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Designated according to Article29 of Regulation (EU) Nº 305/2011

Member of EOTA
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European Technical Assessment ETA 17/0687 of 13/06/2018

English translation prepared by IETcc. Original version in Spanish language

General Part

Technical Assessment Body issuing the ETA designated according to Art. 29 of Regulation (EU) 305/2011:	Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)
Trade name of the construction product:	**Ceiling anchor ANCU**
Product family to which the construction product belongs:	Anchor made of galvanized steel for multiple use for non-structural applications in concrete.
Manufacturer:	**Index - Técnicas Expansivas S.L.** Segador 13 26006 Logroño (La Rioja) Spain. website: www.indexfix.com
Manufacturing plants:	Index plant 6
This European Technical Assessment contains:	8 pages including 3 annexes which form an integral part of this assessment. Annex D. contains confidential information and is not included in the European Technical Assessment when that assessment is publicly disseminated
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of:	Guideline for European Technical Approval of "Metal anchors for use in concrete", ETAG 001 Part 6: "Anchors for multiple use for non-structural applications", August 2010, used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011
This ETA replaces:	ETA 17/0687 issued on 19/02/2018

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.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission according to article 25 (3) of Regulation (EU) No 305/2011.

English translation prepared by IETcc

SPECIFIC PART

1. Technical description of the product

The Index ceiling anchor ANCU in diameter 6 is an anchor made galvanized steel. The anchor is installed into a predrilled cylindrical hole and anchored by deformation-controlled expansion.

Product and 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 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 mean to 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 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic resistance for any load directions	See annex C2

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchorages satisfy requirements for class A1
Resistance to fire	See annex C2

3.3 Hygiene, health and the environment (BWR 3)

This requirement is not relevant for the anchors.

3.4 Safety in use (BWR 4)

The essential characteristics regarding safety in use are included under the basic works requirements Mechanical resistance and stability.

3.5 Protection against noise (BWR 5)

This requirement is not relevant for the anchors.

3.6 Energy economy and heat retention (BWR 6)

This requirement is not relevant for the anchors.

3.7 Sustainable use of natural resources (BWR 7)

No performance determined

4. Assessment and Verification of Constancy of Performances (hereinafter AVCP) system applied, with reference to its legal base

The applicable European legal act for the system of Assessment and Verification of Constancy of Performances (see annex V to Regulation (EU) No 305/2011) 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 European Assessment Document.

The technical details necessary for the implementation of the AVCP system are laid down in the quality plan deposited at Instituto de Ciencias de la Construcción Eduardo Torroja.

Instituto de Ciencias de la Construcción Eduardo Torroja
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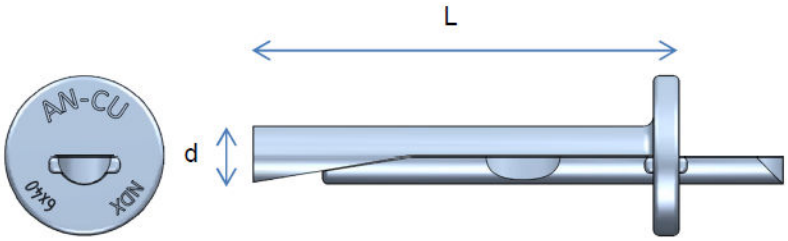
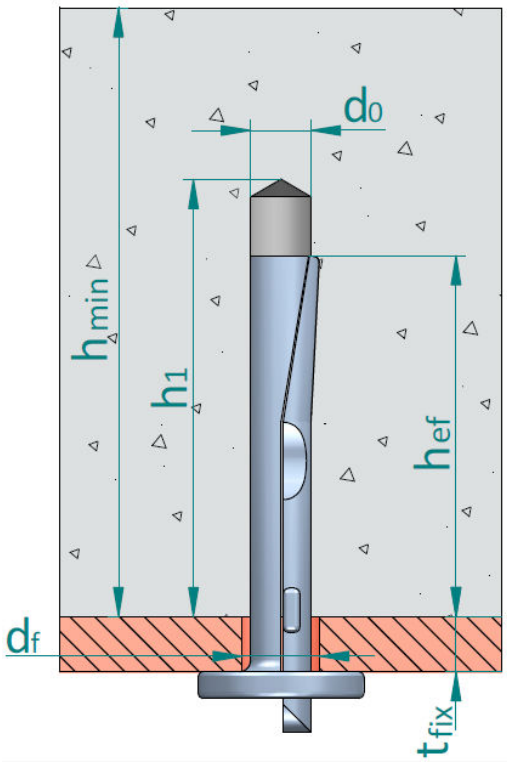
On behalf of the Instituto de Ciencias de la Construcción Eduardo Torroja
Madrid, 13th of June 2018

Marta Mª Castellote Armero
Director

Product and installed condition

ANCU ceiling anchor





Anchor dimensions	6x40	6x70
d: diameter [mm]	6	6
L: length [mm]	40	70

d_0: Nominal diameter of drill
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness

Table A1: materials

Item	Designation	Material for AN-CU
1	Anchor body	Carbon steel wire rod, galvanized ≥ 5 µm ISO 4042 A2
2	Shank	Carbon steel wire rod, galvanized ≥ 5 µm ISO 4042 A2

ANCU ceiling anchor	**Annex A1**
Product description Installed condition and materials	

Specifications of intended use

Anchorages subjected to:

- Static or quasi-static loads
- Multiple use in non-structural applications
- Fire exposure

Base materials:

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2008
- Strength classes C20/25 to C50/60 according to EN 206-1:2008
- Cracked or uncracked concrete

Use conditions (environmental conditions):

- Anchorages subjected to dry internal conditions.

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete.
- Verifiable calculation rules and drawings are prepared taking into account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static or quasi-static actions are designed for design method C in accordance with:
  - ETAG 001, Annex C, edition August 2010
  - FprEN1992-4:2016
- Anchorages under fire exposure are designed in accordance with:
  - ETAG 001, Annex C, design method C, edition August 2010 and EOTA Technical Report 020, edition May 2004
  - FprEN 1992-4:2016
  - It must be ensured that local spalling of the concrete cover does not occur.

Installation:

- Hole drilling by rotary plus hammer mode.
- Anchor installation carried out by appropriately qualified personal and under the supervision of the person responsible for technical matters of the site.
- Anchor expansion by impact on the shank. The anchor is properly set, if no further driving by impact is possible and the excess of the shank is at maximum 2,5 mm.
- The anchor may only be set once.

Table C1: Installation parameters for ANCU ceiling anchor

Installation parameters			Performances	
			ANCU 6 x 40	ANCU 6 x 70
d_0	Nominal diameter of drill bit:	[mm]	6	
d_f	Fixture clearance hole diameter:	[mm]	7	
h_{min}	Minimum thickness of concrete member:	[mm]	80	
h_1	Depth of drilled hole ≥	[mm]	40	
h_{ef}	Effective anchorage depth ≥	[mm]	32	
t_{fix}	Thickness of fixture:	[mm]	0 - 5	0 - 35
s_{min}	Minimum spacing:	[mm]	200	
c_{min}	Minimum edge distance:	[mm]	150	

Installation process

Table C2: Characteristic values of resistance loads in any direction of design method C according to ETAG 001, Annex C, or prEN1992-4 for ANCU ceiling anchor

Characteristic values of resistance to loads of design method C			Performances	
			ANCU 6 x 40	ANCU 6 x 70
Any load direction				
F^0_{Rk}	Characteristic resistance in C20/25 to C50/60 concrete:	[kN]	3,0	
$\gamma_2 = \gamma_{inst}$	Installation safety factor: 1)	[-]	1,2	
Shear loads: steel failure with lever arm				
$M^0_{Rk,s}$	Characteristic bending moment	[Nm]	3,68	
γ_{Ms}	Partial safety factor: 1)	[-]	1,25	

1) in absence of other national regulations

Table C3: Characteristic values for resistance to fire ANCU ceiling anchor

Characteristic resistance under fire exposure in concrete C20/25 to C50/60 in any load direction for use in concrete			Performances	
			ANCU 6 x 40	ANCU 6 x 70
R30	Characteristic resistance $F^0_{Rk,fi,30}$ 1)	[kN]	0,41	
R60	Characteristic resistance $F^0_{Rk,fi,60}$ 1)	[kN]	0,30	
R90	Characteristic resistance $F^0_{Rk,fi,90}$ 1)	[kN]	0,19	
R120	Characteristic resistance $F^0_{Rk,fi,120}$ 1)	[kN]	0,14	
R30 to R120	Minimum spacing $s_{min,fi}$	[mm]	200	
	Minimum edge distance $c_{min,fi}$ 2)	[mm]	150	

1) in absence of other national regulations the partial safety factor for resistance under fire exposure $\gamma_{M,fi}$ =1.0 is recommended.

2) If fire attack is from more than one side, the design method may be taken if edge distance of the anchor is c ≥ 300