

## 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 documents listed below are available for download on our website.  
 ⇒ [www.zimmer-group.de](http://www.zimmer-group.de)  
 Only the documents currently available on the website are valid.

- Catalogs, drawings, CAD data, performance data
- Detailed installation and operating instructions
- General Terms and Conditions of Business with specifications for the warranty entitlement

## 2 Safety notes

**CAUTION:**

Non-compliance may result in severe injuries! The following notes shall be taken into account in order to reduce the likelihood of injuries/malfunctions:

1. Installation, commissioning, maintenance and repairs may only be performed by qualified experts in accordance with these installation and operating instructions.
2. The element is state-of-the-art. It is mounted on industrial machines.
3. The element 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.
4. Any use other than the intended use requires written approval from ZIMMER GmbH.
5. Do not reach into the operating range of the element.
6. Make sure that the power cables are disconnected before you install, retool, maintain or repair the gripper.
7. In the event of maintenance, conversion or expansion work, remove the element from the machine and perform all work outside of the danger zone.
8. When commissioning or testing, make sure that the element cannot be actuated by mistake.
9. Modifications to the element, such as adding drilled holes or threads, may be made only with prior approval from ZIMMER GmbH.
10. The specified maintenance intervals and compressed air quality specifications are to be observed; also refer to the Maintenance section. Please contact Customer Service for this purpose.
11. Use of the element under extreme conditions, such as aggressive liquids and abrasive dusts, is subject to prior approval from ZIMMER GmbH.

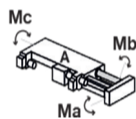
## 3 Proper use

**NOTE:**

The LSF series element 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 rail slide is designed for operation with compressed air only. It is not suited for operation with other media such as liquids or gases. The linear rail slide is intended for use in closed rooms for the variable compensation of forces and torques.

Proper use of the linear rail slide also includes the forces and torques that may be acting in addition to the gripping force (see technical data sheets at [www.zimmer-group.de](http://www.zimmer-group.de)).



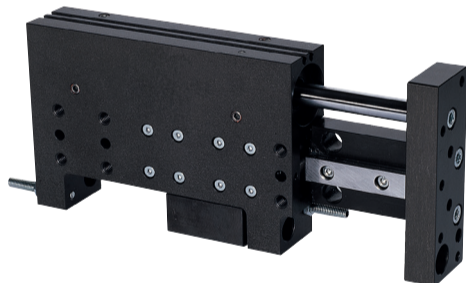
## 4 Personnel qualification

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

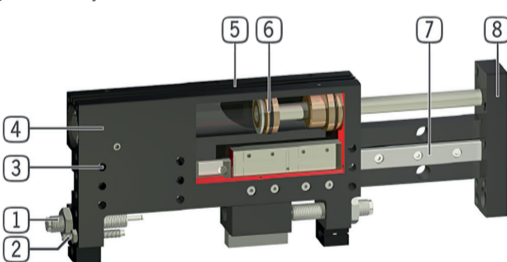
The LSF series linear rail slide with recirculating ball provides both high precision and high rigidity. By using PowerStop dampers, the end position can be gently approached, thereby increasing the process reliability and service life of the application. As a result of the extremely flat design, interference contours in the application are reduced. The power supply connection is located on the front side of the housing.

Fig. 1: LSF series linear rail slide



1	Patented, hydraulic shock absorber
2	Stop screw for stroke limitation
3	Mounting and positioning
4	Robust, lightweight and extremely flat structure housing
5	Integrated slot for magnetic field sensors
6	Drive
7	Linear guide with recirculating ball and wiper
8	Locating flange

Fig. 2: Cutaway view of the LSF series linear rail slide



## 6 Installation

**WARNING:**

Risk of injury in case of unexpected movement of the machine or system into which the element 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:**

Risk of injury in case of unexpected movement of the element 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.

The element has to be installed on a mounting surface in accordance with the levelness specifications.  
 Diameter < 100 mm → permitted non-levelness < 0,02 mm  
 Diameter < 100 mm → permitted non-levelness < 0,05 mm

## 6.1 Installation positions

A figure of an LSF25-50 is shown as an example in the adjacent image. You will find the matching dimensional drawing of your element on our website:  
 ⇒ [www.zimmer-group.de](http://www.zimmer-group.de).

The following options are available for the installation of the element:

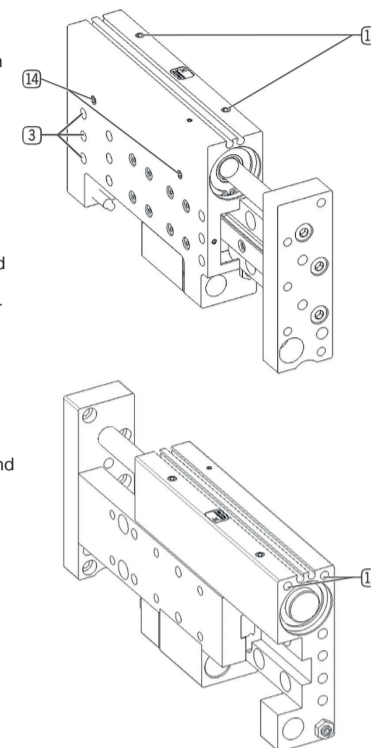
- Mounting and positioning (3)
- Power supply (14)

The dimensions for the design of the mounting piece can be found on the respective data sheet on our website. You can download any necessary CAD data in all formats from our website:  
 ⇒ [www.zimmer-group.de](http://www.zimmer-group.de)

Make the following selections:  
 Handling technology/linear module/linear rail slide/LSF series

Depending on the design size, mounting screws from M5 to M6 and of strength class 8.8 must be used. The following tightening torques must be observed during installation:

Screw size		M5
Permitted tightening torque	[Nm]	6,4



## 6.2 Installing the energy supply

The power supplies (14) are located on the front side of the housing.  
 ⇒ You can find these positions on the example figure in Section 6.1 and on our website [www.zimmer-group.de](http://www.zimmer-group.de) (refer to the technical data sheets)

**NOTE:**

Close off the unused pneumatic connections with dummy plugs.  
 ⇒ Use compressed air in accordance with DIN ISO 8573-1 quality class 4.

## 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 ⇒ [www.zimmer-group.de](http://www.zimmer-group.de).

## 7 Technical data

**INFORMATION:**

Refer to our homepage ⇒ [www.zimmer-group.de](http://www.zimmer-group.de) for technical data. 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

Maintenance-free operation of the element is guaranteed for up to **10 million cycles**. The maintenance interval 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.
- Ambient temperature of more than 60°C; lubricants harden faster!

We recommend having maintenance and the replacement of seals performed by ZIMMER GmbH Customer Service. Dismantling and reassembling the element without authorization may result in complications, as special installation equipment is required in some cases.

## 9 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 • D-77866 Rheinau, Germany • Phone: +49 7844 9138 0 • Fax: +49 7844 9138 80  
 Web: [www.zimmer-group.de](http://www.zimmer-group.de)

We hereby declare that the incomplete machine described below  
**Product designation:** Linear rail slide, pneumatic  
**Type designation:** LSF□□ - □□  
 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 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.**

**Authorized representative for the compilation of relevant technical documents**

Kurt Ross	See manufacturer's address	Rheinau, Germany, 2019-03-26	Martin Zimmer, Managing Director
First name, last name	Address	Place and date of issuance	Legally binding signature