

Installation and operating instructions Im Salmenkopf 77866 Rheinau, Germany ☎:+49 7844 91380
LS series Fax: +49 7844 913880
 DDOC00330 Index 0 www.zimmer-group.de

1 Supporting documents

NOTE:

- Read through the installation and operating instructions carefully before installing 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 life time.
- The following documents are available for download on our website. Only those documents currently available on the website are valid.

- Catalog, drawings, CAD data, performance data
- Information on accessories
- Detailed installation and operating instructions, technical data sheets
- General Terms and Conditions of Business, including warranty information

2 Safety notes

CAUTION:

- Installation, commissioning, maintenance and repairs may only be performed by qualified experts in accordance with these installation and operating instructions.
- The linear module is state-of-the-art. It is fitted to industrial machines and is used to hold workpieces. The following are examples of situations in which the linear module may cause a hazard:
 - the linear module is not properly installed, used or maintained,
 - the linear module is not used for its intended purpose,
 - local regulations (legislation, ordinances, guidelines), such as the EC Machinery Directive, accident prevention regulations and the installation and operating instructions, are not observed.
- The linear module may only be used in accordance with its intended use and technical data. ZIMMER GmbH shall accept no liability for any damage caused by improper use.
- Any use other than the intended use requires written approval from ZIMMER GmbH.
- Do not reach into the operating range of the linear module.
- Make sure that the energy supply is disconnected before you install, retool, maintain or repair the linear module.
- In the event of maintenance, conversion or expansion work, remove the linear module from the machine and carry out the work outside the danger zone.
- When commissioning or testing, make sure that the linear module cannot be actuated by mistake.
- Modifications to the linear module, such as adding drilled holes or threads, may be made only with prior approval from ZIMMER GmbH.
- The specified maintenance intervals and compressed air quality specifications are to be observed; also refer to the Maintenance section. Please contact our hotline for this purpose.
- Use of the linear module under extreme conditions, such as aggressive liquids and abrasive dusts, is subject to prior approval from ZIMMER GmbH.

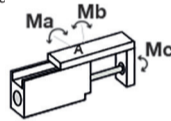
3 Proper use

NOTE:

- The LS series linear module is only to be used in its original state with its original accessories, with no unauthorized changes and within the scope of its defined parameters for use. ZIMMER GmbH shall accept no liability for any damage caused by improper use.

The linear module is designed for operation with compressed air only. It is not suited for operation with other media such as liquids or gases. The linear module is properly used in closed rooms for the variable compensation of forces and torque.

Proper use of the linear module also includes the forces and torques which can additionally act on surface A while statically loaded (see technical data sheets at www.zimmer-group.de)



4 Personnel qualification

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

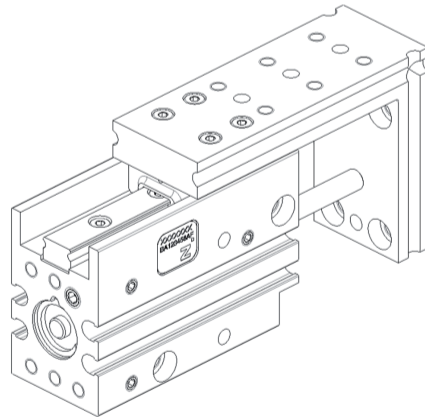
5 Product description

5.1 Linear module function

The linear module makes it possible to combine several units directly to each other. A required follow-on tool can be fastened in a standardized manner by means of an adapter plate. High precision and rigidity are ensured by the use of a linear guide with recirculating ball and wiper. A double-acting pneumatic rotor cylinder is used as the actuator, whereby there are several options for the linear module to be connected with the energy supply. There are also alternative mounting options provided on multiple sides for customized installation.

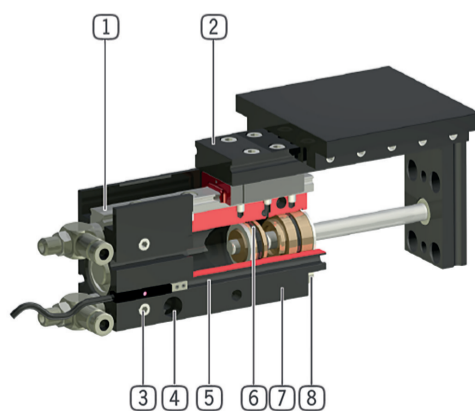
5.2 Design of the linear module

Fig. 1: Linear module, LS series



- | | |
|---|--|
| 1 | Linear guide with recirculating ball and wiper |
| 2 | Locating groove |
| 3 | Energy supply |
| 4 | Mounting and positioning |
| 5 | Integrated slot for magnetic field sensors |
| 6 | Drive |
| 7 | Robust, lightweight housing |
| 8 | Stop screw for stroke limitation |

Fig. 2: Cutaway view of the design



6 Installation

WARNING:



Risk of injury in case of unexpected movement of the machine or system into which the linear module is to be installed.

- Switch off the power supply to the machine before all work.
- Secure the machine against being switched on unintentionally.
- Check the machine for any residual energy.

CAUTION:



While working with the linear module or in the work area of the machine, the valid regulations of workplace safety and health protection are to be observed. Risk of injury in case of unexpected movement of the linear module when pneumatic energy is connected.

- Switch off the pneumatic energy before all work.
- Secure the pneumatic circuit against being switched on unintentionally.
- Check the pneumatic circuit for any existing residual energy, bleed if necessary.

6.1 Linear module installation

Customized installation of the linear module is possible from several sides by the use of alternative mounting options.

You can find the suitable dimensions for the connection of the linear module as well as suitable dimensions for the connection of your application on our website.

⇒ www.zimmer-group.de

The linear module must be installed on mounting surfaces that correspond to the levelness specifications.

Diameter < 100 mm → permitted non-levelness < 0,02 mm

Diameter < 100 mm → permitted non-levelness < 0,05 mm

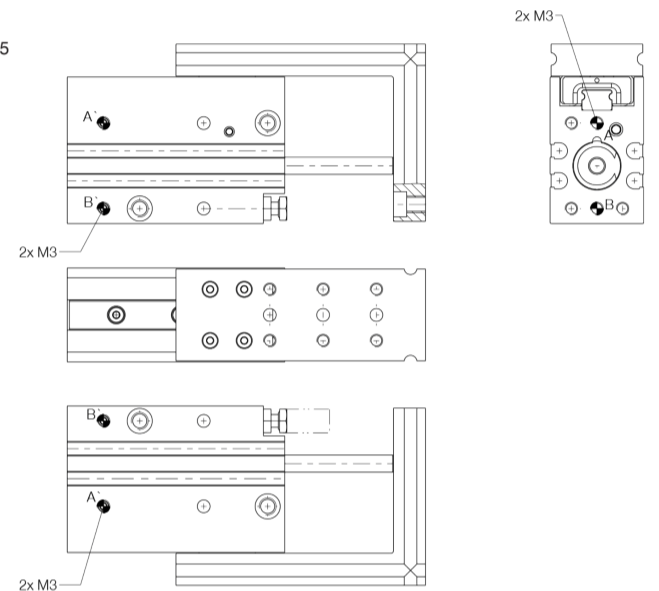
6.2 Installing the pneumatic connections

The pneumatic energy power supply can be connected to multiple sides of the gripper.

The adjacent image shows the dimensional drawing of the LS10-25 as an example.

You will find the matching dimensional drawing of your linear module on our website:

⇒ www.zimmer-group.de



NOTE:



Close off unused pneumatic connections with dummy plugs. The available pneumatic connections can be found in the accessories list of the product data sheets on our website. The necessary ordering information can also be found there.

6.3 Installation of accessories

NOTE:



Before installing an accessory, make sure it is suitable for use with the chosen variant. You can find more information on available accessories on our website at ⇒ www.zimmer-group.de.

7 Technical data

These multi-page data sheets contain the following:

- Product description
- Technical data
- Dimensional drawing
- Available accessories

INFORMATION:



For technical data, please refer to our website at www.zimmer-group.de. This data varies within the type series depending on the specific design. If you should have further questions about products or technical data, please contact ZIMMER GmbH customer service.

8 Maintenance

The linear module does not require maintenance.

The time of freedom from maintenance may shorten under the following circumstances:

- Operation with compressed air that does not comply with DIN ISO 8573-1 quality class 4.
- Dirty environment.
- Improper use and use that does not comply with the performance data.

We recommend using the ZIMMER GmbH repair service for maintenance and the replacement of seals.

Dismantling and reassembling the linear module without authorization may result in complications, as special installation equipment is required in some cases.

INFORMATION:



Even though the linear module is, as mentioned, maintenance-free, perform a regular visual inspection to check for any corrosion, damage or contamination. Clean the linear module as needed using a commercially available cleaning agent for machinery.

9 Declaration of incorporation

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

Name and address of the manufacturer:

ZIMMER GmbH • Im Salmenkopf 5 • D-77866 Rheinau, Germany • Phone: +49 7844 9138 0 • www.zimmer-group.de

We hereby declare that the incomplete machine described below

Product designation: Linear rail slide

Type designation: LS□□□□

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.

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 the machine or system in which the incomplete machine is to be installed has been determined to satisfy the conditions of the Machinery Directive 2006/42/EC and the EC Declaration of Conformity has been produced in accordance with Annex II 1 A.

Authorized representative for the compilation of relevant technical documents

Kurt Ross	See manufacturer's address	Rheinau, Germany, 2019-02-07	Martin Zimmer, Managing Director
First name, last name	Address	Place and date of issuance	Legally binding signature