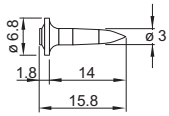
X-EGN, X-GHP, X-GN: GX Fasteners

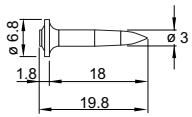
Product data

Dimensions

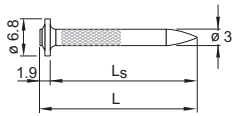
X-EGN 14



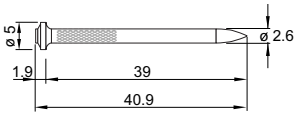
X-GHP 18



X-GN 20/27/32



X-GN 39



General information

Material specifications

Carbon steel shank:	**X-EGN**	HRC 58
	X-GHP	HRC 58
	X-GN	HRC 53.5
Zinc coating:	2–8 µm	

Fastening tool

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

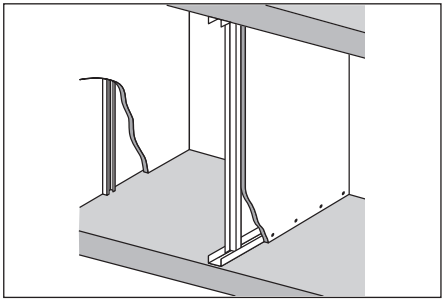
Approvals

ICC, ESR 1752 (USA):	**X-GN 20/27/32, X-EGN 14, X-GHP 18/20/24**

Note: technical data presented in these approvals and design guidelines reflect specific local conditions and may differ from those published in this handbook.

Applications

Examples



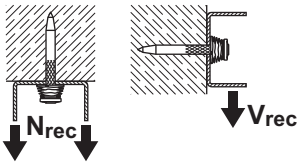
Drywall tracks to concrete and steel

Electrical applications

Load data

Design data

Recommended loads



Concrete	$N_{rec} = V_{rec}$ = **0.4 kN** for $h_{ET} \geq$ 27 mm
	0.3 kN for $h_{ET} \geq$ 22 mm
	0.2 kN for $h_{ET} \geq$ 18 mm
	0.1 kN for $h_{ET} \geq$ 14 mm
Steel	$N_{rec} = V_{rec}$ = **0.4 kN**

Design conditions:

- Minimum 5 fastenings per fastened unit
- All visible failures must be replaced

Test data

Important note: test data are for information only and cannot be used for design. These data are examples and do not represent the whole range of applications and load cases.
Design data for Hilti standard nails in concrete are based on a specific statistical evaluation method taking into consideration high variation coefficients. The evaluation procedure is described in the **Direct Fastening Principles and Technique** section of this manual.
For more detailed information please contact Hilti.

Load capacity of the nails:

Fastenings to concrete

Nail	Average tensile failure load $N_{u,m}$ [kN]	Scatter %	Embedment depth h_{ET} [mm]		Concrete strength f_{cc} [N/mm²]
X-GHP 20 MX	1.61	52.0	14.0		52.2
X-GN 27 MX	1.91	47.1	19.2		23.7

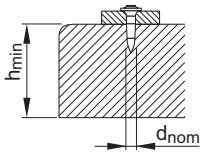
Fastenings to steel

Nail	Average tensile failure load $N_{u,m}$ [kN]	Scatter %	Embedment depth h_{ET} [mm]	Steel thickness t_{II} [mm]	Steel strength f_u [N/mm²]
X-EGN 14 MX	3.62	13.7	8.6	6	543

Application requirements

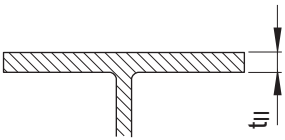
Thickness of base material

Concrete



h_{min} = 60 mm
(d_{nom} = 3.0 mm)

Steel



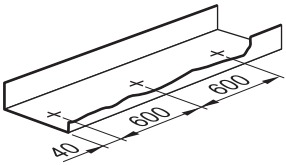
$t_{II} \geq 4$ mm

Thickness of fastened material

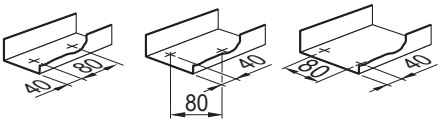
Wooden track: **$t_I \leq$** 24 mm
Metal track: **$t_I \leq$** 2 mm

Spacing and edge distances (mm)

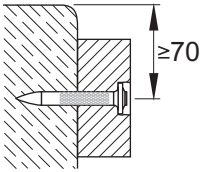
Spacing along track
(as per U.S. Gypsum Handbook)



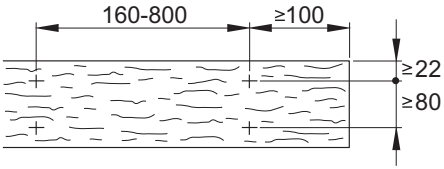
All track ends (cut-outs for doors),
secure with 2 nails



Distance to edge of concrete /
sandlime masonry



Fastener spacings on wood:

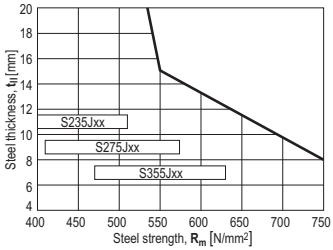


Corrosion information

The intended use only comprises fastenings which are not directly exposed to external weather conditions or moist atmospheres. For further detailed information on corrosion see relevant chapter in **Direct Fastening Principles and Technique** section.

Application limits

Steel



X-EGN 14

Fastener selection and system recommendation

Fastener selection

Fastening to concrete / sandlime masonry

	Application	Base material	
X-GN 39	Wooden track ($t_I \leq 24$ mm)	Concrete/sandlime masonry	increasing strength ↓
X-GN 27	Metal track	Concrete/sandlime masonry	
X-GN 20	Metal track	Concrete/sandlime masonry	
X-GHP	Metal track	Concrete/sandlime masonry	

Fastening to steel

	Application	Base material	
X-EGN 14	Metal track	Steel	

System recommendation

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

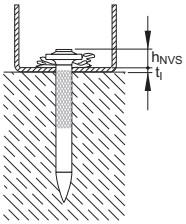
Tool and gas can

Designation	
GX 120 / GX 120 ME	with gas can GC 21 and GC 22
GX 100 / GX 100 E	with gas can GC 11 and GC 12 (for USA)

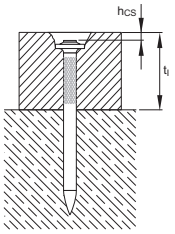
Fastening quality assurance

Fastening inspection

Fastening to concrete / sandlime masonry

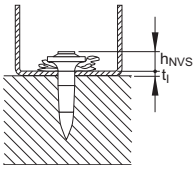


X-GN/GHP: h_{NVS} = 2–5 mm



X-GN 39: h_{CS} = 2–3 mm

Fastening to steel



X-EGN 14: h_{NVS} = 4–7 mm