



X-HS DKH DATA SHEET


Suspended ceiling fastener



X-HS DKH Hybrid ceiling hanger

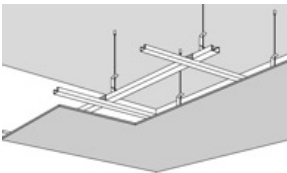
Product info

Product description

Designation	Features
<p>X-HS DKH</p> 	<ul style="list-style-type: none"> • Enhanced load capacity due to deep embedment • Suitable for use on hard or tough concrete, e.g. renovation jobs on older concrete. • With the DX Hybrid technique – fastenings are driven into a small pre-drilled hole, increasing the stick rate to almost 100% while protecting the base material from spalling. • Peace of mind – European Technical Assessment (ETA). approved system for suspended ceilings. • Suitable for threaded rod ceiling hangers.

Application conditions

Applications

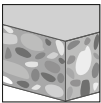


Suspended ceiling



Suspended ceiling
Hanger type: Threaded rod

Base materials



Concrete

Load conditions



Static/
quasi static

Environmental conditions



Dry indoor

Application requirements

Base material properties and fastener positioning in base material

	Base material	Concrete
	Concrete class	C20/25 – C50/60
	Base material thickness h_{min} [mm]	100
	Edge distance $c_{1,min}$, $c_{2,min}$ [mm]	150
	Spacing $s_{1,min}$, $s_{2,min}$ [mm]	100

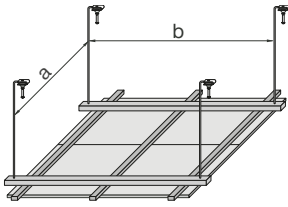
Performance data

Single point loads

Designation	Hanger type	Characteristic resistance under tension load	Recommended tension load
		N_{Rk} [kN]	N_{rec} [kN]
X-HS M6 DKH 18 P8S15	Threaded rod: M6	1.8	0.86
X-HS M8 DKH 18 P8S15	Threaded rod: M8	1.8	0.86
X-HS M10 DKH 18 P8S15	Threaded rod: M10	1.8	0.86

System loads

Maximum allowable ceiling weight [kN/m²]



**Hanger spacing
b [mm]**

	500	600	700	800	900	1000	1100	1200	
Carrying channel/ spacing a [mm]	500	1.60	1.33	1.14	1.00	0.88	0.80	0.72	0.66
	600	1.33	1.11	0.95	0.83	0.74	0.66	0.60	0.55
	700	1.14	0.95	0.81	0.71	0.63	0.57	0.51	0.47
	800	1.00	0.83	0.71	0.62	0.55	0.50	0.45	0.41
	900	0.88	0.74	0.63	0.55	0.49	0.44	0.40	0.37
	1000	0.80	0.66	0.57	0.50	0.44	0.40	0.36	0.33
	1100	0.72	0.60	0.51	0.45	0.40	0.36	0.33	0.30
	1200	0.66	0.55	0.47	0.41	0.37	0.33	0.30	0.27



- Allowable ceiling weights are calculated based on a maximum recommended hanger load of 0.4 kN.
- The eccentric load introduction into the fastener is already considered in these load values.
- Fastening of redundant non-structural components (details see ETA-22/0587).

Stick rate estimation

	Designation	Soft/standard concrete	Tough concrete
	X-HS DKH	100 %	100 %



- The stick rate indicates the percentage of nails that were driven correctly to carry a load.
- Stick rate can vary from the above values depending on job site conditions.

System recommendation

System recommendation for fastening collated nails with powder-actuated tools

Designation	Powder-actuated tool		
	DX 6 F8	DX 5 F8	DX 460 F8
X-HS DKH	■	■	■

■ = recommended □ = feasible

Cartridge recommendation

Base material	Cartridge color (tool power level)	
		Tool type: DX 6 F8 Cartridge type: 6.8/11 M10 for DX 6
Soft/standard concrete	titanium ■ (6-8), black ■ (7-8)	red ■, black ■
Tough concrete	titanium ■ (4-7)	yellow ■, red ■



- Tool power level adjustment by setting tests on site (see chapter quality assurance).
- For more details, please refer to the chapter Accessories and consumables compatibility in the Direct Fastening Technology Manual (DFTM).

Installation recommendation

Pre-drilling

	Base material	Concrete
	Concrete class	C20/25 – C50/60
	Nominal diameter of drill bit [mm]	5
	Cutting diameter of drill bit d_{cut} [mm]	5.4
	Depth of pre-drilling [mm]	23
	Drill bit	TX-C 5/23, TX-C 5/23B

Quality assurance

Fastening inspection

<h4>Hanger type</h4>	<h4>Designation</h4>	<h4>Fastener stand-off h_{NHS} [mm]</h4>
	X-HS M6 DKH18P8S15 X-HS M8 DKH18P8S15 X-HS M10 DKH48P8S15	6– 10
<h4>Threaded rod</h4>		

- Visible setting failures must be replaced with a new fastener, not in the same hole.
- These are abbreviated instructions which may vary by application. Always review/ follow the instructions accompanying the product.

Fastener program

Item no. and description

Designation	Item no	Description
X-HS M6 DKH18P8S15	299696	Hybrid ceiling hanger
X-HS M8 DKH18P8S15	299697	
X-HS M10 DKH48P8S15	299698	