



INSTALLATION AND OPERATING INSTRUCTIONS

2-jaw parallel gripper

GEP5000

3-jaw concentric gripper

GED5000

I/O

DDOC02456

THE KNOW-HOW FACTORY

Glossary

Term	Explanation
Adjust	Starts the travel routing stored in the product to teach the BasePosition and WorkPosition.
BasePosition	Outer jaw position Depending on the application, this can be the base position or the work position.
DIR	Direction/24 V DC supply line Depending on the product, this signal is used to move the gripper jaws.
GND	Ground/earth
Offset	Correction value
PositionTolerance	Tolerance range for TeachPosition The value of the parameter acts in both directions.
Teach	Adoption of the ActualPosition as the TeachPosition
TeachPosition	Taught-in workpiece position
Traversing routine	Defined procedure for movement of the jaws
Travel path	Path on which the gripper jaws travel.
WorkPosition	Inner jaw position Depending on the application, this can be the standby position or the work position.

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1 Supporting documents

NOTICE



Read through the installation and operating instructions before installing or working with the product.

The installation and operating instructions contain important notes for your personal safety. They must be read and understood by all persons who work with or handle the product during any phase of the product lifetime.



The documents listed below are available for download on our website www.zimmer-group.com.

- Installation and operating instructions
 - Catalogs, drawings, CAD data, performance data
 - Information on accessories
 - Technical data sheets
 - General Terms and Conditions, including warranty information.
- ⇒ Only those documents currently available on the website are valid.

In these installation and operating instructions, "product" refers to the product designation on the title page!

1.1 Notices and graphics in the installation and operating instructions

DANGER



This notice warns of an imminent danger to the life and health of people. Ignoring these notices can lead to serious injury or even death.

► You absolutely must comply with the described measures for avoiding these dangers!

⇒ The warning symbols are assigned according to the type of danger.

WARNING



This notice warns of a situation that is potentially hazardous to personal health. Ignoring these notices can cause serious injury or damage to health.

► You absolutely must comply with the described measures for avoiding these dangers!

⇒ The warning symbols are assigned according to the type of danger.

CAUTION



This notice warns of a situation that is potentially hazardous to persons. Ignoring these notices can cause minor, reversible injuries.

► You absolutely must comply with the described measures for avoiding these dangers!

⇒ The warning symbols are assigned according to the type of danger.

NOTICE



This notice warns of possible material and environmental damage. Ignoring these notices can result in damage to the product or the environment.

► You absolutely must comply with the described measures for avoiding these dangers!

⇒ The warning symbols are assigned according to the type of danger.

INFORMATION



This category contains useful tips for handling the product efficiently. Failure to observe these tips will not result in damage to the product. This information does not include any information relevant to health or workplace safety.

2 Safety notices

CAUTION



Risk of injury and material damage in case of non-compliance

The product is state-of-the-art.

The following are examples of situations in which the product may cause a hazard:

- The product is not properly installed, used or maintained.
- The product is not used for its designated purpose.
- The locally applicable regulations, laws, directives or guidelines are not observed.
- ▶ The product may only be used in accordance with these installation and operating instructions and the product's technical data. Any changes or additions to the intended use of the product, as well as modifications to the product, such as those in the following examples, require the written permission of the manufacturer:
 - Use of the product under extreme conditions, such as aggressive fluids or abrasive dusts
 - Additional drilled holes or threads
- ⇒ Zimmer GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.
- ▶ Make sure that the power supply is disconnected before you mount, adjust, modify, maintain or repair the product.
- ▶ Whenever work is carried out on the product, make sure that the product cannot be actuated by mistake.
- ▶ Perform maintenance tasks, renovation work or attachment work outside of the machine's danger zone when possible.
- ▶ Do not reach into the operational range of the product.
- ▶ Always adhere to the required maintenance intervals.
- ▶ When using the product under extreme conditions, adjust the maintenance interval according to the degree of contamination.
- ▶ Check the completeness and tightening torques of all mounting screws.

CAUTION



Notes and handling regulations for electrostatically sensitive components

Electrostatically sensitive components are individual components, integrated circuits or assemblies that can be damaged by electrostatic fields or electrostatic discharge.

- ▶ When handling electrostatic components, make sure that persons, the work area and packaging are all fully grounded.
- ▶ Touch electronic components only in appropriately identified areas with conductive flooring and only if:
 - You are grounded by means of special bracelets.
 - You wear shoes that are suitable and approved for the discharge of electrostatic charges.
- ▶ Do not bring electronic assemblies into contact with plastics and parts of clothing that have plastic content.
- ▶ Store electronic assemblies on conductive underlays only.
- ▶ Do not install electronic assemblies in the vicinity of data back-up devices or monitors (monitor distance > 100 mm).
- ▶ Perform measurements on electronic assemblies only if:
 - The measuring instrument is grounded (e.g. via a ground conductor).
 - The measuring head is momentarily discharged before measuring with a floating measuring instrument.

3 Proper use

NOTICE



Material damage and malfunction in case of non-compliance

The product is only to be used in its original state with its original accessories, with no unauthorized changes and within the stipulated parameter limits and operating conditions.

Any other or secondary use is deemed improper.

- ▶ Operate the product only in compliance with the associated installation and operating instructions.
 - ▶ Operate the product only when it is in a technical condition that corresponds to the guaranteed parameters and operating conditions.
- ⇒ Zimmer GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

- The product is designed exclusively for electric operation using a 24 V DC power supply.
- The product must always be mounted on materials that dissipate heat.
- The product is intended for industrial use.
- The product is to be used as intended in enclosed rooms for temporary gripping, handling and holding.
- The product is not suitable for clamping workpieces during a machining process.
- Direct contact with perishable goods/food is not permitted.
- The product is not suited for use in a potentially explosive atmosphere.

4 Personnel qualification

WARNING



Inadequate qualification can cause injury and material damage

If inadequately qualified personnel perform work on the product, this can cause serious injuries and significant material damage.

- ▶ All work on the product must be performed by qualified personnel.
- ▶ Before working with the product, read the document in its entirety and make sure that you have understood everything.
- ▶ Observe country-specific accident prevention regulations and the general safety notices.

The following qualifications are a prerequisite for performing various work on the product.

4.1 Electricians

Electricians are able to perform work on electrical systems, can recognize and avoid possible dangers and know the relevant standards and provisions due to their technical training, knowledge and experience.

4.2 Specialists

Specialists are able to perform the assigned work, can recognize and avoid possible dangers and know the relevant standards and provisions due to their technical training, knowledge and experience.

4.3 Instructed personnel

Instructed personnel have been trained by the operating company on the tasks and possible dangers of improper behavior.

4.4 Service personnel

Service personnel are able to perform the assigned work and can recognize and avoid possible dangers due to their technical training, knowledge and experience.

4.5 Additional qualifications

Persons who work with the product must be familiar with the valid safety regulations and laws as well as the standards, guidelines and laws listed in this document.

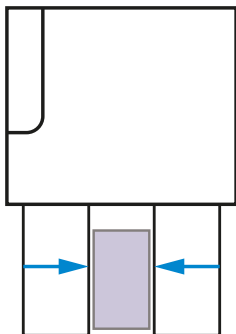
Personnel who work with the product must have facility-issued authorization to commission, program, configure, operate, maintain and also decommission this product.

5 Product description

5.1 Possible applications

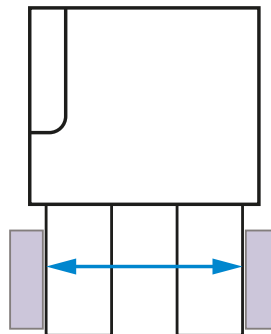
Outside gripping

The product can be used for outside gripping.
MoveToWork command



Inside gripping

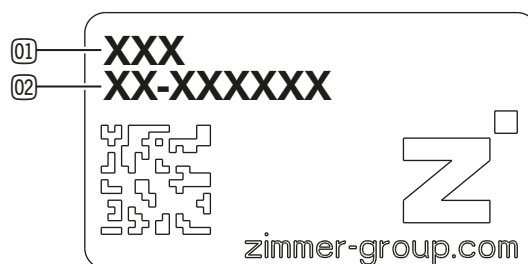
The product can be used for inside gripping.
MoveToBase command



5.2 Type plate

A type plate is attached to the product.

- ① Article number
- ② Confirmation number



6 Functional description

The gripper jaws of the GEP5000 series are arranged parallel to each other on two opposing guide rails and can be moved relative to each other.

The gripper jaws of the GED5000 series are arranged on three guide rails offset to each other at a 120° angle.

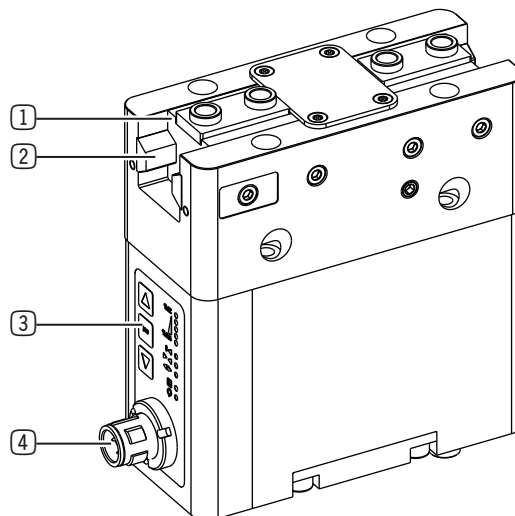
The force of the motor is transmitted over a gear to a worm gear. The movement is transferred from the worm gear to the toothed gripper jaws and a synchronized movement is generated.

Despite their small installation space, these products are suited for gripping a wide range of form-fit and frictional fit parts.

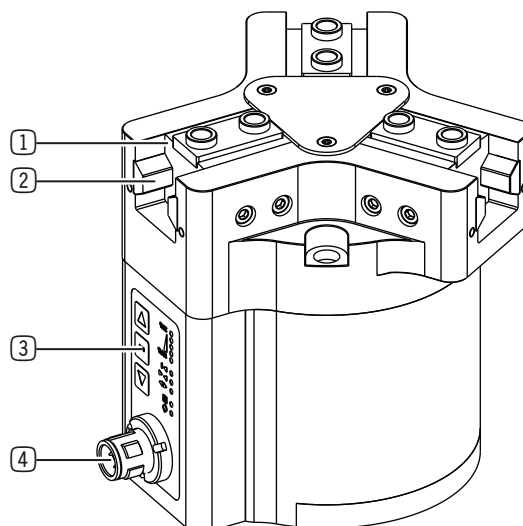
The product has a mechanical self-locking mechanism to ensure that the workpiece remains held in the event of a power supply loss.

The products can be easily integrated into the existing control system.

GEP5000



GED5000

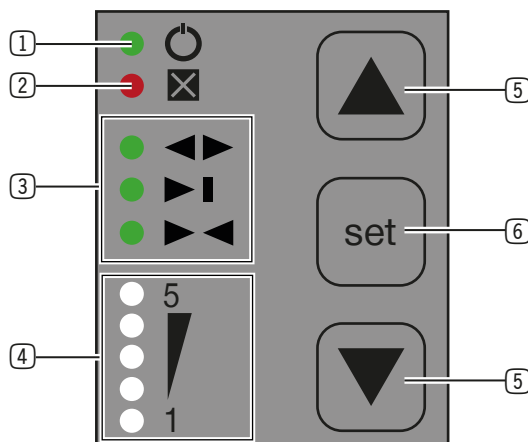


- ① Gripper jaw
- ② Guide rail
- ③ Integrated control module
- ④ Power supply

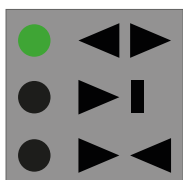
6.1 LED status display

6.1.1 Menu

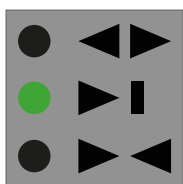
- ① Power supply
- ② Error
- ③ Positions
- ④ Force level/Error code
- ⑤ Button for changing the value
- ⑥ Button for input confirmation



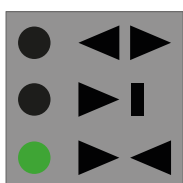
6.1.2 Gripper positions



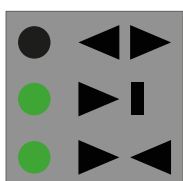
The jaws are at the BasePosition.
The jaws are open.



The jaws are at the TeachPosition.



The jaws are at the WorkPosition.



The jaws are at the TeachPosition.
This simultaneously corresponds to the WorkPosition.
The jaws are closed.

6.2 Verified configuration examples

INFORMATION



- You can find the information in the technical data sheet on our website.
- Please contact Customer Service if you have any questions.

7 Technical data

INFORMATION



- ▶ You can find the information in the technical data sheet on our website.
- ▶ This data varies within the series, depending on the specific design.

8 Accessories/scope of delivery

INFORMATION



- ▶ If any accessories not sold or authorized by Zimmer GmbH are used, the function of the product cannot be guaranteed. Zimmer GmbH accessories are specifically tailored to the individual products.
- ▶ For optional accessories and those included in the scope of delivery, refer to our website.

9 Transportation/storage/preservation

- ▶ Transport and storage of the product must be done only with the original packaging.
- ▶ If the product has already been installed on the superordinate machine unit, care must be taken during transport to ensure that no unexpected movements can occur.
 - ▶ Before commissioning the product and after transport, check all power and communication connections as well as all mechanical connections.
- ▶ If the product is stored for an extended period, the following points are to be observed:
 - ▶ Keep the storage location as dust-free and dry as possible.
 - ▶ Avoid temperature fluctuations.
 - ▶ Avoid wind/drafts/water condensation formation.
 - ▶ Pack the product and do not expose it to direct sunlight during storage.
- ▶ Clean all components. There must be no soiling left on the components.
- ▶ Visually inspect all components.
- ▶ Remove all foreign substances.
- ▶ Properly remove potential corrosion spots.
- ▶ Close electrical connections using suitable covers.

10 Installation

WARNING



Risk of injury due to uncontrolled movements

Risk of injury in case of unexpected movement of the machine or system into which the product is to be installed.

- ▶ Switch off the energy supply of the machine before any work.
- ▶ Secure the power supply against being switched on unintentionally.
- ▶ Check the machine for any residual energy that may be present.

CAUTION



Risk of injury due to uncontrolled movements

Risk of injury in the event of uncontrolled movement of the product when the power supply is connected.

- ▶ Switch off the power supply to the machine before carrying out any work.
- ▶ Secure the power supply against being switched on unintentionally.
- ▶ Check the machine for any residual energy that may be present.

Assembly requirements

Permissible flatness tolerance [mm]	0,03
Strength class of the mounting screws	8.8

INFORMATION



Further installation information:

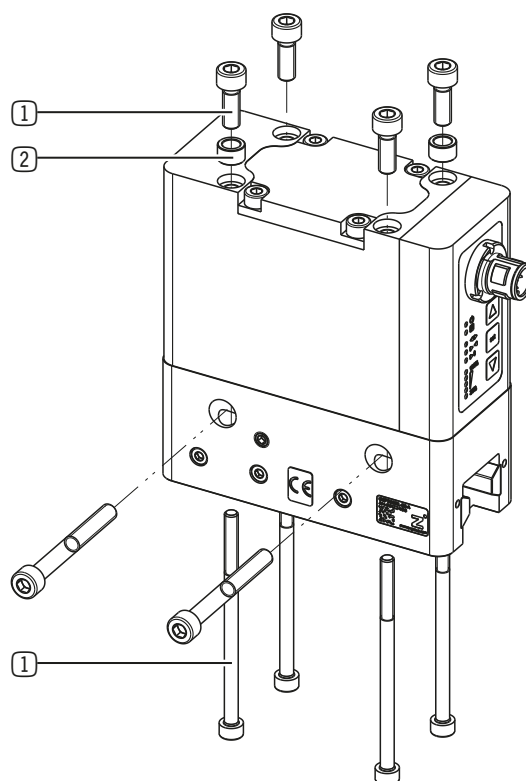
- The mounting screws are not included in the scope of delivery.

- ▶ Install the product on an appropriate mounting surface in accordance with the flatness specifications.
- ▶ Make sure that the mounting piece is sufficiently rigid.
- ▶ Ensure the cleanliness of the connection surfaces.
- ▶ Please note the permitted tightening torques of the mounting screws at www.zimmer-group.com/en/td.

10.1 Installing GEP5000

The product can be installed from multiple sides.

- Insert the centering sleeves into the provided fits on the product.
- Position the product on the mounting piece using centering sleeves.
- Mount the product on the mounting piece using the appropriate mounting screws.

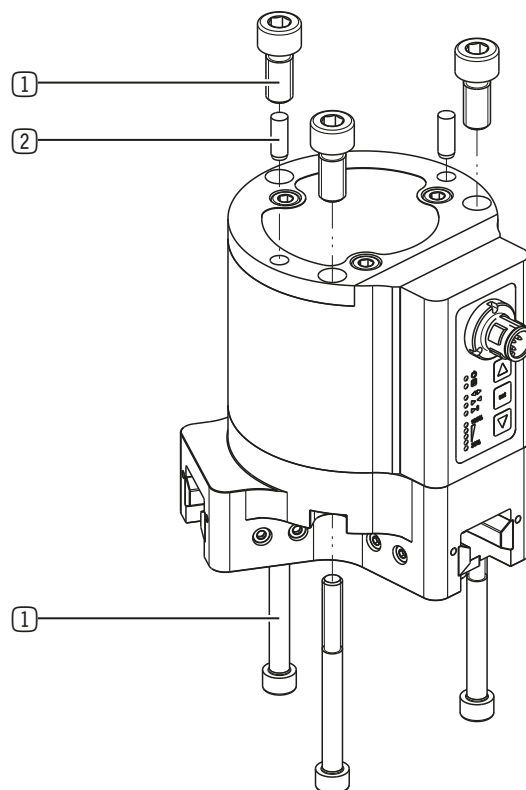


- ① Mounting screw
- ② Centering Disc

10.2 Installing GED5000

The product can be installed from multiple sides.

- Insert the straight pins into the designated fits on the product.
- Position the product on the mounting piece with the straight pins.
- Mount the product on the mounting piece using the appropriate mounting screws.



- ① Mounting screw
- ② Straight pins

10.3 Installing the energy supply

NOTICE

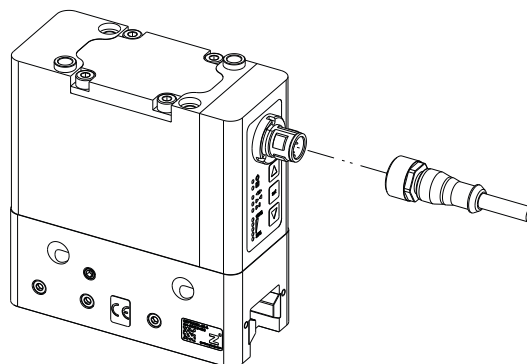


Material damage and malfunction in case of non-compliance

The cable mounted on the product can be subjected to a torsional angle of +50°.

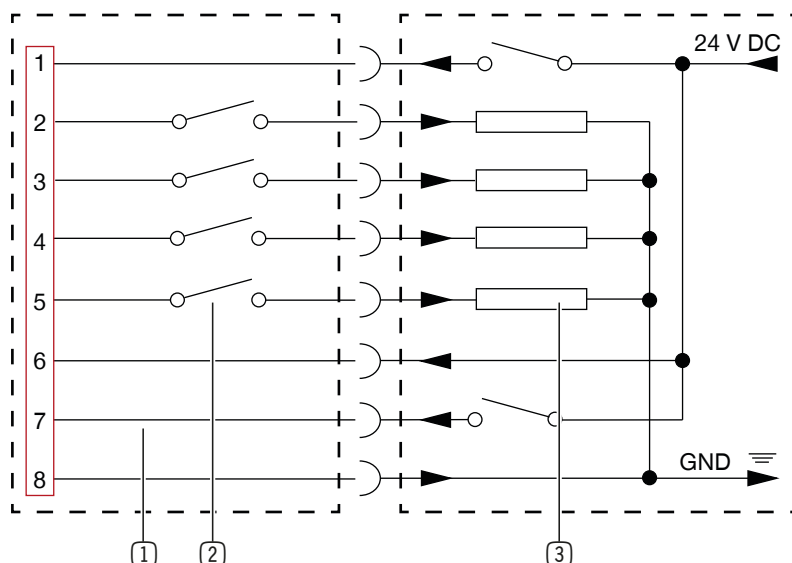
- ▶ Do not route the cable so that it is strained.
- ▶ You must meet the minimum bending radius of 10x the outer diameter.
- ▶ Secure free-hanging cables to prevent excessive motion loads or pinching.
- ▶ The contacts of the energy supply must be dry, clean and undamaged at all times.

- ▶ Connect the power supply cable to the control system of the product.



Pin	Color	Function	Explanation	Plug, M12
1	White	DIR	Product control input, open/close	
2	Brown	WorkPosition	WorkPosition confirmation	
3	Green	Error	Fault confirmation	
4	Yellow	TeachPosition	TeachPosition confirmation	
5	Gray	BasePosition	BasePosition confirmation	
6	Pink	PWR	24 V DC supply voltage	
7	Blue	Teach/Adjust	Workpiece programming control input	
8	Red	GND	0 V DC supply voltage	

- ▶ Reconnect the voltage supply.
- A voltage supply between pin 6 and pin 8 is necessary for operation.
- ⇒ A jaw movement is triggered by a voltage level to Pin 1.



- ① Product
- ② Position sensing at sensors
- ③ External control and programming unit

10.4 Static charge

NOTICE



Material damage from static charge

The movement of the gripper jaws creates low voltages as a result of static charging. These charges cannot be dissipated if the product is mounted on an insulating surface and if discharge is also not possible through the workpiece.

- ▶ Please note that ESD-sensitive parts can be damaged if they come into contact with the product.
- ▶ Ground the product for applications that require high EMC resistance.

10.5 Heat dissipation

NOTICE



Material damage from overheating of the product

If the product is operated under a very high ambient temperature and with fast clock cycles on an ongoing basis, this can reduce its service life.

- ▶ If the product is exposed to high ambient temperatures, always install it on heat-conducting materials.
- ▶ Reduce the load with increasing temperature.

10.6 Installing accessories

NOTICE



Non-compliance may result in material damage.

- ▶ Before installing an accessory, make sure it is suitable for use with the selected variant.
- ▶ You can find information on our website.
- ▶ Please contact Customer Service if you have any questions.

11 Commissioning

WARNING



Risk of injury from crushing

Injuries can be caused by crushing and clamping during the gripping process on the product or between the product and the workpiece.

- ▶ Do not reach into the operational range of the product.
- ▶ Make sure that there are no parts of the body in the range of movement of the product!

CAUTION



Risk of injury from impact

When the gripper jaws are opening, there is a risk of impact in the guide area.

- ▶ Always keep an adequate safety distance.

CAUTION



Reduction of the gripping force can cause injury and material damage

When flexible components are gripped, the gripping force of the product is reduced.

Reduced gripping force can cause injuries or material damage because the components can no longer be securely gripped and transported.

- ▶ Do not stand or walk underneath suspended loads.

NOTICE



Malfunction in case of non-compliance

- ▶ Note the correct setting of the gripping force and the selection of the gripper finger length to prevent the gripper jaws from tensioning.

11.1 Switching sequence

CAUTION



Risk of injury due to uncontrolled movements

When the energy supply is switched on again, this can lead to uncontrolled movements of the gripper jaws if there is an incorrect signal at the DIR input.

- Always keep an adequate safety distance.

NOTICE



- Please note that the travel movement cannot be canceled by the software.

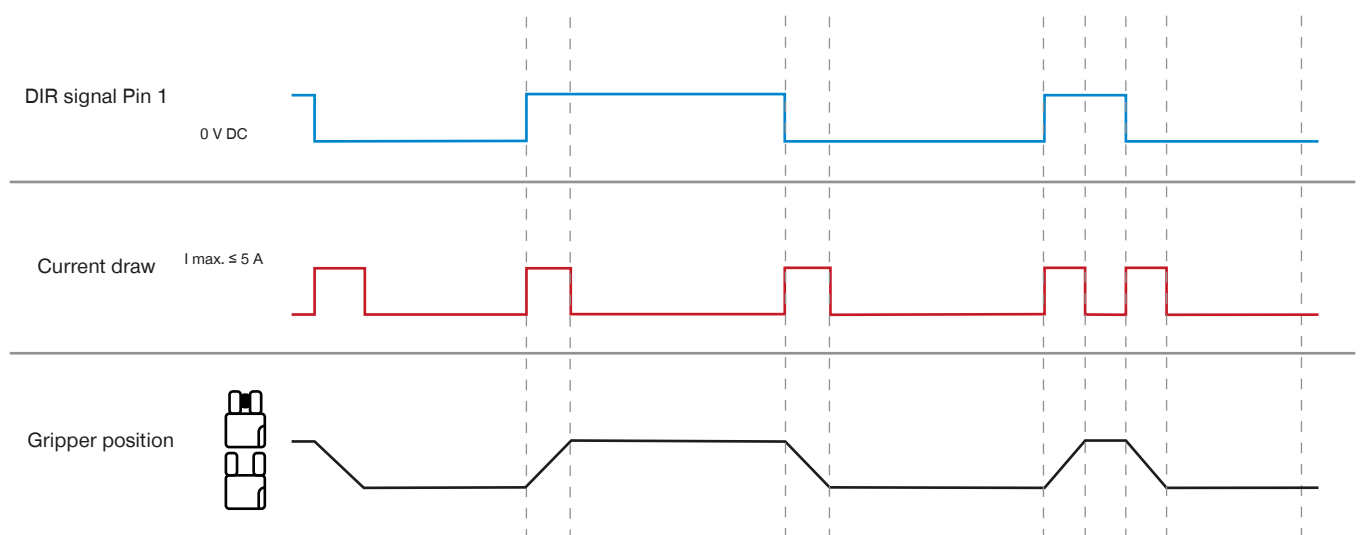
⇒ The travel can be stopped by a workpiece or the mechanical end positions of the product.

INFORMATION



If the energy supply is lost, the workpiece is stopped by the self-locking mechanism of the product.

A movement in the desired direction occurs when the corresponding signal is at a high level. The signal must then be stopped at the corresponding level.



11.1.1 Switching sequence for teaching in the TeachPosition

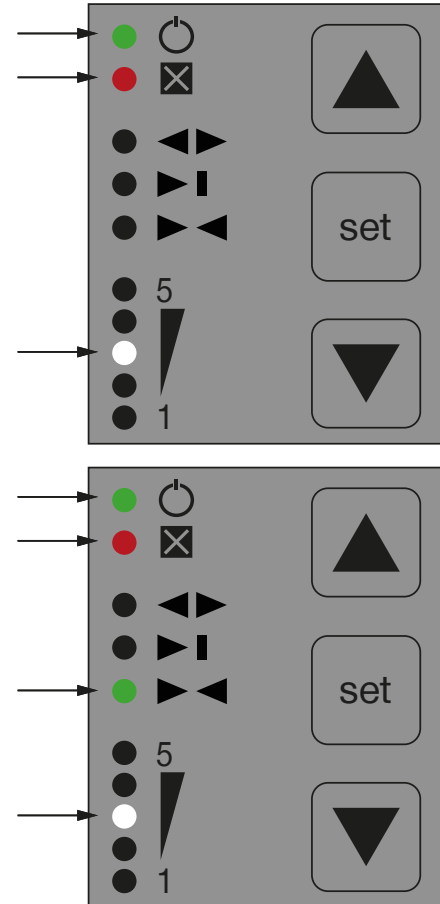
INFORMATION



- Please note that the error display lights up during initial commissioning.

- Position the gripper jaws at the desired position.
 - Example: Insert a workpiece to be gripped.
- Close the product by sending a signal to pin 1.
- ⇒ The following LED displays light up when traveling to the workpiece:
 - Power supply
 - Error
 - Force level

- Send a signal to the pin 7 control input for 0.5 - 3 seconds.
- ⇒ The TeachPosition lights up green in the position display.



11.1.2 Switching sequence for teaching in the end position

NOTICE



Non-compliance may result in material damage.

- Make sure that the DIR signal is not interrupted during the travel routing.
- ⇒ Otherwise, the process must be repeated because the end position cannot be correctly determined.

INFORMATION



The end positions are preset by the manufacturer.

- Please note that the end positions must be taught without gripper fingers and the workpiece in order to restore the factory settings.

- Make sure that a 0 is set at Pin 1.
- Make sure that an input signal is switched at Pin 7 for at least 15 seconds.
- ⇒ The product opens and closes several times and stops the process automatically after 5 gripping cycles.
- ⇒ The end positions are confirmed by means of outputs Pin 2 and Pin 5.
- ⇒ The LED display lights up green.

11.2 Cold start

CAUTION



Risk of injury due to uncontrolled movements

When the energy supply is switched on again, this can lead to uncontrolled movements of the gripper jaws if there is an incorrect signal at the DIR input.

- Always keep an adequate safety distance.

INFORMATION



The sensor and actuator power supply are not separate. The product is operational and can perform a motion task via Pin 1 when the energy supply is connected via Pin 6.

Variant	Position	DIR signal Pin 1	Action
1	BasePosition	0 V DC	No movement The move command towards the WorkPosition direction is activated by applying 24 V to Pin 1.
2	BasePosition	24 V DC	No movement To trigger a move command, 0 V must first be applied to Pin 1 and then 24 V.
3	WorkPosition	0 V DC	The product moves to the BasePosition.
4	WorkPosition	24 V DC	No movement The move command towards the BasePosition direction is activated by applying 0 V to Pin 1.

11.3 Minimum travel path

INFORMATION



The minimum travel path applies to both directions of movement and is independent of the start position. The product moves slightly past the front and rear end position. The value shown on the LED display corresponds to the end position.

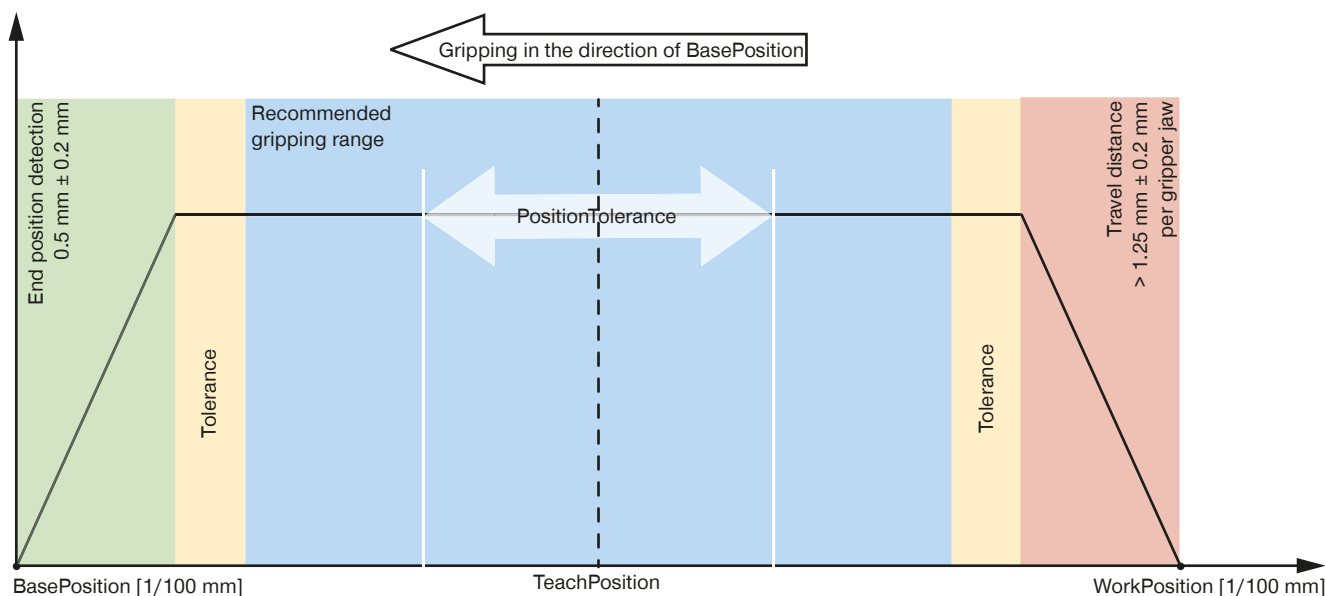
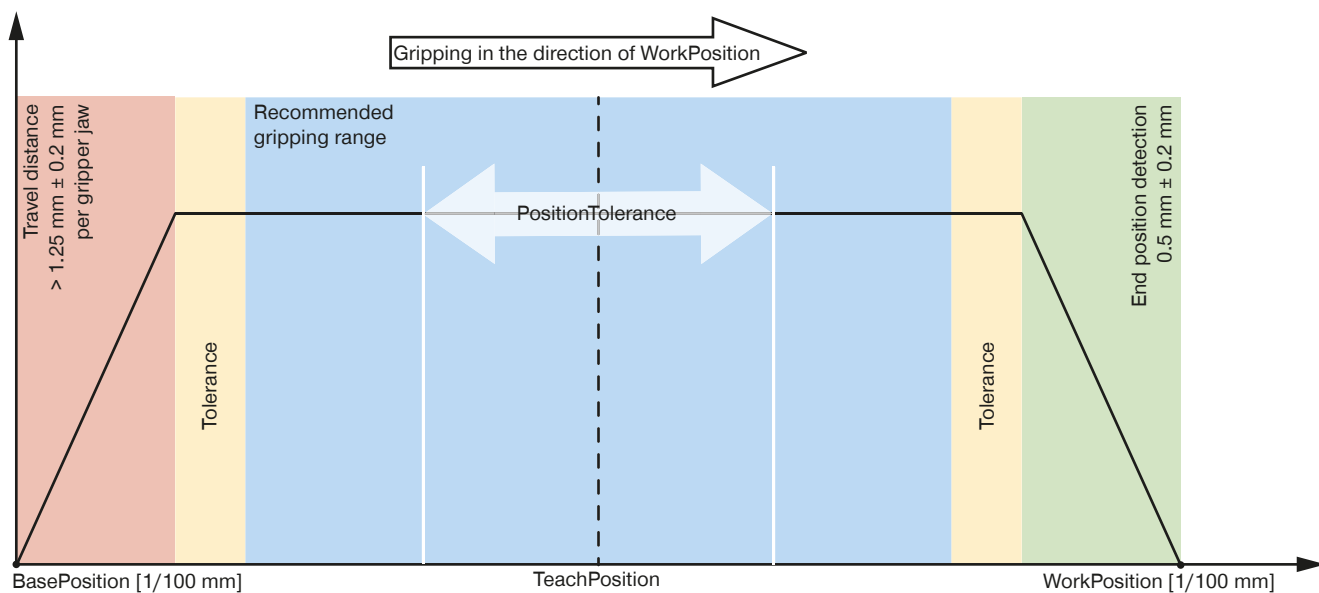
The product requires a certain minimum travel path to move to the desired position.

INFORMATION



- You can find the information in the technical data sheet on our website.
- Please contact Customer Service if you have any questions.

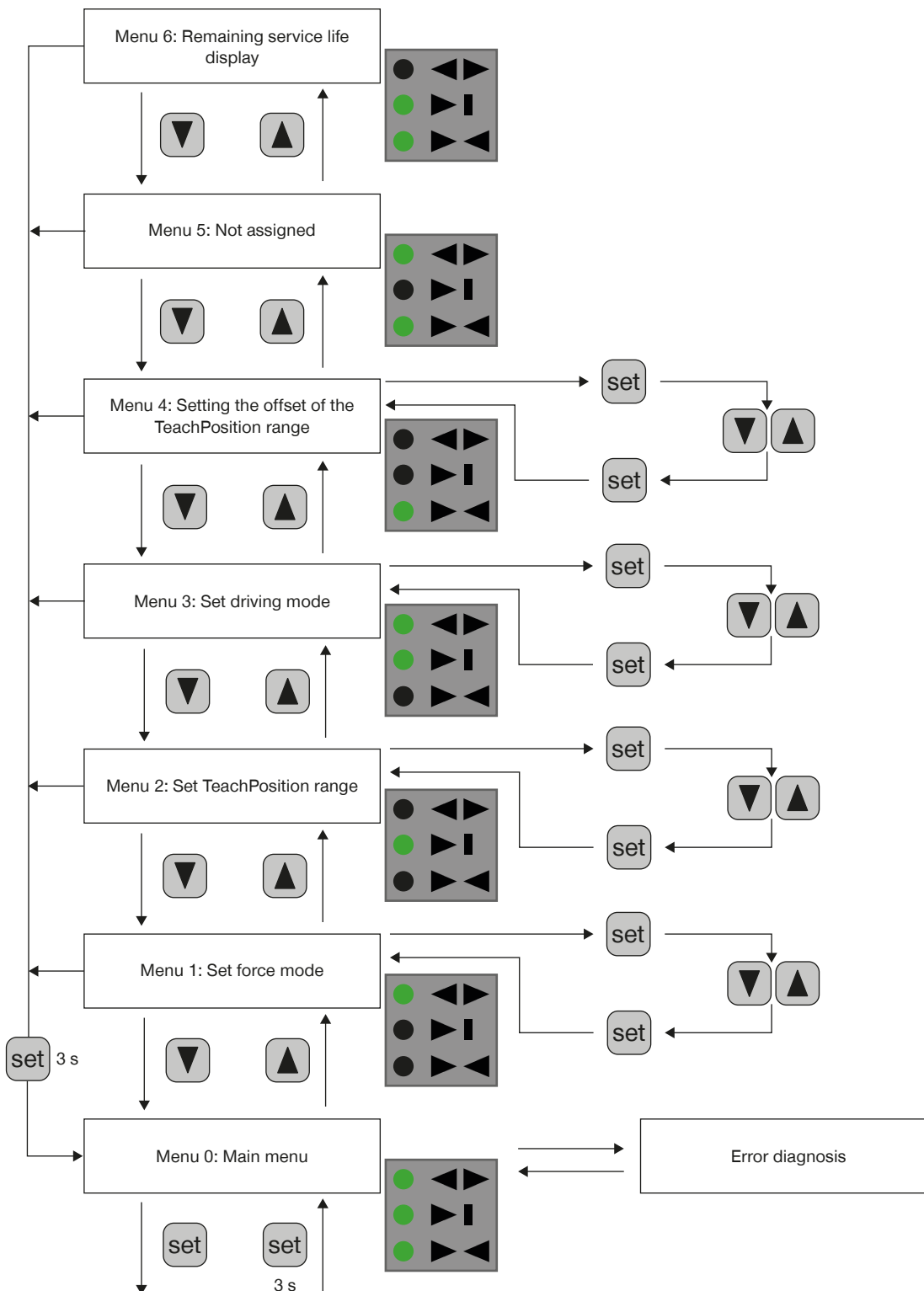
11.4 Movement profiles



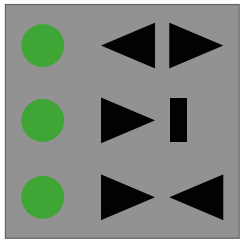
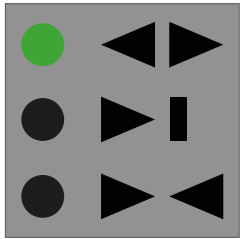
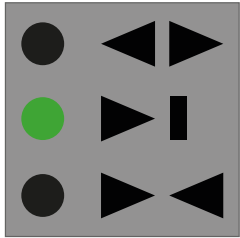
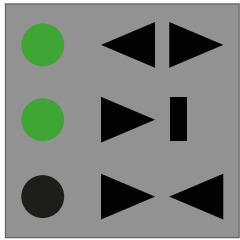
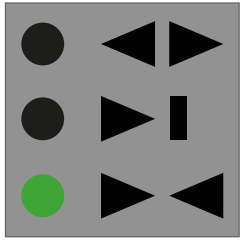
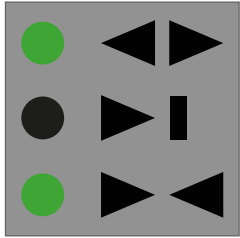
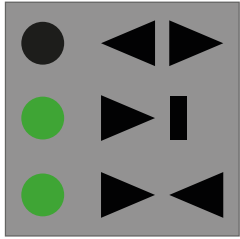
Design size	Calculation	Recommended working stroke [mm]
GEP5006/GED5006	12 mm - value of end position - value of travel distance	8.6
GEP5008/GED5008	16 mm - value of end position - value of travel distance	12.6
GEP5010/GED5010	20 mm - value of end position - value of travel distance	16.6

12 Operation

12.1 Menu structure



12.2 Menu function

Menu 0: Main menu	Error codes are displayed in the main menu.	
Menu 1: Set force mode	Setting for the gripping force and travel speed in 5 stages: <ul style="list-style-type: none"> • 1 = Low gripping force/low travel speed • 5 = High gripping force/high travel speed • Default value: 3 	
Menu 2: Set TeachPosition range	Setting the TeachPosition window width in 5 stages: <ul style="list-style-type: none"> • 1 = Narrow window width • 5 = Wide window width • Default value: 3 	
Menu 3: Set driving mode	<ul style="list-style-type: none"> • 1 = Universal operation • 2 = Inside gripping • 3 = Outside gripping • Default value: 1 	
Menu 4: Setting the offset of the TeachPosition range	Offset of the TeachPosition range: <ul style="list-style-type: none"> • 1 = Large offset in the direction of the BasePosition • 2 = Small offset in the direction of the BasePosition • 3 = No offset • 4 = Small offset in the direction of the WorkPosition • 5 = Large offset in the direction of the WorkPosition • Default value: 3 	
Menu 5: Not assigned	-	
Menu 6: Remaining service life display	The LED display for the remaining service life is based on 30 million cycles: <ul style="list-style-type: none"> • 1 = Low remaining service life (< 2 million cycles) • 5 = High remaining service life 	

12.2.1 Menu 2: Set TeachPosition range

PositionTolerance	Window width [mm]
1	± 0.1
2	± 0.2
3	± 0.3
4	± 0.6
5	± 1.2

12.2.2 Menu 4: Setting the offset of the TeachPosition range

Offset	Offset [mm]
1	- 0.8
2	- 0.4
3	0
4	0.4
5	0.8

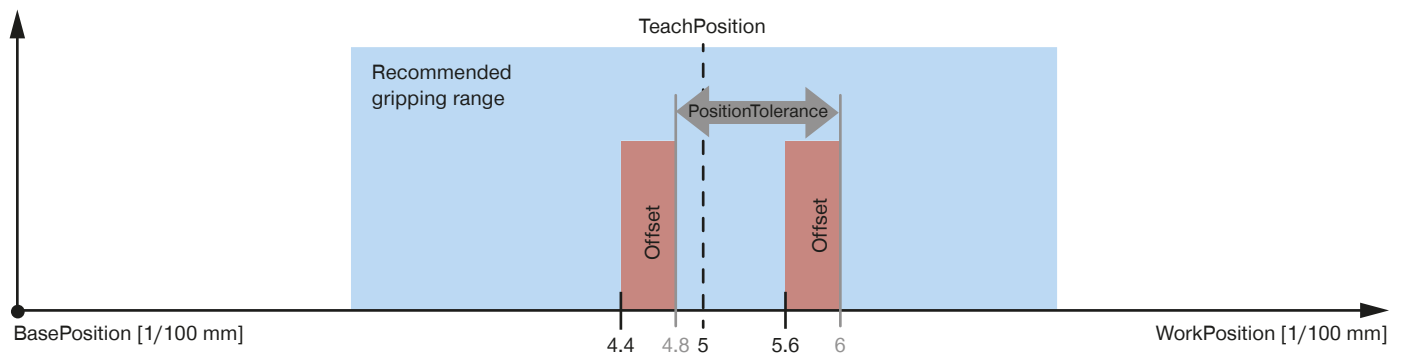
INFORMATION



Example:

For TeachPosition 500 (5.00 mm), you can configure a window width of 60 (0.6 mm) in both directions with window width 4 and offset 4. Because of the offset, there is also a shift of 40 (0.4 mm).

This means that workpiece detection starts at 480 (4.80 mm) and goes all the way up to 600 (6.00 mm).



12.3 Operate menu

CAUTION



Risk of injury and material damage in case of non-compliance

- ▶ Please note that the product does not travel against a fixed end stop during the fast backwards movement because otherwise the permitted load would be exceeded.

NOTICE



- ▶ Use force setting 2 or 3 for the defined gripping direction.
- ⇒ The entire gripping cycle accelerates due to the shorter return time for the gripper jaws. As a result, it is possible to operate the product in a manner that is easy on both the electronics and the mechanical components.

INFORMATION



- ⇒ If no input occurs after 3 minutes, the menu window closes without saving.

- ▶ Press the **set** button for 3 seconds.
- ⇒ The edit mode is activated when the LED display of the main menu flashes.
- ▶ Press the **set** button.
- ⇒ This activates the parameter selection and the LED display flashes.
- ▶ Select a value between 1 and 5 using the ▼▲ buttons.
- ▶ Press the **set** button.
- ⇒ The selection has been saved.
- ⇒ The main menu opens.
- ⇒ The LED display flashes.
- ▶ Navigate by pressing the ▼▲ buttons.
- ▶ Press the **set** button.
- ⇒ The main menu is closed.
- ⇒ The LED display goes out.

13 Gripping force charts

INFORMATION



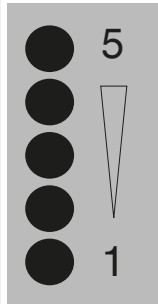
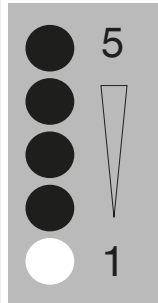
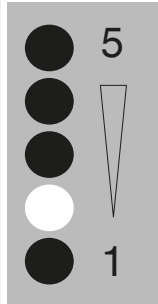
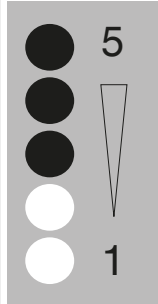
- ▶ You can find information on our website.
- ▶ Please contact Customer Service if you have any questions.

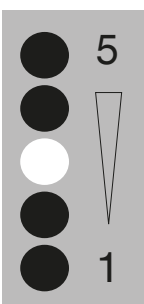
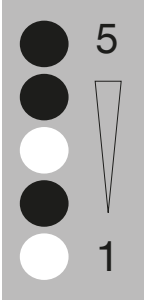
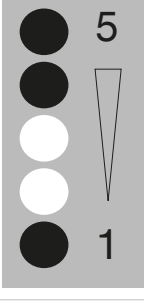
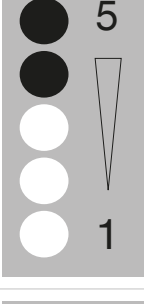
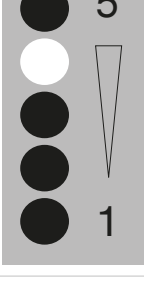
14 Error diagnosis

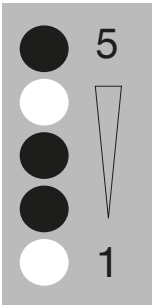
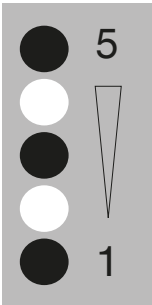
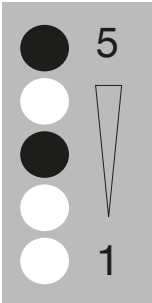
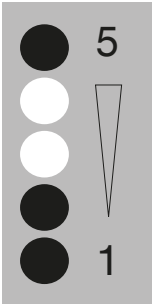
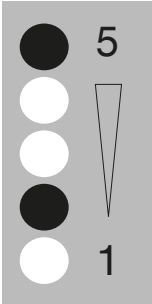
INFORMATION

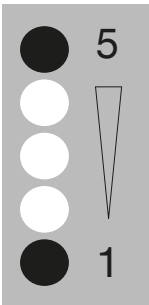
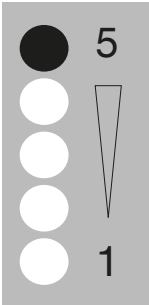
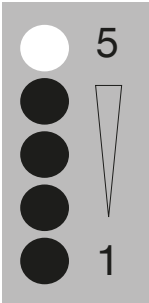
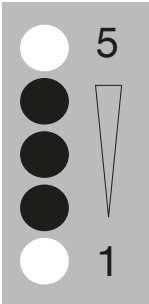
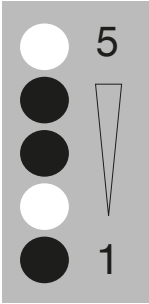


Errors remain active until the DIR signal is switched or a restart takes place.

Error code	Error/condition	Possible cause	Measure
	Device is ready for operation.	-	-
	The motor has excess current in multiple consecutively following cycles.	<ul style="list-style-type: none"> Gripper jaws are blocked. Guide moves with difficulty. Gripping material or gripper jaws are elastic. 	<ul style="list-style-type: none"> ▶ Ensure that the product can move freely. ▶ Check the gripped material and the gripper jaws.
	The motor has excess current.	<ul style="list-style-type: none"> Gripper jaws are blocked. 	<ul style="list-style-type: none"> ▶ Ensure that the product can move freely. ▶ Please contact Customer Service.
	The motor has excess current in idle mode.	<ul style="list-style-type: none"> Internal error 	<ul style="list-style-type: none"> ▶ Please contact Customer Service.

Error code	Error/condition	Possible cause	Measure
	Max. permitted temperature undershot	<ul style="list-style-type: none"> Ambient temperature is too high Overload of the product 	<ul style="list-style-type: none"> ► Ensure improved cooling of the product. ► Make sure that the product moves freely.
	Internal error	<ul style="list-style-type: none"> Product is in reference run. 	<ul style="list-style-type: none"> ► Please contact Customer Service.
	Erroneous reference position	<ul style="list-style-type: none"> Product does not have any reference position. 	<ul style="list-style-type: none"> ► Please contact Customer Service.
	The product is in the setting run.	<ul style="list-style-type: none"> Setting run was started. The positions cannot be evaluated during the setting run. 	<ul style="list-style-type: none"> ► Wait until the end of the setting run.
	Position implausible	<ul style="list-style-type: none"> The product does not reach the end position (BasePosition, WorkPosition, TeachPosition). 	<ul style="list-style-type: none"> ► Check the object being gripped. ► Check the gripper fingers.

Error code	Error/condition	Possible cause	Measure
	The product does not achieve the target speed when moving.	<ul style="list-style-type: none"> Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Ensure that the product can move freely. ► Please contact Customer Service.
	Position sensor error	<ul style="list-style-type: none"> Internal error 	<ul style="list-style-type: none"> ► Please contact Customer Service.
	Motor temperature too high	<ul style="list-style-type: none"> Ambient temperature is too high Overload of the product 	<ul style="list-style-type: none"> ► Ensure improved cooling of the product. ► Make sure that the product moves freely.
	System error	<ul style="list-style-type: none"> Internal system error 	<ul style="list-style-type: none"> ► Please contact Customer Service.
	DIR signal = 0: The product does not reach the BasePosition or TeachPosition.	<ul style="list-style-type: none"> Gripper jaws are blocked. Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Ensure that the product can move freely. ► Please contact Customer Service.

Error code	Error/condition	Possible cause	Measure
	DIR signal = 1: The product does not reach the WorkPosition or TeachPosition.	<ul style="list-style-type: none"> Gripper jaws are blocked. Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Ensure that the product can move freely. ► Please contact Customer Service.
	The product is blocked.	<ul style="list-style-type: none"> Gripper jaws are blocked. Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Ensure that the product can move freely. ► Please contact Customer Service.
	The product has exceeded the maximum travel time.	<ul style="list-style-type: none"> Gripper jaws are blocked. Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Ensure that the product can move freely. ► Please contact Customer Service.
	The product does not achieve the target speed when moving.	<ul style="list-style-type: none"> Guide moves with difficulty. 	<ul style="list-style-type: none"> ► Please contact Customer Service.
	The product is in NC or NO mode and is blocked from free travel.	<ul style="list-style-type: none"> Guide moves with difficulty. The product moves to a fixed stop during the return movement. 	<ul style="list-style-type: none"> ► Change the travel mode. ► Please contact Zimmer Customer Service.

15 Maintenance

NOTICE



Material damage resulting from blowing out with compressed air

Blowing out the product with compressed air can cause malfunctions.

- ▶ Never purge the product with compressed air.

NOTICE



Material damage caused by unsuitable cleaning materials

Liquid and solvent-based cleaning agents can cause malfunctions.

- ▶ Do not clean the product with any cleaning agents that are liquid or contain solvents.

NOTICE



Contamination of the environment due to escaping lubricants

Lubricants can escape through moving machine parts. This can lead to contamination of the machine, the workpiece and the environment.

- ▶ Remove leaking lubricant immediately and thoroughly.

Maintenance-free operation of the product is guaranteed for up to **30 million cycles**.

- ▶ Note that the product could become damaged under the following circumstances:
 - Dirty environment
 - Improper use and use that does not comply with the performance data
 - Permissible temperature range not observed
 - ▶ Even though the product is maintenance-free as mentioned above, perform a regular visual inspection to check for any damage or contamination.
 - ▶ Have maintenance work that requires disassembly of the product performed by customer service only.
- ⇒ Dismantling and reassembling the product without authorization may result in complications, as special installation equipment is required in some cases. Zimmer GmbH accepts no liability for any resulting malfunctions or damage.

16 Decommissioning/disposal

INFORMATION



When the product reaches the end of its operational phase, it can be completely disassembled and disposed of.

- ▶ Disconnect the product completely from the power supply.
- ▶ Dispose of the components properly according to the material groups.
- ▶ Comply with the locally applicable environmental and disposal regulations.

17 RoHS declaration

in terms of the EU Regulation 2011/65/EU

Name and address of the manufacturer:

Zimmer GmbH



Im Salmenkopf

77866 Rheinau, Germany



+49 7844 9138 0



info@zimmer-group.com



www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: 2-jaw parallel gripper, 3-jaw concentric gripper

Type designation: GEP5000, GED5000

conforms to the requirements of the directive in its design and the version we put on the market.

Michael Hoch

Authorized representative for the
compilation of relevant technical
documents

Rheinau, Germany, 2020-11-15

(Place and date of issuance)

Martin Zimmer
(Legally binding signature)
Managing Partner

18 Declaration of Incorporation

In terms of the EU Machinery Directive 2006/42/EC (Annex II 1 B)

Name and address of the manufacturer:

Zimmer GmbH



Im Salmenkopf

77866 Rheinau, Germany



+49 7844 9138 0



info@zimmer-group.com



www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: 2-jaw parallel gripper, 3-jaw concentric gripper

Type designation: GEP5000, GED5000

conforms to the requirements of the Machinery Directive, 2006/42/EC, Article 2g, Annex VII, b – Annex II, b, in its design and the version we put on the market.

We hereby confirm that all the relevant basic health and safety requirements for the product have been observed and implemented.

A full list of applied standards can be obtained from the manufacturer.

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with electronic versions of special documents for the incomplete machine through our documentation department, should they have reason to request them.

The incomplete machine may only be commissioned if it has been ascertained, if applicable, that the machine or system in which the incomplete machine is to be installed satisfies the requirements of Directive 2006/42/EC on Machinery and an EC Declaration of Conformity has been drawn up in accordance with Annex II 1 A.

Kurt Ross

Authorized representative for the
compilation of relevant technical
documents

Rheinau, Germany, 2021-05-01

(Place and date of issuance)

Martin Zimmer
(Legally binding signature)
Managing Partner

19 Declaration of Conformity

As defined by the EC Directive 2014/30/EU on electromagnetic compatibility

Name and address of the manufacturer:

Zimmer GmbH

 Im Salmenkopf
 77866 Rheinau, Germany
 +49 7844 9138 0
 info@zimmer-group.com
 www.zimmer-group.com

We hereby declare that the product described below

Product designation: 2-jaw parallel gripper, 3-jaw concentric gripper
Type designation: GEP5000, GED5000

conforms to the requirements of the Electromagnetic Compatibility Directive 2014/30/EU in its design and the version we put on the market.

The following harmonized standards have been used:

DIN EN ISO 12100	Safety of machinery - General principles for design - Risk assessment and risk reduction
DIN EN 61000-6-3	EMC Generic standard, Emission standard for residential, commercial and light-industrial
DIN EN 61000-6-2	EMC Generic standard, Emission standard for industrial environments
DIN EN 61000-6-4	EMC Generic standard, Immunity for industrial environments

A full list of applied standards can be obtained from the manufacturer.

Kurt Ross

Authorized representative for the compilation of relevant technical documents

Rheinau, Germany, 2021-05-01

(Place and date of issuance)



Martin Zimmer
 (Legally binding signature)
 Managing Partner