DICHIARAZIONE DI PRESTAZIONE

DoP 0267

per Fissaggio a chiodo per controsoffitto fischer FDN II (ancorante meccanico per l'utilizzo nel calcestruzzo) IT

1. Codice di identificazione unico del prodotto-tipo: **DoP 0267**
2. Usi previsti: **Ancorante post-inserito per l'utilizzo in sistemi non strutturali ridondanti in calcestruzzo, vedi appendice, in particolare gli allegati da B1 - B2.**

3. Fabbricante: **fischerwerke GmbH & Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Germany**

4. Mandatario: **–**

5. Sistemi di VVCP: **2+**

6. Documento per la valutazione europea: **ETAG 001, Part 6, April 2013, usato come EAD**
   Valutazione tecnica europea: **ETA-17/0736; 2018-01-30**
   Organismo di valutazione tecnica: **DIBt- Deutsches Institut für Bautechnik**
   Organismi notificati: **2873 TU Darmstadt**

7. Prestazioni dichiarate:

Sicurezza in uso (BWR 4)

Resistenza caratteristica al carico di tensione (carico statico e quasi-statico):

Resistenza alla rottura dell'acciaio:	NPD	
Resistenza alla rottura per sfilamento:	NPD	
Resistenza alla rottura del cono di calcestruzzo:	NPD	
Robustezza:	Allegato C1	
Distanza dal bordo e interassi minimi:	Allegati B2, C1	
Distanza dal bordo per evitare lo splitting sotto carico:	NPD	

Resistenza caratteristica al carico di taglio (carico statico e quasi statico):

Resistenza alla rottura dell'acciaio (carico di taglio):	Allegato C1	$V_{Rk,s}$=NPD; k_7=NPD
Resistenza alla rottura per pry-out:	NPD	
Resistenza alla rottura del bordo di calcestruzzo:	NPD	

Resistenza caratteristica per tutte le direzioni di carico e per tutti i modi di rottura per una progettazione semplificata:

Resistenza caratteristica:	Allegato C1

Durabilità:

Durabilità:	Allegato B1

Sicurezza in caso di incendio (BWR 2)

Reazione al fuoco:	Classe (A1)

Resistenza al fuoco:

Resistenza al fuoco alla rottura dell'acciaio (carico di trazione):	NPD
Resistenza al fuoco alla rottura per sfilamento (carico di trazione):	NPD
Resistenza la fuoco alla rottura dell'acciaio (carico di taglio):	NPD
Resistenza al fuoco per tutte le direzioni di carico e modalità di guasto:	Allegato C1

8. Documentazione tecnica appropriata e/o documentazione tecnica specifica: **–**

La prestazione del prodotto sopra identificato è conforme all'insieme delle prestazioni dichiarate. La presente dichiarazione di prestazione è emessa, in conformità al regolamento (UE) n. 305/2011, sotto la sola responsabilità del fabbricante sopra identificato.

Firmato a nome e per conto del fabbricante da:

Dr.-Ing. Oliver Geibig, Direttore Generale Unità di Business & Engineering

Jürgen Grün, Direttore Generale Chimica & Qualità

Tumlingen, 2021-01-11

Questa Dichiarazione di Prestazione (DoP) è stata preparata in varie lingue. In caso di contestazioni sull'interpretazione, prevarrà sempre la versione inglese.

L'Appendice include informazioni volontarie e complementari in lingua inglese che superano i requisiti di legge (lingua specificata in modo neutrale).

Specific Part

1 Technical description of the product

The fischer Ceiling Anchor FDN II is an anchor made of galvanized steel which is placed into a drilled hole and anchored by deformation-controlled expansion.

The 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 means for 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)

The essential characteristics regarding mechanical resistance and stability are included under the Basic Works Requirement Safety in use.

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 C 1

3.3 Safety in use (BWR 4)

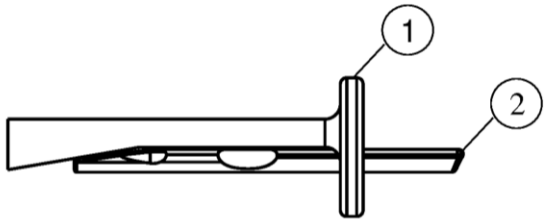
Essential characteristic	Performance
Characteristic resistance in concrete	See Annex C 1

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

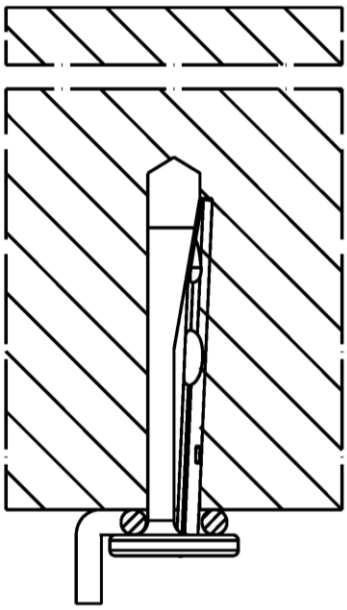
In accordance with guideline for European technical approval ETAG 001, April 2013 used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011 the applicable European legal act is: [97/161/EC].

The system to be applied is: 2+

Product installation conditions, product marking and product dimensions



① Shaft
② Pin



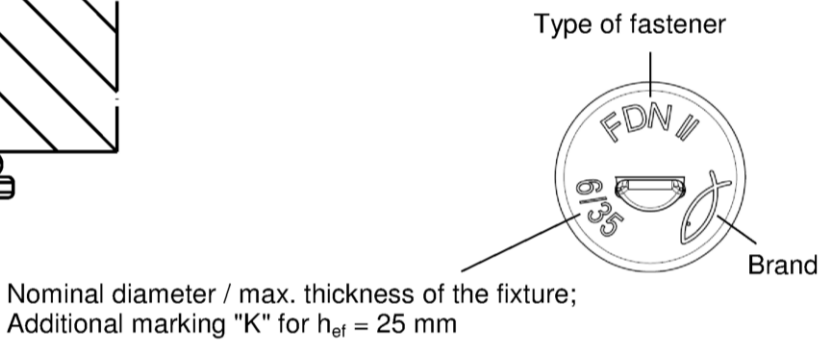
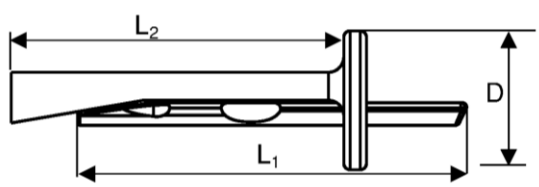


Table A1.1: Dimensions

Size				FDN II			
				6/5 K	**6/5**	**6/35 K**	**6/35**
Length of the	pin	L_1	[mm]	36	43	66	73
	shaft	L_2		30,5	37,5	60,5	67,5
Diameter of the head		D ≥		13			



(Fig. not to scale)

fischer Ceiling Anchor FDN II

Annex A 1

Product description

Product installation conditions, product marking and product dimensions

Specifications of intended use

Anchorages subject to:

Size	FDN II 6
Static and quasi-static loads	✓
Use for multiple fixture of non-structural applications according to ETAG 001, Part 6	
Fire exposure	

Base materials:

- Reinforced and unreinforced normal weight concrete according to EN 206-1:2000
- Strength classes C12/15 to C50/60 according to EN 206-1:2000
- Cracked and non-cracked concrete

Use conditions (Environmental conditions):

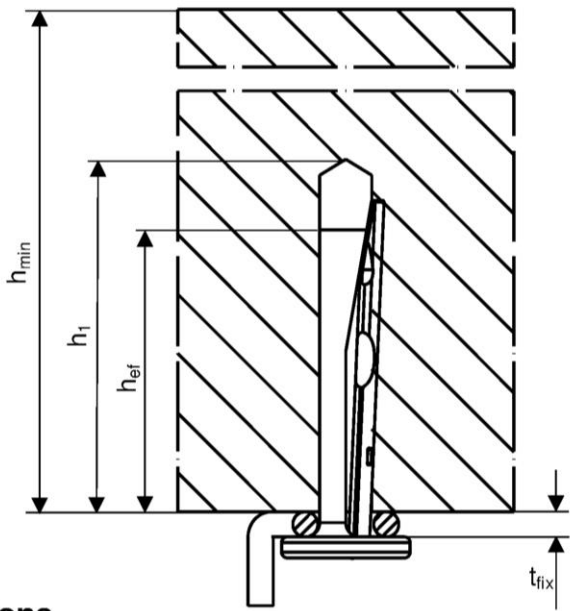
- Anchorage subject to dry internal conditions

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work
- Verifiable calculation notes and drawings have to be prepared taking 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 have to be designed for Design Method C in accordance with:
  - ETAG 001, Annex C, Design Method C, Edition August 2010
  - CEN/TS 1992-4:2009
- Anchorages under fire exposure have to be designed in accordance with
  - EOTA Technical Report TR 020, Edition May 2004
  - CEN/TS 1992-4:2009, Annex D (it must be ensured that local spalling of the concrete cover does not occur)

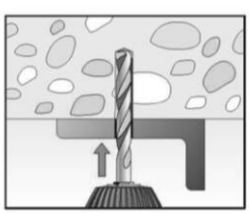
Table B2.1: Installation parameters

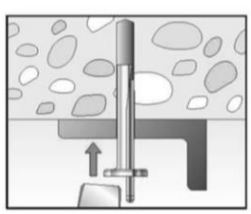
Size					FDN II			
					6/5 K	6/5	6/35 K	6/35
Thickness of the fixture		t_{fix}	≤	[mm]	5		35	
Nominal drill hole diameter		d_0			6			
Diameter of clearance hole in the fixture		d_f	≤		7			
Maximum bit diameter		$d_{cut,max}$			6,40			
Effective embedment depth		h_{ef}			25	32	25	32
Depth of drill hole to deepest point	with hole cleaning	h_1	≥		30	37	30	37
	without hole cleaning				35	42	35	42
Minimum thickness of concrete member		h_{min}			80			

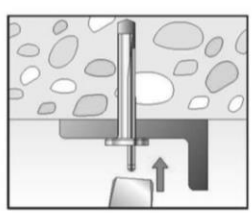


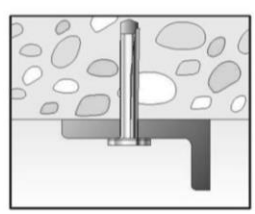
Installation instructions

- Hammer or hollow drilling only
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site
- Positioning of the drill holes without damaging the reinforcement
- In case of aborted hole: New drilling at a minimum distance twice the depth of aborted hole away of or smaller distance if the aborted hole is filled with high strength mortar and if under shear or oblique tension load it is not in the direction of the load application


1: Drill the hole


2: Set the fastener


3: Set the pin, until flush to the surface


4: Installed fastener

(Fig. not to scale)

fischer Ceiling Anchor FDN II

Intended use

Installation parameters and installation instructions

Annex B 2

Table C1.1: Characteristic resistance

Size				FDN II 6	
For all load directions and for all failures modes					
Effective embedment depth		h_{ef}	[mm]	25	32
Characteristic resistance in cracked and non-cracked concrete	C12/15	F_{Rk}	[kN]	2,0	2,5
	C20/25 to C50/60			2,5	3,5
Characteristic edge distance		$c_{cr,N} = c_{min}$	[mm]	70	60
Characteristic spacing		$s_{cr,N} = s_{min}$	[mm]	60	50
Partial safety factor		γ_M [2]	[-]	1,5	
Shear load with lever arm					
Characteristic bending resistance		$M^0_{Rk,s}$	[Nm]	4,4	
Partial safety factor for steel failure		γ_{Ms} [1]	[-]	1,25	

[1] In absence of other national regulations
[2] The installation safety factor $\gamma_2 = \gamma_{inst} = 1,0$ is included

Table C1.2: Characteristic resistance under fire exposure for all effective embedment depths

Size				FDN II 6
Steel failure for tension and shear load				
R30	Characteristic resistance	$F_{Rk,s,fi30}$	[kN]	1,00
R60		$F_{Rk,s,fi60}$		0,50
R90		$F_{Rk,s,fi90}$		0,34
R120		$F_{Rk,s,fi120}$		0,26
R180		$F_{Rk,s,fi180}$		0,17
Spacing and edge distance				
R30 – R120		$s_{cr,fi}$	[mm]	200
		$c_{cr,fi}$		150

For fire exposure from more than one side $c_{min} \geq 300$ mm

fischer Ceiling Anchor FDN II

Performances

Characteristic resistance and characteristic resistance under fire exposure

Annex C 1

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