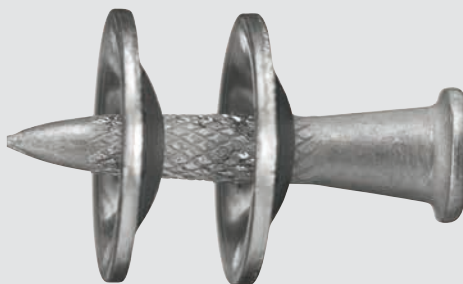




X-ENP 2K DATA SHEET

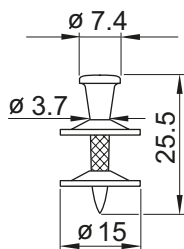
Siding and decking nail



X-ENP 2K Siding and decking nail

Product data

Dimensions



Material specifications

Carbon steel shank:	HRC 55.5
Zinc coating:	8–16 µm

Recommended fastening tools

Tools:	Single nail:
DX 76 PTR with	X-ENP 2K-20 L15
X-76-F-15-PTR fastener guide	
DX 76 MX with	
X-76-F-15 fastener guide	
Tools:	Collated nails:
DX 76 PTR	X-ENP 2K-20 L15 MX
DX 76 MX	(green magazine strip)



- For more details, please refer to the chapter **Accessories and consumables compatibility** in the Direct Fastening Technology Manual (DFTM).

Approvals and certificates

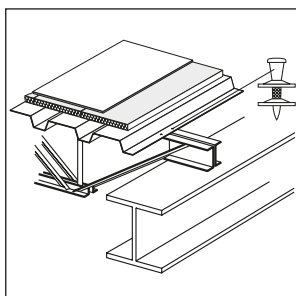
BUtgb (Belgium), ABS, ETA 13/0172 (Hilti-DX-DoP 003), LR 97/00077



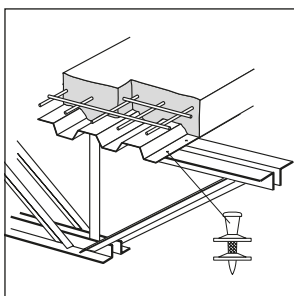
- Not all information presented in this product data sheet might be subject to approval/ certificate content. Please refer to approval/certificate for further information.

Applications

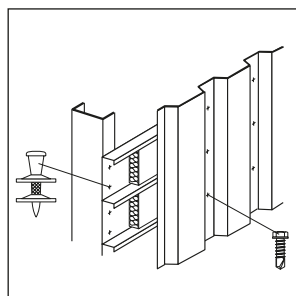
Examples



Roof and floor decking



Roof and floor decking



Wall liners

Performance data

Caracteristic loads

Overlap Sheeting thickness t_l [mm]	$3 \text{ mm} \leq t_{ll} < 4 \text{ mm}$			$4 \text{ mm} \leq t_{ll} \leq 6 \text{ mm}$		
	V_{Rk} [kN]	N_{Rk} [kN]	Types of conn.	V_{Rk} [kN]	N_{Rk} [kN]	Types of conn.
0.75	4.70	6.00	a, c	4.70	6.30	a, b, c, d
0.88	5.40	6.00	a, c	5.40	7.20	a, (b)*, c, d
1.00	6.00	6.00	a, c	6.00	8.00	a, (b)*, c, d
1.13	–	–	–	7.00	8.40	a, c
1.25	–	–	–	8.00	8.80	a, c
1.50	–	–	–	8.60	8.80	a

* Fastening type (b) covered for $5 \text{ mm} \leq t_{ll} < 6 \text{ mm}$, if N_{Rk} is reduced to 6.6 kN

Fastening type (b) fully covered for $t_{ll} = 6 \text{ mm}$

For a, b, c, d please refer to Application requirements, Sheet thicknesses and overlap types

Design

Design shear and tension resistance

$$V_{Rd} = V_{Rk} / \gamma_M \quad N_{Rd} = \alpha_{cycl} N_{Rk} / \gamma_M \text{ with } \alpha_{cycl} = 1.0 \text{ for all sheeting thickness } t_l$$

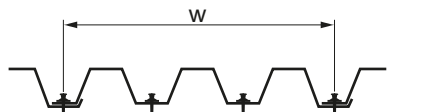
α_{cycl} considers the effect of repeated wind loads

$\gamma_M = 1.25$ in the absence of national regulations

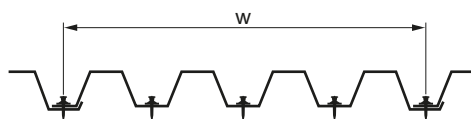
Characteristic tension resistances n_{Rk} [kN/m] and shear resistances v_{Rk} [kN/m] per unit length, taking the effect of thermal constraints into account

N_{Rk} and V_{Rk} characteristic shear and tension resistance

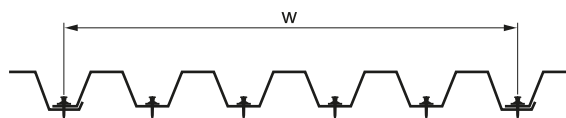
w ... width of the panel sheet



$$n_{Rk} = 0.9 \cdot 2 \cdot N_{Rk} / w \quad v_{Rk} = 2 \cdot V_{Rk} / w$$

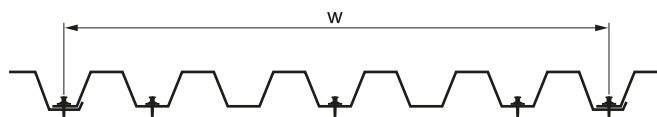


$$n_{Rk} = 0.9 \cdot 3 \cdot N_{Rk} / w \quad v_{Rk} = 3 \cdot V_{Rk} / w$$



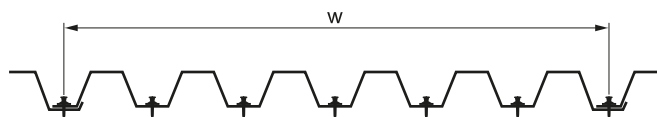
$$n_{Rk} = 0.9 \cdot 4 \cdot N_{Rk} / w$$

$$v_{Rk} = 4 \cdot V_{Rk} / w$$



$$n_{Rk} = 0.9 \cdot 5 \cdot N_{Rk} / w$$

$$v_{Rk} = 5 \cdot V_{Rk} / w$$



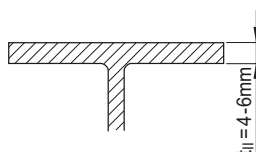
$$n_{Rk} = 3 \cdot N_{Rk} / w$$

$$v_{Rk} = 3 \cdot V_{Rk} / w$$

The same characteristic resistances can also be applied along supports at end-overlaps, if connection type “d” is not covered in the load table.

Application recommendation

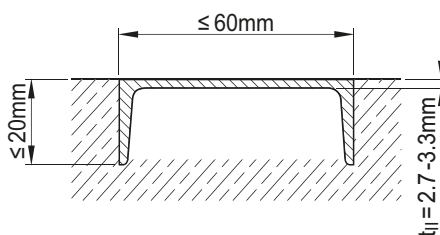
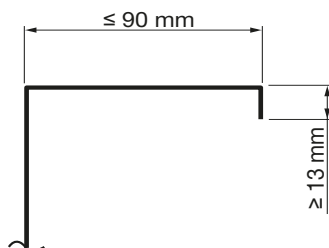
Thickness of base material



$t_{lj} = 4.0 - 6.0$ mm for general shapes

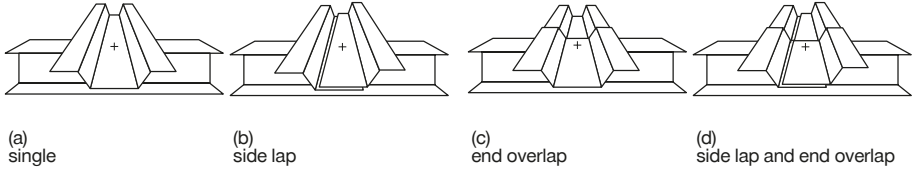
Fastening to cold-formed C- and Z-sections with a thickness from 2.9 to 4.0 mm

Fastening to U-shape concrete inlays with a nominal thickness t_{lj} of 3 mm.
 $t_{lj} = 3.0 \pm 0.3$ mm



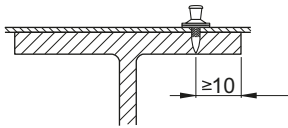
Grade: \geq S320 GD according to EN 10346

Sheet thicknesses and overlap types

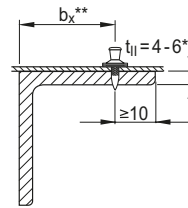


Edge distances (mm)

Rolled I or wide flange shapes



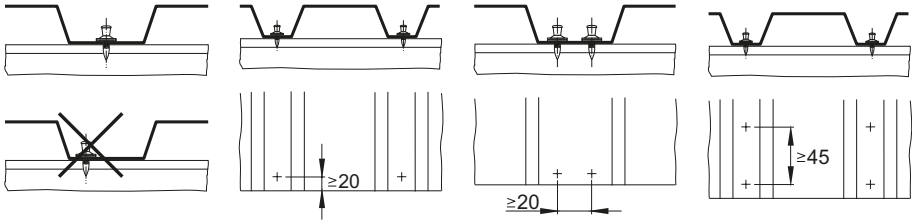
Angles



* For $t_{fl} = 3$ to 4 mm, restrictions on application. See approval or contact Hilti.

** Maximum recommended $b_x \leq 8 \times t_{fl}$ however, jobsite verification advisable.

Trapezoidal profiles

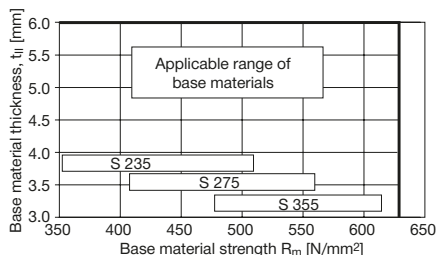


Centre fastenings in ribs

Clearance to end of sheet

Double fastenings
Note: Reduce tensile resistance per fastener to $0.7 N_{Rk}$.

Application limits



Corrosion information



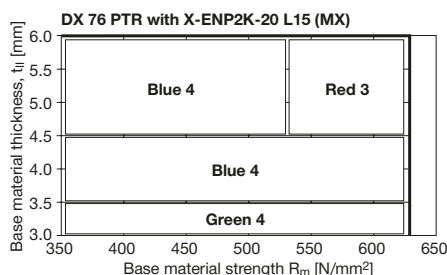
- The intended use only comprises fastenings which are not directly exposed to external weather conditions or moist atmospheres.
- For more details, please refer to following technical document: Hilti Corrosion Handbook

Fastener program and system recommendation

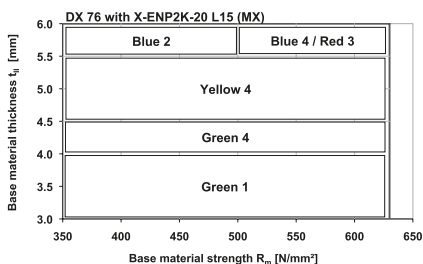
Fasteners	Designation	Item no.	Tools	Fastener guide
			Designation	Designation
Single nail:	X-ENP 2K-20 L15	385133	DX 76 PTR	X-76-F-15-PTR
			DX 76 MX	X-76-F-15
Collated nails:	X-ENP 2K-20 L15 MX	385134	DX 76 PTR	
			DX 76 MX	
Piston:	X-76-P-ENP2K-PTR		DX 76 PTR	
	X-76-P-ENP2K		DX 76 MX	

Cartridge selection and tool energy setting

DX 76 PTR



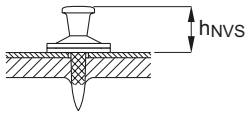
DX 76



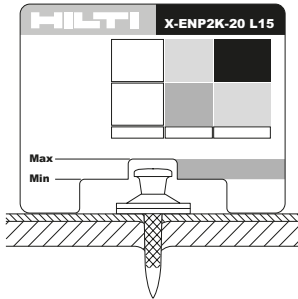
Fine adjustment by installation tests on site.

Quality assurance

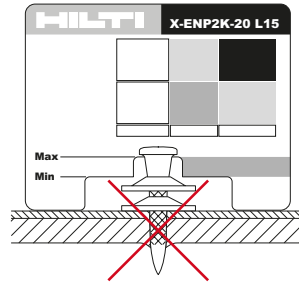
Fastening inspection



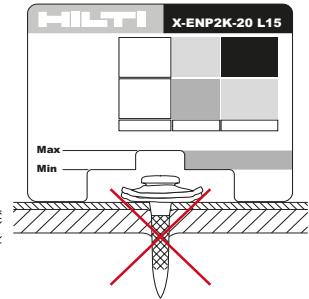
$h_{NVS} = 7-11 \text{ mm}$



$h_{NVS} = 7-11 \text{ mm}$



$h_{NVS} > 11 \text{ mm}$



$h_{NVS} < 7 \text{ mm}$