

Cast-in lifting hoop

Type AS 28.0 - AS 95.0



Data sheet

Our products from the division BUILDING SOLUTIONS

SERVICES

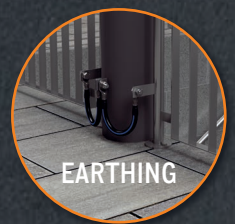
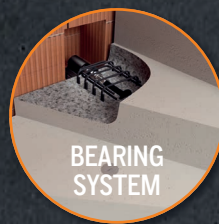
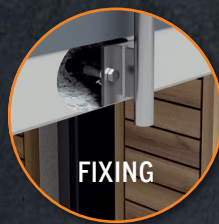
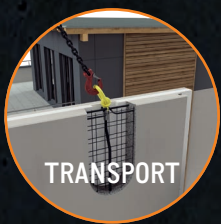
- » On-site tests -> we ensure that your requirements are properly covered by our planning.
- » Test reports -> for your safety and documentation.
- » Trainings -> the knowledge of your employees from planning and production is enhanced by our experts on site, online or via webinar.
- » Planning support -> 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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PHILIPP Cast-in lifting hoop

GENERAL PRODUCT INFORMATION

The Cast-in lifting hoop is part of the PHILIPP transport anchor system. Cast-in lifting hoops are designed for the transport of precast concrete units only. Multiple use within the transport chain (from production to installation of the unit) means no repeated usage. A repeated use (e.g. ballasts for cranes) is not allowed.

Depending on the individual application and load direction it might be necessary to contact our technical department.



FURTHER QUESTIONS

If you have further questions, please have a look at our website www.philipp-group.de or call our technical department under +49 6021 40 27-318 resp. send an email to technik@philipp-gruppe.de.

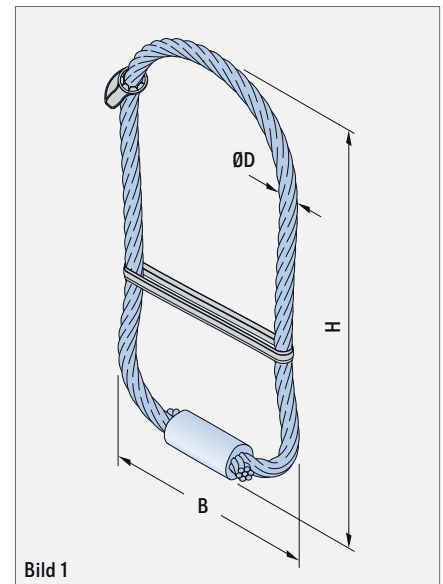


TABLE 1: PERMISSIBLE LOAD BEARING CAPACITIES AND DIMENSIONS

Ref. no. galvanised	Type	perm. F_z ③ 0° - 30° (kN)	Dimensions			Colour code
			H ① (mm)	B ① (mm)	ØD ② (mm)	
442280	AS 28.0	280	800	375	32	Pure white
442320	AS 32.0	320	880	426	32	Jet black
442370	AS 37.0	370	950	440	36	Emerald green
442420	AS 42.0	420	1000	480	38	Curry
442470	AS 47.0	470	1100	530	38	Light blue
442520	AS 52.0	520	1200	550	44	Silk grey
442570	AS 57.0	570	1350	645	44	Claret violet
442650	AS 65.0	650	1430	670	48	Sulfur yellow
442750	AS 75.0	750	1530	725	50	Blue lilac
442850	AS 85.0	850	1680	850	52	Beige
442950	AS 95.0	950	1800	900	52	Clay brown

To determine the correct type please refer also to our General Installation Instruction.

The weight of 1,0 t corresponds to 10,0 kN.

① Dimensions H and B are standard values and can vary depending on the position of the fixation strap.

② Rope diameter ØD is a standard value and can vary depending on the wire rope construction.

③ Load bearing capacity of steel.

GENERAL INFORMATION / APPLICATION

MATERIALS

Cast-in lifting hoops are made of steel wire rope. Both ends of the wire rope are bonded together by a ferrule and form a loop.

MARKING

In order to identify the type of the Cast-in lifting hoop visually it is marked with a coloured tag. This tag must also be visible at the segment sticking out after concreting. With its fins the tag guarantees an easy fixing to this part of the Cast-in lifting hoop sticking out of the element.

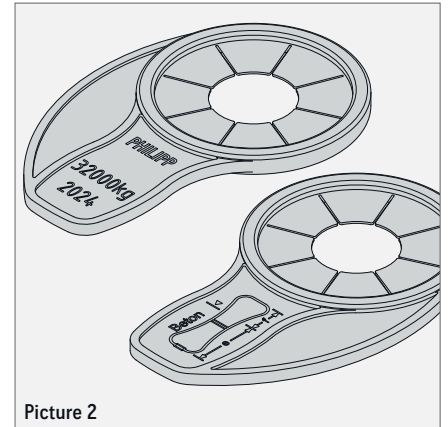
Following data are given on the tag:

- » Producer PHILIPP
- » Bearing capacity e.g. 32000 kg
- » Year of manufacturing e.g. 2024

CORROSION

Aluminium ferrules should be avoided because of corrosion if an increased chlorine equivalent in the concrete is used. For this application a Cast-in lifting hoop with a steel ferrule is more suitable and can be delivered by PHILIPP on request.

An increased chlorine equivalent exists if the values given in the German standards DIN EN 206 and DIN 1045-2 are exceeded.



Picture 2



NOTE!

The aluminium ferrule used in Cast-in lifting hoops must not be placed near-surface of the concrete element. The concrete cover for the ferrule has to be determined using following equation.

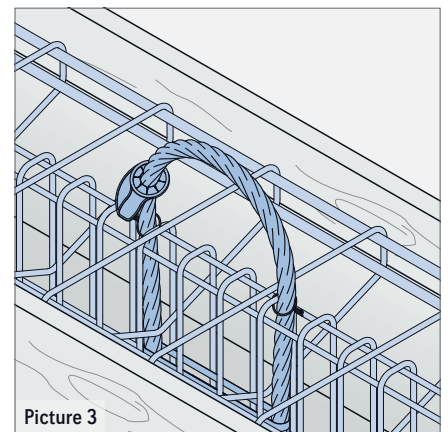
$$c_{\min} \leq c_{\text{Ferrule}} \leq 2 \times c_{\min}$$

(DIN EN 1992-1-1 part 4 a. tab. 4.4N)
(DIN EN 1992-1-1/NA tab. NA.4.4)

INSTALLATION

If Cast-in lifting hoops are installed in an open side of a mould they must be fixed carefully to the reinforcement so that the embedment depth is guaranteed (Picture 3).

It might be necessary to add some steel bars. Here attention has to be paid not to place those steel bars directly to the ferrule of the hoop.



Picture 3

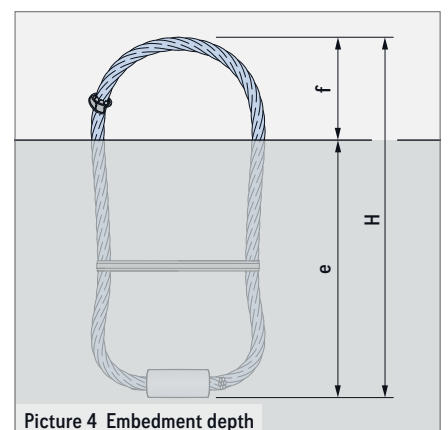


WELDING!

Welding or other strong heat influences on the lifting hoops are not allowed.

TABLE 2: EMBEDMENT DEPTH

Type	e (mm)	f (mm)
28.0	590	210
32.0	630	250
37.0	670	280
42.0	700	300
47.0	770	330
52.0	850	350
57.0	950	400
65.0	1000	430
75.0	1070	460
85.0	1170	510
95.0	1250	550



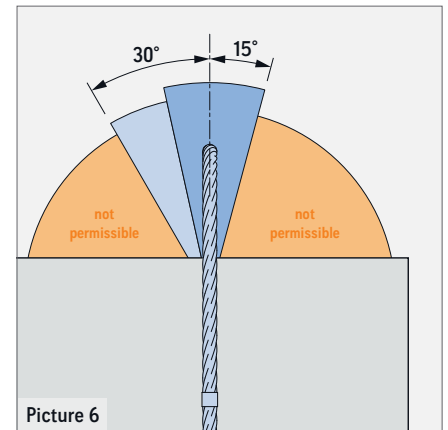
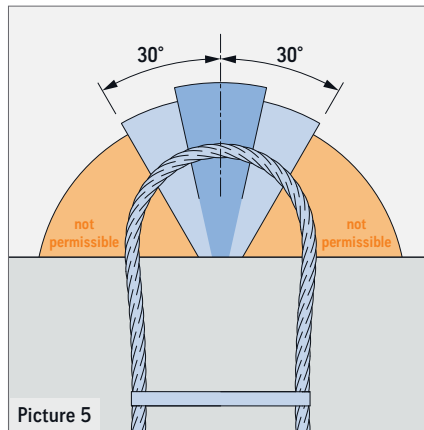
Picture 4 Embedment depth

PHILIPP Cast-in lifting hoop

APPLICATION AND SAFETY

Permissible load directions

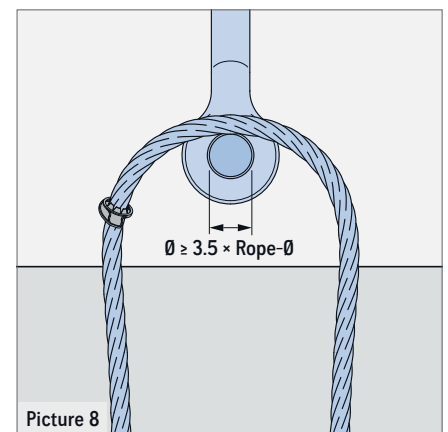
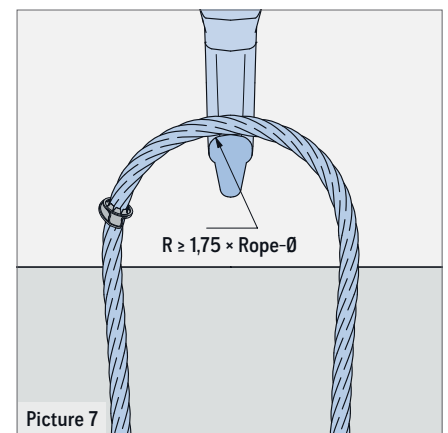
Cast-in lifting hoops can be used only for axial and diagonal tension $\beta \leq 30^\circ$.



SAFETY NOTICES

By using too small, too large or sharp-edged hooks the lifetime of the lifting device will be reduced. The transition radii of used hooks must be at least 1.75 times of the wire rope diameter of the Cast-in lifting hoop (Picture 7).

Using a shackle the pin must be at least 3.5 times of the wire rope diameter of the Cast-in lifting hoop (Picture 8).



TRANSITION RADIUS

In order to guarantee the correct transition radius we recommend to use our Wire protection pulley. This is available in six dimensions for all our Cast-in lifting hoops from AS 0.8 up to AS 95.0 to. For more details please refer to the separate data sheet of the Wire protection pulley.



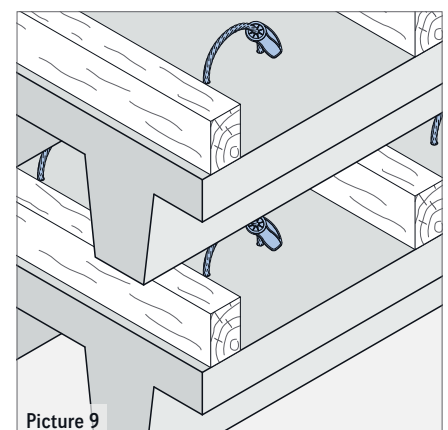
During use of Cast-in lifting hoops the following must be considered:

- » The use of damaged Cast-in lifting hoops with broken strands, contusions, kinks or corrosion pits is not allowed.
- » Contact of Cast-in lifting hoops with acids or alkalis must be avoided.
- » Misuse of Cast-in lifting hoops because of wrong load directions must also be avoided.
- » Lever arms caused by rotating, tilting or swinging which result in local blow-out failures in the concrete or broken wire ropes are inadmissible!

STORAGE OF THE PRECAST UNITS

During storage of the concrete units please make sure that the Cast-in lifting hoops are not bent in any way. This can be guaranteed by using a spacer (e.g. a squared timber) between the concrete elements.

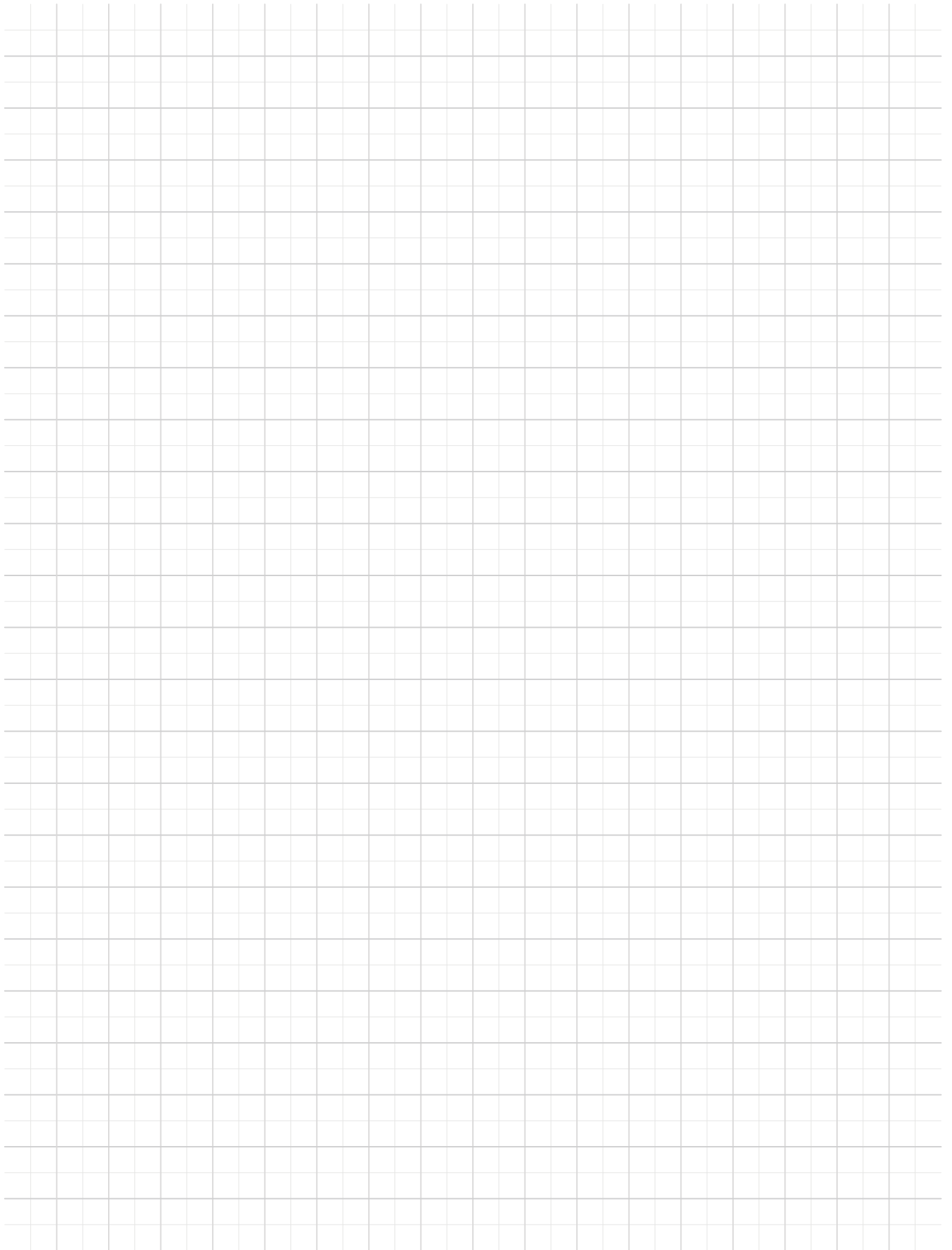
An outdoor storage of the concrete units can lead to corrosion and as a result to a reduction of the hoop bearing capacity.



SIGNIFICANT CORROSION!

If a significant corrosion appears to the installed Cast-in lifting hoops they cannot be used for lifting anymore.

NOTES



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