



...eine starke Verbindung

PRESTATIEVERKLARING

DoP Nr.: MKT-132 - nl

- ◇ **Unieke identificatiecode van het producttype:** MKT slaganker E / ES
- ◇ **Beoogd(e) gebruik(en):** Padgestuurd expansieanker voor gebruik als meervoudige bevestiging van niet-structurele systemen in beton, zie bijlage / Annex B
- ◇ **Fabrikant:** MKT Metall-Kunststoff-Technik GmbH & Co.KG
Auf dem Immel 2
67685 Weilerbach
- ◇ **Het systeem of de systemen voor de Beoordeling en verificatie van de prestatiebestendigheid:** 2+
- ◇ **Europees beoordelingsdocument:** ETAG 001-6
Europese technische beoordeling: ETA-05/0116, 04.01.2017
Technische beoordelingsinstantie: DIBt, Berlin
Aangemelde instantie(s): NB 1343 – MPA, Darmstadt
- ◇ **Aangegeven prestatie(s):**

| Essentiële kenmerken | Prestaties |
|--|-----------------------|
| Brandveiligheid (BWR2) | |
| Brandgedrag | Klasse A1 |
| Brandwerendheid | Bijlage/Annex C4 – C5 |
| Veiligheid tijdens gebruik (BWR4) | |
| Karakteristieke waarden voor alle belastingsrichtingen | Bijlage/Annex C1 – C3 |

De prestaties van het hierboven omschreven product zijn conform de aangegeven prestaties. Deze prestatieverklaring wordt in overeenstemming met Verordening (EU) nr. 305/2011 onder de exclusieve verantwoordelijkheid van de hierboven vermelde fabrikant verstrekt.

Ondertekend voor en namens de fabrikant door:

Stefan Weustenhagen
(Directeur)
Weilerbach, 04.01.2017

p.p.

Dipl.-Ing. Detlef Bigalke
(Hoofd productontwikkeling)



Het origineel van deze prestatieverklaring was in het Duits geschreven. In geval van afwijkingen in de vertaling is de Duitse versie geldig.

Specifications of intended use

| Drop-in Anchor | | | | | | | |
|---|-------|-------|--------|--------|--------|--------|--------|
| Anchorage depth $h_{ef} \geq 30$ mm | M6x30 | M8x30 | M8x40 | M10x30 | M10x40 | M12x50 | M16x65 |
| Steel, zinc plated | | | | ✓ | | | |
| Stainless steel A4 and high corrosion resistant steel HCR | | ✓ | | - | | ✓ | |
| Static and quasi-static loads | | | | ✓ | | | |
| Fire exposure | | | | ✓ | | | |
| Cracked and uncracked concrete | | | | ✓ | | | |
| Solid concrete C20/25 to C50/60 | | | | ✓ | | | |
| Anchorage depth $h_{ef} = 25$ mm | M6x25 | M8x25 | M10x25 | M12x25 | | | |
| Steel, zinc plated | | | ✓ | | | | |
| Stainless steel A4 and high corrosion resistant steel HCR | | | - | | | | |
| Static and quasi-static loads | | | ✓ | | | | |
| Fire exposure (solid concrete, C20/25 to C50/60) | | | ✓ | | | | |
| Cracked and uncracked concrete | | | ✓ | | | | |
| Solid concrete C12/15 to C50/60 | | | ✓ | | | | |
| Precast pre-stressed hollow core slabs (C30/37 to C50/60) | | | ✓ | | | | |

Base materials:

- reinforced or unreinforced normal weight concrete according to EN 206-1:2000

Use conditions:

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

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

Drop-in Anchor E / ES

Intended use
Specifications

Annex B1

Specifications of intended use

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.).
- The strength class and the length of the fastening screw or threaded rod shall be defined by the designing engineer
- Anchorages under static or quasi-static actions for multiple use for non-structural applications are designed in accordance with:
 - ETAG 001, Annex C, design method B, Edition August 2010 or
 - CEN/TS 1992-4:2009, design method B
- Anchorages under static or quasi-static actions for precast pre-stressed hollow core slabs:
 - ETAG 001, Annex C, design method C, Edition August 2010.
 - CEN/TS 1992-4:2009, design method C
- Anchorages under fire exposure are designed in accordance with:
 - ETAG 001, Annex C, design method B, Edition August 2010 and EOTA Technical Report TR 020, Edition May 2004 or
 - CEN/TS 1992-4:2009, Annex D
 - It must be ensured that local spalling of the concrete cover does not occur.

Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site,
- Anchor installation in accordance with the manufacturer's specifications and drawings and using the appropriate tools,
- Drill hole by hammer drilling only (use of vacuum drill bits is admissible),
- Positioning of the drill holes without damaging the reinforcement.

Drop-in Anchor E / ES

Intended use
Specifications

Annex B2

Table B1: Installation parameters for $h_{ef} \geq 30$ mm

| Anchor size | | M6x30 | M8x30 | M8x40 | M10x30 | M10x40 | M12x50 | M16x65 |
|---|----------------------|-------|-------|-------|--------|--------|--------|--------|
| Depth of drill hole | $h_0 =$ [mm] | 30 | 30 | 40 | 30 | 40 | 50 | 65 |
| Drill hole diameter | $d_0 =$ [mm] | 8 | 10 | 10 | 12 | 12 | 15 | 20 |
| Cutting diameter of drill bit | $d_{cut} \leq$ [mm] | 8,45 | 10,45 | 10,45 | 12,5 | 12,5 | 15,5 | 20,55 |
| Max. recommended installation torque | $T_{inst} \leq$ [Nm] | 4 | 8 | 8 | 15 | 15 | 35 | 60 |
| Diameter of clearance hole in the fixture | $d_f \leq$ [mm] | 7 | 9 | 9 | 12 | 12 | 14 | 18 |
| Available thread length | L_{th} [mm] | 13 | 13 | 20 | 12 | 15 | 18 | 23 |
| Minimum screw-in depth | L_{sdmin} [mm] | 7 | 9 | 9 | 10 | 11 | 13 | 18 |
| Steel, zinc plated | | | | | | | | |
| Minimum thickness of member | h_{min} [mm] | 100 | 100 | 100 | 120 | 120 | 130 | 160 |
| Minimum spacing | s_{min} [mm] | 55 | 60 | 80 | 100 | 100 | 120 | 150 |
| Minimum distance | c_{min} [mm] | 95 | 95 | 95 | 115 | 135 | 165 | 200 |
| Stainless steel A4, HCR | | | | | | | | |
| Minimum thickness of member | h_{min} [mm] | 100 | 100 | 100 | - | 130 | 140 | 160 |
| Minimum spacing | s_{min} [mm] | 50 | 60 | 80 | - | 100 | 120 | 150 |
| Minimum distance | c_{min} [mm] | 80 | 95 | 95 | - | 135 | 165 | 200 |

Table B2: Installation parameters for $h_{ef} = 25$ mm

| Anchor size | | M6x25 | M8x25 | M10x25 | M12x25 |
|--|----------------------|------------|-------|--------|--------|
| Depth of drill hole | $h_0 =$ [mm] | 25 | 25 | 25 | 25 |
| Drill hole diameter | $d_0 =$ [mm] | 8 | 10 | 12 | 15 |
| Cutting diameter of drill bit | $d_{cut} \leq$ [mm] | 8,45 | 10,45 | 12,5 | 15,5 |
| Max. recommended installation torque | $T_{inst} \leq$ [Nm] | 4 | 8 | 15 | 35 |
| Diameter of clearance hole in the fixture | $d_f \leq$ [mm] | 7 | 9 | 12 | 14 |
| Available thread length | L_{th} [mm] | 12 | 12 | 12 | 12 |
| Minimum screw-in depth | L_{sdmin} [mm] | 6 | 8 | 10 | 12 |
| Minimum thickness of member | $h_{min,1}$ [mm] | 80 | | | |
| Minimum spacing | s_{min} [mm] | 30 | 70 | 70 | 100 |
| Minimum edge distance | c_{min} [mm] | 60 | 100 | 100 | 130 |
| Standard thickness of member | $h_{min,2}$ [mm] | 100 | | | |
| Minimum spacing | s_{min} [mm] | 30 | 50 | 60 | 100 |
| Minimum edge distance | c_{min} [mm] | 60 | 100 | 100 | 110 |
| Installation in precast pre-stressed hollow core slabs C30/37 to C50/60 | | | | | |
| Spacing | s_{min} [mm] | 200 | | | |
| Edge distance | c_{min} [mm] | 150 | | | |

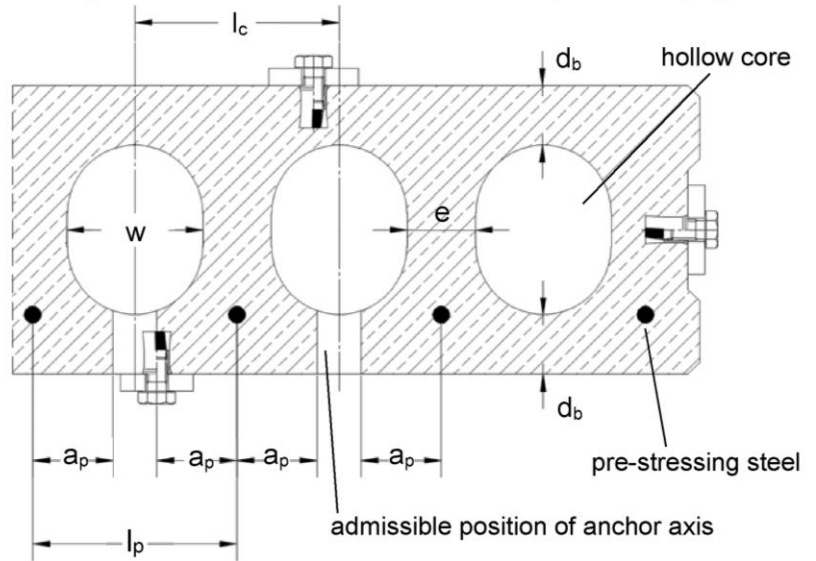
Drop-in Anchor E / ESIntended use
Installation parameters**Annex B3**

Admissible anchor positions in precast pre-stressed hollow core slabs ($w / e \leq 4,2$)

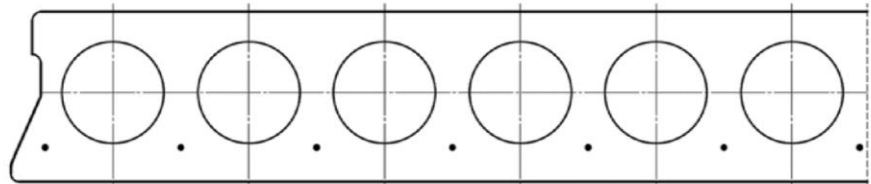
core distance:
 $l_c \geq 100$ mm

pre-stressing steel distance:
 $l_p \geq 100$ mm

distance between anchor
 position and pre-stressing steel:
 $a_p \geq 50$ mm

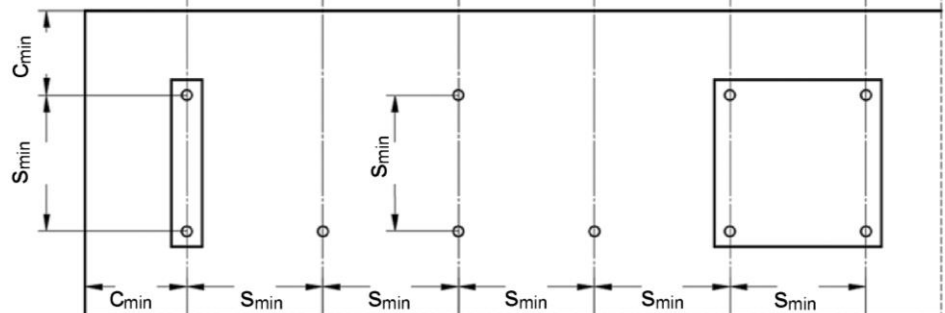


Minimum spacing and edge distance of anchors and distance between anchor groups in precast pre-stressed hollow core slabs



Minimum edge distance
 $C_{min} \geq 150$ mm

Minimum anchor spacing
 $S_{min} \geq 200$ mm

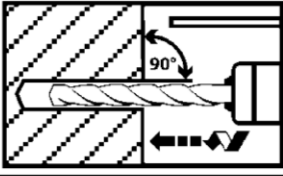
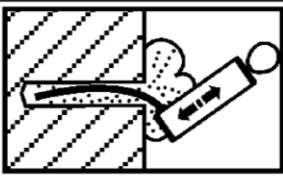
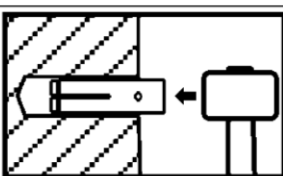
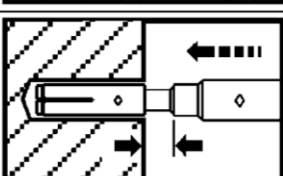
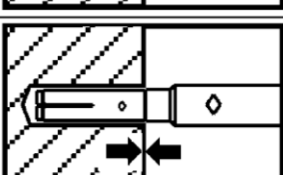
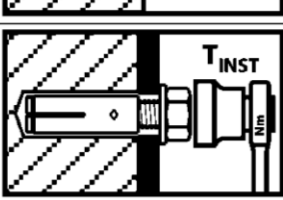


Drop-in Anchor E / ES

Intended use
 Installation in precast pre-stressed hollow core slabs

Annex B4

Installation instructions for solid concrete slabs

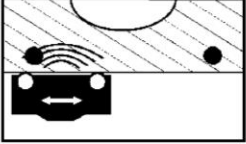
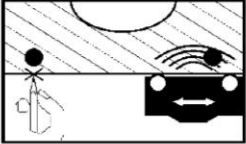
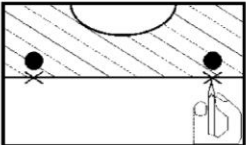
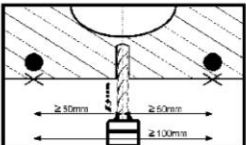
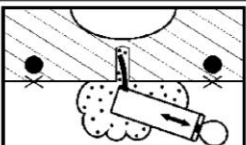
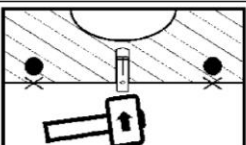
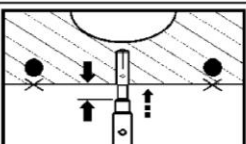
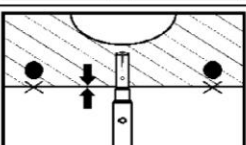
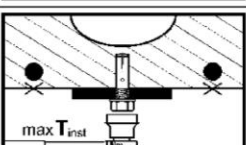
| | | |
|---|---|---|
| 1 |  | <p>Drill hole perpendicular to concrete surface. When using vacuum drill bit proceed with step 3.</p> |
| 2 |  | <p>Blow out dust. Alternatively vacuum-clean down to the bottom of the hole.</p> |
| 3 |  | <p>Drive in anchor.</p> |
| 4 |  | <p>Drive in cone by using setting tool.</p> |
| 5 |  | <p>Shoulder of setting tool must fit on anchor rim.</p> |
| 6 |  | <p>Apply installation torque T_{inst} by using calibrated torque wrench.</p> |

Drop-in Anchor E / ES

Intended use
Installation instructions for solid concrete slabs

Annex B5

Installation instructions for precast pre-stressed hollow core slabs

| | | |
|---|---|---|
| 1 |  | Search for the position of the reinforcement. |
| 2 |  | Mark the position of the reinforcement and search for the other position of the reinforcement |
| 3 |  | Mark the positions of reinforcement. |
| 4 |  | Drill hole while maintaining the required distances. |
| 5 |  | Blow out dust. Alternatively vacuum clean down to the bottom of the hole. |
| 6 |  | Drive in anchor. |
| 7 |  | Drive in cone by using setting tool. |
| 8 |  | Shoulder of setting tool must fit on anchor rim. |
| 9 |  | Apply installation torque T_{inst} by using calibrated torque wrench. |

Drop-in Anchor E / ES

Intended use
Installation instructions for precast pre-stressed hollow core slabs

Annex B6

Table C1: Characteristic resistance for $h_{ef} \geq 30$ mm in solid concrete slabs

| Anchor size | | | M6x30 | M8x30 | M8x40 | M10x30 | M10x40 | M12x50 | M16x65 |
|---|--------------------|------|-------|-------|-------|--------|--------|--------|--------|
| Load in any direction | | | | | | | | | |
| Characteristic resistance in concrete C20/25 to C50/60 | F^{0}_{RK} | [kN] | 3 | 5 | 6 | 6 | 6 | 6 | 16 |
| Partial safety factor | γ_M | [-] | 1,8 | 2,16 | | 2,1 | 2,16 | 1,8 | 1,8 |
| Spacing | s_{cr} | [mm] | 130 | 180 | 210 | 230 | 170 | 170 | 400 |
| Edge distance | c_{cr} | [mm] | 65 | 90 | 105 | 115 | 85 | 85 | 200 |
| Shear load with lever arm, Steel zinc plated | | | | | | | | | |
| Characteristic resistance (Steel 4.6) | $M^{0}_{RK,s}{}^1$ | [Nm] | 6,1 | 15 | 15 | 30 | 30 | 52 | 133 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | | | | |
| Characteristic resistance (Steel 4.8) | $M^{0}_{RK,s}{}^1$ | [Nm] | 6,1 | 15 | 15 | 30 | 30 | 52 | 133 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | | | | |
| Characteristic resistance (Steel 5.6) | $M^{0}_{RK,s}{}^1$ | [Nm] | 7,6 | 19 | 19 | 37 | 37 | 65 | 166 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | | | | |
| Characteristic resistance (Steel 5.8) | $M^{0}_{RK,s}{}^1$ | [Nm] | 7,6 | 19 | 19 | 37 | 37 | 65 | 166 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | | | | |
| Characteristic resistance (Steel 8.8) | $M^{0}_{RK,s}{}^1$ | [Nm] | 12 | 30 | 30 | 59 | 60 | 105 | 266 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | | | | |
| Shear load with lever arm, Stainless steel A4 / HCR | | | | | | | | | |
| Characteristic resistance (Property class 70) | $M^{0}_{RK,s}{}^1$ | [Nm] | 11 | 26 | 26 | - | 52 | 92 | 233 |
| Partial safety factor | γ_{Ms} | [-] | 1,56 | | | | | | |
| Characteristic resistance (Property class 80) | $M^{0}_{RK,s}{}^1$ | [Nm] | 12 | 30 | 30 | - | 60 | 105 | 266 |
| Partial safety factor | γ_{Ms} | [-] | 1,33 | | | | | | |

1) Characteristic bending moment $M^{0}_{RK,s}$ for equation (5.5) in ETAG 001, Annex C or for equation (14) in CEN/TS 1992-4-4

| | |
|---|-----------------|
| Drop-in Anchor E / ES | Annex C1 |
| Performance Characteristic resistance for $h_{ef} \geq 30$ mm in solid concrete | |

Table C2: Characteristic resistance for $h_{ef} = 25$ mm in solid concrete slabs

| Anchor size | | | M6x25 | M8x25 | M10x25 | M12x25 |
|--|--------------------|------|-------|-------|--------|--------|
| Load in any direction | | | | | | |
| Characteristic resistance in concrete C12/15 and C16/20 | F^{0}_{Rk} | [kN] | 2,5 | 2,5 | 3,5 | 3,5 |
| Characteristic resistance in concrete C20/25 to C50/60 | F^{0}_{Rk} | [kN] | 3,5 | 4,0 | 4,5 | 4,5 |
| Partial safety factor | γ_M | [-] | 1,5 | | | |
| Spacing | s_{cr} | [mm] | 75 | 75 | 75 | 75 |
| Edge distance | c_{cr} | [mm] | 38 | 38 | 38 | 38 |
| Shear load with lever arm | | | | | | |
| Characteristic resistance (Steel 4.6) | $M^{0}_{Rk,s}{}^1$ | [Nm] | 6,1 | 15 | 30 | 52 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | |
| Characteristic resistance (Steel 4.8) | $M^{0}_{Rk,s}{}^1$ | [Nm] | 6,1 | 15 | 30 | 52 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |
| Characteristic resistance (Steel 5.6) | $M^{0}_{Rk,s}{}^1$ | [Nm] | 7,6 | 19 | 37 | 65 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | |
| Characteristic resistance (Steel 5.8) | $M^{0}_{Rk,s}{}^1$ | [Nm] | 7,6 | 19 | 37 | 65 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |
| Characteristic resistance (Steel 8.8) | $M^{0}_{Rk,s}{}^1$ | [Nm] | 12 | 30 | 60 | 105 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |

¹⁾ Characteristic bending moment $M^{0}_{Rk,s}$ for equation (5.5) in ETAG 001, Annex C or for equation (14) in CEN/TS 1992-4-4

| | |
|--|-----------------|
| Drop-in Anchor E / ES | Annex C2 |
| Performance Characteristic resistance for $h_{ef} = 25$ mm in solid concrete | |

Table C3: Characteristic resistance for $h_{ef} = 25$ mm in precast pre-stressed hollow core slabs

| Anchor size | | M6x25 | M8x25 | M10x25 | M12x25 | |
|--|--------------------|-------|------------------------------|--------|--------|-----|
| Load in any direction | | | | | | |
| Flange thickness | d_b | [mm] | ≥ 35 (30) ¹⁾ | | | |
| Characteristic resistance in precast pre-stressed hollow core slabs C30/37 to C50/60 | F_{Rk} | [kN] | 3,5 | 4,0 | 4,5 | 4,5 |
| Partial safety factor | γ_M | [-] | 1,5 | | | |
| Spacing | s_{cr} | [mm] | 200 | | | |
| Edge distance | c_{cr} | [mm] | 150 | | | |
| Shear load with lever arm | | | | | | |
| Characteristic resistance (Steel 4.6) | $M^0_{Rk,s^{(2)}}$ | [Nm] | 6,1 | 15 | 30 | 52 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | |
| Characteristic resistance (Steel 4.8) | $M^0_{Rk,s^{(2)}}$ | [Nm] | 6,1 | 15 | 30 | 52 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |
| Characteristic resistance (Steel 5.6) | $M^0_{Rk,s^{(2)}}$ | [Nm] | 7,6 | 19 | 37 | 65 |
| Partial safety factor | γ_{Ms} | [-] | 1,67 | | | |
| Characteristic resistance (Steel 5.8) | $M^0_{Rk,s^{(2)}}$ | [Nm] | 7,6 | 19 | 37 | 65 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |
| Characteristic resistance (Steel 8.8) | $M^0_{Rk,s^{(2)}}$ | [Nm] | 12 | 30 | 60 | 105 |
| Partial safety factor | γ_{Ms} | [-] | 1,25 | | | |

¹⁾ The anchor may be set in a flange thickness of 30 mm with identical characteristic loads, if the borehole cuts no hollow core.

²⁾ Characteristic bending moment $M^0_{Rk,s}$ for equation (5.5) in ETAG 001, Annex C or for equation (14) in CEN/TS 1992-4-4

Drop-in Anchor E / ES

Performance

Characteristic resistance for $h_{ef} = 25$ mm in precast pre-stressed hollow core slabs

Annex C3

Table C4: Characteristic values under fire exposure in solid concrete slabs C20/25 to C50/60 for $h_{ef} \geq 30$ mm

| Anchor size | | | | M6x30 | M8x30 | M8x40 | M10x30 | M10x40 | M12x50 | M16x65 | |
|---------------------------------------|--|---------------------------|---------------|-------|-------|-------|--------|--------|--------|--------|-----|
| Fire resistance class | | Load in any direction | | | | | | | | | |
| Steel 4.6 | R 30 | Characteristic resistance | $F_{Rk,fi}^0$ | [kN] | 0,4 | 0,6 | 0,6 | 0,9 | 0,9 | 1,5 | 3,1 |
| | R 60 | | | [kN] | 0,35 | 0,6 | 0,6 | 0,8 | 0,8 | 1,3 | 2,4 |
| | R 90 | | | [kN] | 0,30 | 0,6 | 0,6 | 0,6 | 0,6 | 1,1 | 2,0 |
| | R 120 | | | [kN] | 0,25 | 0,5 | 0,5 | 0,5 | 0,5 | 0,8 | 1,6 |
| Steel 4.8 | R 30 | Characteristic resistance | $F_{Rk,fi}^0$ | [kN] | 0,4 | 0,9 | 1,1 | 0,9 | 1,5 | 1,5 | 4,0 |
| | R 60 | | | [kN] | 0,35 | 0,9 | 0,9 | 0,9 | 1,5 | 1,5 | 4,0 |
| | R 90 | | | [kN] | 0,3 | 0,6 | 0,6 | 0,9 | 1,1 | 1,5 | 3,0 |
| | R 120 | | | [kN] | 0,3 | 0,5 | 0,5 | 0,7 | 0,9 | 1,2 | 2,4 |
| Steel ≥ 5.6 | R 30 | Characteristic resistance | $F_{Rk,fi}^0$ | [kN] | 0,8 | 0,9 | 1,5 | 0,9 | 1,5 | 1,5 | 4,0 |
| | R 60 | | | [kN] | 0,8 | 0,9 | 1,5 | 0,9 | 1,5 | 1,5 | 4,0 |
| | R 90 | | | [kN] | 0,4 | 0,9 | 0,9 | 0,9 | 1,5 | 1,5 | 3,7 |
| | R 120 | | | [kN] | 0,3 | 0,5 | 0,5 | 0,7 | 1,0 | 1,2 | 2,4 |
| A4 / HCR | R 30 | Characteristic resistance | $F_{Rk,fi}^0$ | [kN] | 0,8 | 0,9 | 1,5 | - | 1,5 | 1,5 | 4,0 |
| | R 60 | | | [kN] | 0,8 | 0,9 | 1,5 | - | 1,5 | 1,5 | 4,0 |
| | R 90 | | | [kN] | 0,4 | 0,9 | 0,9 | - | 1,5 | 1,5 | 3,7 |
| | R 120 | | | [kN] | 0,3 | 0,5 | 0,5 | - | 1,0 | 1,2 | 2,4 |
| Partial safety factor $\gamma_{M,fi}$ | | | | [-] | 1,0 | | | | | | |
| Steel zinc plated | | | | | | | | | | | |
| R 30 – R 120 | Spacing | | $S_{cr,fi}$ | [mm] | 130 | 180 | 210 | 170 | 170 | 200 | 400 |
| | Edge distance | | $C_{cr,fi}$ | [mm] | 65 | 90 | 105 | 85 | 85 | 100 | 200 |
| | If the fire attack is from more than one side, the edge distance shall be ≥ 300 mm. | | | | | | | | | | |
| Stainless steel A4, HCR | | | | | | | | | | | |
| R 30 – R 120 | Spacing | | $S_{cr,fi}$ | [mm] | 130 | 180 | 210 | - | 170 | 200 | 400 |
| | Edge distance | | $C_{cr,fi}$ | [mm] | 65 | 90 | 105 | - | 85 | 100 | 200 |
| | If the fire attack is from more than one side, the edge distance shall be ≥ 300 mm. | | | | | | | | | | |

Drop-in Anchor E / ES

Performance
Characteristic values under fire exposure for $h_{ef} \geq 30$ mm

Annex C4

Table C5: Characteristic values under fire exposure in solid concrete slabs C20/25 to C50/60 for $h_{ef} = 25$ mm

| Anchor size | | M6x25 | M8x25 | M10x25 | M12x25 | | |
|--|---------------------------|---|-------|--------|--------|-----|-----|
| Fire resistance class | | Load in any direction | | | | | |
| Steel ≥ 4.6 | R 30 | Characteristic resistance $F^{0}_{Rk,fi}$ | [kN] | 0,4 | 0,6 | 0,6 | 0,6 |
| | R 60 | | [kN] | 0,35 | 0,6 | 0,6 | 0,6 |
| | R 90 | | [kN] | 0,30 | 0,6 | 0,6 | 0,6 |
| | R 120 | | [kN] | 0,25 | 0,5 | 0,5 | 0,5 |
| Partial safety factor $\gamma_{M,fi}$ | | [-] | 1,0 | | | | |
| R 30 – R 120 | Spacing $s_{cr,fi}$ | [mm] | 100 | 100 | 100 | 100 | |
| | Edge distance $c_{cr,fi}$ | [mm] | 50 | 50 | 50 | 50 | |
| If the fire attack is from more than one side, the edge distance shall be ≥ 300 mm. | | | | | | | |

Drop-in Anchor E / ES

Performance
Characteristic values under fire exposure for $h_{ef} = 25$ mm

Annex C5