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Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
www.eota.eu

European Technical Assessment

ETA 22/0349 – version 01 of 12/10/2022

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011:	**Technický a skúšobný ústav stavebný, n. o.**
Trade name of the construction product	Anchor Easyfix ATI/TZE
Product family to which the construction product belongs	Product area code: 33 FIXINGS
Manufacturer	Amex Technika Kriplennya Ltd Pshenychna Str., 4 03134 Kyiv Ukraine
Manufacturing plant	Amex Technika Kriplennya Ltd Pshenychna Str., 4 03134 Kyiv Ukraine
This European Technical Assessment contains	14 pages including 7 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

This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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Specific part

1 Technical description of the product

The Easyfix ATI/TZE nailed-in plastic anchor consists of plastic sleeve with an enlarged expansion zone made of polyethylene and a galvanized or hot galvanized steel nail. The head of the nail has an additonal plastic coating.

The drawings and the description of the products are given in Annex A.

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

The performances given in Clause 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment (ETA) are based on an assumed intended working life of at least 25 years. The indications given as to the working life cannot be interpreted as a guarantee given by the manufacturer or the Technical Assessment Body, but should be regarded only as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

The information on use, maintenance and repair is given in the manufacturer's technical documentation. It is responsibility of the manufacturer(s) to ensure that these provisions are easily accessible to the concerned people.

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

3.1 Safety and accessibility in use (BWR 4)

The basic work requirements for safety in use are listed in Annex C.

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

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal transmittance	See Annex C

3.7 Sustainable use of natural resources (BWR 7)

No performance determined.

3.8 General aspects relating to fitness for use

Durability and serviceability are only ensured if specifications of intended use according to Annex B are kept.

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

According to the European Commission Decision 97/463/EC of the Commission of 27 June 1997 (Official journal of the European Communities L198 of 25.07.1997, p. 31-32) (further described in Annex V to Regulation (EU) No. 305/2011) given in the following table apply.

Table 1 – Assessment and verification of constancy of performance system

Product(s)	Intended use(s)	Level(s) or class(es) (Reaction to fire)	System(s)
Plastic anchors for use in concrete and masonry	For fixing of external thermal insulation composite systems with rendering	–	2+

(1) Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material).

(2) Products/materials not covered by footnote (1).

(3) Products/materials that do not require to be tested for reaction to fire (e.g. Products/materials of Classes A1 according to Commission Decision 96/603/EC).

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

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information together with the requirements given in EC Guidance Paper B will generally form the basis on which the factory production control (FPC) is assessed by the Notified Body.

This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

1) The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

2) Basic manufacturing process

The basic manufacturing process is described in sufficient detail to support the proposed FPC methods.

The different components of ETICS are generally manufactured using conventional techniques. Any critical process or treatment of the components which affects performance are highlighted in the manufacturer's documentation.

3) Product and materials specifications

The manufacturer's documentation includes:

- detailed drawings (possibly including manufacturing tolerances);
- incoming (raw) materials specifications and declarations;
- references to European and/or international standards;
- technical data sheets.

4) Control Plan (as a part of FPC)

The manufacturer and the Technický a skúšobný ústav stavebný, n. o. have agreed a Control Plan which is deposited at the Technický a skúšobný ústav stavebný, n. o. in documentation which accompanies the ETA. The Control Plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product.

In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the Notified Body shall withdraw the certificate and inform Technický a skúšobný ústav stavebný, n. o. without delay.

Technický a skúšobný ústav stavebný, n. o.
Building Testing and Research Institute
Studená 3, 821 04 Bratislava, Slovak Republic

On behalf of the Technický a skúšobný ústav stavebný, n. o.
Bratislava, 12 October 2022

prof. Ing. Zuzana Sternová, PhD.
Head of Technical Assessment Body

Annexes

Annex A.1 – Product description. Installation conditions

Annex A.2 – Product description. Marking and dimensions of the anchors

Annex A.3 – Product description. Materials

Annex B.1 – Intended use. Specifications

Annex B.2 – Intended use. Installation characteristics, edge and axial distances

Annex B.3 – Intended use. Installation instruction

Annex C.1 – Performances. Characteristic tension load, displacement under tension load

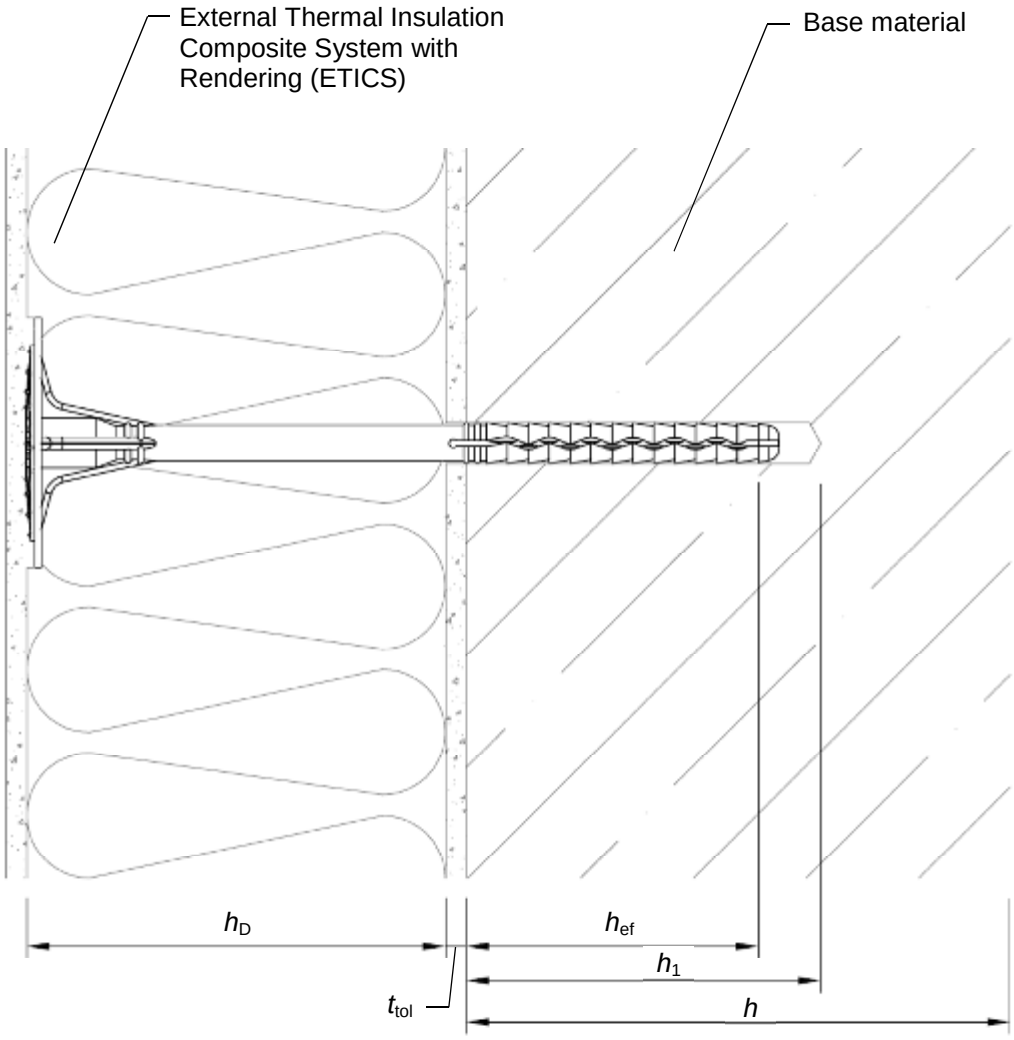
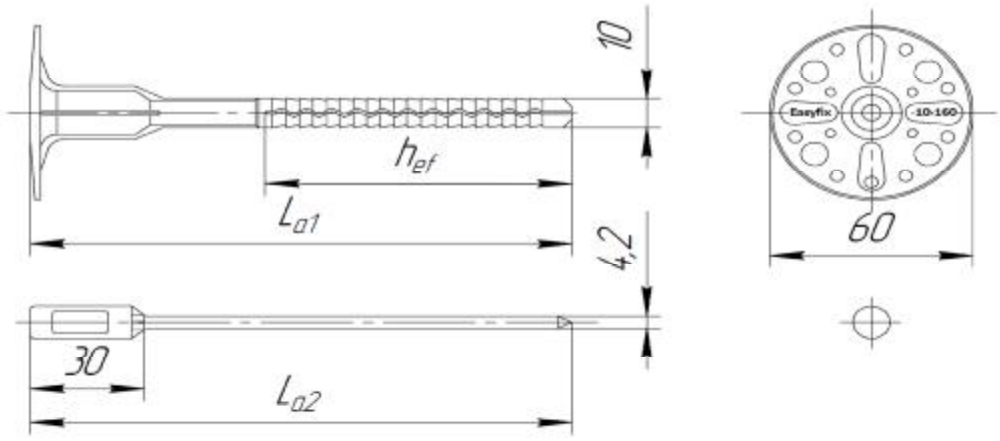


Figure A.1 – Surface assembly
(Fixing of external thermal insulation composite systems)

Legend

h_{ef}	effective anchorage depth
h_1	depth of drill hole in base material
h	thickness of base material
h_D	thickness of insulation material
t_{tol}	thickness of adhesive



Legend
L_{a1} - length of anchor sleeve
L_{a2} - length of expansion nail
$h_{ef(Abcd)}$- effective anchorage depth for anchors in the base material category A, B, C, D
$h_{ef(E)}$ - effective anchorage depth for anchors in the base material category E
d_{nom} - nominal diameter of anchor sleeve
D - nominal diameter of anchor plate
d - nominal diameter of nail

Figure A.2 – Anchor ATI/TZE

Table A.2 – Dimensions of anchors ATI/TZE

Anchor type	Anchor sleeve					Nail	
	d_{nom} (mm)	D (mm)	L_{a1} (mm)	h_{ef} (mm) base material		L_{a2} (mm)	d (mm)
				A, B, C, D	E		
Easyfix ATI/TZE 10×120	10	60	120	50	90	120	4,2
Easyfix ATI/TZE 10×140	10	60	140	50	90	140	4,2
Easyfix ATI/TZE 10×160	10	60	160	50	90	160	4,2
Easyfix ATI/TZE 10×180	10	60	180	50	90	180	4,2
Easyfix ATI/TZE 10×200	10	60	200	50	90	200	4,2
Easyfix ATI/TZE 10×220	10	60	220	50	90	220	4,2
Easyfix ATI/TZE 10×240	10	60	240	50	90	240	4,2
Easyfix ATI/TZE 10×260	10	60	260	50	90	260	4,2
Easyfix ATI/TZE 10×300	10	60	300	50	90	300	4,2

Table A.3 – Materials of anchors Easyfix ATI/TZE

Designation	Default Colour	Material
Anchor sleeve	Natural, green, orange white, red, grey, yellow, black, blue	Virgin plastic – Polyethylene
Expansion nail	Natural	Galvanized steel (≥ 5 µm)
Thermal head	Natural, green, orange white, red, grey, yellow, black, blue	Virgin plastic – Polypropylene

Specification 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:

- Normal weight concrete (use category A), according to Annex C.1.
- For other base materials of the use category A, the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051, edition December 2016.
- Clay bricks (use category B), according to Annex C.1.
- Vertically perforated clay bricks (use category C), according to Annex C.1.
- Lightweight aggregate concrete with open structure (use category D), according to Annex C.1.
- Autoclaved aerated concrete (use category E), according to Annex C.1.

Temperature Range:

- +5°C to +40°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 C 1.
- 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 +5°C to +40°C.
- Exposure to UV due to solar radiation of the anchor not protected by rendering ≤ 6 weeks.

Table B.2.1 – Base materials

Use category	Base material	Compressive strength β (N/mm^2)	Bulk density (kg/m^3)	Remarks (standard)	Drilling method
A	Concrete	Class C 16/20 ÷ C 50/60	≥ 2 200	- (EN 206:2013+A1:2016)	Hammer drilling
B	Clay bricks *(Mz)*	≥ 30	≥ 1 000	Cross section reduced up to 15% by perforation vertically to the resting area (EN 771-1:2011+A1:2015)	Rotary drilling only
C	Vertically perforated clay bricks *(Hlz)*	≥ 12	≥ 600	Cross section reduced over 15% and less than 50% by perforation vertically to the resting area, exterior web thickness ≥ 12 mm (EN 771-1:2011+A1:2015)	Rotary drilling only
D	Lightweight aggregate concrete blocks *(LAC)*	≥ 6	≥ 1 000	- (EN 1520:2011, EN 771-3:2011+A1:2015)	Rotary drilling only
E	Autoclaved aerated concrete blocks *(AAC)*	≥ 2	≥ 400	- (EN 12602:2016, EN 771-3:2011+A1:2015)	Rotary drilling only

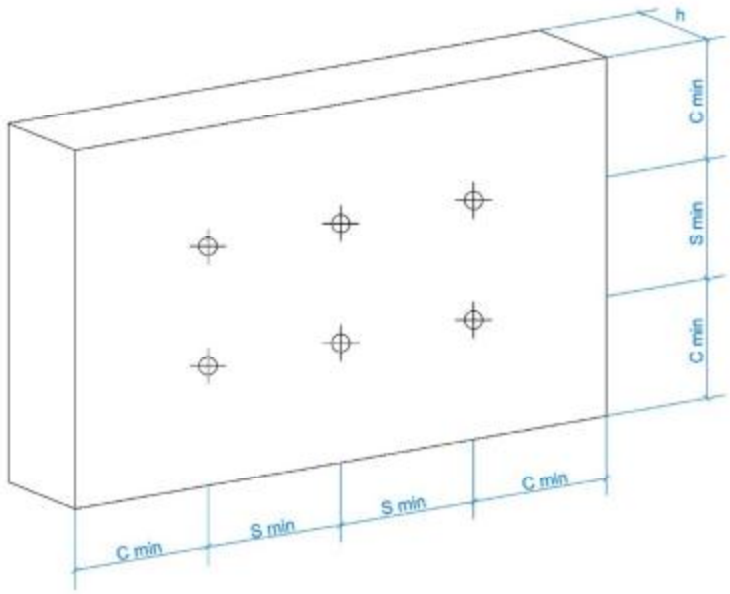
Table B.2.2 – Installation characteristics

Anchor type	Nominal diameter of drill bit d_0 (mm)	Cutting diameter of drill bit $d_{cut,max}$ (mm)	Cutting diameter of drill bit $d_{cut,min}$ (mm)	Depth of drill hole h_1 (mm)	Overall embedment depth (base material) h_{ef} (mm)
Easyfix ATI/TZE	10,26 - 10,29	10,40	10,17	h_{ef} + 10	50 (A, B, C, D); 90 (E)

Table B.2.3 – 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)
Easyfix ATI/TZE	100	100	100

Scheme of distance and spacing:

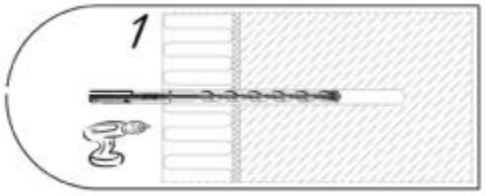


Easyfix ATI/TZE	Annex B.2
Intended use Installation characteristics, edge and axial distances	of European Technical Assessment **ETA 22/0349**

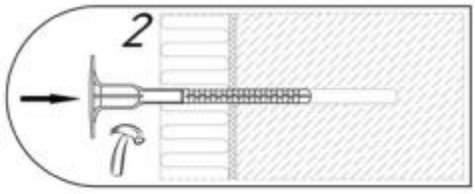
Installation:

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

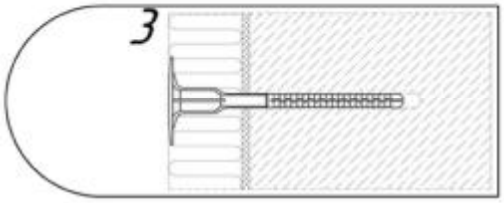
- Anchor installation is carried out by appropriately qualified workers under the supervision of the person responsible for technical matters on site.
- Use of the anchor only as supplied by the manufacturer without exchanging any components of the anchor.
- Anchor installation in accordance with the manufacturer's specifications and drawing using the tools meant for installation.
- Checks before placing the anchor to ensure that the characteristic values of the base material, in which the anchor is to be placed, are identical with the values which the characteristic loads apply for.
- Observation of the drill method.
- Layout the drill holes without damaging the reinforcement.
- Temperature during installation of the anchor in interval from +5°C to +40°C.
- Exposing the anchors to UV light for no more than 6 weeks.



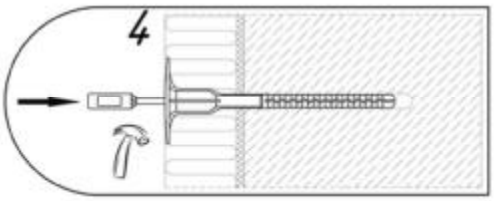
1. Drill hole by corresponding drilling method



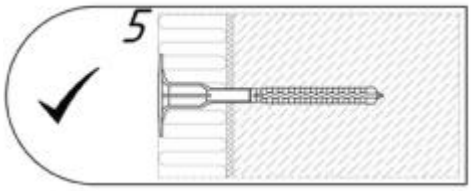
2. Set-in anchor by hammer



3. Anchor in drilling hole



4. Set anchor by hammer blows



5. Correctly installed anchor

Figure B.3 – Installation (surface mounting)

Easyfix ATI/TZE	**Annex B.3** of European Technical Approval **ETA 22/0349**
Intended use Installation instruction	

Table C.1.1 – Characteristic resistance in tensile strength of single anchor Easyfix ATI/TZE

Use category	**Base material**	**Compressive strength β** (N/mm^2)	**Bulk density** (kg/m^3)	**Remarks (standard)**	**N_{Rk}** (kN)
A	Concrete	Class C 16/20 ÷ C 50/60	≥ 2 200	- (EN 206:2013+A1:2016)	**0,60**
B	Clay bricks *(Mz)*	≥ 30	≥ 1 000	Cross section reduced up to 15 % by perforation vertically to the resting area (EN 771-1:2011+A1:2015)	**0,55**
C	Vertically perforated clay bricks *(Hlz)*	≥ 12	≥ 600	Cross section reduced over 15 % and less than 50 % by perforation vertically to the resting area, exterior web thickness ≥ 12 mm (EN 771-1:2011+A1:2015)	**0,45**
D	Lightweight aggregate concrete blocks *(LAC)*	≥ 6	≥ 1 000	- (EN 1520:2011, EN 771-3:2011+A1:2015)	**0,45**
E	Autoclaved aerated concrete blocks *(AAC)*	≥ 2	≥ 400	- (EN 12602:2016, EN 771-3:2011+A1:2015)	**0,20**
Partial safety factor γ_M					2,0*

** In the absence of other national regulations.*

Table C.1.2 – Displacement of anchors under tension loads

Base material	Tension load N (kN)	Displacement $\Delta_{\delta N}$ (mm)
Concrete	0,20	0,42
Vertically perforated clay bricks *(Hlz)*	0,15	0,65
Lightweight aggregate concrete blocks *(LAC)*	0,15	0,24
Autoclaved aerated concrete blocks *(AAC)*	0,07	0,23

Table C.1.3 – Plate stiffness

Anchor type	Diameter of the anchor plate (mm)	Load resistance – characteristic value (kN)	Plate stiffness – mean value (kN/mm)
Easyfix ATI/TZE	60	0,32	0,35

Table C.1.4 – Point thermal transmittance

Anchor type	Insulation thickness h_D (mm)	Point thermal transmittance χ (W/K)
Easyfix ATI/TZE	50 to 250	0,003