



X-HS AND X-CC DATA SHEET

Threaded hanger and loop hanger
system



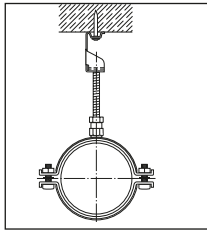
Approvals and certificates

Lloyds Register: X-HS
 ICC, UL, FM: X-HS W6/10

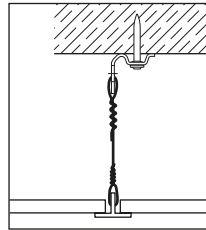
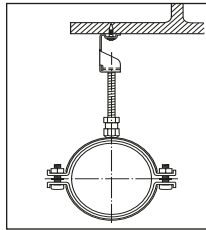
Not all information presented in this product data sheet might be subject to approval / certificate content. Please refer to approval / certificate for further information.

Applications

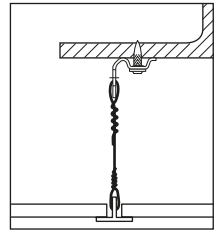
Examples



Threaded rod attachments to concrete and steel



Wire attachments to concrete and steel

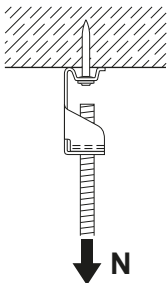


Performance data

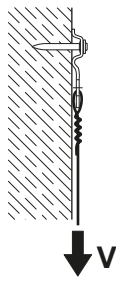
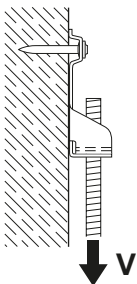
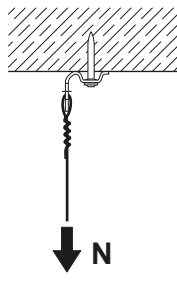
Recommended resistance under tension and shear load

Concrete (DX-Kwik with pre-drilling) or steel

X-HS



X-CC



Designation

$N_{rec} = V_{rec}$

Base material

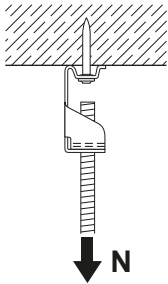
X-HS __ DKH 48	0.9 kN	Concrete
X-HS __ U19	0.9 kN	Steel
X-CC DKH 48	0.9 kN	Concrete
X-CC U16	0.9 kN	Steel

Conditions

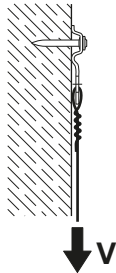
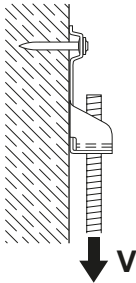
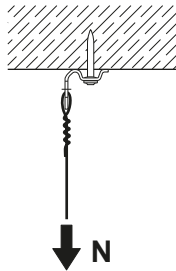
- Predominantly static loading.
- Concrete C20/25–C50/60
- Strength of fastened material is not limiting.
- Observance of all application limitations and recommendations (especially pre-drilling requirements).

Concrete (DX Standard without pre-drilling)

X-HS



X-CC



Designation	N_{rec}	V_{rec}	h_{ET}
X-HS_U32	0.4 kN	0.4 kN	27 mm
X-HS_U27	0.3 kN	0.3 kN	22 mm
X-HS_U22	0.2kN	0.2 kN	18 mm
X-CC_U27	0.2* kN	0.3 kN	22 mm
X-CC_U22	0.15* kN	0.2 kN	18 mm
X-CC_CS27	0.2 kN	0.3 kN	22 mm
X-CC_CS22	0.15 kN	0.2 kN	18 mm

*) eccentric loading considered

Conditions

- Minimum 5 fasteners per fastened unit (normal weight concrete).
- All visible failures must be replaced.
- With lightweight concrete base material and appropriate washers, greater loading may be possible, please contact Hilti.
- Predominantly static loading.
- Observance of all application limitations and recommendations.



- For more details in relation to base material properties, please refer to the chapter **Fastener selection guide** in the Direct Fastening Manual (DFTM).

Application recommendation

Base material thickness

Concrete

DX-Kwik

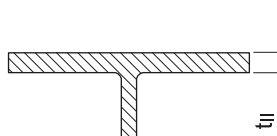
(with pre-drilling) $h_{min} = 100$ mm

DX Standard

(w/o pre-drilling) $h_{min} = 80$ mm

Steel

$t_{II} \geq 4$ mm

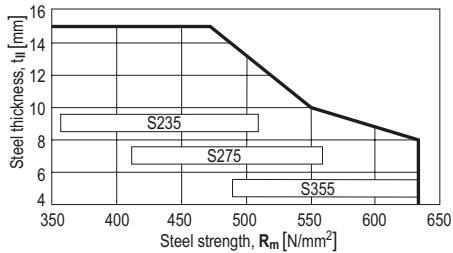


Fastener positioning

Minimum spacing and edge distances: See corresponding nail data sheet of X-U and X-DKH.

Application limits

Fastening to steel – X-HS U19 with DX351



Application limit may increase in case of specific applications, like the fastening of wire mesh to steel, which is connected with X-CC U16 P8 fasteners. That wire mesh acts as reinforcement for fire protective sprayed coating. In such cases also different fastener stand-offs apply. Inquire at Hilti related with the use of X-CC U16 P8 in that specific application.

Corrosion information



- These zinc-coated fasteners are not suitable for long-term service outdoors or in otherwise corrosive environments.
- For more details, please refer to following technical document: Hilti Corrosion Handbook.

System recommendation

- For more details, please refer to the chapter **Accessories and consumables compatibility** in the Direct Fastening Technology Manual (DFTM).

Technical information

Designation	Shank diameter d_s	Shank length L_s	Fastener length L	Base material	Tools
① X-HS_ DKH 48 P8S15	4.0 mm	48 mm	50.0 mm	Concrete pre-drilled	DX 6 F8, DX 5 F8, DX 460-F8
② X-HS_ U 32 P8S15	4.0 mm	32 mm	34.4 mm	Concrete	DX 6 F8,
② X-HS_ U 27 P8S15	4.0 mm	27 mm	29.4 mm	Concrete	DX 5 F8,
② X-HS_ U 22 P8S15	4.0 mm	22 mm	24.4 mm	Concrete	DX 460-F8,
② X-HS_ U 19 P8S15	4.0 mm	19 mm	21.4 mm	Steel	DX 351-F8, DX 36, DX 2
③ X-CC DKH 48 P8S15	4.0 mm	48 mm	50.0 mm	Concrete pre-drilled	DX 6 F8, DX 5 F8, DX 460-F8
③ X-CC U 27 P8	4.0 mm	27 mm	29.4 mm	Concrete	DX 6 F8,
③ X-CC U 22 P8	4.0 mm	22 mm	24.4 mm	Concrete	DX 5 F8,
③ X-CC U 16 P8	4.0 mm	16 mm	18.4 mm	Steel	DX 460-F8, DX 351-F8, DX 36, DX 2

Cartridge recommendation for fastening on concrete

Base material	Cartridge color (tool power level)	
	Tool type: DX 6 F8	Tool type: DX 5 F8, DX 460 F8, DX 2, DX 351 F8
	Cartridge type: 6.8/11 M	Cartridge type: 6.8/11 M
Soft/medium concrete	titanium ■ (2-5)	yellow ■, red ■
Tough concrete	titanium ■ (4-8)	yellow ■, red ■

Cartridge recommendation for fastening on steel

Base material		Cartridge color (tool power level)	
		Tool type: DX 6 F8	Tool type: DX 5 F8, DX 460 F8, DX 2, DX 351 F8
		Cartridge type: 6.8/11 M	Cartridge type: 6.8/11 M
S235,	$4 \leq t_{\parallel} \leq 6 \text{ mm}$	titanium ■ (1-3)	green ■
S275,	$6 < t_{\parallel} \leq 14 \text{ mm}$	titanium ■ (4-8)	red ■
S355			

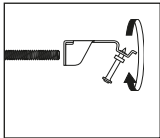


- Tool power level adjustment by setting tests on site.
- Start tool energy selection with lowest recommended tool power level.
- Correct according requirement from chapter quality assurance.

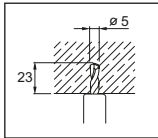
Quality assurance

Installation

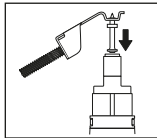
X-HS



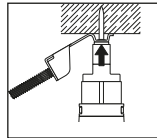
1. Attach the threaded rod to the X-HS before fastening



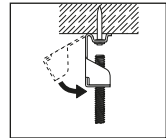
2. For DKH 48 pre-drill ($\varnothing 5 \times 23$)



3. Load the assembly into the tool

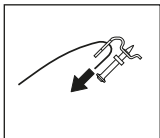


4. Locate the nail, compress the tool, pull the trigger and the fastening is complete

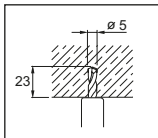


5. Bend the X-HS assembly down to the vertical position

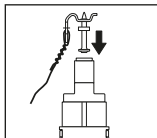
X-CC



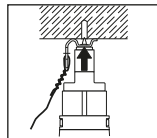
1. Assemble the wire with the X-CC



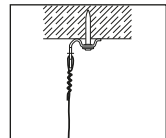
2. For DKH 48 pre-drill ($\varnothing 5 \times 23$)



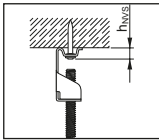
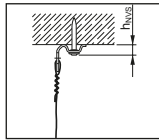
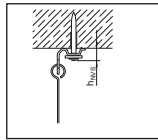
3. Load the assembly into the tool



4. Locate the nail, compress the tool, pull the trigger and the fastening is complete



5. Adjust the wire as required

Setting depth control
X-HS

 $h_{NVS} = 6-10 \text{ mm}$
X-CC

 $h_{NVS} = 4-7 \text{ mm}$
X-CC DKH48 P8 S15

 $h_{NVS} = 6-10 \text{ mm}$

These are abbreviated instructions which may vary by application.

ALWAYS review/follow the instructions accompanying the product.

Fastener program

Item no. and description

X-HS order information

Item no.	Designation	Item no.	Designation
361788	X-HS M6 U32 P8 S15	386214	X-HS M8 U19 P8 S15
386223	X-HS M6 U27 P8 S15	386215	X-HS M10 U19 P8 S15
361789	X-HS M8 U32 P8 S15	386217	X-HS W10 U19 P8 S15
386224	X-HS M8 U27 P8 S15	386218	X-HS M6 U22 P8 S15
361790	X-HS M10 U32 P8 S15	386219	X-HS M8 U22 P8 S15
386225	X-HS M10 U27 P8 S15	386222	X-HS W10 U22 P8 S15
386226	X-HS W6 U27 P8 S15	386216	X-HS W6 U19 P8 S15
386227	X-HS W10 U27 P8 S15	386220	X-HS M10 U22 P8 S15
386213	X-HS M6 U19 P8 S15	386221	X-HS W6 U22 P8 S15



• Type of threading: M = metric; W6, W10 = Whitworth 1/4"; 3/8"

X-CC order information

Item no.	Designation
386229	X-CC U22 P8
386230	X-CC U27 P8
299937	X-CC DKH P8 S15
386228	X-CC U16 P8
2006454	X-CC CS22 P8
2005065	X-CC CS27 P8