



INSTALLATION AND OPERATING INSTRUCTIONS

Adjustment jaws

EB5000 series

DDOC00206

THE KNOW-HOW FACTORY

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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 for people or that may result in material or environmental damage. Ignoring these notices may result in slight, temporary injuries or damage to the product or to 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.

NOTICE



General notices contain usage tips and valuable information, but no warnings of dangers to health.

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

Installation, commissioning, maintenance and repairs may only be performed by qualified specialists in accordance with these installation and operating instructions.

The product is state-of-the-art.

It is fitted to industrial machines and is used to adapt gripper fingers to various tools.

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.
- ▶ Observe the specified maintenance intervals and specifications regarding the quality of the operating material.
- ▶ When using the product under extreme conditions, adjust the maintenance interval according to the degree of contamination.

3 Proper use

NOTICE



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 operation with series GEP5000, GED5000, GPP5000, GPD5000 and GPW5000.

The product is not suitable for clamping workpieces during a machining process.

The product is to be used as intended in enclosed rooms for temporary gripping, handling and holding.

Direct contact with perishable goods/food is not permitted.

4 Personnel qualification

Installation, commissioning and maintenance may only be performed by trained specialists. These persons must have read and understood the installation and operating instructions in full.

5 Product description

CAUTION



Reduction of the gripping force can cause personal injury and material damage

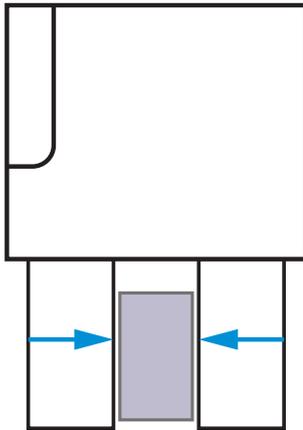
When flexible components are gripped, the gripping force of the product is reduced.

Reduced gripping force can lead to personal injury or material damage, because the components that are being gripped can no longer be securely gripped and transported.

5.1 Possible applications

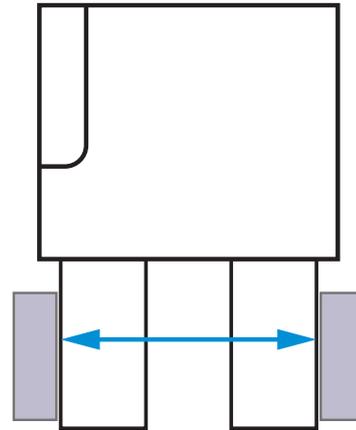
Outside gripping

The product can be used for outside gripping.
MoveToWork command



Inside gripping

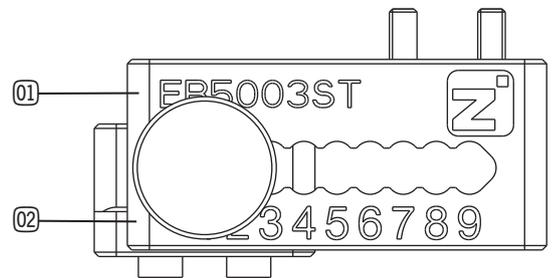
The product can be used for inside gripping.
MoveToBase command



5.2 Type plate

A type plate, as a laser engraving, is affixed to the housing of the product.

The article number and confirmation number are shown on the type plate.



① Article number

② Confirmation number

INFORMATION



Please state the serial number in the event of damage or a complaint.

► Please contact Zimmer Customer Service if you have any questions.

INFORMATION



The product can be installed on series GEP5000, GED5000, GPP5000, GPD5000 and GPW5000 and combined with the respective accessories.

The product is available in steel ST and aluminum AL versions.

6 Functional description

The product is designed exclusively for operation with series GEP5000, GED5000, GPP5000, GPD5000 and GPW5000.

WARNING



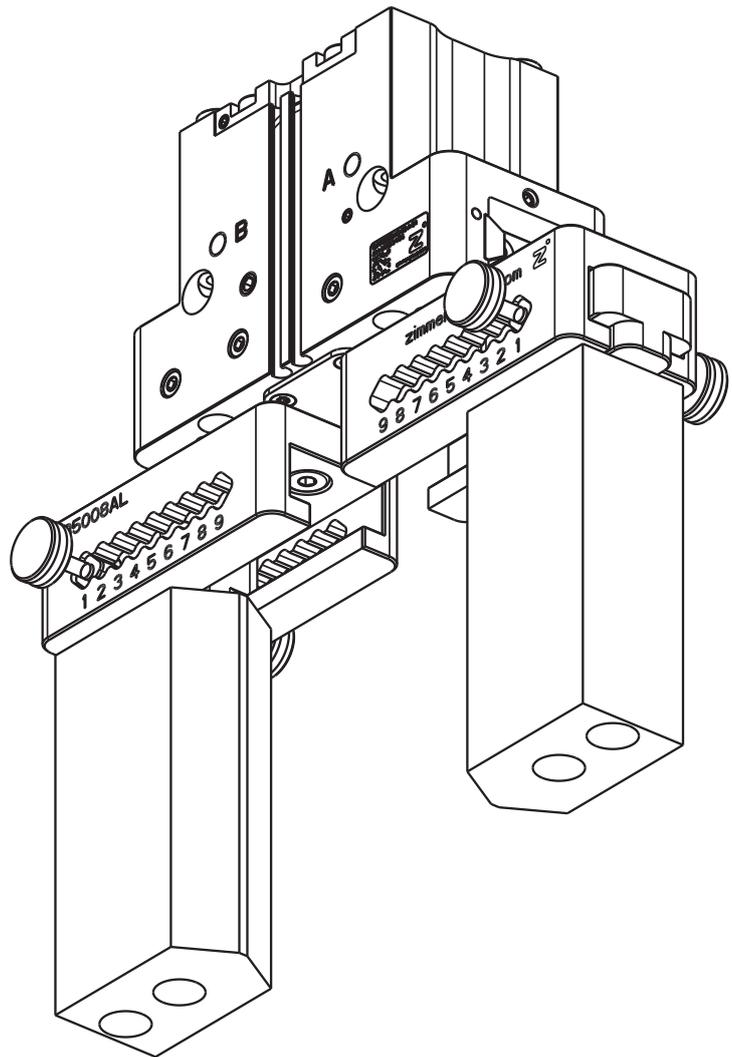
Risk of injury from crushing

For the 3-jaw gripper, a crushing hazard point can result during the gripping movement between the vertical edges of the gripper fingers.

- ▶ Make sure that there are no parts of the body in the range of movement of the product!
- ▶ Only permit installation, maintenance and servicing work to be carried out by trained personnel.
- ▶ Do installation, maintenance and servicing work in manual jog mode only.

Workpiece-specific gripper fingers can be mounted to the adjustment jaws.

The illustration shows an example of installed gripper fingers on the GPP5000.

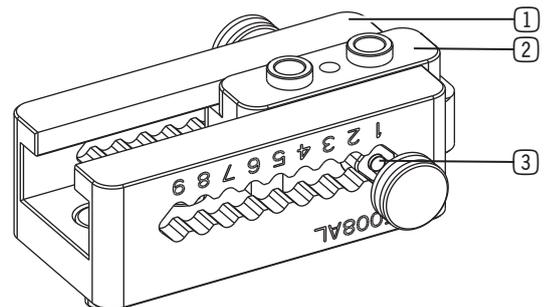


The product consists of two opposite guide rails with one manually adjustable slide each.

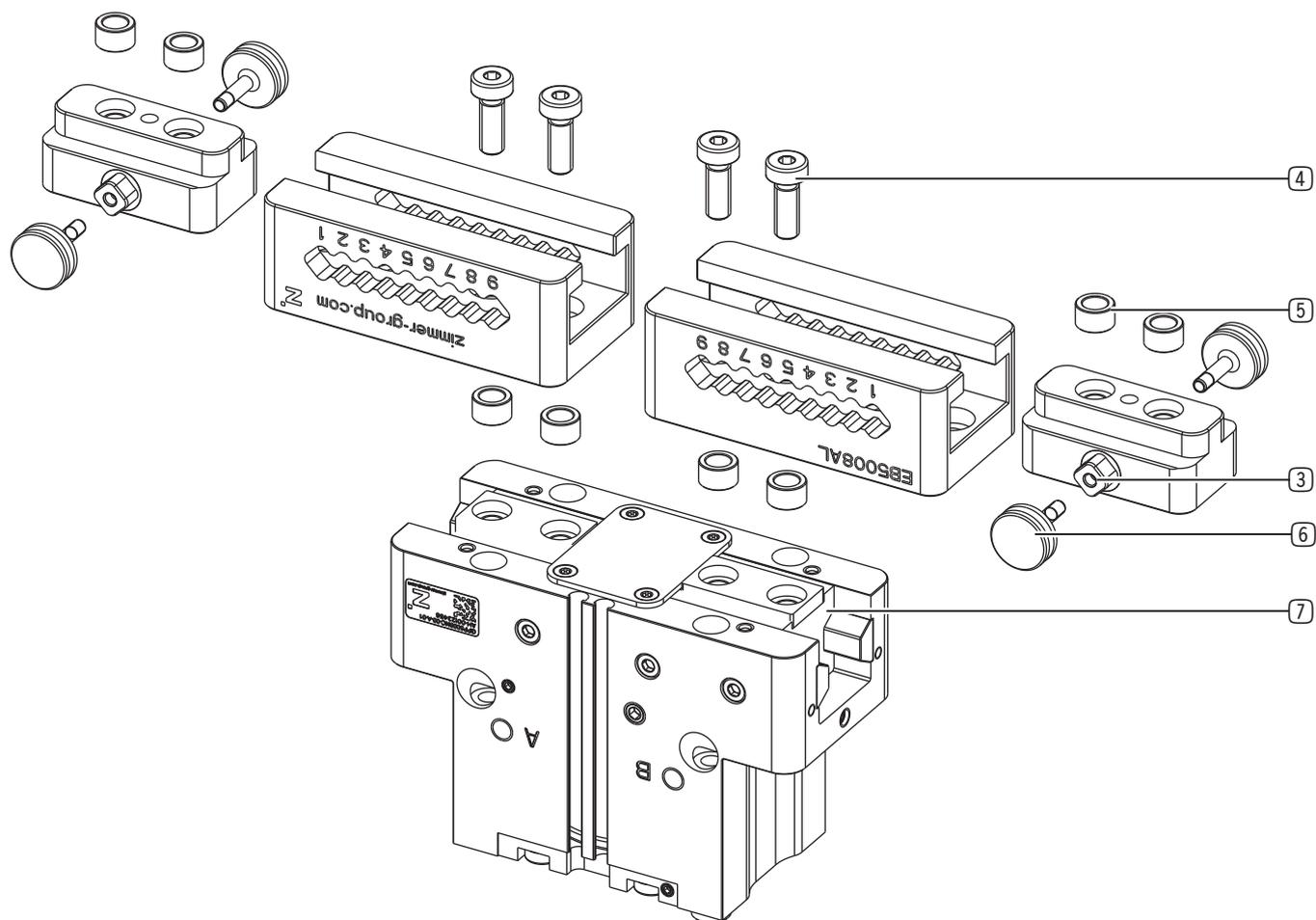
The rails are installed on the gripper jaws using centering sleeves and screws.

Workpiece-specific gripper fingers are mounted to the slide using screws and centering sleeves.

The movable slides can be unlocked, shifted and locked again into the designated positions by pushing the spring-loaded pins together.



- ① Guide rail
- ② Slides
- ③ Pin



- ③ Pin
- ④ Mounting screw
- ⑤ Centering Disc
- ⑥ Operating element
- ⑦ Gripper jaw

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.
- ▶ Please contact Zimmer Customer Service if you have any questions.

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/observe and adhere to the temperature range.
 - ▶ Avoid wind/drafts/water condensation formation.
 - ▶ Cover the product with a weatherproof, tear-resistant foil to prevent dust.
 - ▶ 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.

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.

CAUTION



Risk of injury due to objects being ejected

Spring-loaded components can jump out when installing or uninstalling the device.

NOTICE



- ▶ Installation may only be carried out by qualified personnel in accordance with these installation and operating instructions.
- ▶ Switch off the power supply before any assembly, installation or maintenance work.

INFORMATION



- ▶ Observe the tightening torque of the mounting screws.
- ▶ Verify the permitted load capacity of the required screw connections in accordance with VDI 2230.

Further installation information:

- Mounting screws are included in the scope of delivery.
- Strength class of the mounting screws is at least 8.8 (DIN EN ISO 4762)

The product can be installed flexibly and quickly. The numbering of the detent notches enables the gripper finger position to be configured securely.

10.1 Installing the rail

CAUTION



Risk of injury due to loss of gripping force

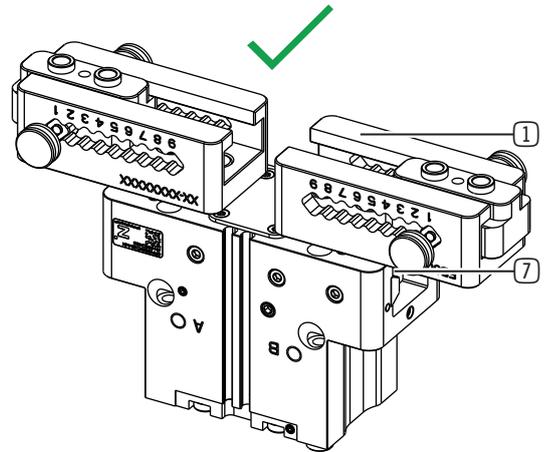
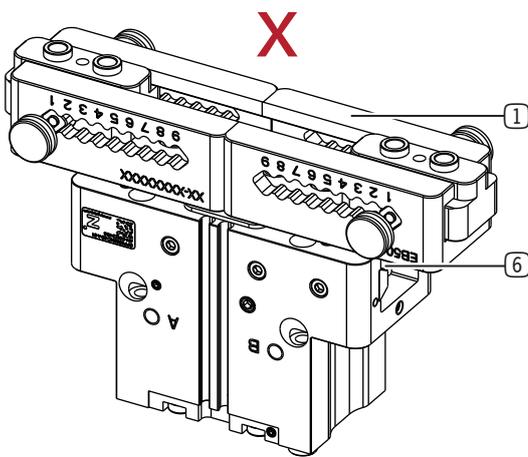
If the pin is not engaged, a sudden loss of gripping force may result.

- ▶ Rotate the operating elements in the screw-in direction if the pin does not engage by itself.
- ▶ Make sure that all pins are engaged.

INFORMATION



- ▶ Make sure that the rails are not touching when the gripper opening is at the minimum.

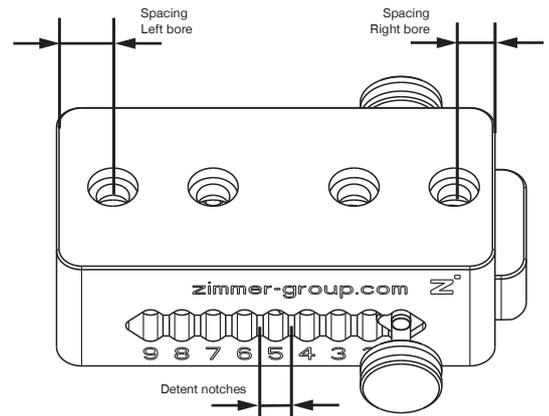


- ① Guide rail
- ⑦ Gripper jaw

The distance of the individual adjustment positions (detent notches) depends on the installation size of the product.

The bores on the rails for installation on the gripper jaws are arranged asymmetrically.

Depending on the direction in which the rail is installed, the notch can either be moved half of the dimension inward or outward.



INFORMATION



- ▶ Install the rails on the gripper jaws in the same direction.

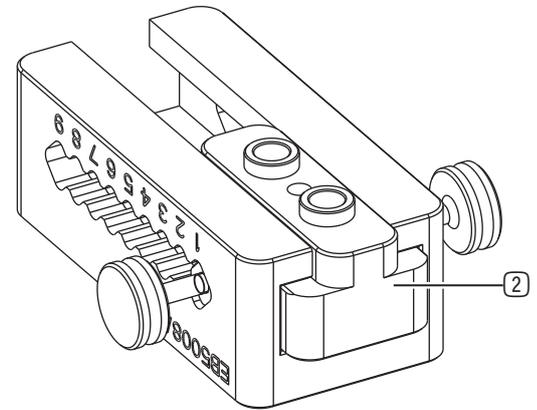
10.2 Installing the adjustment jaw

INFORMATION



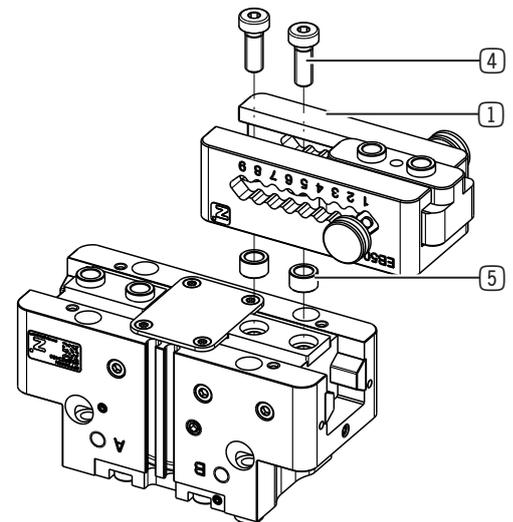
The installation holes are freely accessible in the two outer positions of the slide. The slide does not have to be removed from the rail.

- ▶ Unlock the slide and push it to the end of the row of holes.
- ▶ Pay attention to the installation direction.



② Slides

- ▶ Fit the centering sleeves into the bores of the gripper jaws.
- ▶ Set the rail such that the centering sleeves slide into the bores on the bottom of the rail.
- ▶ Mount the product on the gripper jaws using the screws.



① Guide rail

④ Mounting screw

⑤ Centering Disc

INFORMATION

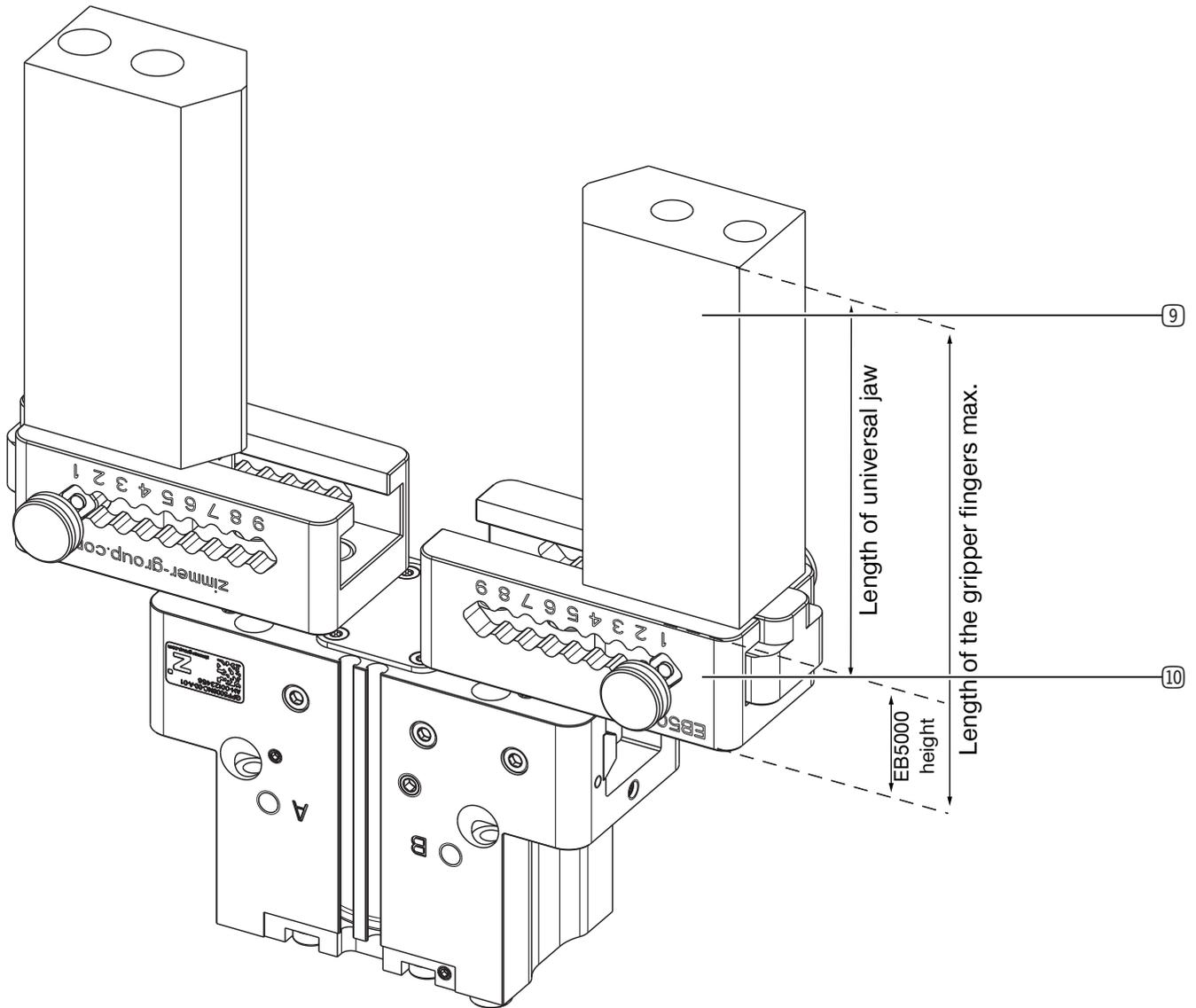


In the data sheet, a maximum length of the gripper fingers is specified for series GEP5000, GED5000, GPP5000, GPD5000 and GPW5000, depending on the installation size.

► Note that this dimension contains the respective height of the adjustment jaws.

In the data sheet, a maximum weight per jaw set is specified for series GEP5000, GED5000, GPP5000, GPD5000 and GPW5000, depending on the installation size.

► Note that the weight of a jaw set includes the weights of the gripper finger and the adjustment jaw.



- ⑨ Gripper finger
- ⑩ Adjustment jaw

10.3 Installing the gripper finger from above

CAUTION

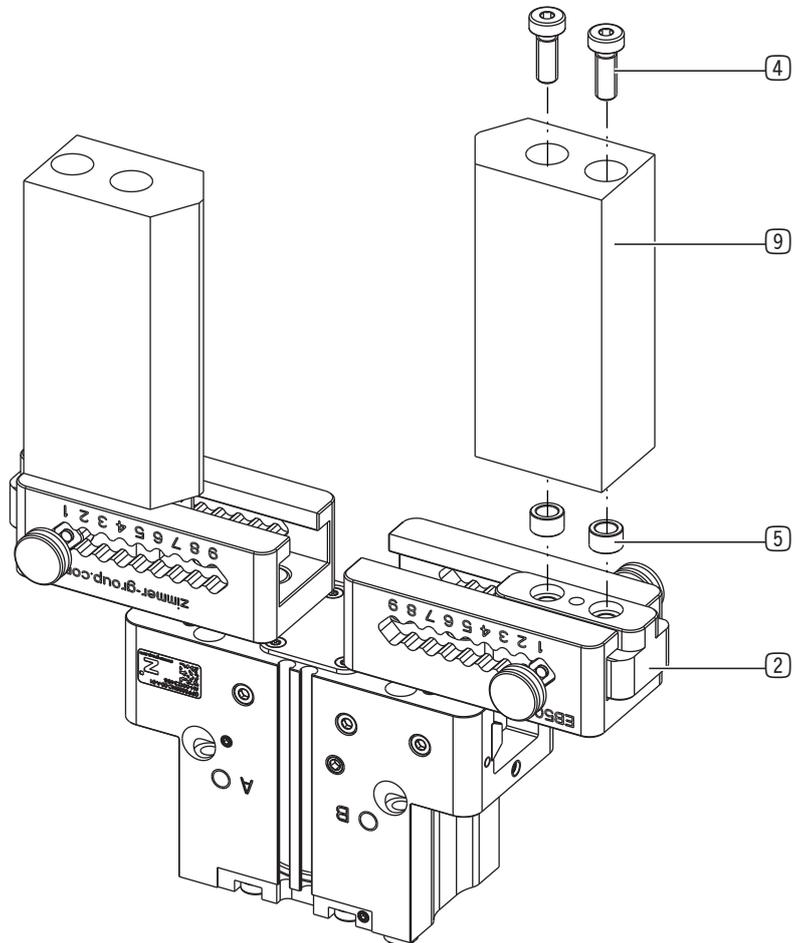


Risk of injury due to loss of gripping force

Note that the product is not compatible with the quick-change units available for the GEP5000, GED5000, GPP5000, GPD5000 and GPW5000.

- ▶ Insert the centering sleeves into the bores on the slide.
- ▶ Set the gripper finger on the slide.
- ▶ Install the gripper finger from above with the supplied screws.

- ② Slides
- ④ Mounting screw
- ⑤ Centering Disc
- ⑨ Gripper finger



10.4 Installing the gripper finger from below

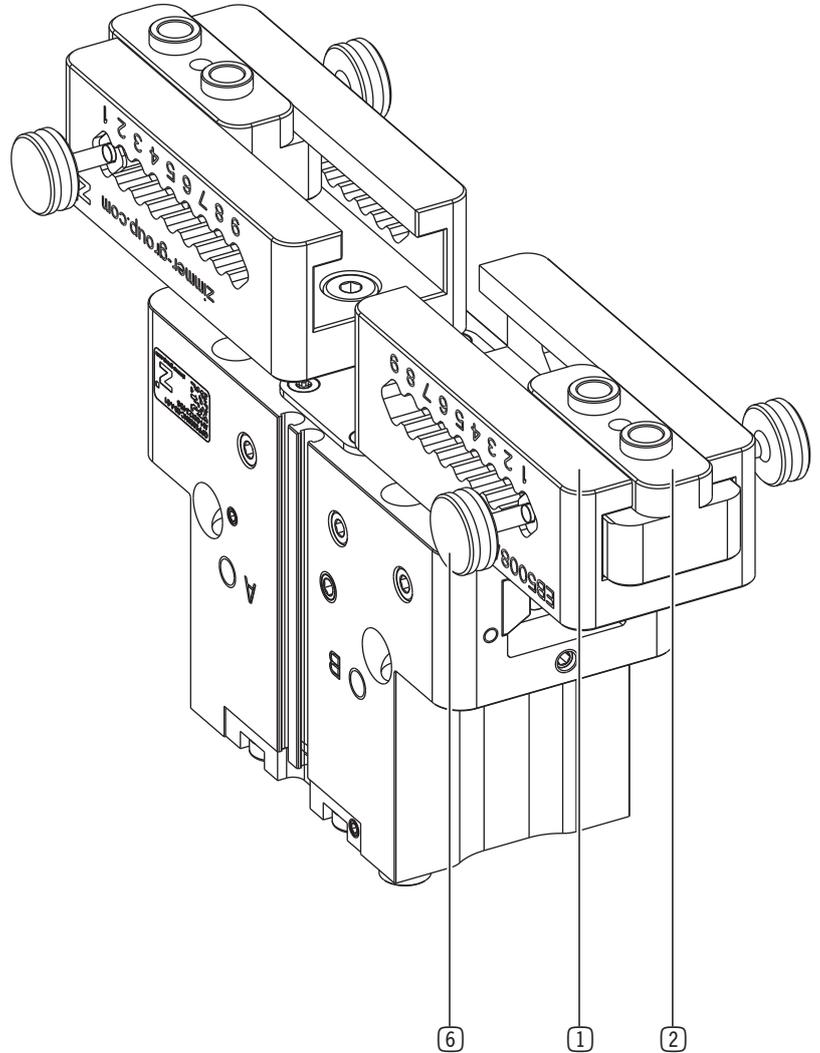
CAUTION



Risk of injury due to loss of gripping force

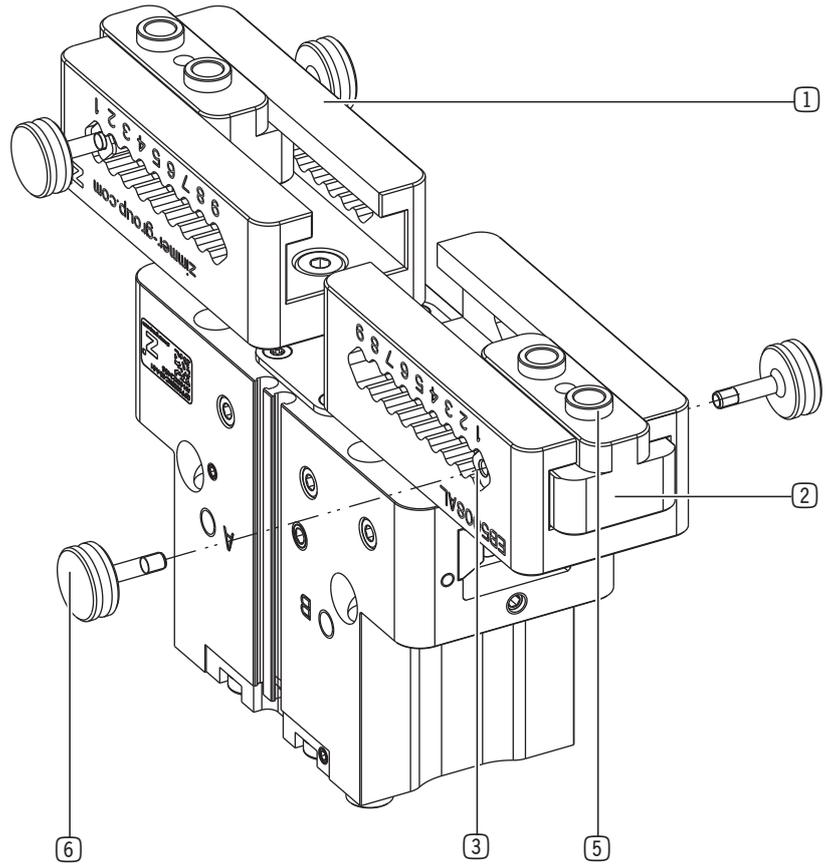
Note that the product is not compatible with the quick-change units available for the GEP5000, GED5000, GPP5000, GPD5000 and GPW5000.

- ▶ Push the slide to the end of the rail.
- ▶ Push in the operating element until the pin is blocked at the last position behind the rail.



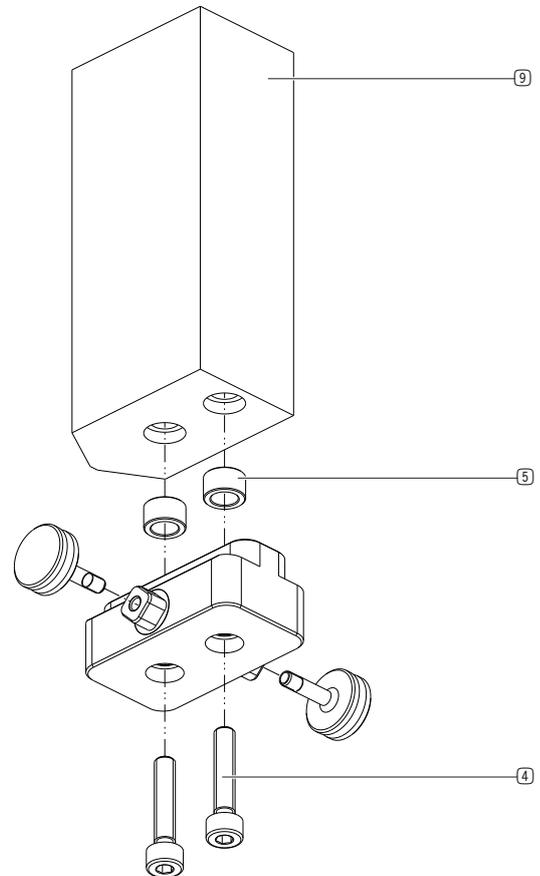
- ① Guide rail
- ② Slides
- ⑥ Operating element

- ▶ Rotate the operating elements out of the pins.
- ▶ Move the slide forward until the pins of the lock are visible on the outside of the rails.
- ▶ Surround the pin on both sides and press it together.
- ▶ Pull the slide out of the guide rail.



- ① Guide rail
- ② Slides
- ③ Pin
- ⑤ Centering Disc
- ⑥ Operating element

- ▶ Insert the centering sleeves into the bores on the slide.
- ▶ Set the gripper finger on the slide.
- ▶ Install the gripper finger from below with the supplied screws.
- ▶ Surround the pin on both sides and press it together.
- ▶ Slide the slide into the rail again until the lock engages in the first position.
- ▶ Screw the operating elements into the pins again.



- ④ Mounting screw
- ⑤ Centering Disc
- ⑨ Gripper finger

10.5 Alignment of the adjustment jaws

NOTICE



- ▶ Make sure that the adjustment jaws are aligned symmetrically.
- ⇒ If the adjustment jaws are not aligned symmetrically, the gripper cannot apply the optimal gripping force. It can lead to a malfunction.

10.6 Installing accessories

NOTICE



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

11 Gripping force charts

INFORMATION



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

12 Maintenance

WARNING



Risk of injury due to objects being ejected

When disassembling the slide, there is the danger that the spring will jump out of the guide rail, ejecting the pin by centrifugal force.

- ▶ Push out the pins only halfway and attach a securing device, e.g. a screw clamp, or disassemble the slide in a safety container.
- ▶ Then push the slide entirely out of the guide rail.

CAUTION



Risk of injury due to improper maintenance

- ▶ Do not perform maintenance on the product when it is installed on the gripper.
- ▶ Switch off the power supply before any assembly, installation or maintenance work.
- ▶ Secure the power supply against being switched on unintentionally.
- ▶ Check the energy supply for residual pressure.

INFORMATION



- ▶ Comply with a maintenance interval of 6 months.

INFORMATION

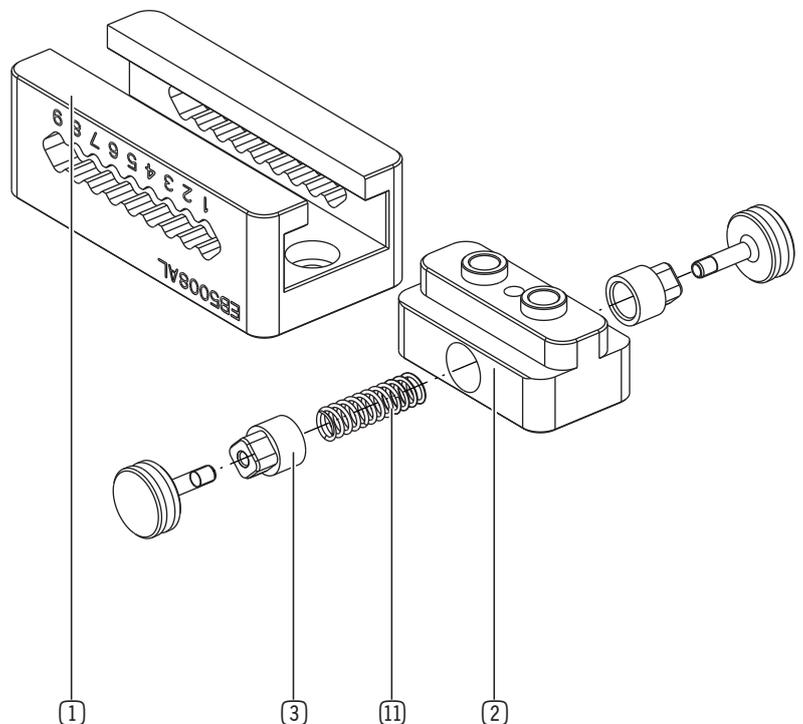


- The two pins and springs of the lock are not connected to each other and can therefore be lost during removal.
- ▶ During uninstallation, ensure that the individual parts are stored safely.

For maintenance, the product must be disassembled into its individual parts.

- ▶ Clean the guide surfaces of the rails and slide.
- ▶ Oil the guide surfaces and move the slide back and forth multiple times. Wipe off the excess oil.
- ▶ Check the springs of the lock and replace them if necessary.
- ▶ Check the pin in the lock for ease of movement.
- ▶ Check the bores for dirt. If necessary, wipe them clean using a cloth or brush.
 - ▶ Apply a light coat of oil to the bores.

- ① Guide rail
- ② Slides
- ③ Pin
- ⑪ Spring



13 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: Adjustment jaws

Type designation: EB5000 series

conform 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.

Basic health and safety requirements:

No. 1.1.2, No. 1.1.3, No. 1.1.5, No. 1.3.2, No. 1.3.3, No. 1.3.4, No. 1.3.7, No. 1.3.9, No. 1.5.1, No. 1.5.3, No. 1.5.4, No. 1.6.4, No. 1.7.1, No. 1.7.4

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, 2020-08-31

(Place and date of issuance)



Martin Zimmer
(Legally binding signature)
Managing Partner