

## DECLARACIÓN DE PRESTACIONES

### DoP 0254

para fischer FIF-CS-8 (Anclajes de plástico para el uso en hormigón y mampostería)

ES

- |  |  |                 |
|--|--|-----------------|
| 1. <u>Código de identificación única del producto tipo:</u>                                  | <b>DoP 0254</b>  |                 |
| 2. <u>Usos previstos:</u>  | <b>Anclaje de plástico atornillado para la fijación de sistemas compuestos de aislamiento térmico exterior (ETICS) con revoque en hormigón y mampostería, véase el apéndice, especialmente los anexos B1 - B3.</b> |                 |
| 3. <u>Fabricante:</u>  | <b>fischerwerke GmbH &amp; Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Alemania</b>  |                 |
| 4. <u>Representante autorizado:</u>  | -  |                 |
| 5. <u>Sistemas de evaluación y verificación de la constancia de las prestaciones (EVCP):</u> | <b>2+</b>  |                 |
| 6. <u>Documento de evaluación europeo:</u>   | <b>EAD 330196-01-0604</b>  |                 |
| Evaluación técnica europea:  | <b>ETA-15/0006; 2018-05-31</b>   |                 |
| Organismo de evaluación técnica:   | <b>ETA-Danmark A/S</b>   |                 |
| Organismos notificados:  | <b>2873 TU Darmstadt</b>   |                 |
| 7. <u>Prestaciones declaradas:</u>   |  |                 |
| <b>Seguridad en uso (BWR 4)</b>  |  |                 |
| <b>Capacidad de carga característica:</b>  | <b>Resistencia característica bajo carga de tensión:</b>   | <b>Anexo C1</b> |
|  | <b>Distancia mínima al borde:</b>  | <b>Anexo B2</b> |
|  | <b>Espacio mínimo:</b>   | <b>Anexo B2</b> |
| <b>Desplazamientos:</b>  | <b>Carga de tensión con factor parcial:</b>  | <b>Anexo C2</b> |
|  | <b>Desplazamientos:</b>  | <b>Anexo C2</b> |
| <b>Rigidez de la placa:</b>  | <b>Diámetro de la placa de anclaje:</b>  | <b>Anexo C2</b> |
|  | <b>Resistencia a la carga de la placa de anclaje:</b>  | <b>Anexo C2</b> |
|  | <b>Rigidez de la placa:</b>  | <b>Anexo C2</b> |
| <b>Economía de energía y retención de calor (BWR 6)</b>                                      |  |                 |
| <b>Transmitancia térmica:</b>  | <b>Transmitancia térmica puntual de un anclaje:</b>  | <b>Anexo C2</b> |
|  | <b>Espesor de la capa aislante del ETICS:</b>  | <b>Anexo C2</b> |
| 8. <u>Documentación técnica adecuada o documentación técnica específica:</u>                 | -  |                 |

Las prestaciones del producto identificado anteriormente son conformes con el conjunto de prestaciones declaradas. La presente declaración de prestaciones se emite, de conformidad con el Reglamento (UE) no 305/2011, bajo la sola responsabilidad del fabricante arriba identificado.

Firmado por y en nombre del fabricante por:



Dr.-Ing. Oliver Geibig, Director General Unidades de Negocio e Ingeniería  
Tumlingen, 2021-01-15



Jürgen Grün, Director General de Química y Calidad

Esta DdR se ha preparado en distintos idiomas. En caso de que haya alguna controversia sobre la interpretación prevalecerá siempre la versión inglesa.

El Apéndice incluye información voluntaria y complementaria en idioma inglés que excede los requisitos legales (de idioma neutral).

# **1 Technical description of product and intended use**

## **Technical description of the product**

The screwed-in anchor fischer FIF - CS 8 for fixing of external thermal insulation composite systems (ETICS) consists of an anchor sleeve made of polypropylene with a diameter of 8 mm and an insulation plate made of glass-fiber reinforced polyamide with a diameter of 60 mm. The color of the anchor sleeve is grey. The special compound screw is made of galvanized steel and glass-fiber reinforced polyamide. The anchor is expanded by screwing the screw into the sleeve. It is possible to install the anchor flush to the surface of the insulation.

The product description is given in Annex A.

## **2 Specification of the intended use in accordance with the applicable EAD**

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 to B3

The provisions made in this European Technical Assessment are based on an assumed intended working life of the anchor of 25 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, 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 Characteristics of product**

##### **Mechanical resistance and stability (BWR 1):**

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

##### **Safety in case of fire (BWR 2):**

No Performance determined

##### **Safety in use (BWR4):**

The essential characteristics are detailed in the Annex from C1 to C3.

##### **Sustainable use of natural resources (BWR7)**

No performance determined

Other Basic Requirements are not relevant.

##### **General aspects**

The verification of durability is part of testing of the essential characteristics. Durability is only ensured if the specifications of intended use according to Annex B are taken into account.

#### **3.2 Methods of assessment**

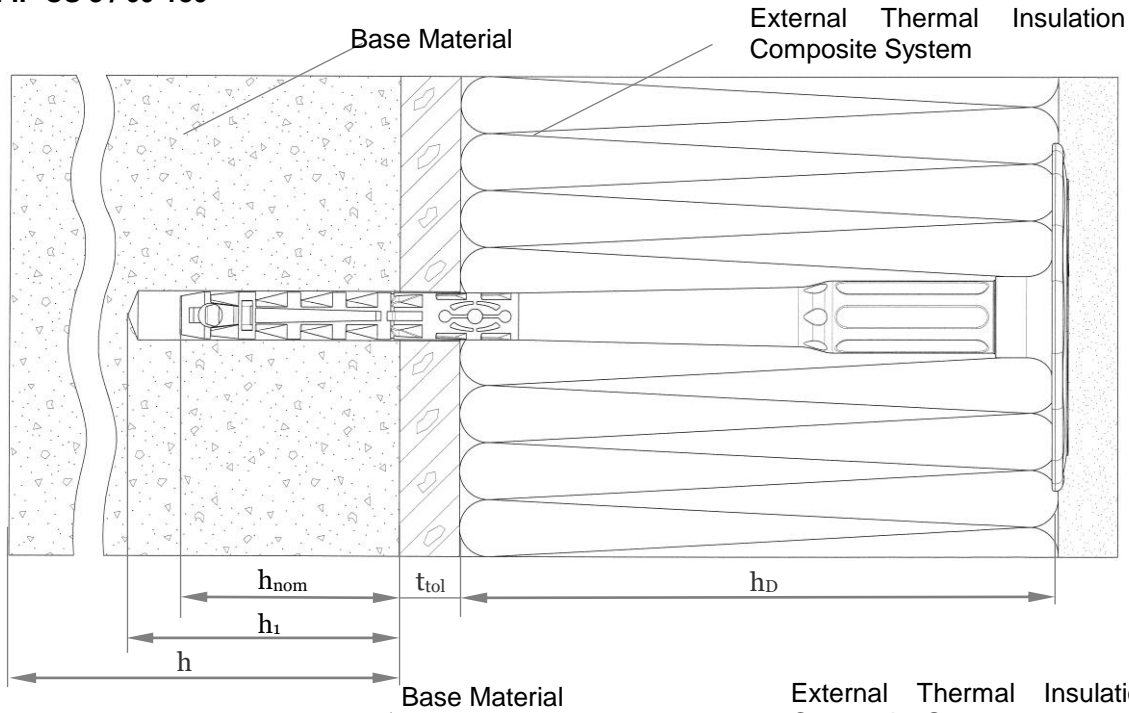
The assessment of fitness of the anchor for the intended use in relation to the requirements for mechanical resistance and stability and safety in use in the sense of the Basic Requirements 4 has been made in accordance with the EAD 330196-01-0604 Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering.

## **4 Assessment and verification of constancy of performance (AVCP)**

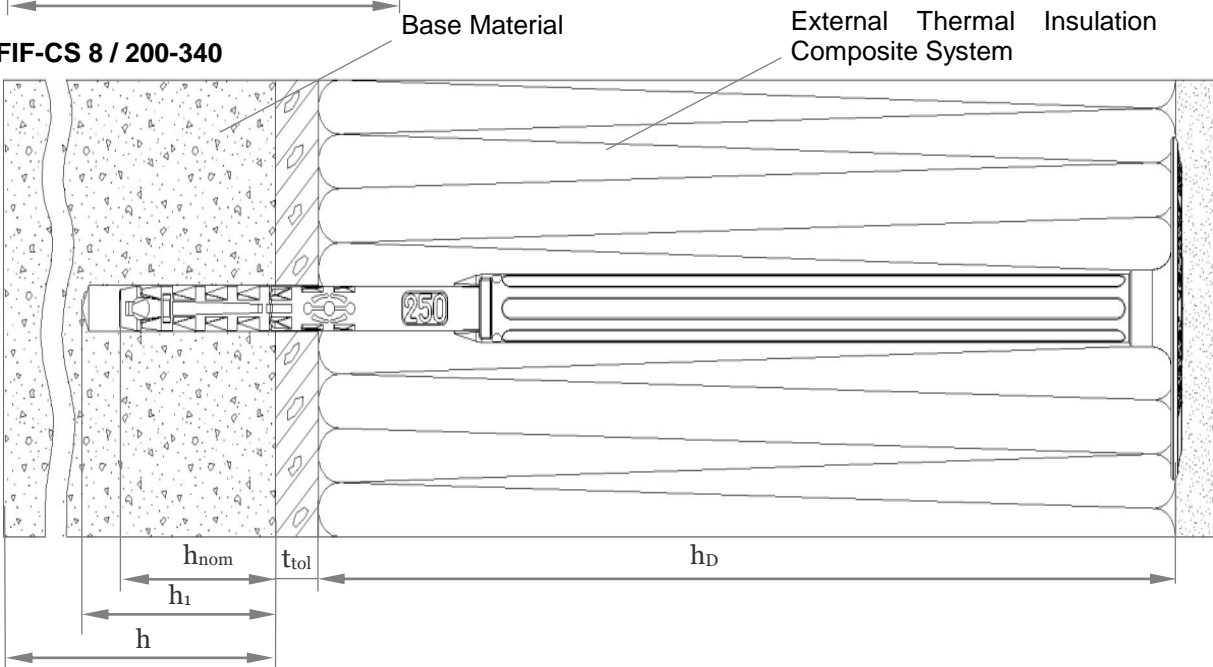
### **4.1 AVCP system**

According to the decision 97/463/EC of the European Commission, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

**FIF-CS 8 / 60-180**



**FIF-CS 8 / 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

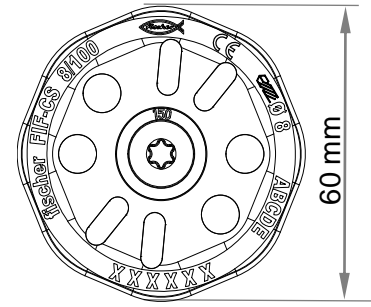
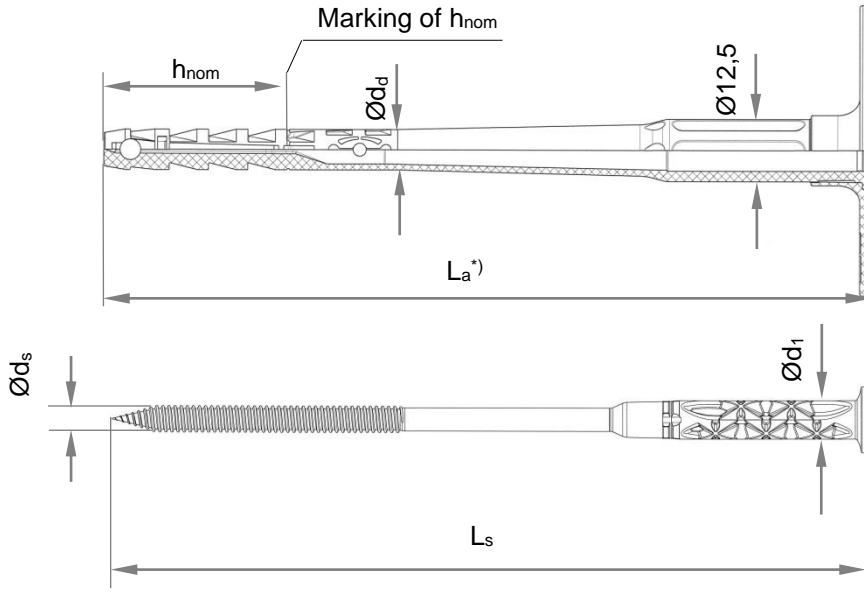
**fischer FIF-CS-8**

**Annex A1**

Product description - Installed anchor

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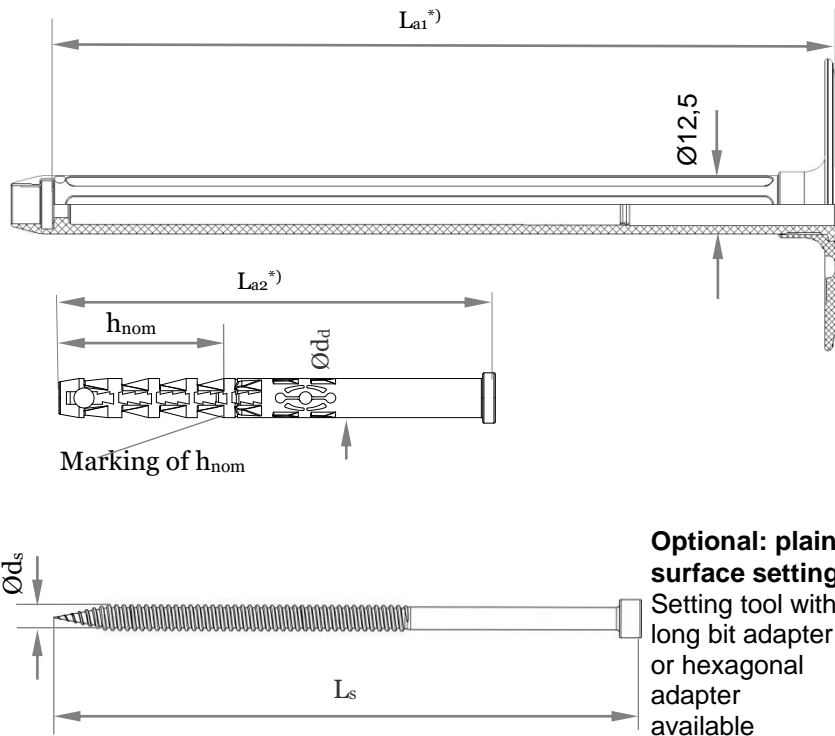
**Anchor sleeve / Specific screw for FIF-CS 8 / 60-180**



\*) FIF-CS 8 / 60-180:  
 $110 \leq L_a \leq 230$

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

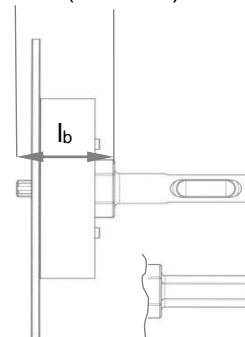
**Shaft / Anchor sleeve / Specific screw for FIF-CS 8 / 200-340**



\*) FIF-CS 8 / 200-340:  
 $250 \leq L_a \leq 390$

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

**Optional: plain surface setting**  
 Setting tool with long bit adapter or hexagonal adapter available





**fischer FIF-CS-8**

**Annex A2**

Product description - Installed anchor

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**Table A3.1: Marking**

|                         |   |
|-------------------------|---|
|                         | <b>Designation</b>  |
| Name and size of anchor | FIF-CS-8  |
| Example                 | <b>fischer FIF-CS-8</b>  (optional) <b>CE</b>  (optional) <b>Ø 8 ABCDE</b><br>(optional) and xxxxx additional marks possible |

**Table A3.2: Dimensions [mm]**

| Anchor type                                       | Anchor sleeve    |                  | Shaft          |                                     | Specific screw   |   |                  | Length of bits l <sub>b</sub> |      |
|---|------------------|------------------|----------------|-------------------------------------|------------------|---|------------------|-------------------------------|------|
|   | Ø d <sub>d</sub> | h <sub>nom</sub> | L <sub>a</sub> | (L <sub>a1</sub> +L <sub>a2</sub> ) | Ø d <sub>s</sub> | l <sub>s</sub>                                  | Ø d <sub>1</sub> | l <sub>b</sub> [mm]           | size |
| <b>FIF-CS<br/>8 / 60-180</b>                      | 8                | 35               | 110-230        | -                                   | 5,4              | L <sub>a</sub>                                  | 8                | 30                            | T30  |
| <b>FIF-CS<br/>8 / 200-340</b>                     | 8                | 35               | -              | 250-390                             | 5,4              | (L <sub>a1</sub> + L <sub>a2</sub> ) –<br>155mm | -                | 180                           | T25  |
| <b>FIF-CS<br/>Renovation type<br/>8 / 200-260</b> | 8                | 35               | -              | 250-310                             | 5,4              | (L <sub>a1</sub> + L <sub>a2</sub> ) – 75mm     | -                | 100                           | T25  |

**Table A3.3: Materials**

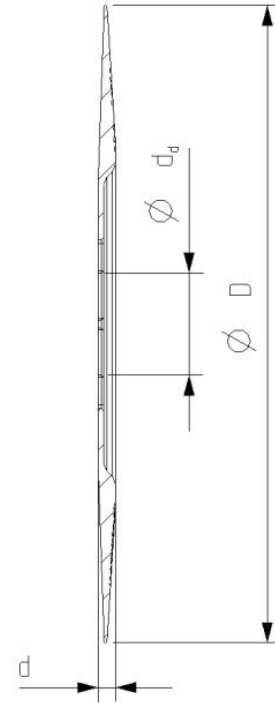
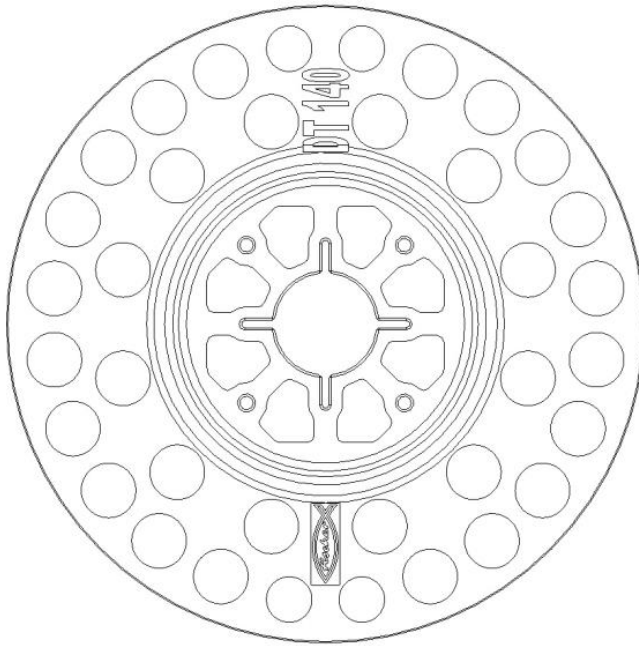
| Designation  | Material  |
|--|---|
| Anchor sleeve  | PP colour: grey   |
| Shaft (FIF-CS-8 / 200-340)   | PA6 GF colour: grey   |
| Specific compound screw (FIF-CS-8 / 60-180)<br>or<br>specific screw (FIF-CS-8 / 200-340) | PA6 GF with Steel gal Zn A2G or A2F acc. to EN ISO 4042<br>Steel gal Zn A2G or A2F according to EN ISO 4042<br>or stainless steel 1.4362 duplex coating, 1.4401, 1.4571,<br>1.4529 acc. to EN 10088 |
| Anchor plate   | PA6 GF colour: grey   |

**fischer FIF-CS-8****Annex A3**

Product description – Dimension and materials

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**Drawing of the slip-on plates**



**Table A4.1: Slip-on plates, diameters and material**

| Slip-on plate     | Ø D [mm]       | Ø d <sub>d</sub> [mm] | d [mm] | Material |
|-------------------|----------------|-----------------------|--------|----------|
| DT 90 / 110 / 140 | 90 / 110 / 140 | 22,5                  | 3,9    | PA 6 GF  |

**fischer FIF-CS-8**

**Annex A4**

Product description – Slip-on plates combined with FIF-CS-8

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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.
- Hollow or perforated masonry (use category D), according to Annex C1.
- Hollow or perforated masonry (use category E), according to Annex C1.
- For other base materials of the use categories A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to EOTA Technical Report TR 051.

### 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 ETICS.

### Installation:

- Drilling method 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-CS-8**

Intended use - Specifications

**Annex B1**

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**Table B2.1: Installation parameters for use categories A, B, C, D and E**

| Anchor type   |                                   | FIF-CS-8 |
|---|-----------------------------------|----------|
| Nominal drill hole diameter                                 | $d_0 = [\text{mm}]$               | 8        |
| Cutting diameter of drill bit                               | $d_{\text{cut}} \leq [\text{mm}]$ | 8,45     |
| Depth of drill hole to deepest point                        | $h_1 \geq [\text{mm}]$            | 45       |
| Overall plastic anchor embedment depth in the base material | $h_{\text{nom}} \geq [\text{mm}]$ | 35       |

**Table B2.2: Installation parameters for cat. "C" only valid for tested masonry units (see Annex C1**

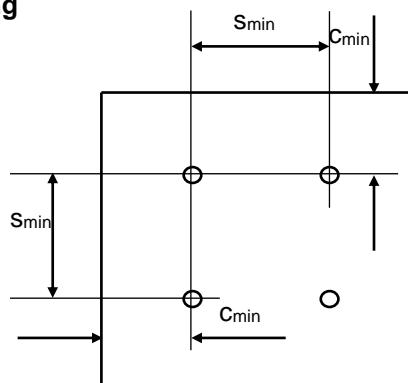
| Anchor type   |                                   | FIF-CS |
|---|-----------------------------------|--------|
| Nominal drill hole diameter                                 | $d_0 = [\text{mm}]$               | 8      |
| Cutting diameter of drill bit                               | $d_{\text{cut}} \leq [\text{mm}]$ | 8,45   |
| Depth of drill hole to deepest point                        | $h_1 \geq [\text{mm}]$            | 35     |
| Overall plastic anchor embedment depth in the base material | $h_{\text{nom}} \geq [\text{mm}]$ | 25     |

**Table B2.3: Anchor distances and dimensions of members**

| Anchor type                 |                                | FIF-CS |
|-----------------------------|--------------------------------|--------|
| Minimum thickness of member | $h^{1)} \geq [\text{mm}]$      | 100    |
| Minimum spacing             | $s_{\text{min}} = [\text{mm}]$ | 100    |
| Minimum edge distance       | $c_{\text{min}} = [\text{mm}]$ | 100    |

1) not valid for weather shells acc. to C1

**Scheme of distances and spacing**



**fischer FIF-CS-8**

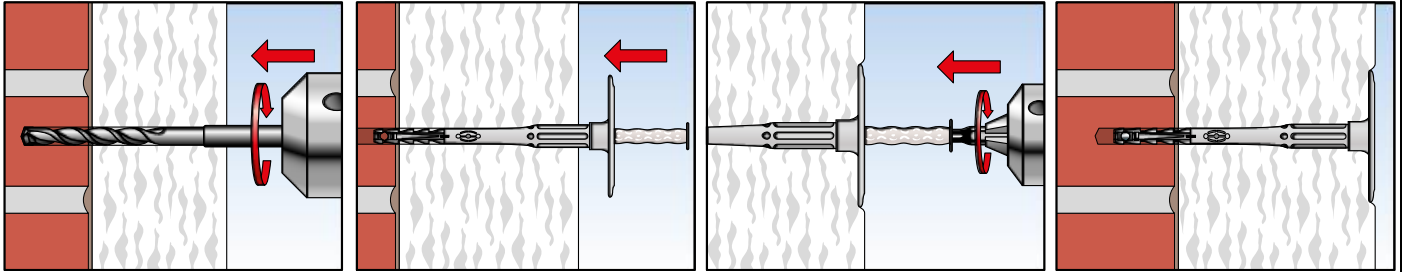
**Annex B2**

Installation parameters for use categories

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## Installation instructions

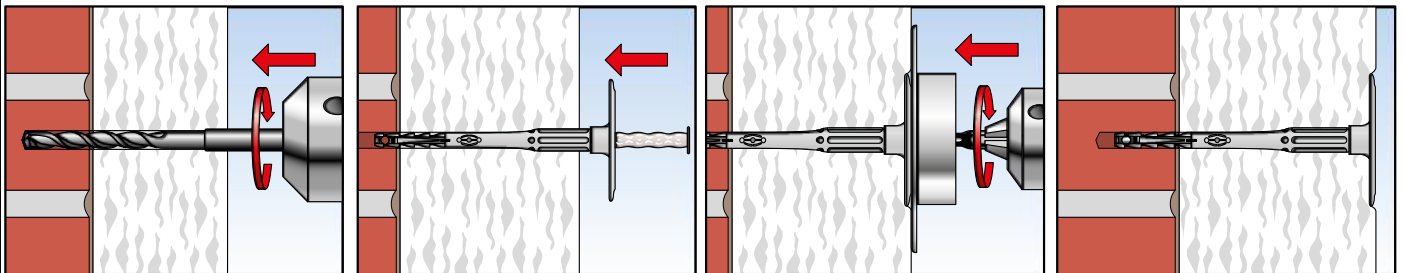
### Standard setting of anchor (plain surface)



1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by machine
4. Correctly installed anchor

### Optional:

### Setting of anchor by setting tool



1. Drill hole by corresponding drilling method
2. Insert anchor manually
3. Set anchor by setting tool with the machine
4. Correctly installed anchor

fischer FIF-CS-8

Annex B3

Procedure

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**Table C1.1: Char. resistance to tension loads NRk in concrete, masonry, LAC and AAC for a single anchor in kN**

| Base material  | Use Cat. | Bulk density class<br>$\rho$<br>[kg/dm <sup>3</sup> ] | Minimum compressive strength<br>$f_b$<br>[N/mm <sup>2</sup> ] | Remarks   | Drill mode <sup>1)</sup> | Characteristic resistance<br>FIF CS<br>$N_{Rk}$<br>[kN] |
|--|----------|---|---|---|--------------------------|---|
| Concrete<br>≥ C 12/15 - C 50/60  | A        | -   |   | EN 206-1:2000   | H                        | <b>1,2</b>  |
| Solid Clay bricks<br>e.g. acc. to<br>DIN 105-100:2012-01,<br>EN 771-1:2011, Mz   | B        | ≥ 1,8   | 20  | Cross section reduced up to 15% by perforation vertically to the resting area                                   | H                        | <b>1,2</b>  |
| Vertically perforated clay bricks e.g. acc. to DIN 105-100:2012-01,<br>EN 771-1:2011, HLz                              | C        | ≥ 1,0   | 12  | Cross section between 15% and 50% by perforation vertically to the resting area. Exterior web thickness ≥ 12 mm | R                        | <b>0,6<sup>3)</sup></b>                                 |
| Lightweight Aggregate Concrete<br>≥ LAC 6  | D        | ≥ 0,9   | 6   | DIN EN 1520   | H                        | <b>0,6</b>  |
| Autoclaved aerated concrete blocks, e.g. AAC acc. to<br>DIN V 4165-100:2005-10,<br>EN 771-4<br>h <sub>nom</sub> = 35mm | E        | ≥ 0,50  | 4   | DIN V 4165-100  | R                        | <b>0,3</b>  |
| Partial safety factor  |          |   |   |   | $\gamma_M^{2)}$          | <b>2,0</b>  |

- 1) H = Hammer drilling, R = Rotary drilling
- 2) In absence of other national regulations
- 3) Values also valid for reduced anchorage depth 25 mm (see Table B2.2)

**fischer FIF-CS-8**

Performances

Characteristic resistance of the anchor use categories A, B, C, D and E

**Annex C1**

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**Table C2.1: Point thermal transmittance acc. to EOTA Technical Report TR 025:2007-06**

| Anchor type   | Thickness of insulation material<br>$h_D$<br>[mm] | Point thermal transmittance<br>$\chi$<br>[W/K] |
|---|---|--|
| FIF-CS 8 / 60 – 180<br>flush mounted                | 60 - 80   | 0,001  |
|   | 100 - 180   | 0,002  |
| FIF-CS 8 / 200 – 340<br>flush mounted               | 200 - max.  | 0,001  |
| FIF-CS 8 / 200 - 260 <sup>*)</sup><br>flush mounted | 200 - 220   | 0,001  |
|   | 240 - 260   | 0,002  |

\*) Renovation type

**Table C2.2: Plate stiffness acc. to EOTA Technical Report TR 026:2007-06**

| Anchor type | Max. size<br>of the anchor plate<br>[mm] | Load resistance<br>of the anchor plate<br>[kN] | Plate stiffness<br>[kN/mm] |
|-------------|--|--|----------------------------|
| FIF-CS-8    | 60                                       | 1,63   | 0,6                        |

**Table C4: Displacements**

| Base material   | Tension load<br>$F_{Rd}$<br>[kN] | Displacements<br>$\delta_m$<br>[mm] |
|---|----------------------------------|-------------------------------------|
| Concrete $\geq$ C12/15 to C 50/60 (EN 206-1:2000)   | 0,40                             | < 0,3                               |
| Clay brick DIN 105-100:2012-01, EN 771-1:2011, Mz 20  | 0,40                             | < 0,3                               |
| Vertically perforated Clay brick acc. to 105-100:2012-01, EN 771-1:2011, Hlz 12                         | 0,20                             | < 0,2                               |
| Lightweight Aggregate Concrete $\geq$ LAC 6 DIN EN 1520   | 0,20                             | < 0,2                               |
| Autoclaved aerated concrete blocks acc. to<br>DIN V 4165-100:2005-10 EN 771-4, AAC 4, $h_{nom} = 35$ mm | 0,10                             | < 0,1                               |

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**Annex C2**

Performance - Point thermal transmittance, plate stiffness and displacements

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