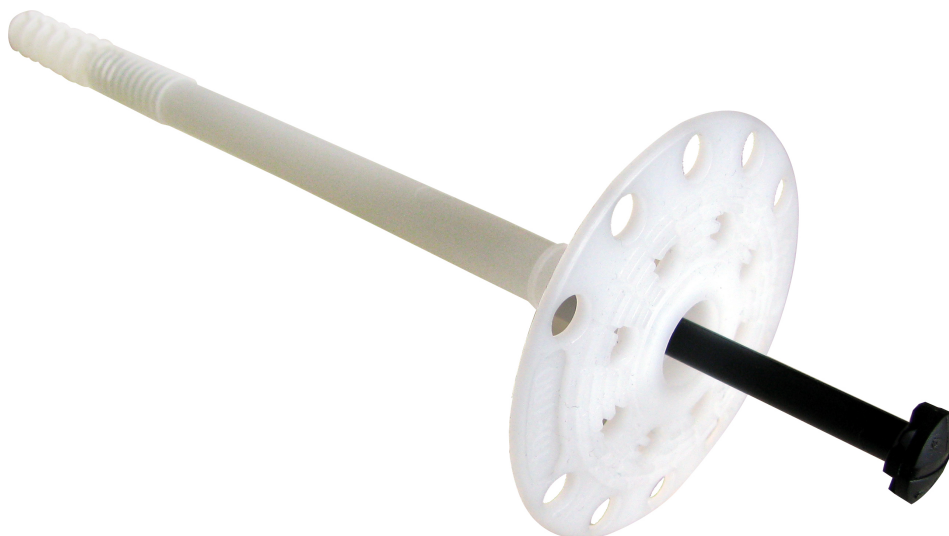


I.N.G. FIXATIONS

Fixation de systèmes d'isolation thermique par l'extérieur



EVALUATION TECHNIQUE EUROPÉENNE



ETE – 09/0318

CLOU ISOLATION SIMPLE EXPANSION

**Cheville plastique tête Ø60 mm pour la fixation de
systèmes d'isolation thermique par l'extérieur**



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Construction Prague**
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Member of



European Technical Assessment

**ETA 09/0318
of 08/09/2026**

General Part

Technical Assessment Body issuing the European Technical Assessment:
Technical and Test Institute for Construction Prague

**Trade name of the construction
product**

**Product family to which the
construction product belongs**

Manufacturer

Manufacturing plant(s)

**This European Technical
Assessment contains**

**This European Technical
Assessment is issued in accordance
with Article 95(4) of Regulation (EU)
2024/3110, on the basis of**

This version replaces

CLOU ISOLATION SIMPLE EXPANSION

Plastic anchors for fixing of external thermal
insulation composite systems with rendering in
concrete and masonry

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12 pages including 9 Annexes which form an
integral part of this assessment.

EAD 330196-01-0604
Plastic anchors made of virgin or non-virgin
material for fixing of external thermal insulation
composite systems with rendering

ETA 09/0318 issued on 28/07/2017

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Specific parts

1. Technical description of the product

The CLOU ISOLATION SIMPLE EXPANSION consist of a plastic sleeve with a plate and an accompanying specific expansion plastic nail for fixing for thermal insulation system (ETICS).

The plastic sleeve of CLOU ISOLATION SIMPLE EXPANSION is made of polypropylene and an accompanying specific expansion nail is made of glass-reinforced polyamide PA6.

The installed CLOU ISOLATION SIMPLE EXPANSION is shown in Annex A1.

2. Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B1-B5.

The provisions made in this European Technical Assessment are based on an assumed working life of the anchor of 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 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)

Not assessed based on EAD 330196-01-0604

3.2 Safety in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for tension loads	See Annex C 1
Displacement	See Annex C 1
Plate stiffness	See Annex C 2

3.3 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

According to the Decision 97/463/EC of the European Commission the system of assessment verification of constancy of performance (see Annex IX to Regulation (EU) 2024/3110) is system 2+.

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Technical and Test Institute for Construction Prague.

Issued in Prague on 08.09.2026

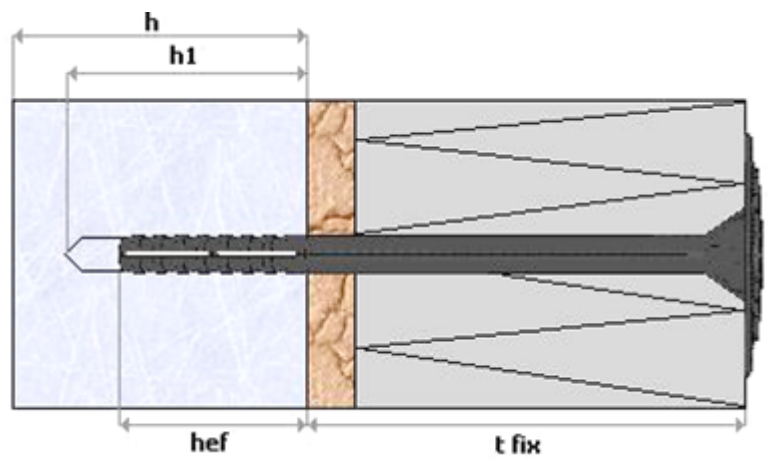


signed by

Ing. Jiří Studnička, Ph.D.
Head of the Technical Assessment Body



Surface assembly for fixing of ETICS in categories A, B, C, D and E

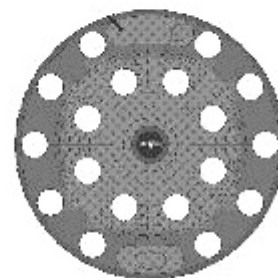
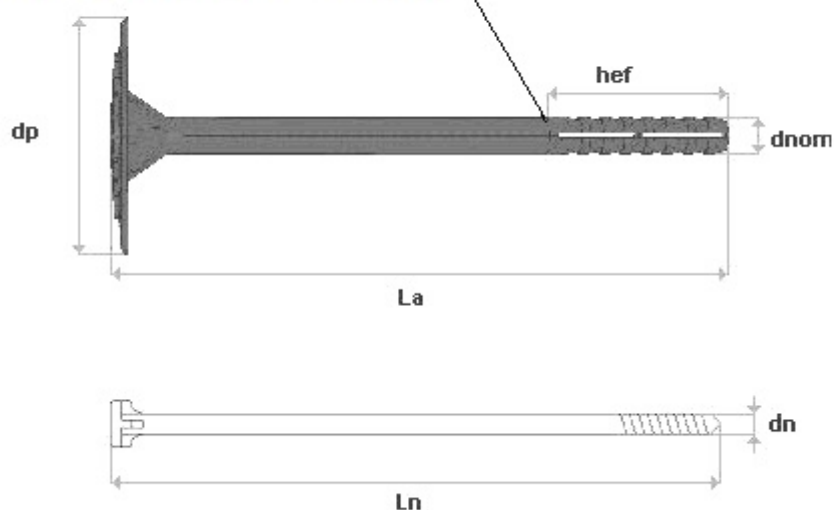


Legend:

- h_{ef} = effective anchorage depth
- h_1 = depth of drill hole in base material
- h = thickness of base material
- t_{fix} = thickness of insulation material

CLOU ISOLATION SIMPLE EXPANSION

Effective anchorage depth
(use category A, B, C, D and E)



Marking:

- Produce name: ING
- Anchor size: e.g. 10x180

CLOU ISOLATION SIMPLE EXPANSION

Product description
Installed conditions

Annex A1

Table A1: Dimensions

Anchor type	Anchor sleeve			Expansion nail L_n
	d_{nom}	h_{ef}	L_a	
CLOU ISOLATION SIMPLE EXPANSION	10	40	90-210	90-210

Table A2: Materials

Designation	Color	Material
Anchor sleeve CLOU ISOLATION SIMPLE EXPANSION	natural	Polypropylene
Expansion nail CLOU ISOLATION SIMPLE EXPANSION	black	glass-reinforced polyamide PA6

CLOU ISOLATION SIMPLE EXPANSION

Dimensions, materials of product

Annex A2

Specifications of intended use

Anchorage subject to:

- Multiple fixing for the anchorage of bonded thermal insulation composite systems (ETICS).

Base materials

- Reinforced or unreinforced normal weight concrete (Base material group A), according to Annex B3.
- Solid brick (Base material group B), according to Annex B3.
- Vertical perforated brick (Base material group C), according to Annex B3-B4.
- Lightweight aggregate concrete hollow blocks LAC (Hbl) (Base material group D), according to Annex B3-B4.
- Autoclaved aerated concrete P2-400 (Base material group E) according to Annex B3.
- The characteristic tension resistance of the anchor may be determined by means of job site pull-out tests carried out on the material actually used, if a characteristic resistance of the base material does not exist (for example masonry made of other solid masonry units or made of perforated clay bricks).

Use conditions

- 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. The dead loads have to be transmitted by the bonding of the thermal insulation composite system.

Use categories:

- The anchors CLOU ISOLATION SIMPLE EXPANSION are used for the categories A, B, C, D and E.

Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages.
- Verifiable calculation notes and drawings shall be prepared taking account of the loads to be anchored, the nature and strength of the base materials, the thickness of insulation and the dimensions of the anchorage as well as of the relevant tolerances.
- Proof of direct local application of load on the base material shall be delivered. The anchor shall only be used for the transmission of wind suction loads. All other loads such as dead load and restraints shall be transmitted by the adhesion of the relevant external thermal insulation composite system

CLOU ISOLATION SIMPLE EXPANSION

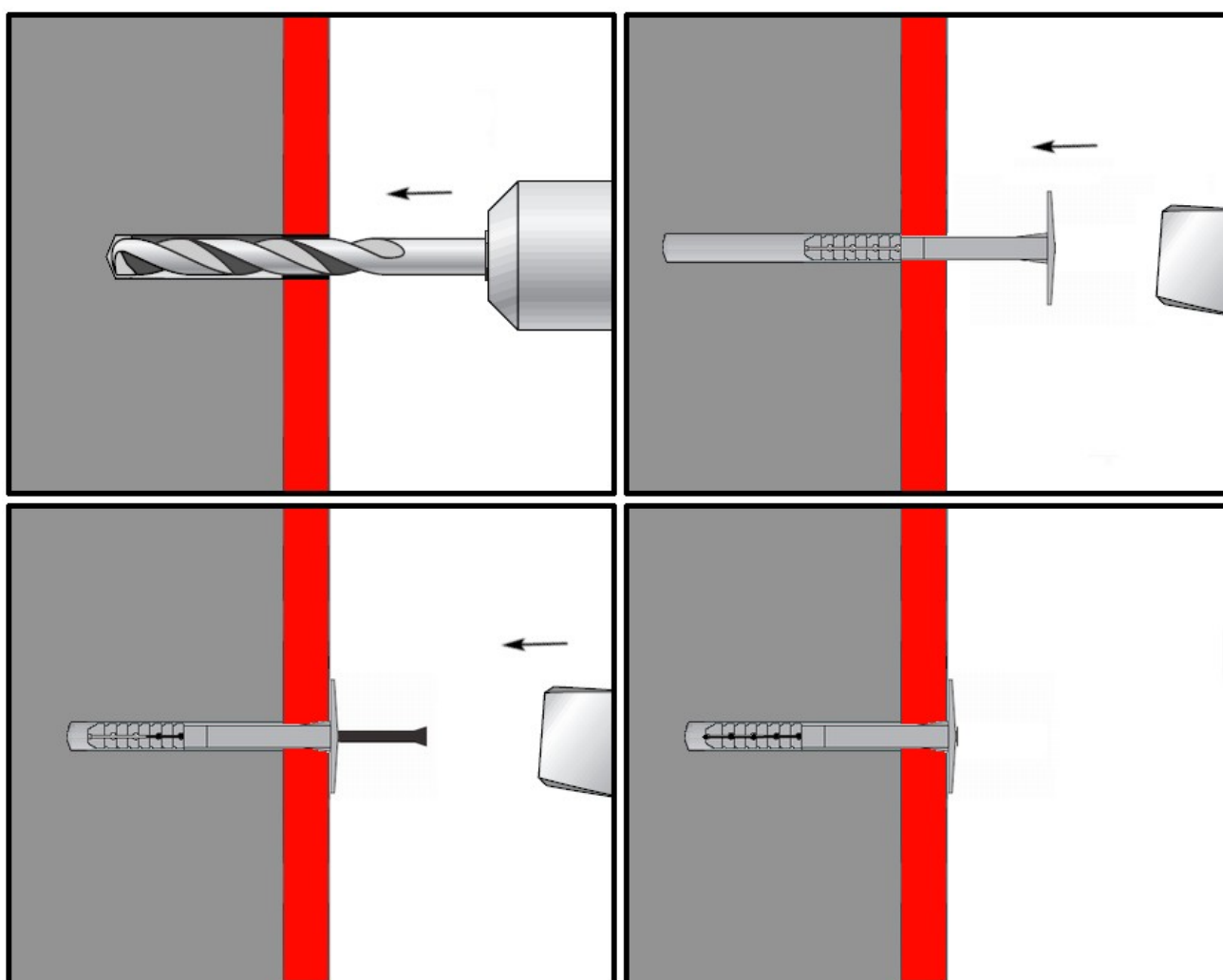
Intended use
Installation

Annex B1

Installation:

The fitness for use of the anchor can only be assumed if the following conditions of installation are met:

- Anchor installation carried out by appropriately qualified personnel under the supervision of the person responsible for technical matters on site.
- Observation of the drill method (Drill holes in masonry made of perforated clay bricks, vertically perforated clay bricks and lightweight aggregate concrete hollow blocks (LAC) may only be drilled using the rotary drill. Other drilling methods may also be used if job-site tests according to Annex B 5 evaluate the influence of hammer or impact drilling.)
- Placing drill holes without damaging the reinforcement
- Temperature during installation of the anchor $\geq 0^{\circ}\text{C}$.
- Exposure to UV due to solar radiation of the anchor not protected by rendering 6 weeks.



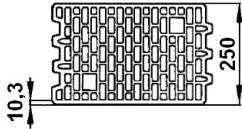
CLOU ISOLATION SIMPLE EXPANSION

Intended use
Installation

Annex B2

Types of base materials

Table B1: Base materials

Base material	Base material group	Bulk density class [kg/dm ³]	Min. compressive strength f_c [N/mm ²]	General remarks	Drilling method
Concrete C12/15 according to EN 206-1	A				Hammer drilling
Concrete C16/20 – C50/60 according to EN 206-1	A				Hammer drilling
Solid clay bricks according to EN 771-1	B	$\geq 1,7$	20	Vertically perforation up to 15%	Hammer drilling
Perforated clay bricks POROTHERM P+D 44 according to EN 771-1	C	$\geq 0,7$	12	Vertically perforation more than 15% and less than 55%	Only rotary drilling
Vertically perforated clay bricks POROTHERM 17,5 P+D according to EN 771-1	C	$\geq 0,9$	10		Only rotary drilling
Lightweight aggregate concrete hollow blocks LAC (Hbl) according to EN 1520	D	$\geq 1,2$	4		Only rotary drilling
Autoclaved aerated concrete P2-400 e.g. according to EN 771-4	E	2	$\geq 0,4$		Only rotary drilling

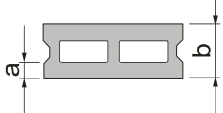
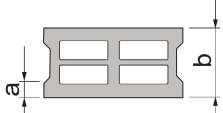
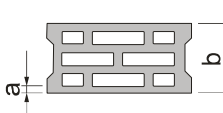
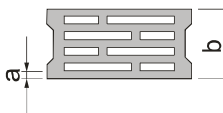
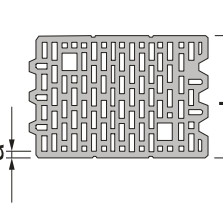
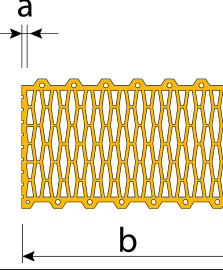
CLOU ISOLATION SIMPLE EXPANSION

Intended use
Base materials

Annex B3

Types of base materials

Table B2: Assignment type anchor for Solid clay bricks according to EN 771-1

Geometry	Thickness of brick b [mm]	Outer web in longitudinal direction a [mm]	Anchor type
			CLOU ISOLATION SIMPLE EXPANSION
	175	50	●
	240 300	50	●
	175	35	●
	240 300 365	35	●
	240 300 365	30	●
POROTHERM 17,5 P+D 	250	10,3	●
POROTHERM P+D 44 	250	10,1	●

CLOU ISOLATION SIMPLE EXPANSION

Intended use
Base materials

Annex B4

Installation

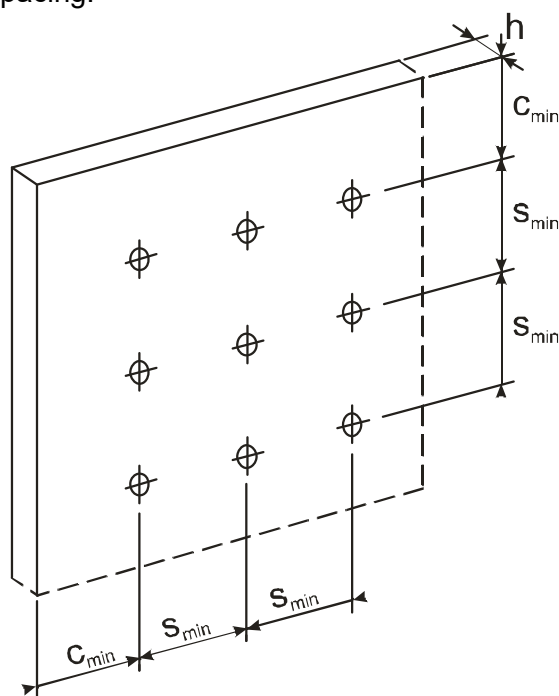
Table B3: Installation characteristics

Anchor types		CLOU ISOLATION SIMPLE EXPANSION
Category of material		A, B, C, D, E
Nominal diameter of drill bit	d_o [mm]	10
Min. diameter of drill bit	$d_{cut, min} \geq$ [mm]	10,0
Max. diameter of drill bit	$d_{cut, max} \leq$ [mm]	10,45
Depth of drill hole	$h_1 \geq$ [mm]	50
Overall embedment depth	$h_{nom} \geq$ [mm]	40

Table B4: Minimum thickness of base material, edge distance and anchor spacing

Anchor type	Minimum thickness of base material h [mm]	Minimum spacing s_{min} [mm]	Minimum edge distance c_{min} [mm]
CLOU ISOLATION SIMPLE EXPANSION	100	100	100

Scheme of distance and spacing.



CLOU ISOLATION SIMPLE EXPANSION

Intended use
Installation characteristics
Edge and axial distances

Annex B5

Table C1: Characteristic resistance to tension loads for single anchor

Base material	Base material group	Bulk density class [kg/dm ³]	Min. compressive strength f_c [N/mm ²]	CLOU ISOLATION SIMPLE EXPANSION [kN]
Concrete C 12/15 according to EN 206-1	A			0,4
Concrete C 16/20 –C50/60 according to EN 206-1	A			0,6
Solid clay bricks according to EN 771-1	B	≥1,7	20	0,75
Perforated clay bricks POROTHERM P+D 44 according to EN 771-1	C	≥ 0,5	4	0,4
Vertically perforated clay bricks POROTHERM 17,5 P+D according to EN 771-1	C	≥ 1,2	4	0,4
Lightweight aggregate concrete hollow blocks LAC (Hbl) according to EN 1520	D	≥ 0,9	10	0,6
Autoclaved aerated concrete P2-400 e.g. according to EN 771-4	E	≥ 0,4	2	0,5
Partial safety factor	$\gamma_M =$	2,0*		

* in the absence of other national regulations

Table C2: Displacement under tension loads

Material	Tension load N_{Sk} [kN]	Displacements $\Delta\delta_N$ [mm]
C12/15 EN 206-1	0,25	0,81
C16/20 EN 206-1	0,4	0,81
C50/60 EN 206-1	0,4	0,81
Solid clay bricks EN 771-1	0,4	0,85
Perforated clay bricks POROTHERM P+D 44 according to EN 771-1	0,4	0,85
Vertically perforated clay bricks POROTHERM 17,5 P+D according to EN 771-1	0,3	0,62
Lightweight aggregate concrete EN 1520 (LAC)	0,3	0,65
Autoclaved aerated concrete P2-400 according to EN 771- 4	0,25	0,38

CLOU ISOLATION SIMPLE EXPANSION**Performances**

Characteristic tension load
Displacement under tension load

Annex C1

Table C3: Point thermal transmittance

Anchor type	Insulation thickness h_D [mm]	Point thermal transmittance χ [W/K]
CLOU ISOLATION SIMPLE EXPANSION	50-170	0

Table C4: Plate stiffness

Anchor type	Diameter of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
CLOU ISOLATION SIMPLE EXPANSION	60	1,79	0,9

CLOU ISOLATION SIMPLE EXPANSION**Performances**

Point thermal transmittance
Plate stiffness

Annex C2