



# NPH DATA SHEET

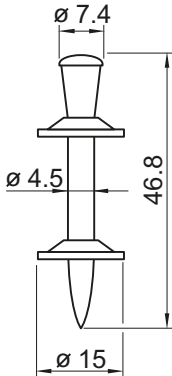
Siding and decking nail



## NPH Siding and decking nail

### Product data

#### Dimensions



#### Material specifications

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

#### Recommended fastening tools:

Tools:	Cartridges:
DX 76 PTR	6.8/18M blue
with DX 76-F-Kwik-PTR fastener guide	
DX 76 with X-76-F-Kwik fastener guide	

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

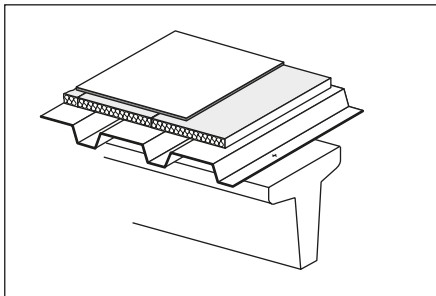
### Approvals and certificates

ITB (Poland)

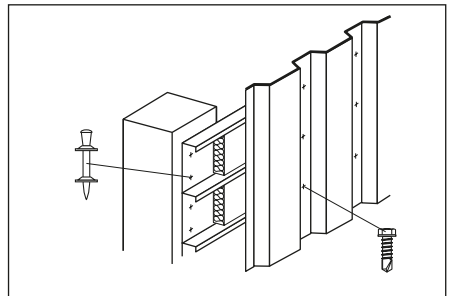
- Not all information presented in this product data sheet might be subject to approval/certificate content. Please refer to approval/certificate for further information.

### Applications

#### Examples



Roof decking



Wall liners

## Performance data

### Recommended loads

Sheeting thickness $t_1$ [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

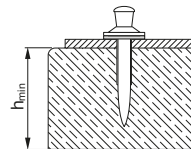
- Recommended working loads valid for steel sheets with a minimum tensile strength of  $\geq 360 \text{ N/mm}^2$ .
- For intermediate sheet thicknesses, use recommended load for next smaller thickness.
- Recommended loads are appropriate for EC1 (or similar) wind loading designs.
- The safety factor 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

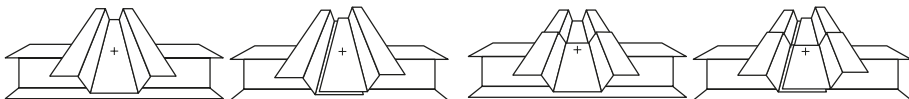
Minimum thickness of concrete member

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



### 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  $t_1$

0.63–1.13 mm

Allowable overlap types

a, b, c, d

> 1.13–2.50 mm

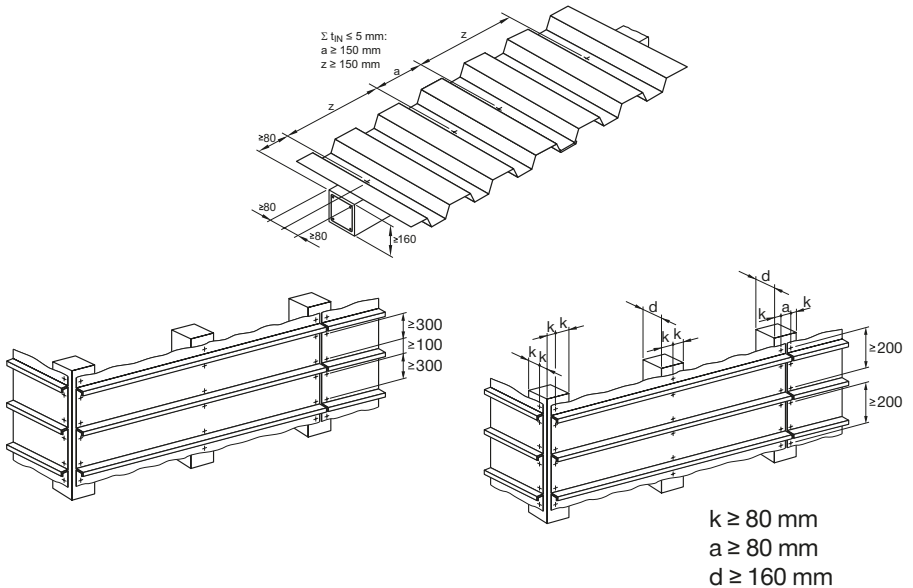
a

- 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	<ul style="list-style-type: none"> <li>• Precast and cast-in-place pre-stressed concrete</li> <li>• Precast and cast-in-place reinforced concrete</li> </ul>
Concrete design strength	<ul style="list-style-type: none"> <li>• Minimum C20/25 (<math>f_c = 20 \text{ N/mm}^2</math>, <math>f_{cc} = 25 \text{ N/mm}^2</math>)</li> <li>• Maximum C45/55 (<math>f_c = 45 \text{ N/mm}^2</math>, <math>f_{cc} = 55 \text{ N/mm}^2</math>)</li> <li>• The NPH/DX-Kwik system has been successfully used in concrete having an in-place cube strength of <math>70 \text{ N/mm}^2</math></li> </ul>
Minimum strength/age at time of fastening	<ul style="list-style-type: none"> <li>• C20/25 concrete must be 28 days old</li> <li>• C45/55 concrete must be 15 days old</li> </ul>
Minimum dimensions of concrete member	<ul style="list-style-type: none"> <li>• Minimum width = 180 mm</li> <li>• Minimum thickness = 160 mm</li> </ul>

## 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		Tool	Fastener guide	Piston
Designation	Item no.	Designation	Designation	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

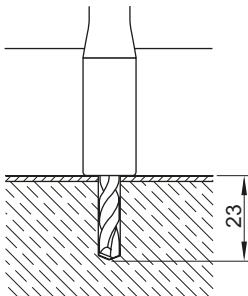
Cartridges 6.8/18 M blue



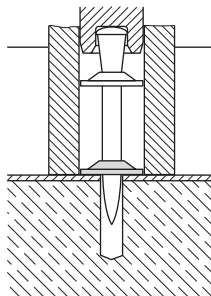
- Tool power level adjustment by setting tests on site.
- Start tool energy selection with lowest recommended tool power level.
- Correct according requirement from chapter quality assurance.

### Quality assurance

#### Installation



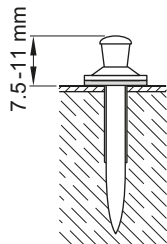
Pre-drill with TX-C-5/23 drill bit  
(Item no.: 00061787)



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.