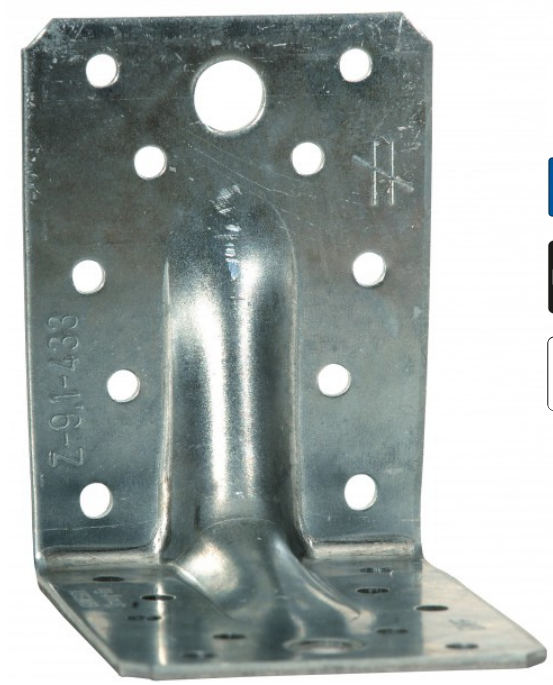
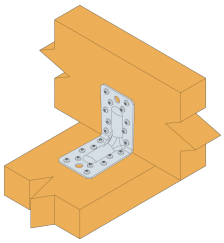
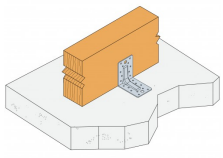
Technical data sheet

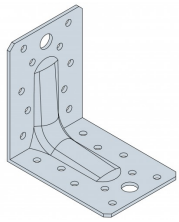
E2/2.5/7090
Reinforced Angle Bracket

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









Features

Material

- Pre-galvanised mild steel.

Benefits

- Reinforced.
- Multiple applications.

Applications

Suitable On

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

When to Use

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

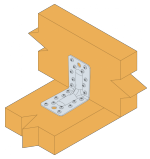
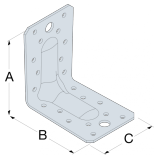
Technical data sheet

E2/2.5/7090
Reinforced Angle Bracket

SIMPSON Strong-Tie

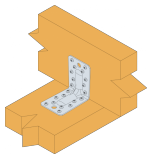
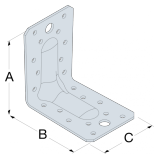
Technical Data

Product Dimensions

References	Product Dimensions [mm]				Joist		Holes flange B	
	A	B	C	t	Ø5	Ø11	Ø5	Ø11
E2/2.5/7090	90	90	65	2.5	10	1	10	1

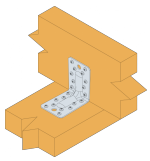
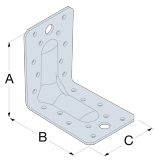
Product capacities - Timber to timber - Full nailing - 2 brackets

References	Product capacities - Timber to timber - Full nailing											
	Number of Fasteners		Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN]									
	Joist	Flange B	$R_{1.k}$				$R_{2.k} = R_{3.k}$				$R_{4.k}$ =	
	Qty	Qty	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40
E2/2.5/7090	8	10	6.46	7.87	10.66	13.32	8.38	9.21	11.07	11.78	-	8,1 / kmod^0,85

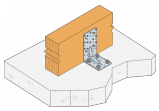
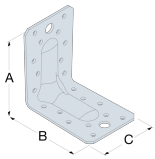
* b = 75 mm and e = 130 mm

Product capacities - Timber to timber - Partial nailing - 2 brackets

References	Product capacities - Timber to timber - Partial nailing									
	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	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60
E2/2.5/7090	4	6	4.38	5.34	7.11	8.89	5.17	5.68	6.9	7.34

Product capacities - Timber to rigid support - 2 brackets

References	Product capacities - Timber to Concrete											
	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	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60
E2/2.5/7090	8	CNA	1	Ø10	min(3,1; 3,2 / kmod)	min(3,7; 3,2 / kmod)	min(4,94; 3,2 / kmod)	min(6,14; 3,2 / kmod)	1.64	1.96	2.6	3.2

Refer to the Simpson Strong-Tie anchor product range for suitable anchors. Typical anchor solutions are BOAXII, SET-XP, WA, AT-HP, depending on the concrete type, spacing and edge distances.

Installation

Fixing

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

Hollow masonry substrate:

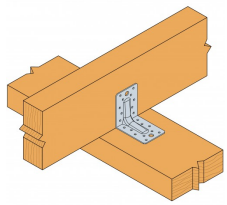
- *Chemical anchor*: AT-HP or POLY-GP resin + LMAS M10-120/25 threaded rod + SH16x130 screen.

On steel:

- Bolts.

Installation

1. Locate onto joist.
2. Install nails. It can be also screwed.
3. If the header is made out of timber, the angle bracket can be attached to it with nails or screw.
4. If the header is made out of concrete, the angle bracket must be attached with adapted anchors (using the installation data from the anchor).



Wood to wood connection.

Technical Notes

Technical Notes

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.

Winchester Road Cardinal Point Tamworth Staffordshire B78 3HG
tel: +44 1827 255600
fax: +44 1827 255616