

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:



- Catalogs, drawings, CAD data, performance data
 - Installation and operating instructions
 - Technical data sheets
 - General Terms and Conditions of Business with specifications for the warranty entitlement
- ⇒ Only those documents currently available on the website are valid.

2 Safety notices

DANGER



Risk of severe injury due to uncontrolled movement

- ▶ Never open the housing!

⇒ Intervention of any kind is not permitted and shall result in warranty and liability disqualification.

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. Injuries or malfunctions can occur, especially with

- Pinching during installation due to an unsecured mounting piece
- Improperly assembled pneumatic connections
- Pneumatic supply faults, e.g. due to pressure fluctuations
- Damaged or loose pneumatic lines
- Missing or loose mounting screws
- Removal of the safety cover
- Failure to switch off the working medium during assembly or repair work on the element
- Human error
- Failure to observe the safety and warning notices during installation and start-up

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. Zimmer GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

The product is designed exclusively for pneumatic operation. It is not suited for operation with any other media. In accordance with EN ISO 13849-1, chap. 6.2.4, par. b, the product is a safety-related component of control systems. Furthermore, Zimmer GmbH confirms that the product is manufactured using the basic and proven safety principles (EN 13849-2, Annex B.1 and B.2). The product can be used without any additional control engineering measures in Category B or Category 1 control systems. A test channel must be provided for Category 2 control systems. For use in higher control categories, the control must be multi-channel and each channel must implement the safety function separately. The product must not be used on linear guides other than those specified by the manufacturer. Without additional protection or control engineering measures, the product must not

- Be used in equipment used for transporting personnel (e.g. elevators).
- Be used in vehicles.
- Be used underwater or in other fluids.
- Be used in a corrosive environment (e.g. in conjunction with acids).
- Come in contact with abrasive media (e.g. grinding dust).
- Be used in a vacuum.
- Come in direct contact with food.
- Be used in areas with a potentially explosive atmosphere.

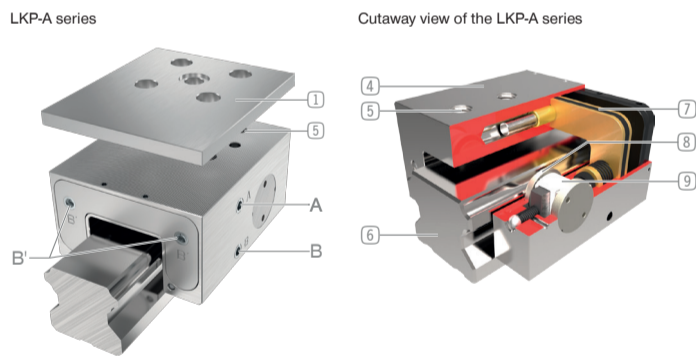
4 Personnel qualification

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

5 Product description

The product is designed for static clamping on linear guide rails. The function is based upon a dual-acting wedge-type gear. The U-shaped piston enables the narrow/low design. The product is open while depressurized. The clamping process is initiated by applying compressed air to connector B. Thanks to the material pairing of the rail and contact profile, as well as the geometry of the contact profile, it is impossible to damage the contact surface of the linear guides. Clamping before the movement is stopped may cause damage to the product as well as the linear guide. The products are set to the respective rail dimension by the manufacturer.

①	Distance plate (optional)
A	Air filter
B	Air connection
④	Housing
⑤	Installation thread
⑥	Profile rail guide
⑦	Pneumatic piston
⑧	Clamping jaws
⑨	Wedge-type gear



6 Connections

NOTICE



Only one air connection needs to be occupied to ensure that the product will function safely. The unused air connection must be closed.

7 Installation

7.1 General installation information

WARNING



Risk of injury due to uncontrolled movement

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

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

CAUTION



Material damage and malfunction in case of non-compliance

If the mounting screws are tightened when not clamped, the element can shift and consequently be unable to achieve the optimum clamping force. Furthermore, the guide rail could become damaged.

- The product must be installed according to the specifications for flatness on a mounting surface with a maximum permissible unevenness of 0.03.
- The product can be mounted on the mounting piece from above using the threads.
- ▶ The mounting screws are not included in the scope of delivery. Use mounting screws of a strength class ≥ 8.8 (DIN EN ISO 4762).
- ▶ Observe the tightening torque of the mounting screws (www.zimmer-group.com/en/lt-td).
- ⇒ Zimmer GmbH recommends verifying the permitted load-carrying capacity of the required screw connections in accordance with VDI 2230.
- ▶ The exact positions can be found on the technical data sheet on our website.

7.2 Installing the element

There are four B air connections available as alternatives, on each side of the housing and on the housing lid.

- ▶ Remove the sealing screw at the air connection B.
- ▶ Connect the pneumatic connection to any air connection B. Close unused air connections using sealing screws.

When using the spacer plate ①, insert it between the element and the mounting piece as height compensation.

- ▶ Insert the O-ring into the recess on the housing and the spacer plate.
 - ▶ Place the spacer plate on the element.
 - ▶ Slide the element over the end of the guide rail. Depending on the rail manufacturer and thus the shape of the contact profile, it may also be possible to mount the element from above.
 - ▶ Screw the mounting screws into the threaded holes by hand until the element makes contact.
- ⇒ The element becomes centered by going through multiple cycles (min. 10x opening and closing cycles within 10 seconds).
- ▶ Pressurize the element.
 - ⇒ The clamp is activated.
 - ▶ Tighten the mounting screws.

7.3 Checking operational readiness

The function of the element can be tested by applying a force less than or (at most) equal to the holding force. If the axle moves, it must be assumed that the inner elements are worn out.

After the element has been properly installed, check the following characteristics, to see whether it is ready to be operated:

- Check the ease of movement by manually pressing upon the element while pressurized
- Check the clamping process by manually pressing upon the element while depressurized
- Visually inspect the pneumatic supply for proper installation
- Check the pneumatic supply for leaks by applying pressure
- Tighten the mounting screws to specified tightening torques

7.4 Removing the element

- ▶ Remove the element by following the steps in the "Installing the product" chapter.

8 Technical data

The element has a product life cycle (BB10d value) of 5,000,000 cycles. The B10d value is determined in accordance with ISO 19973-1 (dangerous failures with regard to the safety of machinery).

INFORMATION



For technical data, refer to our website at www.zimmer-group.com/en/lt-td. This data varies within the series, depending on the specific design. Please contact Zimmer Customer Service if you have any questions.

9 Maintenance

NOTICE



The filters of the exhaust valves as well as the air filters must not be clogged by contamination.

The product is maintenance-free up to the number of cycles listed in the "Technical data" chapter. The maintenance interval may shorten under the following circumstances:

- The use of compressed air of a different quality than what is specified by DIN ISO 8573-1 [4:4:4]
- Dirty environment
- Improper use and use that does not comply with the power specifications.
- The air filter is dirty (the product must not be operated without this filter).

Even though the product is maintenance-free, as mentioned above, perform a regular visual inspection to check for any corrosion, damage or contamination.

A readjustment is not required after proper installation, thanks to the factory default contact profiles.

- ▶ Clean the product as needed using a commercially available machine cleaning agent. Apply a corrosion protection agent to the housing.

10 Troubleshooting

INFORMATION



For a precise and detailed overview of possible faults and corrective measures, please visit our website at www.zimmer-group.com/en/lt-faq. Please contact Zimmer Customer Service if you have any questions.

11 Transportation/storage/preservation

- ▶ Transport and store the product only in the original packaging.
- ▶ During transport, make sure that no uncontrolled movements can occur if the product is already mounted on the higher-level machine unit.
- ▶ Prior to commissioning after transport, check all power and communication connections as well as all mechanical connections.
- ▶ If the product is stored for an extended period, observe the following points:
 - Keep the storage area dust-free and dry.
 - Package the product so that it is protected from corrosion.
 - Clean all components. There must be no soiling left on the components.
- ▶ Seal pneumatic connections by using suitable covers.

12 Decommissioning and 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 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 5 • 77866 Rheinau, Germany • +49 7844 9138 0 • www.zimmer-group.com

We hereby declare that the incomplete machine described below

Product designation: Clamping element, pneumatic

Type designation: LKP

satisfies the following basic requirements of the Machinery Directive 2006/42/EC:

No. 1.1.2., No. 1.1.3., No. 1.1.5., 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

The manufacturer has a complete list of the applied standards.

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 must not be put into operation until it has been established, where applicable, that the machine or system in which the incomplete machine is to be installed satisfies the requirements of the Machinery Directive 2006/42/EC and an EC Declaration of Conformity has been issued in accordance with Annex II 1 A.

Michael Hemler

Authorized representative for compiling the relevant technical documents

Rheinau, Germany, 2021-04-06

(Place and date of issuance)

Martin Zimmer
(Legally binding signature)
Managing Partner