



X-EGN, X-GHP, X-GN DATA SHEET

Fastener for gas-actuated tool

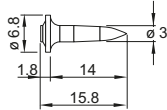


X-EGN, X-GHP, X-GN Fastener for gas-actuated tool

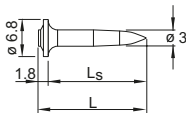
Product data

Dimensions

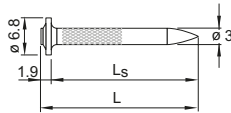
X-EGN 14



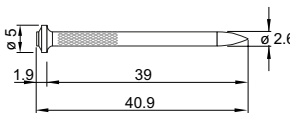
X-GHP 17/20/24



X-GN 20/27/32



X-GN 39



Material specifications

Carbon steel shank:	X-EGN	HRC 57.5
	X-GHP	HRC 57.5
	X-GN	HRC 56.5
Zinc coating:	2–13 µm	

Recommended fastening tools

GX 120, GX 120-ME
GX 100, GX 100 E

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

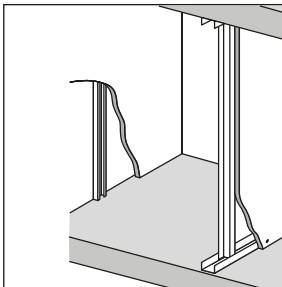
Approvals

ICC-ESR 1752 (USA):	X-GN 20/27/32, X-EGN 14, X-GHP 16/17/20/24
IBMB	X-GHP, X-GN

- 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

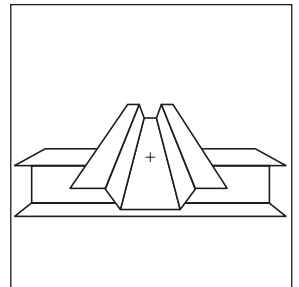
Examples



Drywall tracks to concrete and steel



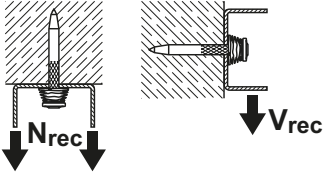
Electrical applications



Temporary tacking of composite deck to steel beams

Performance data

Recommended resistance under tension and shear load for drywall track fastening


X-EGN (Base material: steel)

Tension N_{rec}	Shear V_{rec}
0.4 kN	0.4 kN

X-GHP, X-GN (Base material: concrete / sand-lime masonry)

Embedment	Tension N_{rec}		Shear V_{rec}		Tension N_{rec}	Shear V_{rec}
	Concrete Type					
	Soft/ medium	Tough	Soft/ medium	Tough	Sand-lime masonry	
≥ 22 mm	-	-	-	-	0.3 kN	0.3 kN
≥ 18 mm	0.2 kN	-	0.2 kN	-	0.2 kN	0.2 kN
≥ 14 mm	0.1 kN	0.1 kN	0.1 kN	0.1 kN	0.1 kN	0.1 kN

Conditions

- For safety relevant fastenings sufficient redundancy of the entire system is required; Minimum of 5 nails per fastened track. All visible setting failures must be replaced
- Sheet metal failure is not considered in recommended loads and must be assessed separately
- Soft, medium concrete up to $f_{c,cube} = 45 \text{ N/mm}^2$ (C35/45), some tough concrete up to $f_{c,cube} = 60 \text{ N/mm}^2$ (C50/60).
- Concrete with aggregate like granite or river rock or softer, and up to 16 mm diameter

Stick rate estimation


Designation	Soft/medium concrete	Tough concrete
X-GHP	85–98%	70–85%
X-GN	75–90%	55–70%



- 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.

X-EGN 14 MX for temporary tacking of composite decks

Tension N_{rec}	Shear V_{rec}
0.4 kN	0.4 kN

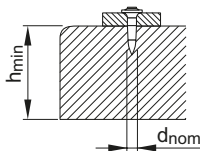
Conditions

- The intended use of the fastenings is to secure the deck position and to ensure a safe working platform during the erection state only. The fasteners serve as temporary fixation until the shear connectors of the composite beams are attached.
- At each permanent composite deck support, it is recommended to drive at least one fastener per trough.
- Every deck panel must be fixed at least with two fasteners at every permanent support.
- Single layer sheet with a maximum thickness of 1.25 mm.
- Sheeting grade up to S450 acc. to EN 10346.
- Minimum base material thickness: 6 mm.
- Minimum steel grade: S235 acc. to EN 10025-2.

Application recommendation

Thickness of base material

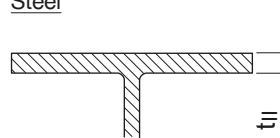
Concrete



$$h_{min} = 60 \text{ mm}$$

$$(d_{nom} = 3.0 \text{ mm})$$

Steel



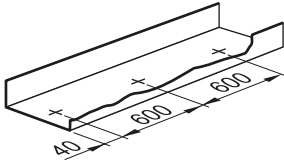
$$t_{II} \geq 4 \text{ mm}$$

Thickness of fastened material

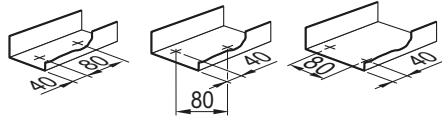
- Wooden track: $t_1 \leq 25 \text{ mm}$
 Metal track: $t_1 \leq 2 \text{ mm}$

Spacing and edge distances (mm)

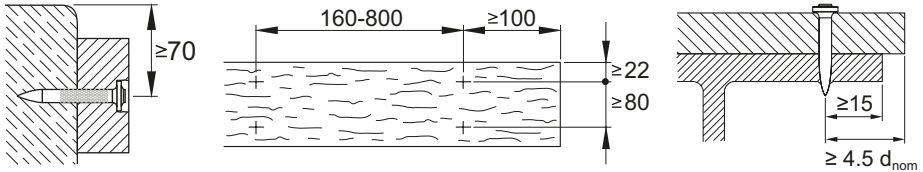
Spacing along track
(as per U.S. Gypsum Handbook)



All track ends (cut-outs for doors),
secure with 2 nails



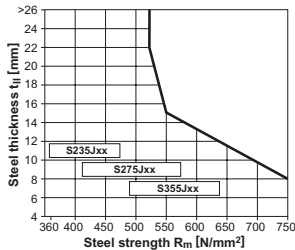
Distance to edge of concrete / Fastener spacings on wood:
sandlime masonry



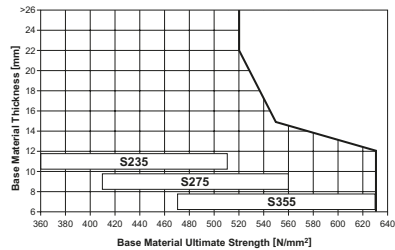
Application limits

X-EGN 14

For fastening on steel



For temporary tacking of composite decks



Design conditions:

- Single layer sheet with a maximum thickness of 1.25 mm.
- Sheeting grade up to S450 acc. to EN 10346.
- Minimum base material thickness: 6 mm
- Minimum steel grade: S235 acc. to EN 10025-2

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.

Fastener program and system recommendation
Fastener program for fastening to concrete/sandlime masonry

Designation	Application	Base material	
X-GN 39 MX	Wooden track ($t_1 \leq 25$ mm)	Concrete/sandlime masonry	Increasing strength
X-GN 27MX	Metal track	Concrete/sandlime masonry	
X-GN 20 MX	Metal track	Concrete/sandlime masonry	
X-GHP_MX	Metal track	Concrete/sandlime masonry	

Fastener programm for fastening to steel

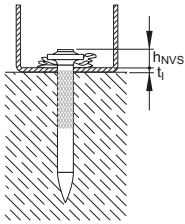
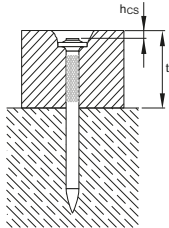
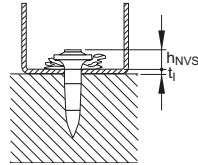
Designation	Application	Base material	
X-EGN 14	Metal track	Steel	

Item numbers and technical information

Designation	Item no.	L_s	L	d_{nom}
X-EGN 14 MX	340231	14 mm	15.8 mm	3.0 mm
X-GHP 16 MX	2071471	16 mm	17.8 mm	3.0 mm
X-GHP 17 MX	340228	18 mm	19.8 mm	3.0 mm
X-GHP 20 MX	285724	20 mm	21.8 mm	3.0 mm
X-GHP 24 MX	438945	24 mm	25.8 mm	3.0 mm
X-GN 20 MX	340232	19 mm	20.9 mm	3.0 mm
X-GN 27 MX	340230	27 mm	28.9 mm	3.0 mm
X-GN 32 MX	340233	32 mm	33.9 mm	3.0 mm
X-GN 39 MX	340234	39 mm	40.9 mm	2.6 mm

Tool and gas can

Tool designation	Gas can
GX 120 / GX 120 ME	GC 20, GC 21 and GC 22
GX 100 / GX 100 E	GC 11 and GC 12 (for USA)

Quality assurance**Fastening inspection**Fastening to concrete / sandlime masonryX-GN/GHP: $h_{NVS} = 2-5$ mmX-GN 39: $h_{CS} = 2-3$ mmFastening to steelX-EGN 14: $h_{NVS} = 2-9$ mm