



INSTALLATION AND OPERATING INSTRUCTIONS

Energy elements

WER3000

DDOC00214

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 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.

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.

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.
- ▶ Always adhere to the required maintenance intervals.
- ▶ When using the product under extreme conditions, adjust the maintenance interval according to the degree of contamination.

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.

INFORMATION



Proper use also includes compliance with the threshold values for the electrical parameters shown in the corresponding data sheet.

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

4 Personnel qualification

WARNING



Injuries and material damage due to inadequate qualification

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

INFORMATION



- ▶ You can find information about suitable installation sizes of tool changers in the technical data sheet on our website.
- ▶ Please contact Customer Service if you have any questions.

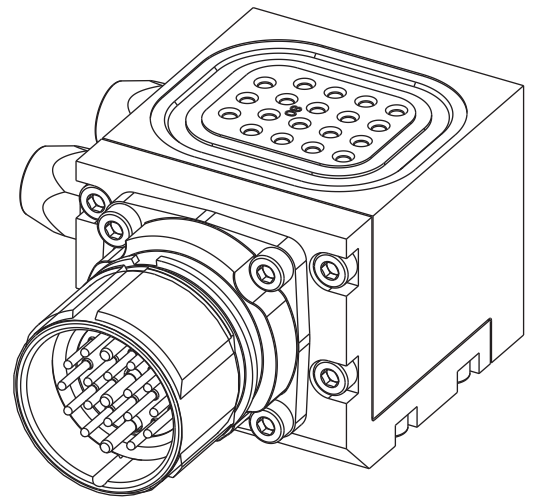
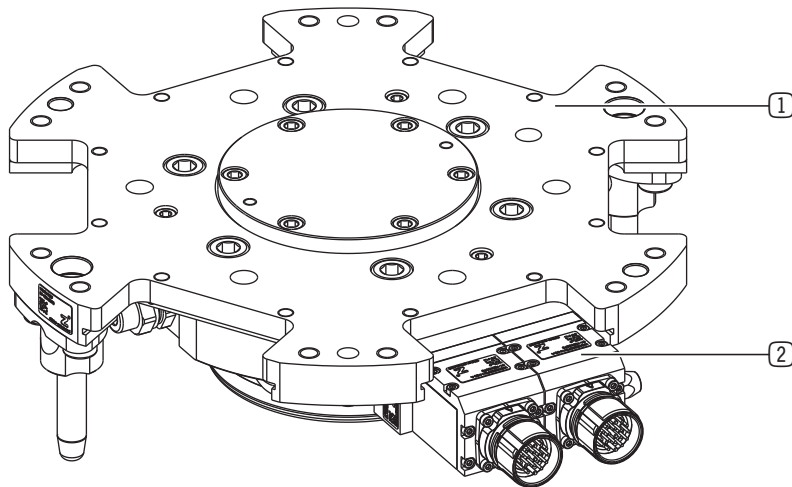
The products are connected to tool changers by adapter plates. Depending on the version of the adapter plate, multiple products can be connected.

The stationary part and loose part can be differentiated by the identifier on the type plate:

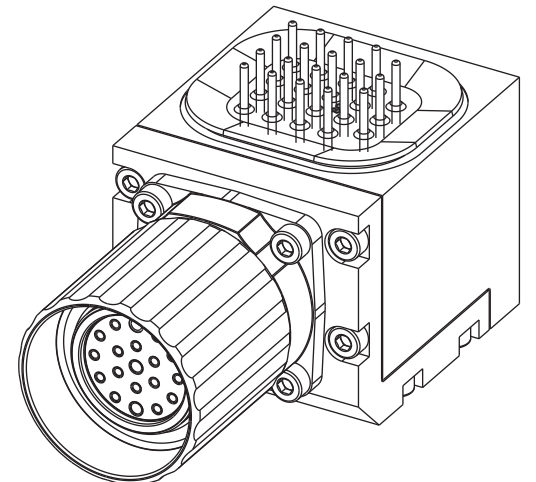
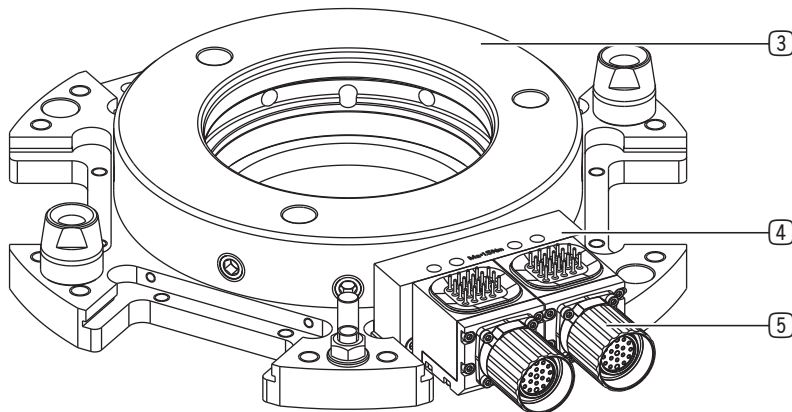
- Stationary part: WER3000F
- Loose part: WER3000L

Example 1: WWR1160 with WER3000

Stationary part



Loose part

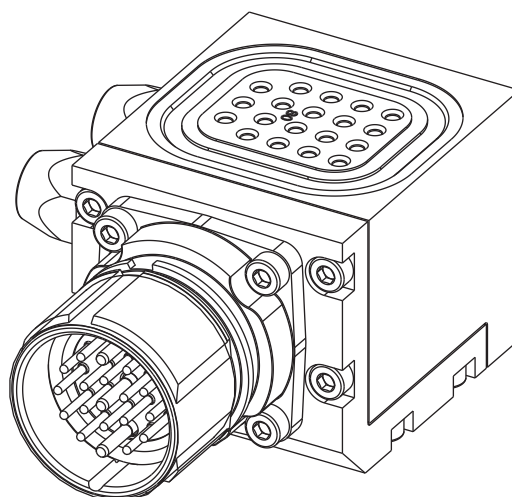
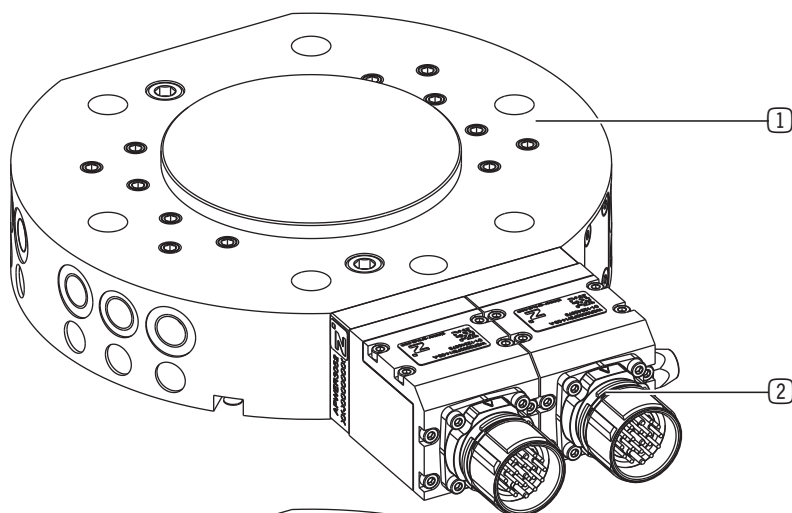


- ① Stationary-part tool changer
- ② Stationary-part energy element
- ③ Loose-part tool changer

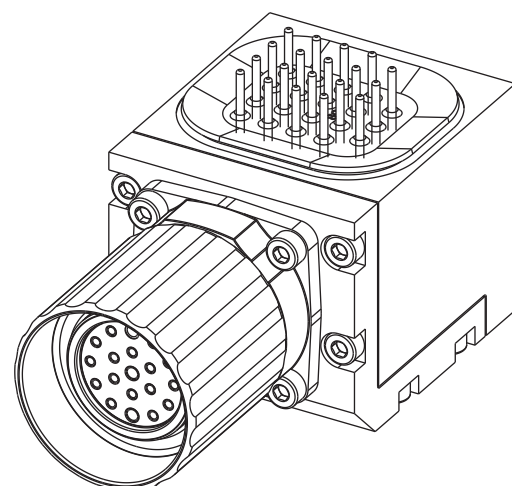
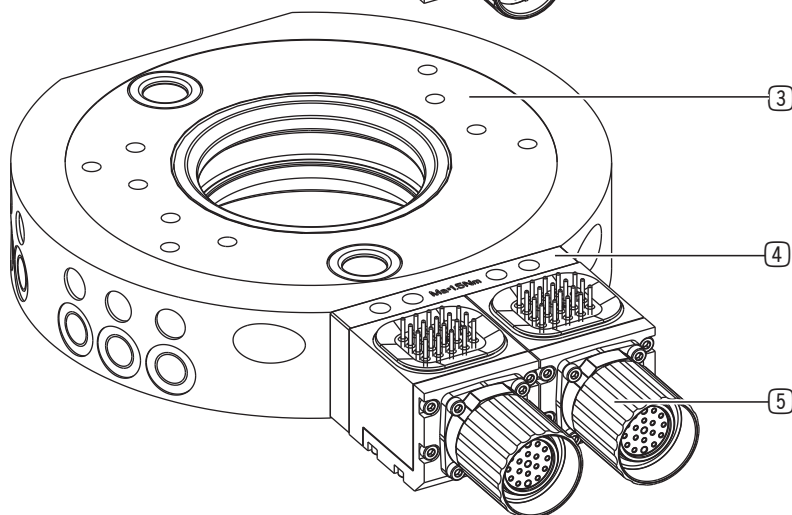
- ④ Adapter plate
- ⑤ Loose-part energy element

Example 2: WWR125 with WER3000

Stationary part



Loose part



- ① Tool Changer Fix Part
- ② Energy Element Fix Part
- ③ Tool Changer Loose Part

- ④ Adapter plate
- ⑤ Energy Element Loose Part

INFORMATION



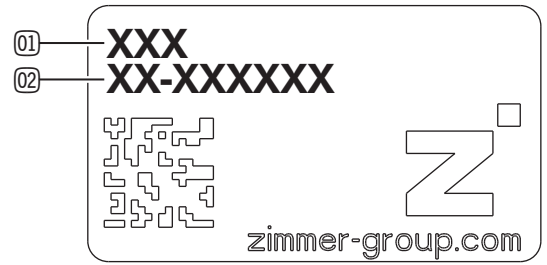
► Shut off electrical and hydraulic power before decoupling and in the decoupled state.

5.1 Type plate

A type plate is attached to the housing of the product.

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

- ① Article number
- ② Confirmation number



INFORMATION



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

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

5.2 Product variants and compatibility

INFORMATION



- ▶ You can find information about product variants and their compatibility on our website.

6 Functional description

The energy elements are suitable for the transfer of fluids and electrical energy.

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 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.
 - ▶ 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

DANGER



Risk of injury in case of non-compliance

Risk of injury due to exposed pin contacts that are live at all times.

- ▶ Never mount the loose part of electrical products on the stationary part of a tool changer.

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.

NOTICE



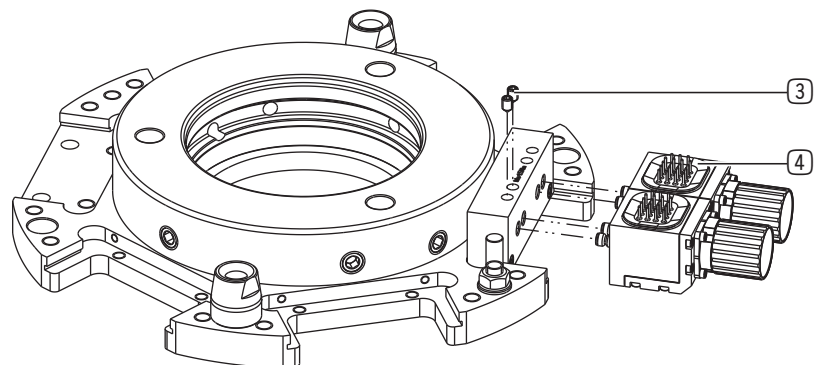
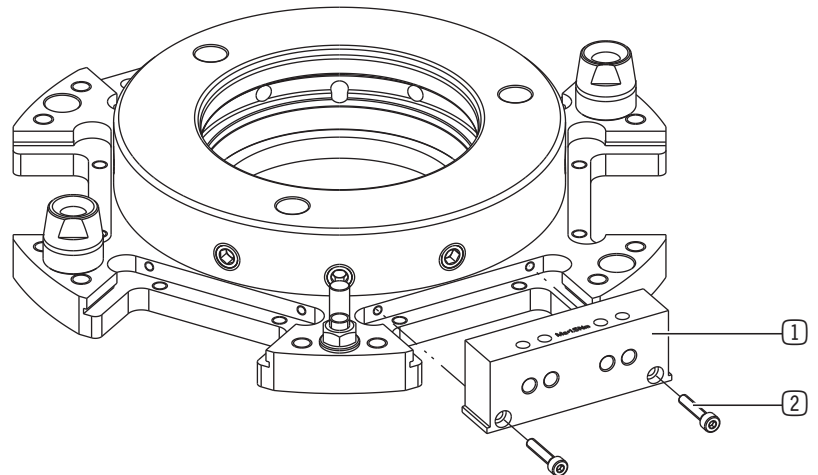
Installation may only be carried out by qualified personnel in accordance with these installation and operating instructions.

- ▶ Switch off the power supply before any assembly, installation or maintenance work.

10.1 Installing the product

The installation is illustrated using the example of a WWR1160 series tool changer.

- ▶ Insert the selected adapter plate into the guide on the tool changer.
 - ▶ Comply with the maximum tightening torque of 1.5 Nm.
 - Adapter plates for tool changers of other series are positioned using straight pins where applicable.
- ▶ Mount the adapter plate on the tool changer by using the included mounting screws.
- ▶ Push the product into the corresponding drilled holes of the adapter plate.
- ▶ Use grub screws to secure the product.



- ① Adapter plate
- ② Mounting screw
- ③ Set Screw
- ④ Loose-part energy element

10.2 Installing non-contact energy elements

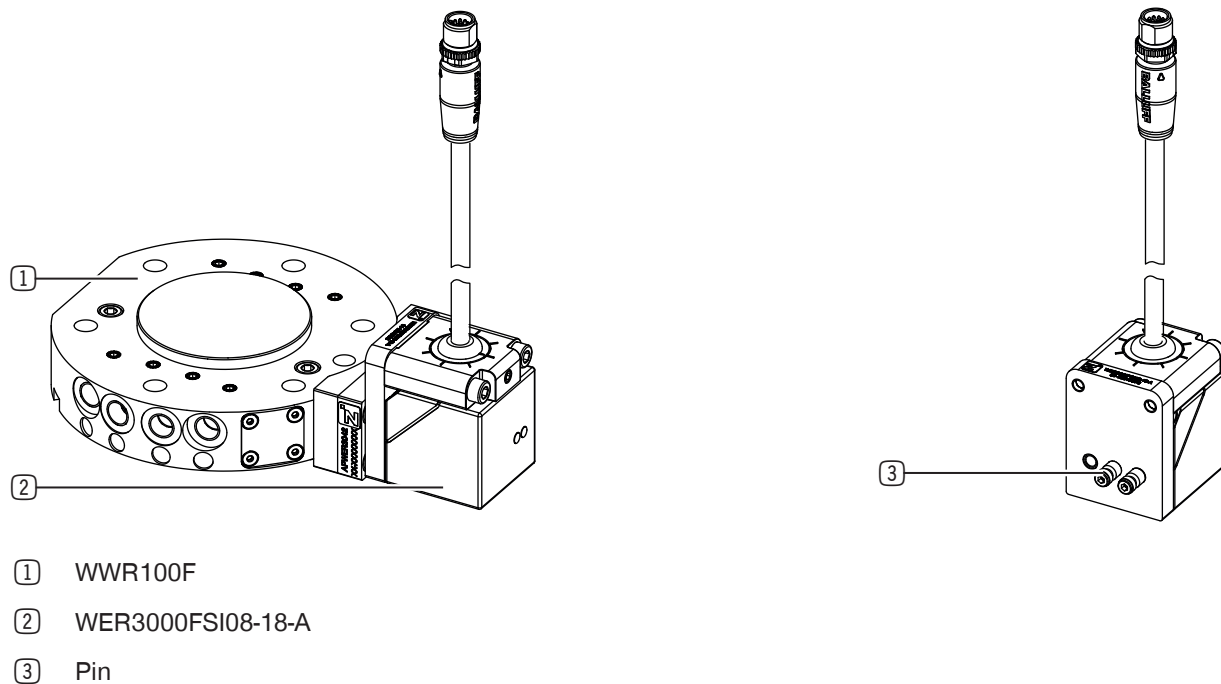
INFORMATION



- ▶ Please note that you must replace the exterior pin for the installation of specific product variants depending on the position (left/right).
 - This pertains to the products WER3000FSI08-18-A, WER3000LSI08-18-A, WER3000FIL01-18-A, WER3000LIL01-18-A.
- ▶ More information about the products can be found on the manufacturer's website.
 - www.balluff.com
- ▶ Note the manufacturer's article number in the table.

| Product | Article number |
|-------------------|----------------|
| WER3000FSI08-18-A | BIC007J |
| WER3000LSI08-18-A | BIC007K |
| WER3000FIL01-18-A | BIC007F |
| WER3000LIL01-18-A | BIC007H |

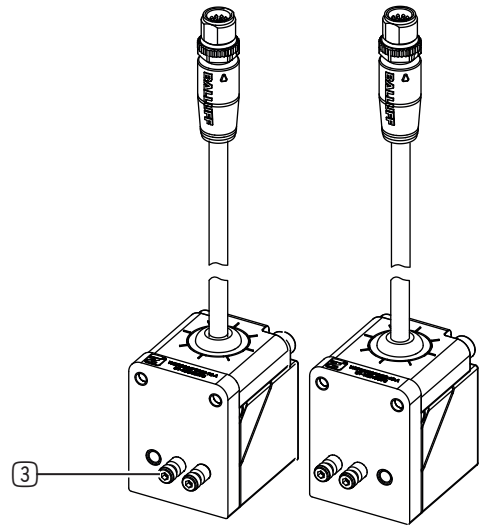
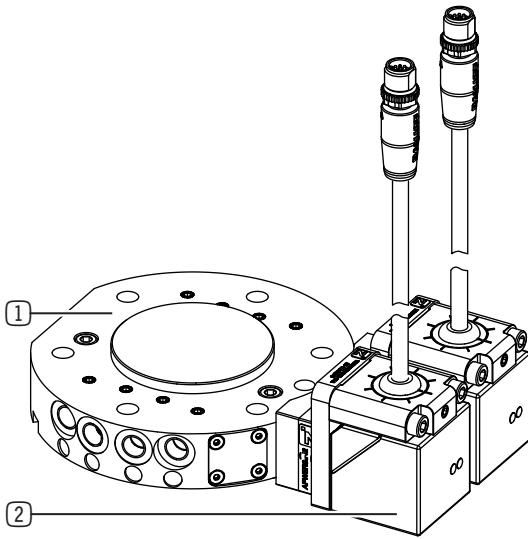
The figure provides an example of the positioning of pins when only one product is installed.



- ① WWR100F
- ② WER3000FSI08-18-A
- ③ Pin

The figure provides an example of the positioning of pins when two products are installed.

► Make sure that no pins are positioned at the exterior borehole on the product.



- ① WWR100F
- ② WER3000FSI08-18-A
- ③ Pin

10.3 Installing hydraulic energy elements

INFORMATION



This chapter pertains to the products WER3000FFL01-03-A and WER3000LFL01-03-A.

INFORMATION

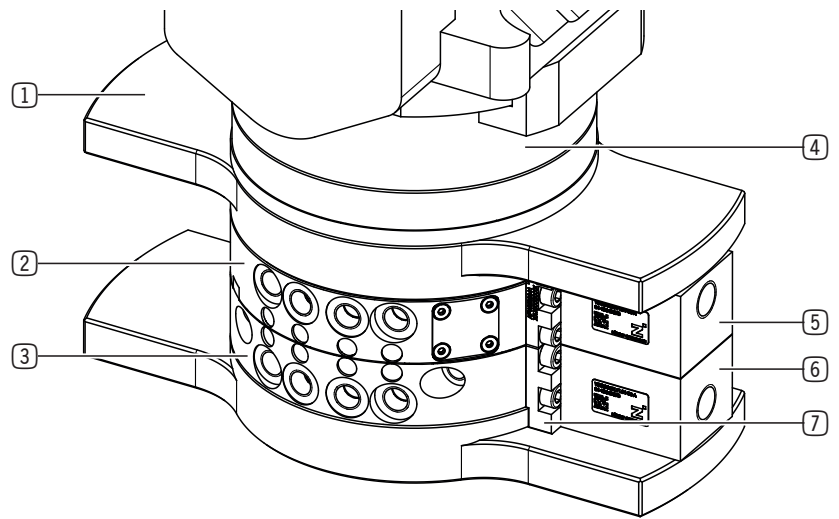


At operating pressures of 30 bar and higher, high forces are exerted that require an the hydraulic products to have an additional support or locking.

- Support on the robot
- Support by a trimmed piece of metal or an adapter plate
- Pneumatic locking

⇒ Without appropriate measures, leaks may result.

► Make sure that hydraulic products are completely covered in their width and at least 70% towards the outside.



- ① Bracing
- ② Stationary-part tool changer
- ③ Loose-part tool changer
- ④ Robot
- ⑤ Stationary-part energy element
- ⑥ Loose-part energy element
- ⑦ Adapter plate

INFORMATION



► Make sure that the thickness of the bracing meets the minimum requirement shown in the following tables.

10.3.1 Determining the bracing thickness for the WWR100 series

Adapter plates: APWER3041, APWER3042

| Steel | | | Aluminum | | |
|--------------|----------------|------------------------|--------------|----------------|------------------------|
| WER quantity | Pressure [bar] | Bracing thickness [mm] | WER quantity | Pressure [bar] | Bracing thickness [mm] |
| 1 | 30 | 2 | 1 | 30 | 3 |
| 1 | 50 | 3 | 1 | 50 | 5 |
| 1 | 100 | 4 | 1 | 100 | 6 |
| 1 | 150 | 5 | 1 | 150 | 7 |
| 2 | 30 | 2 | 2 | 30 | 4 |
| 2 | 50 | 3 | 2 | 50 | 5 |
| 2 | 100 | 4 | 2 | 100 | 7 |
| 2 | 150 | 5 | 2 | 150 | 8 |

10.3.2 Determining the bracing thickness for the WWR125 series

| Adapter plates: APWER3041, APWER3042 | | | | | |
|--------------------------------------|----------------|------------------------|--------------|----------------|------------------------|
| Steel | | | Aluminum | | |
| WER quantity | Pressure [bar] | Bracing thickness [mm] | WER quantity | Pressure [bar] | Bracing thickness [mm] |
| 1 | 30 | 3 | 1 | 30 | 4 |
| 1 | 50 | 4 | 1 | 50 | 6 |
| 1 | 100 | 5 | 1 | 100 | 7 |
| 1 | 150 | 6 | 1 | 150 | 8 |
| 2 | 30 | 3 | 2 | 30 | 4 |
| 2 | 50 | 4 | 2 | 50 | 6 |
| 2 | 100 | 5 | 2 | 100 | 7 |
| 2 | 150 | 6 | 2 | 150 | 9 |
| 3 | 30 | 3 | 3 | 30 | 4 |
| 3 | 50 | 5 | 3 | 50 | 7 |
| 3 | 100 | 6 | 3 | 100 | 8 |
| 3 | 150 | 7 | 3 | 150 | 10 |
| 4 | 30 | 4 | 4 | 30 | 5 |
| 4 | 50 | 5 | 4 | 50 | 7 |
| 4 | 100 | 6 | 4 | 100 | 9 |
| 4 | 150 | 8 | 4 | 150 | 11 |

10.3.3 Determining the bracing thickness for the WWR160 series

| Adapter plates: APWER3041, APWER3042 | | | | | |
|--------------------------------------|----------------|------------------------|--------------|----------------|------------------------|
| Steel | | | Aluminum | | |
| WER quantity | Pressure [bar] | Bracing thickness [mm] | WER quantity | Pressure [bar] | Bracing thickness [mm] |
| 1 | 30 | 3 | 1 | 30 | 4 |
| 1 | 50 | 5 | 1 | 50 | 7 |
| 1 | 100 | 6 | 1 | 100 | 8 |
| 1 | 150 | 7 | 1 | 150 | 10 |
| 2 | 30 | 4 | 2 | 30 | 5 |
| 2 | 50 | 5 | 2 | 50 | 7 |
| 2 | 100 | 6 | 2 | 100 | 9 |
| 2 | 150 | 8 | 2 | 150 | 11 |
| 3 | 30 | 4 | 3 | 30 | 5 |
| 3 | 50 | 6 | 3 | 50 | 8 |
| 3 | 100 | 7 | 3 | 100 | 10 |
| 3 | 150 | 9 | 3 | 150 | 12 |
| 4 | 30 | 4 | 4 | 30 | 6 |
| 4 | 50 | 6 | 4 | 50 | 9 |
| 4 | 100 | 8 | 4 | 100 | 11 |
| 4 | 150 | 9 | 4 | 150 | 13 |

10.3.4 Determining the bracing thickness for the WWR1160 and WWR1200 series

| Adapter plate: APWER3064 | | | | | |
|--------------------------|----------------|------------------------|--------------|----------------|------------------------|
| Steel | | | Aluminum | | |
| WER quantity | Pressure [bar] | Bracing thickness [mm] | WER quantity | Pressure [bar] | Bracing thickness [mm] |
| 1 | 30 | 7 | 1 | 30 | 10 |
| 1 | 50 | 10 | 1 | 50 | 15 |
| 1 | 100 | 12 | 1 | 100 | 18 |
| 1 | 150 | 15 | 1 | 150 | 22 |
| 2 | 30 | 7 | 2 | 30 | 11 |
| 2 | 50 | 11 | 2 | 50 | 17 |
| 2 | 100 | 14 | 2 | 100 | 20 |
| 2 | 150 | 17 | 2 | 150 | 25 |
| 3 | 30 | 8 | 3 | 30 | 12 |
| 3 | 50 | 12 | 3 | 50 | 18 |
| 3 | 100 | 15 | 3 | 100 | 22 |
| 3 | 150 | 18 | 3 | 150 | 27 |
| 4 | 30 | 9 | 4 | 30 | 13 |
| 4 | 50 | 14 | 4 | 50 | 20 |
| 4 | 100 | 17 | 4 | 100 | 25 |
| 4 | 150 | 20 | 4 | 150 | 30 |

| Adapter plate: APWER 3062 | | | | | |
|---------------------------|----------------|------------------------|--------------|----------------|------------------------|
| Steel | | | Aluminum | | |
| WER quantity | Pressure [bar] | Bracing thickness [mm] | WER quantity | Pressure [bar] | Bracing thickness [mm] |
| 1 | 30 | 5 | 1 | 30 | 7 |
| 1 | 50 | 7 | 1 | 50 | 11 |
| 1 | 100 | 8 | 1 | 100 | 14 |
| 1 | 150 | 10 | 1 | 150 | 16 |
| 2 | 30 | 6 | 2 | 30 | 9 |
| 2 | 50 | 8 | 2 | 50 | 14 |
| 2 | 100 | 10 | 2 | 100 | 17 |
| 2 | 150 | 12 | 2 | 150 | 20 |

10.4 Installing the energy supply

CAUTION



Non-compliance may result in material damage.

- ▶ When routing the supply lines, ensure that the joints of the robot arm or tool changer move easily enough.
- ▶ Switch off the power supply to the machine before carrying out any work.
- ▶ Secure the power supply against being switched on unintentionally.
- ▶ Use only supply lines of adequate length.
- ▶ Comply with the permitted bending radii of the supply lines.
- ▶ Use suitable protection systems and fastening points for the supply lines.
- ▶ When routing and securing the supply lines, make sure that they do not put any additional load on the product.

10.4.1 Electrical products

NOTICE



For easier installation, Zimmer GmbH recommends completing the electrical connection before installing the product on the tool changer.

INFORMATION



- ▶ You can find the information about round plugs on the technical data sheet on our website.

- ▶ Use a round plug to connect the cables to the product.

10.4.2 Hydraulic products

INFORMATION



- ▶ You can find the information about connecting threads on the technical data sheet on our website.

- ▶ Connect the products to the power system using connecting threads.
 - ▶ Make sure that the pressure class is correct when selecting suitable hoses.

10.4.3 Pneumatic products

INFORMATION



- ▶ You can find the information about connecting threads on the technical data sheet on our website.

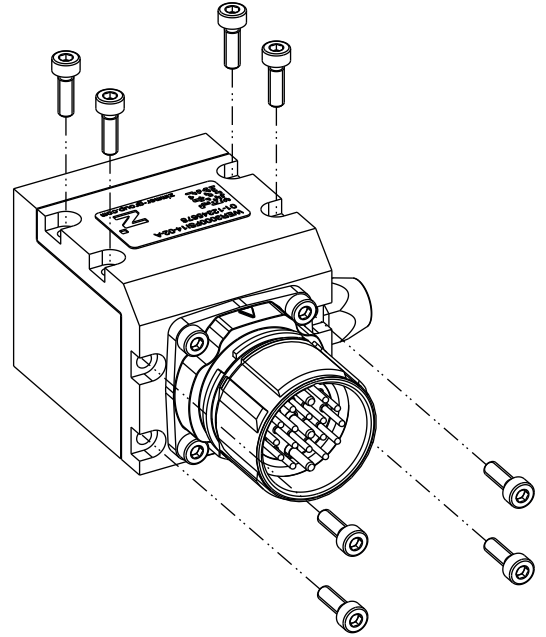
When they are coupled, pneumatic products seal using the pre-load of the seal. The pre-load is ensured by having the elements at a defined distance from each other.

- ▶ Connect the products to the power system using connecting threads.
 - ▶ Make sure that the pressure class is correct when selecting suitable hoses.

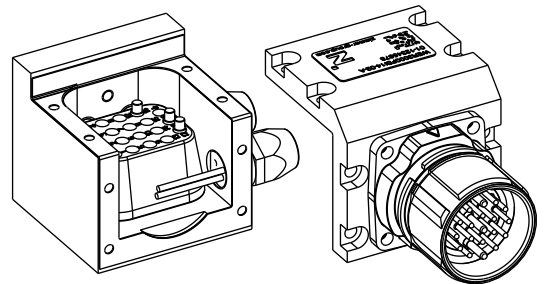
10.5 Aligning the plug

The plug orientation of the product is aligned radially in factory condition.

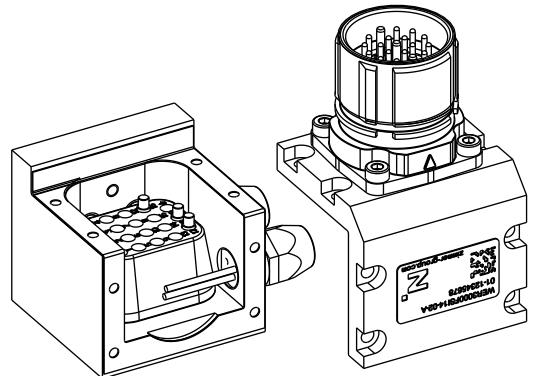
- ▶ Unscrew all mounting screws on the bracket.
 - ▶ Store all mounting screws carefully.



- ▶ Carefully detach the bracket from the housing.
- ▶ During the subsequent work steps, make sure the internal cables do not get damaged.



- ▶ Turn the bracket so that the plug orientation is aligned axially.
- ▶ Bring the bracket and the housing back together in this position.

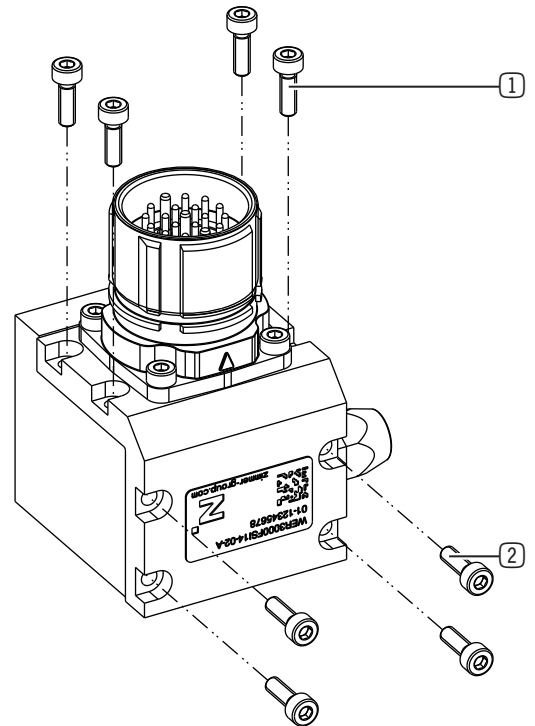


INFORMATION



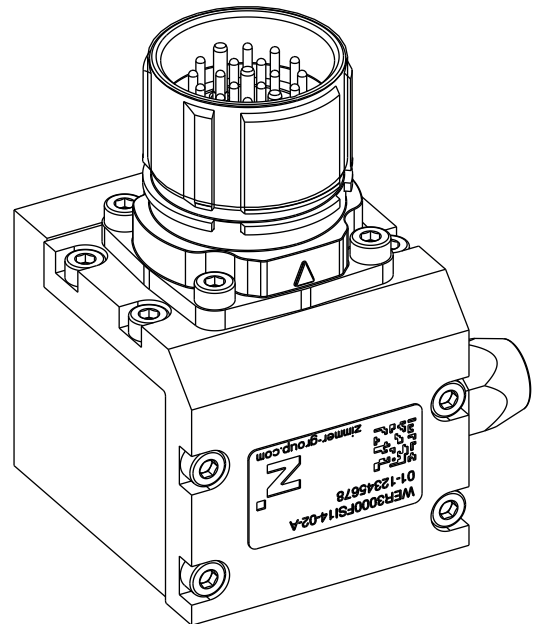
► Comply with the tightening torque of 0.6 Nm.

- Install the bracket on the housing using the mounting screws.
- Loosely attach all mounting screws.
- Tighten mounting screws A.
- Tighten mounting screws B.



① Mounting screw B

② Mounting screw A



10.6 Installing the protective elements

NOTICE

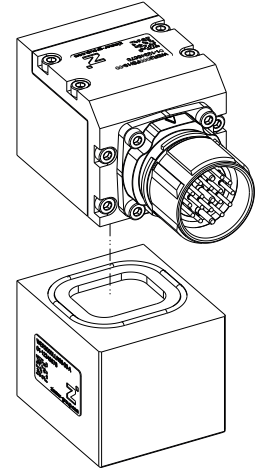


The products are open while decoupled. Protective elements are necessary to protect products that are temporarily not being used.

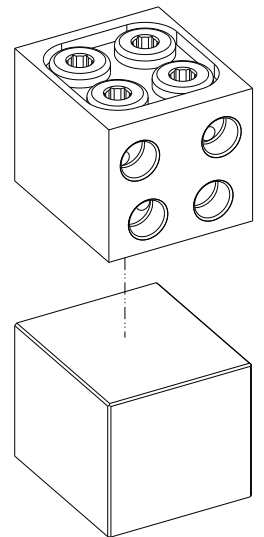
- ▶ While the products are uncoupled, protect them from dirt from the outside.

Protective elements protect unneeded stationary parts of the products from outside contamination.

- For electrical products, the side with the seal ring and the exposed parts for the contacts must point in the direction of the element to be protected. The adjacent image shows a combination with WER3000FSI19-00 as an example.



- For pneumatic products, the flat side must point in the direction of the element to be protected. The adjacent image shows a combination with WER3000FPL04-06-A as an example.



10.7 Installing the sensors

INFORMATION



► You can find information on our website.

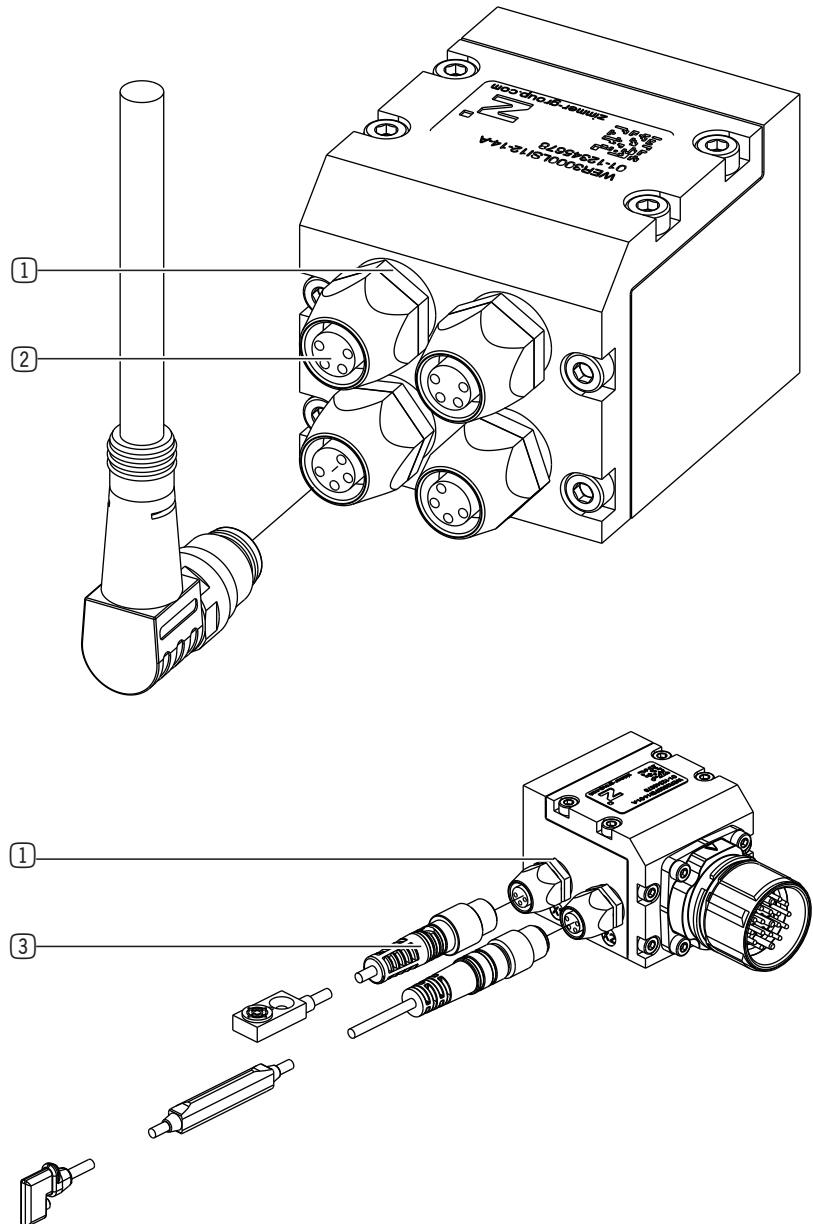
INFORMATION



For example, the WER3000FSI14-01-A and WER3000FSI14-02-A product variants are products with a direct connection for a piston position sensor and a loose part presence query.

The orientation of the round plug on the product can be changed.

- Loosen the lock nut.
- Turn the round plug to the desired position.
- Retighten the lock nut.



- ① Lock nut
- ② Round plug
- ③ Sensor

10.8 Encoding the energy elements

INFORMATION



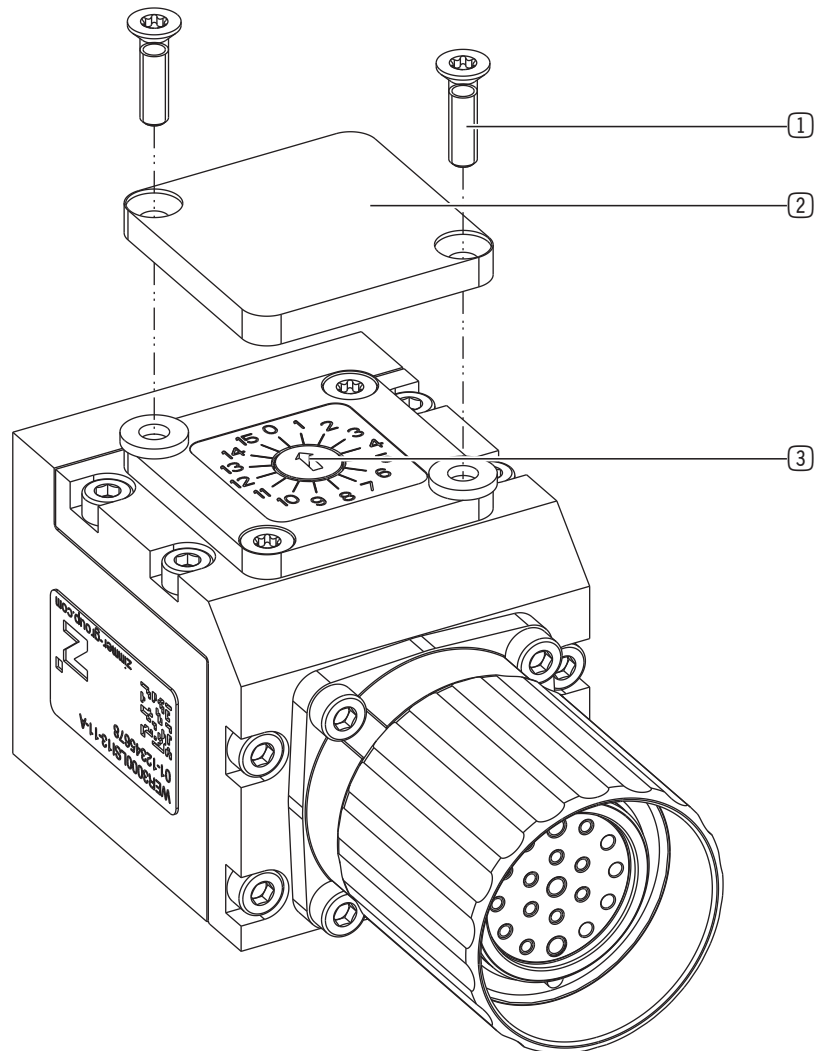
- ▶ For the encoding table, refer to the wiring diagram on the technical data sheet on our website.
- ▶ You can find the pin numbers on the technical data sheet on our website.

Different tools can be encoded using encodable loose parts.

The encoding can be read out in binary fashion via contacts 15 to 18 on the round plug.

The encoding makes it possible to differentiate between multiple loose parts by means of consecutive numbering.

- ▶ Remove the mounting screws.
- ▶ Remove the cover.
- ▶ Set the rotary switch to the corresponding number using a suitable slotted screwdriver.
- ▶ Reinstall the cover on the product using the mounting screws.



- ① Mounting screw
- ② Cover
- ③ Rotary switch

11 Service life

The following service life values can be expected if maintenance is carried out correctly.

| Transmission type | Mating cycles |
|--|---------------|
| Electrical with plug contacts ≤ 15 A | 1 million |
| Electrical with plug contacts > 15 A | 100,000 |
| Electrical with spring contacts ≤ 3 A | 1 million |
| Hydraulic with operating pressure up to max. 150 bar | 1 million |
| Pneumatic | 5 million |

12 Maintenance

This maintenance work includes inspection, maintenance and overhauling.

Maintenance-free operation includes the following number of cycles, depending on the version of the product:

| Transmission type | Maintenance work |
|-------------------|---|
| Electric | <ul style="list-style-type: none"> ▶ Carry out a visual inspection every 50,000 plug cycles or every 8 weeks. ▶ Clean the pins if there is a small amount of dirt or minor discoloration. ▶ Check the electrical function. ▶ Replace damaged products. |
| Hydraulic | <ul style="list-style-type: none"> ▶ Carry out a visual inspection every 50,000 plug cycles or every 8 weeks. ▶ Clean the contact surfaces if there is a small amount of dirt or minor discoloration. ▶ Check the leak-tightness. ▶ Replace damaged products. |
| Pneumatic | <ul style="list-style-type: none"> ▶ Carry out a visual inspection every 50,000 plug cycles or every 8 weeks. ▶ Clean the contact surfaces if there is a small amount of dirt or minor discoloration. ▶ Check the leak-tightness. ▶ Replace damaged products. |

- ▶ Comply with the specifications for maintenance work in order to ensure failure-free operation.
 - ▶ Take into account the maintenance work in the maintenance plan of the complete system.
 - ▶ Document all maintenance work.
- ⇒ The operator is responsible for documenting maintenance work.

12.1 Visual inspection

The visual inspection merely includes visually inspecting component parts and their function.

If any irregularities or damage are identified during the visual inspection, a more detailed check of the component parts must be carried out.

12.2 Check for leaks

A check for leaks is carried out for pneumatic and hydraulic products. The check for leaks involves visually and acoustically inspecting the connection points of the supply lines and the transitions of the products themselves. The check can also be carried out using a leak tester.

- ▶ Replace leaky component parts immediately.

12.3 Cleaning

Clean products and contact surfaces are essentially important for the functional safety.

⇒ Contamination can lead to malfunctions.

12.3.1 Cleaning electrical products

NOTICE



Non-compliance may result in material damage.

Cleaning the contact pins with liquid or aggressive agents or hard brushes or other tools can lead to damage of the contact pins and to malfunctions.

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

INFORMATION



If there is severe contamination that cannot be cleaned using a cloth or if there are deformations, cracks or other mechanical damage in the area of the contact pins or contact holder, these elements must be replaced completely.

- ▶ Please contact Customer Service.

- ▶ Clean contamination from electrical contacts using suitable fiberglass pencils.
- ▶ In order to prevent damage, refrain from cleaning the socket contacts.

12.3.2 Cleaning hydraulic products

INFORMATION



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

- ▶ Use soft, lint-free cloths for cleaning.
- ▶ Replace damaged products.

12.3.3 Cleaning pneumatic products

NOTICE



Non-compliance may result in material damage.

The surface of the loose part serves as the sealing surface and must be free of damage and dirt. Cleaning the surface using liquid or aggressive agents or hard brushes or other tools can lead to damage.

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

INFORMATION



If there is severe contamination that cannot be cleaned using a cloth or if there are deformations, cracks or other mechanical damage in the area of the contact pins or contact holder, these elements must be replaced completely.

- ▶ Please contact Customer Service.

- ▶ Use soft, lint-free cloths for cleaning.
- ▶ Replace damaged products.

13 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.

14 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: Energy elements

Type designation: WER3000

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, 2021-08-20
 (Place and date of issuance)



Martin Zimmer
 (Legally binding signature)
 Managing Partner

15 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: Energy elements
Type designation: WER3000

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. 1.5, No. 1.3.2, No. 1.3.4, No. 1.3.7, No. 1.5.3, No. 1.5.4, No. 1.5.8, 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, 2021-08-20

(Place and date of issuance)

Martin Zimmer
(Legally binding signature)
Managing Partner

16 Declaration of Conformity

In terms of the EU Directive 2014/35/EU (Low voltage directive)

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 products described below

Product designation: Energy elements

Type designation: WER3000

conforms to the requirements of the 2014/35/EC directive 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 60204-1 | Safety of machinery – Electrical equipment of machines - Part 1: General requirements |

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, 2021-08-20
(Place and date of issuance)



Martin Zimmer
(Legally binding signature)
Managing Partner