

ДЕКЛАРАЦИЯ ЗА ЕКСПЛОАТАЦИОННИ ПОКАЗАТЕЛИ

DoP 0267

за fischer Ceiling Anchor FDN II (Механичен анкер за употреба в бетон)

BG

1. Уникален идентификационен код на типа продукт: DoP 0267
2. Предвидена употреба/употреби: Крепеж за последващо закрепване в бетон на неносещи конструкции, вжв Приложение, по-специално Приложения B1 - B2.
3. Производител: fischerwerke GmbH & Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Германия
4. Упълномощен представител: -
5. Система/системи за оценяване и проверка на постоянството на експлоатационните показатели: 2+
6. Европейски документ за оценяване: ETAG 001, Part 6, April 2013, използвано като ЕАД
Европейска техническа оценка: ETA-17/0736; 2018-01-30
Орган за техническа оценка: DIBt- Deutsches Institut für Bautechnik
Нотифициран орган/органи: 2873 TU Darmstadt
7. Декларирани експлоатационни показатели:
Безопасност при употреба (BWR 4)
Характерна носимоспособност на опън (за статично и квази статично действие):

Устойчивост на разрушаване на стомана:	NPD
Товароустойчивост при при отказ на изтегляне:	NPD
Товароустойчивост при при отказ от излизане на бетонния конус:	NPD
Здравина:	Приложение C1
Минимални отстояния от ръба и междусови отстояния:	Приложения B2, C1
Разстояние до ръба, за да се предотврати счепването при натоварване:	NPD

Характерна носимоспособност на сряз (за статично и квази статично действие):

Товароустойчивост при натоварване на сряз, отказ на стоманата:	Приложение C1	$V_{Rk,s}=NPD; k_7=NPD$
Устойчивост на отказ при отклонение:	NPD	
Устойчивост на разрушаване на бетонния ръб:	NPD	

Характерно съпротивление за всички посоки на натоварване и режими на повреда за опростен дизайн:

Характерно съпротивление:	Приложение C1
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трайност:

трайност:	Приложение B1
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Пожарна безопасност (BWR 2)

Реакция на огън:	Клас (A1)
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Пожароустойчивост:

Пожароустойчивост при съпротивление на опън, отказ на стоманата:	NPD
Пожароустойчивост при съпротивление на опън, отказ на изтегляне:	NPD
Пожароустойчивост при съпротивление на сряз, отказ на стоманата:	NPD
Пожароустойчивост за всички посоки на натоварване и режими на разрушаване:	Приложение C1
8. Подходяща техническа документация и/или специфична техническа документация: -

Експлоатационните показатели на продукта, посочени по-горе, са в съответствие с декларираните експлоатационни показатели. Настоящата декларация за експлоатационни показатели се издава в съответствие с Регламент (ЕС) № 305/2011, като отговорността за нея се носи изцяло от

Подписано за и от името на производителя от:



Dr.-Ing. Oliver Geibig, Managing Director Business Units & Engineering
Tumlingen, 2021-01-11



Jürgen Grün, Managing Director Chemistry & Quality

Тази Декларация за съответствие е изготвена на различни езици. В случай, че възникне спор, относно интерпретирането, трябва да се вземе предвид английската версия.

Приложението съдържа доброволна и допълнителна информация на английски език в обем и съдържание, надхвърлящи (независимо от езика) законовите изисквания.

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	Anchorage 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

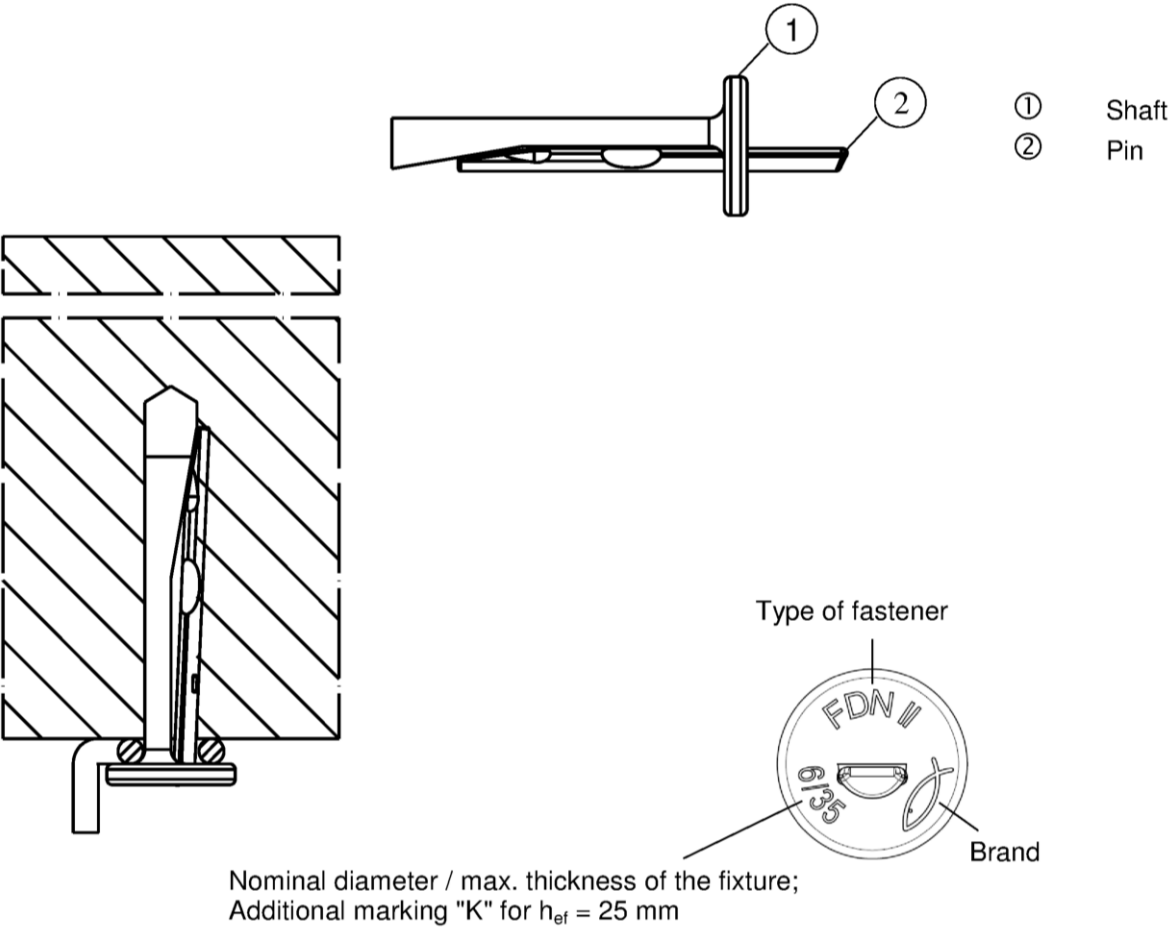
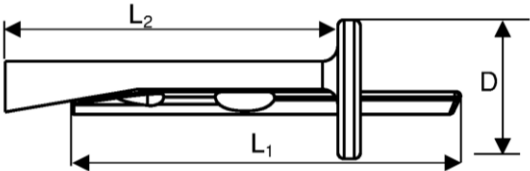


Table A1.1: Dimensions

Size	FDN II			
	6/5 K	6/5	6/35 K	6/35
Length of the pin L_1 shaft L_2 [mm]	36	43	66	73
Diameter of the head $D \geq$	13			



(Fig. not to scale)

fischer Ceiling Anchor FDN II

Product description

Product installation conditions, product marking and product dimensions

Annex A 1

Specifications of intended use

Anchorage 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)

fischer Ceiling Anchor FDN II

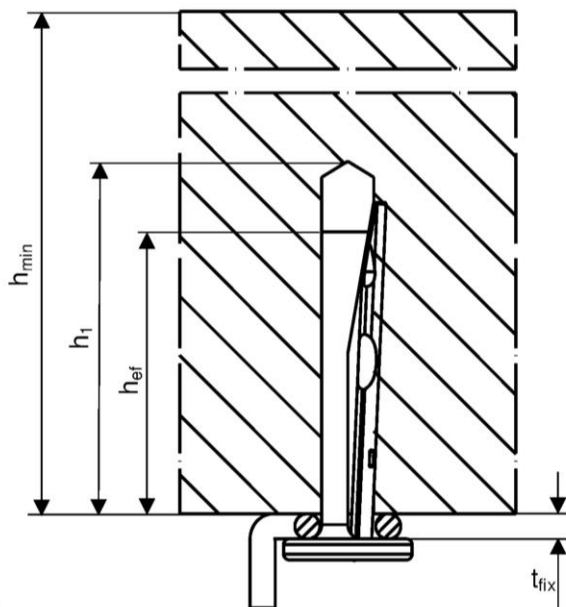
Intended use
Specifications

Annex B 1

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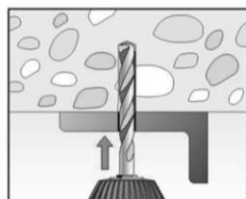
Table B2.1: Installation parameters

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

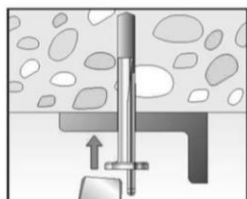


Installation instructions

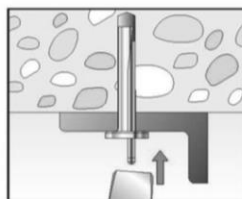
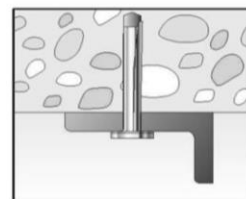
- Hammer or hollow drilling only
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site
- Positioning of the drill holes without damaging the reinforcement
- In case of aborted hole: New drilling at 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

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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
	spacing			$s_{cr,N} = s_{min}$	60
Partial safety factor		$\gamma_M^{2)}$ [-]	1,5		
Shear load with lever arm					
Characteristic bending resistance		$M_{Rk,s}^0$ [Nm]	4,4		
Partial safety factor for steel failure		$\gamma_{Ms}^{1)}$ [-]	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	$F_{Rk,s,fi30}$	[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
Characteristic resistance			
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

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Performances	
Characteristic resistance and characteristic resistance under fire exposure	