



# INSTALLATION AND OPERATING INSTRUCTIONS

Tool changer  
WPR5000

DDOC02112

THE KNOW-HOW FACTORY

## Content

1	Introduction .....	4
1.1	Supporting documents .....	4
1.2	Notices and graphics in the instructions .....	4
2	Safety notices .....	5
3	Proper use .....	6
4	Personnel qualification .....	6
4.1	Electricians .....	6
4.2	Specialists .....	6
4.3	Instructed personnel.....	6
4.4	Service personnel.....	6
4.5	Additional qualifications.....	6
5	Product description .....	7
5.1	Type plate .....	8
5.2	Product variants and compatibility .....	8
6	Functional description .....	8
6.1	Functional safety .....	9
7	Technical data .....	9
8	Accessories/scope of delivery .....	9
9	Transportation/storage/preservation .....	9
10	Installation .....	10
10.1	Installing the stationary part on the robot.....	11
10.2	Installing the tool to the loose part .....	11
10.3	Installing the energy supply .....	12
10.3.1	Pneumatic control .....	12
10.4	Mounting the magnetic field sensor.....	14
10.5	Installing inductive sensors.....	15
10.6	Installing the storage station.....	15
10.6.1	Installing the mounting bracket on the loose part .....	15
10.6.2	Installing the storage station without a compensation module .....	16
10.6.3	Installing the storage station with a compensation module.....	16
10.6.4	Installing the sensor on the holder.....	17
10.6.5	Installing the sensor on the compensation module.....	18
10.6.6	Installing the unlocking latch on the stationary part.....	19
10.6.7	Installing the energy supply to the storage station .....	19
10.6.8	Depositing the loose part in the storage station .....	20
10.7	Installing accessories .....	23
11	Operation without a pneumatic storage station .....	24
11.1	Operation without a compensation module .....	24
11.1.1	Coupling loose parts .....	24
11.1.2	Decoupling loose parts .....	25
11.2	Operation with a compensation module.....	26
11.2.1	Coupling loose parts .....	26
11.2.2	Decoupling loose parts .....	26
12	Operation with a pneumatic storage station.....	27
12.1	Coupling loose parts .....	27
12.2	Decoupling loose parts .....	28
13	Maintenance.....	29

14 Decommissioning/disposal ..... 29

15 RoHS declaration..... 30

16 Declaration of Incorporation ..... 31

# 1 Introduction

## 1.1 Supporting documents

### NOTICE



Read through the instructions before installing or working with the product.

The 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](http://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 instructions, "product" refers to the product designation on the title page!

## 1.2 Notices and graphics in the 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 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 Group 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.
- ▶ Check the completeness and tightening torques of all mounting screws.

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

- The product is designated for use in closed facilities.
- The product is intended for industrial use.
- Direct contact with perishable goods/food is not permitted.
- The product is designed exclusively for pneumatic operation.

### 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

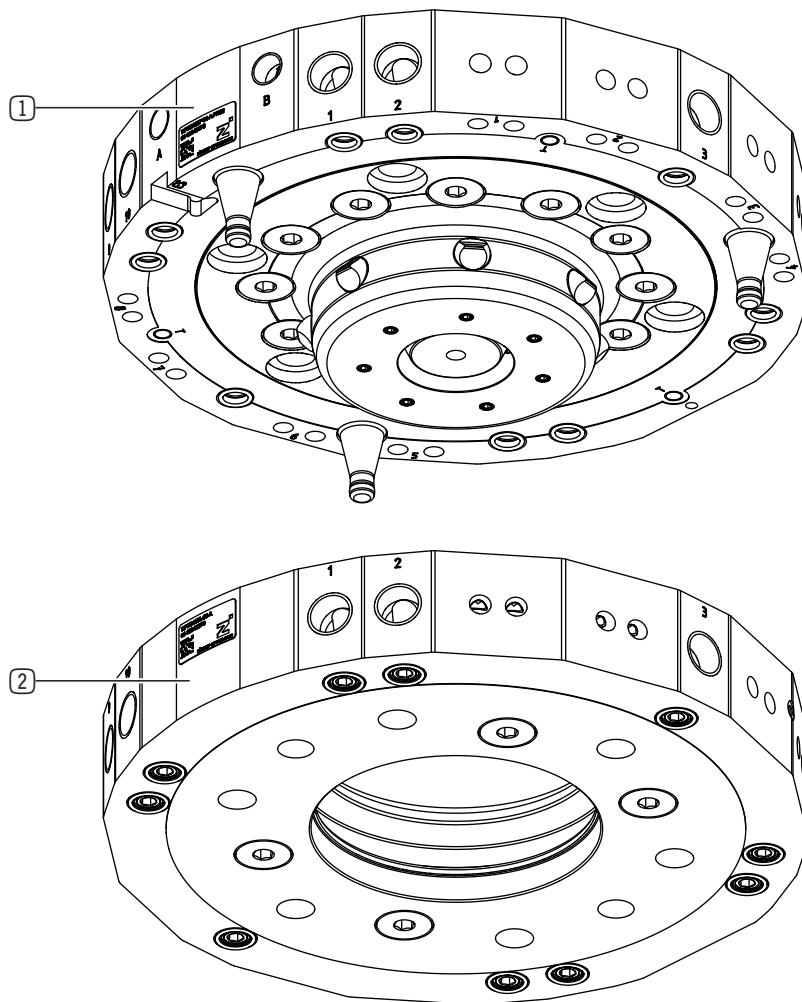
The product is a pneumatically operated exchange system.

It consists of a stationary part and a loose part.

The stationary part can be coupled to different loose parts.

A storage station and a safety system are available as an option.

Several storage stations can be used to hold differently equipped loose parts for operation with the same stationary part.

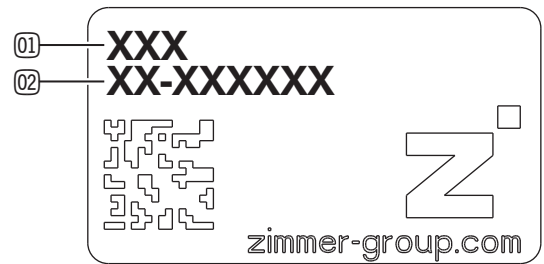


- ① Stationary part (WPR5xxxF-00-A)
- ② Loose part (WPR5xxxL-00-A)

## 5.1 Type plate

A type plate is attached to the product.

- ① Article number
- ② Confirmation number



## 5.2 Product variants and compatibility

### INFORMATION



Energy elements can be installed on the product to supply power to the tools.

► For further information on the energy elements, refer to the corresponding instructions on our website.

## 6 Functional description

The stationary part is installed on a robot. It is used to hold a loose part.

The product has a double-acting pneumatic rotor cylinder.

Alternating ventilation sets the piston in motion.

The movement causes the locking bolts on the stationary part to press into the locking sleeve in the loose part.

An integrated spring acts as an energy store and ensures that locking is maintained in the event of a power failure.

## 6.1 Functional safety

For the overall safety of the function, both components (stationary part and loose part) must be taken into account.

The safety function of the product ensures secure locking between the stationary part and loose part and is implemented via two redundant action channels.

They consist of a pneumatic locking and a mechanical safeguard via a spring.

## 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 Group GmbH are used, the function of the product cannot be guaranteed. Zimmer Group 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 off unused connections using pressure-resistant closures.

## 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.

### Assembly requirements

Permissible flatness tolerance [mm]	Mounting surface length [mm] $\leq$ 100	0.02
	Mounting surface length [mm] $>$ 100	0.05
Strength class of the mounting screws	8.8	

### INFORMATION



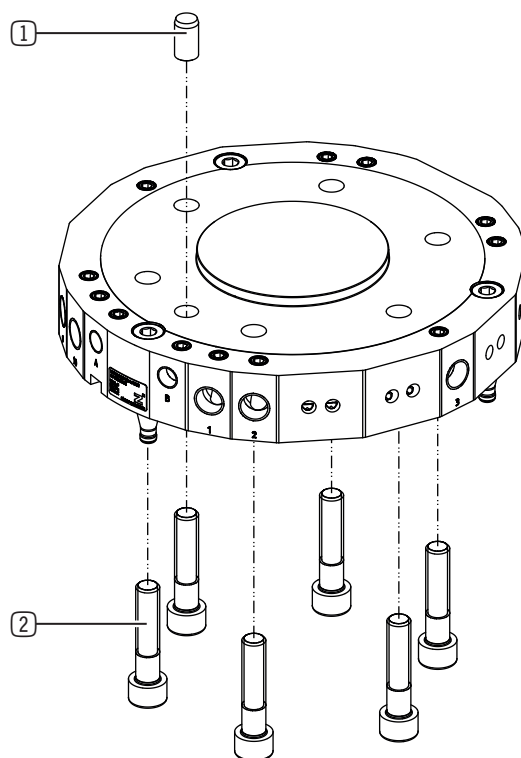
Further installation information:

- 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](http://www.zimmer-group.com/en/td).

### 10.1 Installing the stationary part on the robot

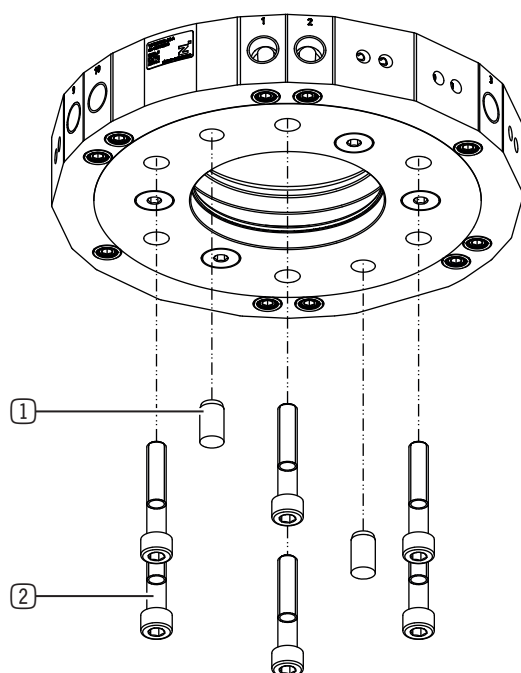
- ▶ Insert the straight pin into the designated fit on the stationary part.
- ▶ Position the stationary part on the robot.
- ▶ Tighten the mounting screws without distortion.



- ① Straight pins
- ② Mounting screw

### 10.2 Installing the tool to the loose part

- ▶ Insert the straight pins into the designated fits on the loose part.
- ▶ Position the loose part on the tool.
- ▶ Tighten the mounting screws without distortion.



- ① Straight pins
- ② Mounting screw

### 10.3 Installing the energy supply

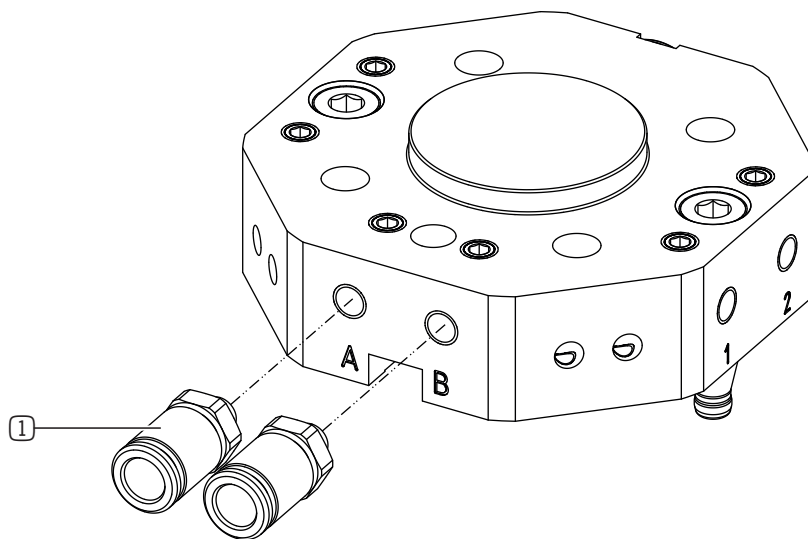
#### NOTICE



**Non-compliance may result in material damage.**

- ▶ You can find the information in the technical data sheet on our website.
- ▶ Close off unused connections using pressure-resistant closures.
- ▶ The authorized connections that are available can be found in the accessories list on our website.
- ▶ Use compressed air in accordance with DIN ISO 8573-1 [7:4:4].

- ▶ Mount the screw fitting in the provided connection.



- ① Screw fitting

#### 10.3.1 Pneumatic control

#### INFORMATION



- ▶ Please note that the connection to the A marking is used for product locking.
- ▶ Please note that the connection to the B marking is used for product unlocking.

The following example shows the pneumatic control for implementing control category 3.



### 10.3.1.1 Control category 3 example

#### NOTICE



- Please note that the indicated maximum torque load and the maximum forces may not be exceeded for the implementation of control category 3.
- You can find the information in the technical data sheet on our website.

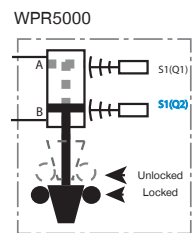
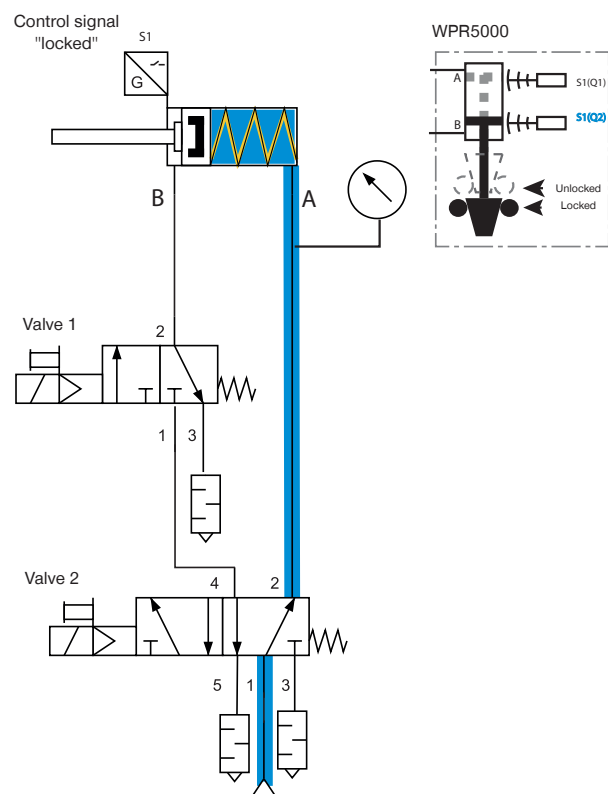
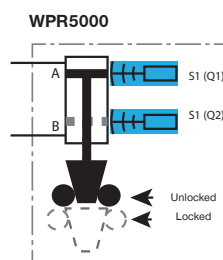
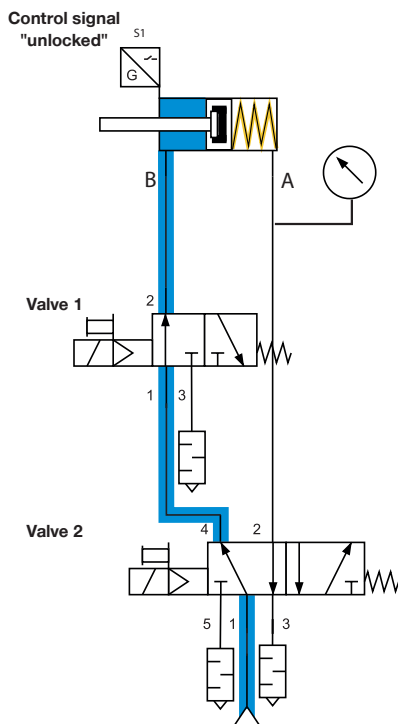
#### Dual-channel

- The mechanical component (spring) operates as action channel 1 (yellow marking).
  - The pneumatic component (pressure) operates as action channel 2 (blue marking).
- ⇒ Each of the individual components alone can maintain the safety function.

There is fault elimination in accordance with EN ISO 13849-2, Annex A, Table A.5 for the mechanical action channel.

The following applies to the pneumatic action channel in the example:

- The degree of diagnostic coverage is  $60 \% \leq DC < 90 \%$ .
- Two mono-stable valves are used.
  - ⇒ The safety functions *reversing* and/or *unexpected startup* (unlock) are realized.
  - ⇒  $PL_d$  can be achieved.
- A 2-point magnetic field sensor (S1) is available for the end position check.
- A pressure sensor can be used for pressure monitoring.
  - ⇒ If used, this can increase the degree of diagnostic coverage to  $90 \% \leq DC < 99 \%$ .
- Optional sensors are available for *loose part present* sensing.
- An optional safety system is available for sensing *the stationary part in the storage station area*.



## 10.4 Mounting the magnetic field sensor

### NOTICE



**Non-compliance may result in material damage.**

Cables must be installed with sufficient length.

► Ensure that the cables cannot be pinched, crushed, or torn off within the movement and swivel ranges.

Various sensors are available for sensing the piston position depending on the installation size. These sensors provide information on the respective position of the piston and increase safety when operating the product.

- Loosen the grub screw.
  - Make sure that the grub screw is not unscrewed completely.
- Remove the cover.

① Grub screw

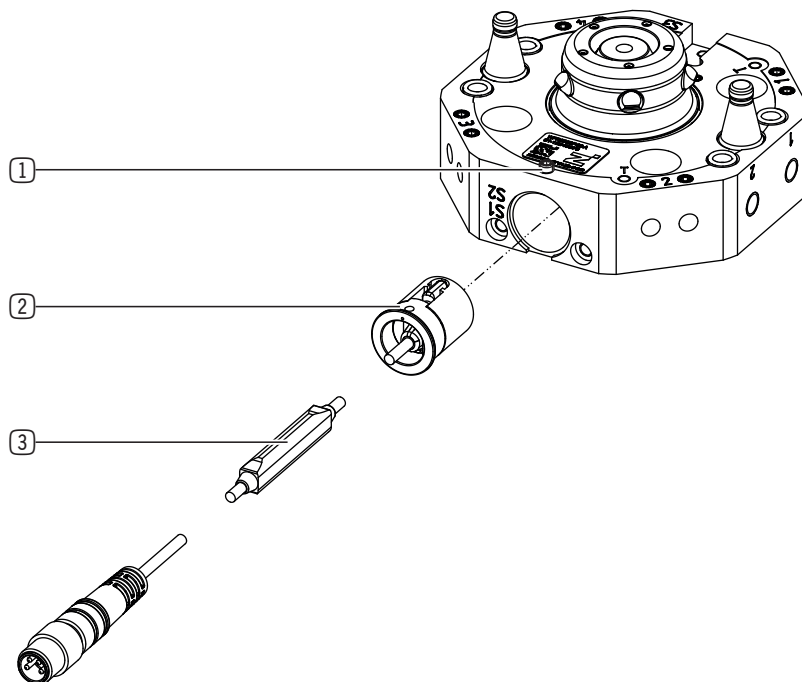
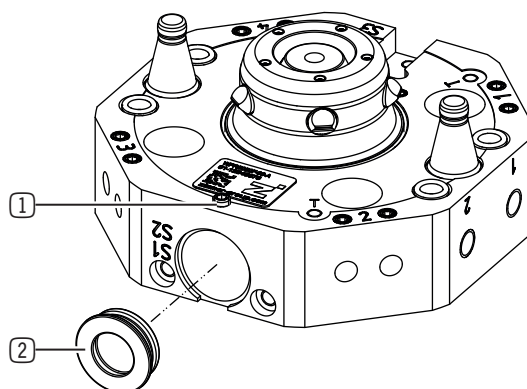
② Cover

- Insert the pre-assembled module into the opening.
  - Observe the marking on the module for the alignment.
- Securely clamp the module with the grub screw.

① Grub screw

② Marking

③ Sensor



## 10.5 Installing inductive sensors

### NOTICE



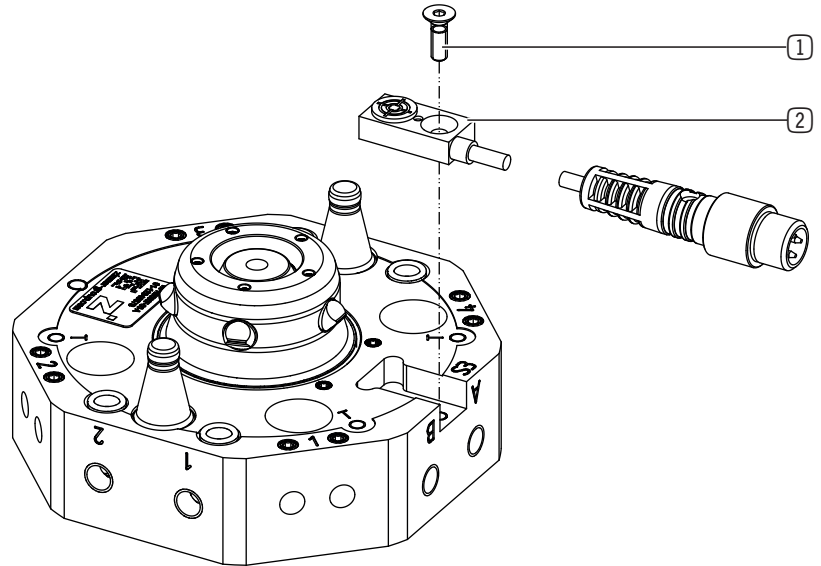
**Non-compliance may result in material damage.**

Cables must be installed with sufficient length.

► Ensure that the cables cannot be pinched, crushed, or torn off within the movement and swivel ranges.

The inductive sensor is used for product safety and senses whether a loose part is present.

- Position the sensor in the fit on the stationary part.
- Install the sensor with the mounting screw.



① Mounting screw

② Sensor

## 10.6 Installing the storage station

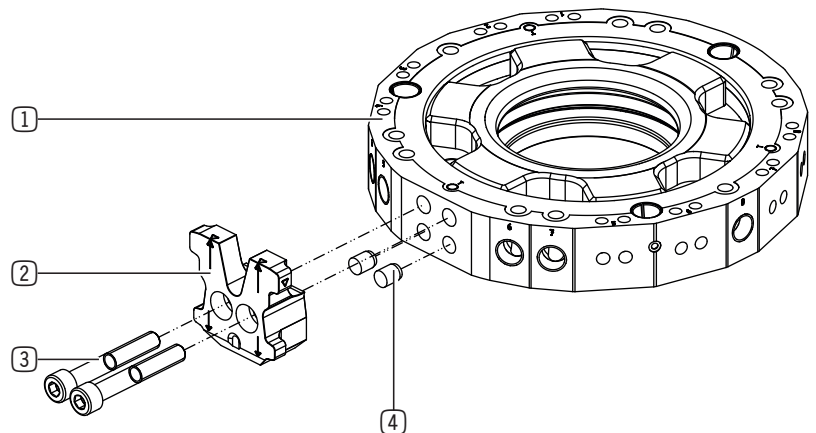
The storage station is a device in which a completely equipped loose part can be held ready in a defined position.

The storage station consists of a mounting bracket and a holder. The holder is available with or without a compensation module. A piston rod and spring are installed in holders with a compensation module. The spring force pushes the piston rod outward and the loose part is locked. There is also the option of controlling the piston rod pneumatically.

It is also possible to install a sensor on the holder.

### 10.6.1 Installing the mounting bracket on the loose part

- Insert the straight pins into the designated fits on the loose part.
- Install the mounting bracket on the loose part using the mounting screws.
- Tighten the mounting screws without distortion.



① Loose part

② Mounting bracket

③ Mounting screw

④ Straight pins

### 10.6.2 Installing the storage station without a compensation module

#### NOTICE

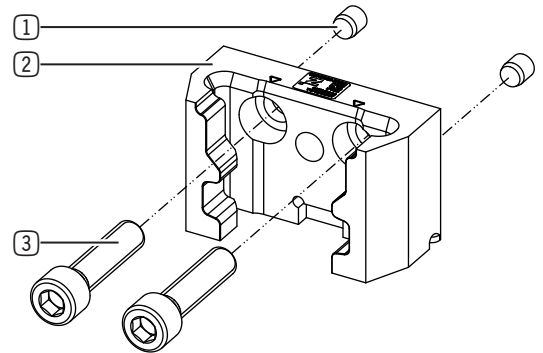


#### Material damage and malfunction in case of non-compliance

If the storage station is not installed correctly, the loose part and tool can fall off.

- Please note that a storage station without a compensation module may only be installed horizontally.
- You can find the information in the technical data sheet on our website.

- Use the straight pins to position the holder on the mounting piece.
- Install the holder on the mounting piece using the mounting screws.
- Tighten the mounting screws without distortion.



- ① Straight pins
- ② Holder
- ③ Mounting screw

### 10.6.3 Installing the storage station with a compensation module

#### NOTICE



#### Material damage and malfunction in case of non-compliance

The piston rod of the compensation module is used exclusively to secure the loose part.

- Make sure that the piston rod is not permanently subjected to external forces.

#### INFORMATION



The storage station with a compensation module can be installed horizontally or vertically.

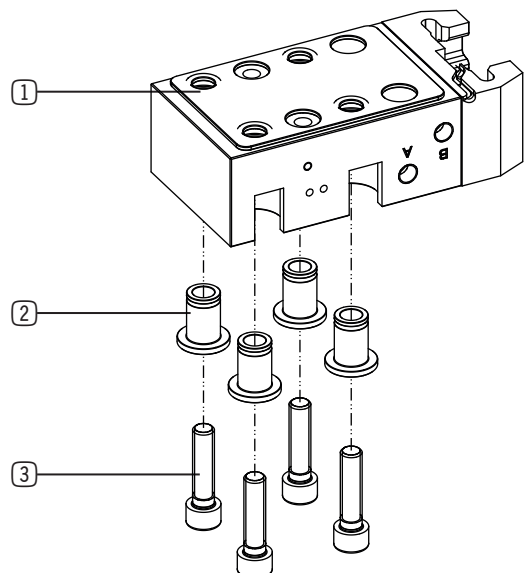
- You can find the information in the technical data sheet on our website.

The storage station with a compensation module is designed for compensation movements in the X and Y directions in order to compensate for deviations in the position.

It is also possible to use the storage station without compensation movements, e.g., when using vertical positioning. To prevent compensation movements, the sliding strip is rotated and the storage station with a compensation module is securely screwed onto the mounting piece.

#### 10.6.3.1 Installing the storage station with a compensation function

- Position the small boreholes of the sliding strip on the holes of the compensation module.
- Insert the sleeves into the designated fits on the compensation module.
- Install the compensation module on the mounting piece using the mounting screws.
- Tighten the mounting screws without distortion.

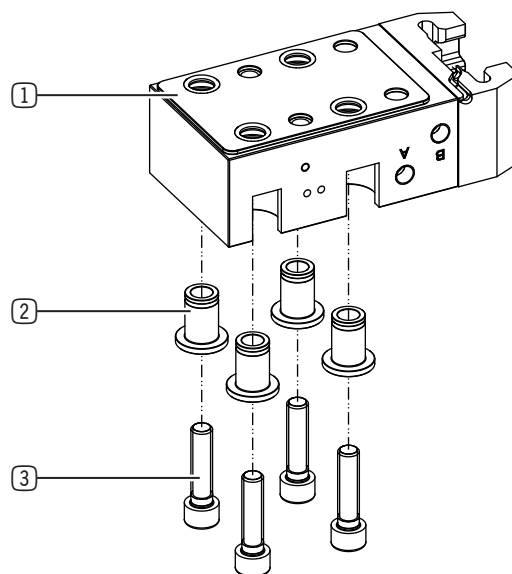


- ① Sliding strip
- ② Sleeve
- ③ Mounting screw

### 10.6.3.2 Installing the storage station without a compensation function

- Position the large boreholes of the sliding strip on the holes of the compensation module.
- Insert the sleeves into the designated fits on the compensation module.
- Install the compensation module on the mounting piece using the mounting screws.
- Tighten the mounting screws without distortion.

- ① Sliding strip
- ② Sleeve
- ③ Mounting screw

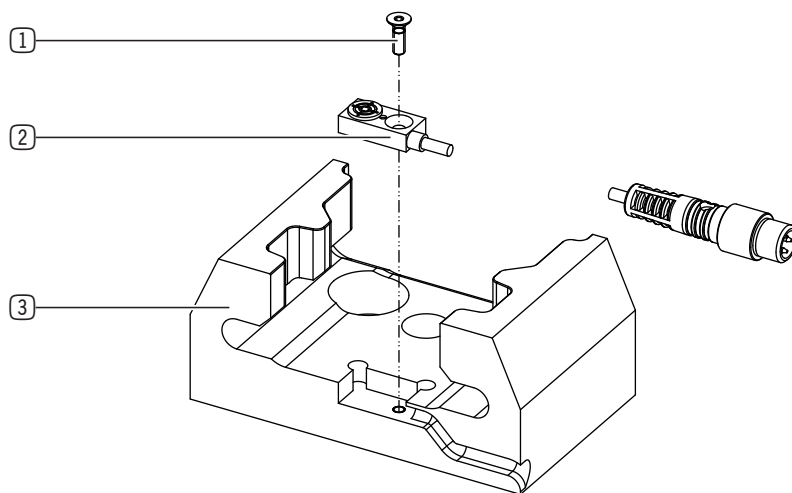


### 10.6.4 Installing the sensor on the holder

The inductive sensor is used for product safety and senses whether a loose part is present.

- Position the sensor in the corresponding fit on the holder.
- Route the cable along the cable duct to the outside.
- Install the sensor with the mounting screw.

- ① Mounting screw
- ② Sensor
- ③ Holder



### 10.6.5 Installing the sensor on the compensation module

#### NOTICE



#### Material damage and malfunction in case of non-compliance

- ▶ Make sure that the piston rod is extended when installing sensor 1.
- ▶ Make sure that the piston rod is retracted when installing sensor 2.

#### NOTICE



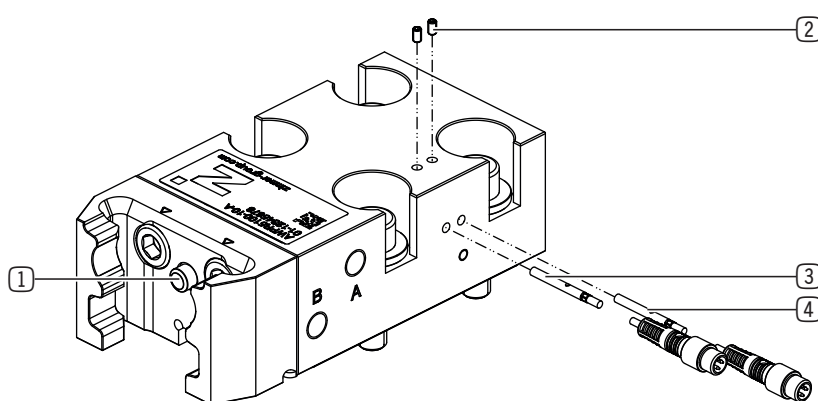
#### Non-compliance may result in material damage.

- Cables must be installed with sufficient length.
- ▶ Ensure that the cables cannot be pinched, crushed, or torn off within the movement and swivel ranges.

Inductive sensors are available for sensing the piston position. These sensors provide information on the respective position of the piston and increase safety when operating the product.

- ▶ Slide the sensor into the fit on the compensation module.
- ▶ Make sure that the sensor does not touch the piston rod.
- ▶ Clamp the sensor using the grub screw.

- ① Piston rod
- ② Grub screw
- ③ Inductive sensor 1
- ④ Inductive sensor 2



### 10.6.6 Installing the unlocking latch on the stationary part

#### NOTICE



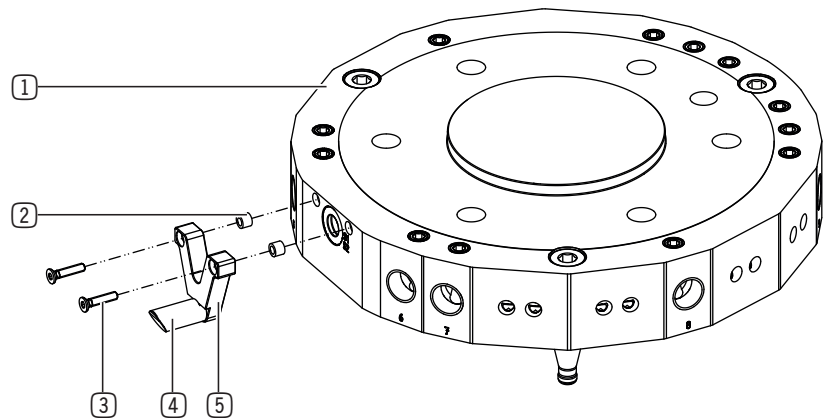
#### Malfunction in case of non-compliance

The unlocking latch releases the holder when the loose part is coupled when the storage station with a compensation module is operated without compressed air.

- Mount an unlocking latch if you are operating the storage station with a compensation module without compressed air.

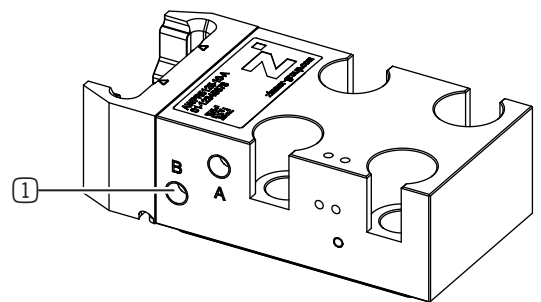
- Insert the centering sleeve into the designated fits on the stationary part.
- Install the unlocking latch on the stationary part with the mounting screws.

- ① Stationary part
- ② Centering sleeve
- ③ Mounting screw
- ④ Pin
- ⑤ Unlocking latch



### 10.6.7 Installing the energy supply to the storage station

- Install the energy supply to connections A and B.



- ① Pneumatic connection

### 10.6.8 Depositing the loose part in the storage station

#### NOTICE



#### Material damage and malfunction in case of non-compliance

- Observe the requirements when positioning the product.
  - Approaching the storage station from the top:
    - Min. distance from the bottom edge of the mounting bracket to the top edge of the holder: 2 mm
  - Approaching the storage station from the front:
    - Min. distance from the front of the mounting bracket to the holder: 2 mm
- Use a programming tip for product teach-in.

#### INFORMATION



There are markings on the mounting bracket and on the holder to assist with positioning and inserting into the storage station.

#### INFORMATION



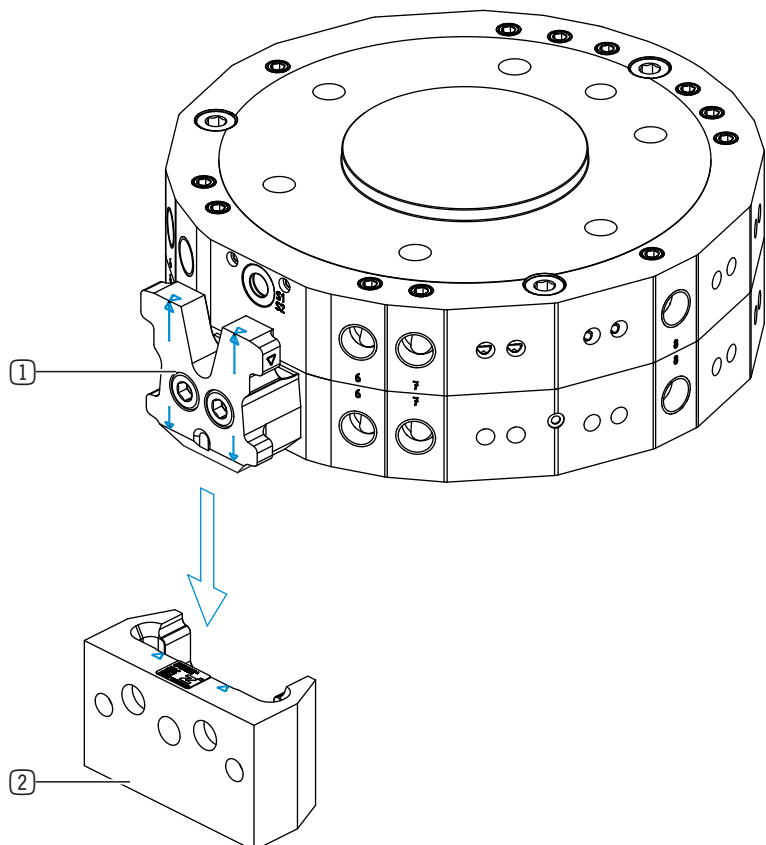
It is also possible to use an inductive sensor to monitor the positioning of the loose part in the storage station.

- You can find information on available sensors on our website.

#### 10.6.8.1 Approaching the storage station from the top

##### Variant 1: Holder without a compensation module

- Position the loose part with the mounting bracket over the holder.
  - Make sure that the mounting bracket is vertically above the holder.
- Push the loose part down along the guide until the top edges of the mounting bracket and holder are flush with each other.
  - Make sure that the markings on the holder and mounting bracket are aligned parallel to each other.
- Deposit the loose part.



- ① Mounting bracket
- ② Holder



## Variant 2: Holder with a compensation module

### NOTICE



#### Malfunction in case of non-compliance

The unlocking latch releases the holder when the loose part is coupled when the storage station with a compensation module is operated without compressed air.

- ▶ Mount an unlocking latch if you are operating the storage station with a compensation module without compressed air.

The holder must be unlocked for the holder with a compensation module variant and then relocked after being deposited. Unlocking takes place when the piston rod is pressed inward when retracting.

Locking takes place when the piston rod moves into the fit on the mounting bracket and blocks the loose part.

Locking and unlocking can also take place pneumatically.

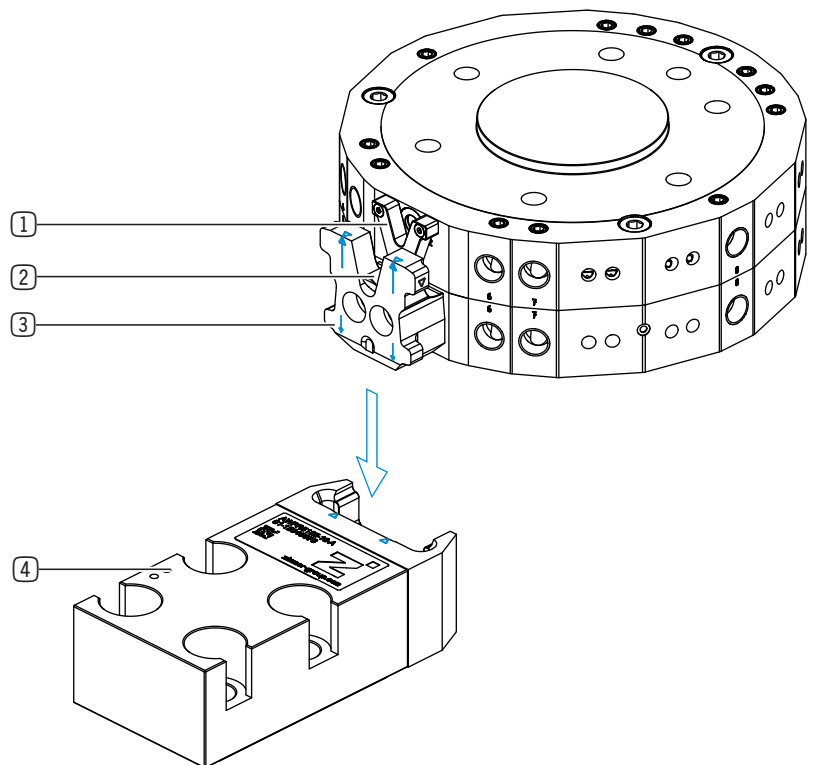
- ▶ Position the loose part with the mounting bracket over the holder.
  - ▶ Make sure that the mounting bracket is vertically above the holder.
- ▶ Push the loose part down along the guide until the top edges of the mounting bracket and holder are flush with each other.
  - ▶ Make sure that the markings on the holder and mounting bracket are aligned parallel to each other.

⇒ When retracting, the piston rod is pressed into the holder by the mounting bracket.

⇒ During pneumatic operation, the retracting and extending of the piston rod is controlled via compressed air.

- ▶ Deposit the loose part.

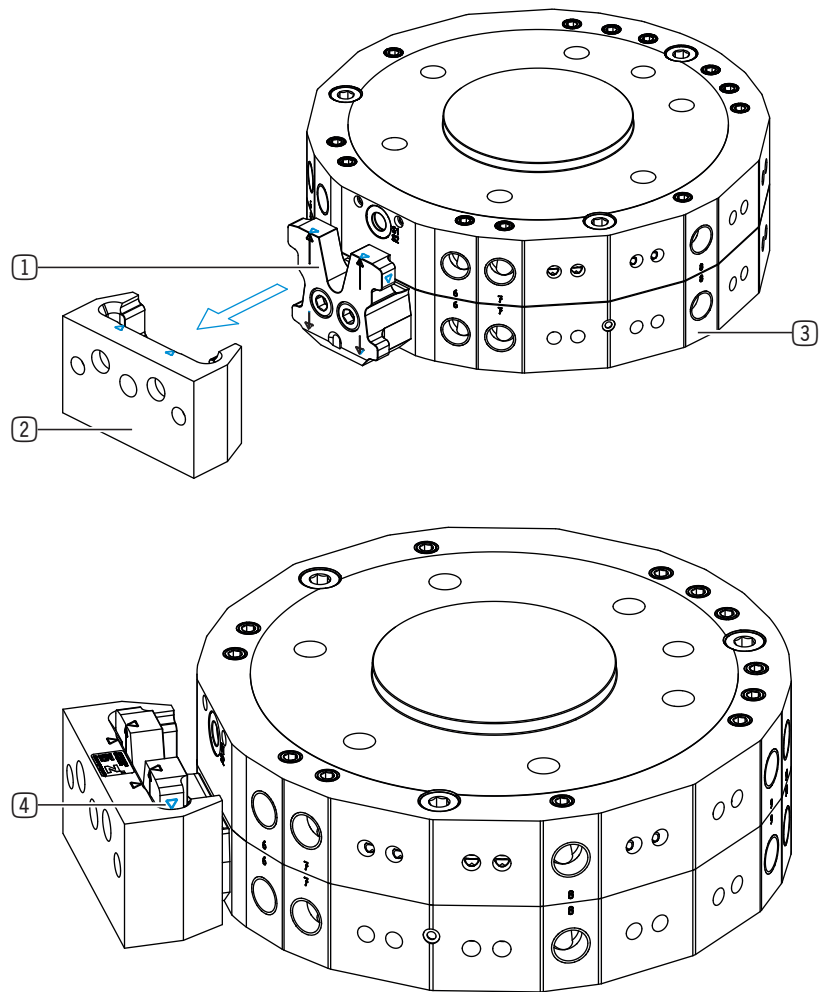
- ① Unlocking latch (optional)
- ② Pin
- ③ Mounting bracket
- ④ Holder with a compensation module



### 10.6.8.2 Approaching the storage station from the front

#### Variant 1: Holder without a compensation module

- ▶ Position the loose part with the mounting bracket in front of the holder.
  - ▶ Make sure that the side markings are aligned parallel to the corresponding cutouts on the holder.
- ▶ Move the loose part with the mounting bracket into the holder up to the end stop.
  - ▶ Make sure that the markings on the side of the mounting bracket are still completely visible.
- ▶ Push the loose part down along the guide until the top edges of the mounting bracket and holder are flush with each other.
  - ▶ Make sure that the markings on the holder and mounting bracket are aligned parallel to each other.
- ▶ Deposit the loose part.
- ▶ When extending, make sure that the markings on the side are fully visible again after pushing up.



- ① Mounting bracket
- ② Holder
- ③ Loose part
- ④ Marking (on the side)

## Variant 2: Holder with a compensation module

The holder must be unlocked for the holder with a compensation module variant and then relocked after being deposited. Unlocking takes place when the piston rod is pressed inward when retracting.

Locking takes place when the piston rod moves into the fit on the mounting bracket and blocks the loose part.

Locking and unlocking can also take place pneumatically.

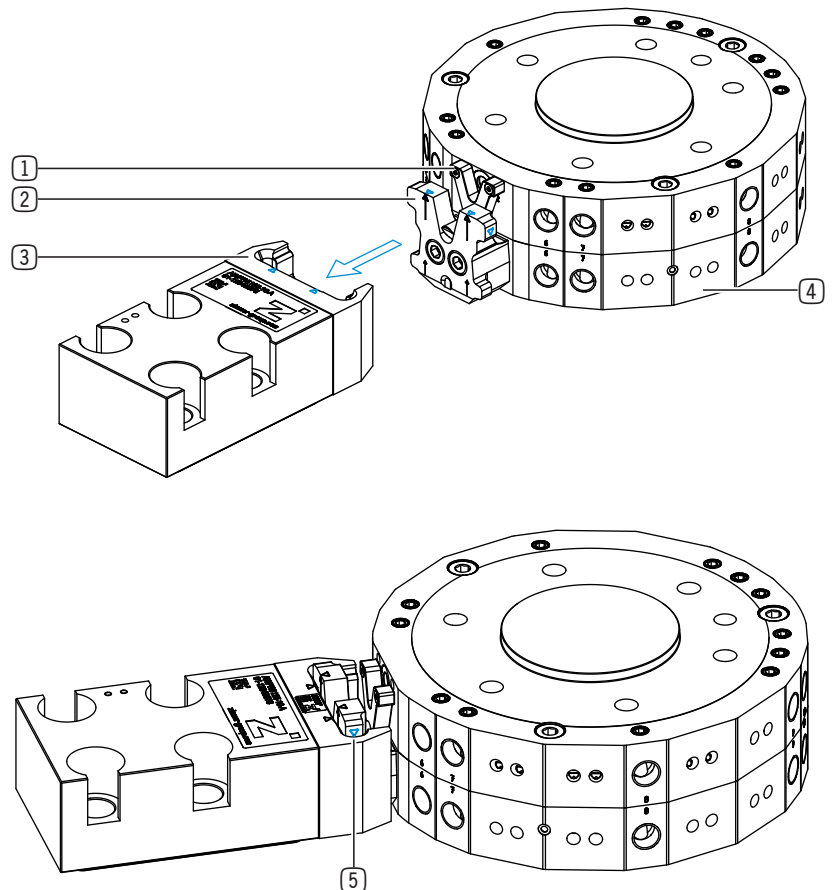
- ▶ Position the loose part with the mounting bracket in front of the holder.
  - ▶ Make sure that the side markings are aligned parallel to the corresponding cutouts on the holder.
- ▶ Move the loose part with the mounting bracket into the holder up to the end stop.
  - ▶ Make sure that the markings on the side of the mounting bracket are still completely visible.

⇒ When retracting, the piston rod is pressed into the holder by the mounting bracket.

⇒ During pneumatic operation, the retracting and extending of the piston rod is controlled via compressed air.

- ▶ Push the loose part down along the guide until the top edges of the mounting bracket and holder are flush with each other.
  - ▶ Make sure that the markings on the holder and mounting bracket are aligned parallel to each other.

- ▶ Deposit the loose part.
- ▶ When extending, make sure that the markings on the side are fully visible again after pushing up.



- ① Unlocking latch (optional)
- ② Mounting bracket
- ③ Holder
- ④ Loose part
- ⑤ Marking (on the side)

## 10.7 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 Operation without a pneumatic storage station

### WARNING



#### Risk of injury from crushing

Crushing can occur between the stationary part and loose part when coupling.

Crushing can occur between the storage station and the loose part when approaching the storage station.

- ▶ Always keep an adequate safety distance.

### WARNING



#### Risk of injury and material damage due to falling parts

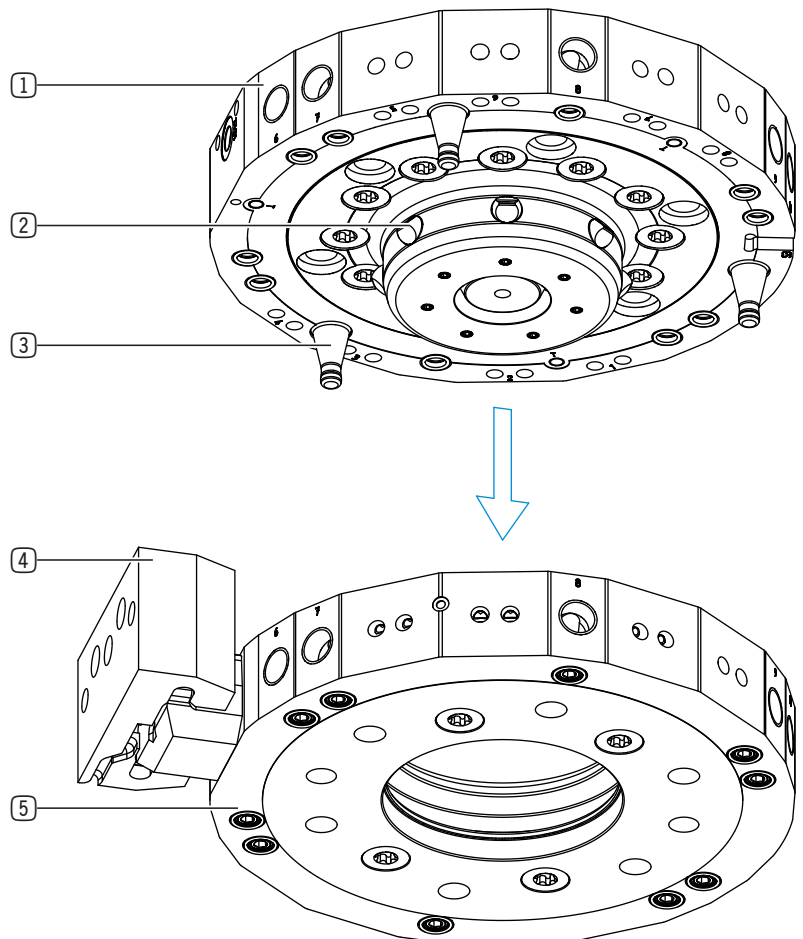
If the stationary part and loose part are not coupled correctly, the loose part and tool can fall off.

- ▶ Make sure that the stationary part and loose part are coupled correctly.
- ▶ Always keep an adequate safety distance.
- ▶ Use sensors for monitoring.

### 11.1 Operation without a compensation module

#### 11.1.1 Coupling loose parts

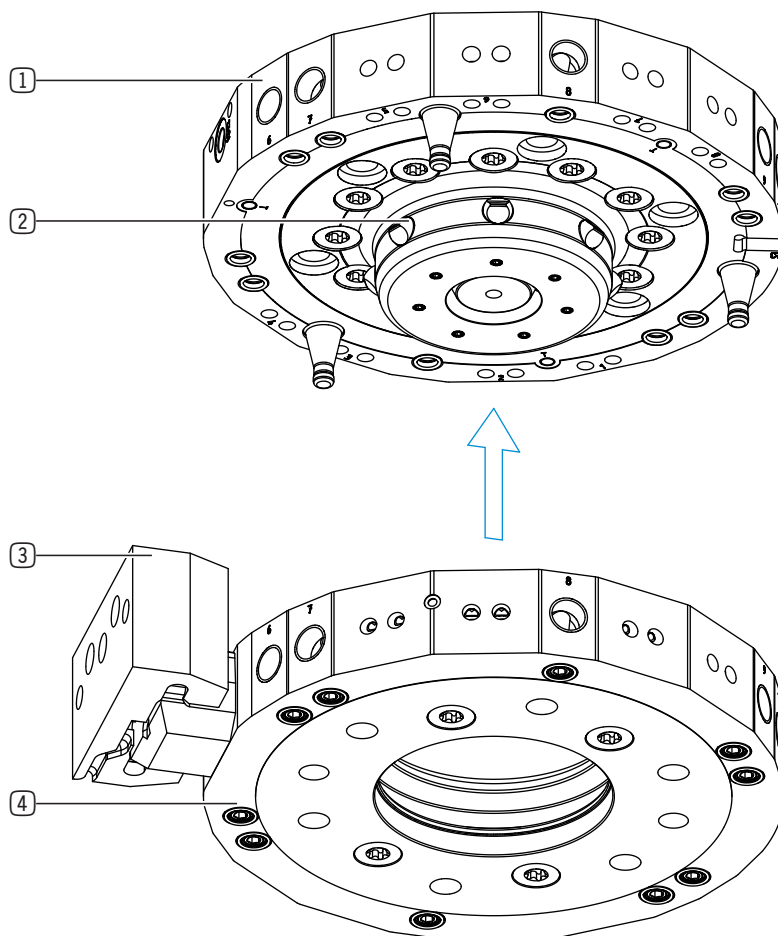
- ▶ Position the stationary part above the loose part using the centering pin.
  - ▶ Switch on the energy supply at connection B.
  - ▶ Lower the stationary part.
  - ▶ Switch on the energy supply at connection A.
- ⇒ The indexing plungers extend outwards and couple the stationary part and loose part.



- ① Stationary part
- ② Indexing plunger
- ③ Centering pin
- ④ Storage station
- ⑤ Loose part

### 11.1.2 Decoupling loose parts

- ▶ Place the loose part in the storage station.
- ▶ Switch on the energy supply at connection B.
- ⇒ The indexing plungers retract inwards and decouple the stationary part and loose part.
- ▶ Separate the stationary part from the loose part.
- ▶ Move up vertically with the stationary part.



- ① Stationary part
- ② Indexing plunger
- ③ Storage station

## 11.2 Operation with a compensation module

### 11.2.1 Coupling loose parts

- Position the stationary part above the loose part using the centering pin.
- Switch on the energy supply at connection B.
- Lower the stationary part.

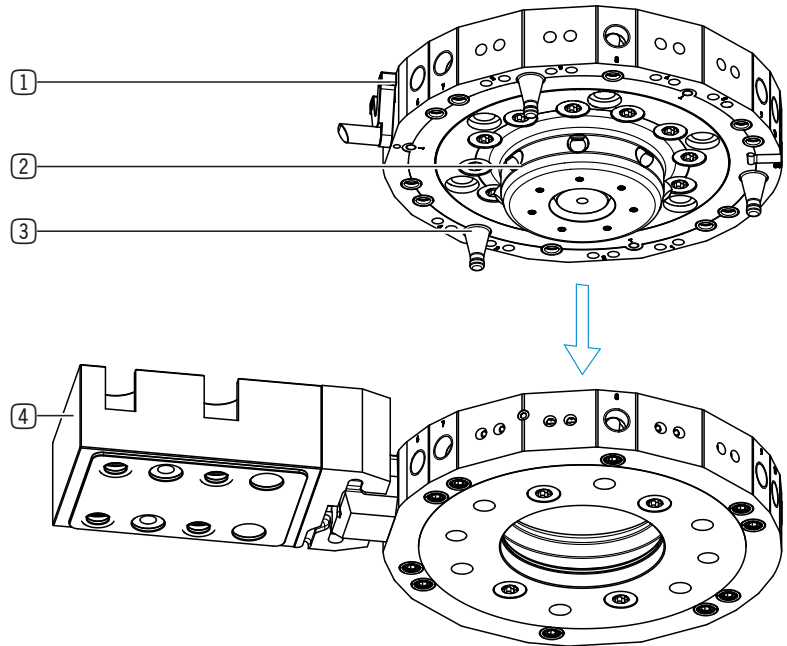
The unlocking latch releases the holder when the loose part is coupled when the storage station with a compensation module is operated without compressed air.

- Switch on the energy supply at connection A.

⇒ The indexing plungers extend outwards and couple the stationary part and loose part.

- Move up vertically with the stationary part and loose part.

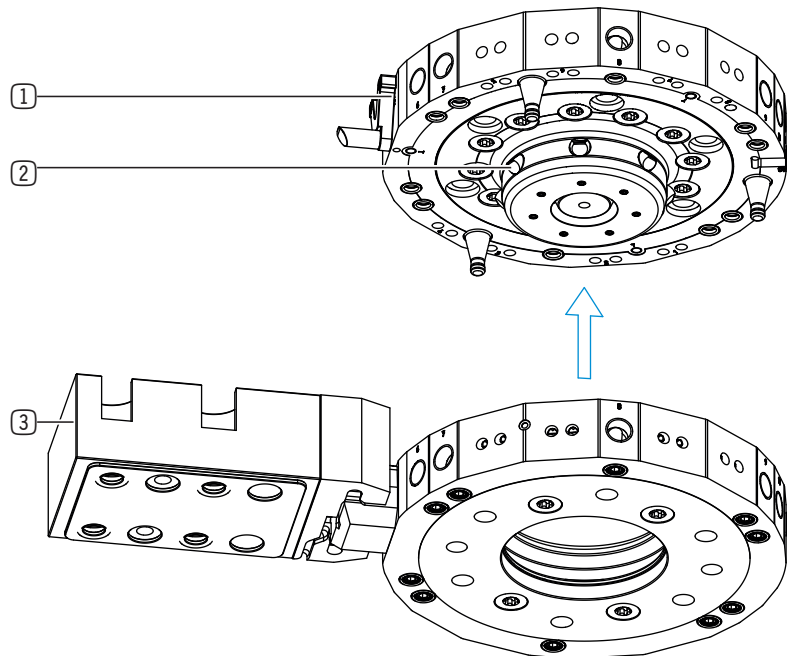
- ① Unlocking latch
- ② Indexing plunger
- ③ Centering pin
- ④ Storage station



### 11.2.2 Decoupling loose parts

- Place the loose part in the storage station.
- Switch on the energy supply at connection B.
- ⇒ The indexing plungers retract inwards and decouple the stationary part and loose part.
- Separate the stationary part from the loose part.
- Move up vertically with the stationary part.
- ⇒ When the stationary part extends, the piston rod moves into the fit on the mounting bracket and the loose part is locked.

- ① Unlocking latch
- ② Indexing plunger
- ③ Storage station



## 12 Operation with a pneumatic storage station

### WARNING



#### Risk of injury from crushing

Crushing can occur between the stationary part and loose part when coupling.

Crushing can occur between the storage station and the loose part when approaching the storage station.

- Always keep an adequate safety distance.

### WARNING



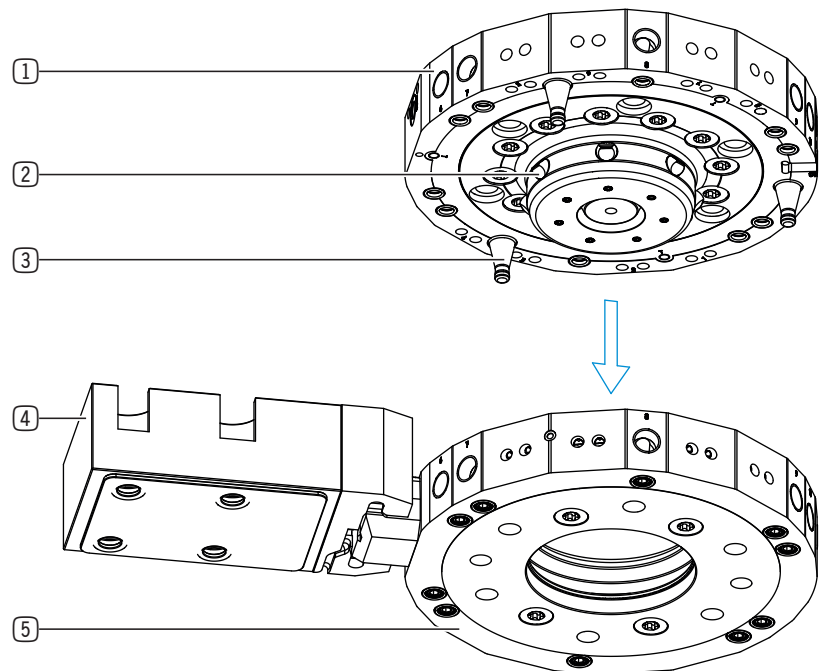
#### Risk of injury and material damage due to falling parts

If the stationary part and loose part are not coupled correctly, the loose part and tool can fall off.

- Make sure that the stationary part and loose part are coupled correctly.
- Always keep an adequate safety distance.
- Use sensors for monitoring.

### 12.1 Coupling loose parts

- Position the stationary part above the loose part using the centering pin.
  - Switch on the energy supply at connection B.
  - Lower the stationary part.
  - Unlock the storage station by applying compressed air to connection B.
  - Switch on the energy supply at connection A.
- ⇒ The indexing plungers extend outwards and couple the stationary part and loose part.

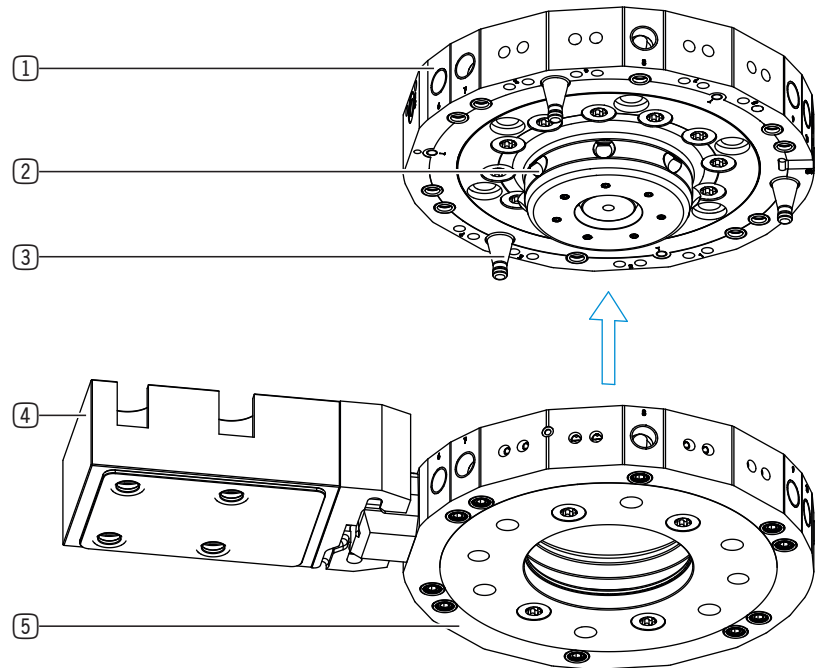


- ① Stationary part
- ② Indexing plunger
- ③ Centering pin
- ④ Storage station
- ⑤ Loose part

## 12.2 Decoupling loose parts

- ▶ Place the loose part in the storage station.
- ▶ Lock the storage station by applying compressed air to connection A.
- ▶ Switch on the energy supply at connection B.
- ⇒ The indexing plungers retract inwards and decouple the stationary part and loose part.
- ▶ Move up vertically with the stationary part.

- ① Stationary part
- ② Indexing plunger
- ③ Centering pin
- ④ Storage station
- ⑤ Loose part





## 13 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 solvent-based cleaning agents**

Seals, insulation, coatings and other surfaces may be damaged by solvent-based cleaning agents.

- ▶ Use chemically and biologically neutral cleaning agents.
- ▶ Use cleaning agents that are categorized as being nonhazardous to health.

The use of the following cleaning agents is strictly prohibited:

- Acetone
- Cleaning solvent
- Nitrocellulose thinner/turpentine oil (solvents)

Maintenance-free operation of the product is guaranteed for up to **5 million cycles**.

- ▶ Note that the product could become damaged under the following circumstances:
    - Operation with impermissible compressed air
    - 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 Group GmbH accepts no liability for any resulting malfunctions or damage.

## 14 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.

## 15 RoHS declaration

in terms of the EU Regulation 2011/65/EU

### Name and address of the manufacturer:

Zimmer Group GmbH



Am Glockenloch 2

77866 Rheinau, Germany



+49 7844 9138 0



[info@zimmer-group.com](mailto:info@zimmer-group.com)



[www.zimmer-group.com](http://www.zimmer-group.com)

We hereby declare that the incomplete machine described below

**Product designation:** Pneumatic tool changer

**Type designation:** WPR5000

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, 2024-11-28

(Place and date of issuance)

Martin Zimmer  
(Legally binding signature)  
Managing Partner

## 16 Declaration of Incorporation

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

### Name and address of the manufacturer:

**Zimmer Group GmbH**

📍 Am Glockenloch 2  
77866 Rheinau, Germany

☎ +49 7844 9138 0

✉ [info@zimmer-group.com](mailto:info@zimmer-group.com)

🌐 [www.zimmer-group.com](http://www.zimmer-group.com)

We hereby declare that the incomplete machine described below

**Product designation:** Pneumatic tool changer

**Type designation:** WPR5000

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, 2024-11-28

(Place and date of issuance)



Martin Zimmer  
(Legally binding signature)  
Managing Partner