



Hilti X-BT Stainless Steel Threaded Studs

Submission Folder

Product Information

Accessories 2

Technical Information 4

Method Statement 14

Letters

Country of Origin 19

Job Reference 20



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Fastening grating / checker plate



APPLICATIONS

- Fastening gratings and industrial flooring on metal profiles (thickness at least 6 mm)
- Suitable for industrial buildings and power plants, shipbuilding, food-processing industry, chemicals and oil industry, steel and metal construction trades, public buildings

ADVANTAGES

- Quick and easy to install: Up to 120 fastenings per hour
- Trouble-free, one-man operation
- Versatile and mobile: No external power source required
- Secure: Verified holding power, highly ductile nails
- Also available in stainless steel

Grating disc X-FCM-M



Order Now



Ordering designation	Base materials	Diameter	Environmental conditions	Fastener shank length	Grating height	Sales pack quantity	Item number
X-FCM-M 25/30	Steel	50 mm	Indoors, dry and non-corrosive environment	23 mm	25 - 30 mm	100 pc	2117357 ¹⁾
X-FCM-M 35/40	Steel	50 mm	Indoors, dry and non-corrosive environment	33 mm	35 - 40 mm	100 pc	2117359 ¹⁾
X-FCM-M 45/50	Steel	50 mm	Indoors, dry and non-corrosive environment	43 mm	45 - 50 mm	100 pc	2117390 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

Grating disc (stainless steel) X-FCM-R

APPLICATIONS

- Fastening gratings in corrosive environments such as marine, offshore, petrochemical, power plants etc.

ADVANTAGES

- Stainless steel discs



Order Now



Ordering designation	Base materials	Diameter	Environmental conditions	Grating height	Sales pack quantity	Item number
X-FCM-R 25/30	Steel	50 mm	Marine, offshore, petrochemical, power plants, etc.	25 - 30 mm	100 pc	247181 ¹⁾
X-FCM-R 35/40	Steel	50 mm	Marine, offshore, petrochemical, power plants, etc.	35 - 40 mm	100 pc	247182 ¹⁾
X-FCM-R 45/50	Steel	50 mm	Marine, offshore, petrochemical, power plants, etc.	45 - 50 mm	100 pc	247183 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

Checker plate fastener HDG X-FCP-F

APPLICATIONS

- Fastening checker plate in mildly corrosive environments (not for off-shore use!)

ADVANTAGES

- Duplex coated discs



Order Now



Ordering designation	Base materials	Diameter	Environmental conditions	Grating height	Sales pack quantity	Item number
X-FCP-F 5/10	Steel	45 mm	Indoors or mildly corrosive environment	5 - 13 mm	200 pc	308859 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

Checker plate fastener (stainless steel) X-FCP-R

APPLICATIONS

- Fastening gratings in corrosive environments such as marine, offshore, petrochemical, power plants etc.

ADVANTAGES

- Stainless steel discs for high corrosion resistance



Order Now



Ordering designation	Base materials	Diameter	Environmental conditions	Grating height	Sales pack quantity	Item number
X-FCP-R 5/10	Steel	45 mm	Marine, offshore, petrochemical, power plants, etc.	5 - 13 mm	200 pc	308860 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

Sealing ring X-FCP



Order Now



Ordering designation	Diameter	Sales pack quantity	Item number
X-FCP	39 mm	200 pc	308856 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

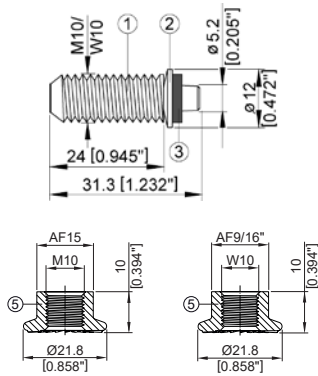
3. TECHNICAL DATA

3.1 Product data

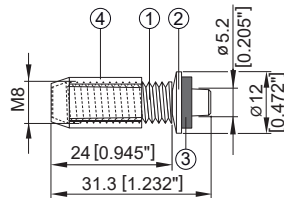
3.1.1 X-BT-GR and X-BT-MR material specification

- ① Shank and thread: S31803 (1.4462)
at least equivalent to A4 / AISI grade 316 material
- ② SN washers: S31635 (X2CrNiMo 17-12-2, 1.4404)
- ③ Sealing washers: Elastomer, black, resistant to UV, salt water, water, ozone, oils, etc.
- ④ Guiding sleeve: plastic
- ⑤ Flange nuts: A4 / AISI grade 316 material
Designation according to Unified Numbering System (UNS)

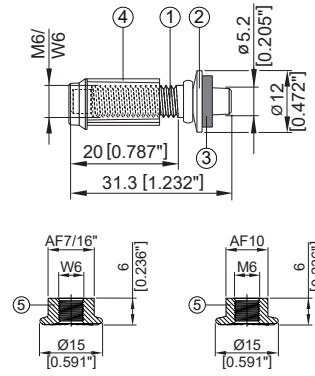
X-BT-MR M10/15 SN 8
X-BT-MR W10/15 SN 8



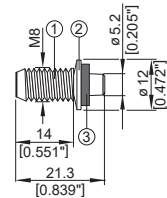
X-BT-MR M8/14 SN 8



X-BT-MR M6/10 SN 8
X-BT-MR W6/10 SN 8



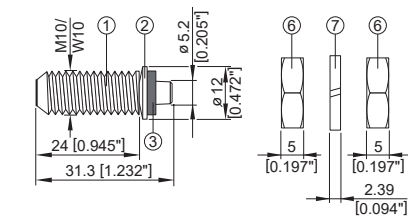
X-BT-GR M8/7 SN 8



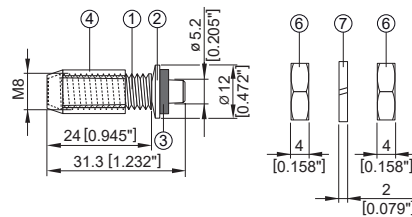
3.1.2 X-BT-ER material specifications

- ① Shank and thread: S31803 (1.4462)
at least equivalent to A4 / AISI grade 316 material
- ② SN washers: S31635 (X2CrNiMo 17-12-2, 1.4404)
- ③ Sealing washer: Elastomer, black, resistant to UV, salt water, water, ozone, oils, etc.
- ④ Guiding sleeve: plastic
- ⑤ Nuts: A4 / AISI grade 316 material
- ⑥ Lock washers: A4 / AISI grade 316 material

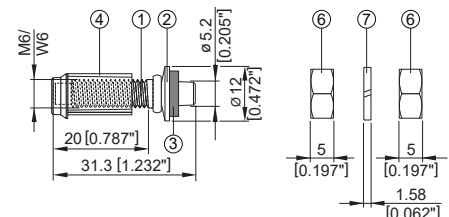
X-BT-ER M10/7 SN 8
X-BT-ER W10/7 SN 8



X-BT-ER M8/7 SN 8



X-BT-ER M6/3 SN 8
X-BT-ER W6/3 SN 8



3.1.3 Fastening tool

DX 351-BT / BTG, BX 3-BT / BTG, see fastener selection in section 3.3.5.

3.1.4 Approvals

ABS, DNV, GL, LR, ICC ESR-2347, UL



The previous X-BT threaded fastener generation as described in the Hilti X-BT Threaded Fastener Specification – July 2015 holds for many years several Type Approvals which are valid for the ship-building and off-shore industry.

These bodies are:

- ABS – American Bureau of Shipping
- DNVGL – Det Norske Veritas – Germanischer Lloyd
- LR – Lloyds Register
- BV – Bureau Veritas
- Russian Maritime Register

The ICC-ES approval ESR-2347 covers application of the X-BT in building construction. ESR-2347 allows for the use of X-BT in compliance with the 2015 International Building Code (2015 IBC).

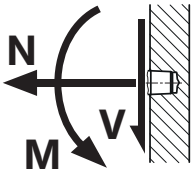
The UL-listing (File E257069) addresses the use of X-BT-ER as grounding and bonding equipment.

The New Generation X-BT-GR and X-BT-MR fasteners also hold the following separate Type Approvals:

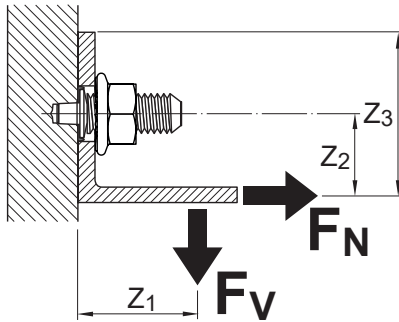
- ABS 18-HS1755518
- DNV-GL TAS00001SV
- BV 54554
- LR 19/0003

Furthermore, the New Generation X-BT-GR and X-BT-MR fasteners were added into ICC-ES ESR-2347 and the new X-BT-ER were also added into UL-file E257067.

Approvals can also be downloaded from Hilti website or from the websites of most Certification Bodies.



Example:



Provisions for group fastenings

For group fastenings with up to 4 fasteners per group and shear force introduction via the sealing washer (section 5.2.3), the resistance of all fastener can be added up, provided the hole in the fastened material is equal or less than 14 mm (e.g. $V_{rec,group} = 17.2$ kN for a group with 4 fasteners fixed to S235 base material).

3.2 Load data

3.2.1 Loads – Construction steel

Recommended loads – steel base material

Steel grades:	S235, S275, A36	S355 to S960 \geq Grade 50
Tension, N_{rec} [kN/lb]	3.6 / 810	4.6 / 1030
Shear, V_{rec} [kN/lb]	4.3 / 970	5.3 / 1190
Moment, M_{rec} [Nm/ft-lb]	20.0 / 14.8	20.0 / 14.8
Torque, T_{rec} [Nm/ft-lb]	20.0 / 14.8	20.0 / 14.8

Conditions for recommended loads

- Application of working load design concept (e.g. ASD).
- For unalloyed construction, off-shore and Shipbuilding steel: e.g. European grades according to EN 10025-4 or EN 10225, S690Q and S960Q according to EN 10025-6, US steel grade A36 and Grade 50.
- Minimum base material thickness $t_{II} = 8$ mm.
- Applicable for steel base materials up to a coating thickness of 500 μ m.
- Edge distance $c \geq 10$ mm [3/8"].
- In case of edge distance 6 mm $\leq c < 10$ mm, N_{rec} , V_{rec} and M_{rec} need to be reduced with the reduction factor $\alpha_c = 0.65$.
- Redundancy (multiple fastening) must be provided.

Remarks

- The recommended loads in the table refer to the resistance of the single fastener and need to be determined by static analysis from the loads F_N and F_V acting on the fastened part. Typical example is the need of consideration of prying forces, see example.
- Moments acting on the shank only need to be considered in case of a gap between the base and the fastened material.
- Global factor of safety for tension and shear load = 2.8 related to the characteristic resistance N_{Rk} and V_{Rk} .
- Global factor of safety for bending moment = 1.75 related to the characteristic plastic moment M_{Rk} of the shank.
- Effects of base metal vibration and stresses are considered.

Characteristic resistance – steel base material

Steel grades	S235, S275, A36	S355 to S960, \geq Grade 50
Tension, N_{Rk} [kN/lbs]	10.0 / 2240	13.0 / 2920
Shear, V_{Rk} [kN/lbs]	12.0 / 2700	15.0 / 3360
Moment, M_{Rk} [Nm/ft-lb]	35.0 / 25.5	35.0 / 25.5

Design resistance - steel base material

Steel grades	S235, S275, A36	S355 to S960, \geq Grade 50
Tension, N_{Rd} [kN/lbs]	5.0 / 1120	6.5 / 1460
Shear, V_{Rd} [kN/lbs]	6.0 / 1350	7.5 / 1680
Moment, M_{Rd} [Nm/ft-lb]	28.0 / 20.5	28.0 / 20.5

Supplemental conditions and remarks for design resistances

- Application of partial safety design concept (e.g. Eurocode steel design)
- Design resistances N_{Rd} and V_{Rd} are determined from the characteristic resistance N_{Rk} and V_{Rk} applying a partial safety factor $\gamma_M = 2.0$
- Design resistance M_{Rd} is determined from the characteristic resistance M_{Rk} applying a partial safety factor $\gamma_M = 1.25$

3.2.2 Loads – cast iron base material*

Recommended loads – cast iron base material*

Tension,	N_{rec} [kN/lb]	1.0 / 230
Shear,	V_{rec} [kN/lb]	1.5 / 340
Moment,	M_{rec} [Nm/ft-lb]	16.0 / 11.5

Design resistance – cast iron*

Tension,	N_{Rd} [kN/lbs]	1.6 / 360
Shear,	V_{Rd} [kN/lbs]	2.4 / 540
Moment,	M_{Rd} [Nm/ft-lb]	26.0 / 19.0

*Requirements of spheroidal graphite cast iron base material

Subject	Requirements
Cast iron	Spheroidal graphite cast iron according to EN 1563
Strength class	EN-GJS-400 to EN-GJS-600 according to EN 1563
Chemical analysis and amount of carbon	3.3 - 4.0 mass percentage
Microstructure	From IV to VI (spherical) according to EN ISO 945-1:2010 Minimum size 7 according to figure 4 of EN ISO 945-1:2010
Material thickness	$t_{\parallel} \geq 20$ mm

Recommended interaction formula for combined loading - steel and cast iron base material

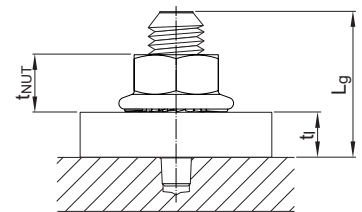
Load combination	Interaction provision
Shear - Tension	$\frac{V_{Sd}}{V_{Rd}} + \frac{N_{Sd}}{N_{Rd}} \leq 1.2$ with $\frac{V_{Sd}}{V_{Rd}} \leq 1.0$ and $\frac{N_{Sd}}{N_{Rd}} \leq 1.0$
Shear - Bending moment	$\frac{V_{Sd}}{V_{Rd}} + \frac{M_{Sd}}{M_{Rd}} \leq 1.2$ with $\frac{V_{Sd}}{V_{Rd}} \leq 1.0$ and $\frac{M_{Sd}}{M_{Rd}} \leq 1.0$
Tension - Bending moment	$\frac{N_{Sd}}{N_{Rd}} + \frac{M_{Sd}}{M_{Rd}} \leq 1.0$
Shear - Tension - Bending moment	$\frac{V_{Sd}}{V_{Rd}} + \frac{N_{Sd}}{N_{Rd}} + \frac{M_{Sd}}{M_{Rd}} \leq 1.0$

3.3 Application requirements and limits

3.3.1 Thickness of fastened material – X-BT-MR

- X-BT-GR M8: $2.0 \leq t_1 \leq 7 \text{ mm}$
- X-BT-MR M10/W10: $2.0 \leq t_1 \leq 15 \text{ mm}$
- X-BT-MR M8: $2.0 \leq t_1 \leq 14 \text{ mm}$
- X-BT-MR M6/W6: $2.0 \leq t_1 \leq 10 \text{ mm}^x)$

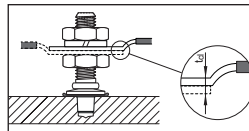
^{x)} If base material sits on the collar of the stud $t_{1,min} = 1.0 \text{ mm}$



3.3.2 Thickness of cable lug – X-BT-ER

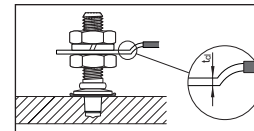
- X-BT-ER M8/M10/W10
- X-BT-ER M6/W6 /7 SN 8

$t_{cl} \leq 7 \text{ mm (0.28")}$



- X-BT-ER M8/M10/W10
- X-BT-ER M6/W6 /7 SN 8
- X-BT-ER M6/W6 /3 SN 8

$t_{cl} \leq 3 \text{ mm (0.12")}$



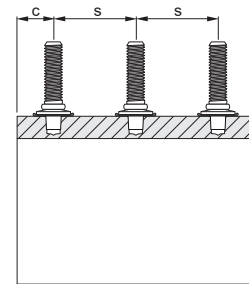
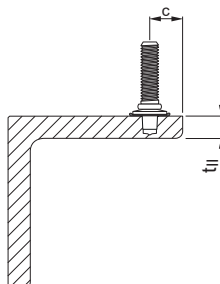
3.3.3 Spacing and edge distances

Edge distance:

- $c \geq 10 \text{ mm}$ (load reduction factor $\alpha_c = 1.00$)
- $6 \text{ mm} \leq c < 10 \text{ mm}$ (load reduction factor $\alpha_c = 0.65$)

Spacing:

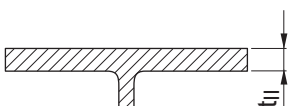
- $s \geq 15 \text{ mm}$



Outer diameter of installed surface (e.g. pipe flange) $\geq 150 \text{ mm}$

3.3.4 Application limit/thickness of base material

$t_{II} \geq 8 \text{ mm [5/16"]}$ → No through-penetration. No limits with regard to steel strength.



3.3.5 Fastener selection and DX 351 fastening system components

Fastener	Item number	Fastening tool	Fastening tool components	Cartridge	Step shank drill bit
X-BT-GR M8/7 SN 8	2194344	Tool: DX 351 BTG	Fastener guide: X-351-BT FG G (item no: 378675) Piston: X-351-BT P G (item no: 378677)	6.8/11 M brown High Precision (item no: 412689)	TX-BT 4.7/7-80 (item no: 2197930) TX-BT 4.7/7-110 (item no: 2197931) TX-BT 4.7/7-150 (item no: 2197629)
X-BT-MR M10/15 SN 8	2194340	Tool: DX 351 BT	Fastener guide: X-351-BT FG M1024 (item no: 378674)		
X-BT-MR M8/14 SN 8	2194339		Piston: X-351-BT P 1024 (item no: 378676)		
X-BT-MR M6/10 SN 8	2252199		Fastener guide: X-351-BT FG W1024 (item no: 378673) Piston: X-351-BT P 1024 (item no: 378676)		
X-BT-MR M6/14 SN 8	2194337				
X-BT-MR W10/15 SN 8	2194341				
X-BT-MR W6/10 SN 8	2252470				
X-BT-MR W6/14 SN 8	2194338				
X-BT-ER M10/7 SN 8	2194352	Tool: DX 351 BT	Fastener guide: X-351-BT FG M1024 (item no: 378674)		
X-BT-ER M8/7 SN 8	2194351		Piston: X-351-BT P 1024 (item no: 378676)		
X-BT-ER M6/3 SN 8	2252195		Fastener guide: X-351-BT FG W1024 (item no: 378673) Piston: X-351-BT P 1024 (item no: 378676)		
X-BT-ER M6/7 SN 8	2194349				
X-BT-ER W10/7 SN 8	2194353				
X-BT-ER W6/3 SN 8	2252198				
X-BT-ER W6/7 SN 8	2194350				

Note:

The three step shank drills only differ in their length. Their use depends on the accessibility condition on the jobsite.

6.8/11 M high-precision brown cartridge

The recommended tool energy setting = 1 (if required, increase of energy setting based on job site tests).

3.3.6 Fastener selection and BX 3 fastening system components

Fastener	Item number	Fastening tool	Fastening tool components	Energy	Step shank drill bit
X-BT-GR M8/7 SN 8	2194344	Tool: BX 3-BTG	Fastener guide: X-FG B3-BTG (item no: 2197625)	Hilti's 22V cordless tool battery platform	TX-BT 4.7/7-80 (item no: 2197930) TX-BT 4.7/7-110 (item no: 2197931) TX-BT 4.7/7-150 (item no: 2197629)
X-BT-MR M10/15 SN 8	2194340	Tool: BX 3-BT	Fastener guide: X-FG B3-BT M (item no: 2197626)		
X-BT-MR M8/14 SN 8	2194339				
X-BT-MR M6/10 SN 8	2252199		Fastener guide: X-FG B3-BT W (item no: 2197627)		
X-BT-MR W10/15 SN 8	2194341				
X-BT-MR W6/10 SN 8	2252470				
X-BT-ER M10/7 SN 8	2194352	Tool: BX 3-BT	Fastener guide: X-FG B3-BT M (item no: 2197626)		
X-BT-ER M8/7 SN 8	2194351				
X-BT-ER M6/3 SN 8	2252195		Fastener guide: X-FG B3-BT W (item no: 2197627)		
X-BT-ER W10/7 SN 8	2194353				
X-BT-ER W6/3 SN 8	2252198				

Note:

The three step shank drills only differ in their length. Their use depends on the accessibility condition on the jobsite.

The fastener guides of the battery-actuated tool BX 3-BT(G) also allow embedment depth adjustment:

The front part can be turned to the positions 1, 2, 3 or 4 (Higher position leads to deeper embedment). The recommended start position is 3. If required, fine adjustment during job-site execution be applied.

Complementary information for use of BX 3-BT(G) battery-actuated fastening tool in combination with previous generation X-BT threaded fasteners

The battery-actuated fastening tool BX 3-BT(G) is also suitable to drive the following previous generation X-BT threaded fasteners. The drilled holes have to be made with the previous generation step shank drill bits TX-BT 4/7. The corresponding allocation of system components is summarized in the table below:

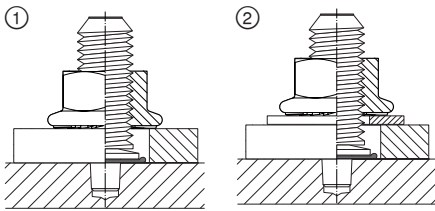
BX 3-BT(G) Fastener Guide	Previous Generation X-BT threaded fasteners	Previous generation step shank drill bits
X-FG B3-BTG (item no: 2197625)	X-BT M8-15-6 SN12-R (item no: 377074)	
X-FG B3-BT M (item no: 2197626)	X-BT M10-24-6 SN12-R (item no: 377078)	TX-BT 4/7-80 (item no: 377079)
	X-BT-ER M10/3 SN 4 (item no: 2103094)	TX-BT 4/7-110 (item no: 377080)
	X-BT-ER M8/7 SN 4 (item no: 2103095)	TX-BT 4/7-150 (item no: 377081)
X-FG B3-BT W (item no: 2197627)	X-BT W10-24-6 SN12-R (item no: 377076)	
	X-BT-ER W10/3 SN 4 (item no: 2103093)	

For the listed previous generation X-BT threaded fasteners, the same technical performance data as described in section 3 of the "Hilti X-BT Threaded Fastener Specification, July 2015" applies, when the BX 3-BT(G) is used to drive the above fasteners.

The previous generation X-BT threaded fasteners also hold the following separate Type Approvals:

- ABS 16-HS1545448-PDA
- DNV-GL 12272-10HH
- BV 23498/B0 BV
- LR 03/00070(E4)

3.3.7 Installation details – X-BT-MR



X-BT-MR M8

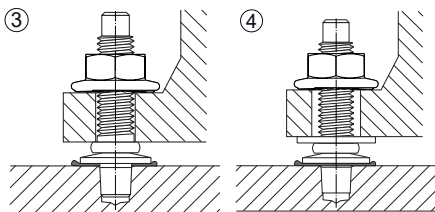
Fastened material:

- Hole diameter: 13 to 14 mm: Use of supplied flange nut ①
- Hole diameter: beyond 14 to 18 mm: Use of supplied flange nut with supplement washer (maximum thickness of fixed component to be reduced with thickness of washer) ②

X-BT-MR M10/W10

Fastened material:

- Hole diameter: 13 to 18 mm: Use of supplied flange nut ①
- Hole diameter: beyond 18 to 22 mm: Use of supplied flange nut with supplement washer (maximum thickness of fixed component to be reduced with thickness of washer) ②



X-BT-MR M6/W6

Fastened material:

- Hole diameter: 6.5 – 6.7: Fastener sits on collar of stud, use of supplied flange nut ③
- Hole diameter: 6.7 to 11 mm: Use of supplied flange nut with supplement washer sitting on collar ④
- Hole diameter: > 12 mm, fixed part sits on base material, use of flange nut with supplemental washer to cover hole clearance (maximum thickness of fixed component to be reduced with thickness of washer) ②

Provisions on group fastenings

For group fastenings with up to 4 fasteners per group and shear force introduction via the sealing washer (section 5.2.3), the resistance of all fasteners can be added up, provided the hole in the fastened material is equal or less than 14 mm.

For hole diameters in the fastened material greater than 14 mm, the following conservatively applies:

- For the shear load transfer only one fastener of the group may be considered (e.g. $V_{rec,group} = 4,3 \text{ kN}$ for any fastener group with ≥ 2 fasteners in S235 base material).
- If relevant, deformations have to be checked for serviceability reasons.

Before fastener installation

The drilled hole must be clear of liquids and debris. The area around the drilled hole must be free from liquids and debris.

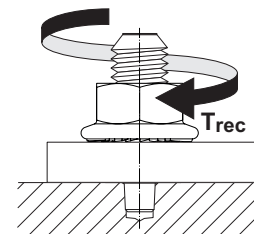


Pre-drill until the bit shoulder grinds a shiny ring (to ensure proper drilling depth).

Remark: Recommended tightening torque for thin base material thickness $4 \leq t_{II} < 8 \text{ mm}$, see section 5.11.

Tightening torque, $T_{rec} \leq 20 \text{ Nm}$ [14.8 ft-lb]

Hilti torque tool $\frac{1}{4}''$ - 20 Nm / [14.8 ft-lb]

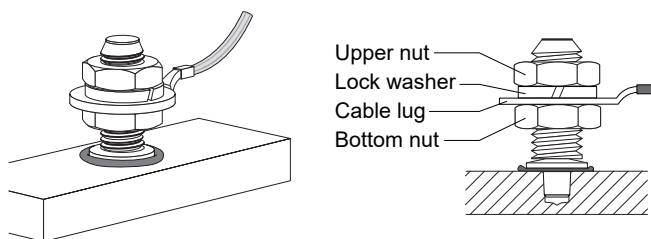


Hilti screwdriver

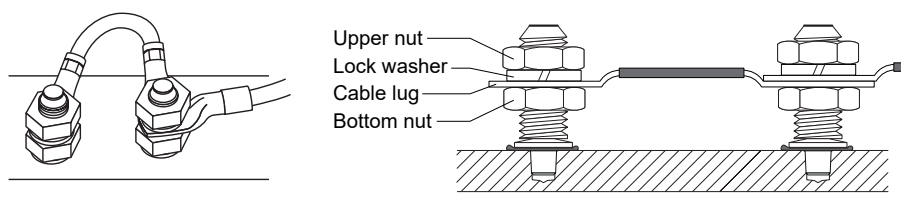
With regards to suitable Hilti screwdrivers and their respective torque settings see the information given in the Hilti Direct Fastening Technology Manual or the information given in the instruction for use which are supplied with the fasteners.

3.3.8 Installation for electrical connections – X-BT-ER

Single point connection for all X-BT-ER M8/M10/W10 /7 SN 8,
X-BT-ER M6/W6 /3 SN 8



Double point connection for all X-BT-ER M8/M10/W10 /7 SN 8,
X-BT-ER M6/W6 /7 SN 8



3.3.9 Fastening quality assurance

Fastening inspection

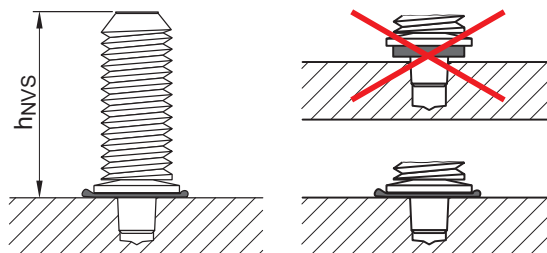
X-BT-GR M8

$h_{NVS} = 15.7 - 16.8 \text{ mm}$

X-BT-MR M6/W6/M8/M10/W10

X-BT-ER M6/W6/M8/M10/W10

$h_{NVS} = 25.7 - 26.8 \text{ mm}$



4. METHOD STATEMENT

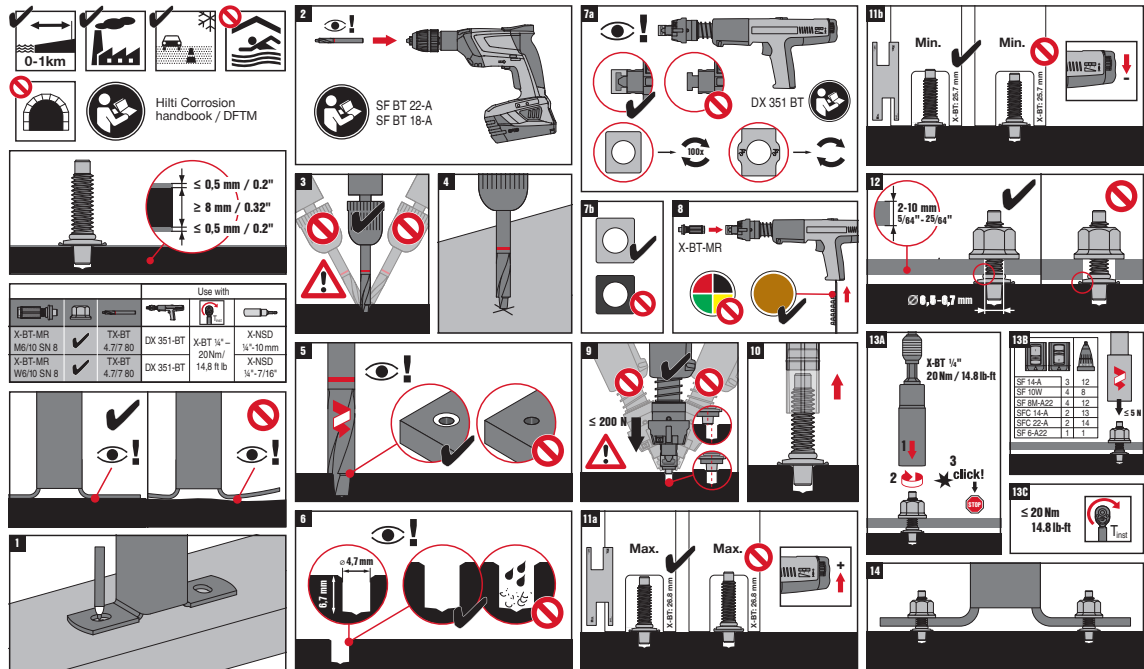
4.1 Instructions for use - X-BT-MR M6/W6/10 SN 8

Fastening tool: DX 351



X-BT-MR M6/W6

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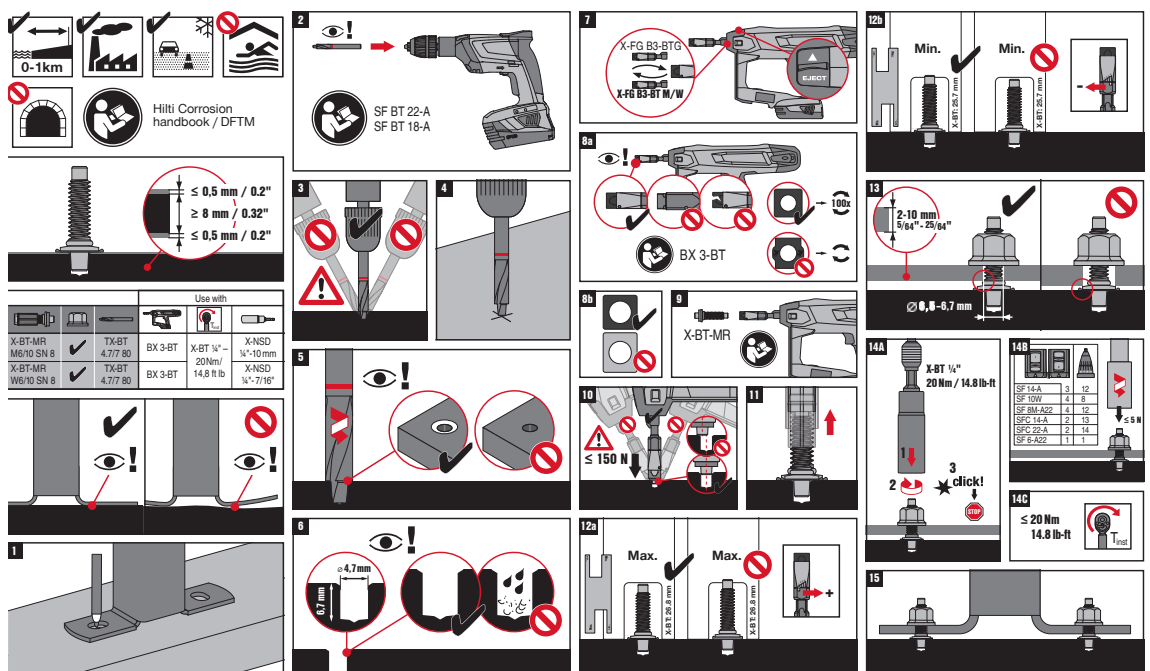


For fasteners X-BT-MR M6/14 SN 8 and X-BT-MR W6/14 SN 8 the same instructions for use apply with the exception of the maximum thickness of the fixed component, for detail it is referred to the instructions supplied with each box of fasteners.

Fastening tool: BX 3



X-BT-MR M6/W6



Instructions for use are subject to continuous changes related to code developments, product portfolio updates, and new research results. Current instruction for use can be downloaded from Hilti website.

4.2 Instructions for use - X-BT-MR M8/14 SN 8

Fastening tool: DX 351



X-BT-MR M8

2203795 A2-07.2019

0-1km

Hilti Corrosion handbook / DFTM

SF BT 22-A
SF BT 18-A

DX 351 BT

X-BT-MR M8/14 SN 8

TX-BT 4.7/7 80

DX 351-BT

X-BT 1/4" 20Nm / 14.8 ft lb

S-NS 15 C 95/3 3/4"

Use with

1

2

3

4

5

6

7a

7b

8

9

10

11a

11b

12

13

13a

13b

13c

14

≤ 0.5 mm / 0.2"
≥ 8 mm / 0.32"
≤ 0.5 mm / 0.2"

≤ 200 N

≤ 20 Nm
14.8 lb-ft

2-14 mm
5/64" - 35/64"

13-14 mm
1/2" - 1/2"

1-BT 1/4" 20 Nm / 14.8 lb-ft

SF 12-A	3	12
SF 10-W	4	8
SF 8-A22	4	12
SFC 14-A	2	13
SFC 22-A	2	13
SF 6-A22	11	11

≤ 5 Nm

≤ 20 Nm
14.8 lb-ft

Fastening tool: BX 3



X-BT-MR M8

0-1km

Hilti Corrosion handbook / DFTM

SF BT 22-A
SF BT 18-A

BX 3-BT

X-BT-MR M8/14 SN 8

TX-BT 4.7/7 80

BX 3-BT

X-BT 1/4" 20Nm / 14.8 ft lb

S-NS 15 C 95/3 3/4"

Use with

1

2

3

4

5

6

7

8a

8b

9

10

11

12a

12b

13

14

14a

14b

14c

15

≤ 0.5 mm / 0.2"
≥ 8 mm / 0.32"
≤ 0.5 mm / 0.2"

≤ 150 N

≤ 20 Nm
14.8 lb-ft

2-14 mm
5/64" - 35/64"

13-14 mm
1/2" - 1/2"

1-BT 1/4" 20 Nm / 14.8 lb-ft

SF 12-A	3	12
SF 10-W	4	8
SF 8-A22	4	12
SFC 14-A	2	13
SFC 22-A	2	13
SF 6-A22	11	11

≤ 5 Nm

≤ 20 Nm
14.8 lb-ft

Instructions for use are subject to continuous changes related to code developments, product portfolio updates, and new research results. Current instruction for use can be downloaded from Hilti website.

4.3 Instructions for use - X-BT-MR M10/W10/15 SN 8

Fastening tool: DX 351



X-BT-MR M10/W10

2203796 A2-07_2019

			Use with
X-BT-MR M10/15 SN 8	TX-BT 4.7/7 80	DX 351-BT	X-BT 1/4" - 20Nm/ 14.8 ft lb C 95/3 1/4" S-NIS 15
X-BT-MR W10/15 SN 8	TX-BT 4.7/7 80	DX 351-BT	S-NIS 15/2" C 95/3 1/4"

SF 14-A	3	13	≤ 5 N
SF 10W/ 18-A-22	4	11	
SFC 14.22-A	2	11	
SF 6-A22	11	11	

Fastening tool: BX 3



X-BT-MR M10/W10

			Use with
X-BT-MR M10/15 SN 8	TX-BT 4.7/7 80	BX 3-BT	X-BT 1/4" - 20Nm/ 14.8 ft lb S-NIS 15
X-BT-MR W10/15 SN 8	TX-BT 4.7/7 80	BX 3-BT	S-NIS 15/2" C 95/3 1/4"

SF 14-A	3	13	≤ 5 N
SF 10W/ 18-A-22	4	11	
SFC 14.22-A	2	11	
SF 6-A22	11	11	

Instructions for use are subject to continuous changes related to code developments, product portfolio updates, and new research results. Current instruction for use can be downloaded from Hilti website.

4.4 Instructions for use - X-BT-GR M8/7 SN 8

Fastening tool: DX 351



X-BT-GR M8

2203797 A2-07.2019

0-1km

Hilti Corrosion handbook / DFTM

$\leq 0,5 \text{ mm} / 0,2''$
 $\geq 8 \text{ mm} / 0,32''$
 $\leq 0,5 \text{ mm} / 0,2''$

X-BT-GR M8/7 SN 8	DX 351-BTG	TX-BT 4,7/7 110	1/4" 20Nm/ 14.8 ft lb
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SF BT 22-A
SF BT 18-A

DX 351 BTG

X-BT-GR

2-7 mm
5/64" - 19/32"

13 - 14 mm
1/2" - 9/16"

≤ 200 N

Max. Max.

Min. Min.

≤ 20 Nm
14.8 ft lb

Fastening tool: BX 3



X-BT-GR M8

0-1km

Hilti Corrosion handbook / DFTM

$\leq 0,5 \text{ mm} / 0,2''$
 $\geq 8 \text{ mm} / 0,32''$
 $\leq 0,5 \text{ mm} / 0,2''$

X-BT-GR M8/7 SN 8	BX 3-BTG	TX-BT 4,7/7 110	1/4" 20Nm/ 14.8 ft lb
-------------------	----------	-----------------	-----------------------

SF BT 22-A
SF BT 18-A

X-FG B3-BTG
X-FG B3-BT/MW

BX 3-BT

2-7 mm
5/64" - 19/32"

13 - 14 mm
1/2" - 9/16"

≤ 150 N

Max. Max.

Min. Min.

≤ 20 Nm
14.8 ft lb

Instructions for use are subject to continuous changes related to code developments, product portfolio updates, and new research results. Current instruction for use can be downloaded from Hilti website.

4.5 Instructions for use - X-BT-ER M8/M10/W10 SN 8

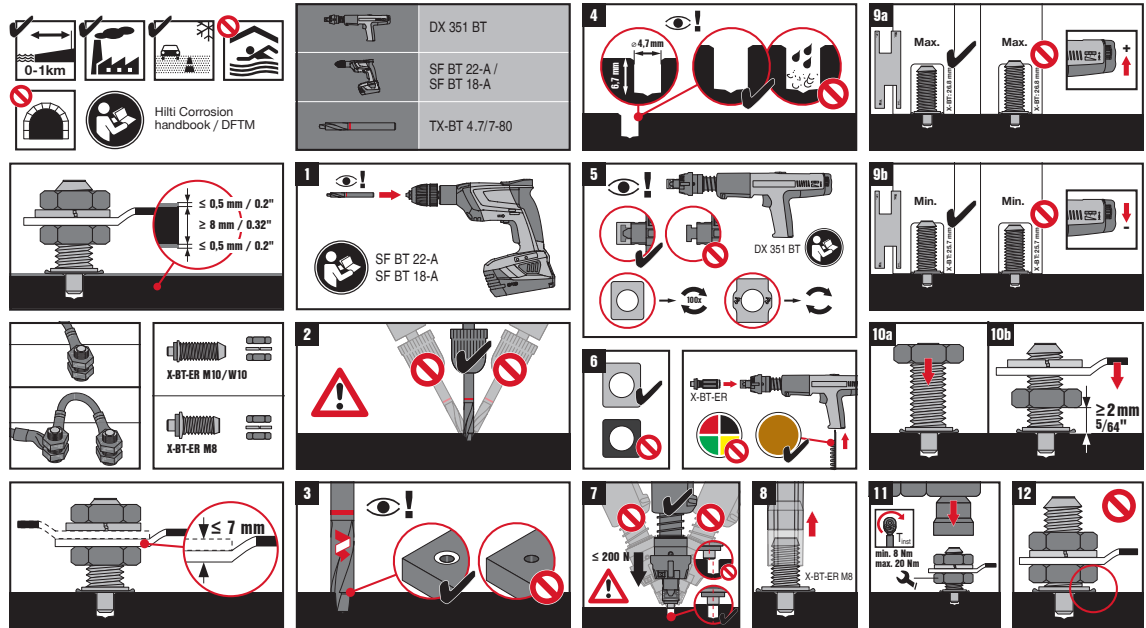
The following graphs show the instructions for use for the items X-BT-ER M8/M10/W10 /7 SN 8. Instructions for use related with X-BT-ER M6/W6 /3 SN 8 are provided in the X-BT packages.

Fastening tool: DX 351



X-BT-ER M8,
M10/W10 SN 8

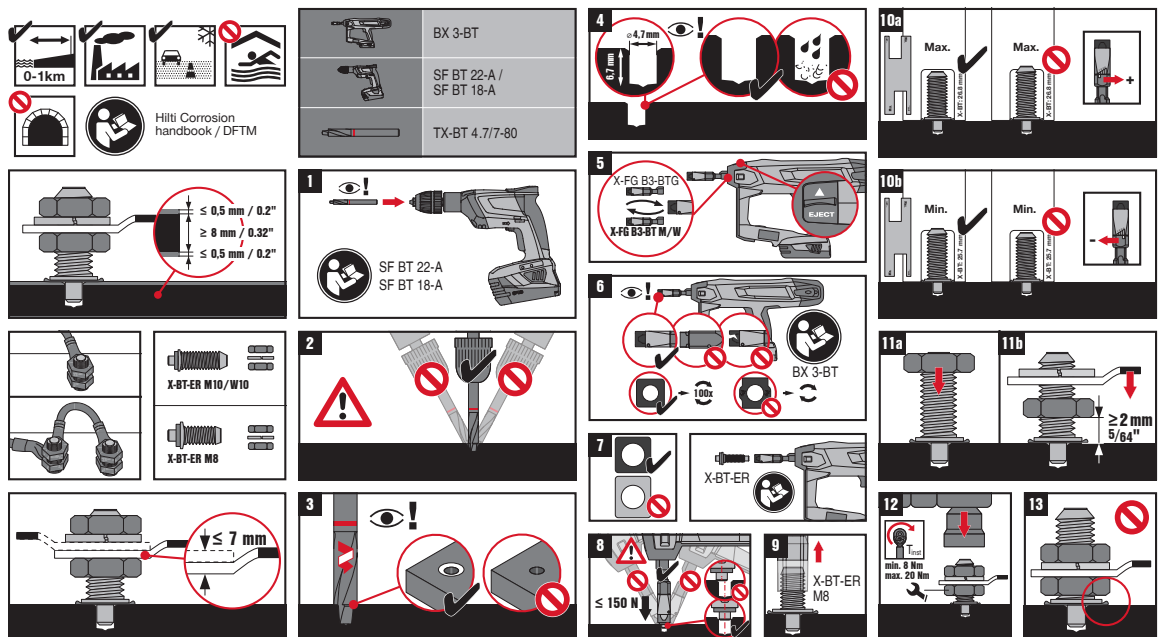
2197511 A2-07.2019



Fastening tool: BX 3



X-BT-ER M8,
M10/W10 SN 8



Attn. : To whom it may concern

Date : 26 September 2023
Ref. : 134/AM/DY/23

Subject : Country of Origin- Hilti X-BT Stainless Steel Threaded Studs

Dear Sir / Madam,

Enclosed please find the information of Hilti X-BT Stainless Steel Threaded Studs.

Brand Name : Hilti

Model Name : Hilti X-BT Stainless Steel Threaded Studs

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Dennis Yeung

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Dennis Yeung (+852 9723 4621)

Country of Origin : Liechtenstein

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

Yours faithfully,



Dennis Yeung
Head of Product Leadership Strategy, F&P

