



# INSTALLATION AND OPERATING INSTRUCTIONS

2-jaw parallel gripper with quick-change system

LWR50L-23-00005-A LWR50L-23-00006-A LWR50L-23-00007-A LWR50L-23-00008-A

DDOC01273

THE KNOW-HOW FACTORY



# Parameter explanation (glossary)

ZIMMER

| Parameter          | Explanation  |
|--------------------|--|
| ActualPosition     | Value of the current position of the product [1/100 mm]  |
| BasePosition       | BasePosition is the outer jaw position. Depending on the gripper profile, this can also be a work position.  |
| ControlWord        | Activation of the product<br>Only one bit is permitted to be active in the word. The value "0" is also permitted.  |
| DeviceMode         | Used to select gripping profiles as well as the additional help modes in the product.  |
| Diagnosis          | If an error occurs, outputs a diagnostic code that can be compared with the error list.  |
| DIR                | Direction/24 V cable connection - Depending on the product, this signal is used to move the product.   |
| Error              | Fault  |
| GND                | Abbreviation for ground connection   |
| GripForce          | Setting the gripping force   |
| Offset             | Correction value   |
| PositionTolerance  | Tolerance range for TeachPosition, BasePosition and WorkPosition<br>The value of the parameter acts in both directions.  |
| ShiftPosition      | ShiftPosition is a switching position between pre-positioning and gripper movement.  |
| StatusWord         | In its bits, returns the most important information about the status of the product to the control system.   |
| Teach/Adjust       | Programming/Adjusting<br>With this signal, depending on the gripper type, the current position of the gripper jaws can be<br>taught in as the new workpiece position.<br>Adjust is used to define the reachable end positions of the gripper jaws. |
| TeachPosition      | Actual workpiece position  |
| Traversing routine | Defined procedure for movement of the gripper jaws   |
| Travel path        | Path on which the gripper jaws travel.   |
| WorkpieceNo        | Selection of the workpiece recipes stored in the product   |
| WorkPosition       | Inner jaw position on the product<br>Depending on the application, this can also be the standby position.  |



# Content

| 1  | Supporting documents         1.1       Notices and graphics in the installation and operating instructions | 5  |
|----|--|----|
| 2  | Safety notices   | 6  |
| 3  | Proper use   |    |
| 4  |  |    |
| 4  | Personnel qualification  | 8  |
| 5  | Product description  | 9  |
|    | 5.1 Possible applications  | 10 |
|    | 5.2 Forces and torques   | 10 |
|    | 5.3 Type plate   | 10 |
|    | 5.4     Product variants and compatibility   | 10 |
| 6  | Functional description   |    |
| 0  | 6.1 LED status display   |    |
|    | 6.2 Sensors  | 14 |
|    | 6.2.1 Wiring diagram sensor system   | 15 |
|    | 6.2.2 Adjust the sensors in the inspection position  | 15 |
|    | 6.2.3 Adjust the sensors in the storage position   | 15 |
|    | 6.3 Functional safety  | 16 |
|    | 6.4 Control  | 16 |
|    | 6.5 Verified configuration examples  | 16 |
| 7  | Technical data   |    |
|    | 7.1 Electrical specifications  | 17 |
|    | 7.2 Protection class   | 17 |
| 8  | Accessories/scope of delivery  | 17 |
| 9  | Transportation/storage/preservation  | 17 |
| 10 | Installation   |    |
|    | 10.1 Installing the product  |    |
|    | 10.1.1 Installing the stationary part and end effector with loose part                                     | 19 |
|    | 10.2 Installing the energy supply  | 20 |
|    | 10.3 Static charge   |    |
|    | 10.4 Heat dissipation  |    |
|    | 10.5 Installing accessories  | 20 |
| 11 | Commissioning  | 21 |
|    | 11.1 Restart   | 21 |
|    | 11.2 Switching sequence  | 21 |
|    | 11.3 Switching sequence for teaching in the end position   |    |
|    | 11.3.1 "Adjust" movement   |    |
|    | 11.4 Minimum travel path   | 22 |
| 12 | Operation  | 23 |
|    | 12.1 Adjustable gripping force   | 23 |
|    | 12.2 Emergency release   | 24 |
| 13 | Gripping force charts  | 24 |
| 14 | Status in LED display  | 25 |
| 15 | Maintenance  | 26 |
|    |  |    |



| 16 | Decommissioning/disposal     | 26   |
|----|------------------------------|------|
| 17 | RoHS declaration             | 27   |
| 18 | REACH declaration            | 27   |
| 19 | Declaration of Incorporation | 28   |
| 20 | Declaration of Conformity    | . 29 |



#### **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!
- $\Rightarrow$  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!
- $\Rightarrow$  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 hold, transport and store workpieces.

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.



#### CAUTION



Notes and handling regulations for electrostatically sensitive components

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

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

#### WARNING

# Risk of injury caused by suspended loads

- Improper handling of suspended loads can cause serious injury.
- Always keep an adequate safety distance from suspended loads.
- Never walk underneath a suspended load.



#### 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 specifically for (cooperative/collaborative) use on robot systems and in combination with the MATCH quick-change system.

The product is designed exclusively for electric operation using a 24 V DC power supply.

The product must always be mounted on materials that dissipate heat.

The product is intended for industrial use.

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

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

Direct contact with perishable goods/food is not permitted.

Observance of the technical data and of the installation and operating instructions are part of proper use.

# 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.

#### NOTICE



- Make sure that the setting of the gripping force and the selection of the gripper finger length are correct to prevent incorrect bracing of the gripper jaws.
- An incorrect configuration or selection can lead to malfunction

The end-of-arm platform of Zimmer Group is equipped with an extensive portfolio of functions and with universal communication interfaces. MATCH is compatible with any lightweight construction robot. The system can be mounted to the robot flange and set up conveniently with just a few manual adjustments.

The product is a safe quick-change system (end effector with loose part).

An electric digital gripper is installed in the product.

The basic and proven safety principles from DIN EN 13849-1 can be complied with only if original parts from Zimmer GmbH are used.

The original parts from Zimmer GmbH required for the safety principles are:

- 1 Stationary part (LWR50F-XX)
- 2 End effector with loose part (LWR50L-XX)
- 3 Storage station (ALWR1-50-A) (sensors optional)

For the overall safety of the function, all three components (stationary part, end effector with loose part, and storage station) must be taken into account (see "Functional Safety" section).





#### 5.1 Possible applications

#### outside gripping

The product can be used for outside gripping.



#### inside gripping

The product can be used for inside gripping.



#### 5.2 Forces and torques

#### INFORMATION



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

Please contact Zimmer Customer Service if you have any questions.

#### 5.3 Type plate

A type plate is attached to the housing of the product. The article number and confirmation number are shown on the type plate.

- ① Article number
- 2 Confirmation number

#### 5.4 Product variants and compatibility

#### INFORMATION

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



#### 5.5 Use in applications

The criteria listed below justify the suitability of the product for use in collaborative applications:

- The product has been designed in accordance with the specifications of ISO/ TS 15066.
- The power of the motor in combination with the transmission design and the pre-assembled gripper jaws is not sufficient to generate a gripping force > 140 N upon vulnerable areas of the body.
- The gripping forces generated when gripping soft objects are significantly reduced, since the amount of dynamic force is lowered. Compliance with the maximum permitted gripping force has been verified using a suitable measuring instrument.
- The product is engineered to be inherently safe and is designed with rounded edges and shapes that prevent crushing and shearing points from being created.

Automation cell

Cooperation

Zones of action

Separated workspaces

**Coexistence** Detection of presence



Collaboration Shared workspaces







# 6 Functional description

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

The force of the motor is transmitted by a worm drive. A pinion and a rack generate the movement of the gripper jaws and synchronize these movements.

Despite its small installation space, the product is suited for gripping a wide range of form-fit and frictional fit parts.

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

The gripping force can be adapted optimally to the workpiece conditions.

The product can be controlled like a valve via I/O-ports.

The product is equipped with a hot-plug function, which allows for the replacement of an end effector with loose part while electrically live.

The end effector with loose part is designed in such a way that incorrect insertion into the storage station is impossible.





#### 6.1 LED status display

- 11 Power/communication
- 12 Error





#### 6.2 Sensors

Example image of a combination consisting of a stationary part, end effector with loose part, and storage station.

Check up to two sensors in the storage position to see whether the end effector with loose part is present in the storage station.

Then move the stationary part onto the end effector with loose part from above. The centering pins of the end effector with loose part help in insertion.

The robot, along with the stationary part and end effector with loose part, moves to the inspection position sensors in the storage station.

The two sensors in the inspection position (test channel) respond if the lockings are extended and make contact in the stationary part.

When the stationary part and end effector with loose part are joined, the internal spring-pin contacts for signal transmission are contacted.

Then the Connect LED changes color from red to green and a Connect signal (depending on the variant) is passed to the higher-level control system.



2 End effector with loose part for quick-change system

- Sensor in storage position (end effector with loose part present)
- Sensor in inspection position (test channel, locking extended)

3

Storage station



#### 6.2.1 Wiring diagram sensor system

Sensor plug connection M8 3-pin:



#### Graphical symbol for sensor in storage position



# 4 Safety Input

2 sensors in inspection position connected in series

Power Supply



# 6.2.2 Adjust the sensors in the inspection position

- Bring the markings on the locking elements of the end effector with loose part to the position of the front markings of the storage station.
- ► Turn in the sensors until they emit a signal.
- ► Fasten the sensors at this position.
- ► Coat the sensors with sealing lacquer.
- 6.2.3 Adjust the sensors in the storage position
- Position an end effector with loose part in the storage station.
- ► Turn in the sensors until they emit a signal.
- Coat the sensors with sealing lacquer.
- (13) Sensor in storage position (end effector with loose part present)
- Sensor in inspection position (test channel, locking extended)





#### 6.3 Functional safety

For the overall safety of the function, all three components (stationary part, end effector with loose part and storage station) must be taken into account.

The safety function that ensures secure locking between the stationary part and end effector with loose part of the product is implemented via two redundant action channels that consist of a mechanical locking and springs.

Technical supplementary safety measures (sensors) provide a high degree of diagnostic coverage. The product can thus be classified into control category 3 in accordance with Chapter 6.2.6 of DIN EN ISO 13849-1. According to Figure 5, Chapter 4.5.4 of the specified standard, the PL d can be achieved with this product.

Fault elimination in accordance with DIN EN ISO 13849-2, Annex A, Table A2 and A3 for the helical compression springs used can be given.

#### 6.4 Control

#### INFORMATION

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

#### 6.5 Verified configuration examples

#### INFORMATION



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

#### INFORMATION



The product has a mechanical self-locking mechanism to ensure that the workpiece remains held by the product in the event of power supply loss or failure (e.g. an emergency stop).

Please contact Zimmer Customer Service if you have any questions.



# 7 Technical data

#### INFORMATION

- ▶ You can find the information in the technical data sheet on our website.
- This data varies within the series, depending on the specific design.
- Please contact Zimmer Customer Service if you have any questions.

#### 7.1 Electrical specifications

#### 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.

#### 7.2 Protection class

#### NOTICE



The product achieves protection class IP40 in all mounted positions of installation.

#### 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.
- Close electrical connections using suitable covers.



#### **10 Installation**

#### WARNING



#### Risk of injury due to uncontrolled movements

- Risk of injury in case of unexpected movement of the machine or system into which the product is to be installed.
- Switch off the energy supply of the machine before any work.
- Secure the power supply against being switched on unintentionally.
- Check the machine for any residual energy that may be present.

#### CAUTION



#### Risk of injury due to uncontrolled movements

- Risk of injury in the event of uncontrolled movement of the product when the power supply is connected.
- Switch off the power supply to the machine before carrying out any work.
- Secure the power supply against unintentional switch-on.
- Check the machine for any residual energy.
- 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

#### INFORMATION



- ► For information, refer to the installation and operating instructions of the fixed part on our website.
- LWR50F

Fasten the product on the stationary part. No assembly work is necessary for the product. The end effector is already connected to the loose part.



 $\subset$ 

h

#### 10.1.1 Installing the stationary part and end effector with loose part

Example image of a combination consisting of a stationary part, end effector with loose part, and storage station.

#### Manual exchange:

The end effector with loose part can be installed on the fixed part and locked manually.

#### Automatic exchange:

The stationary part is moved to the end effector with loose part in the storage station and locked by means of the storage station (see "Sensors" section).



The design rules out incorrect joining, as the end effector with loose part is equipped with two different bolts.



#### 10.2 Installing the energy supply

#### NOTICE

Installation of voltage supply is done internally. This means that the end effector with loose part is equipped with internal contacts. These contacts transmit all signals.

- ▶ The contacts of the energy supply must be dry, clean and undamaged at all times.
- $\Rightarrow$  Damage to the contacts can result in malfunction of the product.

#### 10.3 Static charge

#### CAUTION



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

Grounding the product is recommended if ESD sensitive parts come into contact with the product.

Grounding is also recommended in applications that require high EMC shielding.

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

#### 10.4 Heat dissipation

In the event of high ambient temperatures, the product must be installed on heat-dissipating materials.

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

#### INFORMATION



The product must always be mounted on materials that dissipate heat.

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

⇒ The cycle time must therefore be reduced as the temperature increases.

#### 10.5 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** Commissioning

#### 11.1 Restart

#### INFORMATION



- Make sure that there is no signal present at inputs 1 and 2 when the product is restarted.
- Requirement for a cold start: Input 1 and input 2 = 0 V
- $\Rightarrow$  The product is ready to operate when the green LED lights up.
- ⇒ The product can be moved a few milliseconds after voltage is supplied.

#### 11.2 Switching sequence

A movement in the desired direction occurs when the corresponding signal is at a high level. After a high level is detected, the gripper movement occurs until the gripping process ends.

- Reset the signal after the gripper travels.
- Enter a signal in the opposite direction.
- Between withdrawing the signal and the next command, adhere to a pause time of 10 ms.

#### INFORMATION



The switching sequence applies to compatible stationary parts only.

#### NOTICE

In order to prevent damage to the product, the resistance between the analog output and GND must be at least 10 k $\Omega$ .

The current jaw position is scaled from 0 V to 10 V and is issued via PIN 5 (analog output).



#### 11.3 Switching sequence for teaching in the end position

#### 11.3.1 "Adjust" movement

This function can be used to teach in the end positions of the product.

- Make sure that both input signals are "high" for 5 seconds after a restart.
- ⇒ The product opens and closes several times and then stays open.
- ⇒ The factory default settings are "BasePosition" and "WorkPosition."
- ⇒ The product is equipped with a subsequent current feed (e.g. mode = 103).
- ➡ Teaching in the end position again prevents the product from being unnecessarily energized when it is in the end position.
  - ► In the case of a mechanically limited end position, teach in the end position again.

#### 11.4 Minimum travel path



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

The minimum travel path depends on the desired gripping force and the dimensions of the gripper fingers.

| Design size                      | Minimum travel path per gripper jaw [mm]   |
|----------------------------------|--|
| LWR50L-23-00005-A                | 0.5  |
| LWR50L-23-00006-A                | 0.5  |
|                                  |  |
| Design size                      | Minimum travel path per socket [mm]        |
| Design size<br>LWR50L-23-00007-A | Minimum travel path per socket [mm]<br>0.5 |



# 12 Operation



In the event of a power failure, the gripper jaws remain in their positions and the gripping force of the product stays constant.

The gripper jaws can be opened using the emergency release if the energy supply drops off.

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

#### 12.1 Adjustable gripping force

The gripping force can be adjusted in four stages using a rotary switch.





#### 12.2 Emergency release

The product features an emergency release that can be mechanically opened with an Allen key in the event of a power failure.

| Design size       | Wrench size [mm] |
|-------------------|------------------|
| LWR50L-23-00005-A | 2                |
| LWR50L-23-00006-A | 2                |
| LWR50L-23-00007-A | 2                |
| LWR50L-23-00008-A | 2                |



#### 13 Gripping force charts

#### INFORMATION

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



# 14 Status in LED display

|    | Green LED lights up continuously.   | No error   |
|----|---|--|
|    | Red LED flashes every second. Green LED lights up continuously.                     | Loss of workpiece detected.  |
|    | Red LED lights up continuously.   | Actuator supply not OK   |
| •0 | Red LED flashes every second.<br>Green LED does not light up.                       | Internal error   |
|    | Red LED flashes every second.<br>Green LED flashes every second (at the same time). | <ul><li>No reference position</li><li>A reference run must be performed.</li></ul> |
|    | Red LED flashes every second.<br>Green LED flashes every second (alternating).      | A reference run is being performed.  |



#### **15 Maintenance**

#### CAUTION



- Material damage resulting from blowing out with compressed air
- Blowing out the product with compressed air can cause malfunctions and pose a risk of accidents.
- Never purge the product with compressed air.

#### CAUTION

#### Material damage caused by liquid and solvent-based cleaners

- Liquid and solvent-based cleaning agents can cause malfunctions and pose a risk of accidents.
- ▶ Do not clean the product with any cleaning agents that are liquid or contain solvents.

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

Maintenance-free operation of the tool changer (end effector with loose part) is guaranteed for up to **100,000 change** cycles (hot plug).

The maintenance interval may be shortened under the following circumstances:

- Dirty environment
- Improper use and use that does not comply with the power specifications.
- Ambient temperature is too high.
- Even though the product is maintenance-free as mentioned above, perform a regular visual inspection to check for any corrosion, damage or contamination.
- ► Have maintenance work be performed by Zimmer Customer Service whenever possible.
- ⇒ Dismantling and reassembling the product without authorization may result in complications, as special installation equipment is required in some cases. Zimmer GmbH accepts no liability for any resulting malfunctions or damage.

#### 16 Decommissioning/disposal

#### INFORMATION

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

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



# 17 RoHS declaration

in terms of the EU Regulation 2011/65/EU

Name and address of the manufacturer:

#### Zimmer GmbH

Im Salmenkopf

77866 Rheinau, Germany

- **L** +49 7844 9138 0
- ☑ info@zimmer-group.com
- www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: 2-jaw parallel gripper with quick-change system

Type designation:

LWR50L-23 series

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

Michael HochRheinau, Germany, 2021-04-01Image: Warthware and the second s

# **18 REACH declaration**

In terms of the EC Regulation 1907/2006

Name and address of the manufacturer:

#### Zimmer GmbH

**Q** Im Salmenkopf

77866 Rheinau, Germany

**L** +49 7844 9138 0

☑ info@zimmer-group.com

www.zimmer-group.com

Authorized representative for the

compilation of relevant technical

REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals.

A full declaration of REACH can be obtained from the manufacturer due to the duty to notify in accordance with Art. 33 of the REACH regulation ("Duty to communicate information on substances in articles").

| Michael    | Hoch |
|------------|------|
| IVIICIIAEI | HUCH |

documents

Rheinau, Germany, 2021-04-01

(Place and date of issuance)

Marti 7:

Martin Zimmer (Legally binding signature) Managing Partner

DDOC01273 / b EN / 2021-11-25

# **19 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

- **L** +49 7844 9138 0
- ⊠ <u>info@zimmer-group.com</u>
- www.zimmer-group.com

We hereby declare that the incomplete machine described below

2-jaw parallel gripper with quick-change system

#### Type designation:

**Product designation:** 

LWR50L-23 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:

Nr.1.1.2, Nr.1.1.3, Nr.1.1.5, Nr.1.3.2, Nr.1.3.4, Nr.1.3.7, Nr.1.5.3, Nr.1.5.4, Nr.1.5.8, Nr.1.6.4, Nr.1.7.1, Nr.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

Rheinau, Germany, 2021-04-01

Authorized representative for the compilation of relevant technical documents

(Place and date of issuance)

Vlashi Ti

Martin Zimmer (Legally binding signature) Managing Partner



# 20 Declaration of Conformity

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

# Name and address of the manufacturer:

#### Zimmer GmbH

♀ Im Salmenkopf

77866 Rheinau, Germany

- **L** +49 7844 9138 0
- ⊠ info@zimmer-group.com
- www.zimmer-group.com

#### We hereby declare that the products described below

Product designation: 2-jaw parallel gripper with quick-change system

#### Type designation: LWR50L-23 series

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

The following harmonized standards have been used:

| DIN EN ISO 12100:2011-03 | Safety of machinery - General principles for design - Risk assessment and risk reduction      |
|--------------------------|---|
| DIN EN 61000-6-3         | EMC Generic standard, Emission standard for residential, commercial and light-in-<br>dustrial |
| DIN EN 61000-6-2         | EMC Generic standard, Emission standard for industrial environments                           |
| DIN EN 61000-6-4         | EMC Generic standard, Immunity for industrial environments                                    |
|                          |   |

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

Kurt Ross

Rheinau, Germany, 2021-04-01

Authorized representative for the compilation of relevant technical documents

(Place and date of issuance)

Martin Zimmer (Legally binding signature) Managing Partner

Marti 7.