EN

DECLARATION OF PERFORMANCE

according to Annex III of the Regulation (EU) Nr. 305/2011 (Construction Products Regulation)

Hilti grating fasteners X-FCM, X-FCM-F, X-FCM-F L, X-FCM-F HL, X-FCM-F NG
X-FCM-R, X-FCM-R L, X-FCM-R HL, X-FCM-R NG
Hilti checker plate fasteners X-FCP-F, X-FCP-R
No. Hilti-DX-DoP-013

1. Unique identification code of the product-type: Hilti grating fasteners X-FCM, X-FCM-F, X-FCM-F L, X-FCM-F HL, X-FCM-F NG, X-FCM-R, X-FCM-R L, X-FCM-R HL, X-FCM-R NG. Hilti checker plate fasteners X-FCP-F, X-FCP-R

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4): Type and lot number are displayed on the packaging

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Intended use	Securing the position of gratings with rectangular or square openings in combination with threaded studs with thread size M8. Securing the position of checker plates in combination with threaded studs with thread size M8.
Fixed material (component I)	Gratings with rectangular or square openings Checker plates
Base material (component II)	Non-alloy structural steel - EN 1993-1-1, EN 1993-1-12, EN 10025, EN 10346, EN 10149 Aluminium - EN 1999-1-1 The steel base material may be paint coated, hot-dipped galvanized or duplex coated (duplex = paint applied over zinc coating).
Environmental condition	X-FCM: Surface protection: galvanized (min. 10 µm) X-FCM-F, X-FCM-F L, X-FCM-F HL, X-FCM-F NG, X-FCP-F: Surface protection: galvanized with additional inorganic sealer (duplex coating) X-FCM-R, X-FCM-R L, X-FCM-R HL, X-FCM-R NG, X-FCP-R: the grating and checker plate fasteners are allocated to the corrosion resistance class CRC III according to EN 1993-1-4. Use in the temperature range from −40 °C to +60 °C.
Loading	Static and quasi static tensile loading

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5): Hilti Aktiengesellschaft, Business Unit Direct Fastening, 9494 Schaan, Fürstentum Liechtenstein

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2): n.a.

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard: n.a.

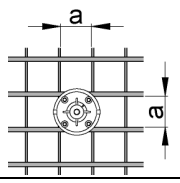
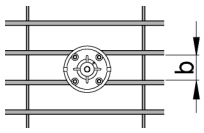
8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued: DIBt, Deutsches Institut für Bautechnik issued ETA-24/0018 on the basis of EAD 333037-00-0602, April 2020. The notified body MPA-Stuttgart 0672 performed third party tasks under system 2+ and issued the certificate of conformity of the factory production control 0672-CPR-1057.

9. Declared performance:

Essential characteristics	Performance
Tension resistance	Annex C1 (Table C1) for X-FCM, X-FCM-F Annex C1 (Table C2) for X-FCM-R Annex C2 (Table C3) for X-FCM-F L, X-FCM-R L Annex C3 (Table C4) for X-FCM-F HL Annex C3 (Table C5) for X-FCM-R HL Annex C4 (Table C6) for X-FCM-F NG Annex C4 (Table C7) for X-FCM-R NG Annex C5 (Table C8) for X-FCP-F, X-FCP-R of ETA-24/0018 (details see below)
Reaction to fire	Class A1 – EN 13501-1
Resistance to fire	no performances evaluated

The following summary provides extracts from the referenced annexes of ETA-24/0018:

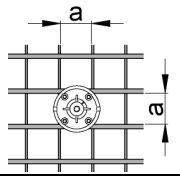
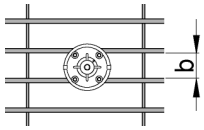
Table C1: Characteristic tension resistance for Hilti X-FCM, X-FCM-F grating fastener [1)]

Square grating					
Clear bar spacing	a	[mm]	18	18 < a ≤ 30	30 < a ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	4.50	1.50	1.15
Rectangular grating					
Clear bar spacing	b	[mm]	18	18 < b ≤ 30	30 < b ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	1.50	1.50	0.95
Partial factor [2)]	γ_M	[-]	1.25		

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM or X-FCM-F grating fastener with the Hilti X-SEA-F 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

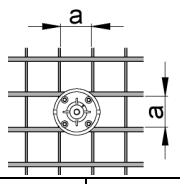
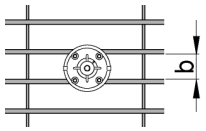
Table C2: Characteristic tension resistance for Hilti X-FCM-R grating fastener [1)]

Square grating					
Clear bar spacing	a	[mm]	18	18 < a ≤ 30	30 < a ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	3.40	1.90	1.50
Rectangular grating					
Clear bar spacing	b	[mm]	18	18 < b ≤ 30	30 < b ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	2.65	1.90	1.15
Partial factor [2)]	γ_M	[-]	1.25		

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-R grating fastener with the Hilti X-SEA-R 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

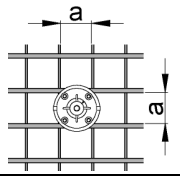
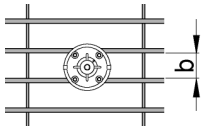
Table C3: Characteristic tension resistance for Hilti X-FCM-F L, X-FCM-R L grating fastener [1)]

Square grating				
Clear bar spacing	a	[mm]	30	30 < a ≤ 60
Characteristic tension resistance	$N_{Rk,g}$	[kN]	3.40	1.50
Rectangular grating				
Clear bar spacing	b	[mm]	30	30 < b ≤ 57
Characteristic tension resistance	$N_{Rk,g}$	[kN]	1.50	1.50
Partial factor [2)]	γ_M	[-]	1.25	

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-F L or X-FCM-R L grating fastener with the Hilti X-SEA-F 30 M8 or X-SEA-R 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

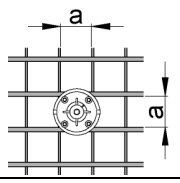
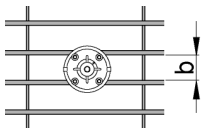
Table C4: Characteristic tension resistance for Hilti X-FCM-F HL grating fastener [1)]

Square grating					
Clear bar spacing	a	[mm]	20	20 < a ≤ 30	30 < a ≤ 38
Characteristic tension resistance	$N_{Rk,g}$	[kN]	6.80	6.80	2.25
Rectangular grating					
Clear bar spacing	b	[mm]	24	24 < b ≤ 30	30 < b ≤ 35
Characteristic tension resistance	$N_{Rk,g}$	[kN]	5.30	4.00	2.65
Partial factor [2)]	γ_M	[-]	1.25		

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-F HL grating fastener with the Hilti X-SEA-F 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

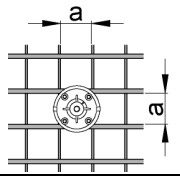
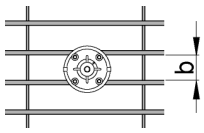
Table C5: Characteristic tension resistance for Hilti X-FCM-R HL grating fastener [1)]

Square grating						
Clear bar spacing	a	[mm]	20	20 < a ≤ 38		38 < a ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	6.80	6.80		2.30
Rectangular grating						
Clear bar spacing	b	[mm]	24	24 < b ≤ 30	30 < b ≤ 35	35 < b ≤ 40
Characteristic tension resistance	$N_{Rk,g}$	[kN]	5.30	4.00	2.70	1.35
Partial factor [2)]	γ_M	[-]	1.25			

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-R HL grating fastener with the Hilti X-SEA-R 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

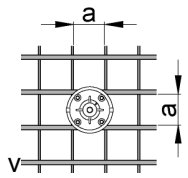
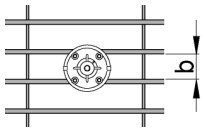
Table C6: Characteristic tension resistance for Hilti X-FCM-F NG grating fastener [1)]

Square grating					
Clear bar spacing	a	[mm]	13	13 < a ≤ 18	18 < a ≤ 22
Characteristic tension resistance	$N_{Rk,g}$	[kN]	7.50	4.70	3.20
Rectangular grating					
Clear bar spacing	b	[mm]	13	13 < b ≤ 18	18 < b ≤ 22
Characteristic tension resistance	$N_{Rk,g}$	[kN]	7.50	4.00	2.25
Partial factor [2)]	γ_M	[-]	1.25		

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-F NG grating fastener with the Hilti X-SEA-F 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

Table C7: Characteristic tension resistance for Hilti X-FCM-R NG grating fastener [1)]

Square grating					
Clear bar spacing	a	[mm]	13	13 < a ≤ 18	18 < a ≤ 22
Characteristic tension resistance	$N_{Rk,g}$	[kN]	6.80	6.80	5.10
Rectangular grating					
Clear bar spacing	b	[mm]	13	13 < b ≤ 18	18 < b ≤ 22
Characteristic tension resistance	$N_{Rk,g}$	[kN]	6.80	6.80	4.00
Partial factor [2)]	γ_M	[-]	1.25		

[1)] The characteristic tension resistance $N_{Rk,g}$ is also valid for the combination of the X-FCM-R NG grating fastener with the Hilti X-SEA-R 30 M8 extension adapter.

[2)] Recommended value in the absence of national regulations.

Table C8: Characteristic tension resistance for Hilti X-FCP-F, X-FCP-R checker plate fastener [1)]

Checker plate fastener			
Characteristic tension resistance	$N_{Rk,g}$	[kN]	3.40
Partial factor [1)]	γ_M	[-]	1.25

[1)] Recommended value in the absence of national regulations.

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Rafael Garcia
Head of Business Unit Direct Fastening

Klaus Bertsch
Head of Quality Direct Fastening

Hilti Aktiengesellschaft, Schaan: 01.06.2024