Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-21/0992 of 11 February 2022

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Hilti Liftbox HLB
Product family to which the construction product belongs	Elevator lifting device
Manufacturer	Hilti AG Feldkircherstraße 100 9494 Schaan FÜRSTENTUM LIECHTENSTEIN
Manufacturing plant	Hilti Werke
This European Technical Assessment contains	9 pages including 3 annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 330075-01-0601, Edition 10/2018

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Specific Part

1 Technical description of the product

The Hilti Liftbox HLB is a pre-installed elevator lifting device consisting of an anchor bolt (anchor rod, anchor head), a joint bracket and a wire loop located in a plastic housing.

The Hilti Liftbox HLB is fully embedded in concrete and anchored by bonding and mechanical interlock.

The product description is given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the Hilt Liftbox HLB is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the Hilti Liftbox HLB of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Load bearing capacity	See Annex C1
Minimum edge distances and spacing	See Annex B2

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 330075-01-0601, the applicable European legal act is: [97/161/EC].

The system to be applied is: 2+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

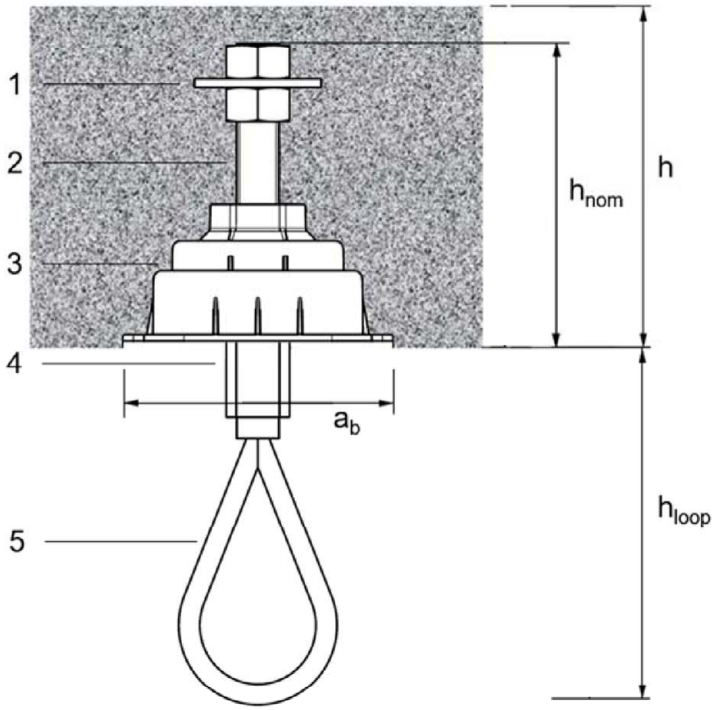
Issued in Berlin on 11 February 2021 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Tempel

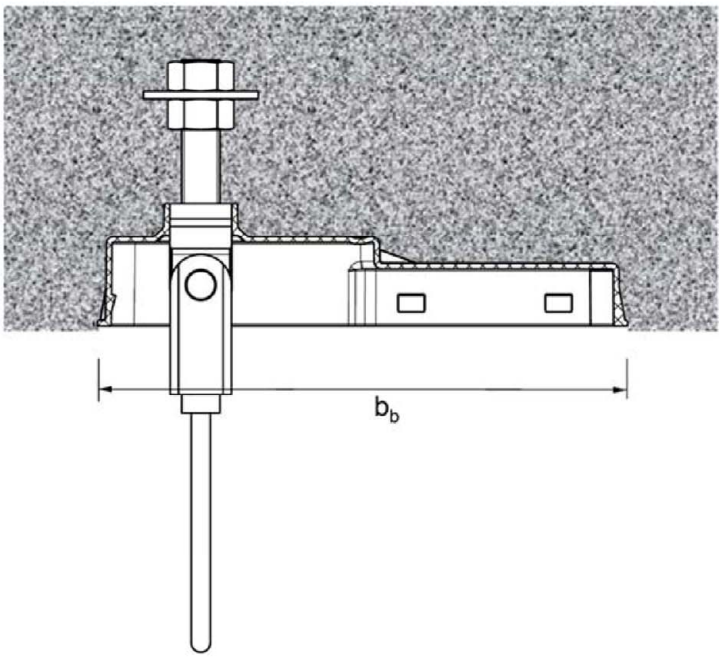
Deutsches Institut für Bautechnik DIBt

Product and installation condition



Key

1 anchor head
2 anchor rod M20
3 wire loop housing
4 joint bracket
5 wire loop M20



Hilti Liftbox HLB

Product Description
Installed condition

Annex A1

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Specifications of intended use

Installation in the roof of an elevator shaft, to transfer the load during the elevator installation.

Anchorage subject to:

- Static and quasi-static loads.
- Tension loading

Base materials:

- Compacted, reinforced or unreinforced normal weight concrete without fibers according to EN 206:2013.
- Strength classes C20/25 to C50/60 according to EN 206:2013.
- Cracked and uncracked concrete.

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions

Design:

- The anchorage with the HLB hoist point for elevator applications is designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the HLB hoist point for elevator applications is indicated on the design drawings (e.g. position of the hoist point for elevator applications relative to the reinforcement or to supports).

Installation:

- The installation of the hoist point for elevator applications is carried out by appropriately qualified personnel under the supervision of the person responsible for the technical matters on site.
- Installation in accordance with the installation instructions given in Annexes B3.
- The hoist point for elevator applications is fixed on the formwork or auxiliary construction such that no movement of the device will occur during the time of laying the reinforcement and of placing and compacting the concrete.
- The concrete around the head of the anchor is properly compacted. The hoist point for elevator applications is protected from penetration of concrete into the internal space of the housing.

Hilti Liftbox HLB	Annex B1
Intended Use Specifications	

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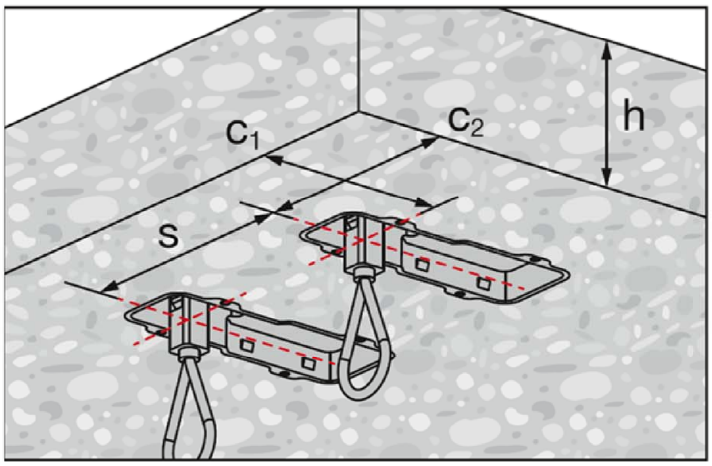
Installation parameters

Table 1: Installation parameter for the Hilti HLB Liftbox

Hilti HLB Liftbox Size			HLB-20	HLB-25
Minimum thickness of concrete member	h_{min}	[mm]	150	200
Minimum edge distance	c_{min}		250	325
Minimum spacing	s_{min}		500	650
Nominal product embedment depth	h_{nom}		142	183
Wire loop height	h_{loop}		168	168
Width of the housing	a_b		128	128
Length of the housing	b_b		277	277



Hilti Liftbox HLB	Annex B2
Intended use Installation parameters, product dimensions	

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HILTI

Liftbox

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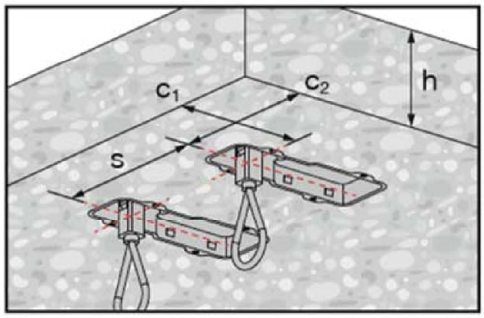
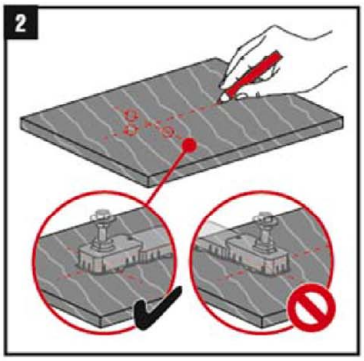
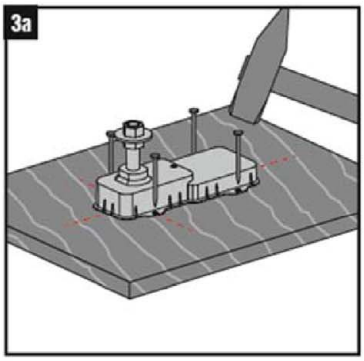
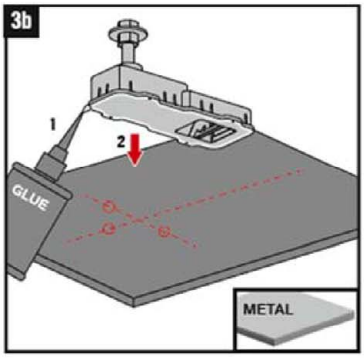
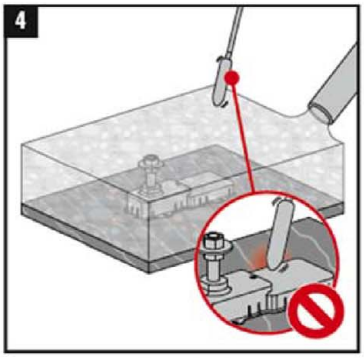
	HLB 20	HLB 25
h_{nom}	142 mm	183 mm
s_{min}	500 mm	650 mm
min c_1, c_2	250 mm	325 mm
min h	150 mm	200 mm

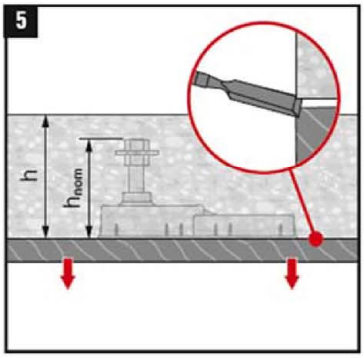


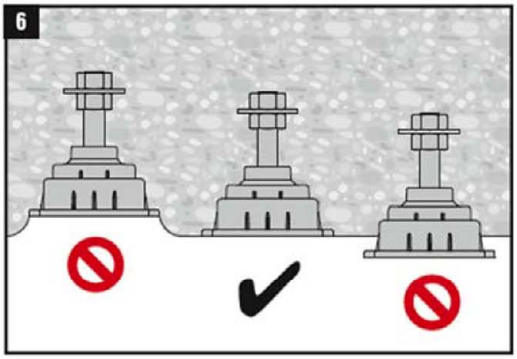


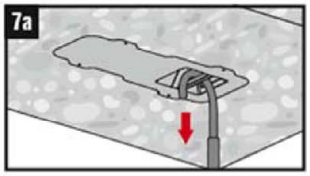


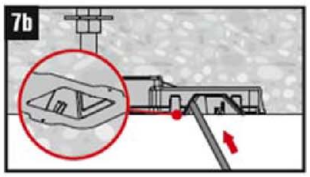












Hilti Liftbox HLB

Intended use and Performance
Installation instructions

Annex B3

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Table 2: Load bearing capacity under tension load for concrete classes C20/25 to C50/60

Hilti HLB Liftbox			**HLB-20**	**HLB-25**
Characteristic resistance	N_{Rk}	[kN]	80	100
Design resistance	N_{Rd}	[kN]	20	25