



INSTALLATION AND OPERATING INSTRUCTIONS

Vacuum ejector

ZTPED/ZTPLED

DDOC02637

THE KNOW-HOW FACTORY

Content

| | | |
|--------|--|----|
| 1 | Introduction | 3 |
| 1.1 | Supporting documents | 3 |
| 1.2 | Notes and illustrations in the instructions..... | 3 |
| 1.3 | Figures..... | 3 |
| 2 | Safety notices..... | 4 |
| 3 | Proper use | 5 |
| 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 | Vacuum switch | 7 |
| 6 | Technical data | 7 |
| 7 | Accessories/scope of delivery | 7 |
| 8 | Storage | 8 |
| 9 | Installation | 8 |
| 9.1 | Installing the product..... | 8 |
| 9.2 | Pin assignment..... | 9 |
| 9.3 | Installing the pneumatic system | 9 |
| 10 | Operation..... | 10 |
| 10.1 | Vacuum switch | 10 |
| 10.1.1 | Function selection | 10 |
| 10.1.2 | Setting the pressure unit (F0) | 10 |
| 10.1.3 | Setting the output signal type (F1) | 11 |
| 10.1.4 | Setting the air-saving function (F2)..... | 11 |
| 10.1.5 | Setting the reaction time (F4) | 12 |
| 10.1.6 | Resetting the settings (F5)..... | 12 |
| 10.1.7 | Zero point calibration | 12 |
| 11 | Maintenance..... | 13 |
| 11.1 | Changing the filter element..... | 13 |
| 11.2 | Spare parts..... | 14 |
| 11.2.1 | ZTPED3031 | 14 |
| 11.2.2 | ZTPED3032..... | 14 |
| 11.2.3 | ZTPLLED3032..... | 14 |
| 11.2.4 | ZTPED3033..... | 14 |
| 11.2.5 | ZTPED3034..... | 14 |
| 11.2.6 | ZTPLLED3034..... | 14 |
| 12 | Decommissioning/disposal | 15 |
| 13 | RoHS Declaration | 15 |
| 14 | Declaration of Incorporation | 16 |
| 15 | Declaration of Conformity | 17 |

1 Introduction

1.1 Supporting documents

NOTICE



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

The instructions contain important notices 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:

- Instructions
 - Catalogs, drawings, CAD data, performance data
 - Information on accessories
 - Technical data sheets
 - General Terms and Conditions (GTCs), including warranty information.
- ⇒ Only the documents currently available on the website are valid.

In these instructions, “product” replaces the product designation on the title page.

1.2 Notes and illustrations 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 people. 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 or 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.

1.3 Figures

The figures may deviate from the actual state.

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 system'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 accepts no liability for any damage caused by improper use. The operator bears sole responsibility.
- ▶ Perform maintenance tasks, retrofitting or attachment work outside of the machine's danger zone when possible.
- ▶ When using the product under extreme conditions, adjust the maintenance interval according to the degree of soiling.
- ▶ Note that all suction cups release simultaneously, thus releasing the workpiece as soon as the vacuum circuit is interrupted.
- ▶ Ensure sufficient heat dissipation if the product is surrounded by other components or is in continuous operation and adhere to the permissible temperature range.
- ▶ Check the completeness and tightening torques of all mounting screws.

NOTICE



Material damage and malfunction in case of non-compliance

- ▶ Observe the regulations for the vacuum switch and vacuum breaker.

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 accepts no liability for any damage caused by improper use. The operator bears sole responsibility.

- The product must not be operated in an environment that is subjected to vibrations and impacts.
- The product must not be operated in an environment that is subjected to corrosive gases, chemicals, seawater, water or steam.
- The product is intended for industrial use.
- The product is not suited for use in a potentially explosive atmosphere.
- Protection, such as a cover, must be provided in areas exposed to direct sunlight.
- The product must be protected from thermal radiation near heat sources.
- Suitable protective measures must be taken in areas where contact with water, oil or solder may occur.

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 types of 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

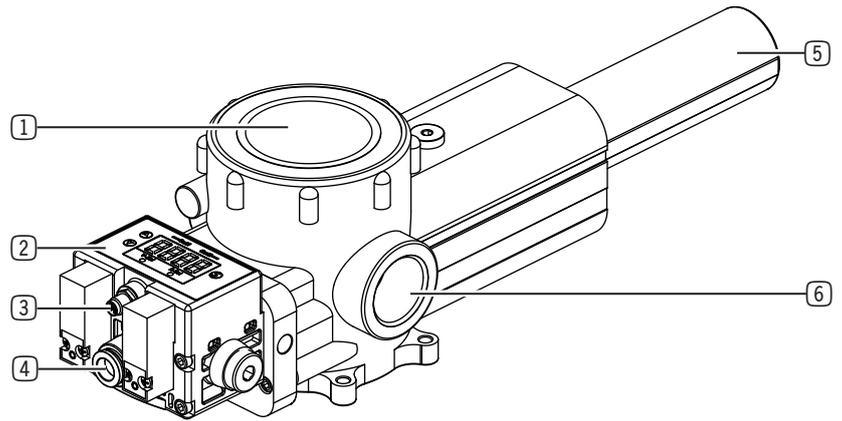
Personnel who work with the product must be familiar with the valid safety regulations and laws as well as the standards, guidelines and laws listed in this document.

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 used to generate a vacuum. This means that suction cups, for example, can be used to handle workpieces.

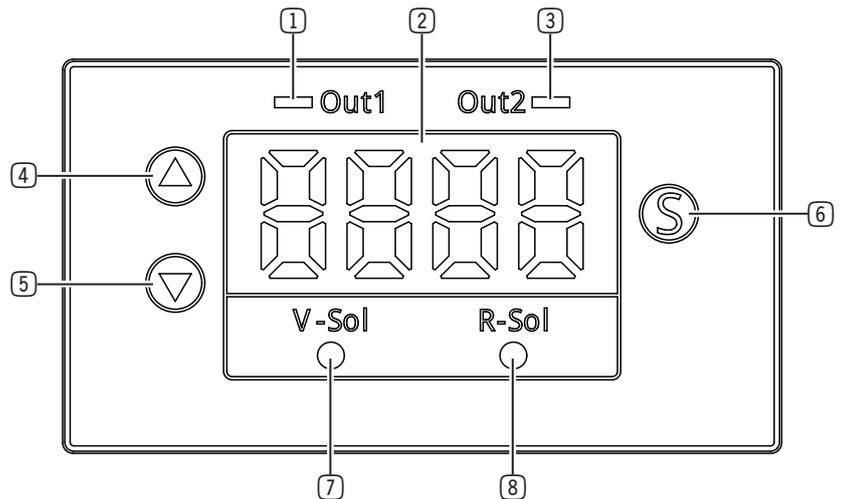
The product has an air-saving function. The compressed air is automatically switched off when the suction cups are evacuated. If the vacuum level falls below the set value, compressed air is automatically supplied again.



- ① Vacuum filter
- ② Vacuum switch
- ③ Electrical connection
- ④ Pneumatic connection
- ⑤ Silencer
- ⑥ Vacuum connection

5.1 Vacuum switch

- ① Green LED *OUT 1*
- ② Display
- ③ Green LED *OUT 2*
- ④ *Up arrow* button
- ⑤ *Down arrow* button
- ⑥ *Setting* button
- ⑦ Solenoid valve for vacuum
- ⑧ Solenoid valve for vacuum release



6 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.

7 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. The accessories from Zimmer Group GmbH are specifically tailored to the individual products.

► For information on optional accessories and those included in the scope of delivery, refer to our website.

8 Storage

- ▶ Visually inspect all components.
- ▶ Clean all components until all contamination has been removed.
- ▶ Remove potential corrosion spots properly.
- ▶ Seal pneumatic connections with suitable covers.
- ▶ Observe the following points when storing the product for longer periods of time:
 - ▶ Monitor the relative air humidity in the storage area.
 - ▶ Keep the storage location as dust-free and dry as possible.
 - ▶ Observe the temperature range and avoid temperature fluctuations.
 - ▶ Avoid wind, drafts and formation of condensation.
 - ▶ Avoid direct sunlight.

9 Installation

WARNING



Risk of injury due to uncontrolled movement

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

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

INFORMATION



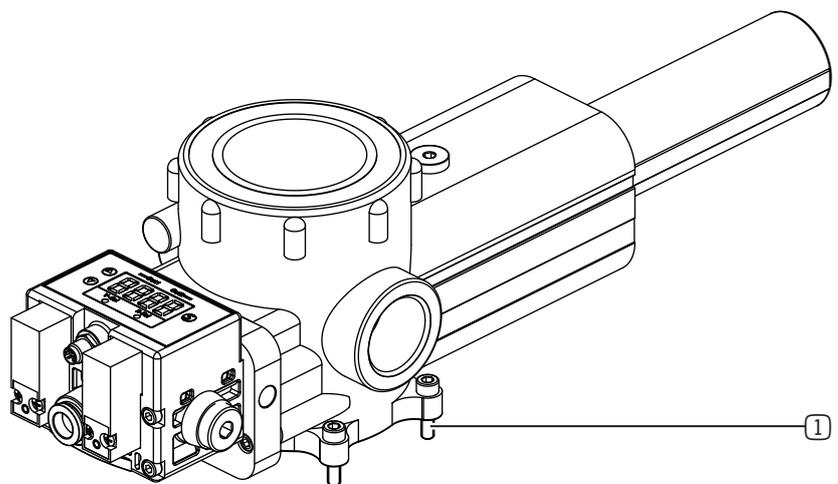
Further installation information:

- 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.
- ▶ Comply with the permitted tightening torques of the mounting screws.

9.1 Installing the product

- ▶ Mount the product on the mounting surface using the mounting screws.
 - ▶ Tighten the mounting screws without distortion.



1 Mounting screw

9.2 Pin assignment

NOTICE



Material damage in case of non-compliance

- ▶ Switch off the power supply before connecting the cable.
- ▶ Do not lay sensor cables parallel to power supply cables or high-voltage cables.
- ▶ Please note that interference and malfunctions may occur when used in the same circuit.

| Pin | Color | Function | Socket, M8 |
|-----|-------|-----------------------------------|------------|
| 1 | Brown | 24 V DC supply voltage | |
| 2 | White | Solenoid valve for vacuum | |
| 3 | Blue | 0 V DC supply voltage | |
| 4 | Black | Digital input 1 | |
| 5 | Gray | Digital input 2 | |
| 6 | Pink | Solenoid valve for vacuum release | |

9.3 Installing the pneumatic system

NOTICE



Material damage in case of non-compliance

- ▶ You can find the information in the technical data sheet on our website.
- ▶ Keep the supply lines as short as possible and ensure a sufficiently large cross-section.
- ▶ Make sure that the hoses cannot be pinched.

NOTICE



Malfunction in case of non-compliance

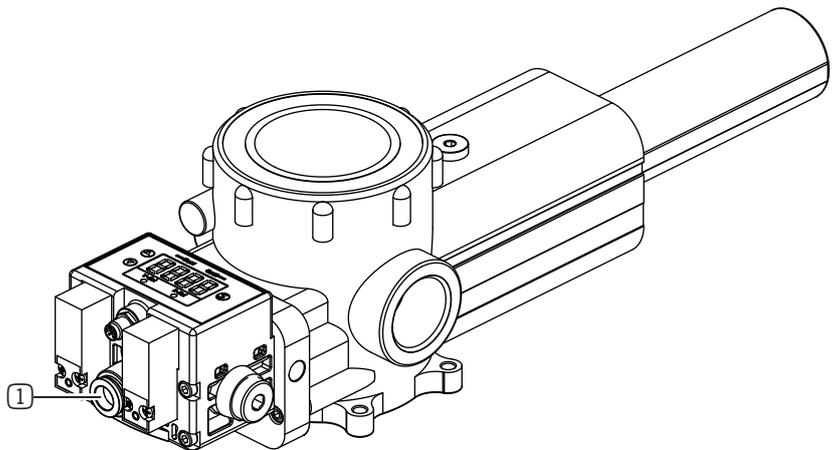
An inner diameter that is too small on the compressed-air side results in an insufficient supply of compressed air. Because of this, the maximum output of the system cannot be achieved.

An inner diameter that is too small on the vacuum side results in an increased flow resistance along the hose. This reduces the suction capacity and increases suction times.

An inner diameter that is too large also results in longer suction times due to the larger volume of air to be evacuated.

- ▶ Select the correct screw fittings and pneumatic hoses.

- ▶ Install a screw fitting on the pneumatic connection.
- ▶ Install the pneumatic hose.



- ① Pneumatic connection

10 Operation

WARNING



Risk of injury caused by falling workpieces

If the suction capacity is insufficient, the workpiece can fall off.

- ▶ Make sure that no personnel are present underneath the product.

CAUTION



Risk of injury in case of non-compliance

Air streams can injure the eye.

- ▶ Do not look directly into the vacuum openings or into the air streams.
- ▶ Wear protective goggles.

NOTICE



Malfunction in case of non-compliance

- ▶ Make sure that the exhaust air can escape unimpeded.
- ▶ Make sure that there is no grease, water or dirt on the connections.

- ▶ Apply compressed air to the product.

10.1 Vacuum switch

10.1.1 Function selection

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.

There are 5 functions to choose from in the main menu:

- F0: Set the pressure unit
- F1: Set the output signal type
- F2: Set the air-saving function
- F4: Set the reaction time
- F5: Reset the settings
- ▶ Press the *Up arrow* or *Down arrow* button to switch between the individual functions.

10.1.2 Setting the pressure unit (F0)

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.
- ▶ Select the function *F0* with the *Up arrow* or *Down arrow* button.
- ▶ Confirm the selection with the *Setting* button.
- ⇒ The pressure unit *PA* is shown on the display.

There are 4 pressure units to choose from:

- PA
- PSI
- InH
- nnH
- ▶ Press the *Up arrow* or *Down arrow* button to switch between the pressure units.
- ▶ Press the *Setting* button to select the corresponding pressure unit.

10.1.3 Setting the output signal type (F1)

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.
- ▶ Select the *F1* function with the *Up arrow* or *Down arrow* button.
- ▶ Confirm the selection with the *Setting* button.
- ⇒ *P_1* is shown on the display.
- ▶ Set the value.
 - ▶ Press the *Up arrow* or *Down arrow* button to set the value.
 - ▶ Press the *Setting* button to save the setting.
 - ⇒ The display switches to the next option *h_1*.
- ▶ Repeat the procedure for the following options in accordance with the order in the table.

| Output signal type | Settings |
|--------------------|---|
| P_1 | Out 1: Value of the output signal (ON) |
| h_1 | Out 1: Value of the signal stop (OFF) |
| P_2 | Out 2: Value of the output signal (ON) |
| h_2 | Out 2: Value of the signal stop (OFF) |
| o_1 | Out 1: NO (Normal open mode) and NC (Normal close mode) modes |
| o_2 | Out 2: NO (Normal open mode) and NC (Normal close mode) modes |

10.1.4 Setting the air-saving function (F2)

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.
- ▶ Select the *F2* function with the *Up arrow* or *Down arrow* button.
- ▶ Confirm the selection with the *Setting* button.
- ⇒ *Sol* is shown on the display.
- ▶ Set the value.
 - ▶ Press the *Up arrow* or *Down arrow* button to set the value.
 - ▶ Press the *Setting* button to save the setting.
 - ⇒ The display switches to the next option *H1*.
- ▶ Repeat the procedure for the following options in accordance with the order in the table.

| Abbreviation | Meaning |
|--------------|---|
| Sol | Output signal type for the solenoid valve |
| H1 | Sets the vacuum level (upper limit) for shutting off the solenoid valve <ul style="list-style-type: none"> • Air-saving function = ON |
| H2 | Sets the vacuum level (lower limit) for switching on the solenoid valve <ul style="list-style-type: none"> • Air-saving function = OFF |
| H3 | Function that prevents the vacuum level of H2 from being set below the limit value of H1. |

10.1.5 Setting the reaction time (F4)

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.
- ▶ Select the *F4* function with the *Up arrow* or *Down arrow* button.
- ▶ Confirm the selection with the *Setting* button.
- ⇒ *rES* is shown on the display.

The following reaction times are available:

- 2.5 ms
 - 20 ms
 - 100 ms
 - 500 ms
 - 1,000 ms
 - 2,000 ms
- ▶ Use the *Up arrow* and *Down arrow* buttons to select the desired reaction time.
 - ▶ Press the *Setting* button to save the setting.

10.1.6 Resetting the settings (F5)

- ▶ Press the *Setting* button for 3 seconds.
- ⇒ The display switches to the main menu.
- ▶ Select the *F5* function with the *Up arrow* or *Down arrow* button.
- ▶ Confirm the selection with the *Setting* button.
- ⇒ *InI* is shown on the display.
- ▶ Use the *Up arrow* and *Down arrow* buttons to select the *ON* option.
- ▶ Press the *Setting* button to confirm the selection.
- ⇒ All parameters are reset to factory settings.

10.1.7 Zero point calibration

- ▶ Press the *Up arrow* and *Down arrow* buttons at the same time until *0* is displayed.
- ▶ Release both buttons again.
- ⇒ The zero point has been set.

11 Maintenance

- ▶ Note that the product could become damaged under the following circumstances:
 - Operation with unauthorized compressed air
 - Dirty environment
 - Improper use and use that does not comply with the performance data
 - Permissible temperature range not observed
- ▶ Visually check the product regularly for damage and dirt.
- ▶ 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.

11.1 Changing the filter element

CAUTION

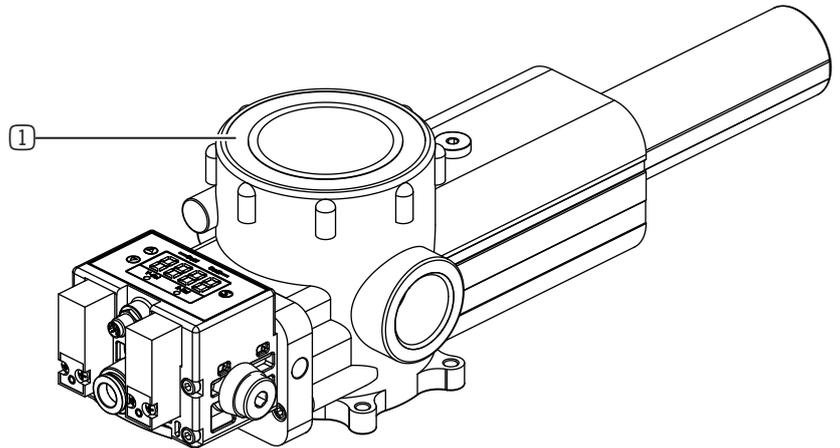


Risk of injury in case of non-compliance

There is a risk of injury due to negative pressure when opening the cover.

- ▶ Make sure that the product is fully vented before opening the cover.

- ▶ Remove the cover.
- ▶ Remove the seal ring, the holder for the filter element and the filter element one after the other.
- ▶ Insert the new filter element, the holder for the filter element and the seal ring one after the other.
- ▶ Install the cover.



1 Cover

11.2 Spare parts

11.2.1 ZTPED3031

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-1 |

11.2.2 ZTPED3032

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-2 |

11.2.3 ZTPLED3032

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-2 |

11.2.4 ZTPED3033

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-2 |

11.2.5 ZTPED3034

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-2 |

11.2.6 ZTPLED3034

| Designation | Part number |
|----------------|-------------|
| Filter element | ZVFA-PF-2 |

12 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.

13 RoHS Declaration

In terms of the EU Directive 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

www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: Vacuum ejector

Type designation: ZTPED, ZTPLED

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

Michael Hoch
Authorized representative for
compiling the relevant technical
documents

Rheinau, Germany, 2026-01-23
(Place and date of issue)

Martin Zimmer
(Legally binding signature)
Managing Partner

14 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
🌐 www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: Vacuum ejector
Type designation: ZTPED, ZTPLED

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.

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 1012-2 | Compressors and vacuum pumps – Safety requirements – Part 2: Vacuum pumps |

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.

Commissioning of the incomplete machine is prohibited until it has been found that – where applicable – the machine in which the above-mentioned incomplete machine is to be installed complies with the Machinery Directive (2006/42/EC) and an EC Declaration of Conformity has been drawn up in accordance with Annex II 1 A.

Nicolas Steiger

Authorized representative for compiling the relevant technical documents

Rheinau, Germany, 2026-01-23

(Place and date of issue)



Martin Zimmer
(Legally binding signature)
Managing Partner

15 Declaration of Conformity

In terms of the EC Directive 2014/30/EU on electromagnetic compatibility

Name and address of the manufacturer:

Zimmer Group GmbH

📍 Am Glockenloch 2
77866 Rheinau, Germany
☎ +49 7844 9138 0
✉ info@zimmer-group.com
🌐 www.zimmer-group.com

We hereby declare that the product described below

Product designation: Vacuum ejector

Type designation: ZTPED, ZTPLED

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

The following harmonized standards have been used:

- DIN EN ISO 12100 Safety of machinery – General principles for design – Risk assessment and risk reduction
- DIN EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements

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

Nicolas Steiger
Authorized representative for compiling the relevant technical documents

Rheinau, Germany, 2026-01-23
(Place and date of issue)



Martin Zimmer
(Legally binding signature)
Managing Partner