## Technický list

#### ABD Angle bracket ABD

Angle bracket ABD45100 for connection timber to timber and the angle bracket ABDW45100 with washer for connection timber to rigid supports. The fixing to the rigid support shall be done with anchor M12.

## Features

Materiál

**Steel quality:** Angle bracket: S 250 GD + Z275 according to EN10346 Washer: S235JR according to EN 10025 **Corrosion protection:** Angle bracket: Z 275 pre-galvanized, zinc coating ~ 20µm Washer: hot dip galvanized, zinc coating ~ 50µm according to EN1461

#### Benefit

For applications timber to timber and timber to concrete

## Applications

### Anwendungsbereich

**Applicable materials** Supporting member Solid wood, engineered wood, concrete, steel, etc. **Supported member** Solid wood, engineered wood

#### Anwendungsbereich

With this angle brackets can be fixed timber elements to timber or rigid support. With different nail pattern are given options for connection, with larger distances of first nail row.











## ABD Angle bracket ABD



# **Technical Data**

For load combination shall be fulfilled:

$$rac{F_{1,d}}{R_{1,d}} + rac{F_{2/3,d}}{R_{2/3,d}} \leq 1$$

F <sub>1</sub>	F <sub>1</sub>
f f	f f

Characteristic capacities F1

Art. nr.	R	R <sub>1,k</sub> - 2 angle brackets per connection [kN] Nail pattern 1 to 3 respectively 4 to 6						
	CNA4,0x35	CNA4,0x40	CNA4,0x50	CNA4,0x60	CNA4,0x35	CNA4,0x40	CNA4,0x50	CNA4,0x60
ABD45100	min : 1,47 ; 21,2 / ((f+15)*kmod)	min : 1,96 ; 21,2 / ((f+15)*kmod)	21,2 / ((f+15)*kmod)	21,2 / ((f+15)*kmod)	2.94	3.92	4.9	5.81
	essary capacity of b I = F <sub>1.d</sub> x 1.65	olt has to be as mir	nimum:		1	1	1	1

With:

R<sub>bolt.axial</sub> = min. axial capacity of the bolt / both bolts (connection with 1 / 2 ABD)

## Technický list

#### ABD Angle bracket ABD

## Characteristic capacities F2/3

Art. nr.	R <sub>2/3,k</sub> - 2 angle brackets per connection [kN]											
	Nail pattern 1 and 4			Nail pattern 2 and 5				Nail pattern 3 and 6				
	CNA4,0x35	CNA4,0x40	CNA4,0x50	CNA4,0x60	CNA4,0x35	CNA4,0x40	CNA4,0x50	CNA4,0x60	CNA4,0x35	CNA4,0x40	CNA4,0x50	CNA
ABD45100	6.07	7.01	8.86	10.18	5.65	6.22	7.47	8.12	3.49	3.82	4.57	4

For connection with one ABD can be use the half of capacities as for connection with 2 ABD, if the timber eleme are prevented against rotation.

The necessary capacity of bolt has to be as minimum:

 $R_{bolt.axial} = F_{2.d} \times 0.4$   $R_{bolt.lat} = F_{2.d}$ 

With:

 $R_{bolt.axial} = min. axial capacity of the bolt / both bolts (connection with 1 / 2 ABD)$ 

 $R_{bolt.lat} = min.$  lateral capacity of the bolt / both bolts (connection with 1 / 2 ABD)

#### ABD Angle bracket ABD



# Installation

Installation

- Fastening is done with CNA4,0xt nails or CSA5,0xt screws.
- M12 anchor bolts are used for fastening to concrete.

ABD Angle bracket ABD

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