

NPB

**Nail plate for CLT**

*Nail plate NPB255 has been developed to fix Timber to Timber, Timber to concrete supports and CLT panels to CLT Floors or concrete support.*

*Very versatile, its installation is aided by centre line markings to indicate correct positioning of the connector*

## Features

### Material

- Galvanized steel S250GD + Z275 according to EN 10346
- Thickness 3 mm

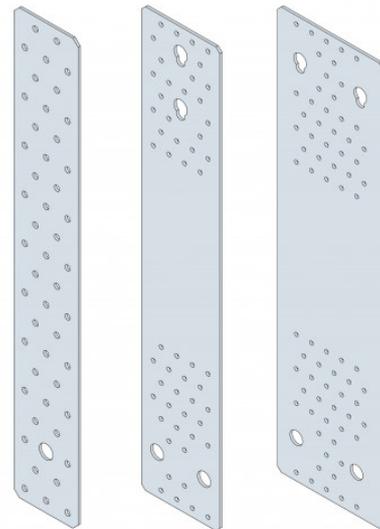
### Advantages

- Ideal for use in Timber and CLT buildings
- Great versatility: can be utilised for Timber to Timber, Timber to concrete, CLT to CLT or CLT to concrete connections,
- High performance for horizontal ( $F_2 / F_3$ ) and vertical ( $F_1$ ) loads directions.

### Applications

### Domaine d'utilisation

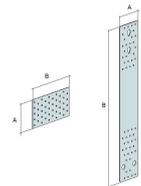
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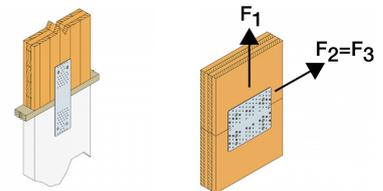
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## Technical Data

### Dimensions



References	Dimensions [mm]			Holes			Box Quantity	Weight [kg]
	A	B	t	Ø5	Ø13	Ø17		
NPB60400	60	400	2	49	1	-	10	0.36
NPB100540	100	540	3	26+28	2 (Ø14)	2	10	1.2
NPB140540	140	540	3	36+36	-	2+2	10	1.7



### Product characteristic capacities - CLT to CLT

References	Product characteristic capacities - CLT to CLT					
	Product characteristic capacities - Timber C24 [kN]					
	Fasteners		$R_{1,k}$		$R_{2,k}$	
	Top part	Bottom part	CNA4,0x50	CSA5,0x50	CNA4.0x50	CSA5.0x50
NPB60400	n	n	min (26.7/kmod ; n x 2.22)	min (26.7/kmod ; n x 2.63)	-	-
NPB100540	n	n	min (71.3/kmod ; n x 2.22)	min (71.3/kmod ; n x 2.63)	-	-
NPB140540	n	n	min (102.5/kmod ; n x 2.22)	min (102.5/kmod ; n x 2.63)	-	-

*n = number of fasteners (CNA or CSA) on the top or bottom part of the plate. This number of fasteners has to be the same on both timber elements.*

*Distances to the edges of the timber must be checked.*

*For combined forces it's to check:*

$$\sum \frac{F_{i,d}}{R_{i,d}} \leq 1$$

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Product characteristic capacities - CLT to concrete

References	Product characteristic capacities - CLT to concrete			
	Fasteners		Product characteristic capacities - Timber C24 [kN]	
	Top part	Bottom part	$R_{1,k}$	
			CNA4,0x50	CSA5,0x50
NPB60400	n	1 Ø12	min (20.6/kmod ; n x 2.22)	min (20.6/kmod ; n x 2.63)
NPB100540	n	2 Ø12	min (58.8/kmod ; n x 2.22)	min (58.8/kmod ; n x 2.63)
NPB140540	n	2 Ø16	min (82.4/kmod ; n x 2.22)	min (82.4/kmod ; n x 2.63)

*n = number of fasteners (CNA or CSA) on the top part of the plate. The distances to the edges of the timber as well as the distances to the edges of the concrete must be checked.*

*Anchors resistance must also be checked*

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## Installation

### Fasteners

#### **CLT Connection:**

- CNA annular ring shank nails dia. 4.0 x 50 mm,
- CSA screws dia. 5.0 x 40 mm.

#### **Concrete Connection :**

- Mechanical anchor: M12
- Chemical anchor: AT-HP resin + LMAS M12-150/35 threaded rod.

### Applications

#### **Nailing pattern**

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