HKH Hollow deck anchor

	Anchor version	Benefits
	HKH	- anchor for suspended ceilings & overhead support applications - channel installation - optical setting control


Prestressed hollow core slabs


Sprinkler approved


Fire resistance

Corrosion resistance

Approvals / certificates

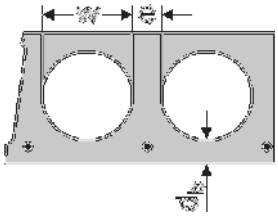
Description	Authority / Laboratory	No. / date of issue
Allgemeine bauaufsichtliche Zulassung (national approval in Germany for single point fastening)[a)]	DIBt, Berlin	Z-21.1-1722 / 2011-10-31
Fire test report	IBMB, Braunschweig	UB 3606 / 8892 / 2002-07-22
Assessment report (fire)	warringtonfire	WF 166402 / 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 $f_{cc} \geq 50$ N/mm²
- 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]			**≥ 25**			**≥ 30**			**≥ 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 ≥ 100 mm and ≤ 200 mm											
Tensile, F_{rec}	spacing s ≥ 100 mm	[kN]	0,9	0,9	1,2	1,2	1,2	1,6	2,5	2,5	4,0
	spacing, s ≥ 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 ≥ 100mm and ≤ 200mm											
Tensile, F_{rec}	spacing, s ≥ 100/100 mm	[kN]	1,2	1,2	1,6	1,6	1,6	2,1	3,5	3,5	5,3
	spacing, s ≥ 100/200 mm	[kN]	1,5	1,5	2,0	2,0	2,0	2,6	4,4	4,4	6,6
	spacing, s ≥ 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 ≥ C 45/55
- Hollow decks where $b_H \leq 4{,}2 \cdot b_{st}$

Materials

Mechanical properties of HKH

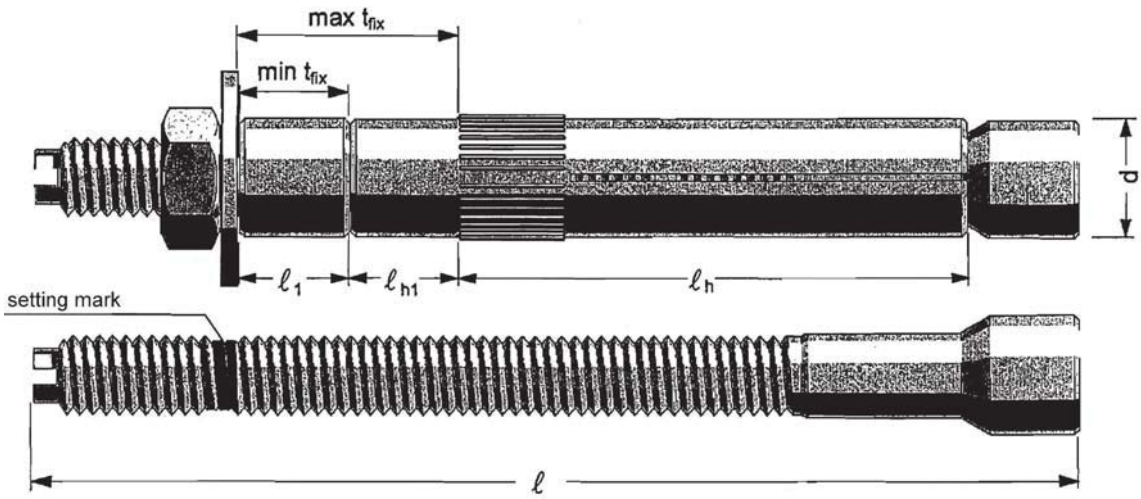
Anchor size			M6	M8	M10
Nominal tensile strength f_{uk}	Carbon steel	[N/mm²]	800	500	500
	Stainless steel	[N/mm²]	700	700	700
admissible bending resistance	Carbon steel	[Nm]	7,0	10,7	21,4
	Stainless steel	[Nm]	4,9	12,1	24,1

Material quality

Part		Material
All parts	HKH (Carbon steel)	galvanised to min. 5 µm
	HKH (stainless steel)	Stainless steel A4

Anchor dimensions

Anchor size		M6	M8	M10
t_{fix}	[mm]	≤ 10	≤ 10	≤ 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		

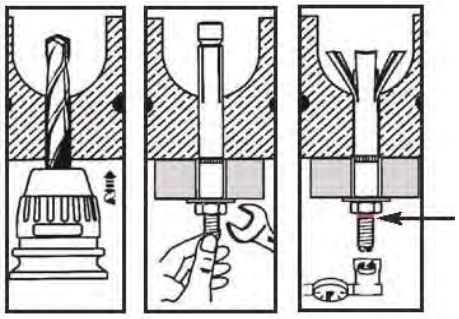


Setting

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 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]	≤ 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 [a)]	$c \geq$	[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: $b_H \leq 4{,}2 \cdot b_{st}$