



X-SCH DATA SHEET


Suspended ceiling fastener



X-SCH Ceiling fastener

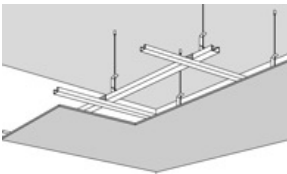
Product info

Product description

Designation	Features
<p>X-SCH</p> 	<ul style="list-style-type: none"> • Higher productivity – up to 20 % project time savings frees up time to take on more projects, ultimately increasing your bottom line • More comfortable jobsites – less noise, dust and vibration when compared with drilling, helping to fulfill health and safety requirements on jobsites • Peace of mind – European Technical Assessment (ETA) approved system for suspended ceilings • Easier to install - quickly install a suspended ceiling hanger in seconds with Hilti direct fastening tools • Suitable for hook hangers

Application conditions

Applications

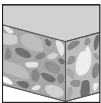


Suspended ceiling



Suspended ceiling
Hanger type: Hook

Base materials



Concrete

Load conditions



Static/
quasi static

Environmental conditions



Dry indoor

Approvals and certificates

Approvals and certificates

Authority	Approval/certificate	Date of issue
DIBt	ETA-22/0587	07/2023



- Not all information presented in this product data sheet might be subject to approval/certificate content. Please refer to approval/certificate for further information.

Product data

Dimensions

	X-SCH ALH32
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Material specification and material properties

Designation	Element	Material	Standard
X-SCH ALH32	Ceiling fastener	S280GD+ Z140-N-A-C	EN 10346

Designation	Element	Material	Coating	Minimum coating thickness t_c [μm]	Hardness [HRC]
X-SCH ALH32	Nail	Carbon steel	Zinc	5	58

Element	Material	Diameter [mm]
Plastic washer	Propylene	8

Application requirements

Base material properties and fastener positioning in base material

	Base material	Concrete
	Concrete class	C20/25 – C40/50
	Base material thickness h_{min} [mm]	80
	Edge distance $c_{1,min}, c_{2,min}$ [mm]	150
	Spacing $s_{1,min}, s_{2,min}$ [mm]	200

Performance data

Single point loads

Designation	Hanger type	Characteristic resistance under tension load	Recommended tension load
		N_{Rk} [kN]	N_{rec} [kN]
X-SCH ALH32	Hook	0.34	0.15

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	0.60	0.50	0.42	0.37	0.33	0.30	0.27	0.25
	600	0.50	0.41	0.35	0.31	0.27	0.25	0.22	0.20
	700	0.42	0.35	0.30	0.26	0.23	0.21	0.19	0.17
	800	0.37	0.31	0.26	0.23	0.20	0.18	0.17	0.15
	900	0.33	0.27	0.23	0.20	0.18	0.16	0.15	0.13
	1000	0.30	0.25	0.21	0.18	0.16	0.15	0.13	0.12
	1100	0.27	0.22	0.19	0.17	0.15	0.13	0.12	0.11
	1200	0.25	0.20	0.17	0.15	0.13	0.12	0.11	0.10



- Allowable ceiling weights are calculated based on the single point recommended tension load $N_{rec} = 0.15$ 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-SCH ALH32	> 95 %	90–95 %



- 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 single nails with powder-actuated tools

Designation	Powder-actuated tool		
	DX 6 F8	DX 5 F8	DX 460 F8
Optional with pole tool	X-6-PT	X-PT 5	X-PT 460
X-SCH ALH32	■	■	■

■ = recommended □ = feasible

Cartridge recommendation

Base material	Cartridge color (tool power level)	
	Tool type: DX 6 F8	Tool type: DX 5 F8, DX 460 F8
Soft/standard concrete	titanium ■ (4-7)	yellow ■, red ■
Tough concrete	titanium ■ (6-8), black ■ (7-8)	red ■, black ■



- 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).

Quality assurance

Fastening inspection

Hanger type	Designation	Fastener stand-off h_{NHS} [mm]
	X-SCH ALH32	6-10
Hook		

- 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-SCH ALH32	2375249	Ceiling fastener