

# PHILIPP GROUP

## PHILIPP Lifting loop plus



VB3-V-082-en - 11/20 - PDF

**Application Instruction**

## Transport and mounting systems for prefabricated building

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Our staff will be pleased to support your planning phase with suggestions for the installation and use of our transport and mounting systems for precast concrete construction.

### ■ Special designs

Customized to your particular needs.

### ■ Practical tests on site

We ensure that our concepts are tailored precisely to your requirements.

### ■ Inspection reports

For documentation purposes and your safety.

### ■ On-site service

Our engineers will be pleased to instruct your technicians and production personnel at your plant, to advise on the installation of precast concrete parts and to assist you in the optimisation of your production processes.

### ■ High safety level when using our products

Close cooperation with federal materials testing institutes (MTIs), and official approvals for the use of our products and solutions whenever necessary.

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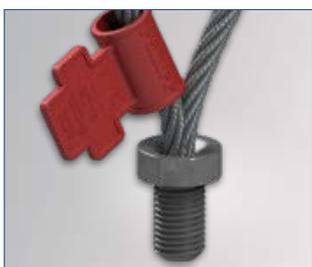
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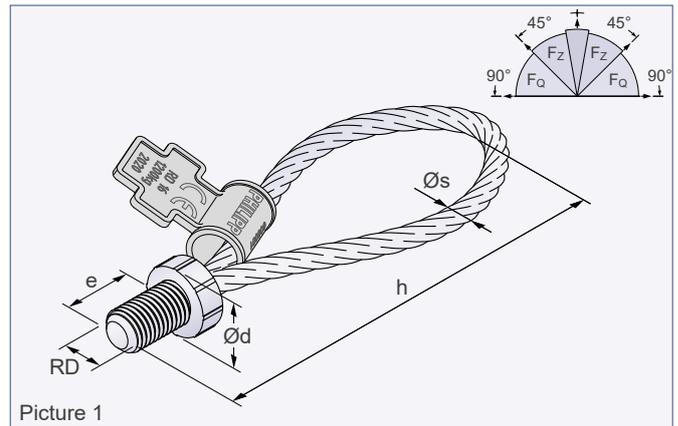
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## The Lifting loop plus

The Lifting loop plus 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 plus 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 with threaded end is suitable for axial, diagonal and lateral tension.



**Table 1: Permissible load bearing capacities and dimensions**

Ref.-no. ①	Type	perm. F		RD	Dimensions					Weight [kg/pc.]
		F <sub>Z</sub> [kN]	F <sub>Q</sub> [kN]		h [mm]	e [mm]	Ød [mm]	Øs [mm]		
69QRD12	RD 12	5,0	2,5	12	155	18	21	6	0.06	
69QRD16	RD 16	12,0	6,0	16	165	26	25	8	0.13	
69QRD20	RD 20	20,0	10,0	20	215	35	31	10	0.26	
69QRD24	RD 24	25,0	12,5	24	255	40	35	12	0.46	
69QRD30	RD 30	40,0	20,0	30	300	43	43	15	0.88	
69QRD36	RD 36	63,0	31,5	36	360	50	53	18	1.45	

① Also available with M thread (ref.-no. 69QM\_...)

- The weight of 1.0 t corresponds to 10.0 kN.

## Material

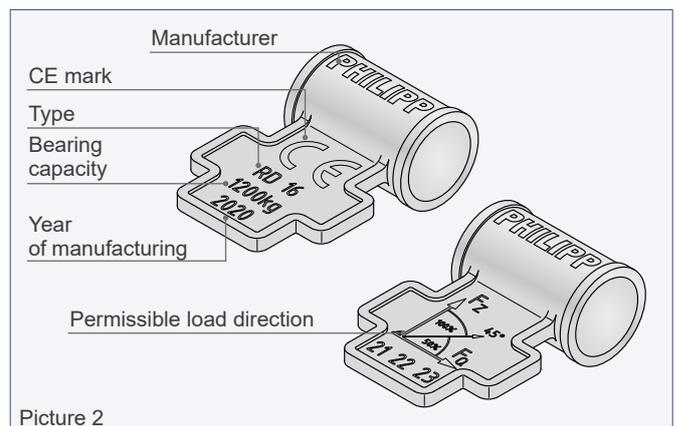
The Lifting loop is made of a galvanised steel wire rope while the threaded part is made of a bright precision steel.

## Marking

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

- Manufacturer (PHILIPP)
- CE mark ②
- Type (system / load class)
- Maximum bearing capacity (e.g. 1200 kg)
- Year of manufacturing
- Illustration of the permissible load direction

**i** ② The EC Declaration of Conformity (DoC) of the Lifting loop plus is available on request or can be downloaded from our website [www.philipp-group.de](http://www.philipp-group.de).



## Application

### Application

The Lifting loop plus 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.



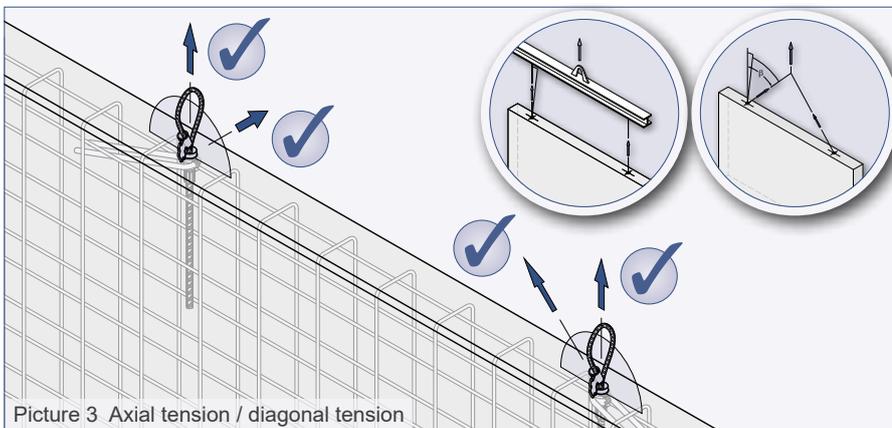
Using only one Lifting loop plus in order to lift concrete elements attention must be paid that the lifting device is protected against unscrewing.

During use the following must be considered:

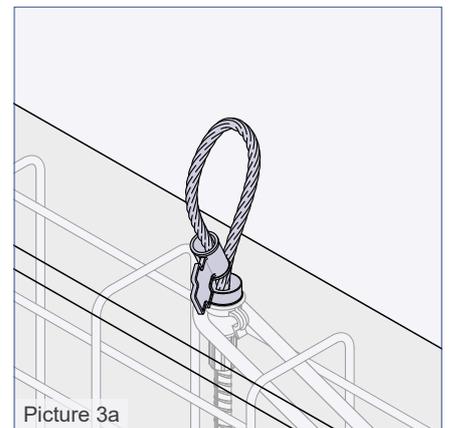
- Thread must be screwed in completely!
- Dirty thread pitches of the transport anchors as well as of the Lifting loops plus are to be cleaned!
- Please notice the replacement state!
- Contact of the Lifting loop plus to acids, alkalis and other aggressive media is not allowed!



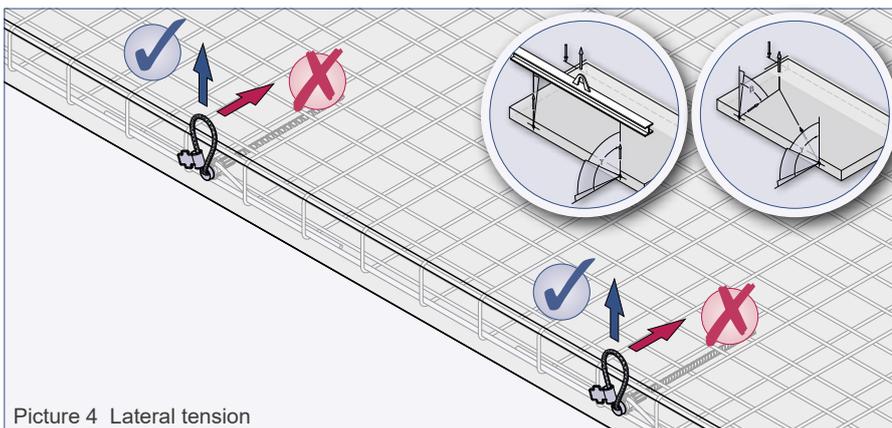
For the combination of a Lifting loop plus with the different PHILIPP recess formers please refer to the document PHILIPP Threaded transport anchor system - Combinations.



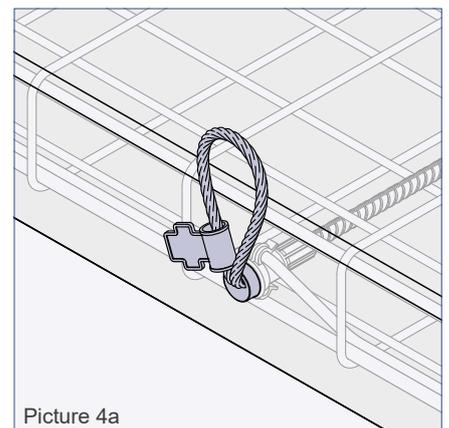
Picture 3 Axial tension / diagonal tension



Picture 3a



Picture 4 Lateral tension



Picture 4a

## Safety / inspection

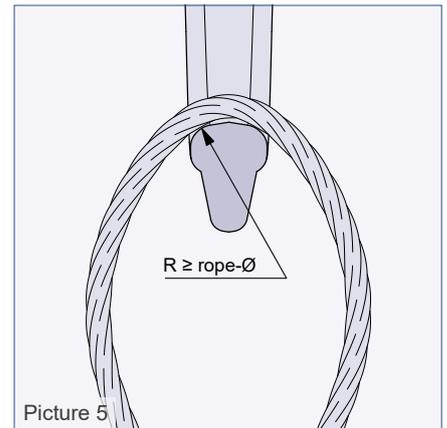
### Safety advice

As each other lifting equipment and lifting device the Lifting loop plus is subject to an annual inspection according DGUV regulation 100-500, chapter 2.8. par. 3.15.4. 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.

 The rounding radius of the load hooks must be at least the rope diameter of the Lifting loop plus (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 plus is loaded with extreme forces (e.g. by an event causing damage) it must be examined extraordinarily by an expert. The criteria are given in section "Replacement criteria and inspection service".



Picture 5

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

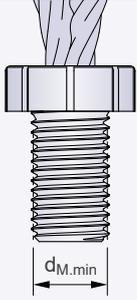
 The continued use of damaged lifting devices or equipment already met the discard criteria is not permitted!

### Replacement criteria and inspection service

The replacement criteria of the Lifting loop plus are based on the German regulation DGUV 100-500, chapter 2.8, par. 3.15.4.

Prior inspection the Lifting loop plus must be cleaned. During inspection the following points have to be considered. If one of the following points is fulfilled the Lifting loop plus 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

Load class	$d_{M,min}$ [mm]	
12	11.50	
16	15.45	
20	19.40	
24	23.40	
30	29.40	
36	35.40	



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solutions

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