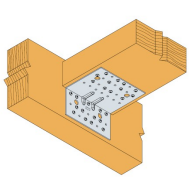
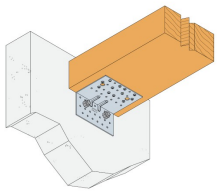
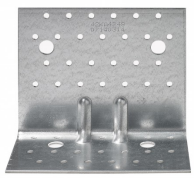
Technical data sheet

AG922
Large Reinforced Angle Bracket

Reinforced angle brackets are suitable for structural applications in framing and wood-frame houses.







Features

Material

- Galvanized steel S250GD + Z275 according to NF EN 10346.

Advantages

- High lateral capacity
- High rigidity
- Allow concrete header

Applications

Header member

- **Supporting member**: solid wood, glued-laminated wood, concrete, steel, etc.
- **Supported member**: solid wood, composite lumber, glued-laminated wood, triangular trusses, profiles, etc.

Intended Use

- Fastening of small trusses.
- Cladding plates, cladding uprights.
- Rafter anchors, cantilevers, headers, etc.

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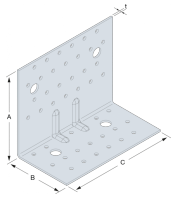
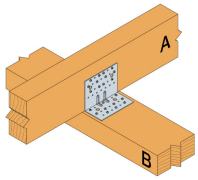


Product Dimensions

References	Product Dimensions [mm]				Joist		Holes flange B		Box Quantity	Weight [kg]
	A	B	C	t	Ø5	Ø13	Ø5	Ø13		
AG922	121	79	150	2.5	26	2	18	2	25	0.54



Wood/wood connection beam/beam type - assembly with 2 angle brackets

References	Product capacities - Timber beam to timber beam			
	Number of Fasteners		Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]	
	Joist	Flange B	$R_{1,k}$	$R_{2,k} = R_{3,k}$
	Qty	Qty	CNA4.0x50	CNA4.0x50
AG922	16	13	18.5	29.5

To obtain the resistance values for a single bracket, the values in the above table should be divided by two, provided that the supported beam is locked in rotation. Please consult our ETA-06/0106 if the beam is free to rotate.

Wood/wood connection post/beam type - assembly with 2 angle brackets

References	Product capacities - Timber post to timber beam		
	Number of Fasteners		Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]
	Joist	Flange B	$R_{1,k}$
	Qty	Qty	CNA4.0x50
AG922	12	13	19.5

To obtain the resistance values for a single bracket, the values in the above table should be divided by two, provided that the supported beam is locked in rotation. Please consult our ETA-06/0106 if the beam is free to rotate.

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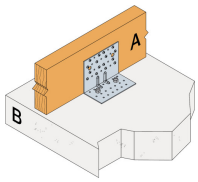
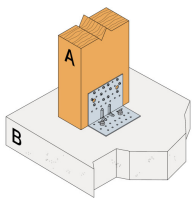
Wood/rigid substrate connection beam/rigid substrate type - assembly with 2 angle brackets



References	Product capacities - Timber beam to rigid support					
	Number of Fasteners				Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]	
	Joist		Flange B		$R_{1.k}$	$R_{2.k} = R_{3.k}$
	Qty	Type	Qty	Type	CNA4.0x50	CNA4.0x50
AG922	16	CNA*	2	Ø12	30.6	48.2

* Refer to Characteristic Capacity table columns for type of fasteners that can be used in Flange A. Capacities vary depending on fastener type used.
The bolt design resistance requirement R#,d is determined from (bolt factor x connection design load F#,d) for the required load direction and fastener. Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions depend on the concrete type, spacing and edge distances.
To obtain the resistance values for a single bracket, the values in the above table should be divided by two, provided that the supported beam is locked in rotation. Please consult our ETA-06/0106 if the beam is free to rotate.

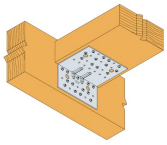
Wood/rigid substrate connection post/rigid substrate type - assembly with 2 angle brackets



References	Product capacities - Timber post to rigid support				
	Number of Fasteners				Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]
	Joist		Flange B		$R_{1.k}$
	Qty	Type	Qty	Type	CNA4.0x50
AG922	12	CNA*	2	Ø12	37.5

* Refer to Characteristic Capacity table columns for type of fasteners that can be used in Flange A. Capacities vary depending on fastener type used.
The bolt design resistance requirement R#,d is determined from (bolt factor x connection design load F#,d) for the required load direction and fastener. Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions depend on the concrete type, spacing and edge distances.
To obtain the resistance values for a single bracket, the values in the above table should be divided by two, provided that the supported beam is locked in rotation. Please consult our ETA-06/0106 if the beam is free to rotate.

Characteristic capacities - Beam/beam assembly - Connection with 1 bracket - F4



References	Product capacities - Timber to timber		
	Number of Fasteners		Characteristic capacities - Timber C24 - 1 angle brackets per connection [kN]
	Joist	Flange B	$R_{4.k}$
	Qty	Qty	CNA4.0x50
AG922	12	13	22.6

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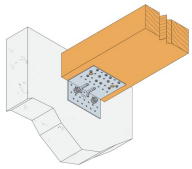


Characteristic capacities - Beam/rigid support - Connection with 1 bracket - F4

References	Characteristic capacities - Timber to rigid support				
	Number of Fasteners				Characteristic capacities - Timber C24 - 1 angle brackets per connection [kN]
	Joist		Flange B		$R_{4,k}$
	Qty	Type	Qty	Type	CNA4.0x50
AG922	12	CNA*	2	Ø12	24.8

Characteristic capacities - CLT beam to CLT beam - Ø12 connector screws - 2 angle brackets

References	Product capacities - CLT beam to CLT beam - Ø12 connector screws - 2 angles brackets					
	Fasteners				Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]	
	Flange A		Flange B		$R_{1,k}$	$R_{2,k} = R_{3,k}$
	Qty	Type	Qty	Type	SSH12x80	SSH12x80
AG922	2	SSH	2	SSH	23	23

AG922
Large Reinforced Angle Bracket

Installation

Fasteners

On wood:

- CNA annular ring-shank nails dia. 4.0 x 35 or dia. 4.0 x 50 mm.
- CSA screws dia. 5.0 x 35 mm or CSA screws dia. 5.0 x 40 mm.
- Bolts.
- LAG screws.

On concrete:
Concrete substrate

- *Mechanical anchor*: WA M10-78/5 OR WA M12-104/5 pin.
- *Chemical anchor*: AT-HP resin + LMAS M10-120/25 or LMAS M12-150/35 threaded rod.

Hollow masonry substrate:

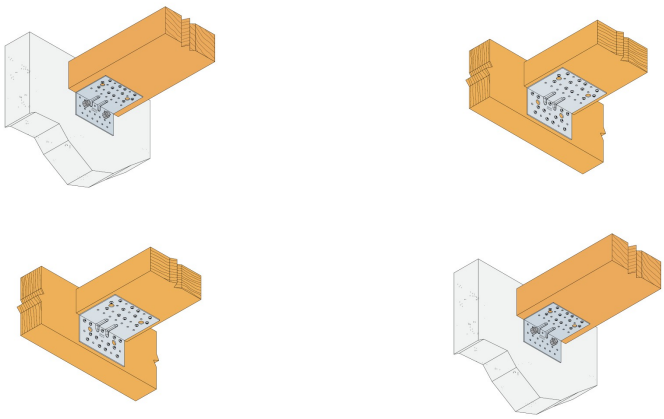
- *Chemical anchor*: AT-HP or POLY-GP resin + LMAS M12-150/35 threaded rod + SH M16-130 screen.

On steel:

- Bolts.

Installation

1. Come with the joist close to the header,
2. Add nails/screws to fix the angle bracket to the joist,
3. If timber header, the angle bracket is also fixed to the header with screws or nails
4. If concrete header, attached the angle bracket using installation details from the anchor



Technical Notes

Technical information

F1: tensile force in the central axis of the angle-bracket
Particular situation of a fastening with only one angle-bracket:

- If the overall structure prevents the rotation of the purlin or the post, the tensile strength is equal to half of the given value for two angle-brackets.
- Otherwise, the connection resistance depends on the « f » distance between the vertical contact surface and the point of load application.

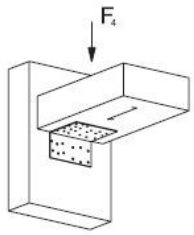
F2 and F3: shear lateral force
Particular situation of a connection with only one angle-bracket:

- The resistance value to consider is equal to half of the one given for two angle-brackets.

F4 and F5: transversal force directed towards or opposite the angle-bracket

- The connection resistance depends on the « e » distance between the base of the angle-bracket and the point of load application.
- To consult corresponding loads, contact us.

Only F1, F2 and F3 forces for connections with 2 angle-brackets are present on this sheet.
For more information, contact us.



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