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European Technical Assessment Body
for construction products



European Technical Assessment

ETA-14/0130
of 31 October 2024

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

EJOT H3

Product family to which the construction product belongs

Plastic anchor for fixing of external thermal insulation composite systems with rendering

Manufacturer

EJOT SE & Co. KG
Astenbergstraße 21
57319 Bad Berleburg
GERMANY

Manufacturing plant

EJOT manufacturing plant 1, 2, 3, 4

This European Technical Assessment contains

12 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 330196-01-0604 edition 10/2017

This version replaces

ETA-14/0130 issued on 17 June 2014

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Specific Part

1 Technical description of the product

The nailed-in anchor EJOT H3 consists of a plastic part made of virgin polyethylene and an accompanying specific nail of virgin polyamide, reinforced with glass fibres.

The anchor types EJOT H3 may in addition be combined with the insulation discs SBL 140 plus and VT 90.

An illustration and the description of the product are 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 anchor 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 anchor of at least 25 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 and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic load bearing capacity <ul style="list-style-type: none">- Characteristic resistance under tension load- Minimum edge distance and spacing	See Annex C 1 See Annex B 2
Displacements	See Annex C 2
Plate stiffness	See Annex C 2

3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Point thermal transmittance	See Annex C 2

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

In accordance with EAD No. 330196-01-0604, the applicable European legal act is: [97/463/EC].

The system to be applied is: 2+

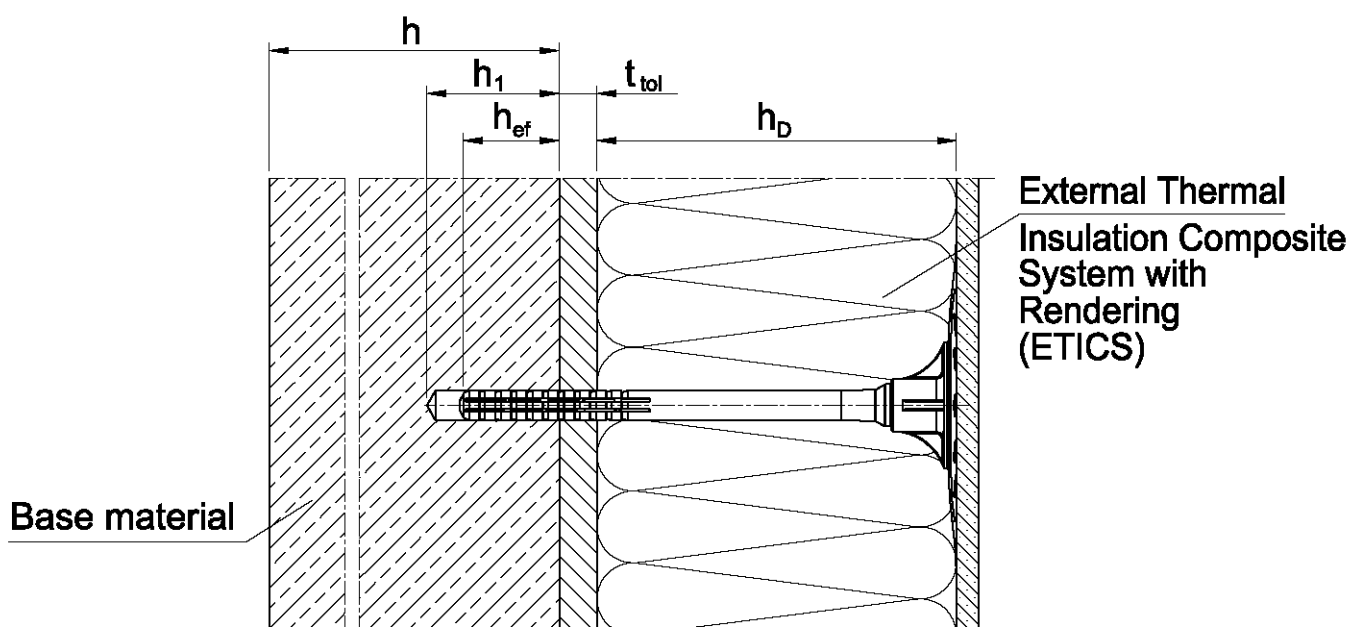
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document

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 31 October 2024 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler



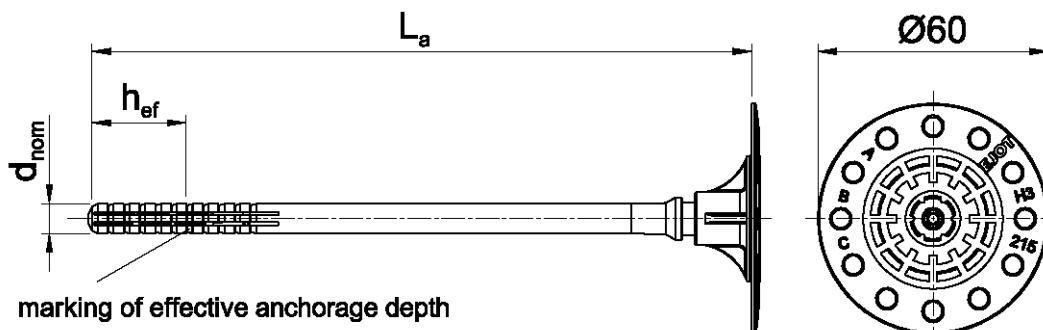
Legend: h_D = thickness of insulation material
 h_{ef} = effective anchorage depth
 h = thickness of member (wall)
 h_1 = depth of drilled hole to deepest point
 t_{tol} = thickness of equalizing layer or non-load-bearing coating

EJOT H3

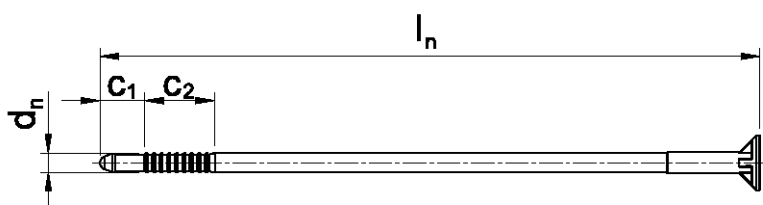
Product description
Installed condition

Annex A 1

EJOT H3



marking of effective anchorage depth



accompanying specific nail

Marking:
Identifying mark (EJOT)
Anchor type (H3)
Length of anchor (e.g. 215)

Table A1: Dimensions

Anchor Type	Colour	Anchor sleeve			Specific nail		
		d_{nom} [mm]	h_{ef} [mm]	min L_a max L_a [mm]	d_n [mm]	C_1 [mm]	C_2 [mm]
EJOT H3	nature	8	25	75 235	5	12	18

Determination of maximum thickness of insulation h_{Dmax} [mm] for EJOT H3:

$$\begin{aligned}
 h_{Dmax} &= L_a - t_{tol} - h_{ef} && (L_a = \text{e.g. } 75; t_{tol} = 10) \\
 \text{e.g. } h_{Dmax} &= 75 - 10 - 25 \\
 h_{Dmax} &= 40
 \end{aligned}$$

EJOT H3

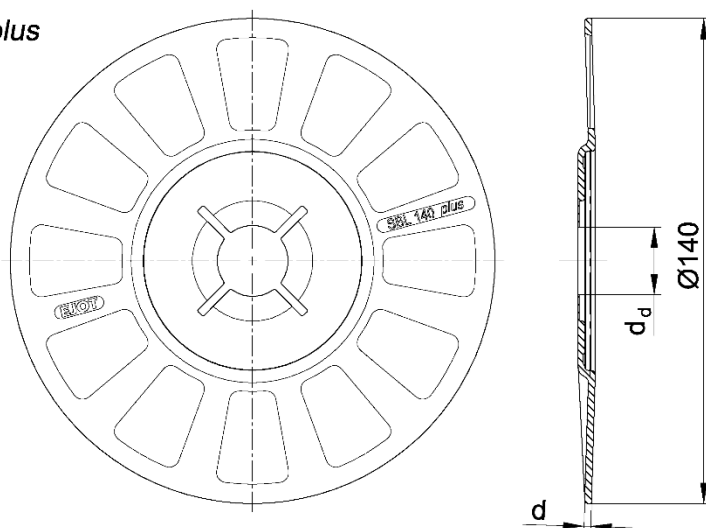
Product description
Marking and dimensions of the anchor sleeve
Specific nail

Annex A 2

Table A2: Materials

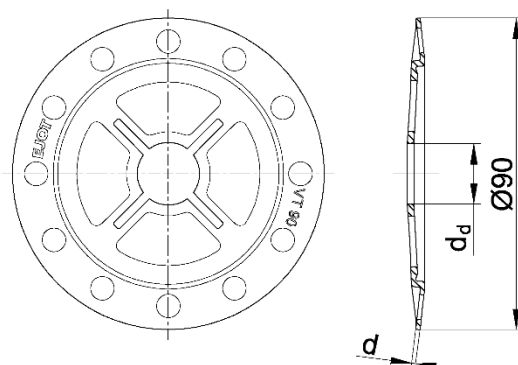
Name	Materials
Anchor sleeve	Polyethylene (virgin material), PE-HD, colour: nature
Specific nail	Polyamide (virgin material), PA GF 50
Slip-on plate (SBL 140 plus, VT 90)	Polyamide (virgin material) PA 6 or PA 6 GF 50 colour: nature

SBL 140 plus



SBL 140 plus	
d_d [mm]	20,0
d [mm]	2,0

VT 90



VT 90	
d_d [mm]	17,5
d [mm]	1,2

EJOT H3

Product description
Materials,
Slip on plates combined with EJOT H3

Annex A 3

Specifications of intended use

Anchorage subject to:

- The anchor may only be used for transmission of wind suction loads and shall not be used for the transmission of dead loads of the thermal insulation composite system.

Base materials:

- Compacted normal weight concrete without fibres (base material group A) according to Annex C 1
- Solid masonry (base material group B), according to Annex C 1
- Hollow or perforated masonry (base material group C), according to Annex C 1
- For other base materials of the base material groups A, B or C the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051 edition April 2018.

Temperature Range:

- 0°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C)

Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors $\gamma_M = 2,0$ and $\gamma_F = 1,5$, if there are no other national regulations.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of thermal insulation composite systems.

Installation:

- Hole drilling by the drill modes according to Annex C1.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation temperature from 0°C to +40°C
- Exposure to UV due to solar radiation of the anchor not protected by rendering ≤ 6 weeks.

EJOT H3

Intended use
Specifications

Annex B 1

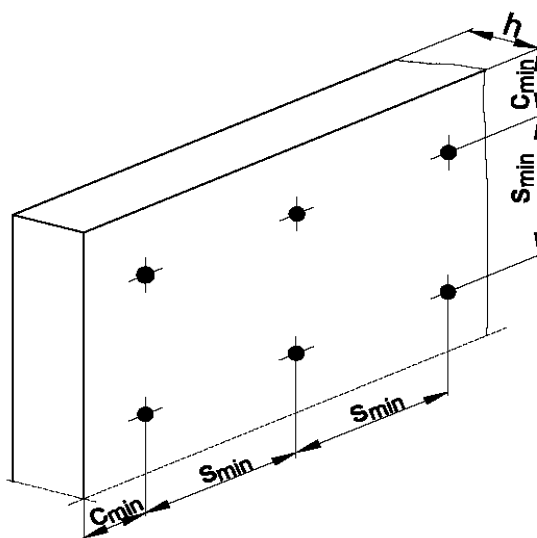
Table B1: Installation parameters

Anchor type				EJOT H3
Drill hole diameter	d_0 [mm]	=		8
Cutting diameter of drill bit	d_{cut} [mm]	≤		8,45
Depth of drilled hole to deepest point	h_1 [mm]	≥		35
Effective anchorage depth	h_{ef} [mm]	≥		25

Table B2: Anchor distances and dimensions of members

Anchor type				EJOT H3
Minimum spacing	s_{min} [mm]	=		100
Minimum edge distance	c_{min} [mm]	=		100
Thickness of member	h [mm]	≥		100

Scheme of distances and spacing

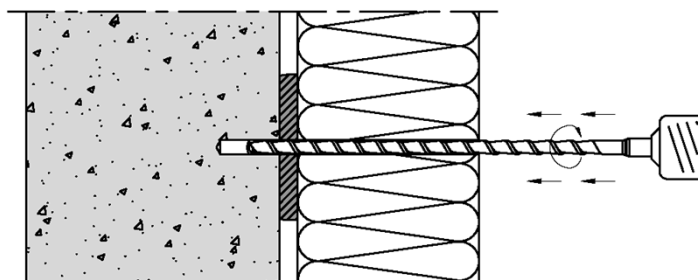


EJOT H3

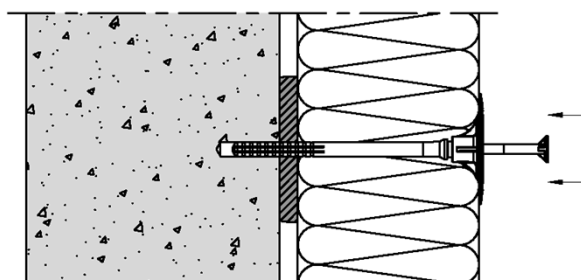
Intended use
Installation parameters, anchor distances and dimensions of members

Annex B 2

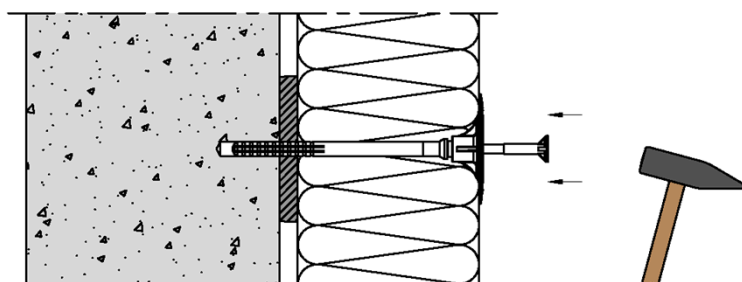
Installation instructions



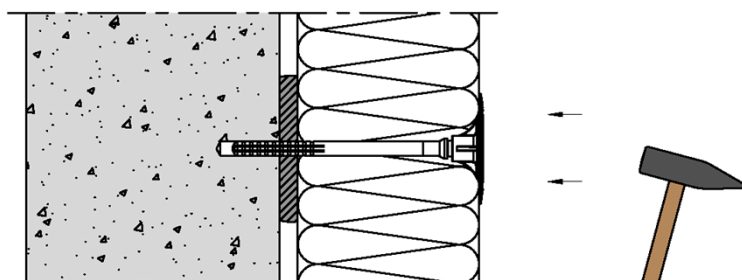
Drill the hole perpendicular to the substrate surface. Clean the drill hole 3x.



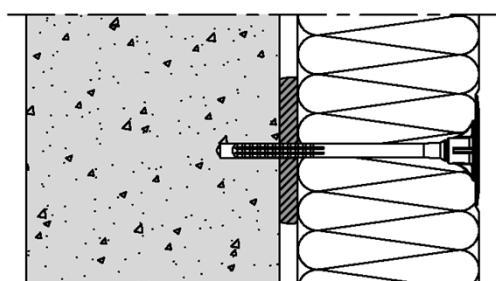
Place the anchor into the drill hole.
The bottom side of the plate must be flush with the ETICS.



Drive in die specific nail with the hammer.



Installed condition of EJOT H3.



EJOT H3

Intended use
Installation instructions

Annex B 3

Table C1: Characteristic resistance to tension loads N_{Rk} in concrete and masonry for a single anchor in kN					
Anchor type					EJOT H3
Base materials	Bulk density ρ [kg/dm ³]	minimum compressive strength f_b [N/mm ²]	General remarks	Drill method	N_{Rk} [kN]
Concrete C12/15 – C50/60 as per EN 206:2013+A1:2016			Compacted normal weight concrete without fibres	hammer	0,6
Clay bricks, Mz as per EN 771-1:2011+A1:2015	$\geq 1,8$	12	Cross section reduced up to 15 % by perforation vertically to the resting area	hammer	0,6
Sand-lime solid bricks, KS as per EN 771-2:2011+A1:2015	$\geq 1,8$	12	Cross section reduced up to 15 % by perforation vertically to the resting area	hammer	0,6
Vertically perforated solid blocks, HLz as per EN 771-1:2011+A1:2015	$\geq 0,8$	12	Cross section reduced by more than 15% and less than 50% by perforation vertically to the resting area	rotary	0,5 ¹⁾
Vertically perforated solid blocks, HLz as per EN 771-1:2011+A1:2015	$\geq 1,2$	20	Cross section reduced by more than 15% and less than 50% by perforation vertically to the resting area	rotary	0,6 ²⁾
Sand-lime perforated bricks, KSL as per EN 771-2:2011+A1:2015	$\geq 1,6$	12	Cross section reduced by more than 15 % by perforation vertically to the resting area	rotary	0,6 ³⁾
<p>1) The value applies only for outer web thickness ≥ 11 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.</p> <p>2) The value applies only for outer web thickness ≥ 14 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.</p> <p>3) The value applies only for outer web thickness ≥ 20 mm; otherwise the characteristic resistance shall be determined by job site pull-out tests.</p>					
EJOT H3					Annex C 1
Performances Characteristic resistance					

Table C2: Point thermal transmittance according EOTA Technical Report TR 025:2016-05

anchor type	insulation thickness h_d [mm]	point thermal transmittance χ [W/K]
EJOT H3	40 - 200	0,000

Table C3: Plate stiffness according EOTA Technical Report TR 026:2016-05

anchor type	diameter of the anchor plate [mm]	load resistance off the anchor plate [kN]	plate stiffness [kN/mm]
EJOT H3	60	1,25	0,6

Table C4: Displacements

Base materials	Bulk density ρ [kg/dm ³]	Minimum Compressive strength f_b [N/mm ²]	Tension load N [kN]	Displacements $\Delta \delta_N$ [kN/mm]
Concrete C20/25 (EN 206:2013+A1:2016)			0,2	0,55
Concrete C50/60 (EN 206:2013+A1:2016)			0,2	0,34
Clay bricks, Mz (EN 771-1:2011+A1:2015)	$\geq 1,8$	12	0,2	0,31
Sand-lime solid bricks, KS (EN 771-2:2011+A1:2015)	$\geq 1,8$	12	0,2	0,33
Vertically perforated solid blocks, HLz (EN 771-1:2011+A1:2015)	$\geq 0,8$	12	0,16	0,25
Vertically perforated solid blocks, HLz (EN 771-1:2011+A1:2015)	$\geq 1,2$	20	0,2	0,27
Sand-lime perforated bricks, KSL (EN 771-2:2011+A1:2015)	$\geq 1,6$	12	0,2	0,24

EJOT H3

Performances
Point thermal transmittance, plate stiffness and displacements

Annex C 2