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European Technical Assessment

ETA-20/0494
of 18/01/2026

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	**Screw anchor THE**
Product family to which the construction product belongs	Screw anchor of sizes 5 and 6 for use in concrete and 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 Index plant 14
This European Technical Assessment contains	14 pages including 3 annexes which form an integral part of this assessment. + annex 4 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	European Assessment Document EAD 330747-00-0601 "Fasteners for use in concrete for redundant non-structural systems", ed. May 2018.
This ETA replaces	ETA 20/0494 revision 1 dated 21/12/2020

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

SPECIFIC PART

1. Technical description of the product

The Index THE screw anchors are comprised of a body with a head. The head diameter is larger than the diameter of the anchor and is formed with a variety of serrations undersize. The anchor body is formed with threads running most of the length of the anchor body. The anchor is installed in a predrilled hole with an impact wrench or torque wrench. The anchor threads cut into the concrete on the side of the hole and interlock with the base material during the installation.

The Index screw anchor THE is a fastener made of carbon steel of sizes 5 and 6.

Product and installation descriptions are given in annexes A and B.

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

2.1 Intended use

This ETA covers fasteners for redundant non-structural systems in concrete. 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 annexes A, B and C.

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 compacted reinforced or unreinforced normal weight concrete without fibers or in precast, prestressed hollow core concrete slabs considering annexes A, 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	----	Anchorages satisfy requirements for class A1 according to EN 13501-1	--
Fire resistance to steel failure (tension load)	2.2.12	$N_{Rk,s,fi}$ [kN]	C6
Fire resistance to pull out failure (tension load)	2.2.12	$N_{Rk,p,fi}$ [kN]	C6
Fire resistance to steel failure (shear load)	2.2.12	$V^0_{Rk,s,fi}$ [kN] $M^0_{Rk,s,fi}$ [Nm]	C6

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Relevant clause in EAD	Performance	Annex
Resistance to steel failure	2.2.1	$N_{Rk,s}$ [kN] E_s = 210,000 [N/mm^2]	C4, C5
Resistance to pull out failure	2.2.2	$N_{Rk,s}$ [kN] ψ_c [-]	C4, C5
Resistance to concrete cone failure	2.2.3	$k_{cr,N}$ [-] $k_{ucr,N}$ [-] h_{ef} [mm] $c_{cr,N}$ [mm]	C4, C5
Robustness	2.2.4	γ_{inst} [-]	C4, C5
Minimum edge distance and spacing	2.2.5	s_{min} [mm] c_{min} [mm] h_{min} [mm]	C1, C2
Edge distance to prevent splitting under load	2.2.6	$N^0_{Rk,sp}$ [kN] $c_{cr,sp}$ [mm]	C4, C5
Resistance to steel failure under shear load	2.2.7	$V_{Rk,s}$ [kN] $M^0_{Rk,s}$ [kN] k_7 [-]	C4, C5
Resistance to pry-out failure	2.2.8	k_8 [-]	C4, C5
Resistance to concrete edge failure	2.2.9	d_{nom} [mm] ℓ_f [mm]	C4, C5
Durability	2.2.11	Coated in zinc plated Coated in zinc nickel Coated in zinc flake Coated mechanical galvanized Coated in Atlantis Stainless steel	A3

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)].

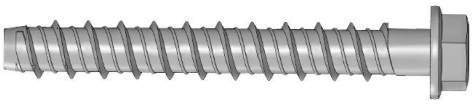
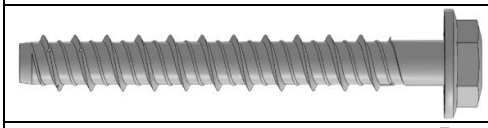
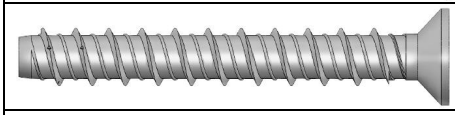
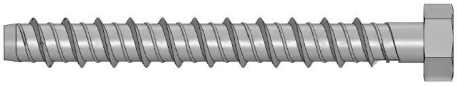
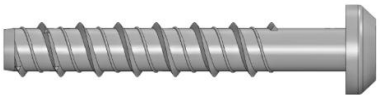
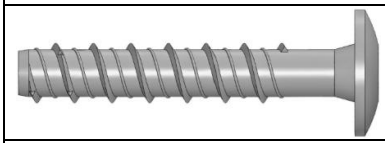
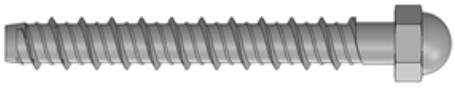
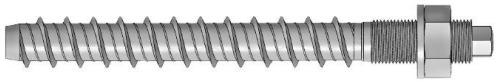
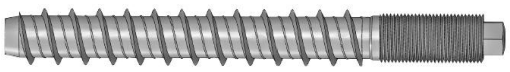
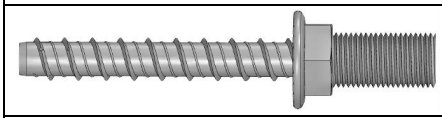
Prepared by: PhD Julián Rivera (Innovative Products Assessment Unit, IETcc-CSIC)

Issued in Madrid on 18 of January 2026

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

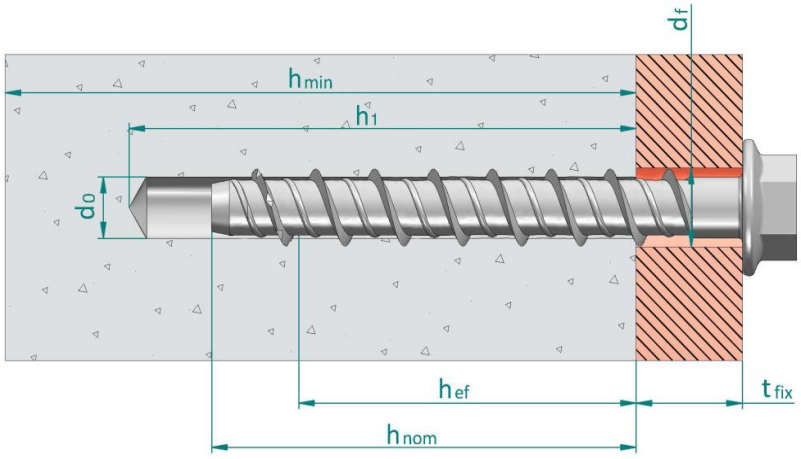
[(1)] The Quality Plan is a confidential part of the ETA and only handed over to the notified certification body involved in the assessment and verification of constancy of performance.

Product types

Picture	Material / coating	Head styles / Sizes
	Carbon steel: -H: Atlantis -F: Zinc plated -N: Zinc flake -K: Zinc nickel -G: Mechanical galvanized	-E, -K: Hexagonal head with flange.
		-J: Hexagonal head with flange. Six lobe recess.
		-A: Countersunk head, Six lobe recess.
		-N: Hexagonal head.
		-P: Pan head. Six lobe recess.
		-T: Truss head. Six lobe recess.
		-D: Dome head:
		-W: Stud head with DIN 934 class 6 nut and DIN 125 washer
		-S: Stud head
		-M: Male thread
		-F: Rod hanger

THE screw anchor	**Annex A1**
Product description Screw types	

Installed condition in concrete



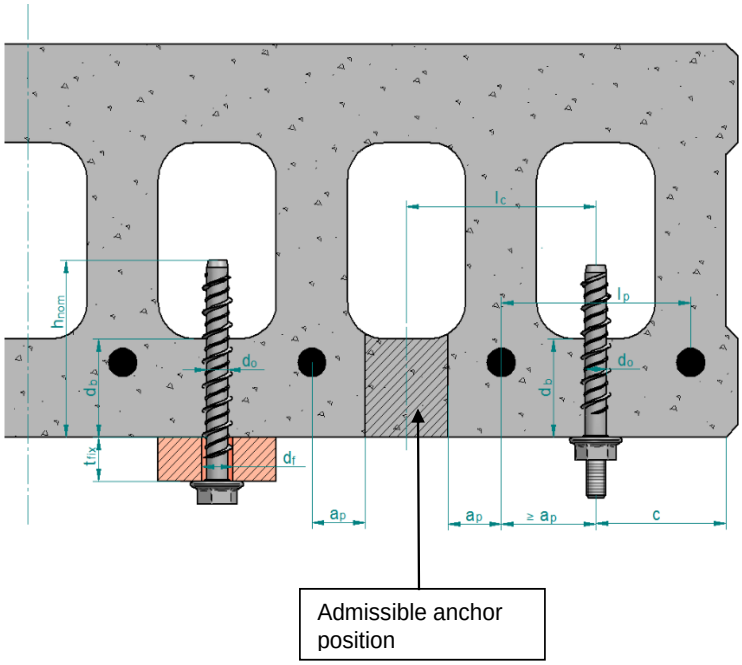
d_0: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
h_{ef}: Effective anchorage depth
h_1: Depth of drilled hole
h_{nom}: Overall fastener embedment depth in the concrete
h_{min}: Minimum thickness of concrete member
t_{fix}: Fixture thickness

Identification on head of fastener: company logo + size x length
The tip of the thread may be coloured
For heads where no space enough space is available, length mark can be replaced by the following letter codes.

Letter on head	Length [mm]
A	35 ÷50
B	51 ÷ 62
C	63 ÷75
D	76 ÷ 88
E	89 ÷ 101
F	102 ÷ 113
G	114 ÷ 126
H	127 ÷139
I	140 ÷153

THE screw anchor	**Annex A2**
Product description Installed condition in concrete	

Installed condition in precast prestressed hollow core concrete slabs



d_0: Nominal diameter of drill bit
d_f: Fixture clearance hole diameter
d_b: Bottom flange thickness
a_p: Distance between anchor position and prestressing steel ≥ 50 mm
l_c: Core distance ≥ 100 mm
l_p: Steel reinforcement distance ≥ 100 mm
t_{fix}: Fixture thickness
c: Edge distance

Table A1: Materials

Item	Designation	Material for screw anchor
1	Fastener body	Carbon steel, galvanized ≥ 5 µm ISO 4042 Zn5 Carbon steel, zinc nickel ≥ 8 µm ISO 4042, ZnNi8/An/T2 Carbon steel, zinc flake ≥ 6 µm ISO 10683 Carbon steel, mechanical galvanizing ≥ 40 µm EN ISO 12683 Zn 40 M(Fe) Carbon steel, Atlantis coating

THE screw anchor	**Annex A3**
Product description Installed condition in precast, prestressed hollow core concrete slabs and materials	

Specifications of intended use

Anchorages subjected to:

- Static or quasi static loads for redundant non-structural systems
- Use for anchorages with requirements related to resistance of fire (not for using in prestressed hollow core slabs)
- 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:

- Reinforced or unreinforced normal weight concrete without fibres according to EN 206-1:2013+A2:2021.
- Strength classes C20/25 to C50/60 according to EN 206-1:2013+A2:2021.
- Cracked or uncracked concrete
- Precast, prestressed hollow core concrete slabs, strength C30/37 to C50/60 according to EN 206:2013

Use conditions (environmental conditions):

- Temperature range of the anchorage base material during the working life: -40 ºC to +80 ºC.
- Anchorages subjected to dry internal conditions.

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation rules and drawings are prepared taking into account of the loads to be anchored. The position of the fastener is indicated on the design drawings (e.g. position of the fastener relative to reinforcement or to supports, etc.).
- Anchorages under static or quasi-static actions are designed for design method A 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:

- Hole drilling by rotary plus hammer mode.
- Fastener 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.
- After installation further turning of the anchor must not be possible.
- The head of the fastener must be supported on the fixture and is not damaged.
- Anchors can be installed only once.

THE screw anchor	**Annex B1**
Intended use Specifications	

Table C1: Installation parameters in concrete

Installation parameters in concrete				Performances			
				5		6	
h_{nom}	Nominal embedment depth:		[mm]	35	45	35	55
h_{ef}	Effective anchorage depth:		[mm]	26.5	35.0	26.0	43.0
d_0	Nominal diameter of drill bit:		[mm]	5		6	
d_f	Clearance hole diameter ≤		[mm]	6,5 ÷ 8		7,5 ÷ 9	
$T_{inst,max}$	Installation torque ≤		[Nm]	5		10	
h_1	Depth of drilled hole ≥		[mm]	45	55	45	65
$h_{1,bit}$	Depth of drilled hole for drill bit cleaning ≥		[mm]	55	65	57	77
h_{min}	Minimum thickness of concrete member:		[mm]	80	80	80	90
L_{min}	Minimum length of the fastener:		[mm]	42	52	40	60
t_{fix}	Thickness of fixture [1] ≤		[mm]	L-35	L-45	L-35	L-55
t_{fix}	Thickness of fixture, stud version [1)]:		[mm]	--	--	L-44	L-64
SW	Socket size	Hexagonal types E, N, K:	[mm]	8		10	
		Hexagonal type J:	[mm]	--		13	
		Dome:	[mm]	--		10	
		Male:	[mm]	--		13	
		Rod hanger:	[mm]	10		13	
		Stud:	[mm]	8		10	
TX	Six lob recess	Countersunk:	[--]	25		30	
		Pan:	[--]	30		40	
		Truss:	[--]	--		30	
d_k	Diameter of countersunk head:		[mm]	10.4		12.4	
s_{min}	Minimum allowable spacing:		[mm]	35		35	
c_{min}	Minimum allowable distance:		[mm]	35		35	
	Setting tool			Bosch GDS 18E, 500 W. $T_{impact,max}$ 250 Nm, or equivalent			
	[1)] L = total fastener length						

THE screw anchor	**Annex C1**
Performances Installation parameters	

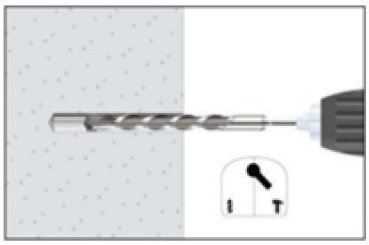
Table C2: Installation parameters in precast, prestressed hollow core concrete slabs

Installation parameters in precast, prestressed hollow core concrete slabs				**Performances**					
				5			**6**		
d_0	Nominal diameter of drill bit:		[mm]	5			6		
d_f	Clearance hole diameter ≤		[mm]	8			9		
$T_{inst,max}$	Installation torque ≤		[Nm]	5			10		
h_1	Depth of drilled hole ≥		[mm]	30	40	45	30	40	45
d_c	Minimum slab member thickness:		[mm]	25	30	40	25	30	40
L_{min}	Minimum length of the fastener:		[mm]	42			40		
SW	Socket size	Hexagonal types E, N, K:	[mm]	8			10		
		Hexagonal type J:	[mm]	--			13		
		Dome:	[mm]	--			10		
		Male:	[mm]	--			13		
		Rod hanger:	[mm]	10			13		
		Stud:	[mm]	8			10		
TX	Six lob recess	Countersunk:	[--]	25			30		
		Pan:	[--]	30			40		
		Truss:	[--]	--			30		
d_k	Diameter of countersunk head:		[mm]	10.4			12.4		
s_{min}	Minimum allowable spacing:		[mm]	35			35		
c_{min}	Minimum allowable distance:		[mm]	35			35		
	Setting tool			Bosch GDS 18E, 500 W. $T_{impact,max}$ 250 Nm, or equivalent					

1) L = total fastener length

THE screw anchor	**Annex C2**
Performances Installation parameters	

Installation procedure

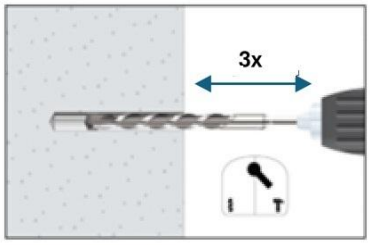


1. DRILL

Drill a hole into the base material of the correct diameter and depth using a carbide drill bit in rotary plus hammer mode.

2.a) BLOW AND CLEAN

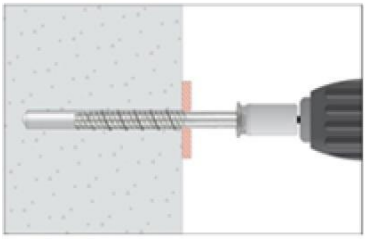
Remove dust and debris from hole using a hand pump, compressed air or a vacuum to remove loose particles left from drilling.



2 b) CLEAN WITH DRILL BIT

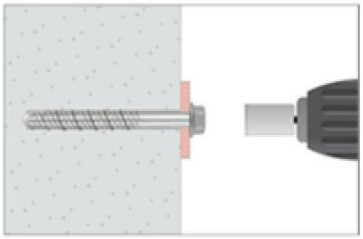
Alternatively to 2.a):

- Upward installation direction: no cleaning is needed.
- Downward or horizontal installation direction: no cleaning is needed if drilling depth is $h_{1,bit}$, and after the drilling process the drill bit is moved in and out of the hole for 3 times with both rotary and hammer modes of the drilling machine activated.



3. INSTALL

Select a powered impact wrench or a torque wrench that does not exceed the maximum torque $T_{impact,max}$ or $T_{inst,max}$ respectively. Attach an appropriately sized hex socket or six lob bit to the wrench. Mount the screw anchor head in the socket / bit.



4. APPLY TORQUE

Drive the anchor with an impact driver or a torque wrench through the fixture and into the hole until the anchor head comes in contact with the fixture. The anchor must be snug after installation. Do not spin the socket off the anchor to disengage.

THE screw anchor	**Annex C3**
Performances Installation procedure	

Table C3: Characteristic values under static or quasi-static tension loads in concrete of design method A according to EN1992-4

Characteristic values under static or quasi-static tension loads in concrete of design method A				Performances			
				5		6	
h_{nom}	Nominal embedment depth:		[mm]	35	45	35	55
Resistance to steel failure							
$N_{Rk,s}$	Characteristic resistance:		[kN]	17.8		25.2	
γ_{Ms}	Partial safety factor [1]:		[-]	1.4		1.4	
Resistance to pull out failure							
$N_{Rk,p}$	Characteristic resistance in C20/25 uncracked concrete:		[kN]	$\geq N^0_{Rkc}$ [2]			
$N_{Rk,p}$	Characteristic resistance in C20/25 cracked concrete:		[kN]	$\geq N^0_{Rkc}$ [2]			
Ψ_c	Increasing factor for concrete	C30/37	[--]	1.14	1.02	1.15	1.22
		C40/50	[--]	1.26	1.04	1.27	1.41
		C50/60	[--]	1.38	1.05	1.38	1.58
γ_{inst}	Robustness:		[--]	1.0	1.0	1.2	1.0
Resistance to concrete cone and splitting failure							
h_{ef}	Effective anchorage depth:		[mm]	26.5	35.0	26.0	43.0
$k_{ucr,N}$	Factor for uncracked concrete:		[-]	11.0			
$k_{cr,N}$	Factor for cracked concrete:		[-]	7.7			
$s_{cr,N}$	Concrete cone failure	Spacing:	[mm]	3 x h_{ef}			
$c_{cr,N}$		Edge distance	[mm]	1,5 x h_{ef}			
$N^0_{Rk,sp}$	Charact. splitting resistance:		[kN]	min ($N_{Rk,p}$; $N^0_{Rk,c}$)			
$s_{cr,sp}$	Spitting failure	Spacing:	[mm]	80	105	90	170
$c_{cr,sp}$		Edge distance	[mm]	40	52.5	45	85
γ_{inst}	Robustness:		[--]	1.0	1.0	1.2	1.0

[1] In absence of other national regulations
[2] Pull out failure is not decisive. N^0_{Rkc} calculated according to EN 1992-4

Table C4: Characteristic values under static or quasi-static shear loads in concrete of design method A according to EN 1992-4

Characteristic values under static or quasi-static shear loads in concrete of design method A			Performances			
			5		6	
h_{nom}	Nominal embedment depth:	[mm]	35	45	35	55
Resistance to steel failure under shear loads						
$V_{Rk,s}$	Characteristic resistance:	[kN]	8.19		12.53	
k_7	Ductility factor:	[-]	0.8			
$M^0_{Rk,s}$	Characteristic bending moment:	[Nm]	11.86		21.6	
γ_{Ms}	Partial safety factor [1]:	[-]	1.5			
Resistance to pry-out failure						
k_8	Pryout factor:	[-]	1.0			
γ_{inst}	Robustness:	[-]	1.0			
Resistance to concrete edge failure						
ℓ_f	Effective length of fastener under shear loads:	[mm]	26.5	35	26.0	43.0
d_{nom}	Outside fastener diameter:	[mm]	5		6	
γ_{inst}	Robustness:	[-]	1.0			

1) In absence of other national regulations
2) The diameter of the clearance hole does not meet the values given in EN 1992-4 Table 6.1. However, the group resistance under shear loading has been verified in the assessment through testing and accounted for in the factor k_7

THE screw anchor

Performances

Characteristic values for tension and shear loads in concrete

Annex C4

Table C5: Characteristic values under static or quasi-static tension loads in precast, prestressed hollow core slabs C30/37 to C50/60 of design method A according to EN 1992-4

Characteristic values under static or quasi-static tension loads in precast, prestressed hollow core slabs C30/37 to C50/60 of design method A				Performances					
				5			6		
d_b	Minimum bottom flange thickness:		[mm]	25	30	40	25	30	40
Resistance to steel failure									
$N_{Rk,s}$	Characteristic resistance:		[kN]	16.4			25.2		
γ_{Ms}	Partial safety factor [1]:		[-]	1.4					
Resistance to pull out failure									
$N_{Rk,p}$	Characteristic resistance in hollow core concrete slab::		[kN]	$\geq N^0_{Rkc}$ [2]					
γ_{inst}	Robustness:		[--]	1.2					
Resistance to concrete cone and splitting failure									
h_{ef}	Effective anchorage depth:		[mm]	20	22	26.5	20	22	26
$k_{ucr,N}$	Factor for uncracked concrete:		[-]	11.0					
$s_{cr,N}$	Concrete cone failure	Spacing:	[mm]	3 x h_{ef}					
$c_{cr,N}$		Edge distance	[mm]	1,5 x h_{ef}					
$N^0_{Rk,sp}$	Charact. splitting resistance:		[kN]	min ($N_{Rk,p}$; $N^0_{Rk,c}$)					
$s_{cr,sp}$	Spitting failure	Spacing:	[mm]	80			90		
$c_{cr,sp}$		Edge distance	[mm]	40			45		
γ_{inst}	Robustness:		[--]	1.2					

[1] In absence of other national regulations

[2] Pull out failure is not decisive. N^0_{Rkc} calculated according to EN 1992-4

Table C6: Characteristic values under static or quasi-static shear loads in precast, prestressed hollow core slabs C30/37 to C50/60 of design method A according to EN 1992-4

Characteristic values under static or quasi-static shear loads in precast, prestressed hollow core slabs C30/37 to C50/60 of design method A			Performances					
			5			6		
d_b	Minimum bottom flange thickness:	[mm]	25	30	40	25	30	40
Resistance to steel failure under shear loads								
$V_{Rk,s}$	Characteristic resistance:	[kN]	8.2			12.5		
$M^0_{Rk,s}$	Characteristic bending moment:	[Nm]	11.9			21.6		
γ_{Ms}	Partial safety factor [1]:	[-]	1.5					
Resistance to pry-out failure								
k_8	Pryout factor:	[-]	1.0					
γ_{inst}	Robustness:	[-]	1.0					
Resistance to concrete edge failure								
ℓ_f	Effective length of fastener under shear loads:	[mm]	20	22	26.5	20	22	26
d_{nom}	Outsi Robustness:de fastener diameter:	[mm]	5			6		
γ_{inst}	Robustness:	[-]	1.0					

1) In absence of other national regulations

THE screw anchor	**Annex C5**
Performances Character. values for tension and shear loads in prestressed hollow core slabs	

Table C7: Characteristic values under fire exposure in concrete

Characteristic values under fire exposure in concrete				Performances	
				6	
h_{nom}	Nominal embedment depth:		[mm]	35	55
Fire resistance to steel failure					
$N_{Rk,s,fi}$	Characteristic tension resistance:	R30	[kN]	0.26	
		R60	[kN]	0.23	
		R90	[kN]	0.18	
		R120	[kN]	0.13	
$V_{Rk,s,fi}$	Characteristic shear resistance:	R30	[kN]	0.26	
		R60	[kN]	0.23	
		R90	[kN]	0.18	
		R120	[kN]	0.13	
$M^0_{Rk,s,fi}$	Characteristic bending resistance:	R30	[Nm]	0.22	
		R60	[Nm]	0.20	
		R90	[Nm]	0.16	
		R120	[Nm]	0.11	
Fire resistance to pull-out failure					
$N_{Rk,p,fi}$	Characteristic resistance:	R30 - R90	[kN]	0,25	1,88
		R120	[kN]	0,20	1,50
Fire resistance to concrete cone failure [1)]					
$N_{Rk,p,fi}$	Characteristic resistance:	R30 - R90	[kN]	0.59	2.09
		R120	[kN]	0.47	1.67
$s_{cr.N,fi}$	Critical spacing:	R30 - R120	[mm]	$4 \times h_{ef}$	
$s_{min,fi}$	Minimum spacing:	R30 - R120	[mm]	35	
$c_{cr.N,fi}$	Critical edge distance:	R30 - R120	[mm]	$2 \times h_{ef}$	
$c_{min,fi}$	Minimum edge distance:	R30 - R120	[mm]	$c_{min} = 2 \times h_{ef}$; if fire attack comes from more than one side, the edge distance of the anchor has to be ≥ 300 mm	
Fire resistance to concrete pry-out failure					
k_8	Pry-out factor:	R30 - R120	[mm]	1.0	

[1)] As a rule, splitting failure can be neglected since cracked concrete and reinforcement is assumed.
In absence of other national regulations, the partial safety factor for resistance under fire exposure $\gamma_{m,fi} = 1,0$ is recommended

THE screw anchor	**Annex C6**
Performances Characteristic values for resistance to fire in concrete	