



## TOIMIVUSDEKLARATSIOON



nr 0003 – ET

1. Tootetüübi kordumatu identifitseerimiskood: **fischer drop-in anchor EA II**

2. Kavandatud kasutusala(d):

| Toode                                                       | Kasutusotstarve/-otstarbed                                                                                                                                                        |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Metallankrud (kerge koormusega tüüpi) betoonis kasutamiseks | Sellistes betoonelementide külge kinnitatavates ja/või toetatavates lisasüsteemides kasutamiseks, nagu kerged ripplaed või paigaldised, vt lisamaterjale, eriti lisasid B 1 - B 5 |

3. Tootja: **fischerwerke GmbH & Co. KG, Klaus-Fischer-Straße 1, 72178 Waldachtal, Saksamaa**

4. Volitatud esindaja: --

5. Toimivuse püsivuse hindamise ja kontrolli süsteem: **2+**

6a. Ühtlustatud standard: ---

Teavitatud asutus(ed): ---

6b. Euroopa hindamisdokument: **ETAG 001; 2011-01**Euroopa tehniline hinnang: **ETA-07/0142; 2014-11-07**Tehnilise hindamise asutus: **DIBt**Teavitatud asutus(ed): **1343 – MPA Darmstadt**

7. Deklareeritud toimivus:

**Mehhaaniline vastupidavus ja stabiilsus (BWR 1)**

| Põhiomadused    | Sooritusnäitajad                          |
|-----------------|-------------------------------------------|
| Tunnusväärtused | Vt lisamaterjale, eriti lisasid C 1 - C 3 |

**Tuleohutus (BWR 2)**

| Põhiomadused   | Sooritusnäitajad                       |
|----------------|----------------------------------------|
| Tuletundlikkus | Ankurdused vastavad klassi A1 nõuetele |
| Tulekindlus    | Vt lisamaterjale, eriti lisa C 1 - C 3 |

8. Asjakohane tehniline dokumentatsioon ja/või tehniline eridokumentatsioon ---

Eespool kirjeldatud toote toimivus vastab deklareeritud toimivusele. Käesolev toimivusdeklaratsioon on välja antud kooskõlas määrusega (EL) nr 305/2011 eespool nimetatud tootja ainuvastutusel.

Tootja poolt ja nimel allkirjastanud:

Andreas Bucher, Dipl.-Ing.

Wolfgang Hengesbach, Dipl.-Ing., Dipl.-Wirtsch.-Ing.

Tumlingen, 2014-11-14

- Toimivusdeklaratsioon on koostatud mitmes keeles. Kui tõlked on omavahel vastuolus, tuleb lähtuda ingliskeelsest versioonist.

- Lisa sisaldab (keeleneutraalselt määratletud) juriidilisi nõudeid ületavat vabatahtlikku ja täiendavat teavet inglise keeles.

## Specific Part

### 1 Technical description of the product

The fischer drop-in anchor EA II is an anchor made of galvanized or stainless steel which is placed into a drilled hole and anchored by deformation-controlled expansion.

The fixture shall be anchored with a fastening screw or threaded rod according to Annex 4.

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)

| Essential characteristic | Performance |
|--------------------------|-------------|
| Characteristic values    | See Annex C |

#### 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                                 |

#### 3.3 Hygiene, health and the environment (BWR 3)

Regarding dangerous substances there may be requirements (e.g. transposed European legislation and national laws, regulations and administrative provisions) applicable to the products falling within the scope of this European Technical Assessment. In order to meet the provisions of Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

#### 3.4 Safety in use (BWR 4)

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

#### 3.5 Protection against noise (BWR 5)

Not applicable.

**3.6 Energy economy and heat retention (BWR 6)**

Not applicable.

**3.7 Sustainable use of natural resources (BWR 7)**

The sustainable use of natural resources was not investigated.

**3.8 General aspects**

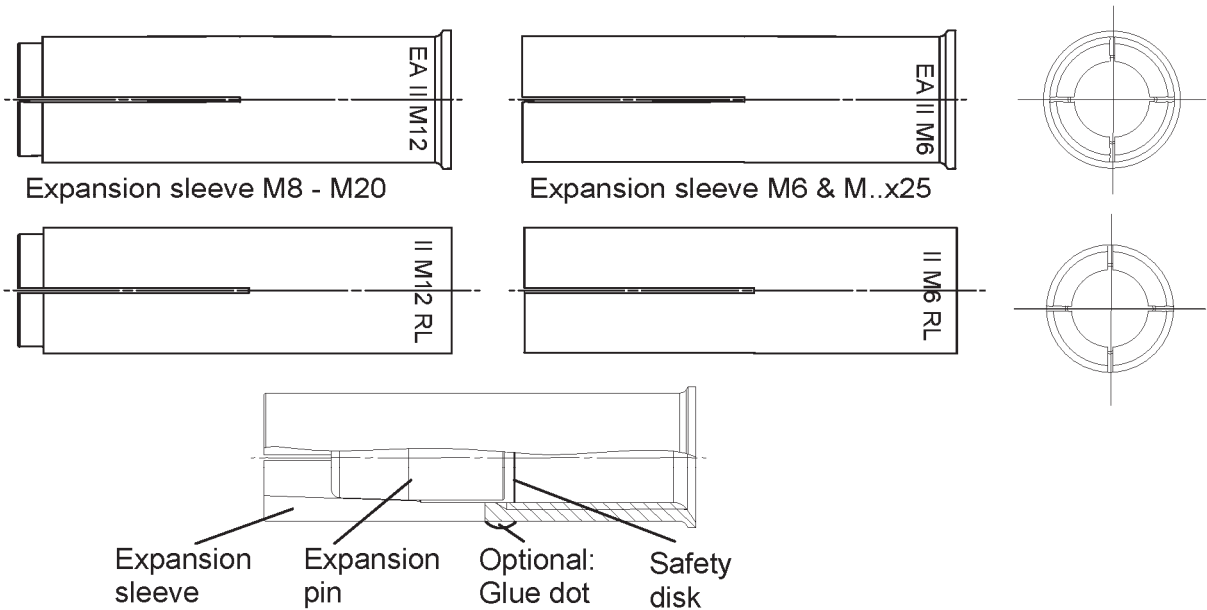
The verification of durability is part of testing the essential characteristics. Durability is only ensured if the specifications of intended use according to Annex B are taken into account.

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

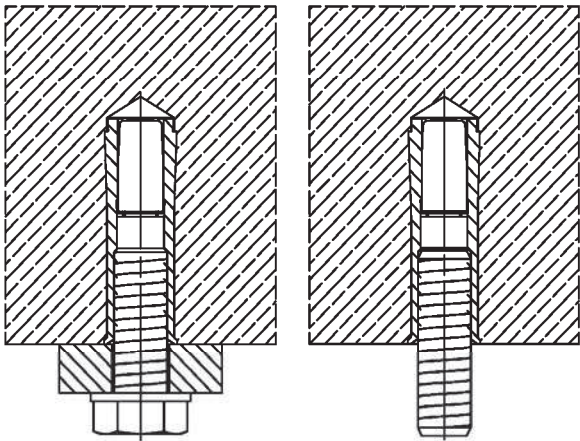
According to Decision of the Commission of 17 February 1997 (97/161/EC) (OJ L 062 of 04.03.97 p. 41-42), the system of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) given in the following table applies.

| Product                                             | Intended use                                                                                                                                    | Level or class | System |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|
| Metal anchors for use in concrete (light-duty type) | For use in redundant systems for fixing and/or supporting to concrete elements such as lightweight suspended ceilings, as well as installations | —              | 2+     |

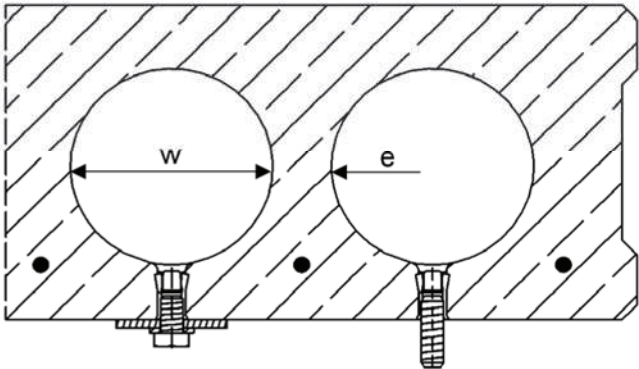
Multiple use for non-structural applications only



Intended use in concrete



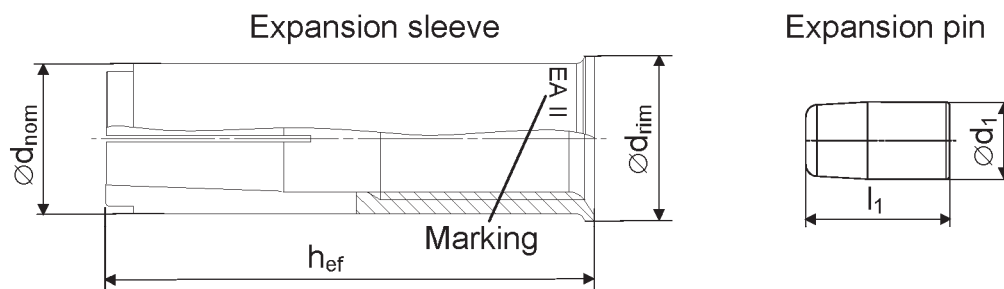
Intended use in precast prestressed hollow concrete slabs ( $w/e \leq 4,2$ ) with a flange thickness  $\geq 30$  mm and only for  $h_{ef} = 25$  mm



fischer drop-in anchor EA II

Annex A 1

Product description  
Installed condition  
Anchor types



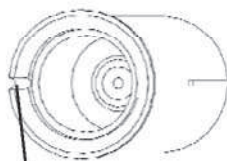
| Anchor size<br>EA II       | M6x25 | M6x30 | M8x25 | M8x30 | M8x40 | M10x25 | M10x30 | M10x40 | M12x25 | M12x50 | M12 D |
|----------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| $h_{ef}$ [mm]              | 25    | 30    | 25    | 30    | 40    | 25     | 30     | 40     | 25     | 50     | 50    |
| $\varnothing d_{nom}$ [mm] | 8     |       | 10    |       |       | 12     |        |        | 15     |        | 16    |
| $\varnothing d_{rim}$ [mm] | 9,5   |       | 11,5  |       |       | 13,5   |        |        | 16,5   |        | 17,5  |
| $\varnothing d_1$ [mm]     | 5     |       | 6,5   |       |       | 8,5    | 8      |        | 10     |        |       |
| $l_1$ [mm]                 | 9     | 14    | 8     | 13,5  |       | 9      | 13,5   | 18,5   | 10,5   | 18,5   |       |

### Distinctive feature



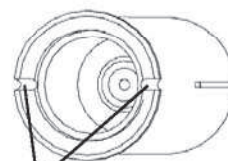
0× groove for:

- EA II M6x30..
- EA II M8x30..
- EA II M10x40..
- EA II M12x50..



1× groove for:

- EA II M6x25..
- EA II M8x25..
- EA II M10x25..
- EA II M12x25..



2× groove for:

- EA II M8x40..
- EA II M10x30..

### Marking on anchor body

| galvanized steel (gvz) |                  | stainless steel (A4) |                     |
|------------------------|------------------|----------------------|---------------------|
| with rim               | rimless          | with rim             | rimless             |
| EA II M6x25            | EA II M6x25 RL   | EA II M6x30 A4       | EA II M6x30 RL A4   |
| EA II M6x30            | EA II M6x30 RL   | EA II M8x30 A4       | EA II M8x30 RL A4   |
| EA II M8x25            | EA II M8x25 RL   | EA II M8x40 A4       | EA II M8x40 RL A4   |
| EA II M8x30            | EA II M8x30 RL   | EA II M10x30 A4      | EA II M10x30 RL A4  |
| EA II M8x40            | EA II M8x40 RL   | EA II M10x40 A4      | EA II M10x40 RL A4  |
| EA II M10x25           | EA II M10x25 RL  | EA II M12x50 A4      | EA II M12x50 RL A4  |
| EA II M10x30           | EA II M10x30 RL  | EA II M12x50 DA4     | EA II M12x50 RL DA4 |
| EA II M10x40           | EA II M10x40 RL  |                      |                     |
| EA II M12x25           | EA II M12x25 RL  |                      |                     |
| EA II M12x50           | EA II M12x50 RL  |                      |                     |
| EA II M12x50 D         | EA II M12x50 RLD |                      |                     |

fischer drop-in anchor EA II

**Product description**  
Anchor types

**Annex A 2**

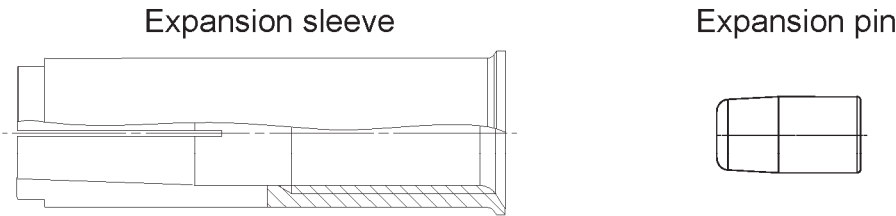


Table A1: Materials

|                                 | Material                                                                                                 |                                                           |
|---------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Designation                     | galvanised steel ( $\geq 5\text{ }\mu\text{m}$ )                                                         | stainless steel                                           |
| Expansion sleeve                | EN 10277:2008 or EN 10084:2008 or<br>EN 10111:2008 or EN 10263:2001 or<br>EN 10087:1998 or ASTM A29/A29M | EN 10088:2005                                             |
| Expansion pin                   |                                                                                                          |                                                           |
| Fastening screw or threaded rod | steel, property class 4.6, 5.6, 5.8 or 8.8 according to EN ISO 898-1:2012                                | property class 50, 70 or 80 according to EN ISO 3506:2009 |

fischer drop-in anchor EA II

Product description  
Material

Annex A 3

### Specifications of intended use

#### Anchorage subject to:

- Static and quasi-static loads.
- Only to be used for multiple use for non-structural application.
- Fire exposure: only in concrete C12/15 to C50/60, not prestressed hollow concrete slabs.

#### Base materials:

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000.
- Strength classes C12/15 to C50/60 according to EN 206-1:2000.
- Precast prestressed hollow concrete slabs with  $w/e \leq 4,2$  and strength classes C30/37 to C50/60: M6x25, M8x25, M10x25 and M12x25.
- Cracked concrete and non-cracked concrete: all sizes.

#### Use conditions (Environmental conditions):

- Structures subject to dry internal conditions (zinc coated steel or stainless steel).
- Structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition, if no particular aggressive conditions exist (stainless steel).

Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used).

#### Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are 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 are designed in accordance with: ETAG 001, Annex C, design method B and C, Edition August 2010.
- Fasteners are only to be used for multiple use for non-structural application, according to: ETAG 001 Part 6, Edition August 2010.
- Anchorages under fire exposure are designed in accordance with: EOTA Technical Report TR 020, Edition May 2004.

#### Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- The anchor may only be used once.
- Anchor expansion by impact using the setting tools given in Annex B 4. The anchor is properly set if the stop of the setting tool reaches the expansion sleeve. The manual setting tool with installation control leaves a visible mark on the sleeve, as illustrated in Annex B 5.

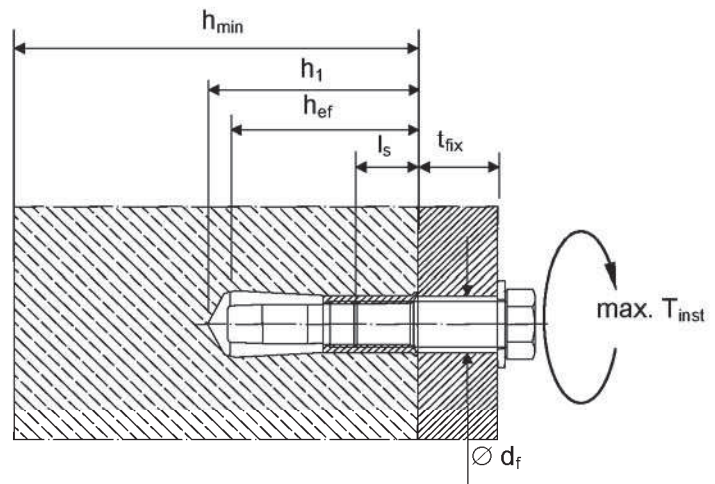
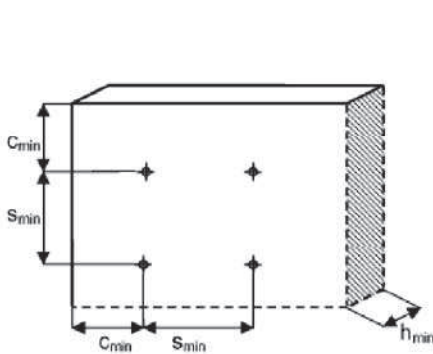
fischer drop-in anchor EA II

Intended Use  
Specifications

Annex B 1

**Table B1: Installation parameters for concrete C12/15 to C50/60**

| Anchor size                 |                        |      | M6 |     | M8  |     |     | M10 |     |     | M12 |     | M12D |
|-----------------------------|------------------------|------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Nominal drill hole diameter | d <sub>0</sub>         | [mm] | 8  |     | 10  |     |     | 12  |     |     | 15  |     | 16   |
| Effective anchorage depth   | h <sub>ef</sub>        | [mm] | 25 | 30  | 25  | 30  | 40  | 25  | 30  | 40  | 25  | 50  | 50   |
| Maximum installation torque | max. T <sub>inst</sub> | [Nm] | 4  |     | 8   |     |     | 15  |     |     | 35  |     |      |
| Minimum drill hole depth    | h <sub>1</sub>         | [mm] | 27 | 32  | 27  | 33  | 43  | 27  | 33  | 43  | 27  | 54  | 54   |
| Minimum screw-in depth      | l <sub>s,min</sub>     | [mm] | 6  |     | 8   |     |     | 10  |     |     | 12  |     |      |
| Maximum screw-in depth      | l <sub>s,max</sub>     | [mm] | 14 |     | 14  |     |     | 14  |     | 17  | 14  | 22  |      |
| Clearance hole diameter     | ∅ d <sub>f</sub>       | [mm] | 7  |     | 9   |     |     | 12  |     |     | 14  |     |      |
| h <sub>min</sub> = 80 mm    |                        |      |    |     |     |     |     |     |     |     |     |     |      |
| Minimum spacing             | s <sub>min</sub>       | [mm] | 30 | 70  | 70  | 110 | 200 | 80  | 200 |     | 100 | -   | -    |
| Minimum edge distance       | c <sub>min</sub>       | [mm] | 60 | 150 | 100 | 150 |     | 120 | 150 |     | 130 | -   | -    |
| h <sub>min</sub> = 100 mm   |                        |      |    |     |     |     |     |     |     |     |     |     |      |
| Minimum spacing             | s <sub>min</sub>       | [mm] | 30 | 65  | 50  | 70  |     | 60  | 90  | 150 | 100 | 200 |      |
| Minimum edge distance       | c <sub>min</sub>       | [mm] | 60 | 115 | 100 | 115 |     | 100 | 160 | 180 | 110 | 200 |      |
| h <sub>min</sub> = 120 mm   |                        |      |    |     |     |     |     |     |     |     |     |     |      |
| Minimum spacing             | s <sub>min</sub>       | [mm] | 30 | 65  | 50  | 70  |     | 60  | 85  | 95  | 100 | 145 |      |
| Minimum edge distance       | c <sub>min</sub>       | [mm] | 60 | 115 | 100 | 115 |     | 100 | 140 | 150 | 110 | 200 |      |



Fastening screw or threaded rod:

- Minimum property class and materials according to table A1.
- The length of the fastening screw or threaded rod shall be determined depending on thickness of fixture  $t_{fix}$ , admissible tolerances and maximum screw length  $l_{s,max}$  as well as minimum screw-in depth  $l_{s,min}$ .

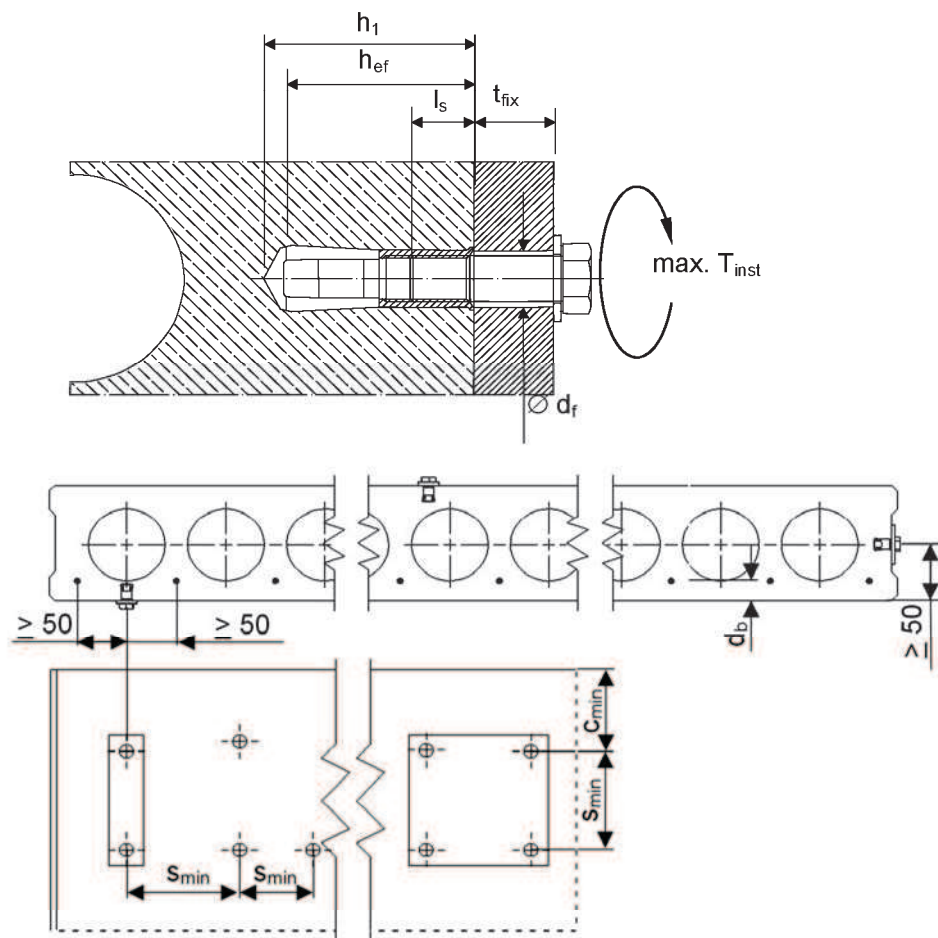
fischer drop-in anchor EA II

**Intended Use**  
Installation parameters

**Annex B 2**

**Table B2: Installation parameters for precast prestressed hollow concrete slabs**

| Anchor size                 |                    |      | M6  | M8 | M10 | M12 |
|-----------------------------|--------------------|------|-----|----|-----|-----|
| Nominal drill hole diameter | $d_0$              | [mm] | 8   | 10 | 12  | 15  |
| Effective anchorage depth   | $h_{ef}$           | [mm] | 25  |    |     |     |
| Maximum installation torque | max. $T_{inst}$    | [Nm] | 4   | 8  | 15  | 35  |
| Minimum drill hole depth    | $h_1$              | [mm] | 27  |    |     |     |
| Minimum screw-in depth      | $l_{s,min}$        | [mm] | 6   | 8  | 10  | 12  |
| Maximum screw-in depth      | $l_{s,max}$        | [mm] | 14  |    |     |     |
| Clearance hole diameter     | $\varnothing d_f$  | [mm] | 7   | 9  | 12  | 14  |
| Minimum spacing             | $s_{min} = s_{cr}$ | [mm] | 200 |    |     |     |
| Minimum edge distance       | $c_{min} = c_{cr}$ | [mm] | 150 |    |     |     |



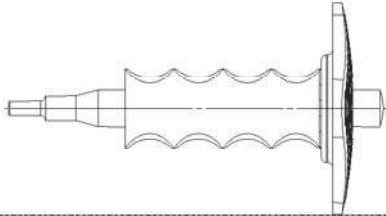
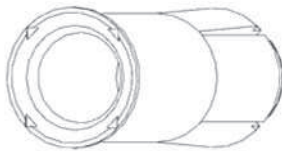
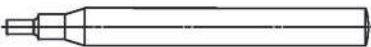
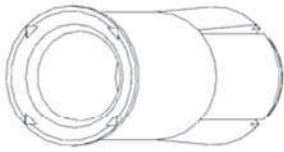
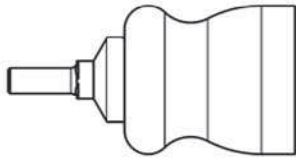
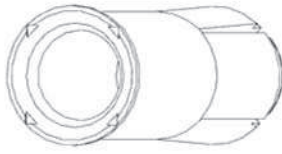
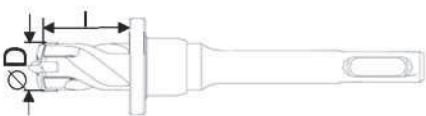
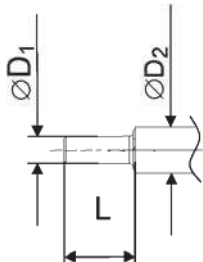
Fastening screw or threaded rod:

- Minimum property class and materials according to table A1.
- The length of the fastening screw or threaded rod shall be determined depending on thickness of fixture  $t_{fix}$ , admissible tolerances and maximum screw length  $l_{s,max}$  as well as minimum screw-in depth  $l_{s,min}$ .

fischer drop-in anchor EA II

**Intended Use**  
Installation parameters

**Annex B 3**

| Setting & drilling tools                                                            |                                  |                                     |                                                                                       |
|-------------------------------------------------------------------------------------|----------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|
| Setting tools                                                                       | Marking                          | Description                         | Marking on EA II with rim and rimless                                                 |
|    | EHS Plus<br>M..x h <sub>ef</sub> | Manual setting tool with hand guard |    |
|    | EHS<br>M..x h <sub>ef</sub>      | Manual setting tool basic format    |    |
|    | EMS<br>M..x h <sub>ef</sub>      | Machine setting tool with SDS Plus  | No marking                                                                            |
|   | EAS<br>M..x h <sub>ef</sub>      | Slip-on setting tool for stop drill |   |
| Drilling tools                                                                      |                                  |                                     |                                                                                       |
|  | EBB<br>ØD x l                    | Stop drill                          |  |
| Or other usual drillers                                                             |                                  |                                     |                                                                                       |

**Table B3: Parameters of setting tools**

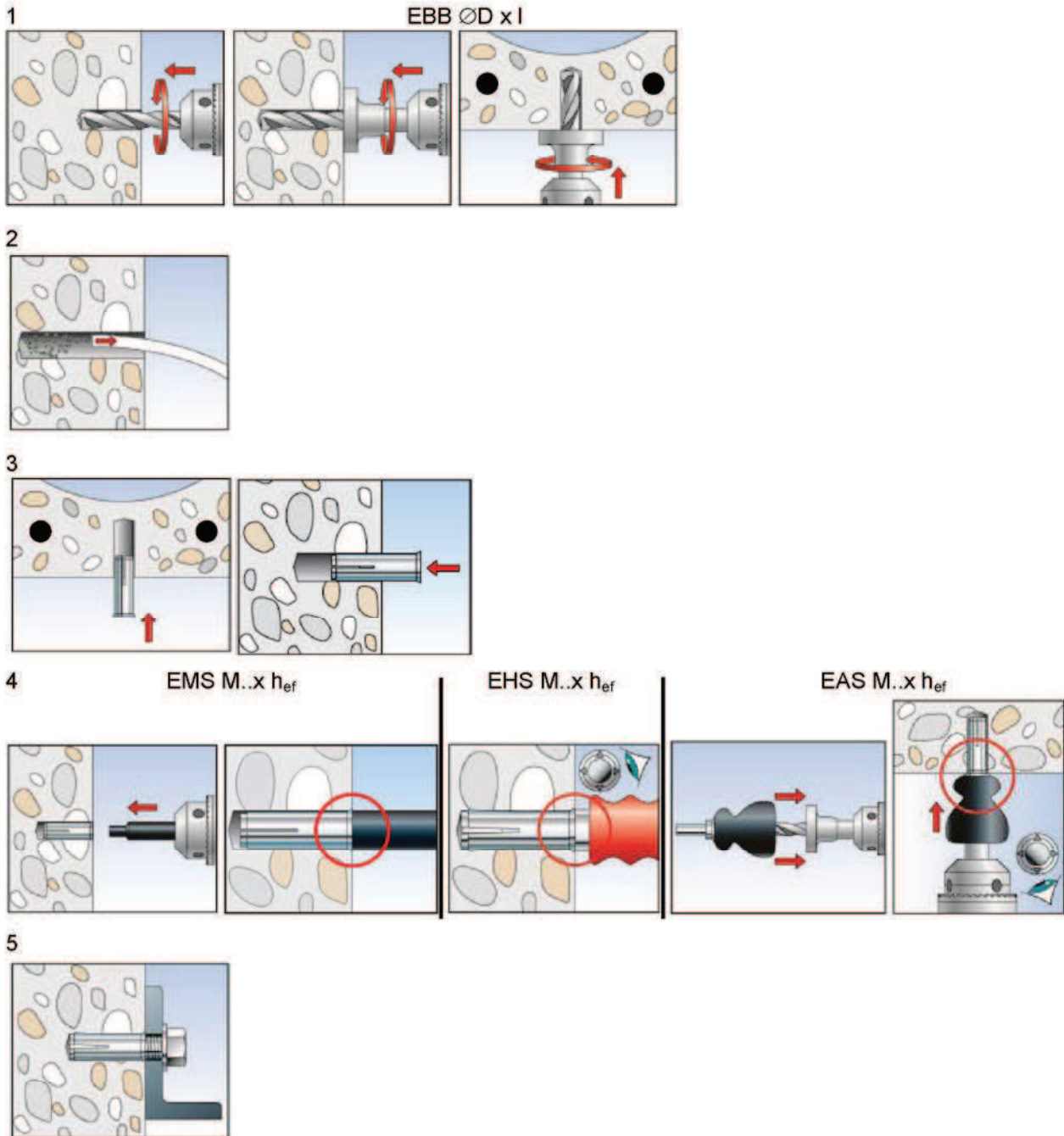
| Manual setting tool | Machine setting tool | Slip-on setting tool | Stop drill             | For anchor size              | Ø D1 | Ø D2 | L    |
|---------------------|----------------------|----------------------|------------------------|------------------------------|------|------|------|
| EHS M6x25/30        | EMS M6x25/30         | EAS M6x25/30         | EBB 8x25<br>EBB 8x30   | EA II M6x25<br>EA II M6x30   | 4,8  | 9,0  | 17,0 |
| EHS M8x25/30        | EMS M8x25/30         | EAS M8x25/30         | EBB 10x25<br>EBB 10x30 | EA II M8x25<br>EA II M8x30   | 6,4  | 11,0 | 18,0 |
| EHS M8x40           | EMS M8x40            | EAS M8x40            | EBB 10x40              | EA II M8x40                  | 6,4  | 11,0 | 28,0 |
| EHS M10x25/30       | EMS M10x25/30        | EAS M10x25/30        | EBB 12x25<br>EBB 12x30 | EA II M10x25<br>EA II M10x30 | 7,9  | 13,0 | 18,0 |
| EHS M10x40          | EMS M10x40           | EAS M10x40           | EBB 12x40              | EA II M10x40                 | 7,9  | 13,0 | 24,0 |
| EHS M12x25          | EMS M12x25           | EAS M12x25           | EBB 15x25              | EA II M12x25                 | 10,2 | 16,5 | 15,2 |
| EHS M12x50          | EMS M12x50           | EAS M12x50           | EBB 15x50              | EA II M12x50                 | 10,2 | 16,5 | 30,0 |

fischer drop-in anchor EA II

| Intended Use             |
|--------------------------|
| Setting & Drilling tools |

Annex B 4

## Installation instructions



| No. | Description                                                                           |
|-----|---------------------------------------------------------------------------------------|
| 1   | Create drill hole.                                                                    |
| 2   | Clean from drill-dust.                                                                |
| 3   | Set anchor till anchor is flush with surface of concrete.                             |
| 4   | Expand the sleeve by driving the pin into the sleeve and control the correct setting. |
| 5   | Fixation of fixture with max. $T_{inst.}$                                             |

fischer drop-in anchor EA II

**Intended Use**  
Installation instructions

**Annex B 5**

**Table C1: Characteristic values in concrete according to design method B C12/15 to C50/60**

| Anchor size                                                     | Property class screw / rod | M6                 |                    | M8                 |                    |     | M10                |                    |     | M12/M12D           |     |
|-----------------------------------------------------------------|----------------------------|--------------------|--------------------|--------------------|--------------------|-----|--------------------|--------------------|-----|--------------------|-----|
| Effective anchorage depth $h_{ef}$ [mm]                         |                            | 25                 | 30                 | 25                 | 30                 | 40  | 25                 | 30                 | 40  | 25                 | 50  |
| <b>All load directions</b>                                      |                            |                    |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance C12/15 $F_{RK}^{0(1)}$ [kN]           | $\geq A4-50$               | -                  | 2                  | -                  | 3                  |     | -                  | 3                  | 5   | -                  | 6   |
|                                                                 | $\geq 4.6$                 | 1,5                | 2                  | 2                  | 3                  |     | 3                  |                    | 5   | 3                  | 6   |
| Characteristic resistance C20/25 to C50/60 $F_{RK}^{0(1)}$ [kN] | $\geq A4-50$               | -                  | 3                  | -                  | 5                  |     | -                  | 5                  | 7,5 | -                  | 9   |
|                                                                 | $\geq 4.6$                 | 2                  | 3                  | 3                  | 5                  |     | 4                  | 5                  | 7,5 | 4                  | 9   |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,5 <sup>(3)</sup> | 1,8 <sup>(4)</sup> | 1,5 <sup>(3)</sup> | 1,8 <sup>(4)</sup> |     | 1,5 <sup>(3)</sup> | 1,8 <sup>(4)</sup> |     | 1,5 <sup>(3)</sup> |     |
| Characteristic spacing $s_{cr}$ [mm]                            |                            | 75                 | 90                 | 75                 | 90                 | 120 | 75                 | 90                 | 200 | 75                 | 300 |
| Characteristic edge distance $c_{cr}$ [mm]                      |                            | 38                 | 45                 | 38                 | 45                 | 60  | 38                 | 45                 | 100 | 38                 | 150 |
| <b>Steel failure with lever arm</b>                             |                            |                    |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | A4-50                      | -                  | 8                  | -                  | 19                 |     | -                  | 37                 |     | -                  | 66  |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 2,38               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | A4-70                      | -                  | 11                 | -                  | 26                 |     | -                  | 52                 |     | -                  | 92  |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,56               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | A4-80                      | -                  | 12                 | -                  | 30                 |     | -                  | 60                 |     | -                  | 105 |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,33               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | 4.6                        | 6,1                |                    | 15                 |                    |     | 30                 |                    |     | 52                 |     |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,67               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | 5.6                        | 7,6                |                    | 19                 |                    |     | 37                 |                    |     | 66                 |     |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,67               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | 5.8                        | 7,6                |                    | 19                 |                    |     | 37                 |                    |     | 66                 |     |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,25               |                    |                    |                    |     |                    |                    |     |                    |     |
| Characteristic resistance $M_{RK,s}^{0(5)}$ [Nm]                | 8.8                        | 12                 |                    | 30                 |                    |     | 60                 |                    |     | 105                |     |
| Partial safety factor $\gamma_{Ms}^{(2)}$                       |                            | 1,25               |                    |                    |                    |     |                    |                    |     |                    |     |

<sup>1)</sup> The anchor is to be used only for multiple use for non-structural applications, the definition of multiple use according to the Member States is given in the informative Annex 1 of ETAG 001 Part 6 (see: [www.eota.eu](http://www.eota.eu)).

<sup>2)</sup> In absence of other national regulations.

<sup>3)</sup> The installation factor  $\gamma_2 = 1,0$  is included.

<sup>4)</sup> The installation factor  $\gamma_2 = 1,2$  is included.

<sup>5)</sup> Characteristic bending moment  $M_{RK,s}^{0(5)}$  for the equation (5.5) in ETAG 001, Annex C.

## fischer drop-in anchor EA II

### Performances

Characteristic values for tension loads in concrete according to design method B

## Annex C 1

**Table C2: Characteristic values precast prestressed hollow concrete slabs according to design method C with C30/37 to C50/60**

| Anchor size                                                            |  | Property class<br>screw / rod | M6                         | M8 | M10 | M12 |
|------------------------------------------------------------------------|--|-------------------------------|----------------------------|----|-----|-----|
| Effective anchorage depth $h_{ef}$ [mm]                                |  |                               | 25                         |    |     |     |
| All Load directions                                                    |  |                               | galvanised steel; with rim |    |     |     |
| Flange thickness $d_b$ [mm]                                            |  |                               | $\geq 35$ <sup>4)</sup>    |    |     |     |
| Characteristic resistance C30/37 to C50/60 $F_{RK}$ <sup>1)</sup> [kN] |  |                               | 2                          | 3  | 4   | 4   |
| Partial safety factor $\gamma_{Ms}$ <sup>2)</sup>                      |  |                               | 1,5 <sup>5)</sup>          |    |     |     |
| Characteristic spacing $s_{cr} = s_{min}$ [mm]                         |  |                               | 200                        |    |     |     |
| Characteristic edge distance $c_{cr} = c_{min}$ [mm]                   |  |                               | 150                        |    |     |     |
| Steel failure with lever arm                                           |  |                               |                            |    |     |     |
| Characteristic resistance $M^0_{RK,s}$ <sup>3)</sup> [Nm]              |  | 4.6                           | 6,1                        | 15 | 30  | 52  |
| Partial safety factor $\gamma_{Ms}$ <sup>2)</sup>                      |  |                               | 1,67                       |    |     |     |
| Characteristic resistance $M^0_{RK,s}$ <sup>3)</sup> [Nm]              |  | 5.6                           | 7,6                        | 19 | 37  | 66  |
| Partial safety factor $\gamma_{Ms}$ <sup>2)</sup>                      |  |                               | 1,67                       |    |     |     |
| Characteristic resistance $M^0_{RK,s}$ <sup>3)</sup> [Nm]              |  | 5.8                           | 7,6                        | 19 | 37  | 66  |
| Partial safety factor $\gamma_{Ms}$ <sup>2)</sup>                      |  |                               | 1,25                       |    |     |     |
| Characteristic resistance $M^0_{RK,s}$ <sup>3)</sup> [Nm]              |  | 8.8                           | 12                         | 30 | 60  | 105 |
| Partial safety factor $\gamma_{Ms}$ <sup>2)</sup>                      |  |                               | 1,25                       |    |     |     |

<sup>1)</sup> The anchor is to be used only for multiple use for non-structural applications, the definition of multiple use according to the Member States is given in the informative Annex 1 of ETAG 001 Part 6 (see: [www.eota.eu](http://www.eota.eu)).

<sup>2)</sup> In absence of other national regulations.

<sup>3)</sup> Characteristic bending moment  $M^0_{RK,s}$  for the equation (5.5) in ETAG 001, Annex C.

<sup>4)</sup> The anchor may be used in a flange thickness of 30 mm with the same characteristic resistance, but the drill hole must not cut a cavity.

<sup>5)</sup> The installation factor  $\gamma_2 = 1,0$  is included

fischer drop-in anchor EA II

**Performances**

Characteristic values for tension loads in hollow core slabs according to design method C

**Annex C 2**

**Table C3: Characteristic resistance under fire exposure in concrete C12/15 to C50/60**

| fire resistance class | EA II                                                                                                   | property class                                | M6x25 <sup>4)</sup> | M6x30 | M8x25 <sup>4)</sup> | M8x30 | M8x40 | M10x25 <sup>4)</sup> | M10x30 | M10x40 | M12x25 <sup>4)</sup> | M12x50/<br>M12x50D |
|-----------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------|-------|---------------------|-------|-------|----------------------|--------|--------|----------------------|--------------------|
| All load directions   |                                                                                                         |                                               |                     |       |                     |       |       |                      |        |        |                      |                    |
| R 30                  | Characteristic resistance<br>F <sup>0</sup> <sub>Rk,fi</sub> <sup>1)</sup> [kN]<br>C20/25 <sup>3)</sup> | steel<br>≥ 4.6<br>or<br>≥ A4-50 <sup>2)</sup> | 0,5                 | 0,6   | 0,9                 | 1,3   | 0,6   | 0,9                  | 1,8    | 0,6    | 2,3                  |                    |
| R 60                  |                                                                                                         |                                               | 0,5                 | 0,6   | 0,9                 | 0,6   | 0,9   | 1,5                  | 0,6    | 2,3    |                      |                    |
| R 90                  |                                                                                                         |                                               | 0,4                 | 0,6   |                     |       | 0,9   |                      | 0,6    | 2,0    |                      |                    |
| R 120                 |                                                                                                         |                                               | 0,3                 | 0,5   |                     |       | 0,6   |                      | 0,5    | 1,3    |                      |                    |
| R 30 – R 120          | Characteristic spacing<br>s <sub>cr,fi</sub> [mm]                                                       |                                               | 100                 | 120   | 100                 | 120   | 160   | 100                  | 120    | 160    | 100                  | 200                |
|                       | Characteristic edge distance<br>c <sub>cr,fi</sub> [mm]                                                 |                                               | 50                  | 115   | 50                  | 140   | 140   | 50                   | 140    | 160    | 50                   | 200                |

<sup>1)</sup> In absence of other national regulations, a partial safety factor for the resistance of  $\gamma_{m,fi}=1,0$  under fire stress is recommended.

<sup>2)</sup> Not for M..x25.

<sup>3)</sup> For C12/15: Characteristic resistance C20/25 x 0,77.

<sup>4)</sup> The data is not valid for precast prestresses hollow core slabs.

fischer drop-in anchor EA II

**Performances**  
Characteristic loads for fire resistances

**Annex C 3**