

## IZJAVA O SVOJSTVIMA

### DoP 0255

za fischer FIF - CN II (Plastične tiple za korištenje u betonu i zidanim konstrukcijama)

HR

- |                                                                                        |                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. <u>Jedinstveni identifikator tipa proizvoda:</u>                                    | DoP 0255                                                                                                                                                                  |
| 2. <u>Namjena korištenja:</u>                                                          | Udarno plastično sidro za pričvršćivanje vanjskih toplinsko izolacijskih kompozitnih sustava (ETICS) sa žbukom u betonu i zidovima, vidi dodatak, posebno priloge B1- B3. |
| 3. <u>Proizvođač:</u>                                                                  | fischerwerke GmbH & Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Njemačka                                                                                              |
| 4. <u>Ovlašteni zastupnik:</u>                                                         | -                                                                                                                                                                         |
| 5. <u>Sistem/i od AVCP:</u>                                                            | 2+                                                                                                                                                                        |
| 6. <u>Europski dokument za ocjenjivanje:</u>                                           | EAD 330196-01-0604                                                                                                                                                        |
| Europska tehnička ocjena:                                                              | ETA-18/0393; 2018-05-29                                                                                                                                                   |
| Tijelo za tehničko ocjenjivanje:                                                       | DIBt- Deutsches Institut für Bautechnik                                                                                                                                   |
| Prijavljeno tijelo/prijavljena tijela:                                                 | 2873 TU Darmstadt                                                                                                                                                         |
| 7. <u>Objavljena svojstva:</u>                                                         |                                                                                                                                                                           |
| <b>Sigurnost u uporabi (BWR 4)</b>                                                     |                                                                                                                                                                           |
| <b>Karakteristična nosivost:</b>                                                       | Karakteristični otpor pod vlačnim opterećenjem: Prilog C1                                                                                                                 |
|                                                                                        | Minimalna rubna udaljenost: Prilog B2                                                                                                                                     |
|                                                                                        | Minimalni osni razmak: Prilog B2                                                                                                                                          |
| <b>Istisnine:</b>                                                                      | Vlačno opterećenje s djelomičnim sigurnosnim faktorom: Prilog C1                                                                                                          |
|                                                                                        | Istisnine: Prilog C1                                                                                                                                                      |
| <b>Krutost ploče sidra:</b>                                                            | Promjer ploče sidra: Prilog C1                                                                                                                                            |
|                                                                                        | Otpornost na opterećenje ploče sidra: Prilog C1                                                                                                                           |
|                                                                                        | Krutost ploče sidra: Prilog C1                                                                                                                                            |
| <b>Ušteda energije i zadržavanje topline (BWR 6)</b>                                   |                                                                                                                                                                           |
| <b>Toplinska propusnost:</b>                                                           | Točka toplinske prolaznosti sidra: Prilog C1                                                                                                                              |
|                                                                                        | Debljina izolacijskog sloja ETICS-a: Prilog C1                                                                                                                            |
| 8. <u>Odgovarajuća tehnička dokumentacija i/ili specifična tehnička dokumentacija:</u> | -                                                                                                                                                                         |

Svojstva gore navedenog proizvoda su u skladu sa skupom izjava o svojstvima. Ova izjava o svojstvima se izdaje, u skladu sa Europskom regulativom (EU) Br. 305/2011, pod punom odgovornošću gore navedenog proizvođača

Za proizvođača i u njegovo ime potpisao:



Dr. Oliver Geibig, Generalni direktor poslovne jedinice i inženjering  
Tumlingen, 2021-01-15



Jürgen Grün, Glavni direktor za kemiju i kvalitetu

Ovaj DoP je pripremljen u različitim jezicima. U slučaju da postoji spor u tumačenju, engleska verzija će uvijek prevladati.

U aneksu se nalaze dodatni podaci na engleskom jeziku, koji ne podliježu zakonskoj regulativi.

## Specific Part

### 1 Technical description of the product

The fischer FIF-CN II consists of an anchor sleeve with an enlarged shaft made of polypropylene (virgin material), an insulation plate made of glass fibre reinforced polyamide (virgin material) and a specific compound nail (for FIF-CN II 60-180) made of glass fibre reinforced polyamide with galvanized steel or a specific nail (for FIF-CN II 200-340) made of galvanised steel which is installed together with a plastic cylinder made of glass fibre reinforced polyamide.

The anchor may in addition be combined with the slip-on-plate DT 90, DT 110 and DT 140.

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 verification 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 25 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 Safety and accessibility in use (BWR 4)

| Essential characteristic          | Performance   |
|-----------------------------------|---------------|
| Characteristic tension resistance | See Annex C 1 |
| Edge distances and spacing        | See Annex B 2 |
| Plate stiffness                   | See Annex C 1 |
| Displacements                     | See Annex C 1 |

#### 3.2 Energy economy and heat retention (BWR 6)

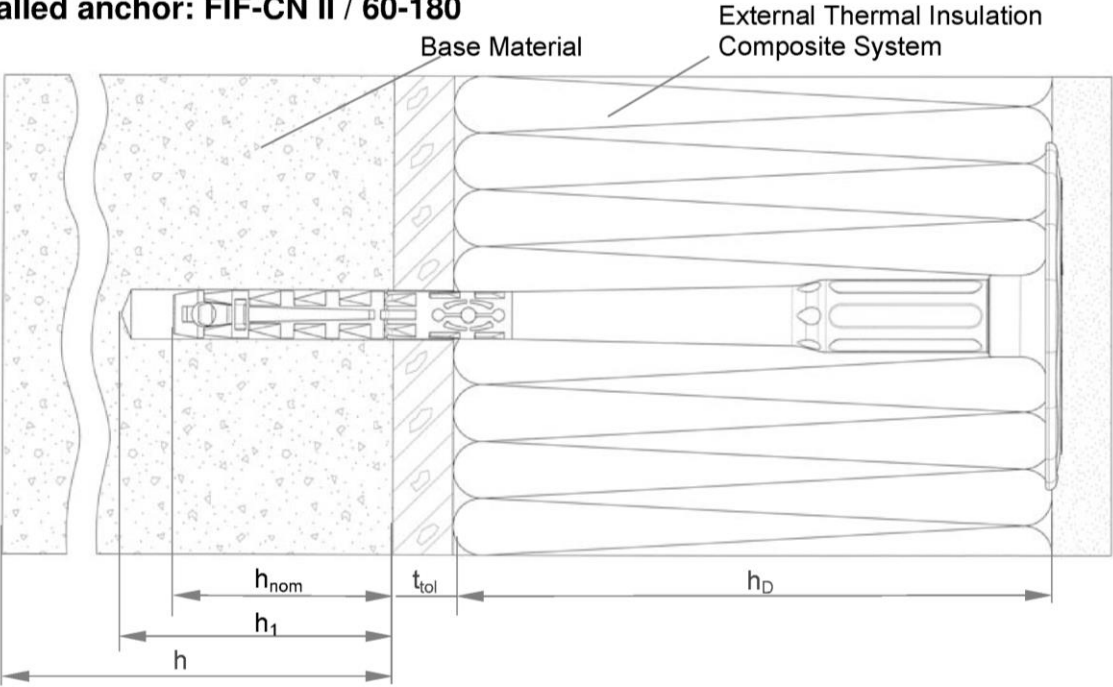
| Essential characteristic    | Performance   |
|-----------------------------|---------------|
| Point thermal transmittance | See Annex C 1 |

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

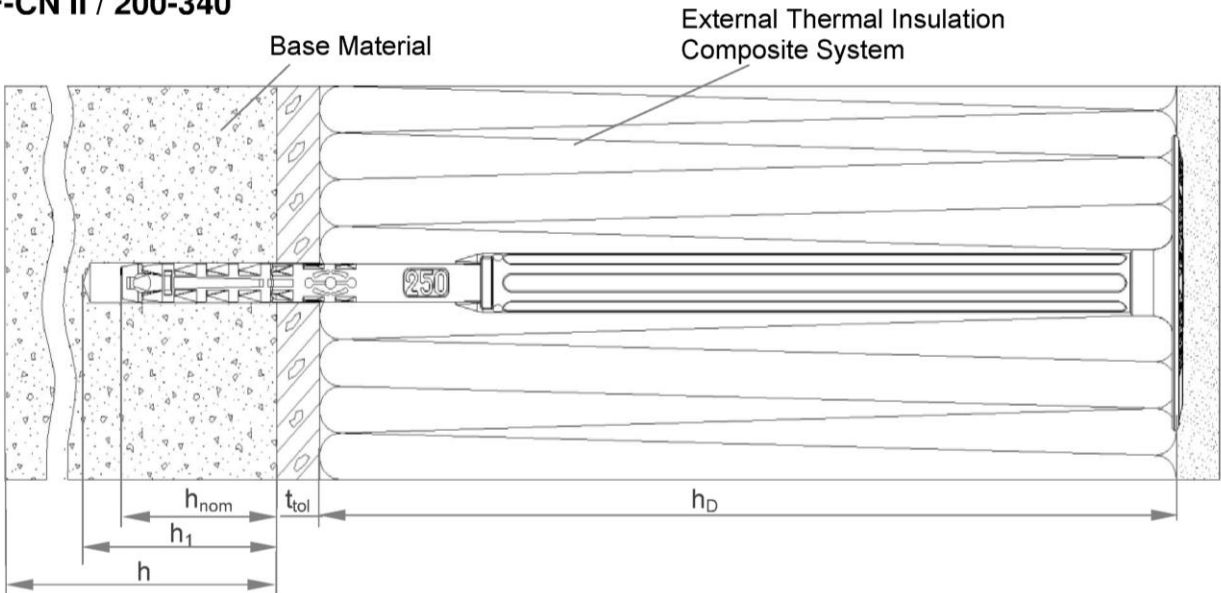
In accordance with EAD No. 330196-01-0604, the applicable European legal act is: [97/463/EC].

The system to be applied is: 2+

**Installed anchor: FIF-CN II / 60-180**



**FIF-CN II / 200-340**



**Legend**

- $h_{nom}$  = Overall plastic anchor embedment depth in the base material
- $h_1$  = Depth of drilled hole to deepest point
- $h$  = Thickness of member (wall)
- $h_D$  = Thickness of insulation material
- $t_{tol}$  = Thickness of equalizing layer or non-load bearing coating

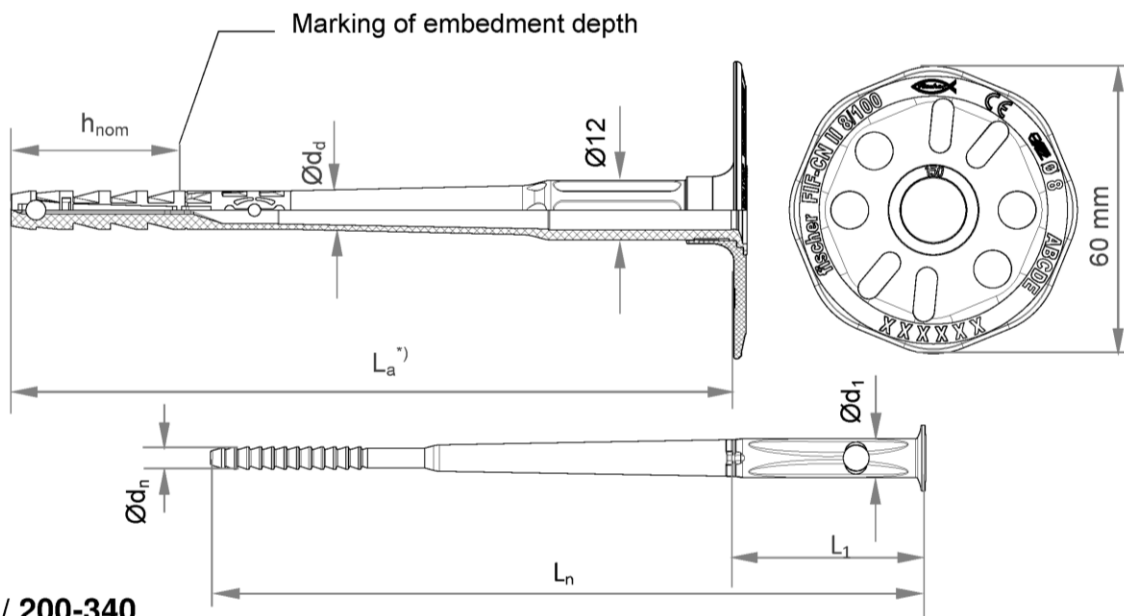
Figures not to scale

fischer FIF-CN II

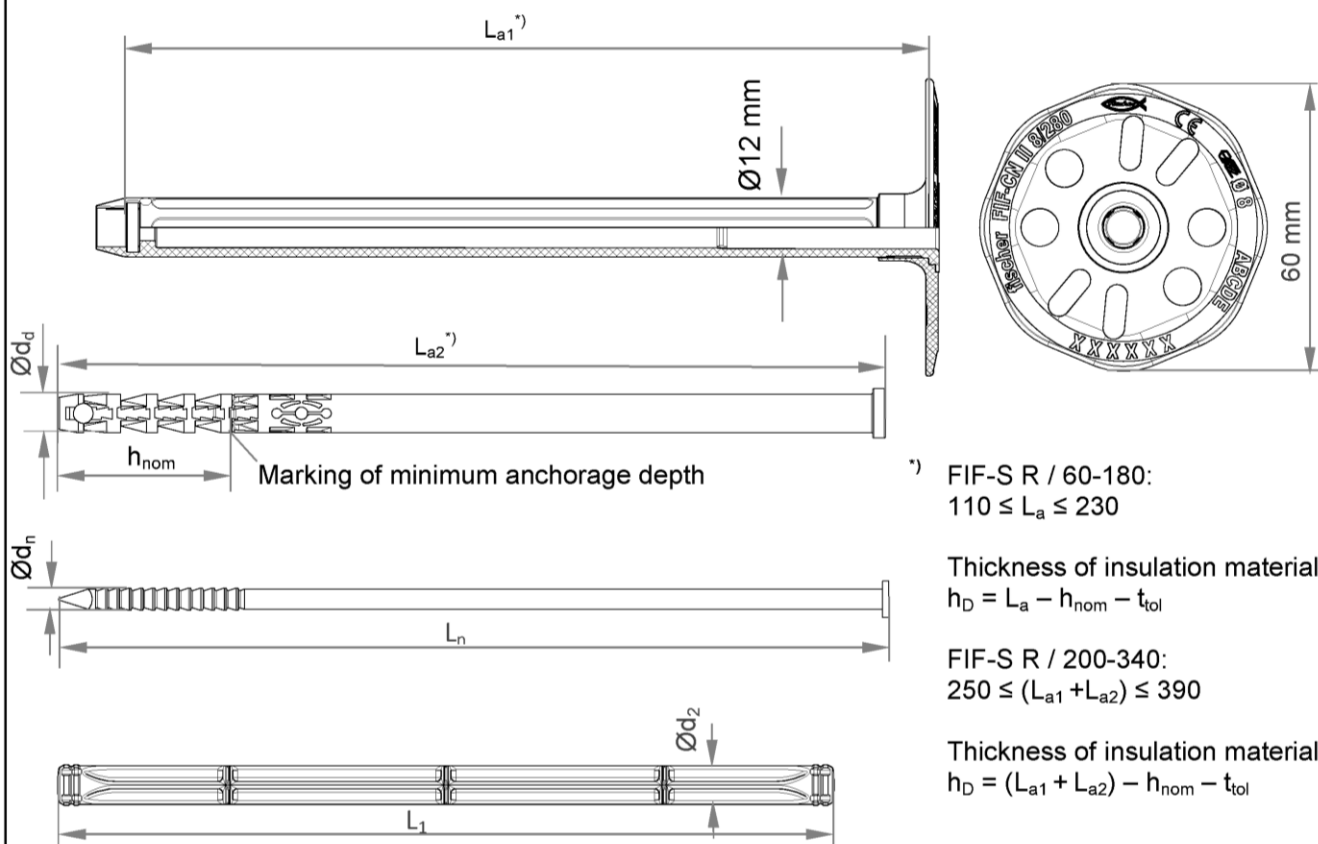
**Product description**  
Installed anchor

**Annex A 1**

## Single parts: FIF-CN II / 60-180



## FIF-CN II / 200-340



FIF-S R / 60-180:  
 $110 \leq L_a \leq 230$

Thickness of insulation material:  
 $h_D = L_a - h_{nom} - t_{tol}$

FIF-S R / 200-340:  
 $250 \leq (L_{a1} + L_{a2}) \leq 390$

Thickness of insulation material:  
 $h_D = (L_{a1} + L_{a2}) - h_{nom} - t_{tol}$

Figures not to scale

fischer FIF-CN II

**Product description**  
 Marking and dimensions of the anchor

**Annex A 2**

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**Table A3.1: Marking**

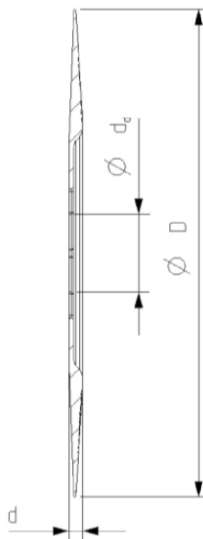
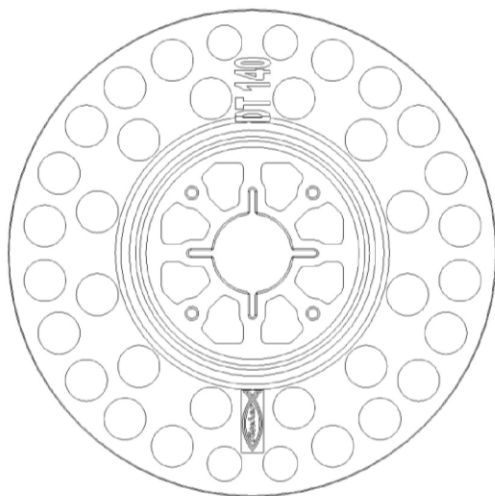
|                                  |                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Anchor type</b>               | <b>FIF-CN II</b>                                                                                                                                                                                                                                                                                                               |
| Name and size of anchor          | FIF-CN II 8                                                                                                                                                                                                                                                                                                                    |
| Thickness of insulation material | 60, 80, 100, 120, ... 340                                                                                                                                                                                                                                                                                                      |
| Example                          | fischer FIF-CN II 8/100  or  or blank CE (optional) Ø 8  (optional) ABCDE |

**Table A3.2: Dimensions**

| Anchor type       | Anchor sleeve    |                  |                    |                    | Specific nail    |                                                           |                  | Plastic cylinder |                  |
|-------------------|------------------|------------------|--------------------|--------------------|------------------|-----------------------------------------------------------|------------------|------------------|------------------|
|                   | Ø d <sub>d</sub> | h <sub>nom</sub> | L <sub>a,min</sub> | L <sub>a,max</sub> | Ø d <sub>n</sub> | L <sub>n</sub>                                            | Ø d <sub>1</sub> | L <sub>1</sub>   | Ø d <sub>2</sub> |
|                   | [mm]             |                  |                    |                    |                  |                                                           |                  |                  |                  |
| FIF-CN II 60-180  | 8                | 35               | 110                | 230                | 4,5              | L <sub>a</sub> - 4                                        | 8                | 40               | -                |
| FIF-CN II 200-340 | 8                | 35               | 250                | 390                | 4,5              | (L <sub>a1</sub> + L <sub>a2</sub> ) - L <sub>1</sub> - 4 |                  | 157              | 8                |

**Table A3.3: Materials**

| Designation                                                                          | Material                                                                                                                            |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Anchor sleeve                                                                        | PP (virgin material), colour: grey                                                                                                  |
| Shaft (FIF-CN II / 200-340)                                                          | PA6 (virgin material) GF, colour: grey                                                                                              |
| Plastic cylinder (FIF-CN II / 60 – 180)                                              | PA6 (virgin material) GF, colour: nature                                                                                            |
| Specific compound nail (FIF-CN II / 60-180)<br>o Specific nail (FIF-CN II / 200-340) | PA6 (virgin material) GF, steel gal Zn A2G or A2F acc.to EN ISO 4042:2001-01<br>Steel gal Zn A2G or A2F acc. to EN ISO 4042:2001-01 |
| Anchor plate                                                                         | PA6 (virgin material) GF, colour: grey                                                                                              |

**Slip-on-plate combined with FIF-CN II****Table A3.4: Slip-on-plate, diameters and material**

| Slip-on-plate     | Ø D            | Ø d <sub>d</sub> | d   | Material |
|-------------------|----------------|------------------|-----|----------|
|                   |                | [mm]             |     |          |
| DT 90 / 110 / 140 | 90 / 110 / 140 | 22,5             | 3,9 | PA6 GF   |

Figures not to scale

fischer FIF-CN II

**Product description**

Marking, dimensions, materials, slip-on plates combined with FIF-CN II

**Annex A 3**

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## Specifications of intended use

### Anchorage subject to:

- The anchor may only be used for transmission of wind suction loads and shall not be used for the transmission of dead loads of the thermal insulation composite system.

### Base materials:

- Normal weight concrete (use category A), according to Annex C1.
- Solid masonry (use category B), according to Annex C1.
- Hollow or perforated masonry (use category C), according to Annex C1.
- Lightweight aggregate concrete (use category D), according to Annex C1.
- Autoclaved aerated concrete (use category E), according to Annex C1.
- For other base materials of the use categories A, B, C, D and E the characteristic resistance of the anchor may be determined by job site tests acc. to EOTA Technical Report TR 051 Edition December 2016.

### Temperature Range:

- 0 °C to + 40 °C (max. short term temperature +40°C and max. long term temperature +24°C).

### Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and masonry work with the partial safety factors  $\gamma_M = 2,0$  and  $\gamma_F = 1,5$ , if there are no other national regulations.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchors is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of the ETICS.

### Installation:

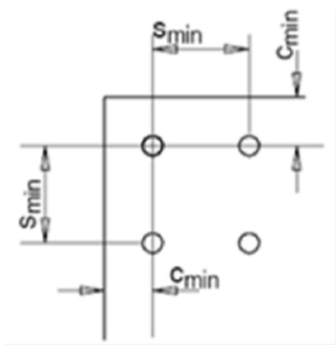
- Hole drilling by the drill modes according to Annex C1.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters on the site.
- Installation temperature from 0 °C to + 40 °C
- Exposure to UV due to solar radiation of the anchor not protected by rendering  $\leq 6$  weeks.

fischer FIF-CN II

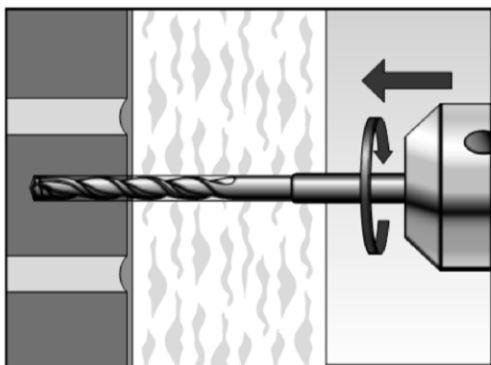
Intended use  
Specification

**Annex B 1**

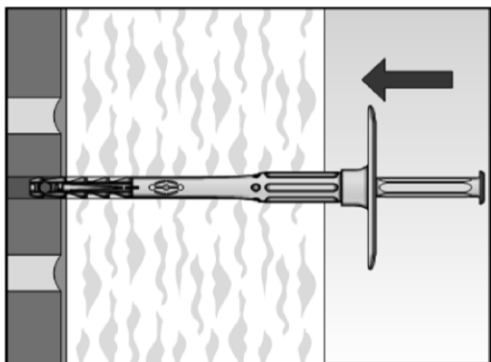
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| Table B2.1: Installation parameters                                                                                                      |           |      |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------------------------------|
| Anchor type                                                                                                                              |           |      | FIF-CN II                       |
| Drill hole diameter                                                                                                                      | $d_0$     | =    | 8                               |
| Cutting diameter of drill bit                                                                                                            | $d_{cut}$ | ≤    | 8,45                            |
| Depth of drill hole to deepest point                                                                                                     | $h_1$     | ≥    | 45 / 65 <sup>1)</sup>           |
| Overall plastic anchor embedment depth in the base material                                                                              | $h_{nom}$ | ≥    | 35 / 55 <sup>1)</sup>           |
| <sup>1)</sup> only for use cat. "D" and "E"                                                                                              |           |      |                                 |
| Table B2.2: Minimum thickness, distance and spacing                                                                                      |           |      |                                 |
| Anchor type                                                                                                                              |           |      | FIF-CN II                       |
| Minimum thickness of member                                                                                                              | $h_{min}$ |      | 100                             |
| Minimum spacing                                                                                                                          | $s_{min}$ | =    | 100                             |
| Minimum edge distance                                                                                                                    | $c_{min}$ | [mm] | 100                             |
| <div>Anordnung Achs- und Randabstände</div> <div></div> |           |      |                                 |
| Figures not to scale                                                                                                                     |           |      |                                 |
| fischer FIF-CN II                                                                                                                        |           |      | Annex B 2<br><br>Appendix 6 / 8 |
| Intended use<br>Installation parameters, edge distances and spacings                                                                     |           |      |                                 |

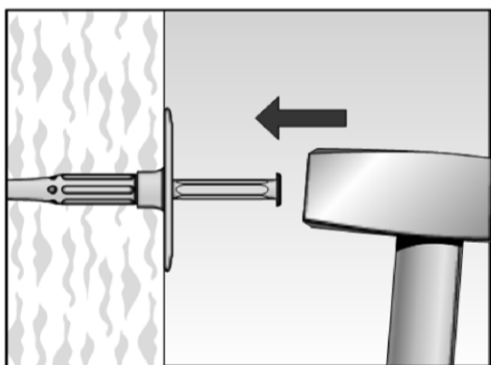
## Installation instructions:



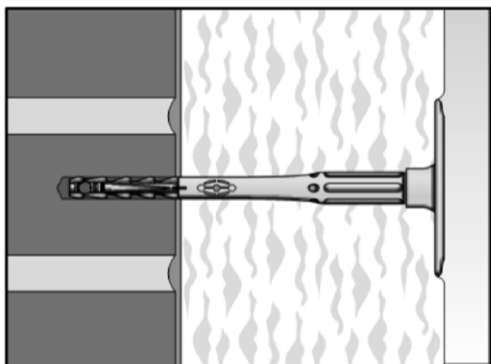
1. Drill the bore hole by the parameters acc. to Table B2.1 and the corresponding drilling method acc. to Annex C 1.



2. Insert anchor manually.



3. Set anchor by hammer blows. The bottom side of the plate must be flush with the ETICS.



4. Correctly installed anchor.

Figures not to scale

fischer FIF-CN II

**Intended use**  
Installation instructions

**Annex B 3**

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**Table C1.1:** Characteristic resistance  $N_{RK}$  in concrete and masonry for a single anchor

| Base material                                                                    | Use cat. | Bulk density class<br>$\rho$<br>[kg/dm <sup>3</sup> ] | Min. compressive strength $f_b$<br>[N/mm <sup>2</sup> ] | Remarks                                                                                                        | Drill method <sup>1)</sup> | Characteristic resistance FIF-CN II<br>$N_{RK}$<br>[kN] |
|----------------------------------------------------------------------------------|----------|-------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------|
| Concrete<br>≥ C12/15 – C50/60<br>acc.to EN 206-1:2000                            | A        |                                                       |                                                         |                                                                                                                | H                          | <b>0,75</b>                                             |
| Clay brick Mz, acc. to EN 771-1:2011                                             | B        | ≥ 2,0                                                 | 12                                                      | Cross section reduced up to 15% by perforation vertically to the resting area                                  | H                          | <b>0,75</b>                                             |
| Vertically perforated clay bricks H1z, acc. to EN 771-1:2011                     | C        | ≥ 1,0                                                 | 12                                                      | Cross section between 15 % and 50 % by perforation vertically to the resting area. Outer web thickness ≥ 12 mm | R                          | <b>0,5</b>                                              |
| Lightweight aggregate concrete, LAC, acc. to EN 1520:2011                        | D        | ≥ 0,8                                                 | 6                                                       | Minimum solid brick or minimum exterior web thickness $t \geq 50$ mm                                           | H                          | <b>0,5</b>                                              |
| Autoclaved aerated concrete blocks AAC, acc. to EN 771-4:2011, $h_{nom} = 35$ mm | E        | ≥ 0,4                                                 | 4                                                       | -                                                                                                              | R                          | <b>0,3</b>                                              |

<sup>1)</sup> H = Hammer drilling

R = Rotary drilling

**Table C1.2:** Point thermal transmittance acc. to EOTA Technical Report TR 025: 2016-05

| Anchor type         | Thickness of insulation material $h_D$<br>[mm] | Point thermal transmittance $\chi$<br>[W/K] |
|---------------------|------------------------------------------------|---------------------------------------------|
| FIF-CN II / 60-180  | 60                                             | 0,001                                       |
|                     | 80 - 180                                       | 0,000                                       |
| FIF-CN II / 200-340 | 200 - 300                                      | 0,000                                       |
|                     | 320 - 340                                      | 0,001                                       |

**Table C1.3:** Plate stiffness acc. to EOTA Technical Report TR 026: 2016-05

| Anchor plate | Size of the anchor plate<br>[mm] | Load resistance of the anchor plate [kN] | Plate stiffness<br>[kN/mm] |
|--------------|----------------------------------|------------------------------------------|----------------------------|
| FIF-CN II    | 60                               | 1,63                                     | 0,63                       |

**Table C1.4:** Displacements of the FIF-CN II

| Base material                                             | Tension load F<br>[kN] | Displacements $\delta$<br>[mm] |
|-----------------------------------------------------------|------------------------|--------------------------------|
| Concrete C12/15 – C50/60 (EN 206-1:2000)                  | 0,25                   | < 0,3                          |
| Clay brick, Mz 12 (EN 771-1:2011)                         | 0,25                   | < 0,5                          |
| Vertically perforated clay brick, H1z 12 (EN 771-1:2011)  | 0,17                   | < 0,2                          |
| Lightweight aggregate concrete, LAC 6 (EN 1520:2011)      | 0,17                   | < 0,3                          |
| Autoclaved aerated concrete blocks, AAC 4 (EN 771-4:2011) | 0,10                   | < 0,2                          |

fischer FIF-CN II

**Performances**

Characteristic resistance of the anchor

Point thermal transmittance, plate stiffness and displacements

**Annex C 1**

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