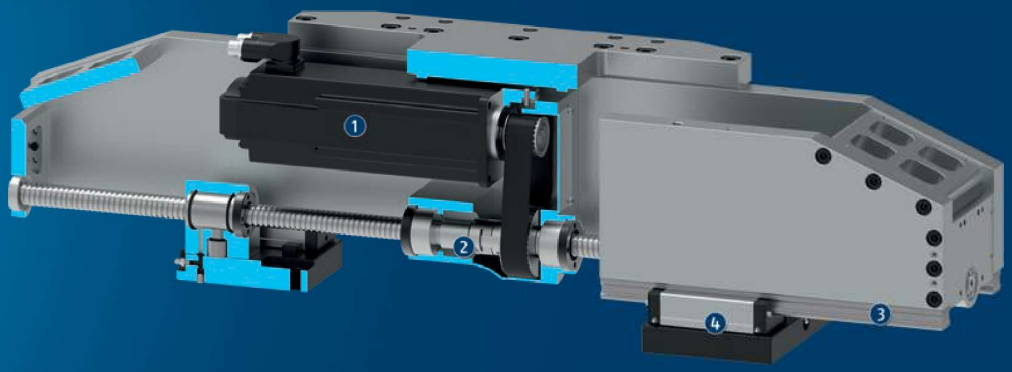
SCHUNK know-how reduces your effort and risk

CAD data available at the push of a button Gripper can be immediately integrated into the CAD system design

Sizes	Weight	Gripping force	Min. stroke per jaw	Max. stroke per jaw
Quantity: 4	8.03 .. 56.5 kg	1000 .. 12000 N	100 mm	300 .. 400 mm

Functional description

A servomotor drives the ball screw via a toothed belt, which linearly moves the base jaws connected to the spindle nuts and profiled rails.



① **Drive**
Servomotors from numerous manufacturers can be adapted

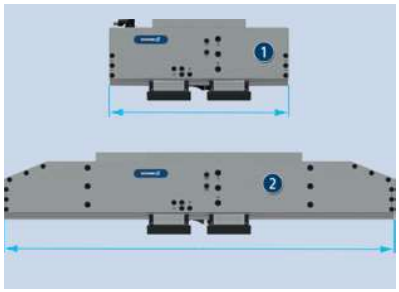
② **Kinematics**
high bearing load capacity and accuracy due to proven combination of ball screw and toothed belt

③ **Profiled rail guide**
highly loadable, nearly backlash-free base jaw guidance for long finger lenghts

④ **Base jaw**
for the connection of workpiece-specific gripper fingers

Detailed functional description

Individually configurable stroke

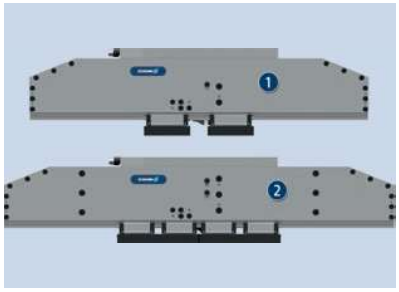


The stroke per jaw can be configured to customer specifications between 100 mm and 400 mm per jaw with millimeter precision. (For size 10, the stroke is limited to 300 mm)

❶ Variant with 100 mm stroke per jaw

❷ Variant with 400 mm stroke per jaw

Finger version

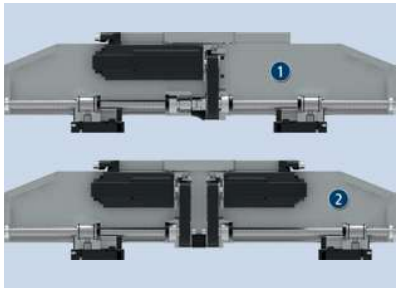


The gripper is available in two finger versions. In addition to the basic variant for short finger lengths, a variant with a long finger length can also be configured for corresponding applications.

❶ Short finger length with two guiding carriages per base jaw

❷ Long finger length with four guiding carriages per base jaw

Synchronization

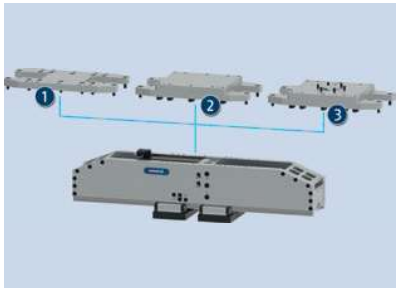


The gripper can be configured as a synchronous and asynchronous variant. In the synchronous variant, the two base jaws are jointly controlled by a servomotor, with the jaw movement being synchronized by a counter-rotating ball screw. With the asynchronous variant, the two base jaws can be controlled independently and separately from each other. In this variant, one base jaw each is connected to one of the two required servomotors via the ball screw and the toothed belt.

❶ Synchronous version

❷ Asynchronous version

Gripper mounting



The gripper offers different options for mounting on robots or gantries.

❶ One-piece adapter plate (gripper side)

❷ Adapter plate, complete (gripper side + blank)

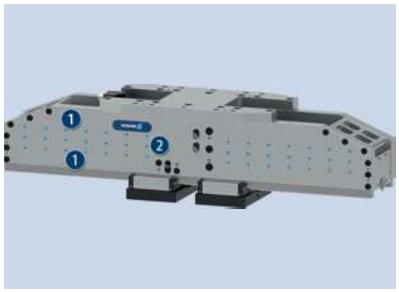
❸ Adapter plate, complete for screw connection according to EN ISO 9409

Position clamping

The electric holding brake prevents the movement of the ball screw, thereby clamping the position of the base jaws. Two brakes are required for the asynchronous variant. One fast switching module (ROBA®-brake-checker) is required for each holding brake (ROBA-stop®). This is included in the scope of delivery of the gripper.

1. Electric holding brake

Lateral mounting options



Optional mounting options on the gripper for customized additional attachments such as cameras, sensor distributors or blow-out nozzles. This option cannot be combined with the "weight-optimized design" option.

1. Connection thread for additional attachment
2. Fit for centering pins

Weight optimization

Cutouts in the sidewalls reduce the weight of the gripper by up to 15%. This option cannot be combined with the option "side mounting options".

1. Cutouts for weight reduction

Cover plates

The cover plates close the gripper on the attachment side. This protects the gripper from external influences at this point. The motor connections are cut out accordingly.

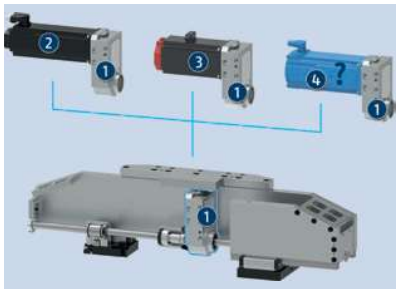
1. Cover plates
2. Motor connection

Bellow

The bellow closes the gripper on the side of the base jaws. It is only available in combination with the cover plate option and it improves the protection of the gripper against environmental influences.

1. Bellows cover
2. Cover plates

Drive motors



Different drive motors can be adapted to the gripper to enable flexible control and simple connection to existing control concepts.

1. Motor-specific attachment kit (always included in the scope of delivery)
2. Bosch or Siemens motors (optionally pre-assembled)
3. additional motors: see configurator (not included in the scope of delivery)
4. motors not included in the configurator on request

General notes about the series

Operating principle: Spindle drive

Housing material: Aluminum

Base jaw material: Aluminum

Actuation: electrically via an adaptable servo drive

Warranty: 12 months

Scope of delivery: Gripper in the ordered variant, accessory kit (centering sleeves/detailed contents see operating manual) and safety information. Product-specific instructions can be downloaded at schunk.com/downloads-manuals.

Gripping force: when the arithmetic sum of the individual force applied to each jaw at distance P (see illustration) on standstill torque of the motor.

Standstill torque: required standstill torque of the motor to achieve the specified gripping force depending on the motor shaft diameter. This torque must not be exceeded. The required standstill torque for the asynchronous version is halved.

Finger length: is measured from the reference surface as the distance P in direction to the main axis.

Gripping force maintenance: A gripping force of at least 80% of the originally applied gripping force can be reliably maintained in the event of an emergency stop situation or a voltage drop due to an electric holding brake (using motors with motor brake and/or utilizing the position clamping option).

Repeat accuracy (positioning, unidirectional): defined as the spread of the actual position of the base jaws after 100 consecutive movements to a target position from the same direction under constant conditions.

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.

How to get to the online configurator: The configurator can be accessed via the SCHUNK website or via https://schunk.com/us/en/konfigurator-elg available directly.

Application example

Application-specific long-stroke gripper for handling washing machines in the end-of-line packaging process

1. Application-specific long-stroke gripper ELG
2. Attachment fingers
3. Feeding of the washing machine
4. Feeding of the packaging material
5. Further transport of the packed washing machine

SCHUNK offers more ...

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

Tool changer

Compensation unit

ⓘ 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.
Food-grade lubrication: The product contains food-compliant lubricants as standard. The requirements of standard EN 1672-2:2020 are not fully met. The relevant NSF certificates are available at https://info.nsf.org/USDA/Listings.asp using the lubricant information in the operating manual. Components such as rolling bearings, linear guides, or shock absorbers are not provided with food-compliant lubricants.

Configurator for long-stroke grippers

SCHUNK is changing the way grippers are custom designed for your exact application.

https://schunk.com/us/en/konfigurator-elg

Just three steps to a customized long-stroke gripper

Step 1: Gripper configuration

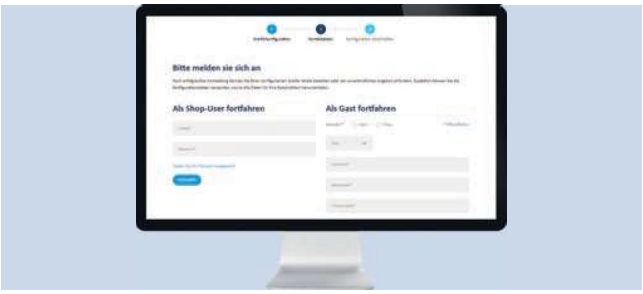
incl. visualization of 3D preview in real time

- Size selection
- Configuration of the gripper stroke
- Selection of the variant (finger variant, synchronization, gripper fastening...)
- Selection of options (position clamping, weight optimization...)

Step 2: Contact details

Online log in

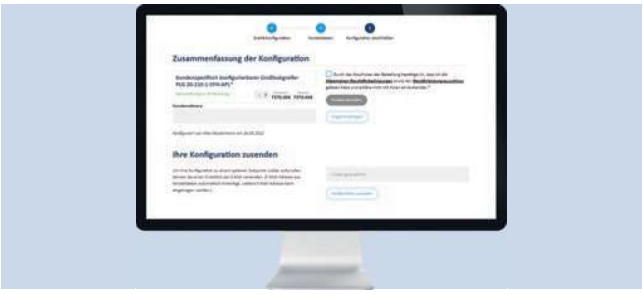
- Log in with SCHUNK shop user access or
- Log in as a guest



Step 3: Complete configuration

CAD download, requesting a quote, or ordering the configured gripper fingers

- Specify the number of grippers
- Order product directly or
- Request a quote (to order from SCHUNK via the usual ordering processes)
- Send configuration as a ink
- Download the CAD-files



Ordering example

ELG 75 - 250 - 2 - SYN - AKO - PKL - ADB - FBA - SAB - GOA - BOSCH - 1

Description
ELG

Size
10/30/75/120

Stroke per jaw
100 ... 400

Finger version
1 = short finger length
2 = long finger length

Synchronization
SYN = synchronous
ASY = asynchronous

Gripper mounting
APL = adapter plate, one-piece (gripper side)
AKO = adapter plate, complete (gripper side + blank)
ISO63 = complete adapter plate EN ISO 9409-1-63-4-M6
ISO80 = adapter plate complete EN ISO 9409-1-80-6-M8
ISO100 = adapter plate complete EN ISO 9409-1-100-6-M8
ISO125 = adapter plate complete EN ISO 9409-1-125-6-M10
ISO160/M10 = adapter plate complete EN ISO 9409-1-160-6-M10
ISO160/M12 = adapter plate complete EN ISO 9409-1-160-11-M12
ISO200/M12 = adapter plate complete EN ISO 9409-1-200-6-M12
ISO200/M16 = adapter plate complete EN ISO 9409-1-200-12-M16
ISO250/M12 = Adapter plate complete EN ISO 9409-1-250-6-M12

Position clamping
- = no
PKL = position clamping

Cover plates
- = no
ADB = cover plates

Bellow
- = no
FBA = bellow

lateral mounting option for attachment parts
- = no
SAB = lateral mounting option for attachment parts

Ordering example

ELG 75 - 250 - 2 - SYN - AKO - PKL - ADB - FBA - SAB - GOA - BOSCH - 1

Weight-optimized design
- = no
GOA = weight-optimized design

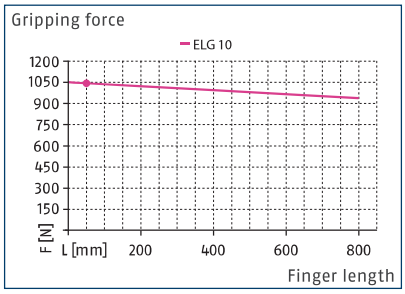
Motor add-on kit for ...
BOSCH = BOSCH motor
SIEMENS = SIEMENS motor
AllenBradley = Allen Bradley motor
FANUC = FANUC motor
KUKA = KUKA motor
SEW = SEW motor
MITSUBISHI = MITSUBISHI motor
other motors possible on request

Drive motor
- = Drive motor is not included in the scope of delivery
1 = Drive motor(s) included in the scope of delivery

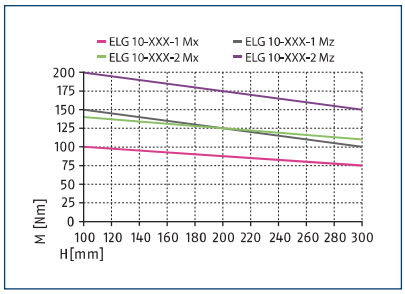
ELG 10

Customized and configurable long-stroke gripper

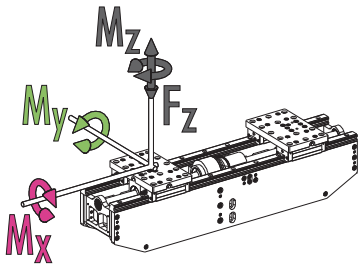
Gripping force O.D. gripping



Moment loading



Max. loads



For values see technical data table

ⓘ The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may occur in addition to the moment generated by the gripping force itself. Please also refer to the diagram for the moment loads.

Technical data

Description		ELG 10-XXX-1-SYN	ELG 10-XXX-1-ASY	ELG 10-XXX-2-SYN	ELG 10-XXX-2-ASY
Finger version		short	short	long	long
Synchronization		Synchron	Asynchronous	Synchron	Asynchronous
Min. stroke per jaw	[mm]	100	100	100	100
Max. stroke per jaw	[mm]	300	300	300	300
Gripping force	[N]	1000	1000	1000	1000
Min. gripping force maintenance***	[%]	80	80	80	80
Weight*	[kg]	8.03	8.03	10.25	10.25
Additional mass per 1 mm stroke**	[kg]	0.02	0.02	0.02	0.02
Closing/opening time*	[s]	0.65/0.65	0.65/0.65	0.65/0.65	0.65/0.65
Max. permissible speed (positioning)	[mm/s]	200	200	200	200
Max. permissible speed (gripping)	[mm/s]	10	10	10	10
Repeat accuracy (positioning, unidirectional)	[mm]	0.1	0.1	0.1	0.1
Max. permissible finger length	[mm]	400	400	800	800
Max. permissible weight per finger	[kg]	11	11	11	11
Min./max. ambient temperature	[°C]	5/55	5/55	5/55	5/55
IP protection class		20	20	20	20
Protection class IP with bellow		44	44	44	44
Standstill torque (shaft diameter 8/9 mm)	[Nm]	0.55	0.28	0.55	0.28
Standstill torque (shaft diameter 11/14 mm)	[Nm]	0.7	0.35	0.7	0.35
Standstill torque (shaft diameter 19 mm)	[Nm]	0.85	0.43	0.85	0.43
Max. drive speed (shaft diameter 8/9 mm)	[1/min]	4000	4000	4000	4000
Max. drive speed (shaft diameter 11/14 mm)	[1/min]	3400	3400	3400	3400
Max. drive speed (shaft diameter 19 mm)	[1/min]	2800	2800	2800	2800
Moments Mx max./My max./Mz max.*	[Nm]	100/240/150	100/240/150	140/470/200	140/470/200
ForcesFz max.	[N]	1200	1200	1800	1800

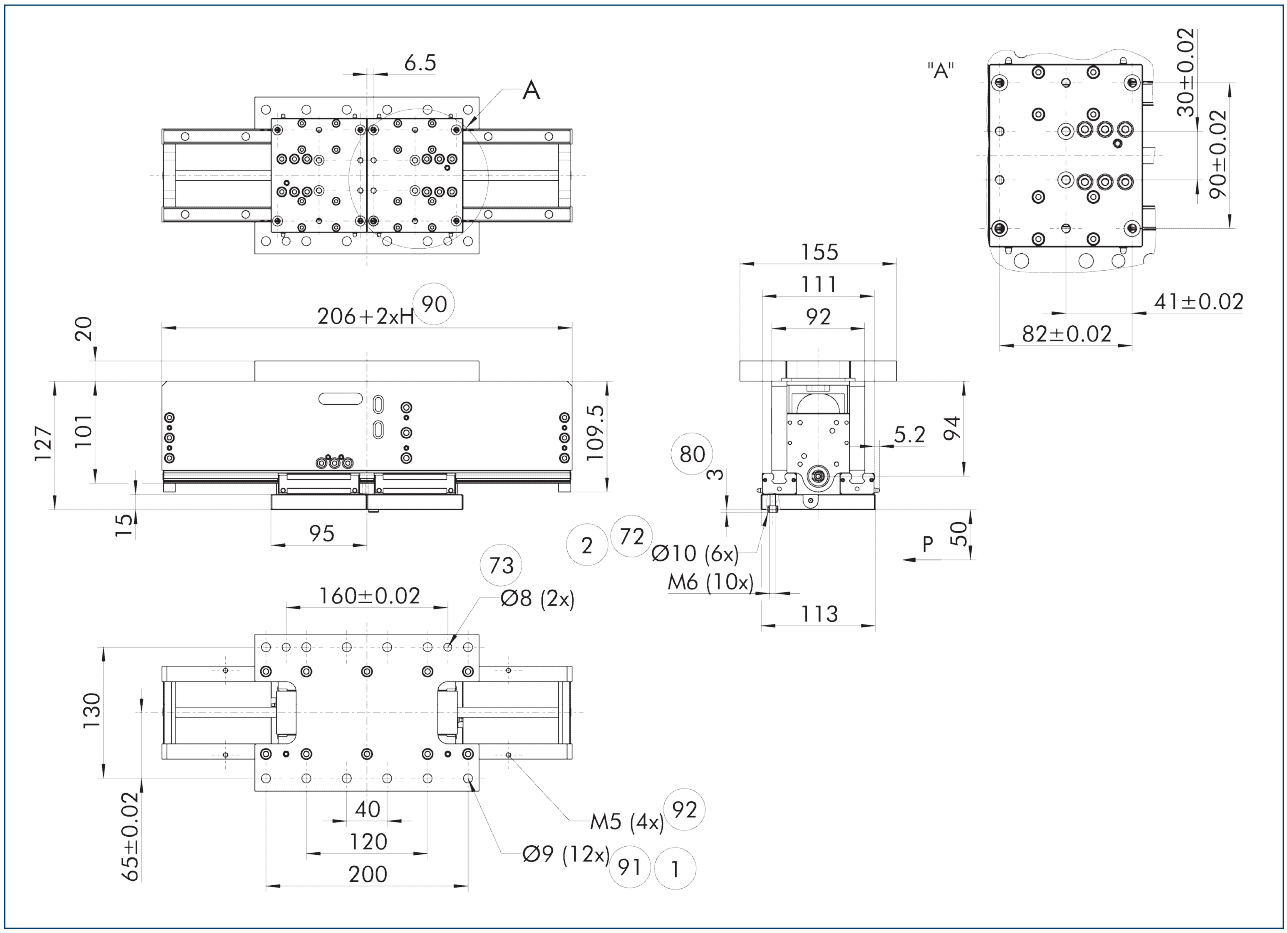
ⓘ You will find supplementary technical data for all combination options in the PDF data sheet following your individual configuration.

* referring to the basic variant shown with 100 mm stroke per jaw without additional options

** ** referring to the basic variant without additional options

*** *** referring to the use of motors with motor brake and/or when using the option position clamping

Main view ELG 10-...-1-...



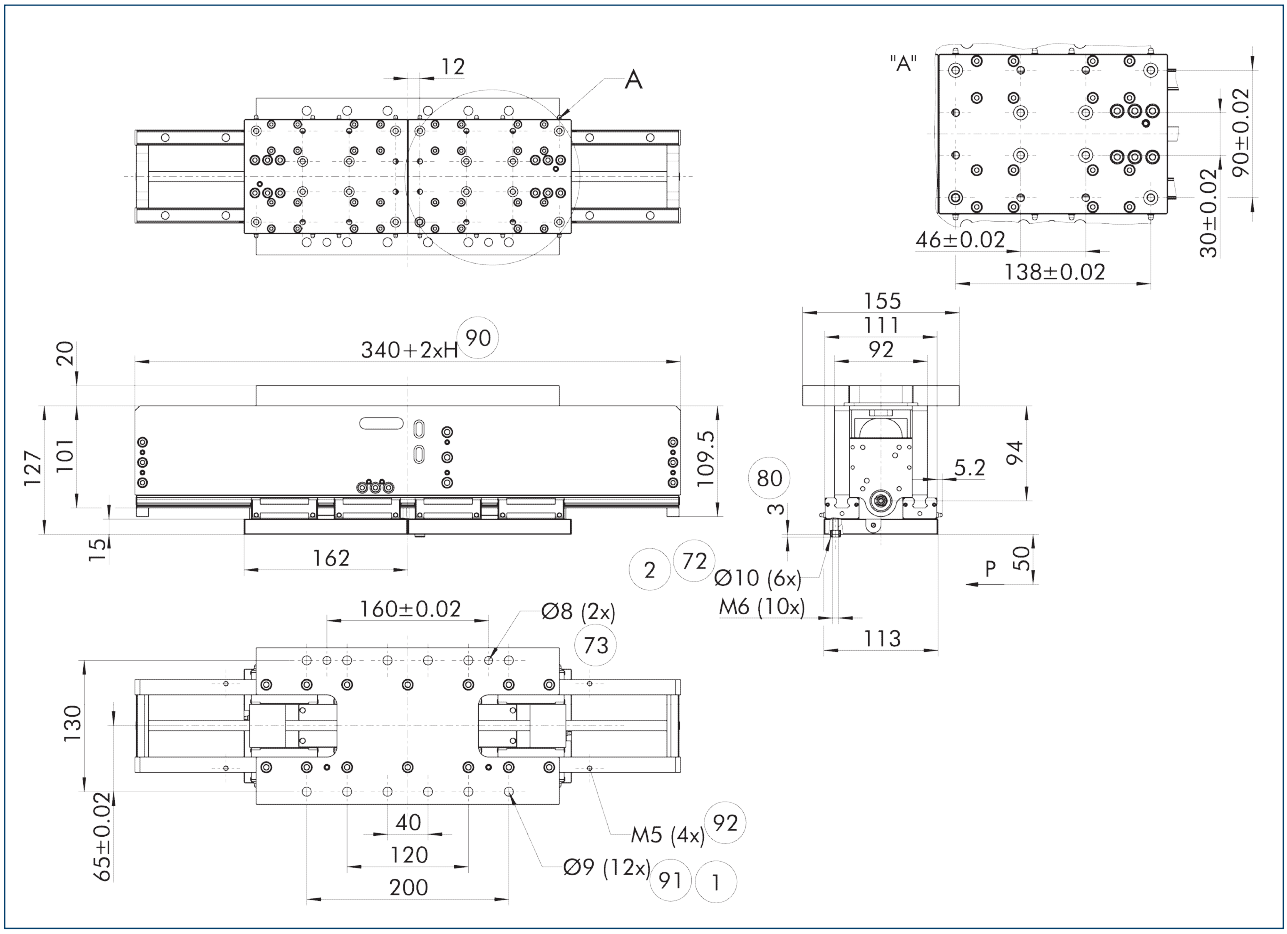
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

1. Gripper connection
2. Finger connection
72. Fit for centering sleeves
73. Fit for centering pins
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection

ELG 10

Customized and configurable long-stroke gripper

Main view ELG 10-...-2-...



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72. Fit for centering sleeves
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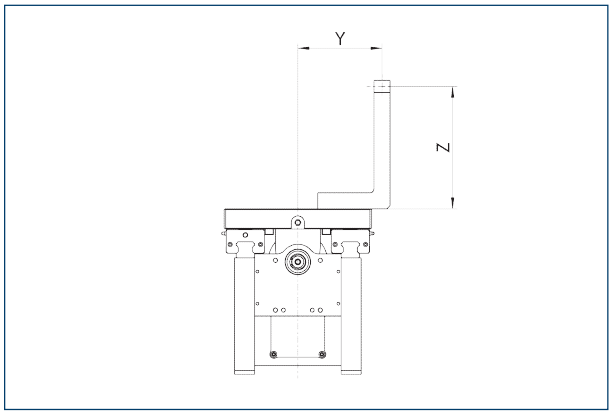
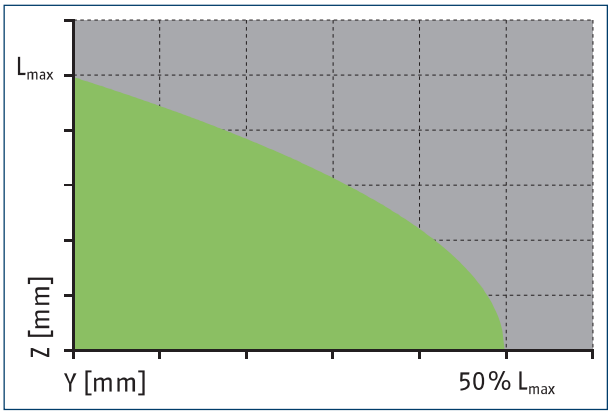
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection

Maximum permitted finger projection



Finger version: short finger length

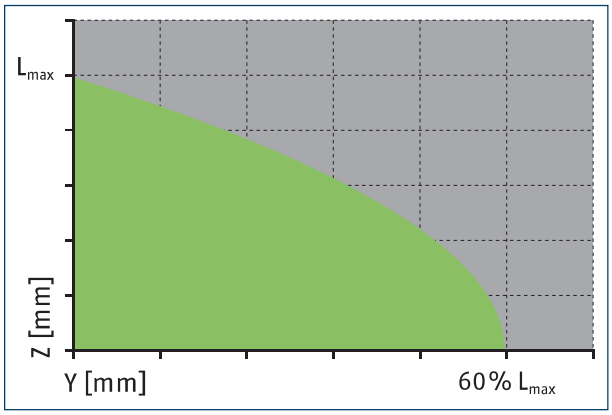


Permitted range

Inadmissible range

Lmax is equivalent to the maximum permitted finger length, see the technical data table.

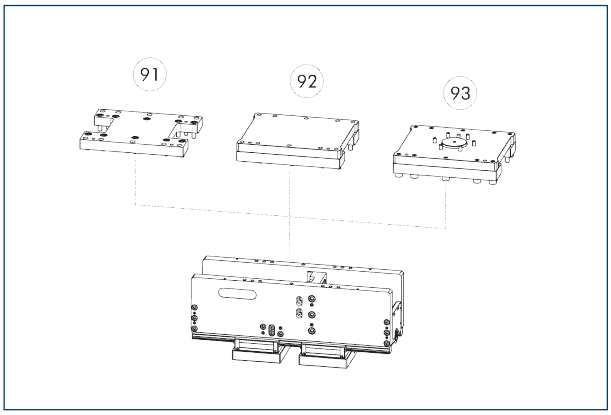
Finger version: long finger length



Permitted range

Inadmissible range

Gripper mounting



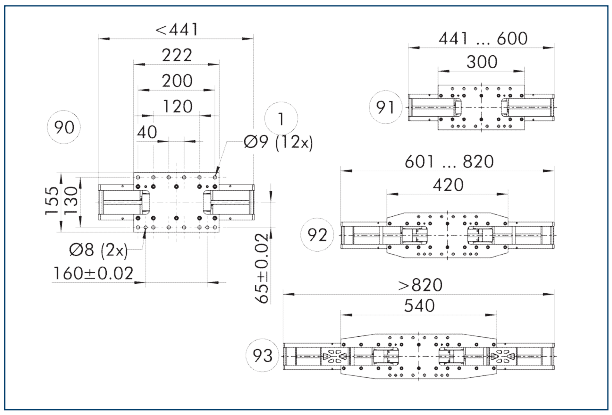
(91) One-piece adapter plate (gripper side)

(92) Adapter plate, complete (gripper side + blank)

(93) Adapter plate, complete (gripper side + ISO)

The gripper offers different options for mounting on robots or gantries.

One-piece adapter plate (gripper side)



(1) Gripper connection

(73) Fit for centering pins

(90) Adapter plate up to and including 440 mm gripping length

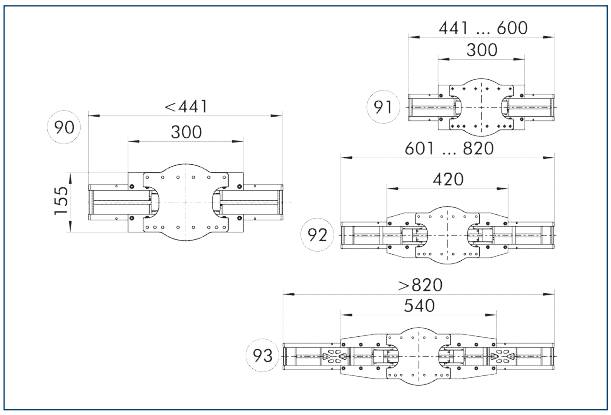
(91) Adapter plate between 441 mm and 600 mm gripping length

(92) Adapter plate between 601 mm and 820 mm gripping length

(93) Adapter plate over 820 mm gripping length

The provided adapter plate includes the screw-on pattern of the gripper, as well as the interface to the second adapter plate. The second adapter plate must be manufactured by the customer. By using a two-part adapter plate, the gripper can also be mounted and fixed from the top side.

Two-piece adapter plate



(90) Adapter plate up to and including 440 mm gripping length

(91) Adapter plate between 441 mm and 600 mm gripping length

(92) Adapter plate between 601 mm and 820 mm gripping length

(93) Adapter plate over 820 mm gripping length

With the "adapter plate complete (gripper side + blank)" variant, the screw-on pattern of the customer interface can be inserted into the blank second adapter plate. This reduces the work required from the customer to a minimum. In the "adapter plate complete (gripper side + ISO)" variant, a flange according to EN ISO 9409 is included in the adapter plate on the robot side.

ⓘ The drawing shows the blank. The possible screw-on patterns according to EN ISO 9409 can be found in the configurator.

ELG 10

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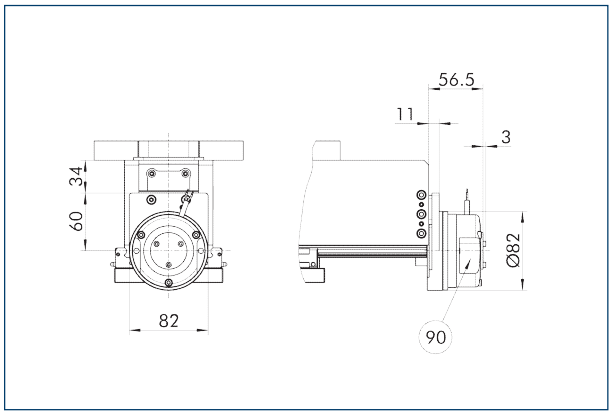
Position clamping PKL

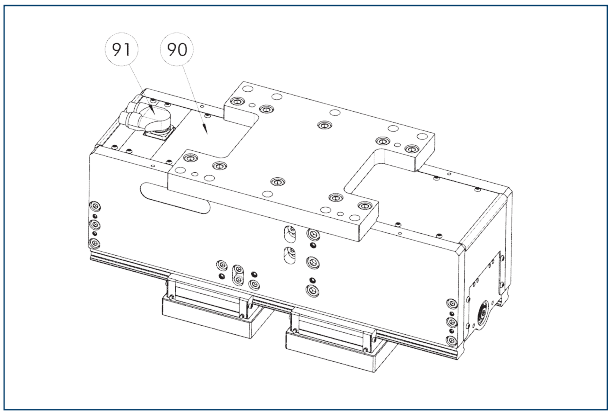


(90) Electric holding brake

The drawing shows changes in dimensions of the variants with position clamping compared to the variant shown in the main view without position clamping.

ⓘ Two holding brakes are mounted on the asynchronous version. For each holding brake, a quick-switch module (ROBA®-brake-checker) for the control as well as the required cables (for connecting the brake with the quick-switch module) are included in the scope of delivery.

Cover plate ADB

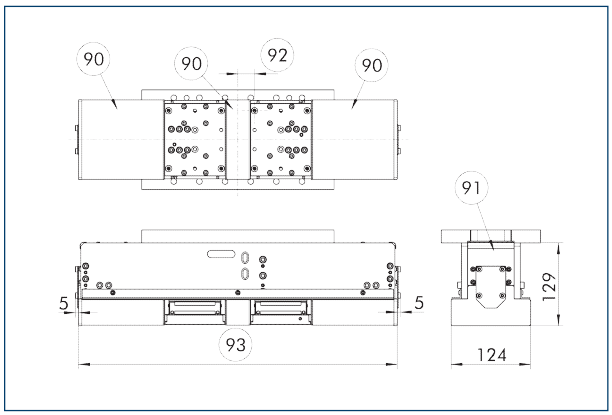


(90) Cover plates

(91) Motor connection

The cover plates close the gripper on the attachment side. This protects the gripper from external influences at this point. The motor connections are cut out accordingly.

Bellow FBA



(90) Bellow

(91) Cover plates

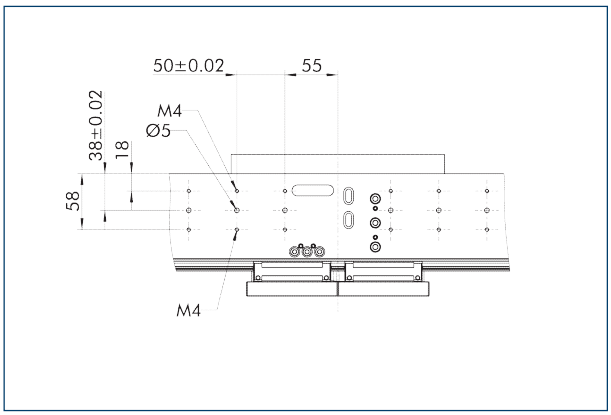
(92) Jaw position closed (see configurator)

(93) Gripper length (see configurator)

The bellow closes the gripper on the side of the base jaws. It is only available in combination with the cover plate option and it improves the protection of the gripper against environmental influences.

ⓘ For further dimensions, please refer to the online configurator at https://schunk.com/shop/us/en/konfigurator-elg

Lateral mounting options SAB



(73) Fit for centering pins

(90) Thread

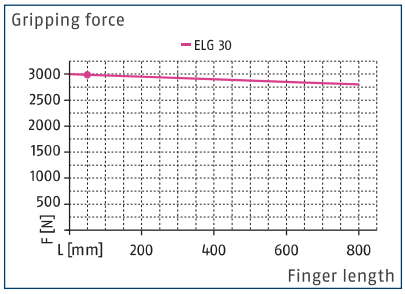
Optional mounting options on the gripper for customized additional attachments such as cameras, sensor distributors or blow-out nozzles. The drawing shows the position of the mounting options.

ⓘ This option cannot be combined with the "weight-optimized design" option.

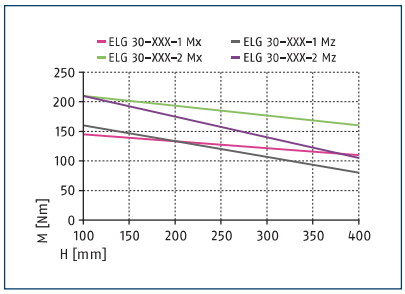
ELG 30

Customized and configurable long-stroke gripper

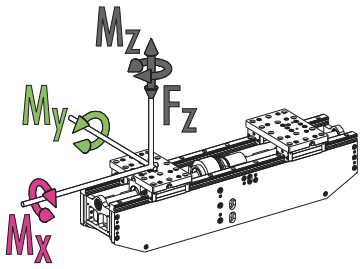
Gripping force



Moment loading



Max. loads



For values see technical data table

ⓘ The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may occur in addition to the moment generated by the gripping force itself. Please also refer to the diagram for the moment loads.

Technical data

Description		ELG 30-XXX-1-SYN	ELG 30-XXX-1-ASY	ELG 30-XXX-2-SYN	ELG 30-XXX-2-ASY
Finger version		short	short	long	long
Synchronization		Synchron	Asynchronous	Synchron	Asynchronous
Min. stroke per jaw	[mm]	100	100	100	100
Max. stroke per jaw	[mm]	400	400	400	400
Gripping force	[N]	3000	3000	3000	3000
Min. gripping force maintenance***	[%]	80	80	80	80
Weight*	[kg]	14.7	14.7	20	20
Additional mass per 1 mm stroke**	[kg]	0.04	0.04	0.04	0.04
Closing/opening time*	[s]	0.79/0.79	0.79/0.79	0.79/0.79	0.79/0.79
Max. permissible speed (positioning)	[mm/s]	200	200	200	200
Max. permissible speed (gripping)	[mm/s]	10	10	10	10
Repeat accuracy (positioning, unidirectional)	[mm]	0.1	0.1	0.1	0.1
Max. permissible finger length	[mm]	400	400	800	800
Max. permissible weight per finger	[kg]	18	18	18	18
Min./max. ambient temperature	[°C]	5/55	5/55	5/55	5/55
IP protection class		20	20	20	20
Protection class IP with bellow		44	44	44	44
Standstill torque (shaft diameter 8/9 mm)	[Nm]	1.32	0.66	1.32	0.66
Standstill torque (shaft diameter 11/14 mm)	[Nm]	1.6	0.81	1.6	0.81
Standstill torque (shaft diameter 19 mm)	[Nm]	1.97	0.99	1.97	0.99
Standstill torque (shaft diameter 24 mm)	[Nm]	2.63	1.32	2.63	1.32
Max. drive speed (shaft diameter 8/9 mm)	[1/min]	4500	4500	4500	4500
Max. drive speed (shaft diameter 11/14 mm)	[1/min]	3800	3800	3800	3800
Max. drive speed (shaft diameter 19 mm)	[1/min]	3000	3000	3000	3000
Max. drive speed (shaft diameter 24 mm)	[1/min]	2300	2300	2300	2300
Moments Mx max./My max./Mz max.*	[Nm]	145/260/160	145/260/160	210/850/210	210/850/210
ForcesFz max.	[N]	2500	2500	3500	3500

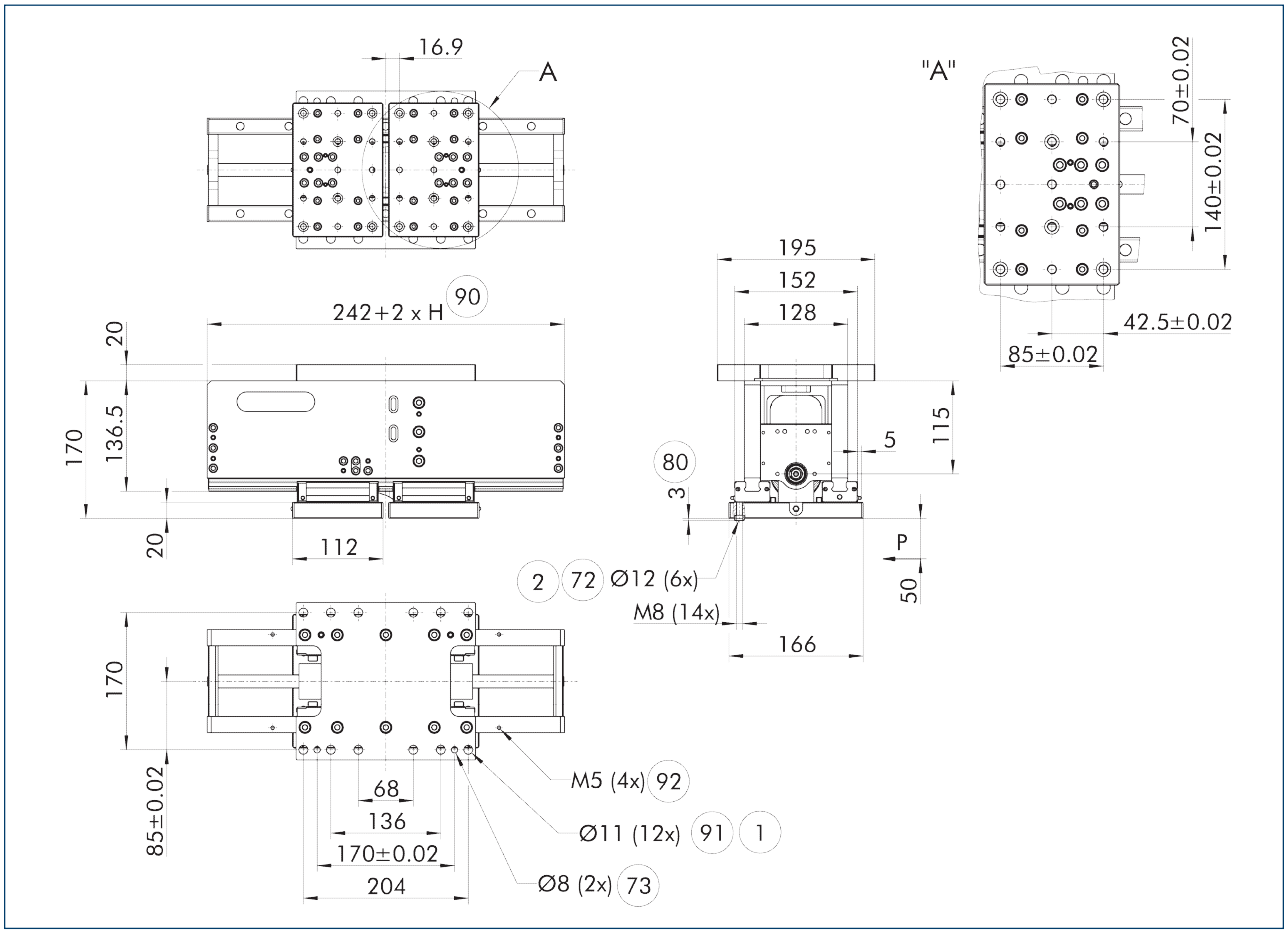
ⓘ You will find supplementary technical data for all combination options in the PDF data sheet following your individual configuration.

* referring to the basic variant shown with 100 mm stroke per jaw without additional options

** ** referring to the basic variant without additional options

*** *** referring to the use of motors with motor brake and/or when using the option position clamping

Main view ELG 30-...-1-...



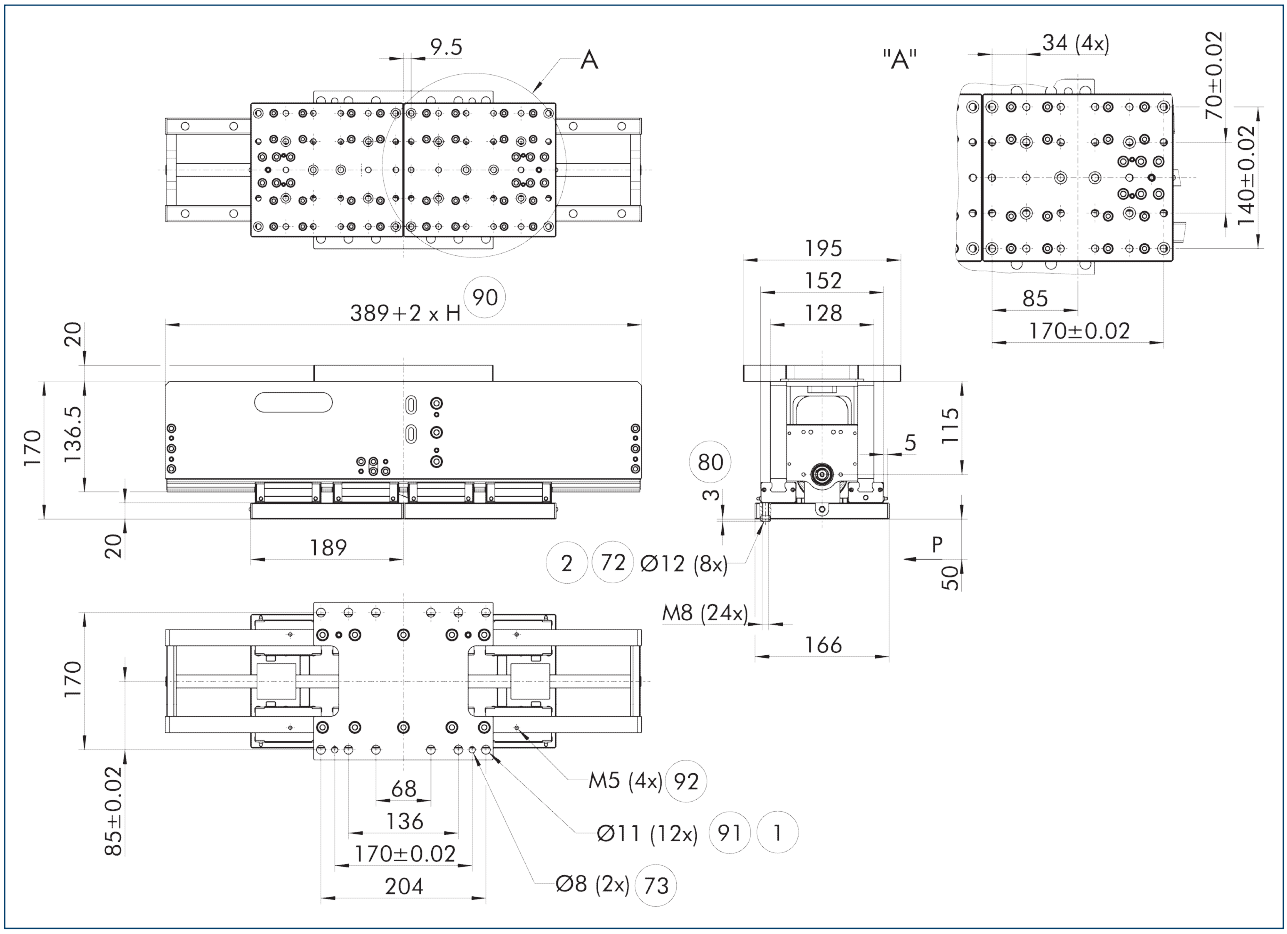
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

1. Gripper connection
2. Finger connection
72. Fit for centering sleeves
73. Fit for centering pins
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection

ELG 30

Customized and configurable long-stroke gripper

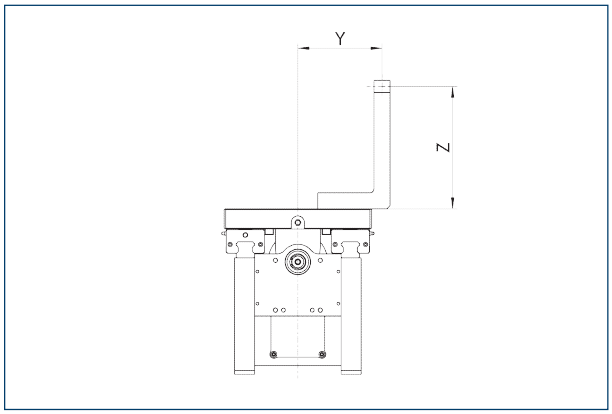
Main view ELG 30-...-2-...



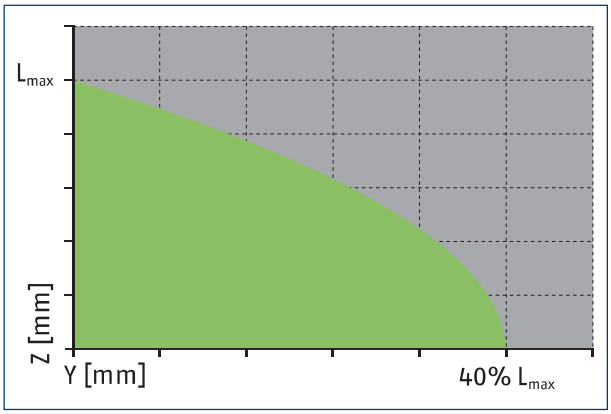
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

1. Gripper connection
2. Finger connection
72. Fit for centering sleeves
73. Fit for centering pins
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection

Maximum permitted finger projection



Finger version: short finger length

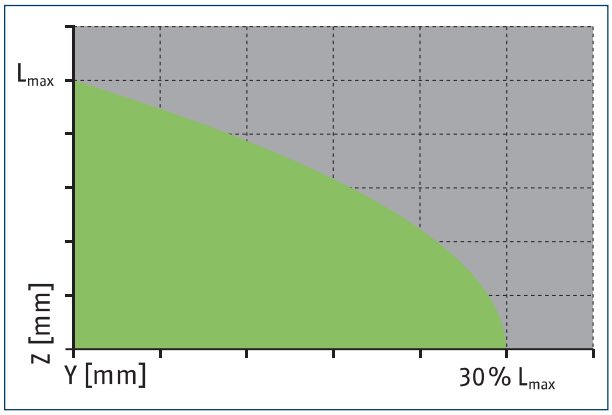


Permitted range

Inadmissible range

Lmax is equivalent to the maximum permitted finger length, see the technical data table.

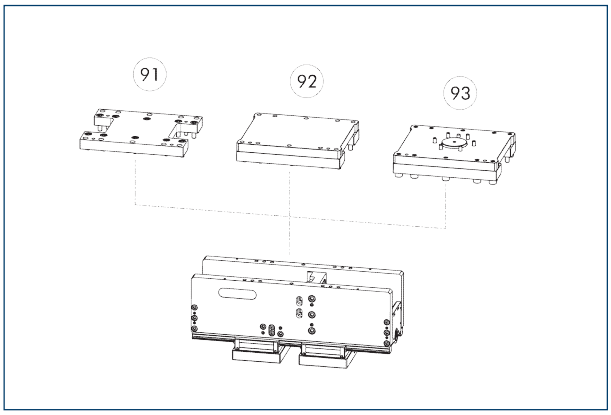
Finger version: long finger length



Permitted range Inadmissible range

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

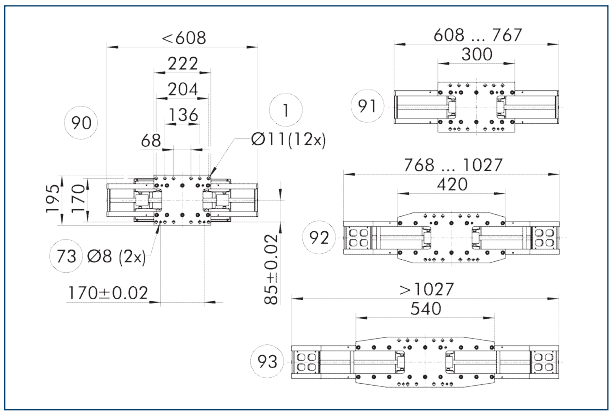
Gripper mounting



(91) One-piece adapter plate (gripper side)
(92) Adapter plate, complete (gripper side + blank)
(93) Adapter plate, complete (gripper side + ISO)

The gripper offers different options for mounting on robots or gantries.

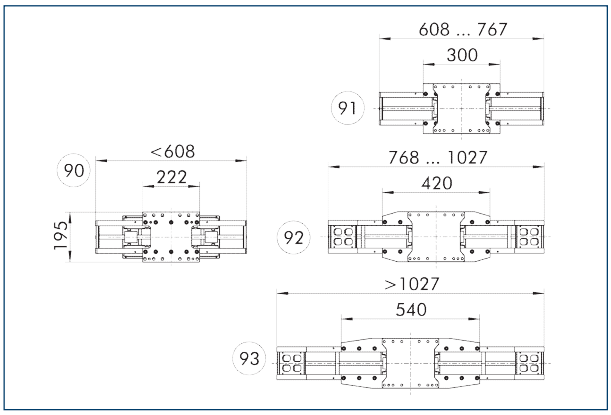
One-piece adapter plate (gripper side)



(1) Gripper connection
(73) Fit for centering pins
(90) Adapter plate up to and including 607 mm gripping length
(91) Adapter plate between 608 mm to 767 mm gripping length
(92) Adapter plate between 768 mm to 1027 mm gripping length
(93) Adapter plate over 1027 mm gripping length

The provided adapter plate includes the screw-on pattern of the gripper, as well as the interface to the second adapter plate. The second adapter plate must be manufactured by the customer. By using a two-part adapter plate, the gripper can also be mounted and fixed from the top side.

Two-piece adapter plate



(90) Adapter plate up to and including 607 mm gripping length
(91) Adapter plate between 608 mm to 767 mm gripping length
(92) Adapter plate between 768 mm to 1027 mm gripping length
(93) Adapter plate over 1027 mm gripping length

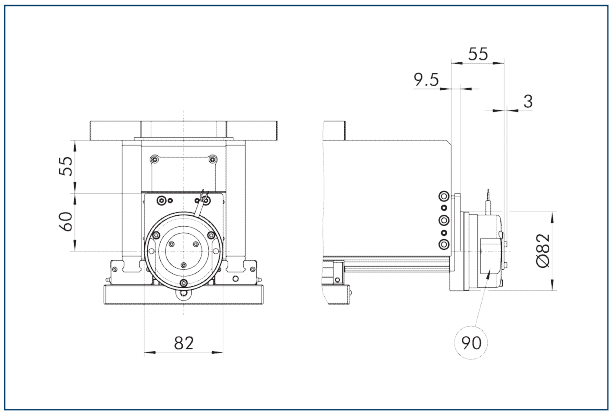
With the "adapter plate complete (gripper side + blank)" variant, the screw-on pattern of the customer interface can be inserted into the blank second adapter plate. This reduces the work required from the customer to a minimum. In the "adapter plate complete (gripper side + ISO)" variant, a flange according to EN ISO 9409 is included in the adapter plate on the robot side.

ⓘ The drawing shows the blank. The possible screw-on patterns according to EN ISO 9409 can be found in the configurator.

ELG 30

Customized and configurable long-stroke gripper

Position clamping PKL

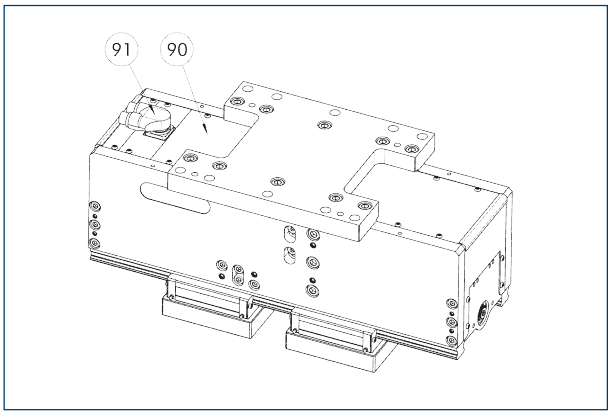


(90) Electric holding brake

The drawing shows changes in dimensions of the variants with position clamping compared to the variant shown in the main view without position clamping.

ⓘ Two holding brakes are mounted on the asynchronous version. For each holding brake, a quick-switch module (ROBA®-brake-checker) for the control as well as the required cables (for connecting the brake with the quick-switch module) are included in the scope of delivery.

Cover plate ADB

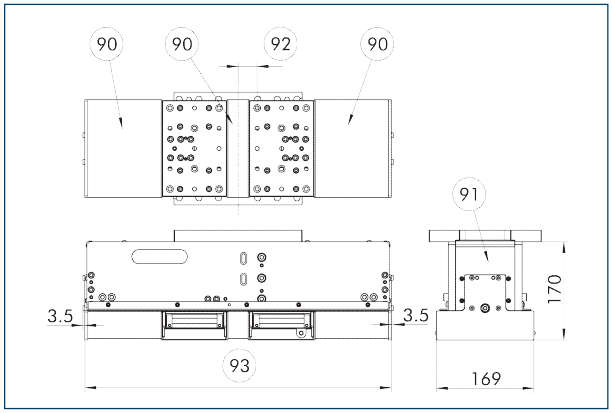


(90) Cover plates

(91) Motor connection

The cover plates close the gripper on the attachment side. This protects the gripper from external influences at this point. The motor connections are cut out accordingly.

Bellow FBA



(90) Bellow

(91) Cover plates

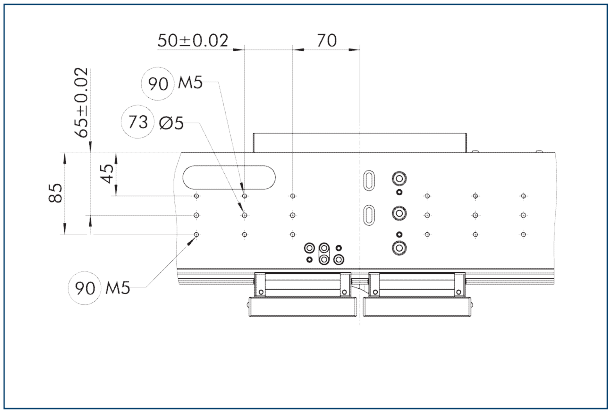
(92) Jaw position closed (see configurator)

(93) Gripper length (see configurator)

The bellow closes the gripper on the side of the base jaws. It is only available in combination with the cover plate option and it improves the protection of the gripper against environmental influences.

ⓘ For further dimensions, please refer to the online configurator at https://schunk.com/shop/us/en/konfigurator-elg

Lateral mounting options SAB



(73) Fit for centering pins

(90) Thread

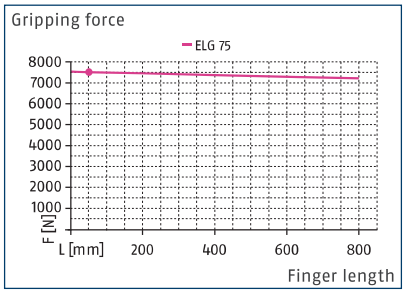
Optional mounting options on the gripper for customized additional attachments such as cameras, sensor distributors or blow-out nozzles. The drawing shows the position of the mounting options.

ⓘ This option cannot be combined with the "weight-optimized design" option.

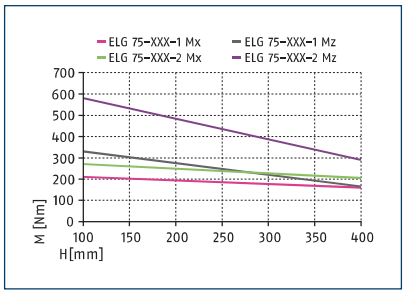
ELG 75

Customized and configurable long-stroke gripper

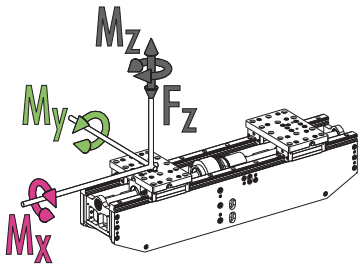
Gripping force



Moment loading



Max. loads



For values see technical data table

ⓘ The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may occur in addition to the moment generated by the gripping force itself. Please also refer to the diagram for the moment loads.

Technical data

Description		ELG 75-XXX-1-SYN	ELG 75-XXX-1-ASY	ELG 75-XXX-2-SYN	ELG 75-XXX-2-ASY
Finger version		short	short	long	long
Synchronization		Synchron	Asynchronous	Synchron	Asynchronous
Min. stroke per jaw	[mm]	100	100	100	100
Max. stroke per jaw	[mm]	400	400	400	400
Gripping force	[N]	7500	7500	7500	7500
Min. gripping force maintenance***	[%]	80	80	80	80
Weight*	[kg]	24.5	24.5	32.9	32.9
Additional mass per 1 mm stroke**	[kg]	0.06	0.06	0.06	0.06
Closing/opening time*	[s]	0.91/0.91	0.91/0.91	0.91/0.91	0.91/0.91
Max. permissible speed (positioning)	[mm/s]	180	180	180	180
Max. permissible speed (gripping)	[mm/s]	10	10	10	10
Repeat accuracy (positioning, unidirectional)	[mm]	0.1	0.1	0.1	0.1
Max. permissible finger length	[mm]	240	240	800	800
Max. permissible weight per finger	[kg]	28	28	28	28
Min./max. ambient temperature	[°C]	5/55	5/55	5/55	5/55
IP protection class		20	20	20	20
Protection class IP with bellow		44	44	44	44
Standstill torque (shaft diameter 8/9 mm)	[Nm]	2.8	1.4	2.8	1.4
Standstill torque (shaft diameter 11/14 mm)	[Nm]	3.4	1.7	3.4	1.7
Standstill torque (shaft diameter 19 mm)	[Nm]	4.2	2.1	4.2	2.1
Standstill torque (shaft diameter 22 mm)	[Nm]	4.6	2.3	4.6	2.3
Standstill torque (shaft diameter 24 mm)	[Nm]	5.6	2.8	5.6	2.8
Max. drive speed (shaft diameter 8/9 mm)	[1/min]	4800	4800	4800	4800
Max. drive speed (shaft diameter 11/14 mm)	[1/min]	4000	4000	4000	4000
Max. drive speed (shaft diameter 19 mm)	[1/min]	3200	3200	3200	3200
Max. drive speed (shaft diameter 22 mm)	[1/min]	2700	2700	2700	2700
Max. drive speed (shaft diameter 24 mm)	[1/min]	2400	2400	2400	2400
Moments Mx max./My max./Mz max.*	[Nm]	210/350/330	210/350/330	270/1100/580	270/1100/580
ForcesFz max.	[N]	3000	3000	5000	5000

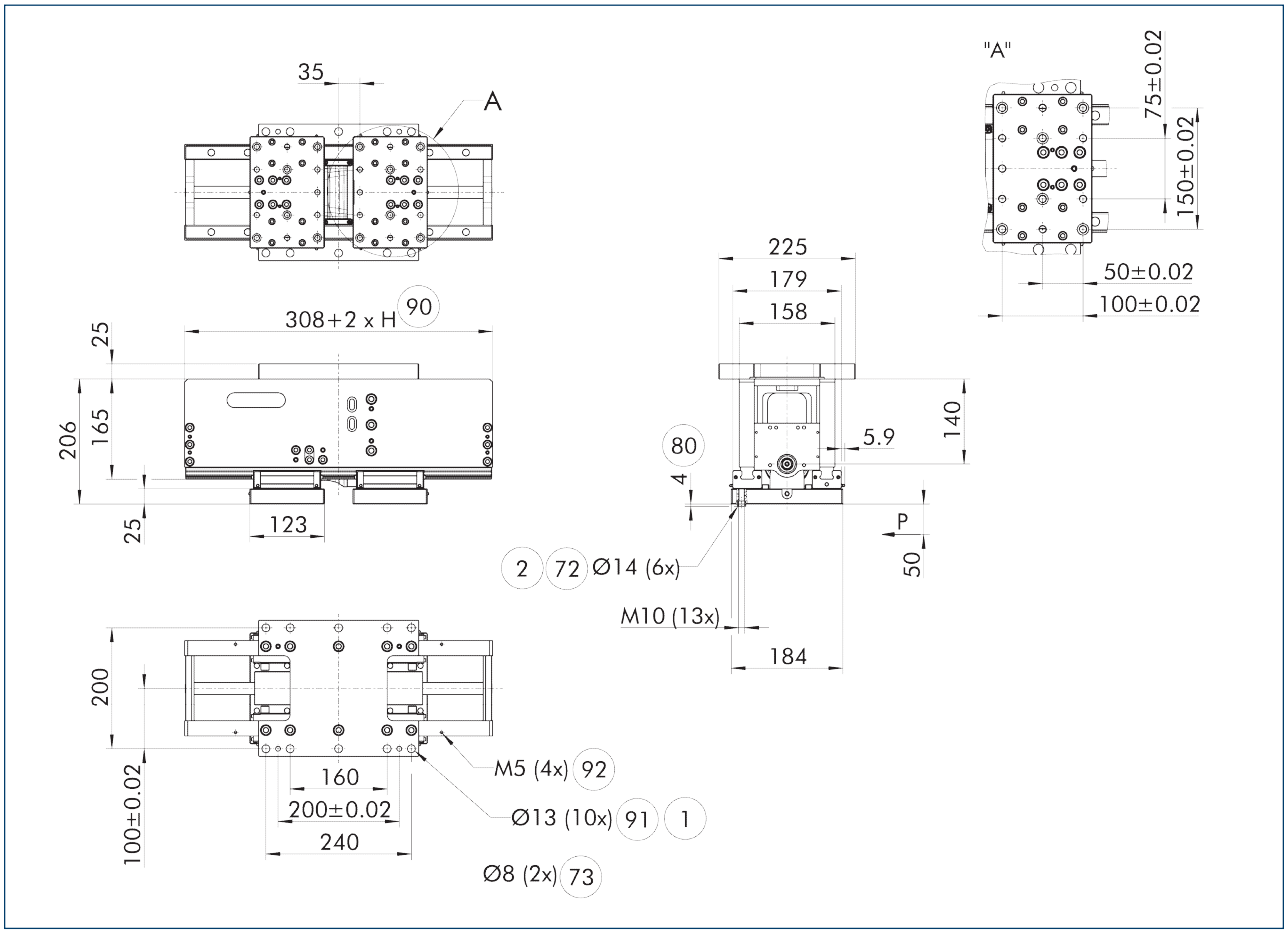
ⓘ You will find supplementary technical data for all combination options in the PDF data sheet following your individual configuration.

* referring to the basic variant shown with 100 mm stroke per jaw without additional options

** ** referring to the basic variant without additional options

*** *** referring to the use of motors with motor brake and/or when using the option position clamping

Main view ELG 75-...-1-...



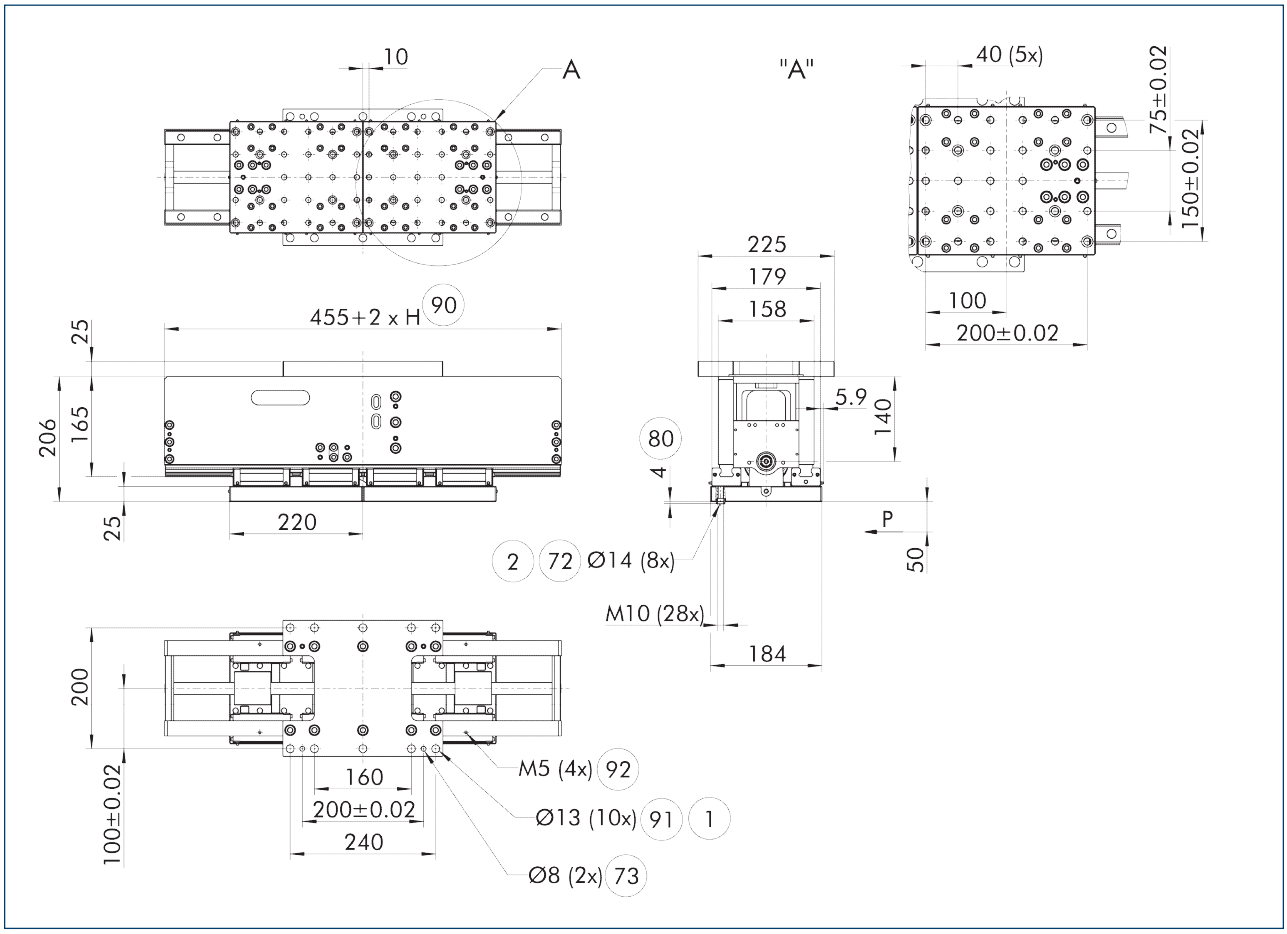
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

(1) Gripper connection
(2) Finger connection
(72) Fit for centering sleeves
(73) Fit for centering pins
(80) Depth of the centering sleeve hole in the counter part
(90) Stroke per jaw
(91) Through holes for screw connections
(92) Ground connection

ELG 75

Customized and configurable long-stroke gripper

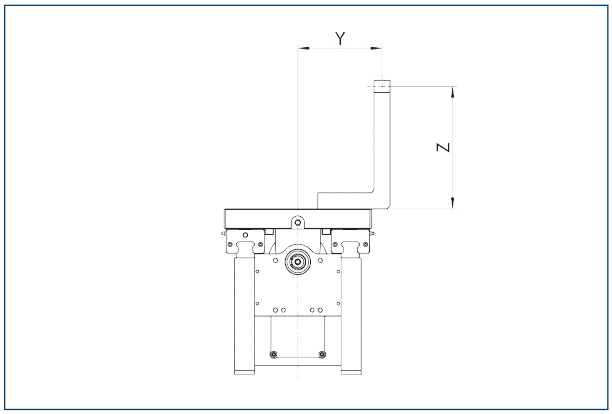
Main view ELG 75-...-2-...



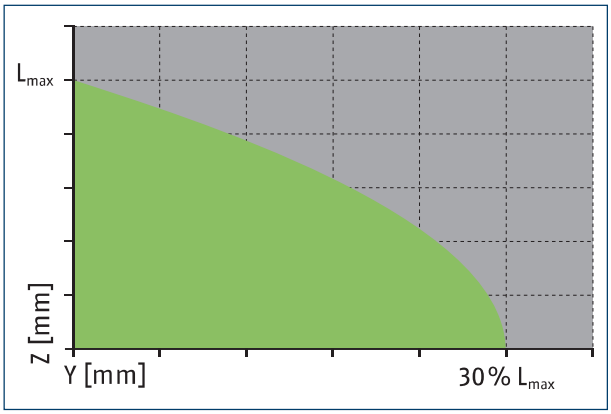
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

1. Gripper connection
2. Finger connection
72. Fit for centering sleeves
73. Fit for centering pins
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection

Maximum permitted finger projection



Finger version: short finger length

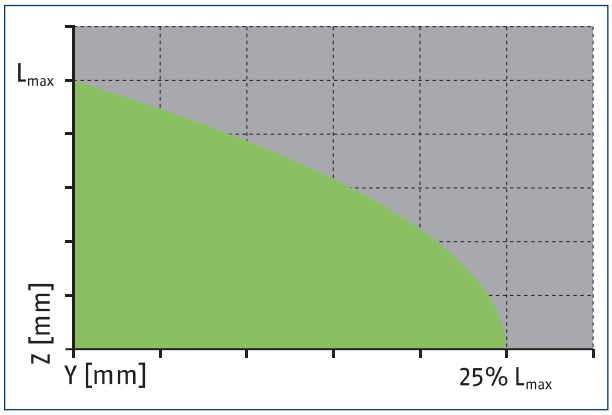


Permitted range

Inadmissible range

Lmax is equivalent to the maximum permitted finger length, see the technical data table.

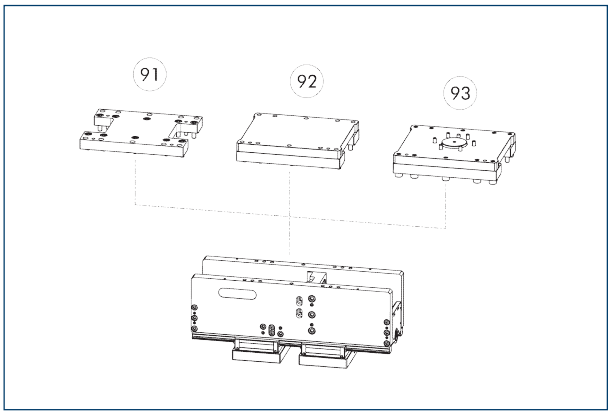
Finger version: long finger length



Permitted range

Inadmissible range

Gripper mounting



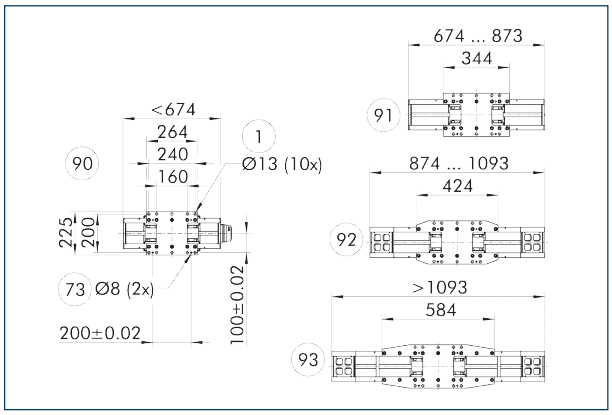
(91) One-piece adapter plate (gripper side)

(92) Adapter plate, complete (gripper side + blank)

(93) Adapter plate, complete (gripper side + ISO)

The gripper offers different options for mounting on robots or gantries.

One-piece adapter plate (gripper side)



(1) Gripper connection

(73) Fit for centering pins

(90) Adapter plate up to and including 673 mm gripping length

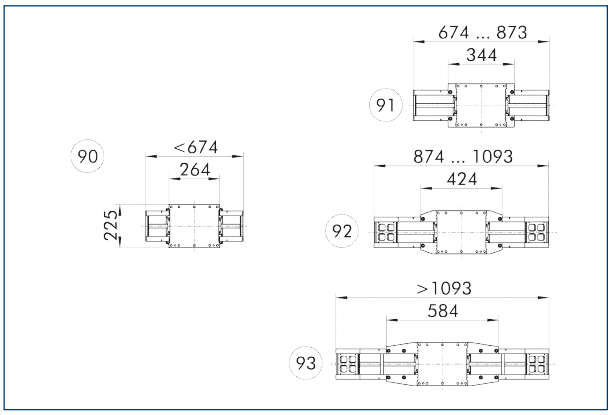
(91) Adapter plate from 674 mm to 873 mm gripping length

(92) Adapter plate from 874 mm to 1093 mm gripping length

(93) Adapter plate over 1093 mm gripping length

The provided adapter plate includes the screw-on pattern of the gripper, as well as the interface to the second adapter plate. The second adapter plate must be manufactured by the customer. By using a two-part adapter plate, the gripper can also be mounted and fixed from the top side.

Two-piece adapter plate



(90) Adapter plate up to and including 673 mm gripping length

(91) Adapter plate from 674 mm to 873 mm gripping length

(92) Adapter plate from 874 mm to 1093 mm gripping length

(93) Adapter plate over 1093 mm gripping length

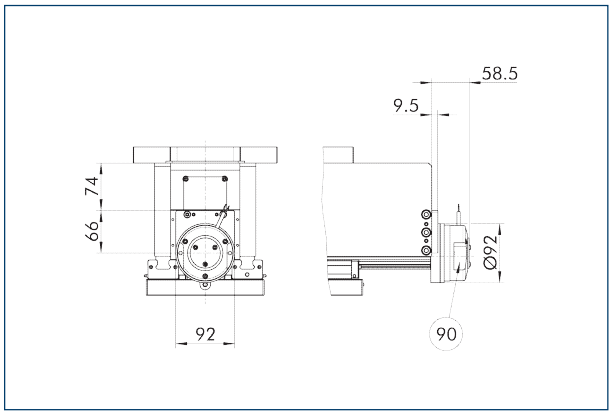
With the "adapter plate complete (gripper side + blank)" variant, the screw-on pattern of the customer interface can be inserted into the blank second adapter plate. This reduces the work required from the customer to a minimum. In the "adapter plate complete (gripper side + ISO)" variant, a flange according to EN ISO 9409 is included in the adapter plate on the robot side.

ⓘ The drawing shows the blank. The possible screw-on patterns according to EN ISO 9409 can be found in the configurator.

ELG 75

Customized and configurable long-stroke gripper

Position clamping PKL

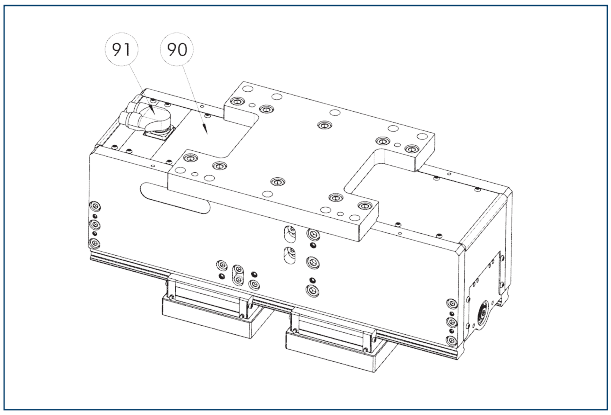


(90) Electric holding brake

The drawing shows changes in dimensions of the variants with position clamping compared to the variant shown in the main view without position clamping.

ⓘ Two holding brakes are mounted on the asynchronous version. For each holding brake, a quick-switch module (ROBA®-brake-checker) for the control as well as the required cables (for connecting the brake with the quick-switch module) are included in the scope of delivery.

Cover plate ADB

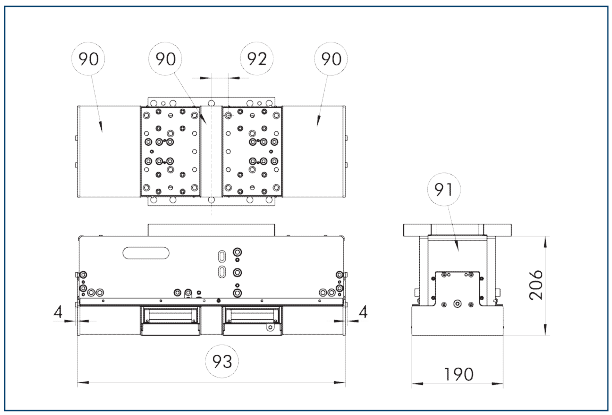


(90) Cover plates

(91) Motor connection

The cover plates close the gripper on the attachment side. This protects the gripper from external influences at this point. The motor connections are cut out accordingly.

Bellow FBA



(90) Bellow

(91) Cover plates

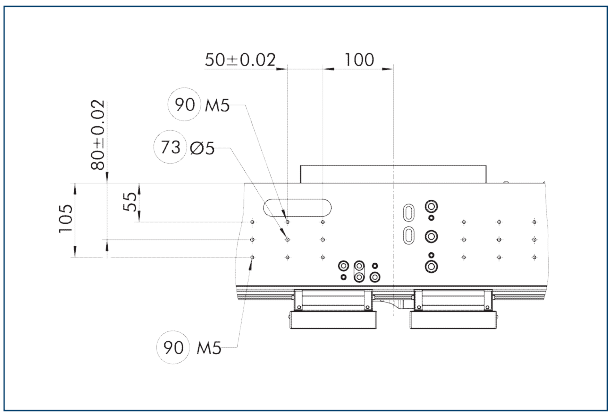
(92) Jaw position closed (see configurator)

(93) Gripper length (see configurator)

The bellow closes the gripper on the side of the base jaws. It is only available in combination with the cover plate option and it improves the protection of the gripper against environmental influences.

ⓘ For further dimensions, please refer to the online configurator at https://schunk.com/shop/us/en/konfigurator-elg

Lateral mounting options SAB



(73) Fit for centering pins

(90) Thread

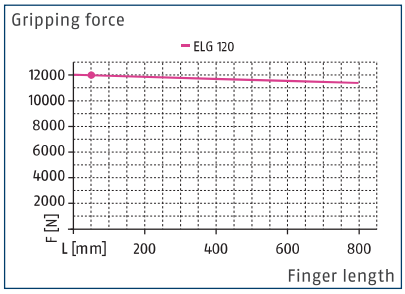
Optional mounting options on the gripper for customized additional attachments such as cameras, sensor distributors or blow-out nozzles. The drawing shows the position of the mounting options.

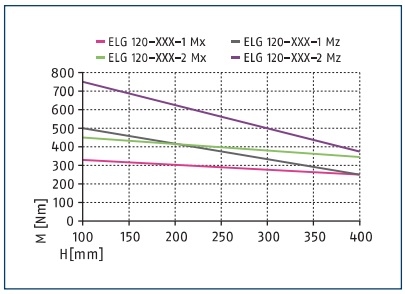
ⓘ This option cannot be combined with the "weight-optimized design" option.

ELG 120

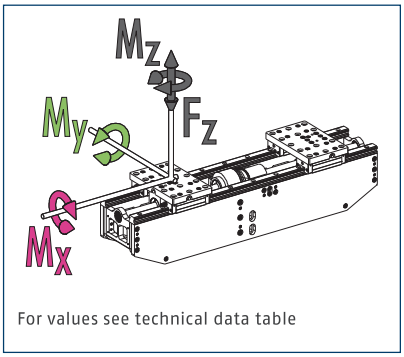
Customized and configurable long-stroke gripper

Gripping force





Max. loads



For values see technical data table

ⓘ The indicated moments and forces are statical values, apply for each base jaw and may appear simultaneously. Loads may occur in addition to the moment generated by the gripping force itself. Please also refer to the diagram for the moment loads.

Technical data

Description		ELG 120-XXX-1-SYN	ELG 120-XXX-1-ASY	ELG 120-XXX-2-SYN	ELG 120-XXX-2-ASY
Finger version		short	short	long	long
Synchronization		Synchron	Asynchronous	Synchron	Asynchronous
Min. stroke per jaw	[mm]	100	100	100	100
Max. stroke per jaw	[mm]	400	400	400	400
Gripping force	[N]	12000	12000	12000	12000
Min. gripping force maintenance***	[%]	80	80	80	80
Weight*	[kg]	42	42	56.5	56.5
Additional mass per 1 mm stroke**	[kg]	0.09	0.09	0.09	0.09
Closing/opening time*	[s]	0.98/0.98	0.98/0.98	0.98/0.98	0.98/0.98
Max. permissible speed (positioning)	[mm/s]	170	170	170	170
Max. permissible speed (gripping)	[mm/s]	10	10	10	10
Repeat accuracy (positioning, unidirectional)	[mm]	0.1	0.1	0.1	0.1
Max. permissible finger length	[mm]	300	300	800	800
Max. permissible weight per finger	[kg]	35	35	35	35
Min./max. ambient temperature	[°C]	5/55	5/55	5/55	5/55
IP protection class		20	20	20	20
Protection class IP with bellow		44	44	44	44
Standstill torque (shaft diameter 8/9 mm)	[Nm]	3.58	1.79	3.58	1.79
Standstill torque (shaft diameter 11/14 mm)	[Nm]	4.38	2.19	4.38	2.19
Standstill torque (shaft diameter 19 mm)	[Nm]	5.37	2.69	5.37	2.69
Standstill torque (shaft diameter 22 mm)	[Nm]	6.3	3.15	6.3	3.15
Standstill torque (shaft diameter 24 mm)	[Nm]	7.16	3.58	7.16	3.58
Max. drive speed (shaft diameter 8/9 mm)	[1/min]	5600	5600	5600	5600
Max. drive speed (shaft diameter 11/14 mm)	[1/min]	4600	4600	4600	4600
Max. drive speed (shaft diameter 19 mm)	[1/min]	3800	3800	3800	3800
Max. drive speed (shaft diameter 22 mm)	[1/min]	3200	3200	3200	3200
Max. drive speed (shaft diameter 24 mm)	[1/min]	2800	2800	2800	2800
Moments Mx max./My max./Mz max.*	[Nm]	330/600/500	330/600/500	450/1400/750	450/1400/750
ForcesFz max.	[N]	4000	4000	7500	7500

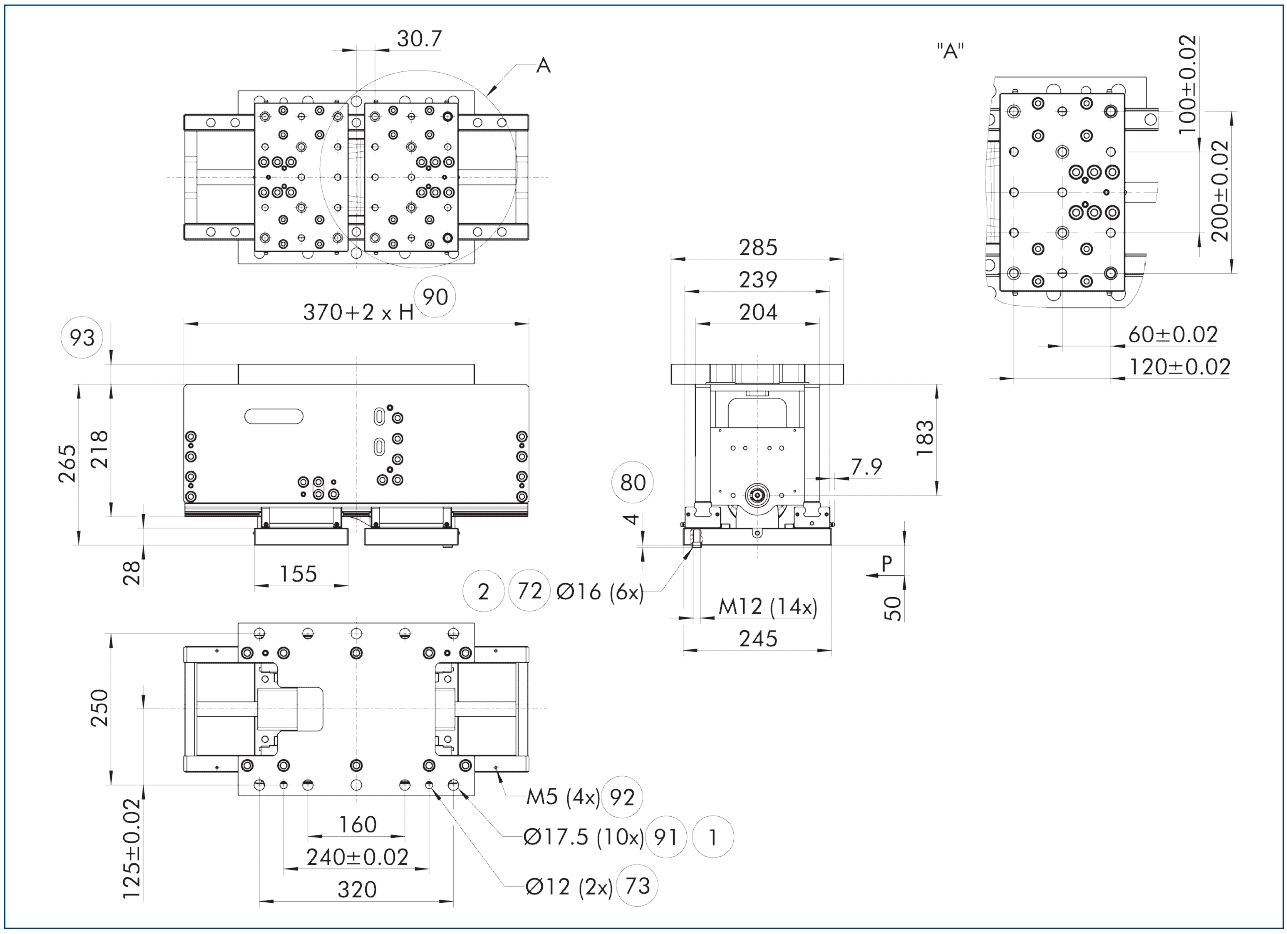
ⓘ You will find supplementary technical data for all combination options in the PDF data sheet following your individual configuration.

* referring to the basic variant shown with 100 mm stroke per jaw without additional options

** ** referring to the basic variant without additional options

*** *** referring to the use of motors with motor brake and/or when using the option position clamping

Main view ELG 120-...-1-...



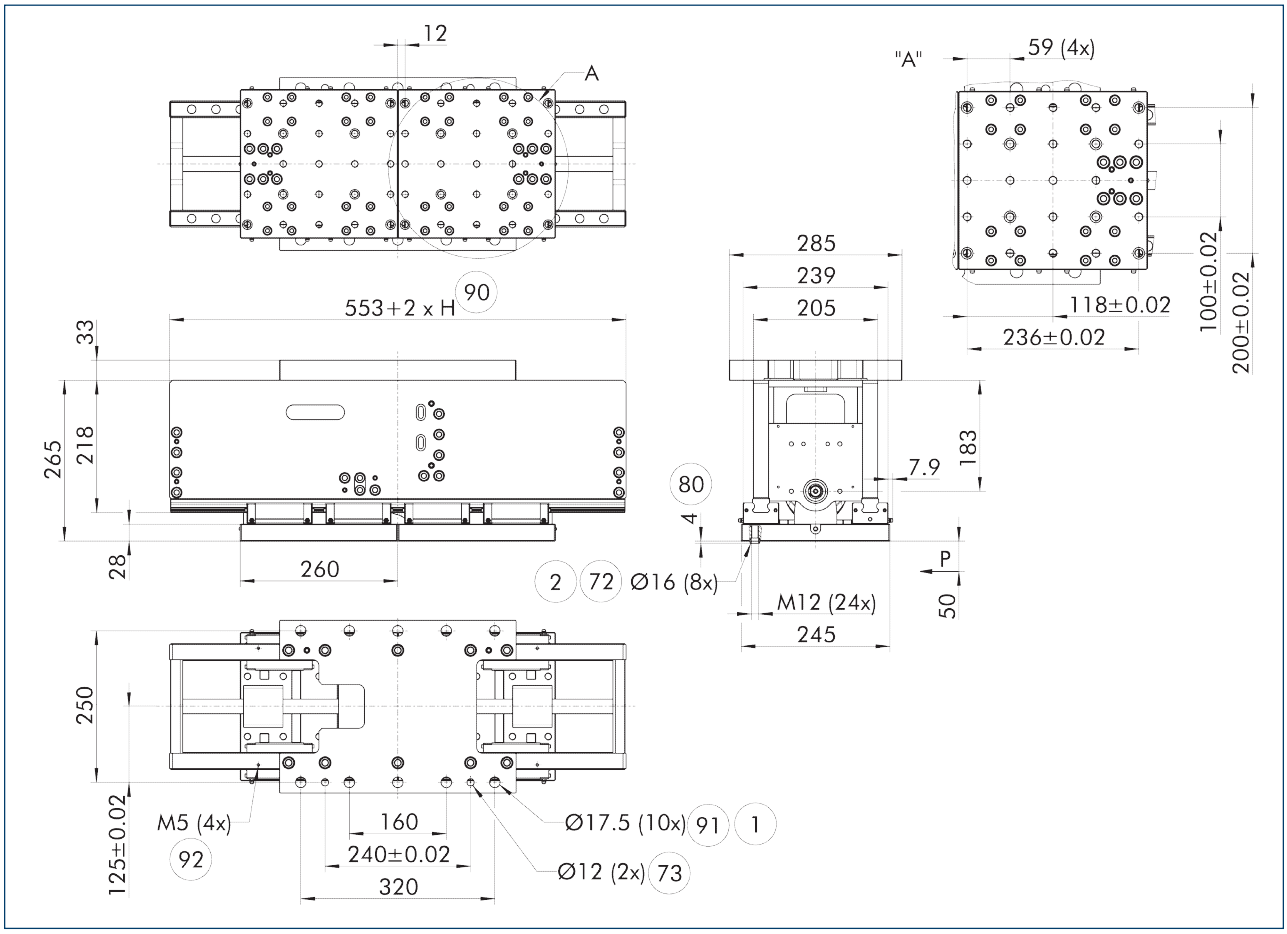
The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

1. Gripper connection
2. Finger connection
72. Fit for centering sleeves
73. Fit for centering pins
80. Depth of the centering sleeve hole in the counter part
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection
93. Height of one-piece adapter plate (see Configurator)

ELG 120

Customized and configurable long-stroke gripper

Main view ELG 120-...-2-...



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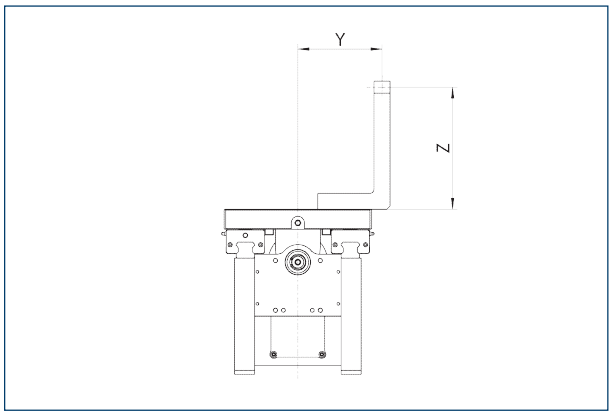
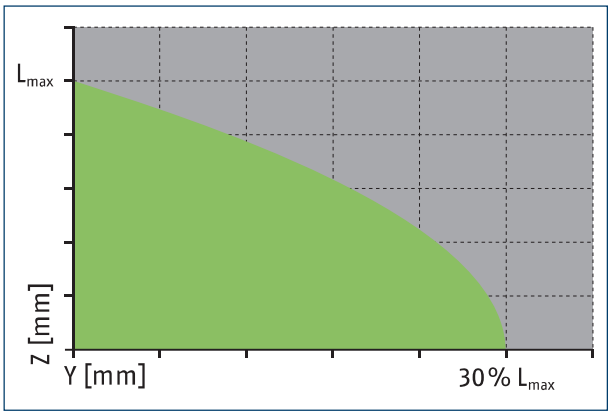
90. Stroke per jaw
91. Through holes for screw connections
92. Ground connection
93. Height of one-piece adapter plate (see Configurator)

Maximum permitted finger projection



Finger version: short finger length

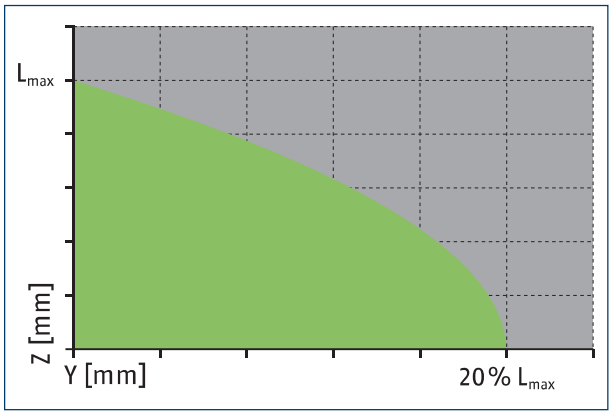


Permitted range

Inadmissible range

Lmax is equivalent to the maximum permitted finger length, see the technical data table.

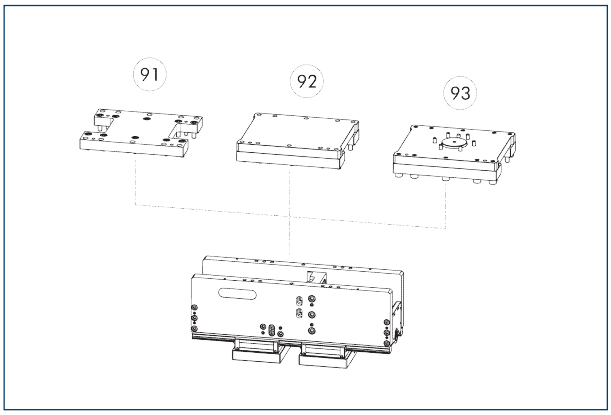
Finger version: long finger length



Permitted range

Inadmissible range

Gripper mounting



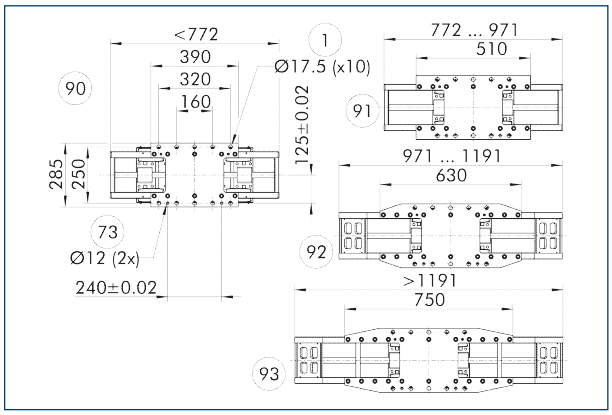
(91) One-piece adapter plate (gripper side)

(92) Adapter plate, complete (gripper side + blank)

(93) Adapter plate, complete (gripper side + ISO)

The gripper offers different options for mounting on robots or gantries.

One-piece adapter plate (gripper side)



(1) Gripper connection

(73) Fit for centering pins

(90) Adapter plate up to and including 771 mm gripping length

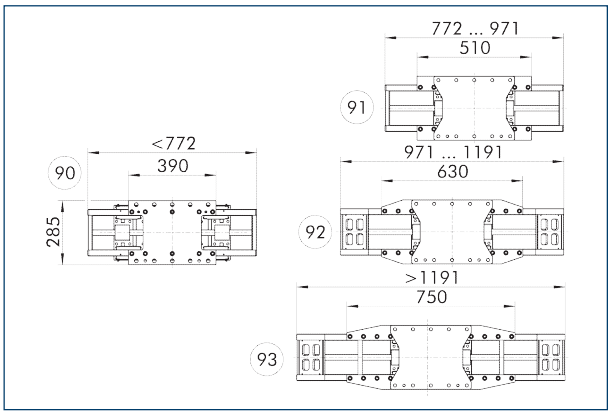
(91) Adapter plate between 772 mm to 971 mm gripping length

(92) Adapter plate between 971 mm to 1191 mm gripping length

(93) Adapter plate over 1191 mm gripping length

The provided adapter plate includes the screw-on pattern of the gripper, as well as the interface to the second adapter plate. The second adapter plate must be manufactured by the customer. By using a two-part adapter plate, the gripper can also be mounted and fixed from the top side.

Two-piece adapter plate



(1) Gripper connection

(73) Fit for centering pins

(90) Adapter plate up to and including 771 mm gripping length

(91) Adapter plate between 772 mm to 971 mm gripping length

(92) Adapter plate between 971 mm to 1191 mm gripping length

(93) Adapter plate over 1191 mm gripping length

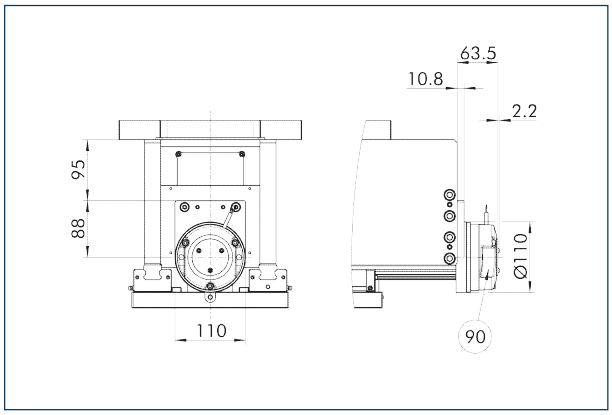
With the "adapter plate complete (gripper side + blank)" variant, the screw-on pattern of the customer interface can be inserted into the blank second adapter plate. This reduces the work required from the customer to a minimum. In the "adapter plate complete (gripper side + ISO)" variant, a flange according to EN ISO 9409 is included in the adapter plate on the robot side.

ⓘ The drawing shows the blank. The possible screw-on patterns according to EN ISO 9409 can be found in the configurator.

ELG 120

Customized and configurable long-stroke gripper

Position clamping PKL

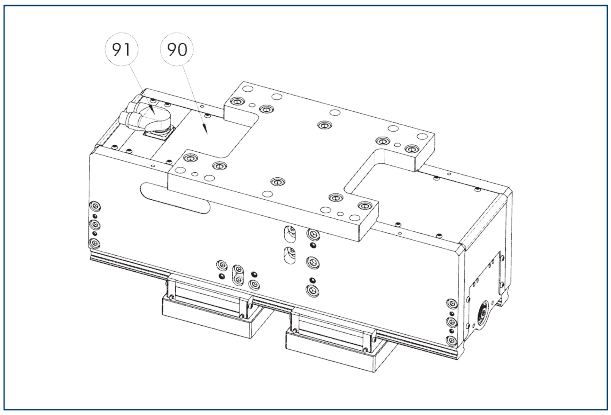


(90) Electric holding brake

The drawing shows changes in dimensions of the variants with position clamping compared to the variant shown in the main view without position clamping.

ⓘ Two holding brakes are mounted on the asynchronous version. For each holding brake, a quick-switch module (ROBA®-brake-checker) for the control as well as the required cables (for connecting the brake with the quick-switch module) are included in the scope of delivery.

Cover plate ADB

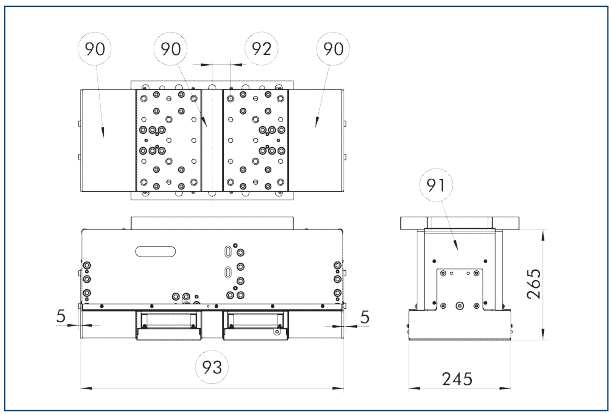


(90) Cover plates

(91) Motor connection

The cover plates close the gripper on the attachment side. This protects the gripper from external influences at this point. The motor connections are cut out accordingly.

Bellow FBA



(90) Bellow

(91) Cover plates

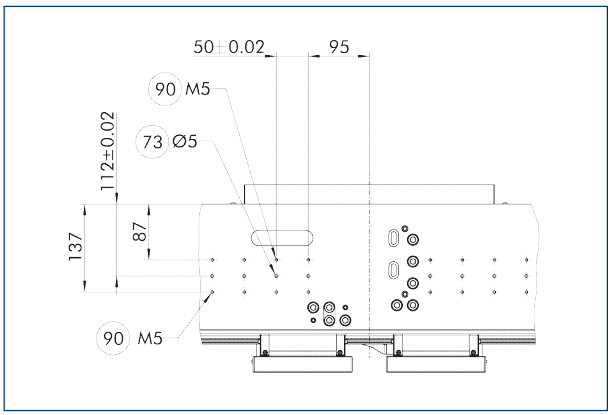
(92) Jaw position closed (see configurator)

(93) Gripper length (see configurator)

The bellow closes the gripper on the side of the base jaws. It is only available in combination with the cover plate option and it improves the protection of the gripper against environmental influences.

ⓘ For further dimensions, please refer to the online configurator at https://schunk.com/shop/us/en/konfigurator-elg

Lateral mounting options SAB



(73) Fit for centering pins

(90) Thread

Optional mounting options on the gripper for customized additional attachments such as cameras, sensor distributors or blow-out nozzles. The drawing shows the position of the mounting options.

ⓘ This option cannot be combined with the "weight-optimized design" option.

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