



EN

## DECLARATION OF PERFORMANCE

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

Hilti powder-actuated fasteners **X-X 27 P8 and MX** per **ETA-23/0911**  
Nr. Hilti-DX-DoP-012

### 1. Unique identification code of the product-type:

Hilti powder-actuated fasteners **X-X 27**

### 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	Drywall track & deflection head fastening to concrete under static, quasi static, seismic and fire demands, see also Figure 1
Base material	Reinforced or unreinforced normal weight concrete of strength class C20/25 bis C40/50.
Environmental condition	Structures subject to dry indoor conditions.

### 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 declaration of the 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:

CSTB, Centre Scientifique et Technique du Bâtiment issued ETA-23/0911 on the basis of EAD 330083-04-0601 v1, Edition 10/2023. The notified body MPA-Stuttgart 0672 performed third party tasks under system 2+.

### 9. Declared performance:

Essential characteristic	Performance
Characteristic <b>static and quasi-static</b> resistance in non-cracked & cracked concrete	Table C1 and C2 ETA-23/0911 (see below)
Characteristic <b>seismic</b> resistance in non-cracked & cracked concrete	Table C3 and C4 ETA-23/0911 (see below)
Characteristic <b>fire</b> resistance in non-cracked and cracked concrete	Table C5 and C6 ETA-23/0911 (see below)
Durability	Structures subject to dry conditions.
Reaction to fire	Class A1

The following tables provide the performance of the X-X fasteners per ETA-23/0911:

**Table C1: Static and quasi-static resistance in cracked and uncracked concrete for fixed track fastening**

Fastener		X-X 27 MX or P8	
Track thickness $t^{(1)} = t_{\text{fix}}$	[mm]	$\geq 0,5$	$\geq 0,75$
Char. Shear resistance $V_{\text{RK}}$ in C20/25	[kN]	<b>0,87</b>	<b>1,22</b>
Char. Shear resistance $V_{\text{RK}}$ in C40/50	[kN]	<b>0,87</b>	<b>1,22</b>
Partial safety factor $\gamma_{\text{M}}^{(2)}$	[-]	1,5	
Partial safety factor $\gamma_{\text{F}}^{(2)}$	[-]	1,4	
Maximum spacing $s_{\text{max}}$	[mm]	600	
Minimum thickness of concrete members $h_{\text{min},1}$	[mm]	80	
Minimum spacing $s_{\text{min},1}$	[mm]	200	
Minimum edge distance $c_{\text{min},1}$	[mm]	150	
Minimum thickness of concrete members $h_{\text{min},2}$	[mm]	160	
Minimum spacing $s_{\text{min},2}$	[mm]	100	
Minimum edge distance $c_{\text{min},2}$	[mm]	150	

- 1) Intermediate values may be linearly interpolated.
- 2) In absence of national regulations.

**Table C2: Static and quasi-static resistance in cracked and uncracked concrete for deflection head fastening ( $V_{\text{sd}}$  acts at 20 mm distance from concrete surface)**

Fastener		X-X 27 MX or P8	
Track thickness $t^{(1)} = t_{\text{fix}}$	[mm]	$\geq 0,5$	$\geq 0,75$
Char. Shear resistance $V_{\text{RK}}$ in C20/25	[kN]	<b>0,34</b>	<b>0,99</b>
Char. Shear resistance $V_{\text{RK}}$ in C40/50	[kN]	<b>0,30</b>	<b>0,56</b>
Partial safety factor $\gamma_{\text{M}}^{(2)}$	[-]	1,5	
Partial safety factor $\gamma_{\text{F}}^{(2)}$	[-]	1,4	
Maximum spacing $s_{\text{max}}$	[mm]	600	
Minimum thickness of concrete members $h_{\text{min},1}$	[mm]	80	
Minimum spacing $s_{\text{min},1}$	[mm]	200	
Minimum edge distance $c_{\text{min},1}$	[mm]	150	
Minimum thickness of concrete members $h_{\text{min},2}$	[mm]	160	
Minimum spacing $s_{\text{min},2}$	[mm]	100	
Minimum edge distance $c_{\text{min},2}$	[mm]	150	

- 1) Intermediate values may be linearly interpolated.
- 2) In absence of national regulations.

**Table C3: Seismic resistance in cracked and uncracked concrete for  
fixed track fastening**

Fastener		X-X 27 MX or P8	
Track thickness $t^{(1)} = t_{fix}$	[mm]	$\geq 0,5$	$\geq 0,75$
Char. Seismic Shear resistance $V_{Rk,p,eq}$ in C20/25	[kN]	<b>0,87</b>	<b>0,90</b>
Char. Seismic Shear resistance $V_{Rk,p,eq}$ in C40/50	[kN]	<b>0,87</b>	<b>0,90</b>
Partial safety factor $\gamma_M^{(2)}$	[-]	1,5	
Partial safety factor $\gamma_F^{(2)}$	[-]	1,4	
Maximum spacing $s_{max}$	[mm]	600	
Minimum thickness of concrete members $h_{min,1}$	[mm]	80	
Minimum spacing $s_{min,1}$	[mm]	200	
Minimum edge distance $c_{min,1}$	[mm]	150	
Minimum thickness of concrete members $h_{min,2}$	[mm]	160	
Minimum spacing $s_{min,2}$	[mm]	100	
Minimum edge distance $c_{min,2}$	[mm]	150	

- 1) Intermediate values may be linearly interpolated.
- 2) In absence of national regulations.

**Table C4: Seismic resistance in cracked and uncracked concrete for  
deflection head fastening ( $V_{sd}$  acts at 20 mm distance from concrete surface)**

Fastener		X-X 27 MX or P8	
Track thickness $t^{(1)} = t_{fix}$	[mm]	$\geq 0,5$	$\geq 0,75$
Char. Seismic Shear resistance $V_{Rk,p,eq}$ in C20/25	[kN]	<b>0,23</b>	<b>0,60</b>
Char. Seismic Shear resistance $V_{Rk,p,eq}$ in C40/50	[kN]	<b>0,23</b>	<b>0,35</b>
Partial safety factor $\gamma_M^{(2)}$	[-]	1,5	
Partial safety factor $\gamma_F^{(2)}$	[-]	1,4	
Maximum spacing $s_{max}$	[mm]	600	
Minimum thickness of concrete members $h_{min,1}$	[mm]	80	
Minimum spacing $s_{min,1}$	[mm]	200	
Minimum edge distance $c_{min,1}$	[mm]	150	
Minimum thickness of concrete members $h_{min,2}$	[mm]	160	
Minimum spacing $s_{min,2}$	[mm]	100	
Minimum edge distance $c_{min,2}$	[mm]	150	

- 1) Intermediate values may be linearly interpolated,
- 2) In absence of national regulations,

**Table C5: Fire resistance in cracked and uncracked concrete for  
fixed track fastening**

Fastener		Hilti X-X 27 MX or P8	
Track thickness $t^{1)}$	[mm]	$\geq 0,5$	$\geq 0,75$
Characteristic Shear resistance $V_{Rk,fi}$ C20/25 – C40/50 For fire duration of:	30 min	0,30 kN	0,40 kN
	60 min	0,23 kN	0,35 kN
	90 min	0,15 kN	0,25 kN
	120 min	0,11 kN	0,19 kN
Partial safety factor $\gamma_M^{2)}$		1,0	
Partial safety factor $\gamma_F^{2)}$		1,0	
Maximum spacing $s_{max}$		600 mm	
Minimum thickness of concrete members <sup>3)</sup> $h_{min,1}$		80 mm	
Minimum spacing $s_{min,1}$		200 mm	
Minimum edge distance $c_{min,1}$		150 mm	
Minimum thickness of concrete members <sup>3)</sup> $h_{min,2}$		160 mm	
Minimum spacing $s_{min,2}$		100 mm	
Minimum edge distance $c_{min,2}$		150 mm	

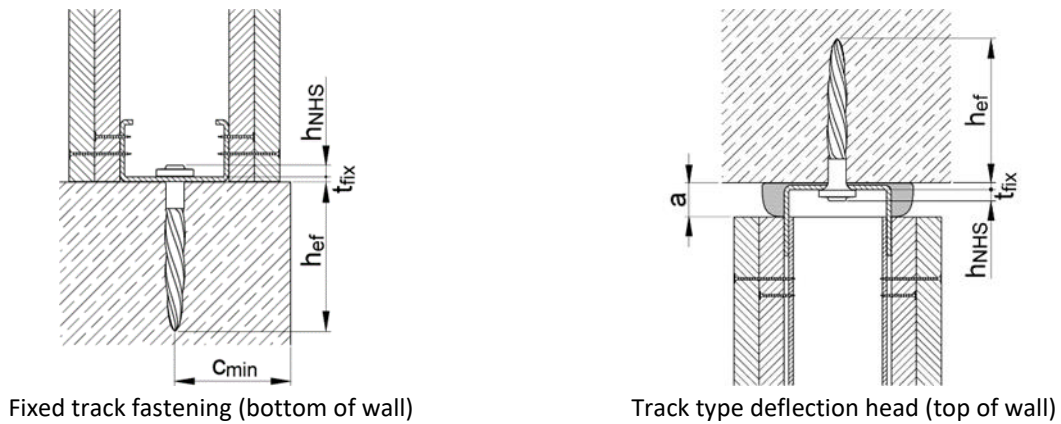
- 1) Intermediate values may be linearly interpolated.
- 2) In absence of national regulations.
- 3) Concrete members under fire exposure must have the at least the same fire rating as the attached partition wall system and connection

**Table C6: Fire resistance in cracked and uncracked concrete for  
deflection head fastening ( $V_{sd}$  acts at 20 mm distance from concrete surface)**

Fastener		Hilti X-X 27 MX or P8	
Track thickness $t^{1)}$	[mm]	$\geq 0,5$ mm	$\geq 0,75$ mm
Characteristic Shear resistance $V_{Rk,fi}$ C20/25 – C40/50 For fire duration of:	30 min	0,15 kN	0,27 kN
	60 min	0,15 kN	0,27 kN
	90 min	0,15 kN	0,20 kN
Partial safety factor $\gamma_M^{2)}$		1,0	
Partial safety factor $\gamma_F^{2)}$		1,0	
Maximum spacing $s_{max}$		600 mm	
Minimum thickness of concrete members <sup>3)</sup> $h_{min,1}$		80 mm	
Minimum spacing $s_{min,1}$		200 mm	
Minimum edge distance $c_{min,1}$		150 mm	
Minimum thickness of concrete members <sup>3)</sup> $h_{min,2}$		160 mm	
Minimum spacing $s_{min,2}$		100 mm	
Minimum edge distance $c_{min,2}$		150 mm	

- 1) Intermediate values may be linearly interpolated.
- 2) In absence of national regulations.
- 3) Concrete members under fire exposure must have the at least the same fire rating as the attached partition wall system and connection

Figure 1: Intended use



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: 02.04.2024