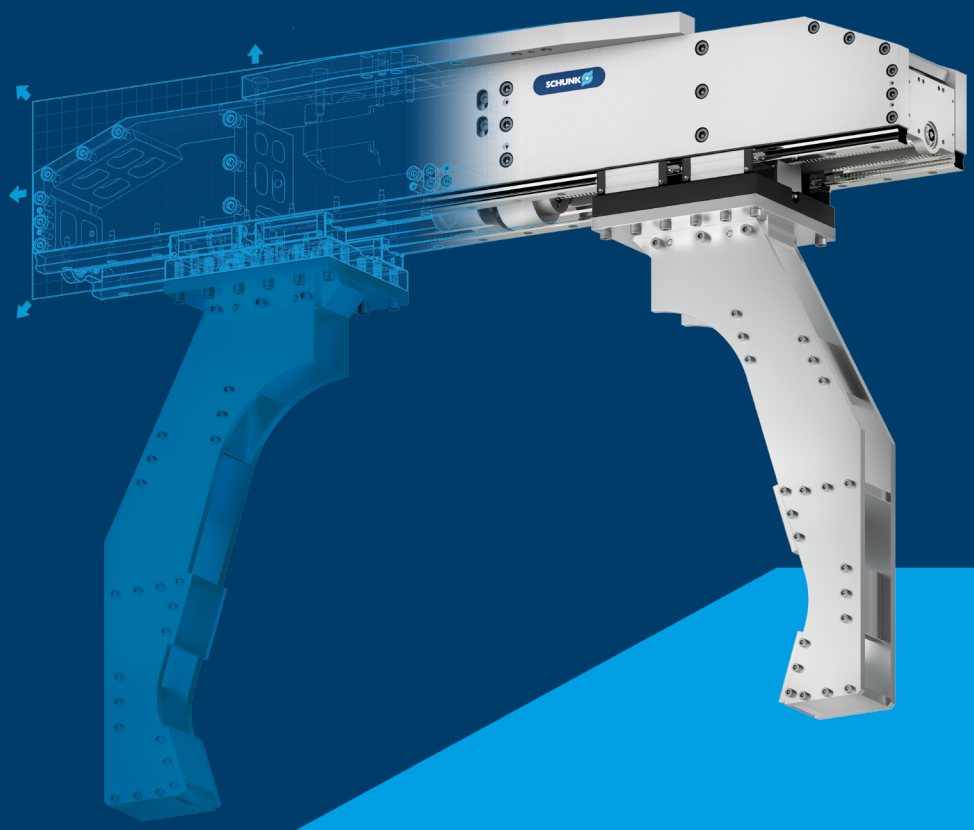


Assembly and Operating Manual

ELG

Configurable electric 2-finger long-stroke gripper

Translation of the original manual

Hand in hand for tomorrow

Imprint

Technical changes:
We reserve the right to make alterations for the purpose of technical improvement.

Document number: 1527393

Version: 09.00 | 09/03/2026 | en

Dear Customer,

Thank you for trusting our products and our family-owned company, the leading technology supplier of robots and production machines.

Our team is always available to answer any questions on this product and other solutions. Ask us questions and challenge us. We will find a solution!

Best regards,

Your SCHUNK team

Customer Management
Tel. +49-7133-103-2503
Fax +49-7133-103-2189
cmg@de.schunk.com

Please read the operating manual in full and keep it close to the product.

Table of Contents

1 General

1.1 About this manual

This manual contains important information for a safe and appropriate use of the product.

This manual is an integral part of the product and must be kept accessible for the personnel at all times.

Before starting work, the personnel must have read and understood this operating manual. Prerequisite for safe working is the observance of all safety instructions in this manual.

In addition to these instructions, the documents listed under ▸ 1.1.4 [🗋 6] are applicable.

NOTE: The illustrations in this manual are intended to provide a basic understanding and may deviate from the actual version.

1.1.1 Presentation of Warning Labels

To make risks clear, the following signal words and symbols are used for safety notes.

⚠ DANGER

Dangers for persons!

Non-observance will inevitably cause irreversible injury or death.

⚠ WARNING

Dangers for persons!

Non-observance can lead to irreversible injury and even death.

⚠ CAUTION

Dangers for persons!

Non-observance can cause minor injuries.

NOTICE

Material damage!

Information about avoiding material damage.

1.1.2 Definition of Terms

The term "product" replaces the product name on the title page in this manual.

1.1.3 Symbol definition

The following symbols are used in this manual:

■ Prerequisite for an action

1. Action 1
2. Action 2
   ⇨ Intermediate results

⇨ Final results

▸ 1.1.3 [🗋 6]: chapter number and [page number] in hyperlinks

1.1.4 Applicable documents

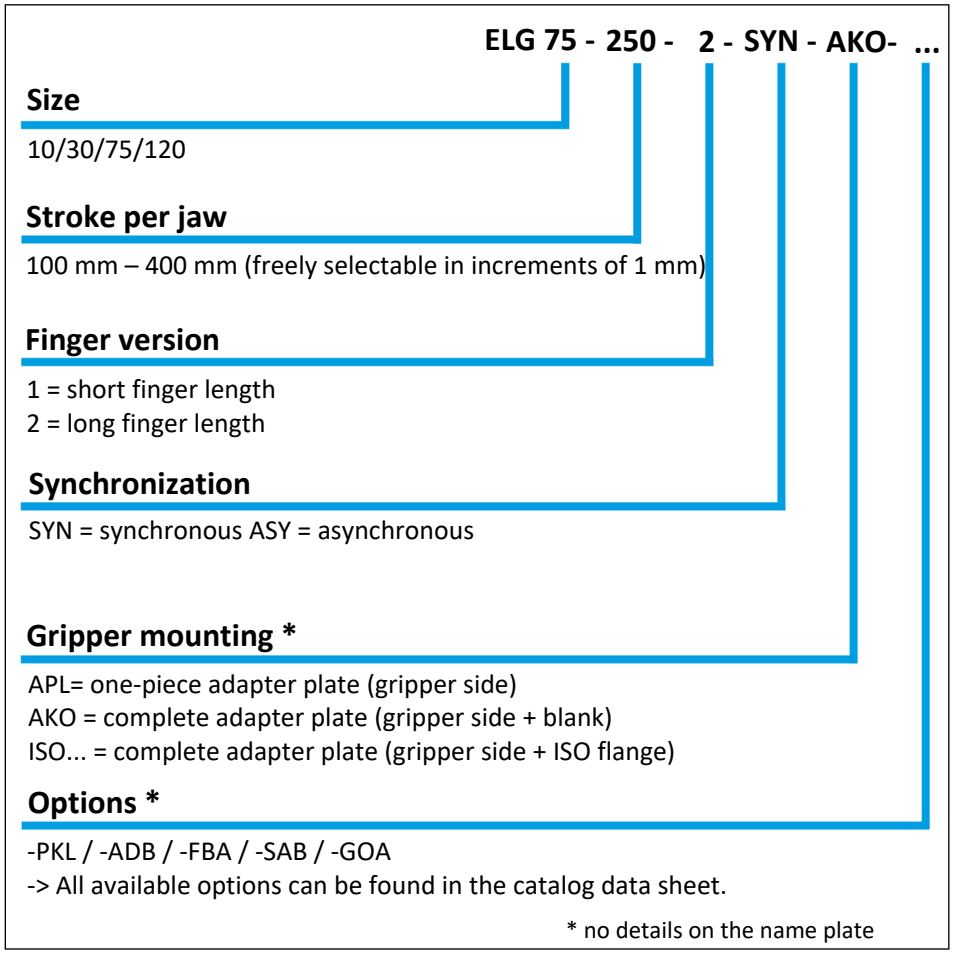
- General terms of business *
- Catalog data sheet of the purchased product *
- Assembly and operating manuals of the accessories *
- Operating manual for the servomotor **
- For variant with brake: Operating manual for the brake **

The documents labeled with an asterisk (*) can be downloaded from **schunk.com/downloads**.

The documents labeled with an asterisk (**) are enclosed with the product and can be downloaded from the manufacturer's website.

1.1.5 Sizes and variants

This manual applies to the following sizes and variants:



Type key

The respective variant of the product is stated on the name plate.

1.2 Warranty

The warranty is 12 months or a maximum of 5 million cycles* from the date of delivery from the production facility if used as intended under the following conditions:

- Observe the ambient conditions and operating conditions, ▸ 2.5 [🗋 10]
- Observe the specified maintenance and lubrication intervals, ▸ 9 [🗋 38]

Parts touching the workpiece and wear parts are not included in the warranty.

* A cycle consists of a complete gripping process: "Open gripper" and "Close gripper".

1.3 Scope of delivery

The scope of delivery includes

- Configurable electric 2-finger long-stroke gripper ELG in the version ordered
- Safety information (product-specific instructions available online)
- Accessory pack

Accessory pack

Content of the accessory pack:

- 4 x centering sleeves for mounting the finger

Note: In the case of the adapter plate with ISO flange variant, the mounting material is already pre-assembled and included in the scope of delivery.

2 Basic safety notes

2.1 Intended use

The product is designed exclusively for gripping and temporarily holding workpieces or objects.

The product is exclusively designed for linear movement of useful loads into any position where the load does not react in a manner endangering persons, property or the environment as a result of this manipulation.

- When implementing and operating components in safety-related parts of the control systems, the basic safety principles in accordance with DIN EN ISO 13849-2 apply. The proven safety principles in accordance with DIN EN ISO 13849-2 also apply to categories 1, 2, 3 and 4.
- The product may only be used within the scope of its technical data, ▶ 3 [🗋 17].
- The product is intended for installation in a machine/automated system. The applicable guidelines for the machine/automated system must be observed and complied with.
- The product is intended for industrial and industry-oriented use.
- Appropriate use of the product includes compliance with all instructions in this manual.
- Any utilization that exceeds or differs from the appropriate use is regarded as misuse.

2.2 Constructional changes

Implementation of structural changes

Modifications, changes or reworking, e.g. additional threads, holes, or safety devices, can damage the product or impair its functionality or safety.

- Structural changes should only be made with the written approval of SCHUNK.

2.3 Spare parts

Use of unauthorized spare parts

Using unauthorized spare parts can endanger personnel and damage the product or cause it to malfunction.

- Use only original spare parts or spares authorized by SCHUNK.

2.4 Gripper fingers

Requirements for the gripper fingers

Accumulated energy can make the product unsafe and risk the danger of serious injuries and considerable material damage.

- Only change gripper fingers if no residual energy can be released.
- Make sure that the product and the top jaws are a sufficient size for the application.

2.5 Ambient conditions and operating conditions

Required ambient conditions and operating conditions

Incorrect ambient and operating conditions can make the product unsafe, leading to the risk of serious injuries, considerable material damage and/or a significant reduction to the product's life span.

- Make sure that the product is used only in the context of its defined application parameters, ▸ 3 [🗋 17].

2.6 Personnel qualification

Inadequate qualifications of the personnel

If the personnel working with the product is not sufficiently qualified, the result may be serious injuries and significant property damage.

- All work may only be performed by qualified personnel.
- Before working with the product, the personnel must have read and understood the complete assembly and operating manual.
- Observe the national safety regulations and rules and general safety instructions.

The following personal qualifications are necessary for the various activities related to the product:

Trained electrician
Due to their technical training, knowledge and experience, trained electricians are able to work on electrical systems, recognize and avoid possible dangers and know the relevant standards and regulations.

Qualified personnel
Due to its technical training, knowledge and experience, qualified personnel is able to perform the delegated tasks, recognize and avoid possible dangers and knows the relevant standards and regulations.

Instructed person
Instructed persons were instructed by the operator about the delegated tasks and possible dangers due to improper behaviour.

Service personnel of the manufacturer
Due to its technical training, knowledge and experience, service personnel of the manufacturer is able to perform the delegated tasks and to recognize and avoid possible dangers.

2.7 Personal protective equipment

Use of personal protective equipment

Personal protective equipment serves to protect staff against danger which may interfere with their health or safety at work.

- When working on and with the product, observe the occupational health and safety regulations and wear the required personal protective equipment.
- Observe the valid safety and accident prevention regulations.
- Wear protective gloves to guard against sharp edges and corners or rough surfaces.
- Wear heat-resistant protective gloves when handling hot surfaces.
- Wear protective gloves and safety goggles when handling hazardous substances.
- Wear close-fitting protective clothing and also wear long hair in a hairnet when dealing with moving components.

2.8 Notes on safe operation

Incorrect handling of the personnel

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Avoid any manner of working that may interfere with the function and operational safety of the product.
- Use the product as intended.
- Observe the safety notes and assembly instructions.
- Do not expose the product to any corrosive media. This does not apply to products that are designed for special environments.
- Eliminate any malfunction immediately.
- Observe the care and maintenance instructions.
- Observe the current safety, accident prevention and environmental protection regulations regarding the product's application field.

2.9 Transport

Handling during transport

Incorrect handling during transport may impair the product's safety and cause serious injuries and considerable material damage.

- When handling heavy weights, use lifting equipment to lift the product and transport it by appropriate means.
- Secure the product against falling during transportation and handling.
- Stand clear of suspended loads.

2.10 Malfunctions

Behavior in case of malfunctions

- Immediately remove the product from operation and report the malfunction to the responsible departments/persons.
- Order appropriately trained personnel to rectify the malfunction.
- Do not recommission the product until the malfunction has been rectified.
- Test the product after a malfunction to establish whether it still functions properly and no increased risks have arisen.

2.11 Fundamental dangers

General

- Observe safety distances.
- Never deactivate safety devices.
- Before commissioning the product, take appropriate protective measures to secure the danger zone.
- Disconnect power sources before installation, modification, maintenance, or calibration. Ensure that no residual energy remains in the system.
- If the energy supply is connected, do not move any parts by hand.
- Do not reach into the open mechanism or movement area of the product during operation.

2.11.1 Protection during handling and assembly

Incorrect handling and assembly

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Have all work carried out by appropriately qualified personnel.
- For all work, secure the product against accidental operation.
- Observe the relevant accident prevention rules.
- Use suitable assembly and transport equipment and take precautions to prevent jamming and crushing.

Incorrect lifting of loads

Falling loads may cause serious injuries and even death.

- Stand clear of suspended loads and do not step into their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.

2.11.2 Protection during commissioning and operation

Falling or violently ejected components

Falling and violently ejected components can cause serious injuries and even death.

- Take appropriate protective measures to secure the danger zone.
- Never step into the danger zone during operation.

2.11.3 Protection against dangerous movements

Unexpected movements

Residual energy in the system may cause serious injuries while working with the product.

- Switch off the energy supply, ensure that no residual energy remains and secure against inadvertent reactivation.
- The faulty actuation of connected drives may cause dangerous movements.
- Operating mistakes, faulty parameterization during commissioning or software errors may trigger dangerous movements.
- Never rely solely on the response of the monitoring function to avert danger. Until the installed monitors become effective, it must be assumed that the drive movement is faulty, with its action being dependent on the control unit and the current operating condition of the drive. Perform maintenance work, modifications, and attachments outside the danger zone defined by the movement range.

- To avoid accidents and/or material damage, human access to the movement range of the machine must be restricted. Limit/ prevent accidental access for people in this area due through technical safety measures. The protective cover and protective fence must be rigid enough to withstand the maximum possible movement energy. EMERGENCY STOP switches must be easily and quickly accessible. Before starting up the machine or automated system, check that the EMERGENCY STOP system is working. Prevent operation of the machine if this protective equipment does not function correctly.

2.11.4 Protection against electric shock

Working on electrical equipment

Touching live parts can lead to death.

- Work on electrical equipment may only be carried out by qualified electricians in accordance with electrotechnical regulations.
- Lay electrical cables properly, e.g. in a cable duct or cable bridge. Observe standards.
- Before connecting or disconnecting electrical cables: Switch off the power supply and secure it against being switched on again, check that the cables are de-energized.
- Before switching on / commissioning the product, check that the protective earth conductor is correctly attached to all electrical components in accordance with the wiring diagram.
- Check whether covers and protective devices have been fitted to prevent contact with live components.
- Do not touch the connection points of the product when the power supply is switched on.

Possible electrostatic energy

Components or assembly groups may become electrostatically charged. When the electrostatic charge is touched, the discharge may trigger a shock reaction leading to injuries.

- The operator must ensure that all components and assembly groups are included in the local potential equalisation in accordance with the applicable regulations.
- While paying attention to the actual conditions of the working environment, the potential equalisation must be implemented by a specialist electrician according to the applicable regulations.
- The effectiveness of the potential equalisation must be verified by executing regular safety measurements.

2.12 Notes on particular risks

⚠ DANGER

Danger from electric voltage!

Touching live parts may result in death.

- Switch off the power supply before any assembly, adjustment or maintenance work and secure against being switched on again.
- Only qualified electricians may perform electrical installations.
- Check if de-energized, ground it and hot-wire.
- Cover live parts.

⚠ DANGER

Risk of fatal injury from suspended loads!

Falling loads can cause serious injuries and even death.

- Stand clear of suspended loads and do not step within their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury from objects falling in the event of an energy supply failure!

In case of an energy supply failure, a secure hold on the gripped workpiece cannot be guaranteed.

- Take suitable protective measures to secure the danger zone.

⚠ WARNING

Risk of injury due to unexpected movements!

If the power supply is switched on or residual energy remains in the system, components can move unexpectedly and cause serious injuries.

- Before starting any work on the product: Switch off the power supply and secure against restarting.
- Make sure, that no residual energy remains in the system.

⚠ WARNING

Risk of injury from crushing and impacts!

Serious injury could occur during movement of the base jaw, due to breakage or loosening of the gripper fingers or if the workpiece is lost.

- Wear suitable protective equipment.
- Do not reach into the open mechanism or the movement area of the product.

⚠ WARNING

Risk of injury from sharp edges and corners!

Sharp edges and corners can cause cuts.

- Use suitable protective equipment.

⚠ WARNING

Risk of burns through contact with hot surfaces!

Surfaces of components can heat up severely during operation. Skin contact with hot surfaces causes severe burns to the skin.

- For all work in the vicinity of hot surfaces, wear safety gloves.
- Before carrying out any work, make sure that all surfaces have cooled down to the ambient temperature.

Work in areas with magnetic and electromagnetic fields

Magnetic and electromagnetic fields can lead to serious injuries.

- Persons with pace-makers, metal implants, metal shards, or hearing aids require the consent of a physician before entering areas in which components of the electric drive and control systems are mounted, started up, and operated.
- Persons with pace-makers, metal implants, metal shards, or hearing aids require the consent of a physician before entering areas in which magnetic grippers or motor parts with permanent magnets are stored, repaired, or assembled.
- Do not operate high-frequency or radio devices in the proximity of electric components of the drive system and their feed lines.

  If the use of such devices is necessary:

  When starting up the electric drive and control system, check the machine or automated system for possible failures when such systems are used at different intervals and in different states of the control system. A special additional EMC test may be necessary if the system has a high risk potential.

3 Technical data

Basisdaten

Size	ELG			
	10	30	75	120
Stroke per jaw [mm]	100–300	100–400	100–400	100–400
Max. Gripping force [N]	1050	3000	7500	12000
Min. Gripping force maintenance [%], ▶ 7.1.1 [🗋 35]	80	80	80	80
Max. acceleration of base jaws [mm/s²]	1000	800	800	600
Max. speed (positioning) [mm/s]	200	200	180	170
Max. speed (gripping) [mm/s]	10	10	10	10
Repeat accuracy	0.1	0.1	0.1	0.1
Spindle pitch [mm]	3	5	5	5
Number of teeth on spindle	18	34	40	50
Linear travel per revolution [mm/revolution]* with number of teeth on the motor-side belt pulley				
– 18 teeth	3	45/17	9/4	9/5
– 22 teeth	11/3	55/17	11/4	11/5
– 27 teeth	9/2	135/34	27/8	27/10
– 32 teeth	–	80/17	4	16/5
– 36 teeth	–	90/17	9/2	18/5
– 40 teeth	–	–	–	4
Brake holding torque (PKL) [Nm]	4	4	8	16

* Stroke per jaw in mm per number of motor revolutions

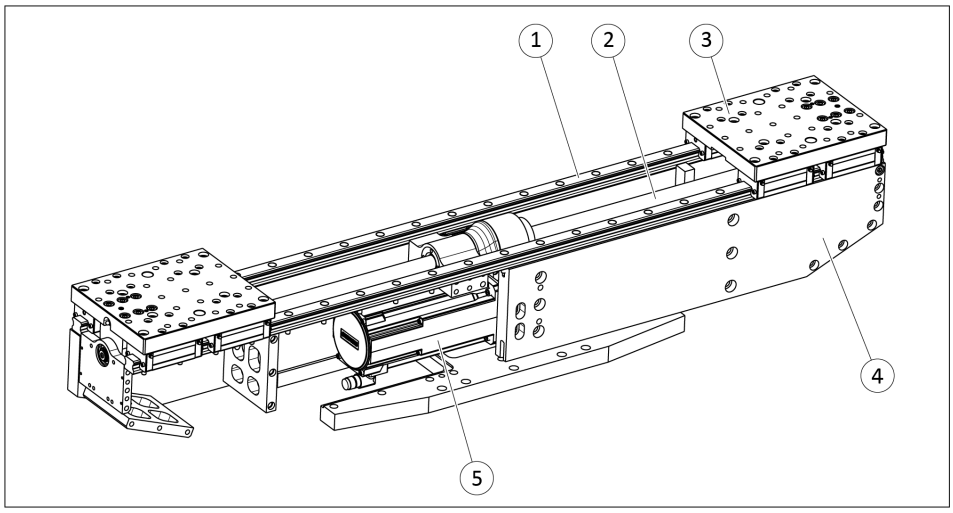
Ambient conditions and operating conditions

Size	ELG			
	10	30	75	120
Ambient temperature [°C] Min. Max.		+5 +55 / (PKL: +40)		
Protection class IP, DIN EN 60529 – With bellows option		20 44		
Noise emission [dB(A)]		≤70		

Further technical data can be found in the catalog data sheet and the technical data sheet of the individual configuration. The latest relevant version is valid.

4 Design and description

4.1 Design



Configurable electric 2-finger long-stroke gripper ELG

1	Linear guide
2	Ball screw
3	Base jaw
4	Housing
5	Servomotor

4.2 Description

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

Two ball-screw spindle drives, which move the base jaw, are driven by one or two servo motors via a toothed belt.

Synchronous version: One servo motor drives the right-to-left and left-to-right spindles synchronized with a clutch.

Asynchronous variant: Each base jaw can be independently moved by two servomotors.

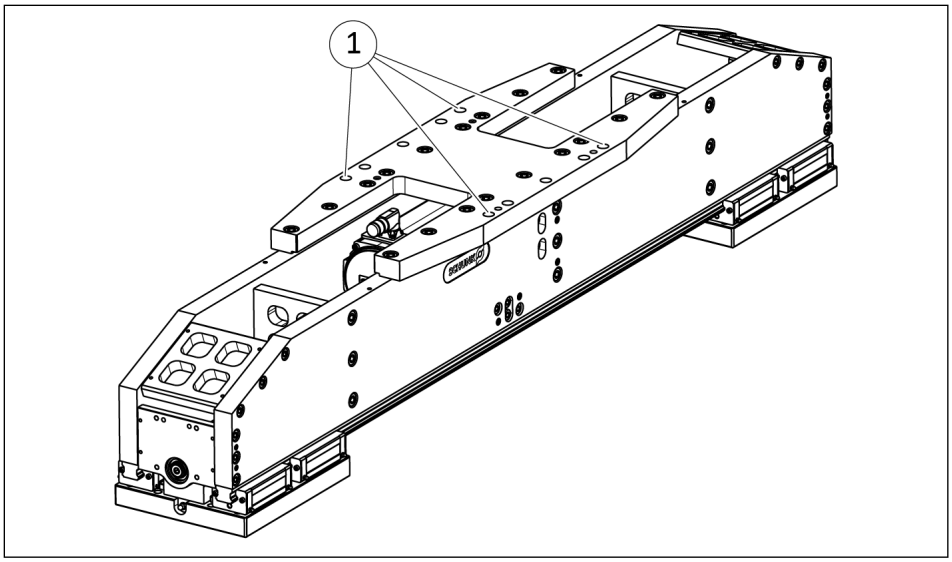
5 Transport

⚠ WARNING

Risk of injury from falling of the product!

During transport and assembly/disassembly the product may fall down and cause serious injuries.

- Secure the product with adequately sized aids.
- Wear suitable protective clothing.



1. Fasten eye bolts to the designated threads/through-holes (1) provided for this purpose.
   Note: Eyebolts are not included.
2. When handling heavy weights, use lifting equipment to lift the product and transport it by appropriate means.
   ⇨ Remove the eyebolts after transport.

6 Assembly

6.1 Installing and connecting

⚠ DANGER

Risk of injury due to electric shock!

Contact with live parts can result in death.

- The electrical connections may only be made by qualified electricians.
- Secure danger zone with suitable protective measures.
- Only connect load and logic voltage of the motor at the end of assembly.
- Only connect voltage supply of the actuation after leaving the danger zone.

⚠ WARNING

Risk of injury due to unexpected movements!

If the power supply is switched on or residual energy remains in the system, components can move unexpectedly and cause serious injuries.

- Before starting any work on the product: Switch off the power supply and secure against restarting.
- Make sure, that no residual energy remains in the system.

⚠ WARNING

Risk of injury due to improperly carried out assembly!

Improperly carried out assembly work can lead to severe injuries and property damage.

- Before beginning work, ensure sufficient assembly clearance.
- Secure components from falling down or over.
- Ensure that all work has been carried out in accordance with the specifications in these instructions.
- Observe tightening torques.

Evenness of the mounting surface

The values apply to the whole mounting surface to which the product is mounted.

Edge length	Permissible unevenness
< 100	< 0.02
> 100	< 0.05

Tab.: Requirements for evenness of the mounting surface (Dimensions in mm)

Overview

1. If necessary, mount servomotor on the product, ▸ 6.3 [🗋 27].
2. Screw the product to the machine/system, ▸ 6.2.1 [🗋 21].
   - ⇨ Observe the maximal tightening torque, admissible screw-in depth and, if necessary, strength class.
   - ⇨ If necessary, use appropriate connection elements (adapter plates).
3. Secure the gripper fingers to the base jaws, ▸ 6.2.1 [🗋 21].
   - ⇨ Observe the maximal tightening torque, admissible screw-in depth and, if necessary, strength class.
4. Connect servo motor electrically, ▸ 6.2.2 [🗋 26].

6.2 Connections

6.2.1 Mechanical connection

6.2.1.1 Connections on the housing

The product offers different options for mounting on robots or gantries, which can be configured:

- with one-piece adapter plate, ▸ 6.2.1.1 [🗋 21].
- with one-piece adapter plate and blank (without drilling pattern), customer-side assembly.
- with one-piece adapter plate and ISO flange, ▸ 6.2.1.1 [🗋 23].

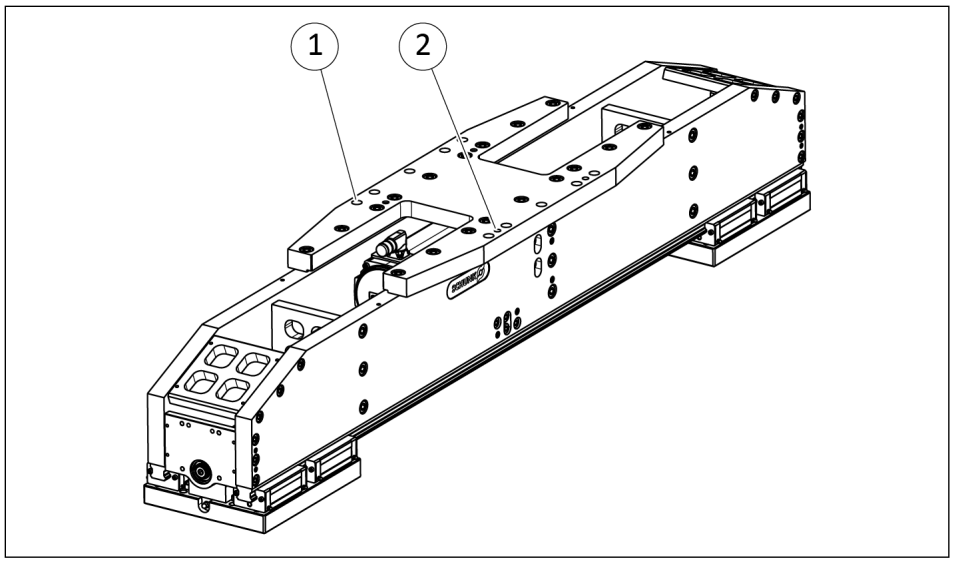
Further information and technical data are available in the catalog data sheet. The latest relevant version is valid.

Mounting with one-piece adapter plate

NOTE

Customer-side adapter plate to be designed according to the application!

Ensure there is a sufficient number of mounting screws.



Item	Mounting	ELG			
		10	30	75	120
1	Through-hole for mounting screws	M8	M10	M12	M16
	Required number of screws [piece]	12	12	10	10
	Mounting screw according to standard	DIN EN ISO 4762			
	Mounting screw strength class	12.9			
	Max. tightening torque [Nm]	43	85	150	360
2	Cylindrical pin [mm]	Ø 8	Ø 8	Ø 8	Ø 12
	Number of cylindrical pins required [piece]	2	2	2	2

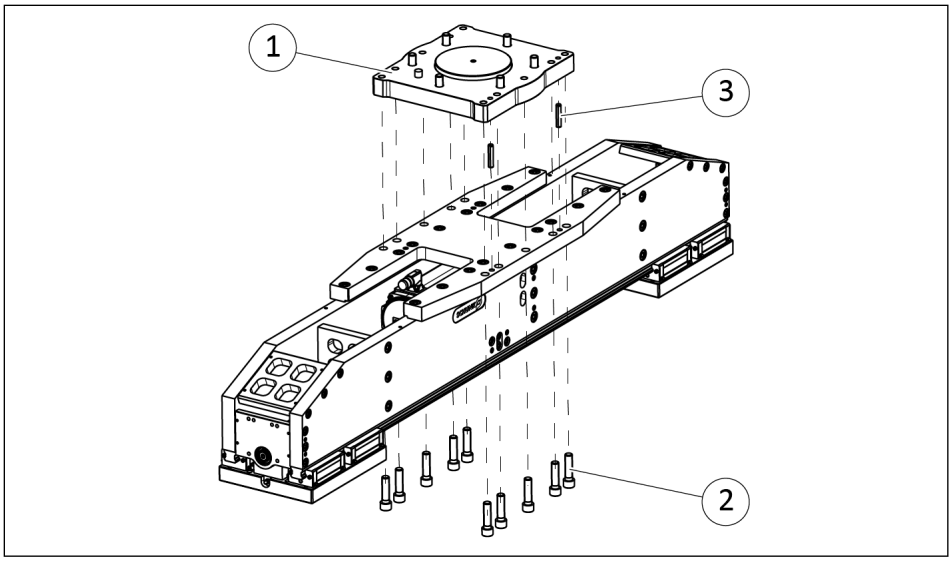
- Secure the product using screws and cylindrical pins.

⇨ Note tightening torques for the mounting screws.

Mounting with complete adapter plate

NOTE

Ensure there is a sufficient number of mounting screws.



Item	Mounting	ELG			
		10	30	75	120
1	Mounting screw	M8	M10	M12	M16
	Required number of screws [piece]	12	12	10	10
	Mounting screw according to standard	DIN EN ISO 4762			
	Mounting screw strength class	12.9			
	Max. tightening torque [Nm]	43	85	150	360
2	Cylindrical pin [mm]	Ø 8	Ø 8	Ø 8	Ø 12
	Number of cylindrical pins required [piece]	2	2	2	2

1. Remove screws (2) and cylindrical pin (3) and mount the adapter plate (1) on the robot/gantry using mounting material.
   Note: The mounting material for the adapter plate is included in the scope of delivery.
2. Secure the product to the adapter plate (1) using screws (2) and cylindrical pins (3).

⇨ Note tightening torques for the mounting screws.

Possible ISO flange dimensions

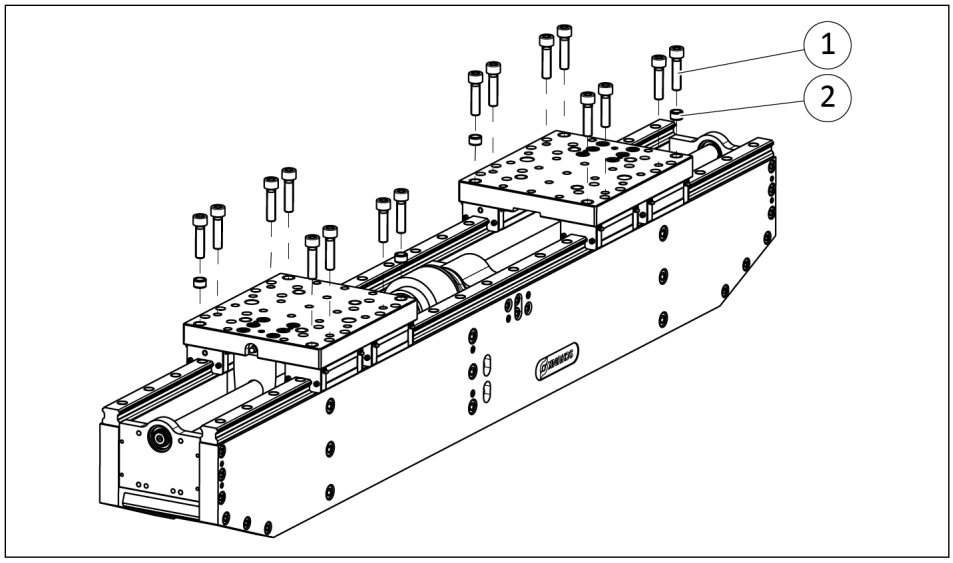
Designation	ELG			
	10	30	75	120
AKO EN ISO 9409-1-63-4-M6	X			
AKO EN ISO 9409-1-80-6-M8	X	X	X	
AKO EN ISO 9409-1-100-6-M8	X	X	X	X
AKO EN ISO 9409-1-125-6-M10	X	X	X	X
AKO EN ISO 9409-1-160-6-M10	X	X	X	X
AKO EN ISO 9409-1-160-11-M12	X	X	X	X
AKO EN ISO 9409-1-200-12-M12		X	X	X
AKO EN ISO 9409-1-200-12-M16			X	X
AKO EN ISO 9409-1-250-6-M12				X

6.2.1.2 Connections to the base jaws

NOTE

The catalog data sheet contains all dimensions for mounting the gripper fingers. The latest relevant version is valid.

Ensure that there is a sufficient number of mounting screws and that the distance between the mounting screws and the finger mounting is sufficient.



Connections at the base jaws

Item	Mounting	ELG			
		10-1	10-2	30-1	30-2
1	Thread in base jaws	M6	M6	M8	M8
	Required number of screws per base jaw [piece]	6	10	6	10
	Max. depth of engagement from locating surface [mm]	14	14	19	19
	Max. tightening torque [Nm]	18	18	43	43
2 *	Centering sleeve [mm]	10	10	12	12

Item	Mounting	ELG			
		75-1	75-2	120-1	120-2
1	Thread in base jaws	M10	M10	M12	M12
	Required number of screws per base jaw [piece]	6	10	6	10
	Max. depth of engagement from locating surface [mm]	24	24	19	19
	Max. tightening torque [Nm]	85	85	150	150
2 *	Centering sleeve [mm]	14	14	16	16

* contained in accessory kit

NOTE

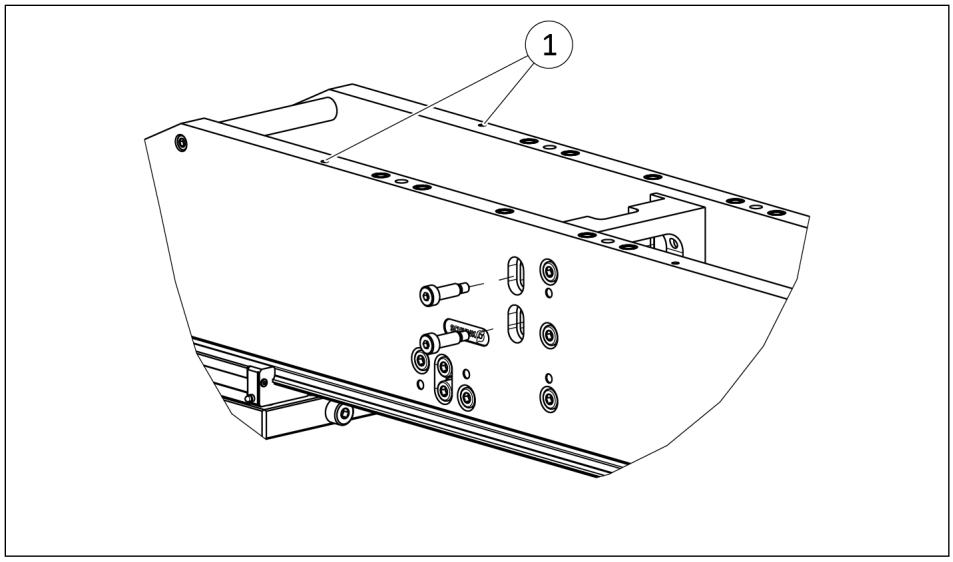
Make sure that the product and the gripper finger are sufficient in size for the workpiece.

6.2.2 Electrical connection

NOTE

- Information on the electrical connections can be found in the operating manuals for the servomotor, regulator, controller and brake.
- Observe the maximum electrical energy values, see servomotor operating manual.

Grounding thread

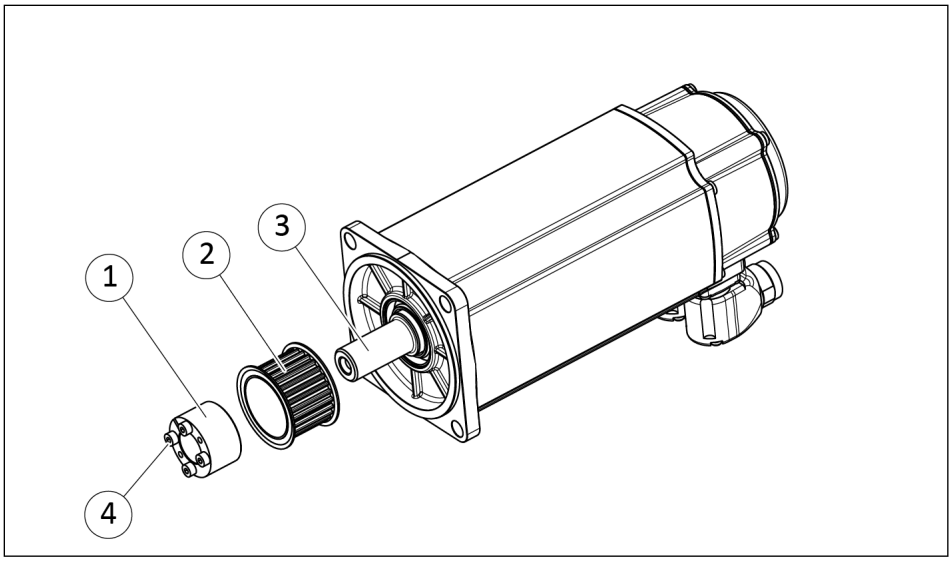


- If necessary, connect the grounding cable to the ground connection (1).

6.3 Mount servo motors

When selecting a suitable motor, in addition to the flange dimensions, the standstill torque and the drive speed from the data sheet must also be taken into account.

6.3.1 Mount belt pulleys



Mounting the belt pulley

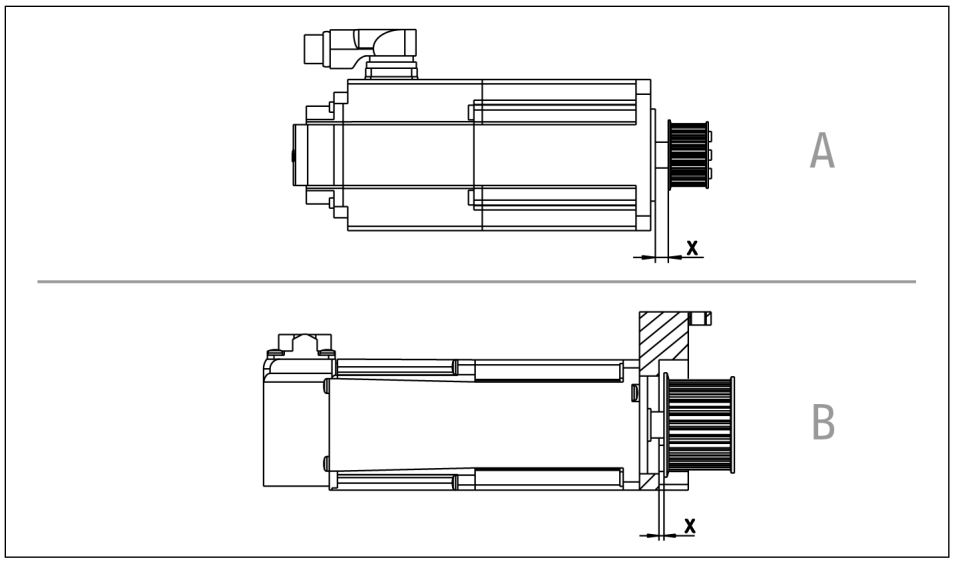
1. Insert clamping element (1) into the belt pulley (2).
2. Slide belt pulley (2) onto the motor shaft (3) and adjust distance "X", ▸ see the following illustration and tables. [🗋 28]
3. Tighten four screws (4) crosswise several times, ▸ observe tightening torque [🗋 27].
   ⇨ Note: The screws will have to be tightened in a crosswise motion several times because contraction of the conical surfaces in the clamping set will cause a reduction in the tightening torque applied to screws already tightened
4. **For asynchronous version:** Carry out previous steps for the second motor.

Tightening torque Screws (4)

Shaft diameter [mm]	Tightening torque [Nm]
8/9	1
11	1.2
14	1.8
19	3.5
22	7
24	10

Tab.: Tightening torque for screws (4) in the clamping set

Setting dimension "X"



Setting dimension "X"

ELG 10

Motor type	Reference variant	Dimension "X" [mm]	
		synchronous	asynchronous
BOSCH – MS2N03	A	1.5	1.5
SIEMENS – 1FK2203	A	1.5	1.5
SEW – CMP40	A	1.5	1.5
KUKA – MG 03	B	–	1.5
KUKA – MG 06	A	1	–
ALLEN-BRADLEY – VPL – X063	A	1.5	1.5
Mitsubishi – HK-KT1M3W	B	1.5	1.5
Inovance – MS1H4-20B30CB-A334R	A	1	1

ELG 30

Motor type	Reference variant	Dimension "X" [mm]	
		synchronous	asynchronous
BOSCH – MS2N04	A	6.5	8
SIEMENS – 1FK2204	A	7	7
SEW – CMP50	A	6.5	7
KUKA – MG 13	A	–	5
KUKA – MG 24	A	7	–
ALLEN-BRADLEY – VPL – X075	A	7	7
Mitsubishi – HK-KT63W	A	5	6.5
Inovance – MS1H4-75B30CB-A334R	A	7	7

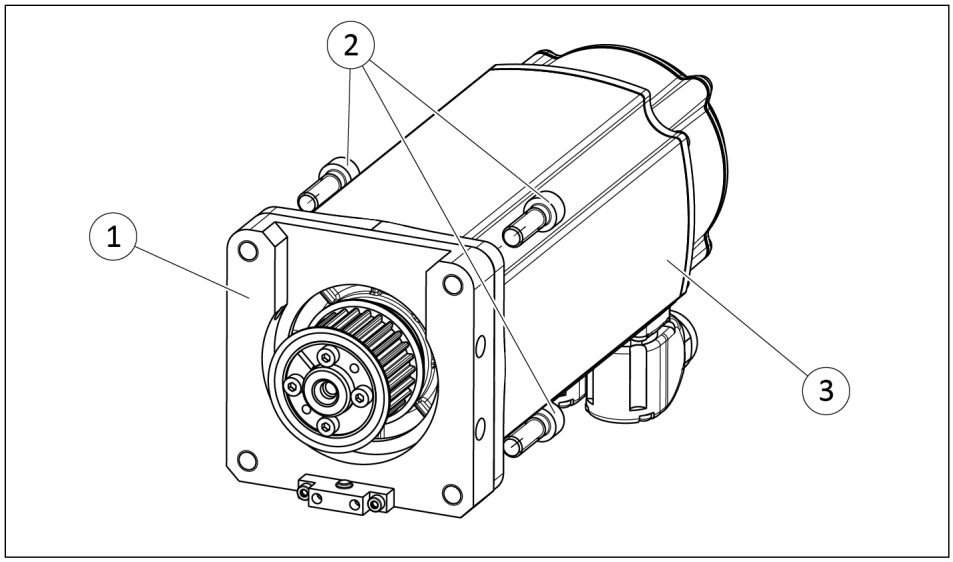
ELG 75

Motor type	Reference variant	Dimension "X" [mm]	
		synchronous	asynchronous
BOSCH – MS2N04	A	3	5
SIEMENS – 1FK2205	A	3	8
SEW – CMP50	A	–	3.5
SEW – CMP63	A	3	–
FANUC – Beta 4 IS	A	1.5	2
KUKA – MG 24	A	–	7
KUKA – MG 48	A	6	–
ALLEN-BRADLEY – VPL – X075	A	–	4
ALLEN-BRADLEY – VPL – X115	A	2.5	–
Mitsubishi – HK-KT63W	A	2.5	4
Inovance – MS1H2 – 20C30CD-A334Z-S4	A	2	–
Inovance – MS1H4-75B30CB-A334R	A	–	2.5

ELG 120

Motor type	Reference variant	Dimension "X" [mm]	
		synchronous	asynchronous
BOSCH – MS2N04	A	–	4.5
BOSCH – MS2N05	A	5.5	–
SIEMENS – 1FK2205	A	–	7
SIEMENS – 1FK2206	A	5	–
SEW – CMP71	A	–	11
SEW – CMP71 M	A	5	–
FANUC – Beta 4 IS	A	–	3
FANUC – Beta 8 IS	A	4.5	–
KUKA – MG 32	A	–	6.5
KUKA – MG 70	A	7.5	–
ALLEN-BRADLEY – VPL – X115	A	–	10.5
ALLEN-BRADLEY – VPL – X130	A	5	–
Mitsubishi – HK-KT153W	A	–	7
Mitsubishi – HK-KT203W	A	5	–
Inovance – MS1H2-30C30CD-A331Z	A	18.5	–
Inovance – MS1H2-15C30CD-A334Z	A	–	5.5

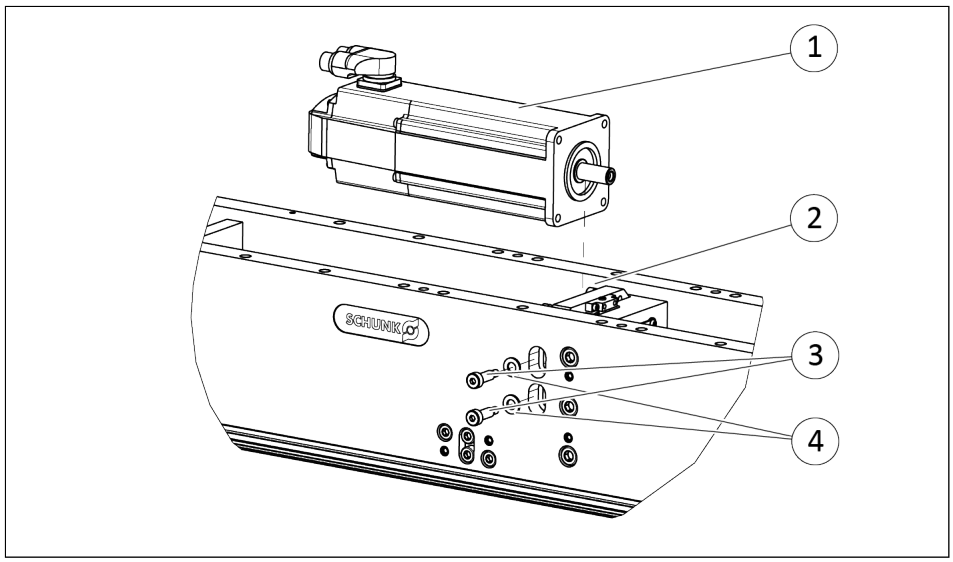
6.3.2 Mount motor adapter



Mount motor adapter

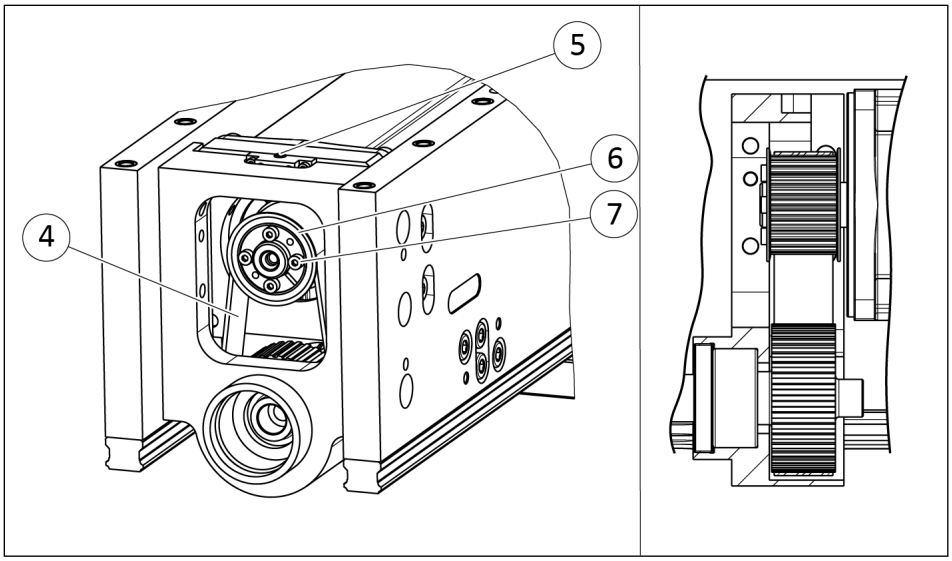
1. Mount motor adapter (1) with four screws (2) to the motor (3).
2. **For asynchronous version:** Carry out previous steps for the second motor.

6.3.3 Mount servo motor to the product



Inserting the motor

1. Insert the pre-assembled motor with motor adapter (1) into the gripper (2).
2. Slide the toothed belt over the belt pulley.
3. Insert four fitting screws (3) with washers (4) but do not tighten them yet.



Pre-tensioning the toothed belt

4. To pretension the toothed belt (4), tighten the set-screw (5) until the desired belt tension is reached.
5. Tighten all fitting screws (3).
   ⇨ Observe the tightening torque.
6. If necessary, connect the grounding cable to the ground connection. ▸ 6.2.2 [🗋 26]
7. **For asynchronous version:** Carry out previous steps for the second motor.

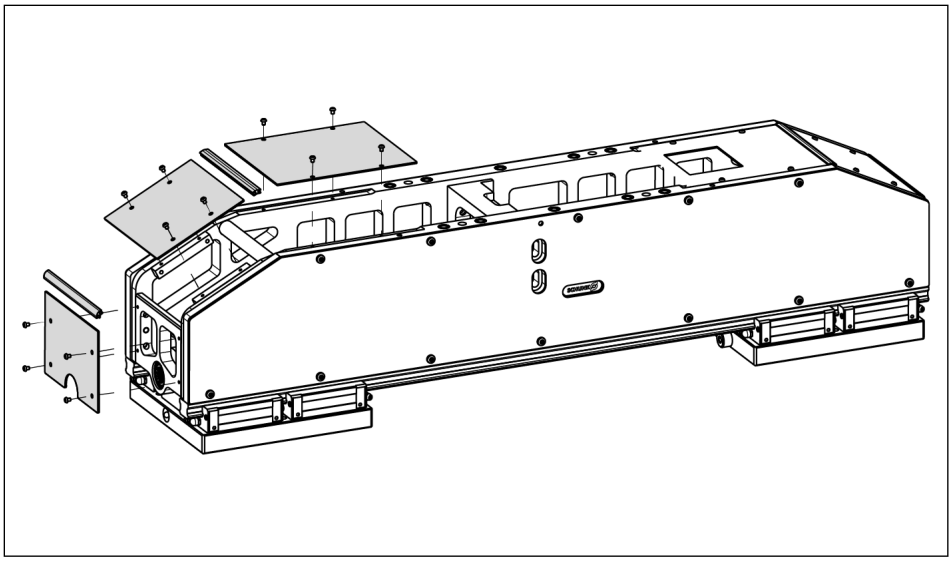
Size	Tightening torque [Nm]
10	4.5
30	9
75	15
120	15

Tab.: Tightening torque of the fitting screws (3)

6.3.4 Mount the covers

NOTE

Cover plates are only available with the cover plate option.



Mount the cover plate

- Position all covers and fasten with screws.

7 Commissioning

⚠ WARNING

Risk of injury due to moving parts!

When moving the gripper fingers, body parts may get squashed/ hit causing severe injuries.

- Only have the product commissioned by specialist personnel.
- Observe position and direction of movement of the gripper fingers.
- In case of a reference loss of the motor/regulator, e.g. after power failure, proceed with particular caution.

NOTICE

Material damage due to excessive gripping force!

Grippers or components can be damaged.

- Use load cell to set the gripping force precisely.

NOTICE

Material damage caused by excessive running speed!

Components might become damaged due to impacts if the workpiece collides or in the end stop.

- Observe maximum permissible running speed, ▶ 3 [🗋 17].
- Observe maximum permissible motor torque.
- In normal operation, avoid moving to the limit stop.

Information on gripping force

- The gripping force is set using the input torque of the motor. Where applicable, the input torque is to be converted into an actuating current.
- A multitude of factors impact the gripping force, for instance impact speed, flexibility and mass of the gripper fingers.
- The "Technical data" chapter contains additional information. ▸ 3 [🗋 17]

Information on running speed

- **Position and size of the workpiece known – prepositioning:** If the position and size of the workpiece is known precisely, the gripper fingers can be moved to a sufficient safety distance to the workpiece with the maximum permitted speed (prepositioning). From this point onwards, the maximum permissible speed must be used for gripping.
- **Position and size of the workpiece not known:** The precise position of the gripping position, e.g. owing to large component tolerances or an inaccurate storage place in the predecessor process, then the complete stroke in the gripping direction has to be traveled at the maximum permissible speed for gripping.

7.1 Commissioning of the position clamping

NOTE

Position clamping is realized by an electric spindle brake.

The brake is only available with the position clamping option (PKL).

Designation	ELG			
	10	30	75	120
Holding brake size	2	2	4	8
Mayr type	891.504.2	891.504.2	891.504.2	891.504.2

- For commissioning, always observe the operating manual for the brake. For more information on the brake, visit **www.mayr.com**.

7.1.1 Position clamping as gripping force maintenance

Achievement of gripping force maintenance through position clamping.

NOTICE

Ensure that the voltage for motor control is available for at least 60 ms after the brake is applied, even in the event of a sudden power supply failure.

NOTE

The degree of gripping force maintenance that can actually be achieved depends on many factors, including the stiffness of the gripper fingers, finger length, gripper length or the position of the base jaws.

However, the degree of maintenance is > 80% of the applied gripping force in all tested cases.

NOTE

In order to be able to determine the application-specific level of maintenance of the gripping force, measurement via a load cell is recommended.

NOTICE

Workpiece loss in the event of a defect in the drivetrain (e.g. belt tear) cannot be reliably prevented by the position clamping if the brake has not already fallen in.

NOTICE

If the attachment brake engages during an emergency stop, for example, while the base jaws are moving, the brake linings will wear prematurely.

8 Troubleshooting

8.1 Product does not move

Possible cause	Corrective action
No jaw movement, motor turns.	Check the belts.
	Check spindle.
Motor not turning over.	Check electrical connection.
	Check the ease of movement of the spindle.
	Check belt tension.
Minimum input torque not reached.	Check the values in the control.
Position reference set incorrectly or lost.	Reference it again.
Direction of the closing / opening movement.	Check specified values.
Wrong motor left in the control unit.	Check the values in the control.
Motor defective.	Check motor and replace if necessary.
Actuation defective.	Check actuation hardware and software.
Component part defective.	Replace component or send it to SCHUNK for repair.

8.2 The gripping force drops

Possible cause	Corrective action
Spindle defective.	Send the product to SCHUNK with a repair order.
Motor defective.	Check motor and replace if necessary.
Min. gripping force maintenance of 80% is not achieved.	Perform cyclic brake test and condition friction pads if necessary. Check motor brake. Position clamping, ▸ 7.1.1 [🗋 35], ▸ 9.1 [🗋 38].

8.3 The product does not travel through the entire stroke

Possible cause	Corrective action
Dirt deposits between basic jaws and guidance.	Disassemble and clean the product.
Component part defective.	Send product with a SCHUNK repair order or dismantle product.

8.4 Product loses gripping position

Possible cause	Corrective action
Screws on the clamping set have come loose.	Retighten screws with appropriate torque, ▶ 6.3.3 [🗋 31].

8.5 Product making noises

Possible cause	Corrective action
Belt tension is too large/small	Check belt tension.
Belt is rubbing against the motor mount or the motor adapter.	Check the position of the belt.
Spindle nut not sufficiently lubricated.	Check spindle lubrication.

If a repair is required, please contact SCHUNK gripping systems service (tel. +49-7133-103-2333, e-mail: service.greifsysteme@de.schunk.com).

9 Maintenance

9.1 Observation of the maintenance and lubrication intervals

Maintenance interval	Maintenance work
0.5 million cycles or every 6 months	Treat all grease areas with lubricant, ▶ 9.2 [🗋 38].
daily	Travel an entire stroke.
regularly	Dry clean all parts thoroughly, check for damage and wear. Remove coarse contamination such as chips and debris. Oil or grease external steel parts.
monthly	Only required with position clamping option (PKL). Perform cyclic brake test, ▶ 9.4.1 [🗋 40].

9.2 Lubricants/Lubrication points (basic lubrication)

⚠ WARNING

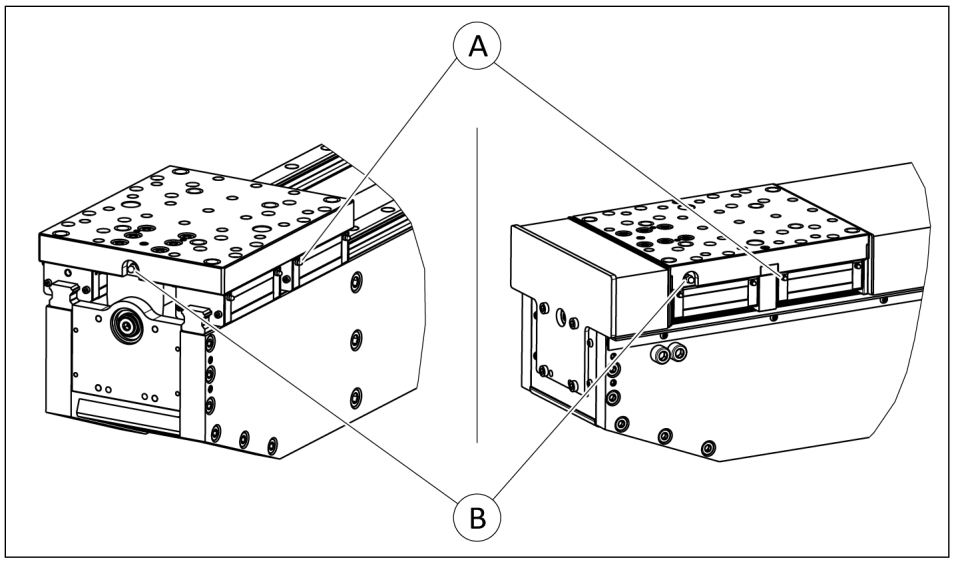
Risk of injury due to contact with lubricants!

Lubricant may cause irritation and allergic reactions if it contacts the skin or eyes.

- Avoid contact between lubricant and skin or eyes.
- Wear safety goggles and protective gloves.
- Observe information on the safety data sheet of the lubricant.

SCHUNK recommends the lubricants listed.

Provably equivalent lubricants can also be used. If different lubricants are used than the recommended ones, a compatibility test must be carried out.



*Lubrication points for each base jaw, **Left**: without bellow, **Right**: Optional bellow*

Item	Lubricant point	Lubricant	Lubrication nipple
A	Linear guide (2x per base jaw)	SCHUNK grease 10	THK PB107 (ELG 10, 30 & 75), THK A-M6F (ELG 120)
B	Spindle (1x per base jaw)	SCHUNK grease 10	Conical lubrication nipple DIN 71412 (SCHUNK ID 9936303)

Details regarding SCHUNK lubricant designations are available at **schunk.com/lubricants**.

The product contains food-compliant lubricants as standard. Components such as rolling bearings, linear guides, or shock absorbers are not provided with food-compliant lubricants.
The requirements of standard EN 1672-2:2020 are not fully met.

Observe the manufacturer's safety data sheets!

9.3 Lubricate product

⚠ WARNING

Risk of injury due to moving parts!

When moving the gripper fingers, body parts may get squashed/ hit causing severe injuries.

- Do not interfere with moving parts during operation.
- Observe position and direction of movement of the gripper fingers.

1. Supply the spindle and linear guide with grease via the grease nipple, ▸ 9.2 [🗋 38].
2. Alternately open and close the gripper completely.

9.4 Servomotor/brake maintenance

The documentation for the respective components contains information on the maintenance work, ▸ 1.1.4 [🗋 6].

9.4.1 Cyclic brake test (position clamping)

A cyclic brake test is required if the application-specific gripping force from the following table is exceeded.

Size	Gripping force [N]
ELG 30	≥ 2300
ELG 75	≥ 4700
ELG 120	≥ 9700

Perform brake test

Load the engaged brake with a 20 % higher drive torque than required in the application.

If there is no jaw movement or spindle rotation, the holding force of the brake is sufficient.

Should the brake spin or jaw movement occur, the friction pads must be conditioned to grind into each other.

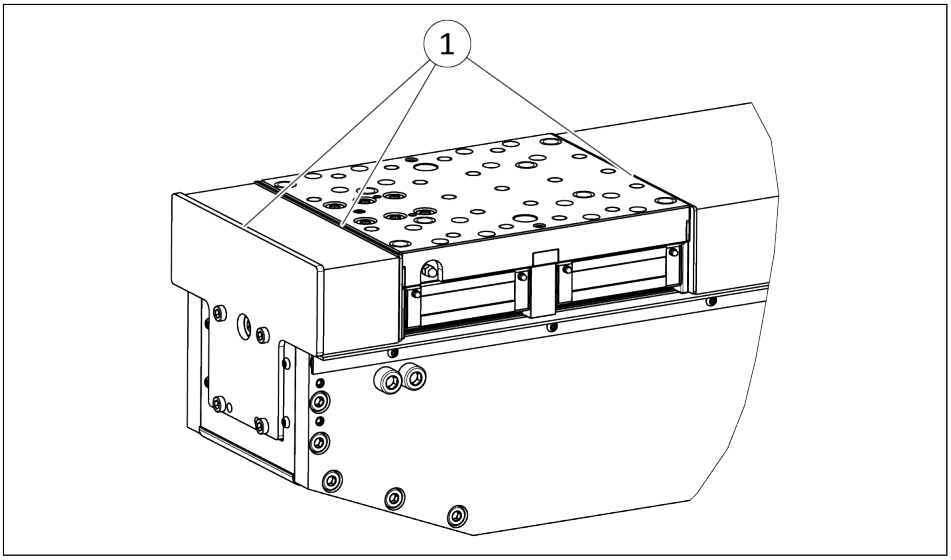
Conditioning the friction pads

1. Load the engaged brake with a spindle torque of approx. 30 % higher than the holding torque of the brake for 10-20 spindle revolutions, ▸ 3 [🗋 17].
2. Allow the brake to cool down and perform another brake test.

9.5 Changing the bellow

NOTE

The bellow is a wearing part.



1. Loosen the Velcro connection (1) and remove the bellow.
2. Check the gripper for dirt and clean if necessary.
3. Insert and fasten the new bellow.

9.6 Repair

Repair by the customer is not provided.

Have all repair work on the product carried out only by SCHUNK Service.

10 Disassembly and disposal

⚠ WARNING

Risk of injury due to unexpected movements!

If the power supply is switched on or residual energy remains in the system, components can move unexpectedly and cause serious injuries.

- Before starting any work on the product: Switch off the power supply and secure against restarting.
- Make sure, that no residual energy remains in the system.

- Disconnect the entire energy supply from the product, discharge any accumulated residual energy.
- Remove any lubricant and dispose of in an environmentally friendly manner.
- Follow local regulations on dispatching product components for recycling or proper disposal.

11 Translation of the original declaration of incorporation

in terms of the Directive 2006/42/EG, Annex II, Part 1 Section B.

Manufacturer/ Distributor	SCHUNK SE & Co. KG Spanntechnik | Greiftechnik | Automatisierungstechnik Bahnhofstr. 106 – 134 D–74348 Lauffen/Neckar

We hereby declare that the partly completed machine described below

Product designation: Configurable electric 2–finger long–stroke gripper / ELG

meets the following basic occupational health and safety of the Machinery Directive 2006/42/EC:

No. 1.1.1, No. 1.1.2, No. 1.1.3, No. 1.1.5, No. 1.3.2, No. 1.5.1, No. 1.5.2; No. 1.5.4, No. 1.5.6, No. 1.5.8, No. 1.5.10, No. 1.5.11, No. 1.5.13

The partly completed machinery may not be put into operation until it has been confirmed that the machine into which the partly completed machinery is to be installed complies with the provisions of the Machinery Directive (2006/42/EC). The declaration shall be rendered invalid if modifications are made to the product.

Applied harmonized standards, especially:

EN ISO 12100:2010	Safety of machinery – General principles for design – Risk assessment and risk reduction

The special technical documentation according to Annex VII, Part B, belonging to the partly completed machine, has been created.

Person authorized to compile the technical documentation:
Stefanie Walter, Address: see manufacturer's address

Signature: see original declaration

Lauffen/Neckar, March 2026

p.p. Jochen Beyl;
Head of Project Management,
Gripping Systems & Handling Solutions

12 UKCA declaration of incorporation

in accordance with the Supply of Machinery (Safety) Regulations 2008.

Manufacturer/ Distributor	SCHUNK Intec Limited Clamping and gripping technology 3 Drakes Mews, Crownhill MK8 0ER Milton Keynes

We hereby declare that on the date of the declaration the following partly completed machine complied with all basic safety and health regulations found in the
"Supply of Machinery (Safety) Regulations 2008".
The declaration shall be rendered invalid if modifications are made to the product.

Product designation: Configurable electric 2-finger long-stroke gripper, ELG

The partly completed machine may not be put into operation until it has been confirmed that the machine into which the partly completed machine is to be installed complies with the provisions of the "Supply of Machinery (Safety) Regulations 2008".

Applied harmonized standards, especially:

EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction

The special technical documentation according to Annex VII, Part B, belonging to the partly completed machine, has been created.

Person authorized to compile the technical documentation:
Marcel Machado, address: refer to manufacturer's address

Lauffen/Neckar, March 2026

p.p. Jochen Beyl;
Head of Project Management, Gripping
Systems & Handling Solutions

13 Information on the RoHS Directive, REACH Regulation and Substances of Very High Concern (SVHC)

RoHS Directive

SCHUNK products are classified as "large-scale stationary installations" or as "large-scale stationary industrial tools" within the meaning of Directive 2011/65/EU and its extension 2015/863/EU "on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)", or fulfill their intended function only as part of one. Therefore products from SCHUNK do not fall within the scope of the directive at this time.

REACH Regulation

Products from SCHUNK fully comply with the regulations of Regulation (EC) No. 1907/2006 "concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)" and its amendment 2022/477. SCHUNK attaches great importance to completely avoiding chemicals of concern to humans and the environment wherever possible.

Only in rare exceptional cases do SCHUNK products contain SVHC substances on the candidate list with a mass content above 0.1%. In accordance with Article. 33 (1) of Regulation (EC) No. 1907/2006, SCHUNK complies with its duty to "communicate information on substances in articles" and lists the components concerned and the substances used in an overview that can be viewed at **schunk.com\SVHC**.

Signature: see original declaration

p.p. Jochen Beyl;
Head of Project Management,
Gripping Systems & Handling Solutions

Lauffen/Neckar, March 2026

SCHUNK SE & Co. KG
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