

Lifting loop



Application Instruction

Our products from the division BUILDING SOLUTIONS

SERVICES

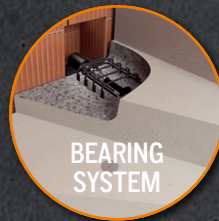
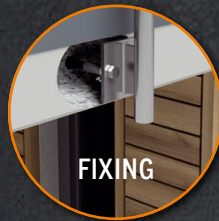
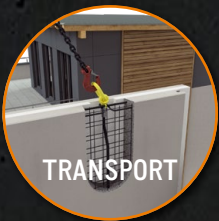
- » On-site tests -> we ensure that your requirements are properly covered by our planning.
- » Test reports -> for your safety and documentation.
- » Trainings -> the knowledge of your employees from planning and production is enhanced by our experts on site, online or via webinar.
- » Planning support -> latest design software, planning documents, CAD data and much more can be downloaded any time from www.philipp-group.de.

HIGH DEMANDS ON PRODUCT SAFETY AND PRACTICALITY

- » Close cooperation with notified bodies and - if necessary - approval of our solutions.

TECHNICAL DEPARTMENT

- » Our expert-team will support you at any time during your planning phase with detailed advice.

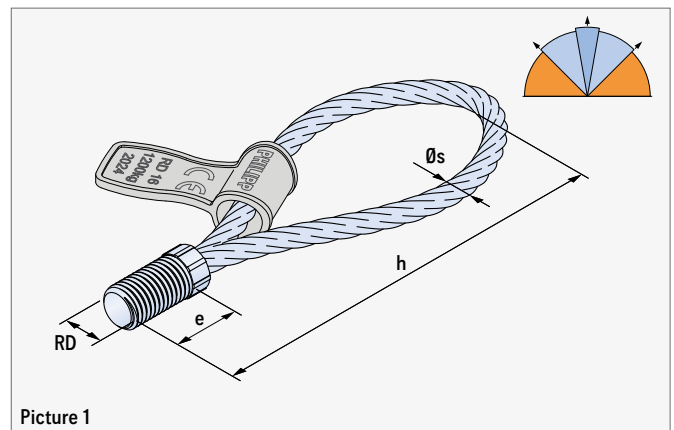


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THE LIFTING LOOP

The Lifting loop is part of the PHILIPP Transport anchor system and complies with the VDI/BV-BS Guideline "Lifting inserts and lifting insert systems for precast concrete elements" (VDI/BV-BS 6205). The use of the Lifting loop requires the compliance with this Application Instruction, the Installation and Application Instruction of the particular threaded anchor as well as the General Installation Instruction. The Lifting loop is only permissible for axial and diagonal tension up to 45°.



Picture 1

TABLE 1: PERMISSIBLE LOAD BEARING CAPACITIES AND DIMENSIONS

Ref. no. ①	Type	Perm. F 0° - 45° (kN)	RD	Dimensions			Weight (kg/pc.)
				Øs (mm)	h (mm)	e (mm)	
69RD12	RD 12	5.0	12	6	155	22	0.06
69RD16	RD 16	12.0	16	8	165	27	0.13
69RD20	RD 20	20.0	20	10	215	35	0.26
69RD24	RD 24	25.0	24	12	255	44	0.46
69RD30	RD 30	40.0	30	16	300	55	0.88
69RD36	RD 36	63.0	36	18	360	66	1.45
69RD42	RD 42	80.0	42	22	425	75	2.16
69RD52	RD 52	125.0	52	26	530	95	4.50

① Also available with M thread (ref. no. 69M___)

- The weight of 1.0 t corresponds to 10.0 kN.

MATERIAL

The Lifting loop is made of a galvanised steel wire rope while the threaded part is made of a bright precision steel.

EC DECLARATION OF CONFORMITY (DOC)

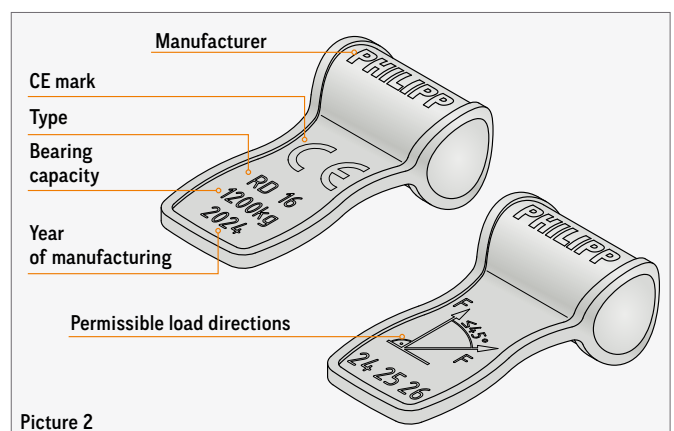
The EC Declaration of Conformity (DoC) of the Lifting loop with threaded end can be downloaded from our website www.philipp-group.de or is available on request.



MARKING

The Lifting loop is labelled with a colour-coded tag which includes the following information (picture 2):

- » Manufacturer (PHILIPP)
- » CE mark
- » Type (system / load class)
- » Maximum bearing capacity (e.g. 1200 kg)
- » Year of manufacturing
- » Illustration of the permissible load direction



Picture 2

APPLICATION

The Lifting loop is a lifting device of the threaded transport anchor system and is supplied with a round thread (with metric pitch) or metric thread. It must be screwed into the thread of the transport anchor hand-tight.



PROTECTION AGAINST UNSCREWING

Using only one Lifting loop in order to lift concrete elements attention must be paid that the lifting device is protected against unscrewing.

During use the following must be considered:

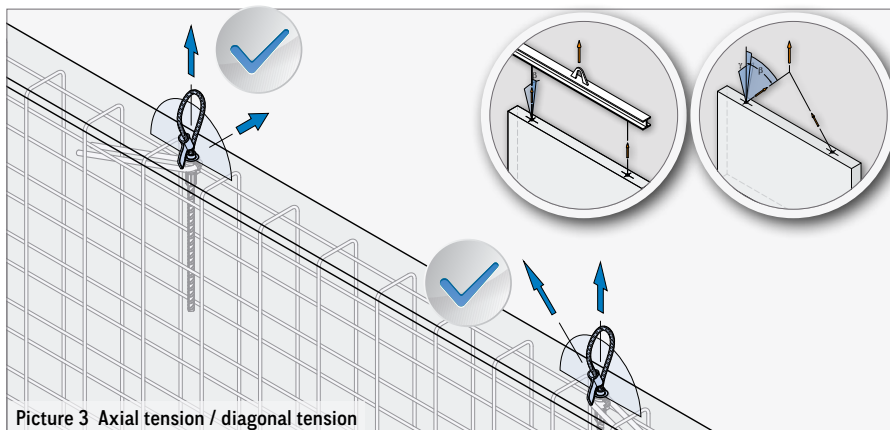
- » Lateral tension to the Lifting loop is not permitted!
- » Thread must be screwed in completely!
- » Dirty thread pitches of the transport anchors as well as of the Lifting loops are to be cleaned!
- » Please notice the replacement state!
- » Contact of the Lifting loop to acids, alkalis or other aggressive media is not allowed!

The Lifting loop is only permitted for axial tension and diagonal tension up to 45°. Incorrect load directions during application lead to damages to the rope and the wire rope clamp. In case of a lateral tension within the transport and lifting procedure of the concrete element we recommend to use the Lifting loop plus, Wirbelstar or Lifty as correct lifting device.

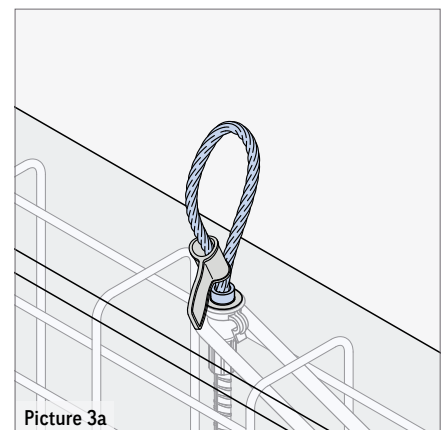


COMBINATIONS WITH RECESS FORMERS

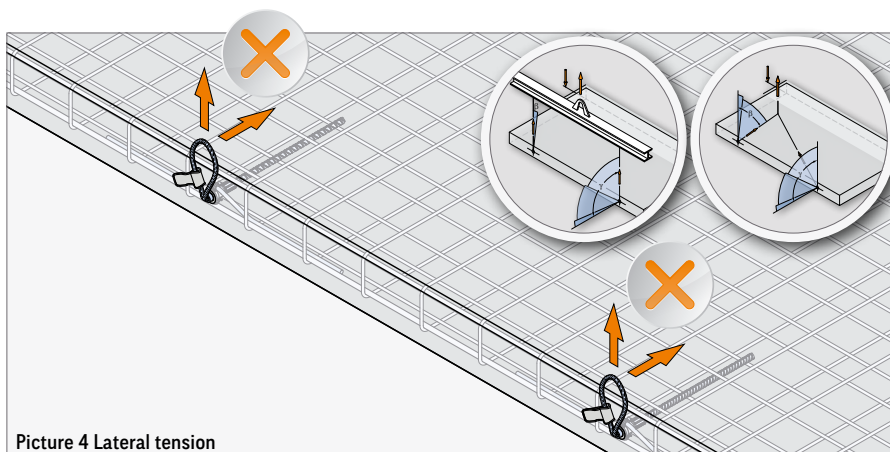
For the combination of a Lifting loop with the different PHILIPP recess formers please refer to the document PHILIPP Threaded transport anchor system – Combinations.



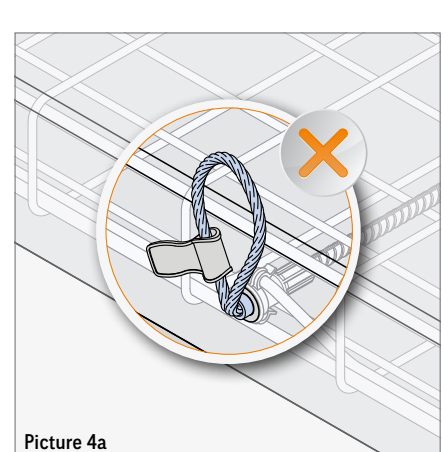
Picture 3 Axial tension / diagonal tension



Picture 3a



Picture 4 Lateral tension

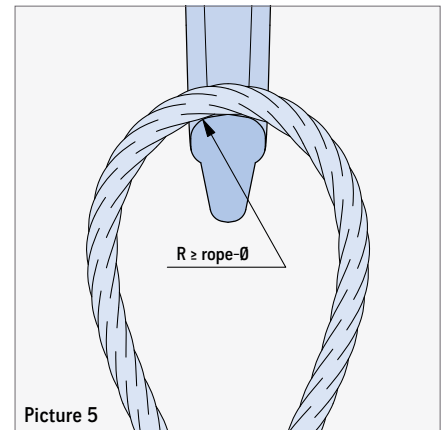


Picture 4a

SAFETY / INSPECTION

SAFETY ADVICE

As each other lifting equipment and lifting device the Lifting loop is subject to an annual inspection (acc. to German DGUV regulation 109-017, para. 8.2). This inspection has to be done by an expert and lies within the responsibility of the owner. Depending on the working conditions inspections might be necessary in a shorter interval than once a year. This might be caused by frequent use, increased wear, corrosion or heat treatment. In general, the current accident prevention regulations must be observed. The correct hook size and form should be considered in order to extend the durability.



Picture 5

ROUNDING RADIUS

The rounding radius of the load hooks must be at least the rope diameter of the Lifting loop (picture 5). The use of too small, too large or sharp-edged hooks leads to a reduced lifetime of the lifting device (replacement criteria).

If the Lifting loop is loaded with extreme forces (e.g. by an event causing damage) it must be examined extraordinarily by an expert. The criteria are given below.

WELDING

Welding or other strong heat influences on the Lifting loop are not allowed.

DAMAGED DEVICES

The continued use of damaged lifting devices or equipment already met the discard criteria is not permitted!

REPLACEMENT CRITERIA AND INSPECTION SERVICE

The replacement criteria of the Lifting loop are based on the German regulation DGUV 109-017, para. 8.4. Prior inspection the Lifting loop must be cleaned. During inspection the following points have to be considered. If one of them is fulfilled the Lifting loop has reached its replacement state and cannot be used anymore.

- » Broken strand
- » Kinks and bends
- » Loosening of external layer
- » Contusion in free lengths
- » Contusions in the support area of the eye with more than 4 broken wires
- » 4 broken wires on a length of the threefold of the wire rope diameter
- » 6 broken wires on a length of the sixfold of the wire rope diameter
- » 16 broken wires on a length of the thirtyfold of the wire rope diameter
- » Corrosion pits
- » Damages, deformations or strong wear and tear of the wire connection (threaded component)
- » Breakage of the wire connection end (threaded part)
- » Deformed thread
- » Welding or other strong heat influences
- » Pull-out of the wire rope from threaded part
- » Unreadable or missing tag
- » Dropping below the permissible test dimensions

TABLE 2: TEST DIMENSIONS

Load class	d _{M,min} (mm)	
12	11.50	
16	15.45	
20	19.40	
24	23.40	
30	29.40	
36	35.40	
42	41.20	
52	51.20	

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