

Technický list

SIMPSON

Strong-Tie

AB255HD

Heavy Duty Angle Bracket for CLT with skewed screws

The AB255HD angle bracket is developed for CLT construction. Flexible, it is designed for both shear and vertical loading. With skewed full threaded screws, it enables very high uplift capacities and it can be hidden under concrete screed.

Features

Material

- Pre-galvanised mild steel.
- S 250 GD + Z 275 according to EN 10346

Benefits

- Perfect for CLT building,
- Very high capacity : F2/3 and F1
- can be hidden in concrete screed

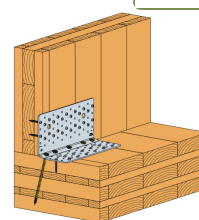
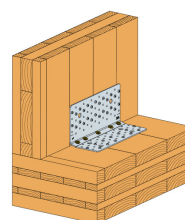
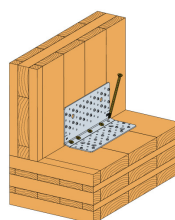
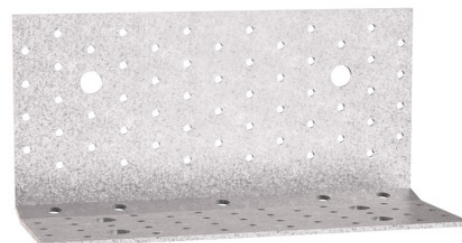
Applications

Suitable On

- **Supporting member:** solid wood, glued-laminated wood, etc.
- **Supported member:** solid wood, composite lumber, glued-laminated wood.

When to Use

- Solid timber panels,
- CLT panels.

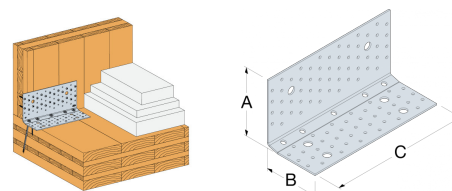


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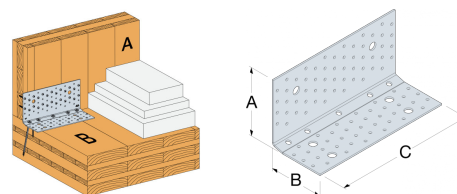
Technical Data

Product dimensions



Art. nr.	Product dimensions [mm]				Holes flange A		Holes flange B			Box Quantity	Hmotnost [kg]
	A	B	C	t	Ø5	Ø14	Ø5	Ø9	Ø14		
AB255HD	123	100	255	3	56	2	41	5	4	10	1.2

Product characteristic capacities - Timber to timber - 1 angle bracket - Nailing pattern 1



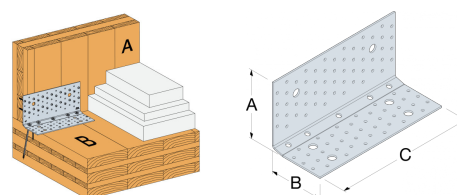
Art. nr.	Product capacities - Timber to timber - Nail pattern 1											
	Fasteners						Characteristic capacities - Timber C24 - 1 angle bracket per connection [kN]					
	Flange A		Flange B				R _{1,k}		R _{2,k} = R _{3,k}		R _{4,k}	
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50
AB255HD	26	CNA/CSA	5	ESCRFC8.0x140	13	CNA/CSA	min (51.0 ; 56/kmod)	min (51.0 ; 56/kmod)	42.9	46	13.9/kmod ^{0.8}	13.9/kmod ^{0.8}

The value in the table above can be used if the panel can't rotate.

The R_{1,k} values are valid for any quantity of CNA/CSA fasteners on flange B.

Values with other ESCRFC length are available in ETA.

Product characteristic capacities - Timber to timber - 1 angle bracket - Nailing pattern 2



Art. nr.	Product capacities - Timber to timber - Nail pattern 2											
	Fasteners						Characteristic capacities - Timber C24 - 1 angle bracket per connection [kN]					
	Flange A		Flange B				R _{1,k}		R _{2,k} = R _{3,k}		R _{4,k}	
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50
AB255HD	30	CNA/CSA	5	ESCRFC8.0x200	13	CNA/CSA	min (66.4 ; 56/kmod)	min (72.4 ; 56/kmod)	46.5	53.5	13.9/kmod ^{0.8}	13.9/kmod ^{0.8}

The value in the table above can be used if the panel can't rotate.

The R_{1,k} values are valid for any quantity of CNA/CSA fasteners on flange B.

Values with other ESCRFC length are available in ETA.

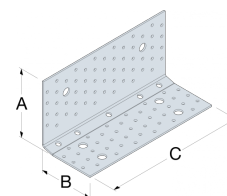
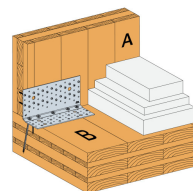
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Product characteristic capacities - Timber to timber - 1
angle bracket - Nailing pattern 3

Art. nr.	Product capacities - Timber to timber - Nail pattern 3												
	Fasteners						Characteristic capacities - Timber C24 - 1 angle bracket per connection [kN]						
	Flange A		Flange B				$R_{1,k}$		$R_{2,k} = R_{3,k}$		$R_{4,k}$		
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50	CNA4.0x50	CSA5.0x50	CNA4
AB255HD	26	CNA/CSA	3	ESCRFTC8.0x200	13	CNA/CSA	min (46.8 ; 56/kmod)	min (46.8 ; 56/kmod)	32.4	43.4	13.9/kmod ^{0.8}	13.9/kmod ^{0.8}	min (9.2/k

The value in the table above can be used if the panel can't rotate.

The $R_{1,k}$ values are valid for any quantity of CNA/CSA fasteners on flange B.

Values with other ESCRFTC length are available in ETA.

AB255HD

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Installation

Fasteners

On timber:

- CNA 4.0x50, CNA4.0x60
- CSA 5.0x50 screws
- ESCRFTC8.0xL (various length allowed, depending on the requested capacity)

On concrete:

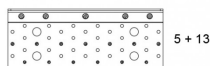
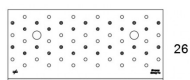
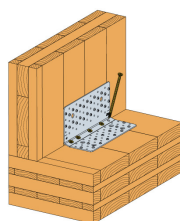
- Mechanical anchor: WA M12-104/5
- Chemical anchor: AT-HP resin + LMAS M12-150/35 threaded rod

Installation

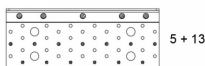
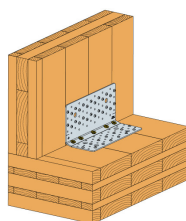
Set CNA nails or CSA screws first, then set the ESCRFTC8.0 full threaded screws at an approximate 70° angle.

A jig is recommended for skewed screw installation (SSJ jig is available)

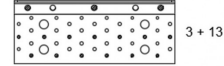
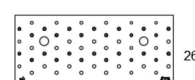
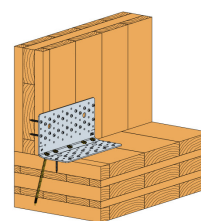
The possible screwing/nailing pattern are displayed below:



AB255HD - Nail pattern 1



AB255HD - Nail pattern 2



AB255HD Nail pattern 3

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