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European Technical Assessment

**ETA 15/0912
of 12/11/2025**

English translation prepared by IETcc. Original version in Spanish language

General Part

Technical Assessment Body issuing the European Technical Assessment:
Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)

**Trade name of the construction
product**

Anchor HC

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

Torque controlled expansion anchor made of zinc plated of
sizes M6, M8 and M10 for use in precast, prestressed
hollow core slabs for redundant non-structural systems.

Manufacturer

Index - Técnicas Expansivas S.L.
Segador 13.
26006 Logroño (La Rioja) Spain.
website: www.indexfix.com

Manufacturing plant

Index plant 2

**This European Technical
Assessment contains**

9 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**

European Technical Assessment EAD 330747-00-0601
"Fasteners for use in concrete for redundant non-structural
systems", ed. May 2018

This ETA replaces

ETA 15/0912 version 0 issued 27/04/2016



Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document.

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SPECIFIC PART

1. Technical description of the product

The Index HC anchors in sizes M6, M8 and M10 are made of a metal sleeve and a metal expansion cone, both of galvanized steel. They are placed into a drilled hole and by screwing in a metal normal metric bolt with necessary length --not delivered with the product-- the expansion cone is pulled into the sleeve. Therefore, the sleeve expands outside the concrete in the hollow area of the hollow prestressed concrete slab. To ensure that the anchor is expanded properly and the expansion cone is pulled into the sleeve, sufficient torque moment must be applied on the anchor. The anchorage is characterised by mechanical interlock between the sleeve and concrete.

Product and installation descriptions are given in annex A1.

2. Specification of the intended use in accordance with the applicable European Assessment Document.

2.1 Intended use

This ETA covers fasteners redundant non-structural systems. Redundant non-structural systems mean applications where, if excessive slip or failure of one fastener occurs, it is assumed that the load can be transmitted to adjacent fasteners without violating the requirements on the fixture in the serviceability and ultimate limit state.

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.

2.2 Relevant general conditions for the use of the product

The assessment methods included or referred to in this EAD have been written based on the manufacturer's request to take into account a working life of the fastener for the intended use of 50 years when installed in the works (provided that the fastener is subject to appropriate installation). These provisions are based upon the current state of the art and the available knowledge and experience.

When assessing the product, the intended use as foreseen by the manufacturer shall be taken into account. The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or its representative nor by EOTA when drafting this EAD nor by the Technical Assessment Body issuing an ETA based on this EAD, but are regarded only as a mean for expressing the expected economically reasonable working life of the product.

This ETA covers fasteners for installation in pre-drilled holes in precast, prestressed hollow core concrete slabs considering annexes B and C.

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

The identification tests and the assessment for the intended use of this product according to the Basic Work Requirements (BWR) were carried out in compliance with EAD 330747-00-0601, The characteristics of each system shall correspond to the respective values laid down in following tables of this ETA, checked by IETcc.



Methods of verification and of assessing and judging are listed afterwards.

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Relevant clause in EAD	Performance	Annex
Reaction to fire	----	Anchorage satisfy requirements for class A1 according to EN 13501-1	--
Fire resistance	2.2.12	$F_{Rk,fi}^0$ [kN] $M_{Rk,fi}^0$ [Nm]	C2

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Relevant clause in EAD	Performance	Annex
Characteristic resistance for all load directions and modes of failure	2.2.10	F_{Rk}^0 [kN] s_{cr} [mm] c_{cr} [mm]	C2
Durability:	2.2.11	Zinc plated	A1

4. Assessment and Verification of Constancy of Performance (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 Performance (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.

Technical details necessary for the implementation of the AVCP system are laid down in the quality plan which is deposited at IETcc⁽¹⁾.

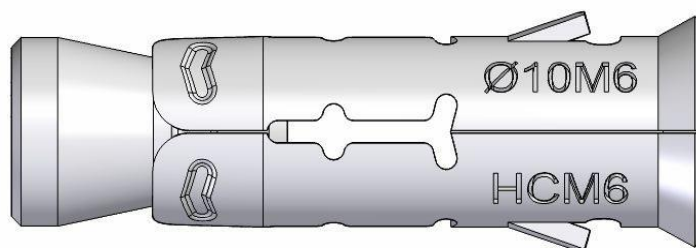
Prepared by: Julián Rivera Lozano (Innovative Products Assessment Unit, IETcc – CSIC)

Issued in Madrid on 12th of November 2025

Director
on behalf of Instituto de Ciencias de la Construcción Eduardo Torroja

⁽¹⁾ The Quality Plan is a confidential part of the ETA and only handled over to the notified certification body involved in the assessment and verification of constancy of performances.



Product**HC anchor**

Identification on sleeve: Outer diameter, metric + Anchor trade name. (e.g. "Ø10M6" + "HCM6") + company logo

Table A1: Dimensions

Anchor dimensions	M6	M8	M10
d _o : external diameter [mm]	10	12	16
D: thread diameter [mm]	M6	M8	M10
L: total anchor length [mm]	38	44	53

Table A2: Materials

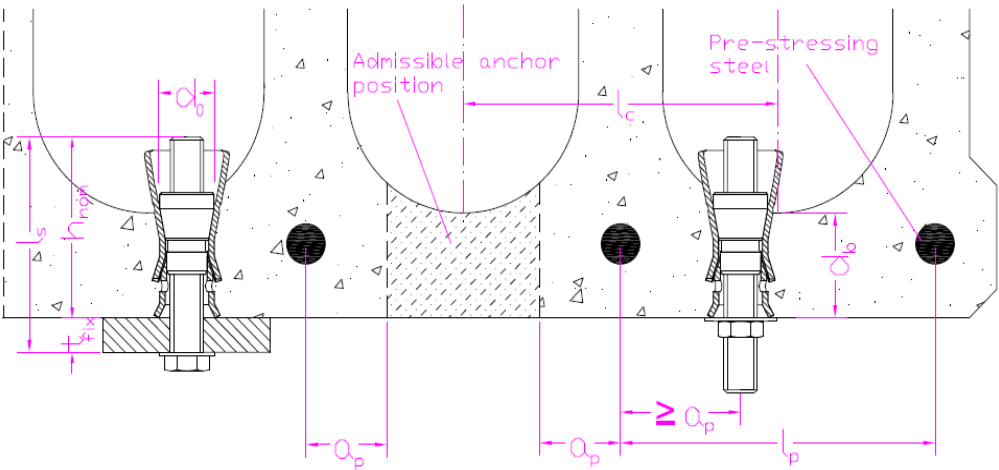
Item	Designation	Material for HC
1	Sleeve	Carbon steel, zinc plated $\geq 5 \mu\text{m}$ ISO 4042 Zn5
2	Cone	Carbon steel, zinc plated $\geq 5 \mu\text{m}$ ISO 4042 Zn5

HC anchor**Product description**

Product, dimensions and materials

Annex A1

Installed condition in precast, prestressed hollow core concrete slabs



- h_{nom} : Overall anchor embedment depth in the base material
 d_0 : Nominal diameter of drill bit
 d_b : Minimum thickness of prestressed hollow core concrete slab
 t_{fix} : Thickness of fixture
 l_s : Overall length of bolt
 l_c : Core distance
 l_p : Prestressing steel distance
 a_p : Distance between anchor position and prestressing steel

HC anchor	Annex A2
Product description	
Installed condition	



Specifications of intended use

Anchorage subjected to:

- Static or quasi static loads for redundant non-structural systems.
- Use for anchorages with requirements related to resistance of fire
- The anchor may only be used if in the design and installation specifications for the fixture the excessive slip or failure of one anchor will not result in a significant violation of the requirements on the fixture in the serviceability and ultimate state.

Base materials:

- Precast, prestressed hollow core concrete slabs, strength class $\geq$ C40/50 according to EN 206-1:2013+A2:2021.

Use conditions (environmental conditions):

- Temperature range of the anchorage base material during the working life: -40 °C to +80 °C.
- 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 B in accordance with EN 1992-4:2018
- Anchorages under fire exposure are designed in accordance with EN 1992-4:2018. It must be ensured that local spalling of the concrete cover does not occur.

Installation:

- Hammer drilling only.
- Anchor installation carried out by appropriately qualified personal and under the supervision of the person responsible for technical matters of the site.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of aborted hole or smaller distance if the aborted hole is filled with high strength mortar and if under shear or oblique tension load it is not the direction of the load application.

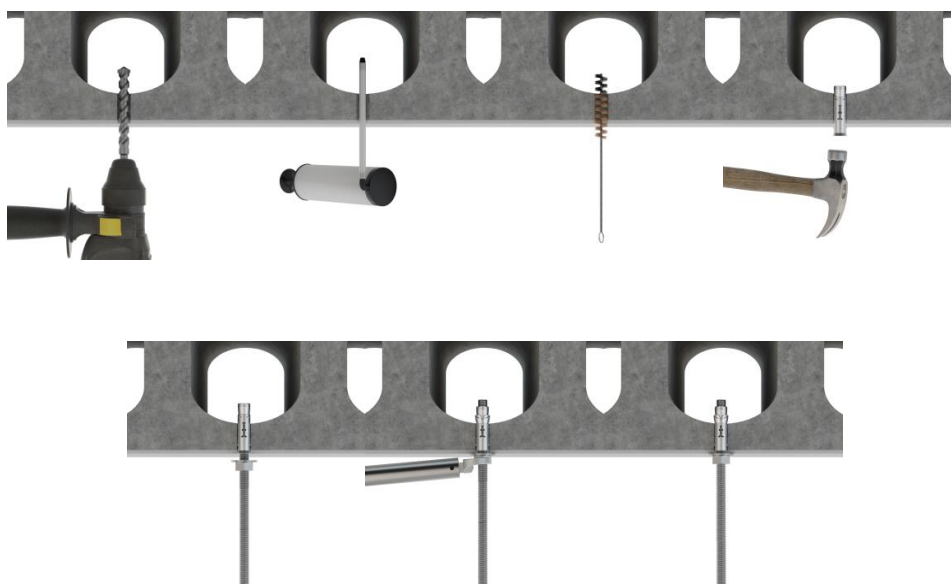
HC anchor	Annex B1
Intended use	
Specifications	



Table C1: Installation parameters in hollow core concrete slabs for HC anchor

Installation parameters			Performances		
			M6	M8	M10
d_o	Nominal diameter of drill bit:	[mm]	10	12	16
D	Thread diameter:	[mm]	M6	M8	M10
d_f	Fixture clearance hole diameter:	[mm]	7	9	12
T_{inst}	Installation torque:	[Nm]	10	20	30
h_1	Depth of drilled hole $\geq$	[mm]	45	50	60
h_{nom}	Overall anchor embedment depth in the base material:	[mm]	38	44	53
l_c	Core distance $\geq$	[mm]	100	100	100
l_p	Prestressing steel distance $\geq$	[mm]	100	100	100
a_p	Distance between anchor position and prestressing reinforcement steel $\geq$	[mm]	50	50	50
l_s	Minimum length of bolt:	[mm]	$t_{fix}+40$	$t_{fix}+46$	$t_{fix}+55$
Minimum steel class of bolt:			6.8 ISO 898-1		
S_{min}	Minimum spacing:	[mm]	100	100	100
C_{min}	Minimum edge distance:	[mm]	60	70	80

Installation process



HC anchor

Performances

Installation parameters and installation procedure

Annex C1



Table C2: Characteristic values to loads in precast, prestressed concrete hollow core concrete slabs of design method B according to EN 1992-4 for HC anchor

Characteristic resistance in precast, prestressed hollow core concrete slabs $\geq 40/50$ MPa for all load directions and failure modes				Performances		
				M6	M8	M10
F_{Rk}^0	Characteristic resistance in $\geq C40/50$ precast, prestressed hollow core concrete slab:	$d_b \geq 25; < 30$ mm	[kN]	3,5	5,0	8,0
		$d_b \geq 30; < 40$ mm	[kN]	7,0	10,0	10,0
		$d_b \geq 40$ mm	[kN]	8,5	11,5	14,0
γ_{inst}	Robustness		[-]	1,2	1,0	1,2
S_{cr}	Characteristic spacing:		[mm]	200	200	200
C_{cr}	Characteristic edge distance:		[mm]	100	100	100
Shear load with lever arm						
$M_{Rk,s}^0$	Characteristic bending moment, steel class 6.8:		[Nm]	9,1	22,5	44,9
γ_{Ms}	Partial safety factor: ¹⁾		[-]	1,25	1,25	1,25
$M_{Rk,s}^0$	Characteristic bending moment, steel class 8.8:		[Nm]	12,2	30,0	59,9
γ_{Ms}	Partial safety factor: ¹⁾		[-]	1,25	1,25	1,25

1) In absence of other national regulations

Table C3: Characteristics values under fire exposure in precast, prestressed hollow core concrete slabs of design method B according to EN 1992-4 for HC anchor

Characteristic resistance under fire exposure in precasts, prestressed hollow core slabs $\geq 40/50$ MPa				Performances		
				M6	M8	M10
d_b	Minimum slab bottom thickness for fire resistance:		[mm]	30	30	40
R30	Characteristic resistance $F_{Rk,fi30}^0$: ¹⁾		[kN]	0,20	0,37	0,87
R60	Characteristic resistance $F_{Rk,fi60}^0$: ¹⁾		[kN]	0,18	0,33	0,75
R90	Characteristic resistance $F_{Rk,fi90}^0$: ¹⁾		[kN]	0,14	0,26	0,58
R120	Characteristic resistance $F_{Rk,fi120}^0$: ¹⁾		[kN]	0,10	0,18	0,46
R30 to	Spacing $S_{cr,fi}$:		[mm]	200	200	200
R120	Edge distance $C_{cr,fi}$:		[mm]	100	100	100
Shear load with lever arm						
R30	Characteristic bending moment $M_{Rk,s,fi30}^0$:		[Nm]	0,15	0,38	1,12
R60	Characteristic bending moment $M_{Rk,s,fi60}^0$:		[Nm]	0,14	0,34	0,97
R90	Characteristic bending moment $M_{Rk,s,fi90}^0$:		[Nm]	0,11	0,26	0,75
R120	Characteristic bending moment $M_{Rk,s,fi120}^0$:		[Nm]	0,08	0,19	0,60

1) In absence of other national regulations the partial safety factor for resistance under fire exposure $\gamma_{M,fi} = 1,0$ is recommended. Design under fire exposure is according to the design method given in TR020. The design equations are given in TR020, section 2.2.1.
If fire attack is from more than one side, the design method may be taken if edge distance of the anchor is $c \geq 300$ mm.

HC anchor

Performances

Characteristics values in precast, prestressed hollow core concrete slabs

Annex C2

