

PHILIPP GROUP

PHILIPP Lifty with wire rope



VB3-T-018-en - 05/18

Application Instruction

PHILIPP Lifty with wire rope

The Lifty with wire rope 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 Lifty with wire rope requires the compliance with this Installation Instruction, the installation instructions for threaded anchor systems as well as the General Installation Instruction. The Lifty with wire rope is suitable for axial, diagonal and lateral tension.

Table 1: Permissible load bearing capacities and dimensions

Ref.-No. RD thread ①	Type	perm. F 0° - 90° [kN]	h [mm]	e [mm]	h ₁ [mm]	Weight [kg/pc.]
62LI12DS	RD 12	5.0	310	18	38	0.38
62LI14DS	RD 14	8.0	330	20	38	0.38
62LI16DS	RD 16	12.0	345	23	38	0.38
62LI18DS	RD 18	16.0	390	26	53	0.88
62LI20DS	RD 20	20.0	410	29	53	0.96
62LI24DS	RD 24	25.0	435	34	53	1.04
62LI30DS	RD 30	40.0	490	43	72	2.72
62LI36DS	RD 36	63.0	650	51	72	4.36
62LI42DS	RD 42	80.0	700	60	92	10.50
62LI52DS	RD 52	125.0	800	73	92	10.50

① Also available with M thread (Ref.-No. 62LI__MDS).
- The weight of 1.0 t corresponds to 10.0 kN.

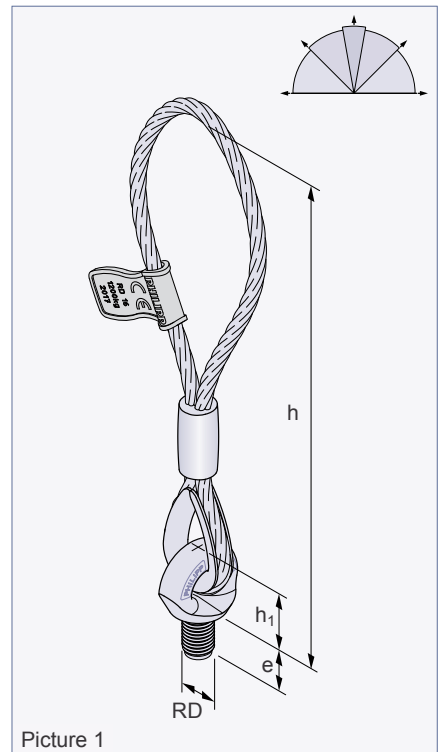
Material

The Lifty with wire rope consists of a forged ring bolt with a thread and a galvanized pressed-steel wire rope.

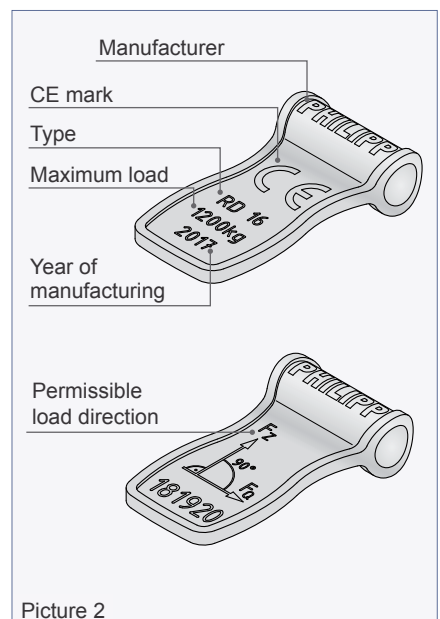
Marking

The Lifty with wire rope is labelled with a colour-coded tag. The label includes the following information:

- Manufacturer (PHILIPP)
- CE mark ②
- Type (system / load class)
- Maximum load (e.g. 1.200 kg)
- Year of manufacturing
- Illustration of the permissible load direction



Picture 1



Picture 2



② The EC Declaration of Conformity (DoC) of the Lifty with wire rope is available on request or can be downloaded from our website www.philipp-group.de.

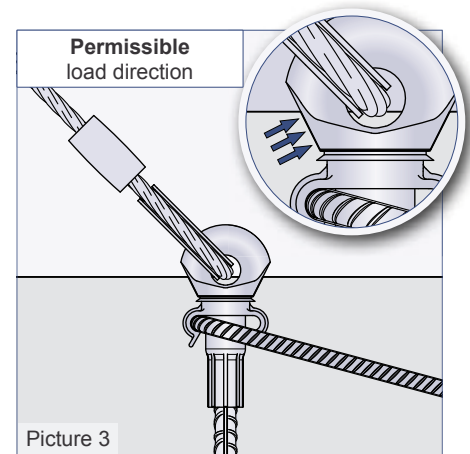


Application / Safety

Application

The Lifty with wire rope is a lifting device of the threaded transport anchor system and is supplied with a round thread (with metric pitch) or a metric thread. The Lifty with wire rope can only be used with appropriate recess formers 72KHN12 to 72KHN52, 72KHN12STK to 72KHN52STK or 72MAXKHN12 to 72MAXKHN52. A Lifty with wire rope must be screwed in the Threaded transport anchor tightly until the bottom part of the ring bolt has continuous contact to the recess created before in the concrete unit. Therefore an optimal load transfer into the cast-in anchor is given, as the ring bolt is supported by the concrete in case of loading (picture 3).

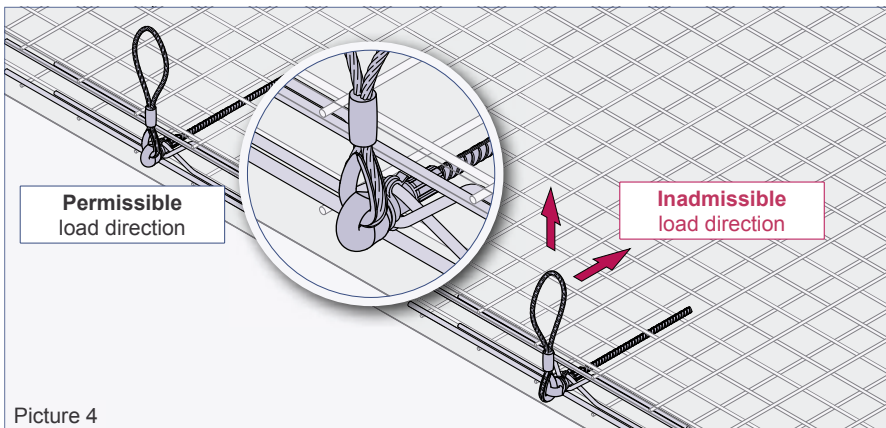
During rigging the loop of the Lifty with wire rope must point to the tensile direction all the time. In order to align the Lifty with wire rope into the correct position it is allowed to screw it back for a half a turn at the most.



Picture 3



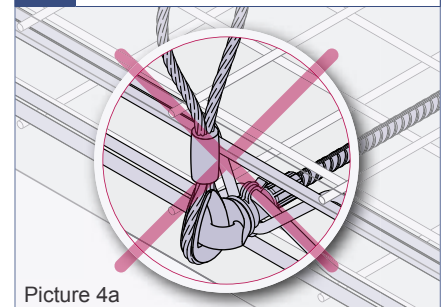
Loading the Lifty with wire rope is only admissible in the tension direction of the ring bolt axis according to picture 4.



Picture 4



Loading the Lifty with wire rope right-angled to the ring bolt axis is inadmissible.



Picture 4a



Using only one Lifty with wire rope in order to lift concrete elements attention must be paid that the Lifty is protected against unscrewing (e.g. by using a tension wire rope at the concrete element).

Safety notice

As each other lifting equipment and lifting device the Lifty with wire rope is subject to an annual inspection according the 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.



Welding or other strong heat influences on the Lifty with wire rope are not allowed.



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

Safety / Inspection

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 Lifty with wire rope (Picture 5). The use of too small, too large or sharp-edged hooks leads to a reduced lifetime of the lifting device (replacement criteria).

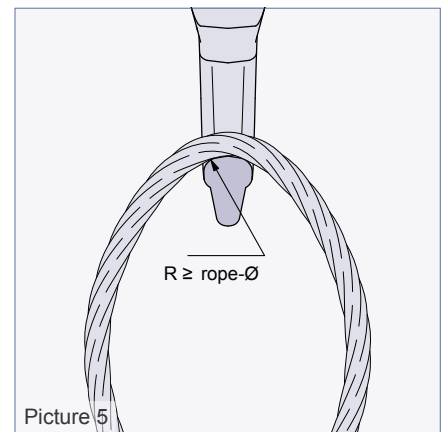
If the Lifty with wire rope is loaded with extreme loads (e.g. by an event causing damage) which may have influenced the bearing capacity it must be examined extraordinarily by an expert. The criteria are given in section „Replacement criteria and inspection“.

Replacement criteria and inspection

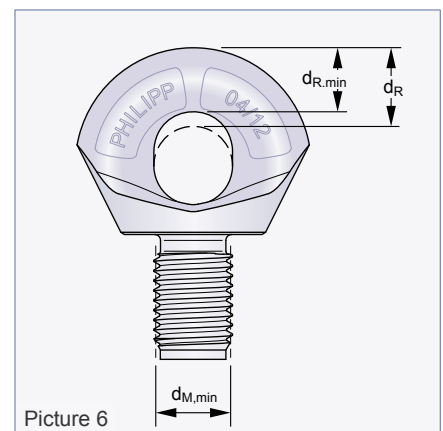
The replacement criteria of the Lifty with wire rope are based on the German DGUV regulation 100-500 (chapter 2.8 par. 3.15.4).

Prior inspection the Lifty with wire rope must be cleaned. During inspection the following points have to be considered. If one of the following points is fulfilled the Lifty with wire rope has reached its replacement state and must not be used any more.

- Broken strand
- Kinks and bends
- Loosening of external layer
- Contusion in free lengths
- Contusion in the support area of the eye with more than 4 broken wire
- 4 broken wire on a length of the threefold of the wire rope diameter
- 6 broken wire on a length he sixfold of the wire rope diameter
- 16 broken wire on a length of the thirtyfold of the wire rope diameter
- Damaged or deformed wire rope connection or threaded area (e.g. twisted ring bolt)
- Cracks or the capacity reducing corrosion pits
- Marking not readable anymore
- Deformed or missing thimble
- Welding or other strong heat influences
- Dropping below the permissible test dimensions (Table 2)



Picture 5



Picture 6

Table 2: Test dimensions of chain link

Load class	$d_{M,min}$ [mm]	d_R [mm]	$d_{R,min}$ [mm]
12	11,50	16	14,4
14	13,50	16	14,4
16	15,45	16	14,4
18	17,40	22	19,8
20	19,40	22	19,8
24	23,40	22	19,8
30	29,40	32	28,8
36	35,40	32	28,8
42	41,20	39	35,1
52	51,20	39	35,1