

Technical data sheet

SIMPSON

Strong-Tie

AB255HD

Reinforced Angle Bracket for CLT

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

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

Benefits

- Ideal for use in CLT buildings,
- Great versatility: can be installed on wooden support and concrete support,
- High performance for horizontal (F_2 / F_3) and vertical (F_1) loads directions.

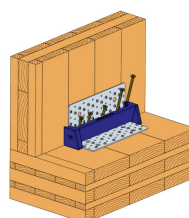
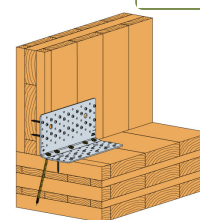
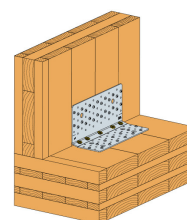
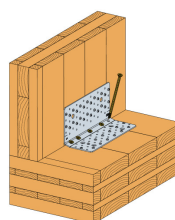
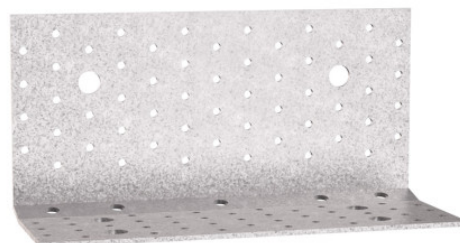
Applications

Suitable On

- **Supporting member:** solid wood, glulam, concrete, steel...
- **Supported member:** solid wood, glulam...

Scope

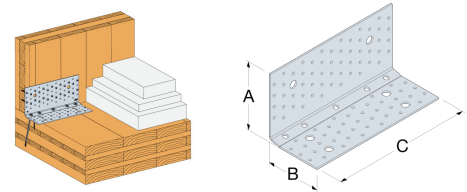
- Solid panels,
- Cross laminated panel (CLT).



AB255HD Reinforced Angle Bracket for CLT

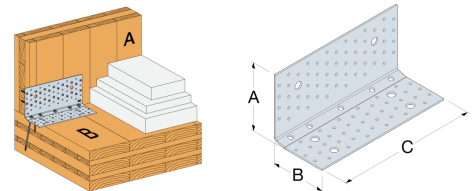
Technical Data

Product dimensions



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

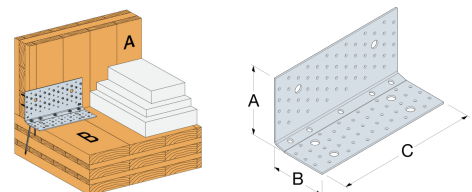
Simplified characteristic capacities - Timber to timber - 1 angle bracket - Nailing pattern 1



References	Simplified product capacities - Timber to timber – Nail pattern 1												
	Fasteners						Simplified 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}		R _{5,k}
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60
AB255HD	26	CNA/CSA	5	ESCRFTC8.0x140	13	CNA/CSA	51	51	45.7	46	15.1	15.1	10.2

- The published characteristic capacity is based on short term load duration and service class 2 according (EN 1995) – $k_{mod} = 0.9$. For other load duration and service class, please refer to the ETA to get more accurate capacities.
- 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.

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



References	Simplified product capacities - Timber to timber – Nail pattern 2												
	Fasteners						Simplified 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}		R _{5,k}
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60
AB255HD	30	CNA/CSA	5	ESCRFTC8.0x200	13	CNA/CSA	62.2	62.2	49.7	53.5	15.1	15.1	10.2

- The published characteristic capacity is based on short term load duration and service class 2 according (EN 1995) – $k_{mod} = 0.9$. For other load duration and service class, please refer to the ETA to get more accurate capacities.
- 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.

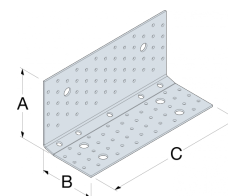
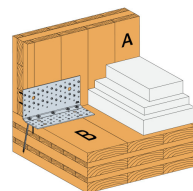
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Reinforced Angle Bracket for CLT



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

References	Simplified product capacities - Timber to timber – Nail pattern 3												
	Fasteners						Simplified characteristic capacities - Timber C24 - 1 angle bracket per connection						
	Flange A		Flange B				$R_{1,k}$		$R_{2,k} = R_{3,k}$		$R_{4,k}$		$R_{5,k}$
	Qty	Type	Qty	Type	Qty	Type	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60	CSA5.0x50	CNA4.0x60
AB255HD	26	CNA/CSA	3	ESCRFTC8.0x200	13	CNA/CSA	46.8	46.8	32.4	43.4	15.1	15.1	10.2

- The published characteristic capacity is based on short term load duration and service class 2 according (EN 1995) – $k_{mod} = 0.9$. For other load duration and service class, please refer to the ETA to get more accurate capacities.
- 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

Reinforced Angle Bracket for CLT

Installation

Fasteners

On wood :

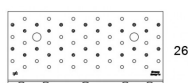
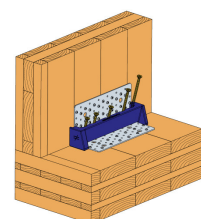
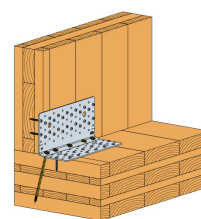
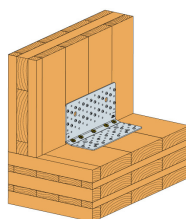
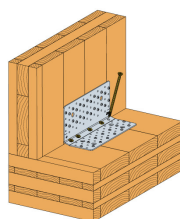
- CNA annular ring shank nails
- CSA screws
- Refer to performance tables for relevant sizes

On concrete :

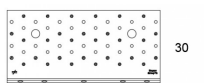
- *Chemical anchor*: AT-HP resin + LMAS M12-150/35 threaded rod.

Installation

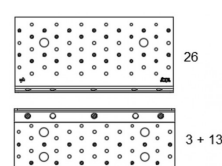
- Install the CNA nails or CSA screws first, then set the ESCRFTC8.0 full threaded screws at an approximate 70° angle. (A jig is recommended for skewed screw installation - SSJ jig is available)
- The possible screwing/nailling pattern are displayed below:



Nail Pattern 1



Nail Pattern 2



Nail Pattern 3

