DX-KWIK X-M6 H, X-M8 H AND DNH, X-DKH DATA SHEET

Threaded stud and nail

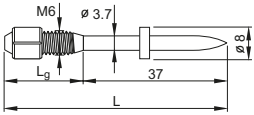
November 2023

DX-Kwik – X-M6 H, X-M8 H and DNH, X-DKH Threaded studs and nails

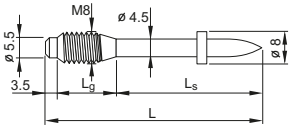
Product data

Dimensions

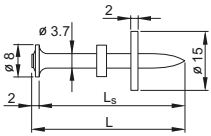
X-M6H-__-37 FP8



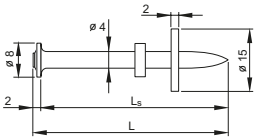
X-M8H___-37 P8



DNH 37 P8S15



X-DKH 48 P8S15



Material specifications

Carbon steel shank:	HRC 58
Zinc coating:	5–20 µm

Recommended fastening tools

DX 6 F8, DX 5 F8, DX 460 F8, DX 2

- See fastener program in the next pages.

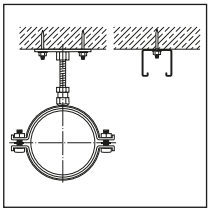
Approvals

IBMB 3041/8171	X-M8H, X-DKH, X-M6H
DIBt (Germany):	X-M8H

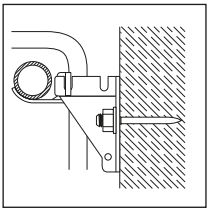
Not all information presented in this product data sheet might be subject to approval / certificate content. Please refer to approval/certificate for further information.

Applications

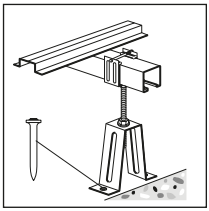
Examples



Base plates, rails for piping



Radiator brackets



Floor stands, metal fixtures to concrete

Performance data

Recommended resistance under tension and shear load

	$N_{rec,1}$	$N_{rec,2}$	$V_{rec,1}$	$M_{rec,1}$
X-M6H, DNH 37	2.0 kN	0.6 kN	2.0 kN	5.5 Nm
X-M8H, X-DKH 48	3.0 kN	0.9 kN	3.0 kN	10.0 Nm

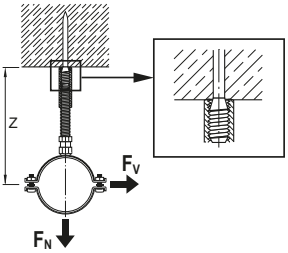
Conditions

- $N_{rec,1}$: concrete in compressive zone.
- $N_{rec,2}$: concrete in tension zone.
- Predominantly static loading.
- Concrete C20/25–C50/60.
- A sufficient redundancy has to be ensured, that the failure of a single fastening will not lead to collapse of the entire system.
- Recommended loads are based on failure of the fastener anchorage in the concrete. Thickness and quality of the fastened material may lower the loadings.
  - Observance of all pre-drilling requirements, fastened thickness limits, and recommended details.
  - The recommended loads in the table refer to the resistance of the individual fastening and may not be the same as the loads F_N and F_V acting on the fastened part. Note: If relevant, prying forces need to be considered in design, see example. Moment acting on fastener shank only in case of a gap between base and fastened material.

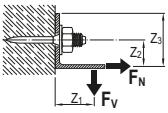
- For more details in relation to base material properties, please refer to the chapter **Fastener selection guide** in the Direct Fastening Manual (DFTM).

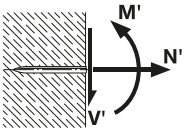
Arrangements to prevent moment on shank

Coupler tight against concrete



Non-symmetric arrangement





- Moment on fastened part
- Prying effect must be considered in determining loads acting on fastener

Resultant forces on nail

Application recommendation

Base material thickness

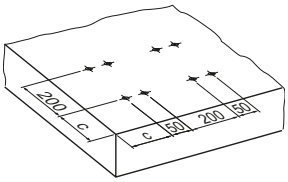
X-M6H, DNH 37: h_{min} = 100 mm
X-M8H, X-DKH 48: h_{min} = 100 mm

Fastened material thickness

X-M6H: $t_I \leq L_g - t_{washer} - t_{nut} \cong$ up to 13.5 mm
X-M8H: $t_I \leq L_g - t_{washer} - t_{nut} \cong$ up to 14.0 mm
DNH 37: $t_I \leq 2.0$ mm
X-DKH 48: $t_I \leq 5.0$ mm or $t_I \leq 2.0$ by pre-drilling through fastened material

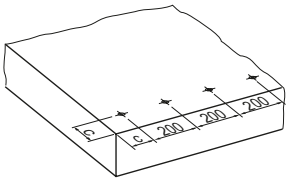
Fastener positioning in base material

Pairs



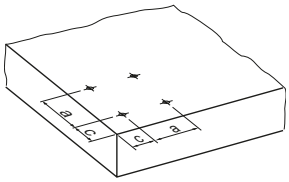
	Reinforced	Non-reinforced
c	100 mm	150 mm

Row along edge



	Reinforced	Non-reinforced
c	80 mm	150 mm

General (e.g. group of fasteners



	Reinforced	Non-reinforced
c	80 mm	150 mm
a	80 mm	100 mm

Corrosion information

- The intended use only comprises fastenings which are not directly exposed to external weather conditions or moist atmospheres.
- 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).

Cartridge recommendation

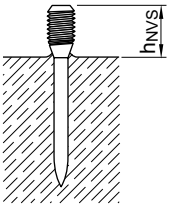
Base material	Cartridge color (tool power level)	
	Tool type: DX 6 F8	Tool type: DX 5 F8, DX 460 F8, DX 2
	Cartridge type: 6.8/11 M	Cartridge type: 6.8/11 M
Soft/medium concrete	titanium ■ (2-6)	yellow ■, red ■
Tough concrete	titanium ■ (4-8)	yellow ■, red ■

- 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

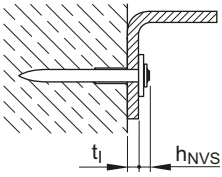
Fastening inspection

X-M6H, X-M8H



$h_{NVS} = L - h_{ET}$, h_{ET} = 37–41 mm

DNH 37, X-DKH 48

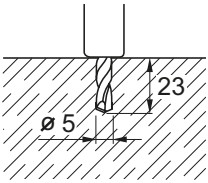


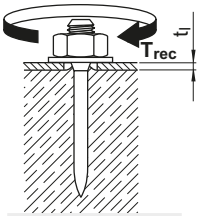
Place nails so that heads and washers bear tightly against each other and against the fastened material

$h_{NVS} \cong 4$ mm

Installation

X-M6H, X-M8H





Pre-drill with drill bit

Designation	Item no
TX-C-5/23B	28557
or	
TX-C-5/23	61787

Tightening torque

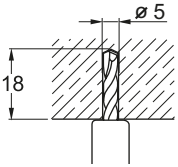
Designation	T_{rec} [Nm]
X-M6H	6.5
X-M8H	10.0

DNH 37, X-DKH 48

Pre-drilling details (not through fastened material)

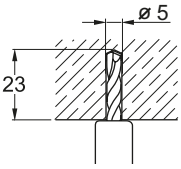
DNH 37

t_I [mm]	Drill-bit	Item no.
≤ 2	TX-C-5/18	61793



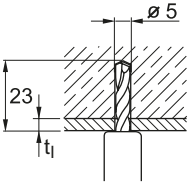
X-DKH 48

t_I [mm]	Drill-bit	Item no.
≤ 5	TX-C-5/23B	28557
	or	
	TX-C-5/23	00061787



Details valid for C20/25–C50/60

Pre-drilling details (through fastened material)



X-DKH 48

t_I [mm]		Drill-bit	Item no.
≤ 2	only	TX-C5/23	61787

Details valid for C20/25–C50/60

These are abbreviated instructions which may vary by application.
ALWAYS review/follow the instructions accompanying the product.

Fastener program

Fastened thickness $t_{I,max}$ [mm]	Fastener				
	Designation	Item no.	L_g [mm]	L_s [mm]	L [mm]
–	X-M6H-10-37 FP8	40464	10	37	47
–	X-M8H-10-37 P8	20059	10	37	50.5
5.0	X-M8H/5-15-37 P8	26325	15	37	55.5
15.0	X-M8H/15-25-37 P8	20064	25	37	65.5
2.0	DNH 37 P8S15	44165	–	37	39
5.0*	X-DKH 48 P8S15	40514	–	48	50

*) with pre-drilling through fastened material $t_{I,max}$ = 2.0 mm