Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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

European Technical Assessment ETA-15/0461 of 28 January 2026

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	DÜNA Thermo
Product family to which the construction product belongs	Plastic anchor for fixing of external thermal insulation composite systems with rendering
Manufacturer	DÜNA Befestigungstechnik GmbH Im Langel 24 59872 Meschede-Freienohl DEUTSCHLAND
Manufacturing plant	Werk DÜNA
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 Article 95(4) of Regulation (EU) No 2024/3110, on the basis of	EAD 330196-01-0604
This version replaces	ETA-15/0461 issued on 14 September 2016

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Specific Part

1 Technical description of the product

The nailed-in anchor DÜNA Thermo consists of an anchor sleeve made of polyethylene (virgin material) and an accompanying specific nail of galvanized steel with a mounting plug of polyamide (virgin material). The serrated expanding part of the anchor sleeve is slotted.

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 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 - 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

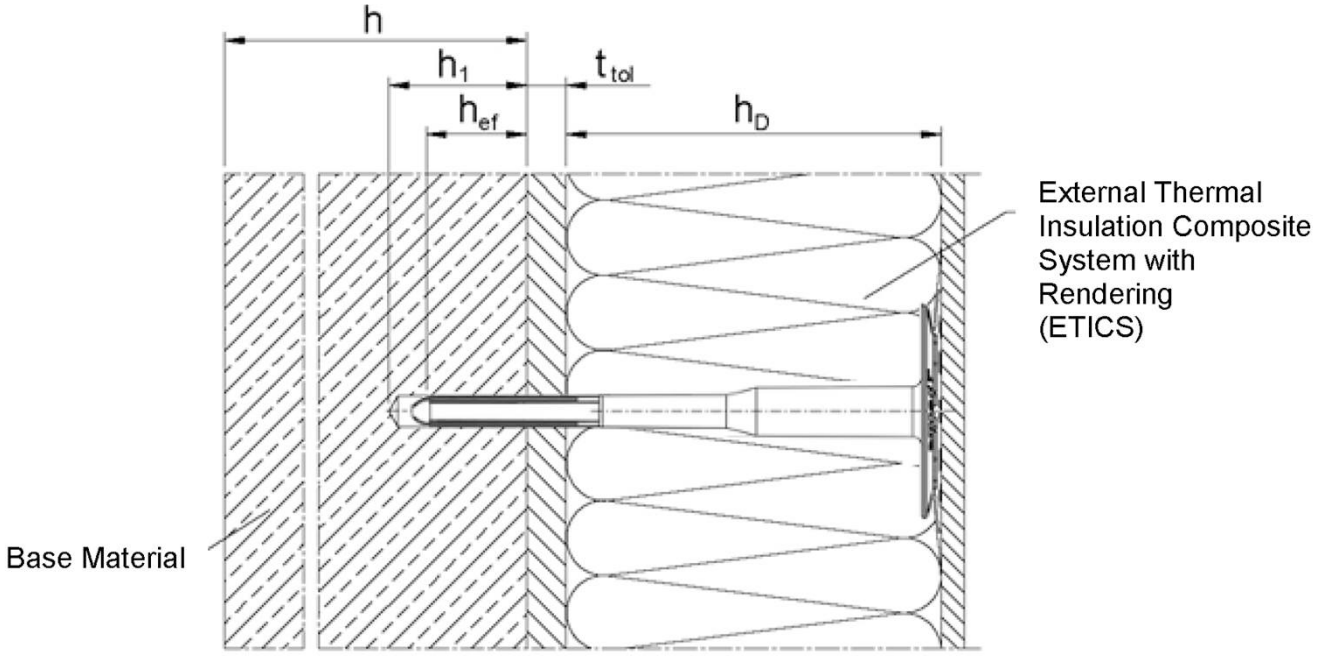
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 28 January 2026 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

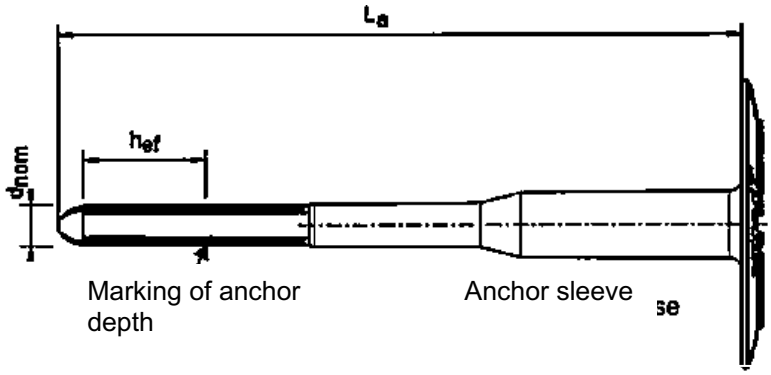
DÜNA Thermo

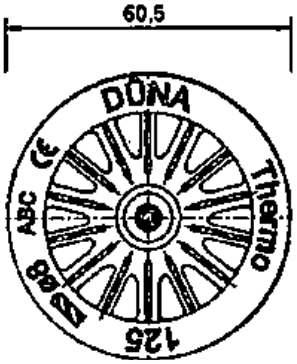


Legend:
- h_D = thickness of insulation material
- h_{ef} = effective anchorage depth
- h = thickness of member (wall)
- h_1 = depth of drill hole to deepest point
- t_{tol} = thickness of equalizing layer or non-load-bearing coating

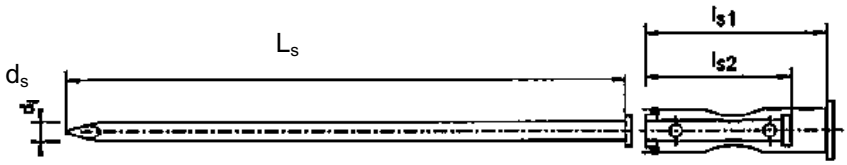
DÜNA Thermo	**Annex A 1**
Product description Installed condition	

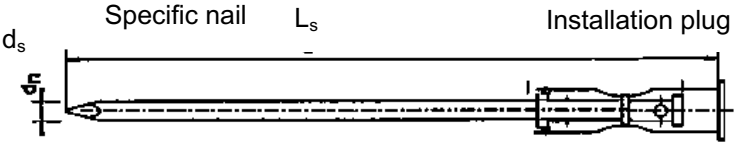
DÜNA Thermo





Marking of the anchor sleeve:
Manufacturer: DÜNA
Anchor type: Thermo (anchor for ETICS)
Length of the anchor (e.g. 135)
Diameter of the anchor: 8
Base material group A,B,C





Marking of the expansion element:
Length of nail: 140 – 260 mm

Table A1: Dimensions

Anchor Type	Anchor sleeve					Specific nail		
	D_k [mm]	d_{nom} [mm]	min L_a [mm]	max L_a [mm]	min h_{ef} [mm]	d_s [mm]	min L_s [mm]	max L_s [mm]
DÜNA Thermo	60,5	8	105	225	35	4,4	95	215

Determination of maximum thickness of insulation h_D [mm]:

$h_D = L_a - t_{tol} - h_{ef}$ (L_a = e.g. 105; t_{tol} = 10)

e.g. $h_D = 105 - 10 - 35$

$h_{Dmax} = 60$

DÜNA Thermo	**Annex A 2**
Product description Marking and dimension of the anchor sleeve and expansion element	

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Table A2: Materials

Name	Materials
Anchor sleeve + Anchor plate	Virgin polyethylene (colour: white)
Installation plug	Virgin polyamide (colour: nature)
Specific nail	Steel, electro galvanized ≥ 5 µm according to EN ISO 4042:2022

DÜNA Thermo

Product description
Materials

Annex A 3

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Specifications of intended use

Anchorages 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 γ_M = 2,0 and γ_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

DÜNA Thermo	**Annex B 1**
Intended use Specifications	

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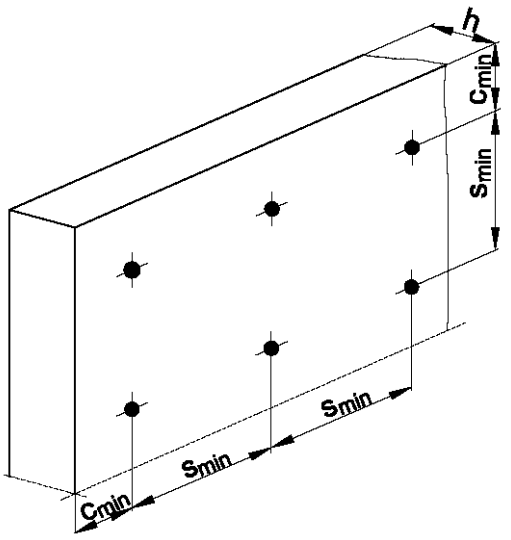
Table B1: Installation parameters

Anchor type		**DÜNA Thermo**
Drill hole diameter	d_0 [mm] =	8
Cutting diameter of drill bit	d_{cut} [mm] ≤	8,45
Depth of drill hole to deepest point	h_1 [mm] ≥	45
Effective anchorage depth [1)]	h_{ef} [mm] ≥	35

Table B2: Anchor distances and dimensions of members

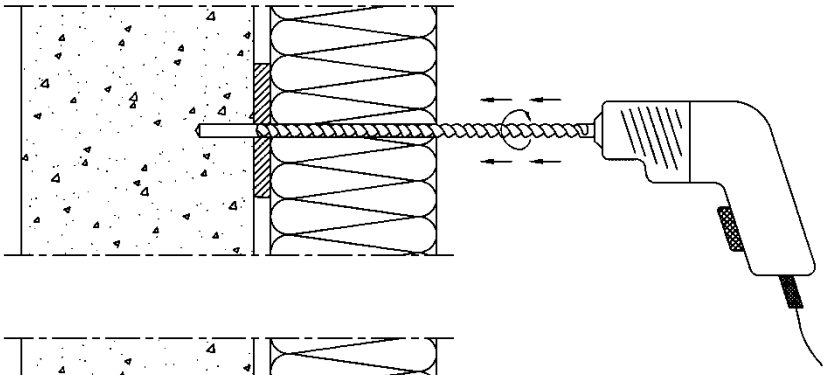
Anchor type		**DÜNA Thermo**
Minimum spacing	s_{min} [mm] =	100
Minimum edge distance	c_{min} [mm] =	100
Thickness of member	h [mm] ≥	100

Scheme of distance and spacing

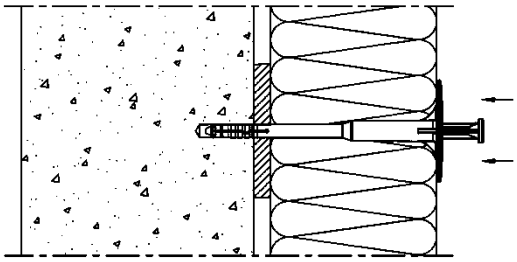


DÜNA Thermo	**Annex B 2**
Intended use Installation parameters, Minimum thickness of member, edge distances and spacing	

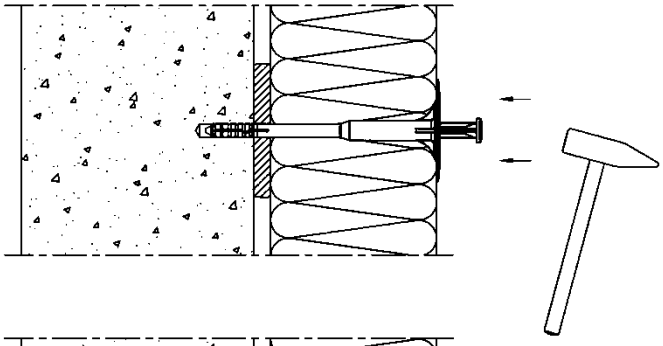
Installation instructions



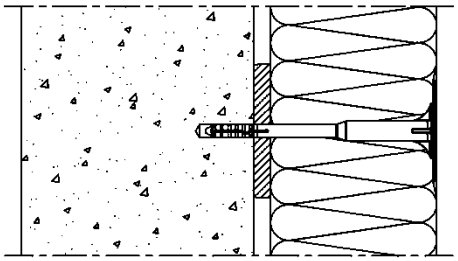
Drill the hole perpendicular to the substrate surface.
Clean the drill hole.



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



Drive in the specific nail with the hammer.



Installed condition

DÜNA Thermo	**Annex B 3**
Intended use Installation instructions	

Table C1: Characteristic resistance to tension loads N_{Rk} [kN] in concrete and masonry for single anchor

Anchor type					**DÜNA Thermo**
Base material	Bulk density ρ [kg/dm³]	Minimum compressive strength f_b [N/mm²]	General remarks	Drilling method [1]	N_{Rk} [kN]
Concrete C12/15 as per EN 206:2013+A1:2016		-	Compacted normal weight concrete without fibres	H	0,3
Concrete C12/15 – C50/60 as per EN 206:2013+A1:2016		-	Compacted normal weight concrete without fibres	H	0,5
Clay brick, Mz as per EN 771-1:2011+A1:2015	≥ 1,8	28	Vertically perforation [2] up to 15%	H	0,4
Sand-lime solid bricks (calcium silikate), KS as per EN 771-2:2011+A1:2015	≥ 1,8	20	Vertically perforation [2] up to 15%	H	0,4
Sand-lime solid bricks (calcium silikate), KSL as per EN 771-2:2011+A1:2015	≥ 1,4	16	Vertically perforation [2] > 15% and ≤ 50% outer web thickness ≥ 20 mm [3]	H	0,3
Perforated clay bricks, HLz as per EN 771-1:2011+A1:2015	≥ 0,8	16	Vertically perforation [2] > 15 % and ≤ 50 % outer web thickness ≥ 16,5 mm [3]	D	0,3
Lightweight concrete hollow block, Hbl, as per EN 771-3:2011+A1:2015	≥ 0,8	2	outer web thickness ≥ 50 mm [3]	D	0,3

[1] H = hammer drill, D = rotary drill

[2] Cross section reduced by perforation vertically to the resting area

[3] The value for N_{Rk} applies only for the given minimum outer web thickness; otherwise the characteristic resistance shall be determined by job site pull-out tests.

DÜNA Thermo	**Annex C 1**
Performances Characteristic tension 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]
DÜNA Thermo	100	0,009

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

anchor type	diameter of the anchor plate [mm]	load resistance of the anchor plate [kN]	plate stiffness [kN/mm]
DÜNA Thermo	60	1,1	0,5

Table C4: Displacements

Base materials	Bulk density ρ [kg/dm³]	Minimum compressive strength f_b [N/mm²]	Tension load N [kN]	Displacements $\Delta \delta_N$ [mm]
Concrete C16/20 – C50/60 (EN 206:2013+A1:2016)			0,3	
Concrete C20/25 – C50/60 (EN 206:2013+A1:2016)			0,5	0,32
Clay bricks, Mz (EN 771-1:2011+A1:2015)	≥ 1,8	28	0,4	0,24
Sand-lime solid bricks, KS (EN 771-2:2011+A1:2015)	≥ 1,8	20	0,4	0,26
Sand-lime perforated bricks, KSL (EN 771-2:2011+A1:2015)	≥ 1,4	16	0,3	0,16
Vertically perforated clay bricks, HLz (EN 771-1:2011+A1:2015)	≥ 0,8	16	0,3	0,13
Lightweight concrete hollow blocks, Hbl (EN 771-3:2011+A1:2015)	≥ 0,8	2	0,3	0,16

DÜNA Thermo	**Annex C 2**
Performances Point thermal transmittance, plate stiffness, displacements	