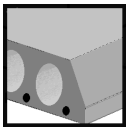
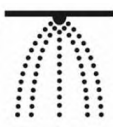


## HKH Hollow deck anchor

|                                                                                   | Anchor version | Benefits                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | HKH            | <ul style="list-style-type: none"> <li>- anchor for suspended ceilings &amp; overhead support applications</li> <li>- channel installation</li> <li>- optical setting control</li> </ul> |



Prestressed  
hollow core  
slabs



Sprinkler  
approved



Fire  
resistance



Corrosion  
resistance

### Approvals / certificates

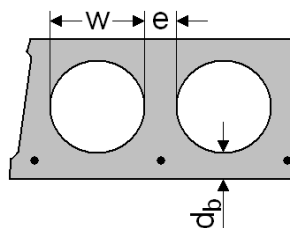
| Description                                                                                                   | Authority / Laboratory | No. / date of issue         |
|---------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------|
| Allgemeine bauaufsichtliche Zulassung (national approval in Germany for single point fastening) <sup>a)</sup> | DIBt, Berlin           | Z-21.1-1722 / 2011-10-31    |
| Fire test report                                                                                              | IBMB, Braunschweig     | UB 3606 / 8892 / 2002-07-22 |
| Assessment report (fire)                                                                                      | warringtonfire         | WF 166402 / 2007-10-26      |
| Sprinkler                                                                                                     | VdS, Cologne           | G 4961028 / 2006-09-05      |

a) All data given in this section according DIBt approval Z-21.1-1722, issue 2011-10-31.

### Basic loading data (for a single anchor)

#### All data in this section applies to

- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Hollow decks where  $b_H \leq 4,2 \cdot b_{st}$
- concrete  $f_{cc} \geq 50 \text{ N/mm}^2$
- Load data for each load direction



## Recommended loads

| Anchor size                                                                                   | M6        | M8  | M10 | M6        | M8  | M10 | M6        | M8  | M10 |
|-----------------------------------------------------------------------------------------------|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|
| Recommended load for a single anchor                                                          |           |     |     |           |     |     |           |     |     |
| Cavity to surface thickness $d_b$ [mm]                                                        | $\geq 25$ |     |     | $\geq 30$ |     |     | $\geq 40$ |     |     |
| Tensile, $F_{rec}$ [kN]                                                                       | 0,7       | 0,7 | 0,9 | 0,9       | 0,9 | 1,2 | 2,0       | 2,0 | 3,0 |
| Recommended load for a group of two anchors with a spacing $s \geq 100$ mm and $\leq 200$ mm  |           |     |     |           |     |     |           |     |     |
| Tensile, $F_{rec}$ spacing $s \geq 100$ mm [kN]                                               | 0,9       | 0,9 | 1,2 | 1,2       | 1,2 | 1,6 | 2,5       | 2,5 | 4,0 |
| Tensile, $F_{rec}$ spacing, $s \geq 200$ mm [kN]                                              | 1,1       | 1,1 | 1,5 | 1,5       | 1,5 | 2,0 | 3,3       | 3,3 | 5,0 |
| Recommended load for a group of four anchors with a spacing $s \geq 100$ mm and $\leq 200$ mm |           |     |     |           |     |     |           |     |     |
| Tensile, $F_{rec}$ spacing, $s \geq 100/100$ mm [kN]                                          | 1,2       | 1,2 | 1,6 | 1,6       | 1,6 | 2,1 | 3,5       | 3,5 | 5,3 |
| Tensile, $F_{rec}$ spacing, $s \geq 100/200$ mm [kN]                                          | 1,5       | 1,5 | 2,0 | 2,0       | 2,0 | 2,6 | 4,4       | 4,4 | 6,6 |
| Tensile, $F_{rec}$ spacing, $s \geq 200/200$ mm [kN]                                          | 1,9       | 1,9 | 2,5 | 2,5       | 2,5 | 3,3 | 5,5       | 5,5 | 8,3 |

The given loads are valid for tensile load, shear load and all load directions

All data applies to:

- Hollow decks, classification  $\geq C 45/55$
- Hollow decks where  $b_H \leq 4,2 \cdot b_{st}$

## Materials

### Mechanical properties of HKH

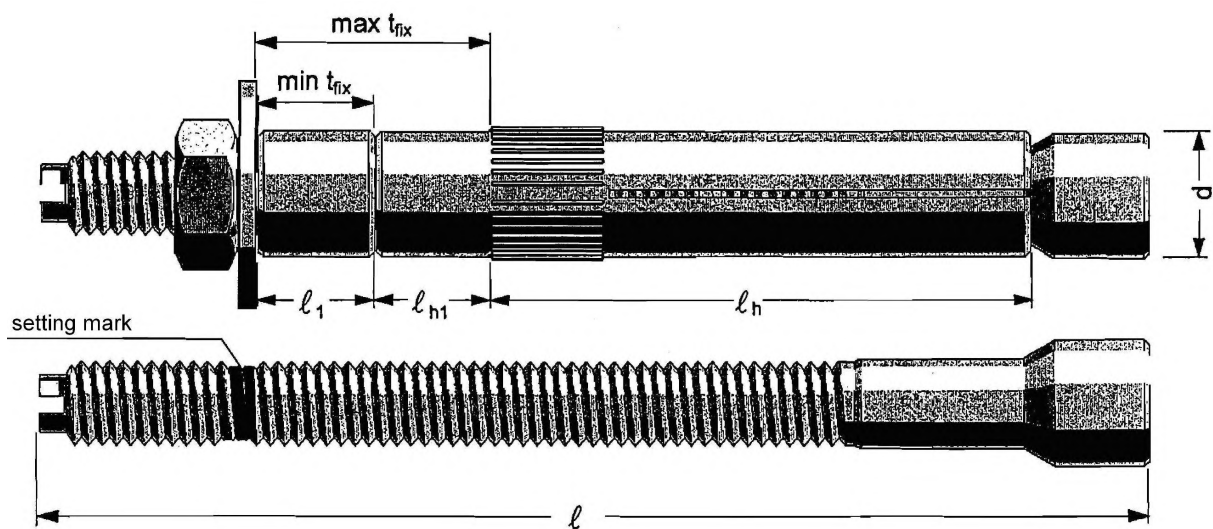
| Anchor size                       |                                      | M6  | M8   | M10  |
|-----------------------------------|--------------------------------------|-----|------|------|
| Nominal tensile strength $f_{uk}$ | Carbon steel [N/mm <sup>2</sup> ]    | 800 | 500  | 500  |
|                                   | Stainless steel [N/mm <sup>2</sup> ] | 700 | 700  | 700  |
| admissible bending resistance     | Carbon steel [Nm]                    | 7,0 | 10,7 | 21,4 |
|                                   | Stainless steel [Nm]                 | 4,9 | 12,1 | 24,1 |

### Material quality

| Part      | Material                                        |
|-----------|-------------------------------------------------|
| All parts | HKH (Carbon steel) galvanised to min. 5 $\mu$ m |
|           | HKH (stainless steel) Stainless steel A4        |

## Anchor dimensions

| Anchor size |      | M6        | M8        | M10       |
|-------------|------|-----------|-----------|-----------|
| $t_{fix}$   | [mm] | $\leq 10$ | $\leq 10$ | $\leq 10$ |
| $l_1$       | [mm] | 0         | 0         | 0         |
| $l_{h1}$    | [mm] | 10        | 10        | 10        |
| $d$         | [mm] | 9,8       | 11,8      | 13,8      |
| $l$         | [mm] | 86        | 88        | 93        |
| $l_h$       | [mm] | 55        |           |           |

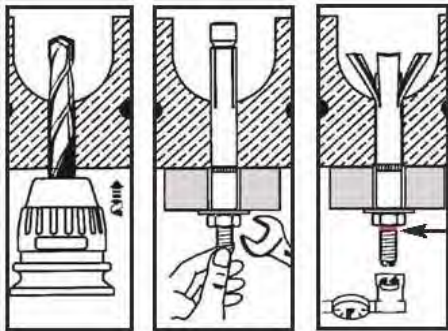


## Setting

### Installation equipment

| Anchor size           |            | M6                                             | M8       | M10      |
|-----------------------|------------|------------------------------------------------|----------|----------|
| Diameter of drill bit | $d_0$ [mm] | 10                                             | 12       | 14       |
| Drill bit             |            | TE-CX-10                                       | TE-CX-12 | TE-CX-14 |
| Rotary hammer         |            | TE 6A, TE 6C, TE 6S, TE 15, TE 15-C or TE 18-M |          |          |
| Setting tools         |            | Torque wrench                                  |          |          |
| Machine setting tool  |            | available                                      |          |          |

### Setting instruction



Setting mark  
must be visible

### Setting details HKH

| Anchor size                               |                 | M6        | M8 | M10 |
|-------------------------------------------|-----------------|-----------|----|-----|
| Diameter of clearance hole in the fixture | $d_f \leq$ [mm] | 12        | 14 | 16  |
| Embedment depth for HKH                   | $h_s$ [mm]      | 55 to 65  |    |     |
| Thickness of fixture                      | $t_{fix}$ [mm]  | $\leq 10$ |    |     |
| Torque moment                             | $T_{inst}$ [Nm] | 5         | 10 | 20  |
| Width across                              | SW [mm]         | 10        | 13 | 17  |

### Base material thickness, anchor spacing and edge distance

| Anchor size                                            |                     | M6  | M8 | M10 |
|--------------------------------------------------------|---------------------|-----|----|-----|
| Edge distance <sup>a)</sup>                            | $c \geq$ [mm]       | 150 |    |     |
|                                                        | $c_{min} \geq$ [mm] | 100 |    |     |
| Spacing between outer anchors of neighbouring fixation | $a \geq$ [mm]       | 300 |    |     |

a) For edge distance  $< 150$  mm the recommended load has to be reduced with  $F = 0,75 \cdot F_{rec}$

Specification:  $b_H \leq 4,2 \cdot b_{St}$

