



NPH DATA SHEET

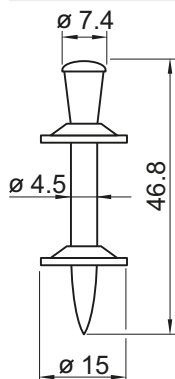
Siding and decking nail



NPH Siding and decking nail

Product data

Dimensions



Material specifications

Carbon steel shank: HRC 58
Zinc coating: 8–16 µm

Recommended fastening tools:

Tools: DX 76 PTR
with DX 76-F-Kwik-PTR
fastener guide
DX 76 with X-76-F-Kwik
fastener guide

Cartridges: 6.8/18M blue



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

Approvals and certificates

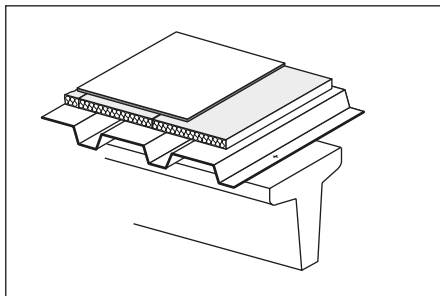
SOCOTEC (France), BUtgb (Belgium)



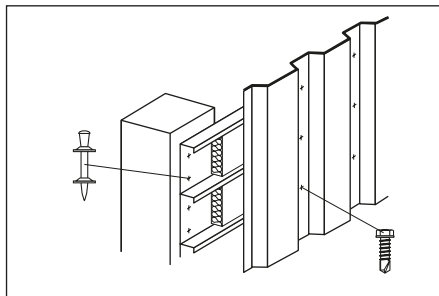
- Not all information presented in this product data sheet might be subject to approval/certificate content. Please refer to approval/certificate for further information.

Applications

Examples



Roof decking



Wall liners

Performance data

Recommended loads

Sheeting thickness t_l [mm] nominal	Trapezoidal profile (symmetric)		Liner trays (asymmetric)	
	N_{rec} [kN]	V_{rec} [kN]	N_{rec} [kN]	V_{rec} [kN]
0.75	1.80	1.20	1.30	1.20
0.88	2.10	1.50	1.50	1.50
1.00	2.40	1.80	1.70	1.80
1.13	2.70	2.20	1.90	2.20
1.25	3.00	2.50	2.10	2.50
1.50	3.00	3.00	2.50	3.00
1.75	3.00	3.00	2.50	3.00
2.00	3.00	3.00	2.50	3.00

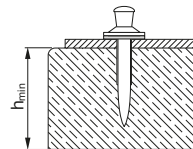
- Recommended working loads valid for steel sheets with a minimum tensile strength of $\geq 360 \text{ N/mm}^2$.
- For intermediate sheet thicknesses, use recommended load for next smaller thickness.
- Recommended loads are appropriate for EC1 (or similar) wind loading designs.
- The safety factor included is at least 2.0 applied to the static 5 % fractile value and 1.3 to the cyclic (5000 cycles) 5 % fractile value.

Application recommendation

Thickness of base material

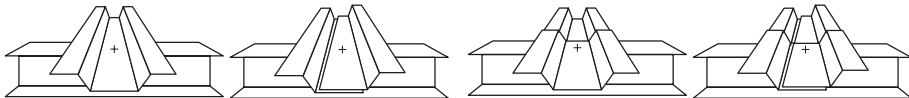
Minimum thickness of concrete member

$h_{min} = 160 \text{ mm}$



Thickness of fastened material

Sheet thicknesses and overlap types



(a)
single

(b)
side lap

(c)
end overlap

(d)
side lap and end overlap

Nominal sheeting thickness t_l

0.63–1.13 mm

> 1.13–2.50 mm

Allowable overlap types

a, b, c, d

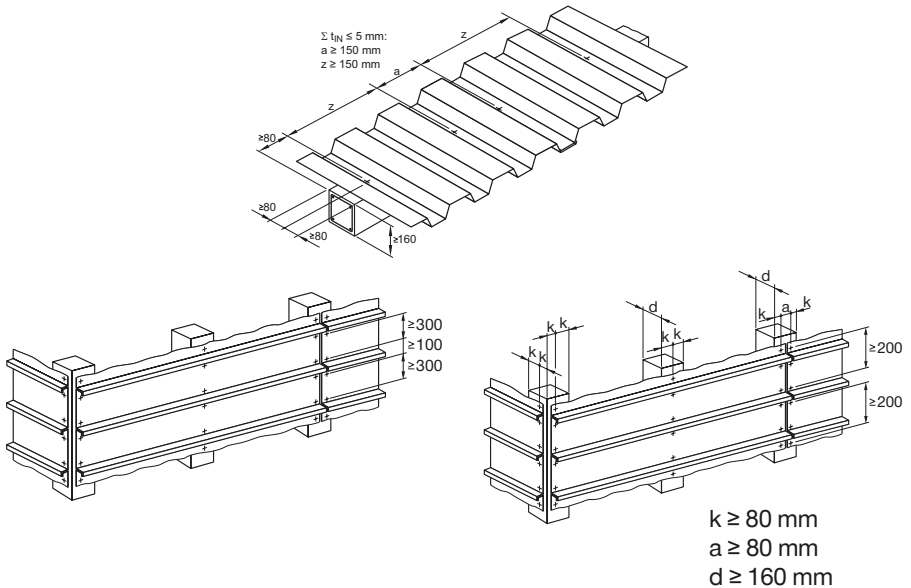
a

- With the above recommended sheet thickness and overlap types, the effects of temperature induced forces of constraint during construction can be neglected.
- These recommendations are valid for sheets up to S350GD.
- With other sheets or overlaps or when unusually large forces of constraint are expected, analyse the structural system to ensure that the shear force acting on the nail does not exceed V_{rec} .

Spacing and edge distances (mm)

Trapezoidal profiles to girders or purlins

Liner trays to columns



Application limits

Types of concrete

- Precast and cast-in-place pre-stressed concrete
- Precast and cast-in-place reinforced concrete

Concrete design strength

- Minimum C20/25 ($f_c = 20 \text{ N/mm}^2$, $f_{cc} = 25 \text{ N/mm}^2$)
- Maximum C45/55 ($f_c = 45 \text{ N/mm}^2$, $f_{cc} = 55 \text{ N/mm}^2$)
- The NPH/DX-Kwik system has been successfully used in concrete having an in-place cube strength of 70 N/mm^2

Minimum strength/age at time of fastening

- C20/25 concrete must be 28 days old
- C45/55 concrete must be 15 days old

Minimum dimensions of concrete member

- Minimum width = 180 mm
- Minimum thickness = 160 mm

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 programm

Fasteners Designation	Item no.	Tool Designation	Fastener guide Designation	Piston Designation
NPH2-42 L15	40711	DX 76	X-76-F-Kwik	X-76-P-Kwik
		DX 76 PTR	X-76-F-Kwik-PTR	X-76-P-Kwik-PTR

Cartridge recommendation

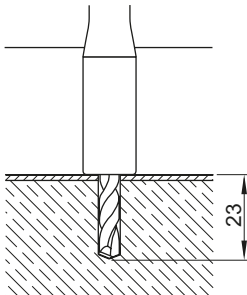
Cartridges 6.8/18 M blue



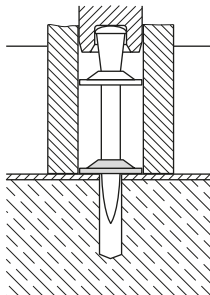
- Tool power level adjustment by setting tests on site.
- Start tool energy selection with lowest recommended tool power level.
- Correct according requirement from chapter quality assurance.

Quality assurance

Installation



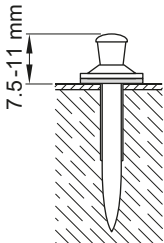
Pre-drill with TX-C-5/23 drill bit
(Item no.: 00061787)



Place fastener with DX 76 PTR
or DX 76

Fastening inspection

NPH2-42 L15



Check for conformity with recommendations
(detailing spacing and edge distances for fastening)

Check the nailhead standoff of completed fastenings

These are abbreviated instructions which may vary by application.
ALWAYS review/follow the instructions accompanying the product.