

Instructions for installation and use PFEIFER LSV Lifting Loop

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



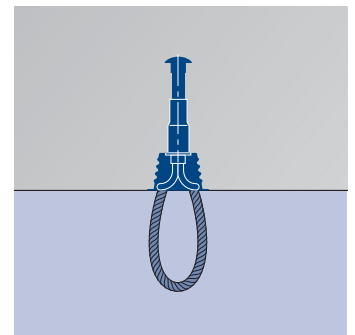
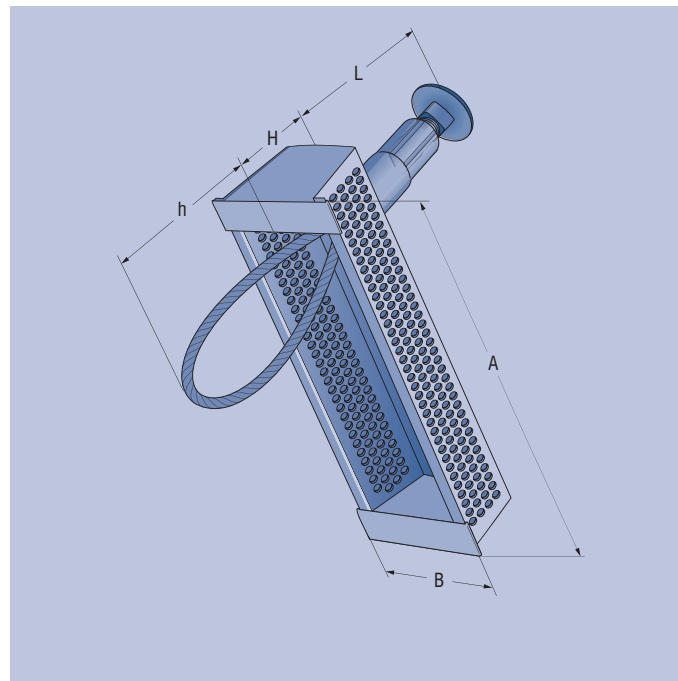
PFEIFER

Fixing Systems
Lift Installation

PFEIFER LSV lifting loops are load attachment points for the suspension of static loads, for flat installation in reinforced concrete lift-shaft ceilings. 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:

bolt anchor, galvanized
flexible steel cable, galvanized
retaining box, galvanized



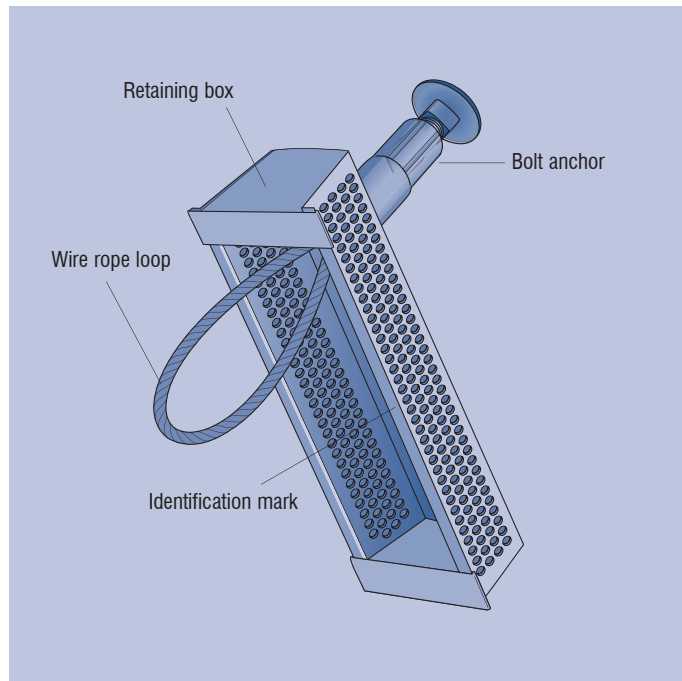
Order no.	Carrying capacity kg	WLL kN	Dimensions mm					Weight kg/ Piece
			L	h	A	B	H	
250922	1000	10	85	90	230	80	50	0,48 kg
250923	1750	17,5	110	145	230	80	50	0,78 kg

Example order for 10 PFEIFER LSV Lifting Loops with load capacity of 1000 kg / WLL 10 kN:
10 PFEIFER LSV Lifting Loops; WLL 10 kN, Ref. no. 250922

Instructions for installation and use of PFEIFER LSV Lifting Loop

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System



The system components of the PFEIFER LSV Lifting Loop are:

- Retaining box
- Wire rope loop secured against unscrewing
- Bolt anchor
- Identification label

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 LSV Lifting Loop must be kept away from contact with chemical products or other aggressive substances.

Safety

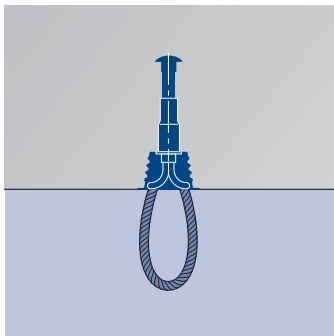
In accordance with machinery safety directive 2006/42/EC the following working coefficients were implemented:

- 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: General building inspectorate approval for lifting loops LSV: Z-21.8-1958)

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

Use

PFEIFER LSV lifting loops are load attachment points for the suspension of static loads, for flat installation in reinforced concrete lift-shaft ceilings. They serve as load connection point for the temporary attachment of objects during assembly and maintenance work.



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 LSV Lifting Loop

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



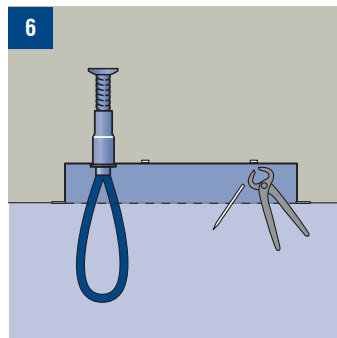
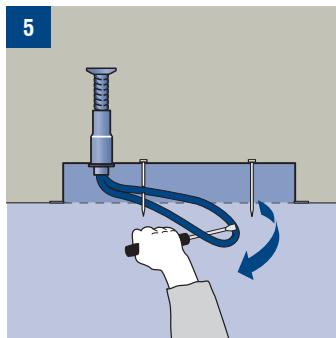
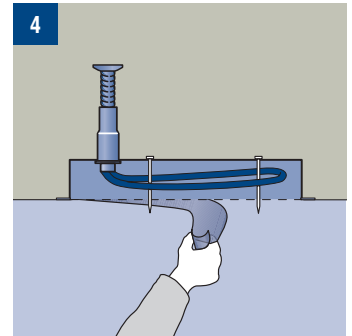
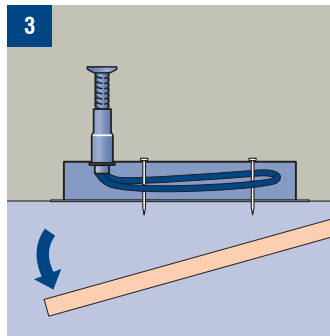
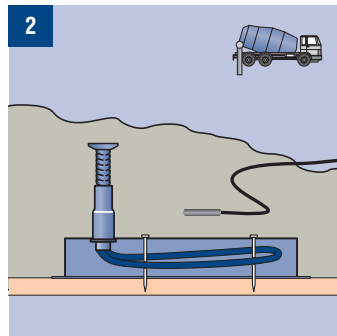
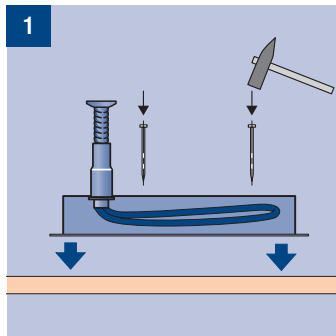
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Installation

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

- 1) The boxes are mounted in the formwork before the concrete is poured by simply nailing or gluing them securely in position
- 2) Pour the concrete carefully and pay attention to the components
Carefully compact the concrete, avoiding direct contact between vibrator and lifting loop or retaining box and anchor
- 3) Formwork: Carefully remove the formwork. Avoid causing damage.
- 4) Remove the tape
- 5) Pull the loop out of the retaining box after using a suitable tool (hammer, screwdriver) to remove the safety stud
- 6) Remove the fixing nails



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



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 LSV lifting loop must be used only in its original unmodified state.

Dimensioning

The selection of the lifting loop box and the dimensioning of the reinforced concrete ceiling where the lifting loops will be installed must be done by a qualified engineer. If appropriate, the weakening effect on the concrete cross-section from installing the lifting loop must be taken into account.

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 are given 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.

To take the splitting forces due to straight pull a minimum reinforcement for each lifting loop must be included as in Table 1. The total cross-section of the reinforcement against splitting is the sum of the required individual sections of each lifting loop. The reinforcement against splitting is to be arranged in both the longitudinal and transverse directions.

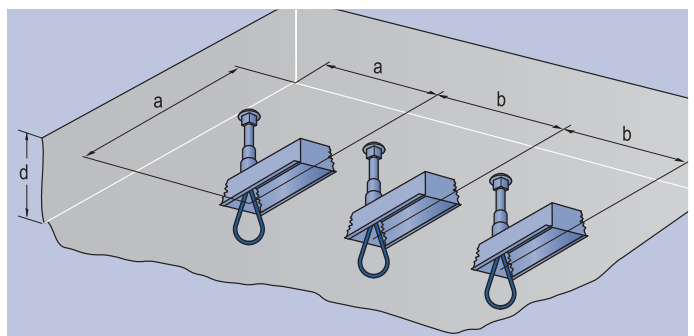


Table 1 – Minimum dimensions

Carrying capacity kg	Edge distance a mm	Minimum spacing b mm	Minimum part thickness d mm	Minimum split reinforcement mm ²
1000	200	400	155	50
1750	230	460	180	70



Caution: The anchorings must be designed in line with engineering practice. Verifiable calculations and design drawings must be prepared, which take into account the loads to be anchored

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

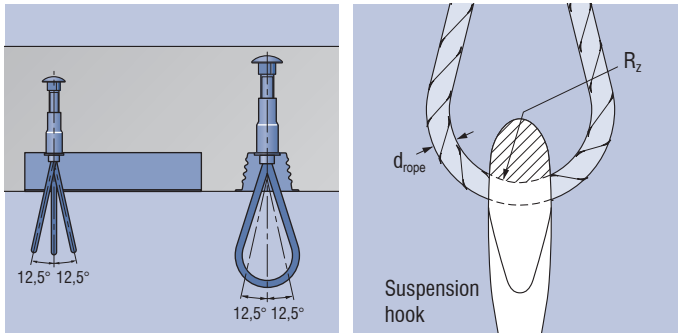
Attachment point for load attachment devices, satisfying EC machinery directive 2006/42/EC



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Use



PFEIFER LSV lifting loops are for later fitting, away from the edges, in the ceiling lower surfaces of lift shafts. They are only for temporary suspension of the lift cabin 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 LSV 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 LSV Lifting Loop must be followed.

Table 2:

WLL [kN]	R_z [mm]
1000	11
1750	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 LSV 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 LSV 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 LSV 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 (separate the anchor, cut the cable etc.) to ensure it cannot be re-used.

Identification mark

PFEIFER LSV Lifting Loop

Type / ID no: 000000
Year of manufacture: 2020

Load Attachment Point

PFEIFER

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

1000 kg

CE 2006/42/EG



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 LSV Lifting Loop**
in the sizes **1.0 t; 1.75 t**

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 14121-1:2007-12
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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Manager, Development Connecting and Lifting Systems, PFEIFER Seil- und Hebetchnik GmbH

PFEIFER Seil- und Hebetchnik GmbH
Memmingen, 14/05/2012



ppa. Dipl.-Ing. Matthias Kintscher
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Manager, Development Connecting and Lifting Systems