

Hilti X-EGN Nails

Submission Folder

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Customer Hotline

Hong Kong 8228 8118

Macau (Toll free) 00800- 8228 8118

Website

www.hilti.com.hk

f.	Appearance Not specified	According to the sample submitted
g.	Color + Not specified	NIL
h.	Specification Not specified	Attached
i.	Manufacturer's Catalogue Not specified	Attached
j.	Test Report (Original/Certificated True Copy) Not specified	Attached
k.	Previous Job Reference Not specified	Attached
l.	Supplementary Information Not specified	NIL

For and on behalf of the Contractor

(Quality Control Manager)

CONTRACT MANAGER'S COMMENTS	
To:	
From:	Contract Manager's Representative: _____
On the basis of the sample and information given, the above sample submitted is:	
(1) *	Approved.
(2) *	Not approved because _____
Remarks:	

Approval does not alter the requirements of the Contract	
Contract Manager's Representative: _____	
Date: _____	

CC. _____

(* Delete if appropriate)
(+ For glass or vitreous mosaic tiles, the contractor is required to confirm the colour range(s) of the submitted sample, i.e. a) light and or medium; or b) dark)

GX 120 gas - driven fastening system

Step on the gas

Applications:

- Versatile fastening tool for the drywall installation trade - no battery to charge
- Fastening to concrete, plastered masonry, sand-lime block, concrete block and steel

Benefits

- Ruggedly built, perfectly balanced, lightweight and reliable, high-performance fastening
- Gas-driven system - for complete independence from electric supplies and no need to ever charge batteries
- World's first ever gas gauge indicates how much gas is left at any time - avoids running out of gas unexpectedly
- Slim, streamlined design for easy access even in tight corners and narrow tracks
- Ergonomically designed, air-cushioned grip zone for high working comfort
- More efficient due to gas capacity of 750 fastenings and 40-nail magazine
- Easily adjustable tool nose with one lever for optimum fastening quality
- Excellent performance at very low temperatures



Technical data

Fastenings per hour:	1200
Power source:	Gas can for 750 nails (supplied with the nails)
Power:	96 J
Pin range:	14 mm to 39 mm
Magazine capacity:	40 nails (+3)
Weight:	3.8 kg
Dimensions, L x W x H:	431 x 134 x 392 mm

Right of technical changes reserved

Hilti GX 120 gas-driven fastening tool

Ordering designation

GX 120 gas-driven fastening tool with 40-nail magazine

Item no.

274638

Supplied in an impact - resistant plastic toolbox with attachable support leg, tool support, nail punch set, ear protectors, safety glasses, cleaning cloth and operating instruction manual.



Fastener and gas can combo program

Package content: 750 pins and one gas can

Nail length (mm)	Suitable base materials	Ordering designation	Item no.
14	Steel	X-EGN 14MX Combo	3445241
18	Hard concrete	X-GHP 18MX Combo	3445283
20	Hard concrete	X-GHP 20MX Combo	3471501
20	Concrete, block, masonry	X-GN 20MX Combo	3445284
27	Concrete, block, masonry	X-GN 27MX Combo	3445393
32	Concrete, block, masonry	X-GN 32MX Combo	3445396
39	Concrete, block, masonry	X-GN 39MX Combo	3445397



Mesh Nail combo program

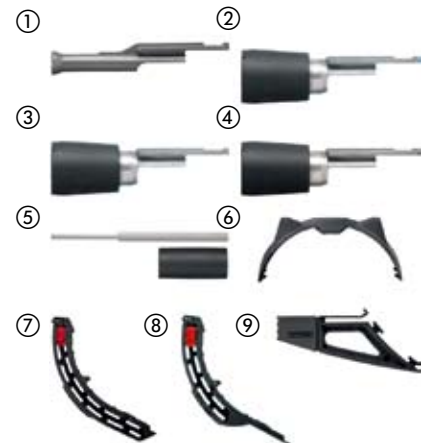
Package content: 750 pins and 750 R23.5(0.8mm) washer and one gas can

Nail length (mm)	Suitable base materials	Ordering designation	Item no.
20	Concrete, block, masonry	X-GN 20MX Mesh Combo	3465383

	Brick plastered masonry	Sand lime stone	Concrete block	Standard concrete	Hard/precasted concrete	Steel
X-EGN steel nail Length: 14 mm						●
Special X-GHP nail Length: 18, 20 mm				●	●	
Special X-GN nail Length: 20, 27, 32, 39 mm	●	●	●	●	4	

GX 120 equipment and accessories

Description	Package content	Ordering designation	Item no.
GX 120 tool case	1	GX 120 Type 39	274005 ★
GX 120 tool nose	1	X-120 TN	① 039535
GX 120 plug holder (Platon)	1	X-120 PHP	② 039540 ★
GX 120 plug holder (Delta)	1	X-120 PHD	③ 039545 ★
GX 120 washer holder	1	X-120 WH	④ 039619
GX 120 nail punch set	1	X-120 NP set	⑤ 039552
GX 120 tool support	1	X-120 TS	⑥ 039548
GX 120 40 nail magazine	1	X-120 GM 40	⑦ 039546
GX 120 20 nail magazine	1	X-120 GM 20	⑧ 039547 ★
GX 120 support leg	1	X-120 SL	⑨ 039550



GX 100 GAS System

Fastener and gas can combo program

Package content: 750 pins (in strips of 10), 1 gas can, 1 valve head

Nail length mm	Suitable base materials	Ordering designation	Item no.
14	Steel	X-EGN 14MX Combo	3440232
18	Hard concrete	X-GHP 18MX Combo	3440403
20	Concrete, block, sand limestone	X-GN 20MX Combo	3440404
27	Concrete, block, sand limestone	X-GN 27MX Combo	3440405
32	Concrete, block, sand limestone	X-GN 32MX Combo	3440406
39	Concrete, block, sand limestone	X-GN 39MX Combo	3440407



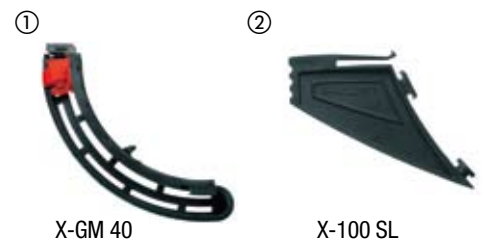
GC11

Gas can pack

Description	Package content	Ordering designation	Item no.
Gas can for 750 fastenings	1 gas can, 1 valve head	GC11	38865 ★

Magazine

Description	Ordering designation	Item no.
40 nail magazine for GX 100	X-GM40 ①	378586



X-GM 40

X-100 SL

Accessories GX 100

Description	Ordering designation	Item no.
Support leg attachable for better tool stability	X-100 SL ②	378587
Tool nose	X-100 TN ③	378588
Washer holder for GX100 tool	X-WH 100m ④	284483
R 36 (0.6 mm) washer for GX100 (pack of 500)	R 36 0.6 ⑤	284534 ★
R 23.5 (0.8 mm) washer for GX100	R 23.5 0.8	3437589



④ X-WH 100m

⑤ R 36 0.6

GX 120-ME gas-driven fastening system

Easy to use and dependable

Applications:

- Fastening jobs of many kinds in the electrical and mechanical trades
- Fastening to concrete, plastered masonry, sand-lime block, concrete block and steel

Benefits

- Ruggedly built, perfectly balanced, lightweight and reliable, high-performance fastening tool
- First ever gas gauge - no surprise due to empty gas can
- Gas-driven-system - for complete independence from electric supplies. No battery to charge
- Slim, streamlined design for optimum accessibility
- Trouble-free starting, even at temperatures below freezing

Technical data

Power source:	Gas can for 750 nails (supplied with the nails)
Contact pressure:	120 N
Length:	431 mm
Magazine capacity:	20 nails
Weight:	3.8 kg

Right of technical changes reserved



GX 120-ME Gas system with magazine

Ordering designation

GX 120-ME gas actuated tool kit

GX 120-ME tool in an impact-resistant plastic toolbox with attachable support leg, nail punch set, tool support, ear plugs, safety glasses, cleaning cloth and operating instruction manual.

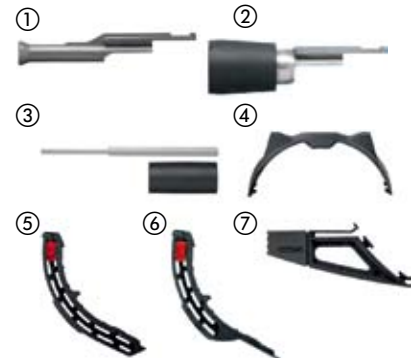
Item no.

274898 ★



GX 120 equipment and accessories

Description	Package content	Ordering designation	Item no.
GX 120-ME tool case	1	GX 120 Type 39	274005 ★
GX 120-ME tool nose	1	X-120 TN	① 39536
GX 120-ME magnetic washer holder	1	X-120 WH	② 39619
GX 120-ME nail punch set	1	X-120 NP set	③ 39552
GX 120-ME tool support	1	X-120 TS	④ 39548
GX 120-ME 40 nail magazine	1	X-120 GM 40	⑤ 39546 ★
GX 120-ME 20 nail magazine	1	X-120 GM 20	⑥ 39547
GX 120-ME support leg	1	X-120 SL	⑦ 39550



Cable tie fastener

Universal holder for all cable tie types up to a width of 9 mm. The ties can be mounted prior to fastening. Cable tie fastener.

Description	Max wide (mm)	Package content	Ordering designation	Item no.
Cable tie fastener	9	100	X-ECT MX	285709
Cable tie fastener	9	100	X-ECT UV MX	⑧ 285710 ★
Cable tie fastener	9	100	X-ECT FR MX	⑨ 285711 ★



Cable tie fastener

To fasten pipes and cable bundles.

Description	Ordering designation	Item no.
Cable tie fastener	X-ECT... 6	000000



★ Special Request

Cable clamps

Permits simple cable retrofitting and tightening

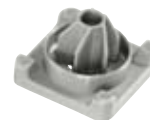
Description	Tankage cable ∅ 6 (mm)	Tankage cable ∅ 8 (mm)	Package content	Ordering designation	Item no.
Cable clamps	4	2	100	X-EKB 4 MX	285712
Cable clamps	8	5	100	X-EKB 8 MX	285713 ★
Cable clamps	16	10	50	X-EKB 16 MX	285714 ★
Cable clamps	4	2	100	X-EKB FR 4 MX	285715 ★
Cable clamps	8	5	100	X-EKB FR 8 MX	285716 ★
Cable clamps	16	10	50	X-EKB FR 16 MX	285717 ★



Universal washer for trunking and junction boxes

Innovative fastener design prevents cracked trunking and junction boxes.

Description	Package content	Ordering designation	Item no.
Universal washer	250	X-ET MX	285718



Snap-in conduit clip

Fasten closed clip on: simple and clean fastening solution for metric electrical pipes with ∅ 16 - 40 mm.

Description	Pie ∅ (mm)	Package content	Ordering designation	Item no.
Snap-in conduit clip	16	100	X-EKS 16 MX	285719
Snap-in conduit clip	20	100	X-EKS 20 MX	285720
Snap-in conduit clip	25	100	X-EKS 25 MX	285721
Snap-in conduit clip	32	100	X-EKS 32 MX	285722
Snap-in conduit clip	40	100	X-EKS 40 MX	285723 ★



Closed snap-in conduit clip

Description	Pie ∅ (mm)	Package content	Ordering designation	Item no.
Closed Snap-in conduit clip	16	100	X-EKS 16 MX	274083 ★
Closed Snap-in conduit clip	20	100	X-EKS 20 MX	274086 ★
Closed Snap-in conduit clip	25	100	X-EKS 25 MX	274087 ★



Metal conduit clip

Bracing rib guarantees high stability and excellent holding power

Description	Pie ∅ (mm)	Package content	Ordering designation	Item no.
Metal conduit clip	7-8	100	X-FB 8 MX	286797 ★
Metal conduit clip	10-11	100	X-FB 11 MX	286798 ★
Metal conduit clip	15-16	100	X-FB 16 MX	286799
Metal conduit clip	19-20	100	X-FB 20 MX	286800
Metal conduit clip	21-22	100	X-FB 22 MX	286801 ★
Metal conduit clip	24-25	100	X-FB 25 MX	286802
Metal conduit clip	27-28	100	X-FB 28 MX	286803 ★
Metal conduit clip	31-32	100	X-FB 32 MX	286804
Metal conduit clip	39-40	100	X-FB 40 MX	286805 ★



Double metal conduit clip

Description	Pie ∅ (mm)	Package content	Ordering designation	Item no.
Double metal conduit clip	15-16	100	X-DFB 16 MX	273383 ★
Double metal conduit clip	19-20	100	X-DFB 20 MX	273384 ★
Double metal conduit clip	21-22	100	X-DFB 22 MX	273385 ★
Double metal conduit clip	24-25	100	X-DFB 25 MX	273386 ★
Double metal conduit clip	27-28	100	X-DFB 28 MX	273387 ★



Threaded rod hanger

Description	Package content	Ordering designation	Item no.
Threaded rod hanger	100	X-HS M4 MX	273367 ★
Threaded rod hanger	100	X-HS M6 MX	272073 ★
Threaded rod hanger	100	X-HS M8 MX	273368



★ Special Request

Ceiling clip

Description	Package content	Ordering designation	Item no.
Ceiling clip	100	X-CC MX	228342



Stand off metal conduit clip

Description	Package content	Ordering designation	Item no.
Stand off metal conduit clip	200	X-EMTC 1/2" MX	228335 ★
Stand off metal conduit clip	200	X-EMTC 3/4" MX	228336 ★
Stand off metal conduit clip	200	X-EMTC 1" MX	228337 ★
Stand off metal conduit clip	100	X-EMTC 1/2" MX	228338 ★
Stand off metal conduit clip	100	X-EMTC 3/4" MX	228339 ★
Stand off metal conduit clip	100	X-EMTC 1" MX	228340 ★



Fastener and gas can combo program

Package content: 750 pins and one gas can

Nail length (mm)	Suitable base materials	Ordering designation	Item no.
14	Steel	X-EGN 14MX Combo	3445241
18	Hard concrete	X-GHP 18MX Combo	3445283
20	Hard concrete	X-GHP 20MX Combo	3471501
20	Concrete, block, masonry	X-GN 20MX Combo	3445284
27	Concrete, block, masonry	X-GN 27MX Combo	3445393
32	Concrete, block, masonry	X-GN 32MX Combo	3445396
39	Concrete, block, masonry	X-GN 39MX Combo	3445397

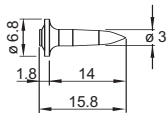


GX Drywall Fasteners X-EGN, X-GPH, X-GN

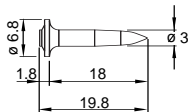
Product data

Dimensions

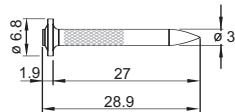
X-EGN 14



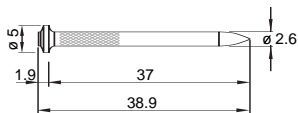
X-GPH 18



X-GN 20/27/32



X-GN 39



General information

Material specification

Carbon steel shank:	X-EGN	HRC 58
	X-GPH	HRC 58
	X-GN	HRC 53.5

Zinc coating:	2–8 μm
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Fastening tool

GX 120, GX 120-ME

GX 100, GX 100 E

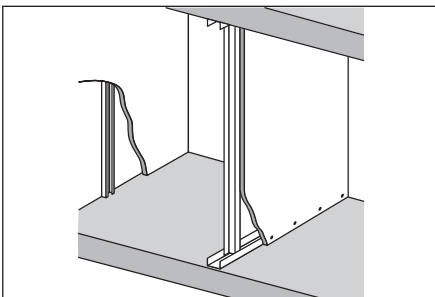
Approvals

ICC (USA): **X-GN 20/27/32, X-EGN 14**

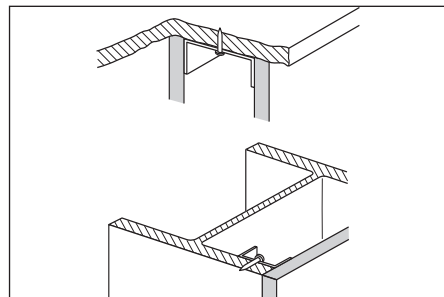
Note: Technical data presented in these approvals and design guidelines reflect specific local conditions and may differ from those published in this handbook.

Applications

Examples



Drywall tracks to concrete

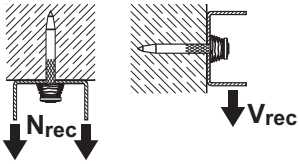


Drywall tracks to steel

Load data

Design data

Recommended loads



Concrete

$$N_{\text{rec}} = V_{\text{rec}} = 400 \text{ N for } h_{\text{ET}} \geq 27 \text{ mm}$$

$$300 \text{ N for } h_{\text{ET}} \geq 22 \text{ mm}$$

$$200 \text{ N for } h_{\text{ET}} \geq 18 \text{ mm}$$

$$100 \text{ N for } h_{\text{ET}} \geq 14 \text{ mm}$$

Steel

$$N_{\text{rec}} = V_{\text{rec}} = 400 \text{ N}$$

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 can't be used for design. These data are examples and not representing the whole range of applications and load cases.

Design data for Hilti standard nails in concrete are based on a specific statistical evaluation method taken into consideration high variation coefficients. The evaluation procedure is described within section **Direct Fastening Technology** 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/mm ²]
X-GHP 20 MX	1.61	52.0	14.0	52.2
X-GN 27 MX	1.91	47.1	19.2	23.7

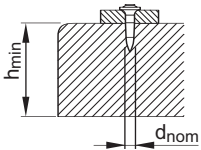
Fastenings to steel

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/mm ²]
X-EGN 14 MX	3.62	13.7	8.6	6	543

Application requirements

Thickness of base material

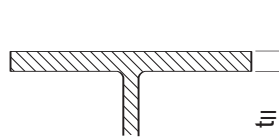
Concrete



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

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

Steel



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

Thickness of fastened material

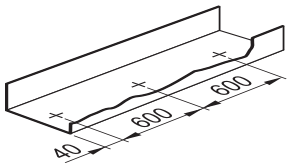
Wooden track: $t_I \leq 24 \text{ mm}$

Metal track: $t_I \leq 2 \text{ mm}$

Spacing and edge distances (mm)

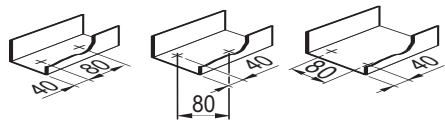
Spacing along track

(per U.S. Gypsum Handbook)

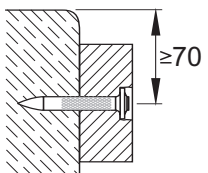


All track ends (cut-outs for doors),

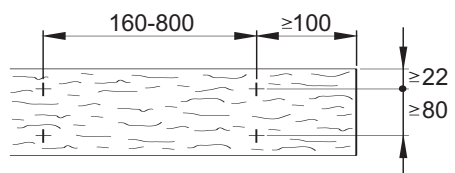
secure with 2 nails



Distance to edge of concrete / sand lime 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 corresponding chapter in section **Direct Fastening Technology**.

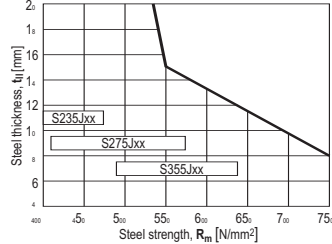
Recommended setting range

Concrete

No general restrictions existent.
Limitations are depending on application
and user requirements.

Working beyond the recommended
application range will lead to an increase of
the failure rate.

Steel



X-EGN 14

Fastener selection and system recommendation

Fastener selection

Fastening to concrete / sand lime masonry

	Application	Base material	 Increasing strength
X-GN 39	Wooden track ($t_f \leq 24$ mm)	Concrete/sand lime masonry	
X-GN 27	Metal track	Concrete/sand lime masonry	
X-GN 20	Metal track	Concrete/sand lime masonry	
X-GHP	Metal track	Concrete/sand lime masonry	

Fastening to steel

	Application
X-EGN 14	Metal track

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-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	37	38.9	2.6

Tool and gas can

Designation

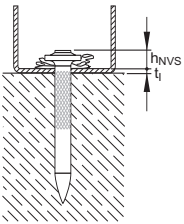
GX 120 / GX 120 ME	with gas can GC 22
GX 100 / GX 100 E	with gas can GC 11 and GC 12(for USA)

Fastening quality assurance

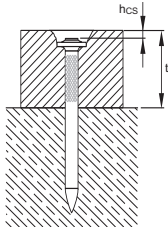
Fastening inspection

Fastening to concrete / sand lime masonry

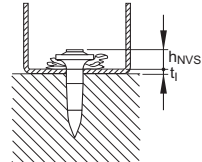
Fastening to steel



X-GN/GHP: $h_{NVS} = 2-5$ mm



X-GN 39: $h_{NVS} = 2-3$ mm



X-EGN 14: $h_{NVS} = 4-7$ mm

Hilti (Hong Kong) Limited
17/F, Tower 6,
China Hong Kong City,
33 Canton Road,
Tsimshatsui,
Kowloon.

4 June, 1997

Attention: Mr. Denny Wu

Dear Sir,

Procedures for building materials submission

I refer to your letter dated 19 May, 1997 concerning the above.

2. Please be advised that there is no provision under the Buildings Ordinance for the Building Authority to approve any proprietary building products. Under the Buildings Ordinance, authorized persons and/or registered structural engineers are required to supervise building works including the selection and installation of proprietary building products and to certify compliance with the Buildings Ordinance upon completion of works. They are therefore responsible for ensuring the health and structural safety requirements, inter alia, of these building products in the building projects which they have been appointed by the developer to co-ordinate and supervise. It is also their responsibility to ensure these products have been installed in accordance with the manufacturers' specifications and complied with the Buildings Ordinance and Regulations.

3. In establishing the acceptability of the proprietary products in building works, reference may be made to the performance standards laid down in Building (Construction) Regulations 1990 and the current Practice Note for Authorized Persons and Registered Structural Engineers 140 in which performance requirements for compliance are given. Reliance may also be placed on the test/assessment report prepared by a recognized laboratory or an equivalent establishment.

4. Before the proprietary products are installed in a building project, the authorized person and/or registered structural engineer appointed for the project should be approached by the manufacturers or their agents for advice and guidance. **Prior approval/acceptance from the Buildings Department is not required.**

5. Generally, all relevant information supporting the use of the proprietary products in building works under the Buildings Ordinance should be submitted associated with the prescribed plans for approval on project basis.

/ Notwithstanding....

- 2 -

6. Notwithstanding the above, the proprietary building products to which 'No objection' letters have been given are still recognized as accepted constructional materials to be used in building works under the Buildings Ordinance provided that all conditions specified in the letters are satisfied. You are informed that the procedures currently adopted by the Building Authority for processing statutory approval of plans which involve the use of these proprietary building products remain unchanged.

7. It is a fact that the 'No objection' letter giving general acceptance to a proprietary building product is based on the technical information submitted to this Department at the time of its application. Should there be any significant modification to these technical information, the product will certainly be considered as 'new' product. The acceptability of such proprietary product in building works should be evaluated by the authorized person and/or registered structural engineer appointed for the project as mentioned above.

8. Should you have any further queries to the above, please feel free to contact the undersigned or Mr. T.C. Kan of this office at phone no. 2626 1583.

Yours faithfully,



(K.S. Chang)

Technical Secretary/Structural
for Building Authority.

tck/

Attention: To whom it may concern

Date: 17 May 2010
Ref: 006/DX/AL/10

Subject: Hilti X-GN / X-EGN / X-GHP nails and GC21 / GC11 Gas Can

Dear Sir / Madam,

Enclosed please find the information of Hilti X-GN / X-EGN / X-GHP nails and GC21 / GC11 Gas Can.

Brand: Hilti
Model: X-GN / X-EGN / X-GHP nails and GC21 / GC11 Gas Can
Manufacturer: Hilti Corporation
Address of Manufacturer: FL-9494, Principality of Liechtenstein
Supplier: Hilti (Hong Kong) Ltd.
Address of Supplier: 701-704, 7/F, Tower A, Manulife Financial Center, 223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Product	Country of Origin	Name of Factory	Address of Factory
X-GN Nail	China	Hilti (China Zhangjiang) Co	Yongping Road South, Zhangjiang Development Zone, 524022 Zhangjiang, Guangdong Province, China
X-EGN / X-GHP Nail	Liechtenstein	Hilti Corporation	FL-9494, Principality of Liechtenstein
GC 21 / GC11 Gas Can	Germany	MoTip Dupli GmbH	Industriestrae 19, 74855 Hamersheim, Germany

Should you have further questions, please do not hesitate to contact our Technical Representatives or Customer Service Hotline at 8228-8118.

Yours sincerely,

Alan Lee
Product Manager

Job/Application Reference

27-Aug-10



<u>Ref No</u>	<u>Date</u>	<u>Project</u>	<u>Contractor</u>	<u>Consulting Engineer</u>	<u>Product</u>	<u>Application</u>
39570	12-09	PTM Projects - Hsin Chong	SUN CHEONG CONSTRUCTION CO LTD		Gas nail X-EGN 14 MX	chicken mesh fixing
38186	06-09	Oceanus Entertainment Complex	MING SHENG CONSTRUCTION CO. LTD.		Gas nail X-EGN 14 MX	fastening on metal decking
37943	05-09	City of Dreams Resort	EASTBOUND CEILING AND RAISE		Gas nail X-EGN 14 MX	fastening on metal decking
36834	02-09	City of Dreams Resort	EASTBOUND CEILING AND RAISE		Gas nail X-EGN 14 MX	channel fixing for drywall

Job/Application Reference

28-Mar-11



<u>Ref No</u>	<u>Date</u>	<u>Project</u>	<u>Contractor</u>	<u>Consulting Engineer</u>	<u>Product</u>	<u>Application</u>
40806	09-10	The Venetian Casino Resort (Parcel 1)	OCEANO ENGENHARIA		Gas nail X-EGN 14 MX	chicken mesh fixing
40866	09-10	Shangri-la and Traders Hotels Sheraton and St. Regis Hotels (Parcel 5&6)	OCEANO ENGENHARIA		Gas nail X-EGN 14 MX	chicken mesh fixing
40307	09-10	Union Square 7, Kowloon Station	DAVID MATERIAL & ENG LTD		Gas nail X-EGN 14 MX	fixing on gypsum panel