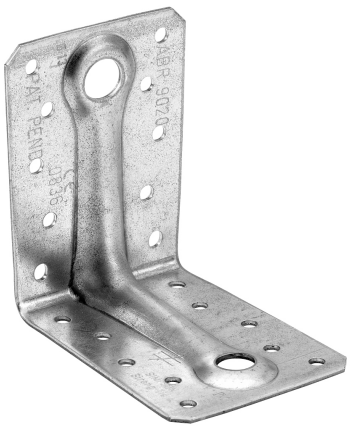
Technical Sheet

ABR
Reinforced Angle Bracket

Reinforced angle brackets are suitable for structural applications in framing and timber framed houses as well as light gauge steel construction.



Features

Material

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

Benefits

- Reinforcing ribs provide enhanced performance.

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.
- Light gauge steel.



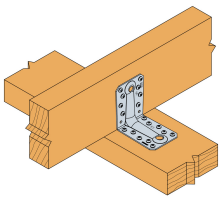
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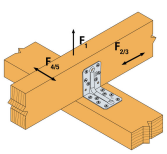


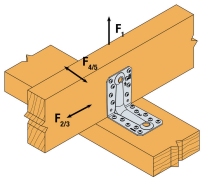
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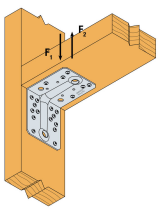


ABR10525











ABR9020



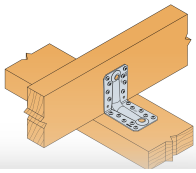
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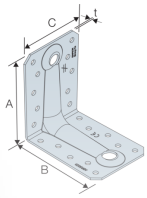
Technical Sheet

ABR
Reinforced Angle Bracket

Technical Data

Product Dimensions

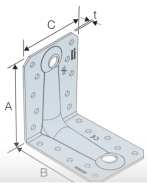


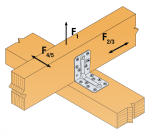


Product Dimensions
See full table online ➡️

Reference	Tun / DB nr.													Flange B[mm]		
														Round		
														5[mm]	Ø9	Ø13[mm]
ABR9020	1241531													10	-	1
ABR10525	1553164	45540683	50.0	0.34	105	105	90	2.5	10	-	2	1		14	-	-

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

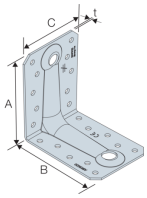


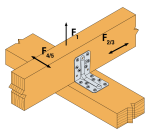


Product capacities - Timber to timber - Full nailing - 2 angles brackets
See full table online ➡️

Reference	Number of Fasteners													g[kN]		
	Joist	Flan B														
	Qty	Qty	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CSA5.0x40	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CSA5.0x40	CN			

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





Reference	Angle bracket capacity									
	Product capacities - Timber to timber - Partial nailing									
	Number of Fasteners		Characteristic capacity - 2 angle brackets per connection - full nailing[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
ABR9020	4.0	6.0	4.9	5.9	7.8	9.8	5.9	6.5	7.6	8.1
ABR10525	6.0	6.0	4.8	5.7	7.6	9.5	9.7	10.6	13.4	14.3

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.

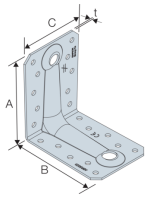
Technical Sheet

ABR
Reinforced Angle Bracket

Product capacities - Timber column to timber beam - 2 angle brackets

Reference	Angle bracket capacity							
	Product capacities - Timber post to rigid support							
	Number of Fasteners		Characteristic capacity - 2 angle brackets per connection - full nailing[kN]					
	Joist	Flange B	$R_{1,k}$			$R_{2,k}=R_{3,k}$		
	Qty	Qty	CNA4.0x40	CNA4.0x60	CSA5.0x40	CNA4.0x40	CNA4.0x60	CSA5.0x40
ABR9020	4.0	6.0	6	9.8	11.8	5.1	6.9	7.1
ABR10525	6.0	8.0	9.4	14.8	25.5	10.2	13.9	14.2

Product capacities - Timber beam to steel 6 mm - Partial nailing - 2 angles brackets



Reference	Angle bracket capacity				
	Product capacities - Timber beam to steel beam 6 mm - Partial nailing - 2 angle brackets				
	Number of Fasteners				Characteristic capacity - 2 angle brackets per connection - full nailing[kN]
	Joist		Flange B		$R_{1,k}$
	Qty	Type	Qty	Type	CNA4.0x60
ABR9020	8.0	CNA	4.0	PDPA-75	12.1
ABR10525	10.0	CNA	4.0	PDPA-75	15.3

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 or LMAS M12-150/35 threaded rod.

Hollow masonry substrate:

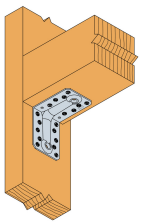
- *Chemical anchor*: AT-HP or POLY-GP resin + LMAS M12-150/35 threaded rod + SH M16-130 screen.

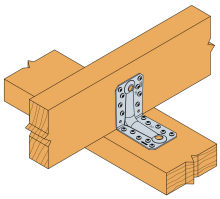
On steel:

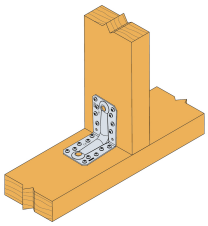
- Bolts.

Installation

c







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.

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