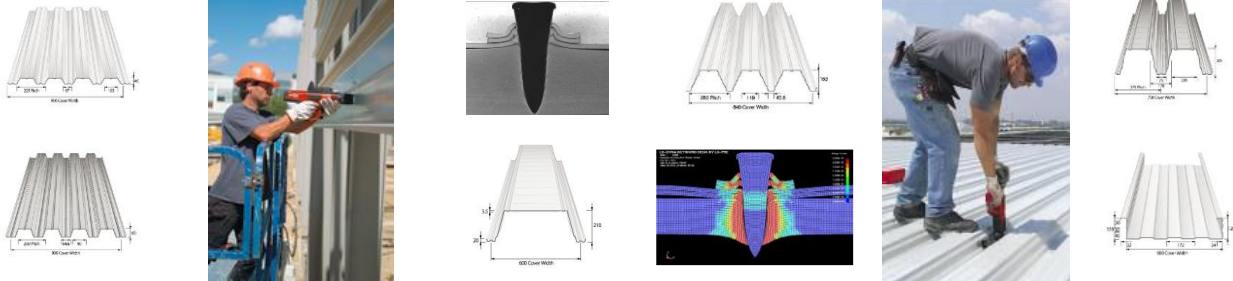
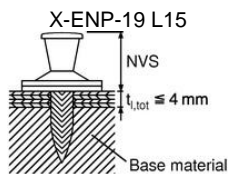


## TATA STEEL

### Fixing Tata Steel RoofDek to steel beams for steel decks and trays with a minimum grade S220



#### X-ENP Siding and Decking Nail



#### Material Specification

Carbon Steel shank:  
HRC 58±1  
Zinc Coating: 8-16 µm

#### Approvals

ETA-04/0101 (Europe),  
UL R13203, FM 3021719 (USA),  
MLIT (Japan)

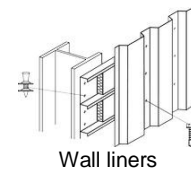
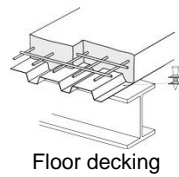
#### Fastening tools

DX 76 MX  
DX 76 PTR  
DX-860-ENP,

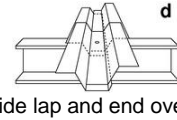
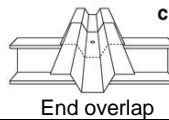
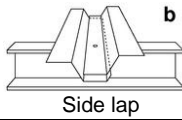
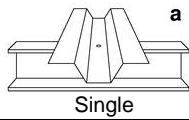
#### Nail

X-ENP-19 L15 MX  
X-ENP-19 L15 MXR

#### Applications

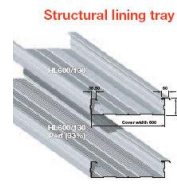


#### Sheet Thickness and overlap types



nominal sheeting thickness $t_1$ mm	allowable overlap types
0.63 - 1.00	a, b, c, d
> 1.00 - 1.25	a, c
> 1.25 - 2.50	a

Additional ENP19 pins can be used for b, c & d but need to be discounted from the overall load calculations; Details from technical services 0161 886 1144



Note: Maximum combined thickness fastened is 4mm

#### Characteristic & Recommended Loads

Steel Sheeting minimum tensile strength  $\geq 300 \text{ N/mm}^2$

TATA STEEL	Nominal sheet thickness $t_1$ (mm)	trapezoidal profile (symmetric loading)				liner trays <sup>1)</sup> (asymmetric loading)			
		char. resistance according to ETA-04/0101		recommended loads		char. resistance according to ETA-04/0101		recommended loads	
Profile references Including Perforated options	$t_1$ (mm)	shear $V_{Rk}$ [kN]	tension $N_{Rk}$ [kN]	shear $V_{Rec}$ [kN]	tension $N_{Rec}$ [kN]	shear $V_{Rk}$ [kN]	tension $N_{Rk}$ [kN]	shear $V_{Rec}$ [kN]	tension $N_{Rec}$ [kN]
D19/D32S/D35/D46/D60/D100	0.675	3.66	4.14	1.94	2.22	2.57	2.91	1.37	1.56
D19/D32S/D35/D46/D60/D100	0.90	4.58	6.11	2.46	3.26	3.22	4.25	1.70	2.29
D19/D32S/D35/D46/D60/D100	1.20	6.32	7.19	3.37	3.85	4.42	5.06	2.38	2.70

(See notes below and overleaf)

- $N_{Rk}$  and  $V_{Rk}$  are valid for steel sheet with minimum tensile strength  $\geq 300 \text{ N/mm}^2$  ( $\geq \text{S220 EN 10326}$ ). Please note the ETA for the fixing only covers sheets with steel grade  $\geq \text{S280}$

	<b>Complied: RBL</b>	<b>Approved:</b>	<b>Revised:</b>
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- Minimum structural steel thickness 6mm, See Hilti Technical data for more details concerning edge distance and fixing spacing
- Recommended loads  $N_{rec}$  and  $V_{rec}$  are appropriate for Eurocode 1 wind loading design with a partial safety factor  $\gamma_F = 1.5$  for wind load and a partial resistance factor  $\gamma_M = 1.25$  for the fastening.

<sup>1)</sup> Required load reduction is taken into account in accordance with Eurocode 3-1-3, section 8.4 (9) and fig. 8.2.

Note this is a Quick Reference Guide to be used for initial fastener selection only – for critical fixings check the full technical data available in the Hilti Direct Fastening Technology manual or available in our internet technical library at [www.hilti.co.uk/technical](http://www.hilti.co.uk/technical)

**HILTI TECHNICAL ADVISORY SERVICE**  
**TELEPHONE 0161 886 1144**

#### **IMPORTANT NOTES**

1. The information and recommendations given herein are believed to be correct at the time of writing. The data has been obtained from tests done under laboratory, or other controlled, conditions and it is the users' responsibility to use the data given in the light of conditions on site and taking account of the intended use of the products concerned. Whilst Hilti (Gt. Britain) Limited can give general guidance and advice, the nature of Hilti products means that the ultimate responsibility for selecting the correct product for a particular application must lie with the customer.
2. All products must be used, handled and applied in accordance with current instructions for use published by Hilti (Gt. Britain) Limited.
3. All products are supplied, and advice given, subject to Hilti (Gt. Britain) Limited terms of business.
4. Hilti's policy is one of continuous development. We therefore reserve the right to alter specifications etc. without notice.
5. Construction materials and conditions vary on different sites. If it is suspected that the base material has insufficient strength to achieve a suitable fixing, contact the Hilti Technical Advisory Service.

