



August 15, 2016

**Re: Hilti X-W6 Stud Load Data**

To Whom It May Concern:

The X-W6-12-14 B3 F7 fastener has the same design, material and application as the XG-W6-12-14 fastener. Therefore, the allowable loads of XG-W6-12-14 fasteners driven into ASTM A36 steel found in the attached XG-W6 Stud Fastener Technical Guide Supplement can be applied to X-W6-12-14 B3 F7.

The X-W6-12-24 B3 F7 fastener has the same design, material and application as the XG-W6-12-27. The X-W6-12-24 B3 F7 fastener has a shorter shank length however the embedment of these two fasteners is the same. Therefore, the allowable loads of XG-W6-12-27 fasteners driven into Concrete or CMU found in the attached XG-W6 Stud Fastener Technical Guide Supplement can be applied to X-W6-12-24 B3 F7.

For both X-W6-12-14 B3 F7 and X-W6-12-24 B3 F7, the installation information can be found in Section 1.4 of the attached XG-W6 Stud Fastener Technical Guide Supplement except that the installation tool should be BX 3-ME.

If you need further information about submittal documents or any questions or concerns, please feel free to contact the local Hilti technical representatives for further clarification.

Regards,

A handwritten signature in black ink that reads "Chenkai Li".

Chenkai Li, E.I.  
Technical Service Consultant  
Hilti, Inc.

Attachment: XG-W6 Stud Fastener Technical Guide Supplement

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# XG-W6 Gas-Actuated Stud Fasteners

## 1.1 Product Description

The Hilti XG-W6 Gas-Actuated Stud Fastener is specifically designed for light duty, redundant, non-approval relevant fastening applications including attaching small electrical components (e.g. electrical junction boxes, switches and outlets) to concrete, steel and masonry base materials. The fastener is installed with the innovative Hilti GX 120-ME gas-actuated tool.

1.1	Product Description
1.2	Material Specifications
1.3	Technical Data
1.4	Installation Information
1.5	Ordering Information

## 1.2 Material Specifications

Fastener Designation	Fastener Material	Fastener Plating	Fastener Hardness
XG-W6	Carbon Steel	2 to 8 microns	58 HRC

## 1.3 Technical Data

Allowable loads for XG-W6 Stud Fasteners driven into ASTM A 36 Steel<sup>1,2</sup>

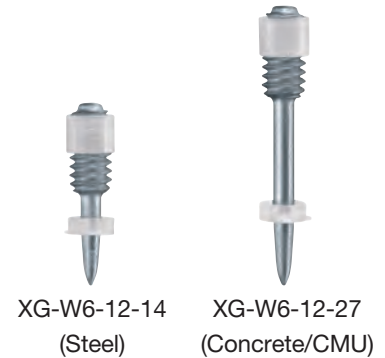
Fastener	Shank Diameter in. (mm)	Steel Thickness in. (mm)	
		≥ 1/4 (6.0)	
		Tension lb (kN)	Shear lb (kN)
XG-W6-12-14	0.118 (3.0)	45 (0.20)	45 (0.20)

- The tabulated allowable load values are for the low-velocity fasteners only, using a factor of safety that is greater than or equal to 5.0. Members connected to the substrate must be investigated in accordance with accepted design criteria.
- Low-velocity fasteners shall be driven to where the point of the fastener penetrates the steel base material.

Allowable loads for XG-W6 Stud Fasteners driven into Concrete or CMU<sup>1</sup>

Fastener	Shank Diameter in. (mm)	Embedment Depth in. (mm)	Compressive Strength	
			≥ 2000 psi	
			Tension lb (kN)	Shear lb (kN)
XG-W6-12-27	0.118 (3.0)	3/4 (19)	10 (0.05)	10 (0.05)

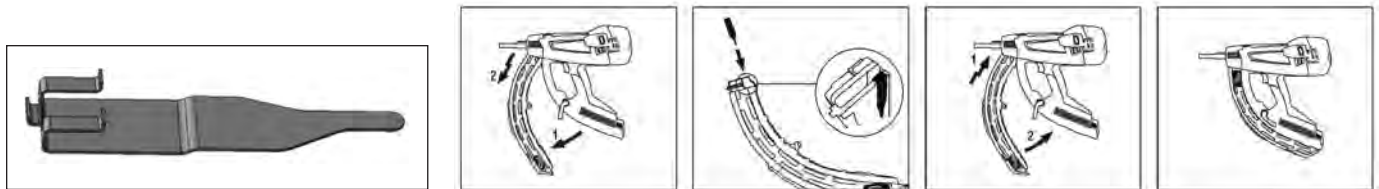
- The tabulated allowable load values are for the low-velocity fasteners only, using a factor of safety that is greater than or equal to 5.0. Members connected to the substrate must be investigated in accordance with accepted design criteria.



## 1.4 Installation Information

Fastener Designation	Base Material	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Maximum Installation Torque ft-lb (N-m)	Installation Tool <sup>1</sup>
XG-W6-12-14	Steel	5/8 (16)	5/8 (16)	2.2 (3.0)	GX-120 ME
XG-W6-12-27	Concrete or CMU	2-3/4 (70)	2-3/4 (70)	2.2 (3.0)	GX-120 ME

- In order to use the threaded studs a single fastener adapter must be attached to the magazine (Reference Figure below).



Single Fastener Adapter for GX 120-ME Proper installation of Single Fastener Adapter

Once Single Fastener Adapter is installed, the fastener is inserted into the nose-piece of the tool. The tool and inserted fastener are then compressed against the base material and the trigger is pulled.

## 1.5 Ordering Information

Gas-Actuated Fasteners:

Fastener Description	Shank Length in. (mm)	Shank Ø in. (mm)	Thread Length in. (mm)	Thread Ø	Guidance Washer Ø	Packaging Quantity	Combo Item No.
XG-W6-12-14 (Steel)	1/2 (14)	0.118 (3.0)	1/2 (12)	UNC 1/4-inch	7 mm plastic	750 pcs	03448596
XG-W6-12-27 (Concrete or CMU)	1 (27)	0.118 (3.0)	1/2 (12)	UNC 1/4-inch	7 mm plastic	750 pcs	03448597

Note: Combo package includes single fastener adapter and gas canister for GX 120-ME for at least 750 fastenings.