

Instructions for installation and use PFEIFER LSF Lifting Loop for insertion in the formwork

Attachment point for load attachment devices, satisfying EC machinery directive 2006/42/EC



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Fixing Systems
Lift Installation

PFEIFER LSF lifting loops are insertion items that are built flat into the formwork of lift shaft ceilings before concreting and with defined minimum axis and edge distances.

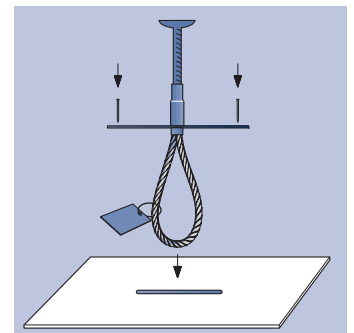
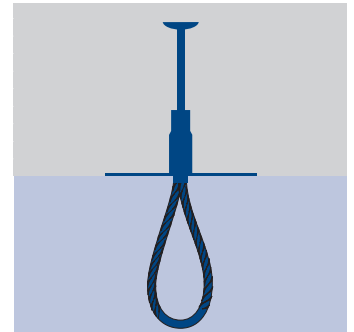
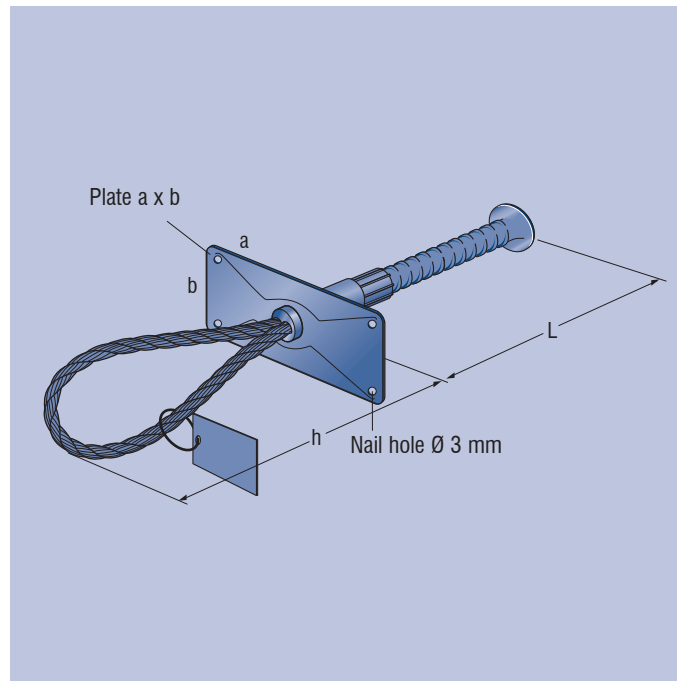
They are only to be used for temporary suspension of lift cabins or other items during installation or maintenance work. They may not be used for transporting people, nor for attaching fall arrest systems.

Material:

Socket made of special grade precision steel tube, galvanized, swaged on with reinforcing steel with upset anchor foot

flexible steel cable, galvanized

Installation plate, galvanized

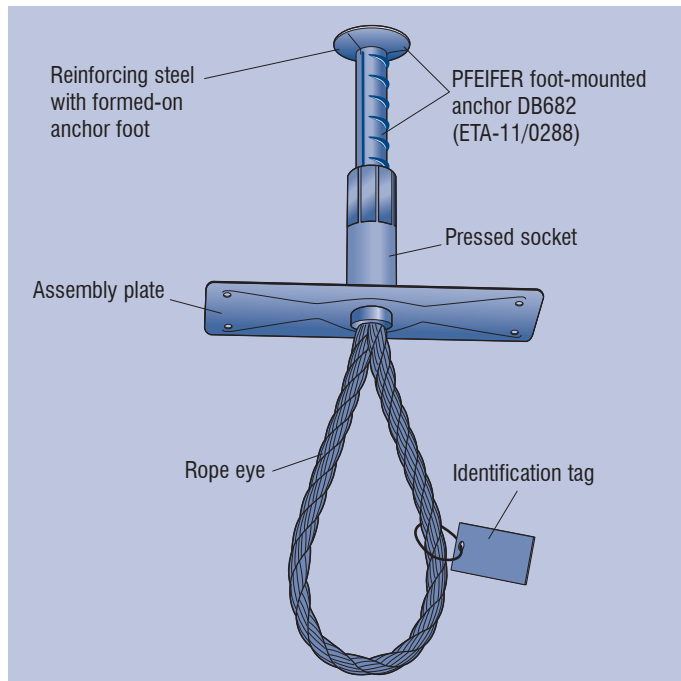


Order no.	Carrying capacity kg	WLL kN	L	Dimensions mm			Weight kg/each
				h	a	b	
250720	600	6	118	130	170	70	0,4
250721	1250	12,5	148	180	170	70	0,7
250722	2250	22,5	218	245	170	70	1,9

Example order for 10 PFEIFER LSF Lifting Loops with load capacity of 1250 kg / WLL 12.5 kN:
10 PFEIFER LSF Lifting Loops; WLL 12.5 kN, Ref. no. 250721

Instructions for installation and use of PFEIFER LSF Lifting Loop

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The system components of the PFEIFER LSF Lifting Loop are:

- Threaded socket pressed with reinforcing steel section with upset anchor foot
- Wire rope loop secured against unscrewing
- Installation plate, galvanized
- Identification tag

i The anchor system is supplied complete. Separate components cannot be ordered separately.

Warning: The use of incomplete anchors is not permissible. Missing components must be replaced only by the manufacturer. The use of parts that are not part of this system can result in reduced safety levels including failure of the anchor and falling of the building component. This is a hazard for the life and limb of the people working on the installation. The anchor system must be checked for completeness before use.

Caution: The PFEIFER LSF Lifting Loop must be kept away from contact with chemical products or other aggressive substances.

Safety

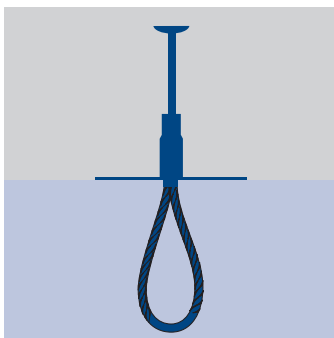
In accordance with machinery safety directive 2006/42/EC the following working coefficients were implemented:

- Working coefficient of all metal components: $\gamma=4$
- Working coefficient of the cables: $\gamma=5$
- Certification of anchoring of the foot-mounted anchors in concrete of grade C 20/25 with safety factor 4. (Basis: European Technical Approval (ETA-11/0288) for DB anchors)

Warning: Certification of adequate carrying capacity of the shaft ceiling (thickness, reinforcement, load transmission) is to be provided by the responsible planner.

Use

PFEIFER LSF load loops are attachment points for load attachment devices. They are insertion items that are built flat into the formwork of lift shaft ceilings before concreting and with defined minimum axis and edge distances.



Notice: Only use the system if you are trained in safe handling. If you have any doubts about the safe condition of the system, the question of usability must be assessed by a suitably authorised person.

Warning: Use of the anchor by untrained personnel results in the risk of incorrect use and the risk of items falling down, causing a hazard to life and limb of persons. Use only trained personnel.

Warning: The attachment point for load attachment devices is provided for the attachment of objects. It is not intended as an attachment point for protection of people against falls from a height or for transporting people.

Installation instructions for PFEIFER LSF Lifting Loop

Attachment point for load attachment devices, satisfying EC machinery directive 2006/42/EC



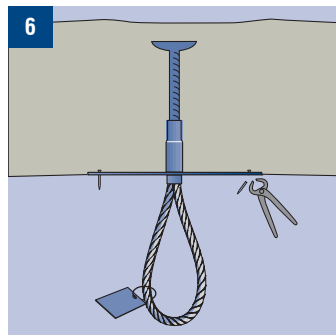
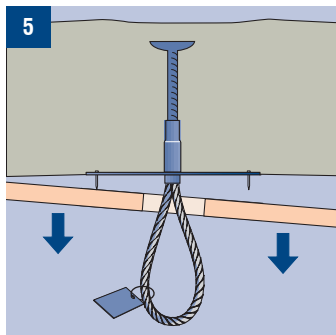
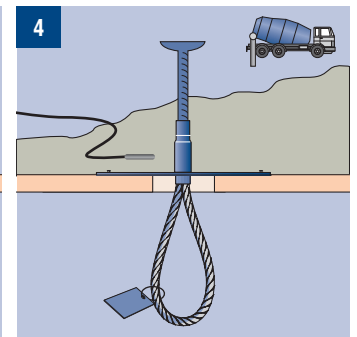
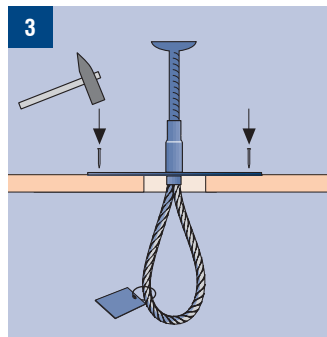
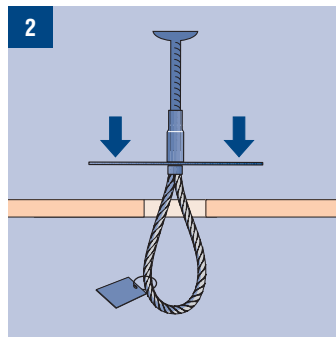
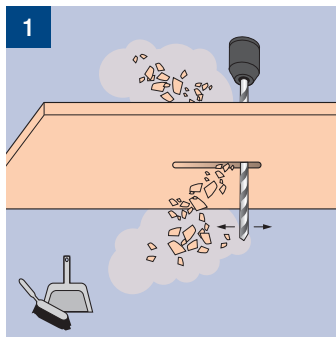
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Fixing Systems
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Installation

Installation of the PFEIFER LSF Lifting Loop is as shown in the following drawings:

- 1) Cut a slot in the formwork and remove the swarf
- 2) Position the anchor in the slot
- 3) Fastening to the formwork:
 - a) Nailing the installation plate to the formwork (3 mm nail holes in the installation plate)
 - b) Adhesion of the installation plate to the formwork
- 4) Pour the concrete carefully and pay attention to the components. Carefully compact the concrete, avoiding direct contact between vibrator and lifting loop incl. anchor
- 5) Formwork: Carefully remove the formwork. Avoid causing damage.
- 6) Remove the fixing nails!



Warning: All modifications, additions and welding work are prohibited. This can result in the load falling down and thus to injury or the death of persons. The LSF lifting loop must be used only in its original unmodified state.

Caution: Do not load the PFEIFER LSF Lifting Loop before the concrete has reached a sufficient strength. The required minimum concrete compressive strength is $f_{ck,cube} = 25 \text{ N/mm}^2$.

Dimensioning

Selecting the anchors is the responsibility of the planner concerned. In particular, the load transmission of the reinforced concrete ceiling must be individually verified.



Caution: The planning must be done only by qualified engineers.

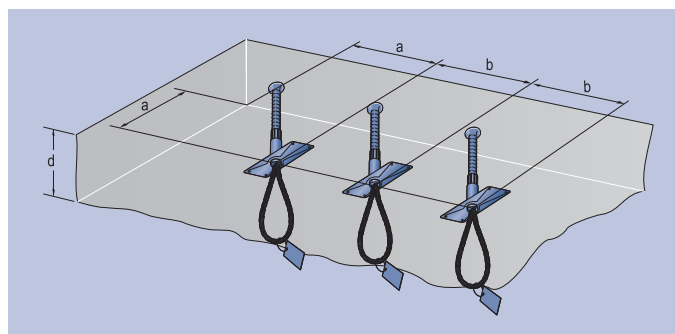


Table 1 – Minimum dimensions

Carrying capacity kg	Edge distance a mm	Minimum spacing b mm	Minimum part thickness d mm
600	180	360	140
1250	220	440	170
2250	330	660	250

To ensure that the force to be anchored is applied locally to the concrete with sufficient safety, certain minimum axis and edge distances must be maintained. In addition, minimum requirements for part thicknesses are specified in order to protect against corrosion. The minimum values can be found in Table 1 and, in each case, refer to the longitudinal axes of the anchors.

When the minimum part thickness was specified, a concrete cover $c_{nom} = 20 \text{ mm}$ was assumed. Depending on the particular operational and environmental conditions, it may be necessary in certain cases to adjust the concrete cover and hence the part thickness in accordance with DIN EN 1992-1-1, Section 4.

Instructions for use of PFEIFER LSF Lifting Loop (including testing logbook)

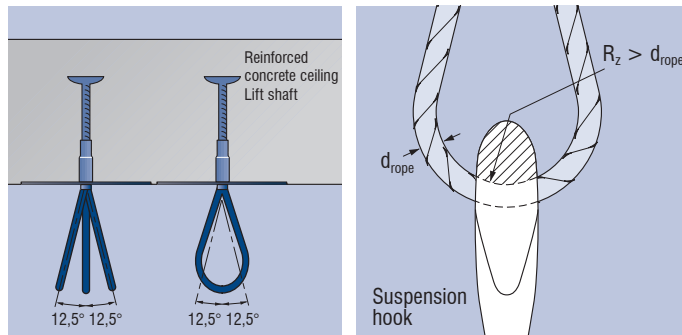
Attachment point for load attachment devices, satisfying EC machinery directive 2006/42/EC



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Fixing Systems
Lift Installation

Use



PFEIFER LSF lifting loops are insertion items that are built flat into the formwork of lift shaft ceilings before concreting and with defined minimum axis and edge distances. They are only for temporary suspension of lift cabins or other objects during installation or maintenance work, always without transporting people and never to protect against falling. In selecting the attachment device, the corner radii R_z as in Table 2 must be observed. The LSF lifting loop is intended for taking loads resulting from straight pull. Planned loads due to skew pull $\geq 12.5^\circ$ must be avoided.

Caution: Before the attachment device is used for the first time, the operating company must ensure that it enters service only after it has been examined by a suitably qualified technician and any faults discovered have been rectified.

Caution: All instructions for the use and application of any other products that are used in connection with the PFEIFER LSF Lifting Loop must be followed.

Table 2:

WLL [kN]	Rz [mm]
6	7
12,5	10
22,5	14

Warning: Too small a corner radius R_z of the attachment device can result in failure or damage of the cable loop even at the rated load. Use only attachment devices with corner radius at least R_z .

Tests

Tests are to be performed as described below and recorded in the testing logbook. When the test criteria are no longer met, the PFEIFER LSF lifting loop can no longer be used.

Regular inspection Inspection prior to use

The contractor or operating company is responsible for ensuring that the PFEIFER Lifting Loop LSF is inspected at regular intervals. Whenever the anchor is used, it must first be verified that the last inspection and confirmation of its usability took place not longer than 12 months earlier. Depending on the operational conditions (frequency of use, environmental influences), inspections may also be necessary at shorter intervals. The inspection tests must always be conducted by suitably qualified persons.

Extraordinary inspection

The contractor or operating company must ensure that the PFEIFER LSF Lifting Loop undergoes a special inspection test by a suitably qualified person

after any unusual incident that could affect its carrying capacity. Written authorisation by a suitably qualified person is also required before using the attachment device after it has undergone repairs.

Inspection criteria

Caution: The attachment point must be in a good operating condition and undamaged. Broken wires, signs of corrosion, visible distortions or deformations are unacceptable.

Caution: The shaft ceiling, particularly the concrete, must be in sound condition. Any visible cracking, blow out or signs of corrosion are unacceptable.

Caution: Do not use an attachment point which has an unreadable or missing identification label.

Disposal

Notice: As soon as the anchor is seen to be ready for scrapping, it must be clearly and unmistakably marked as such. After their removal from installation and until they are scrapped, anchors marked like this must be stored in a special temporary store.

Notice: Before scrapping (steel scrap), the anchor or cable loop must be rendered unusable (cut the cable etc.) to ensure it cannot be re-used.

Identification mark

PFEIFER LSF Lifting Loop

Type / ID no: 000000
Year of manufacture: 2012

PFEIFER

PFEIFER Seil- und Hebeteknik GmbH
Dr.-Karl-Lenz-Strasse 66
D-87700 Memmingen

Load attachment point

XXX kg

CE 2006/42/EG



Usage instructions for PFEIFER LSF Lifting Loop

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2006/42/EC



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Testing logbook

Year of manufacture:	Date of first use:
Purchase date:	Batch number:

Date	Reason for action (regular inspection or repair)	Damage seen, repairs done etc.	Name / signature of qualified person	Date of next regular inspection

EC declaration of conformity according to the EC machinery directive 2006/42/EC, appendix II 1A

The manufacturer **PFEIFER SEIL- UND HEBETECHNIK GMBH**
DR.-KARL-LENZ-STRASSE 66
D-87700 MEMMINGEN

declares that the following lifting device according to article 2 d) with the

product designation **PFEIFER LSF Lifting Loop**
600 kg, 1250 kg, 2250 kg

conforms to the regulations contained in the directives listed below on account of its design and construction
– EC machinery directive 2006/42/EC

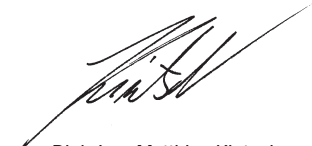
Applied harmonised standards

– DIN EN ISO 12110:2011-03
Safety of machinery – Risk assessment - Part 1: General principles

The person responsible for the creation and maintenance of the technical documentation is

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Memmingen, 20/02/2012



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