# **Technical data sheet**

### E9/2.5 Large reinforced angle brackets

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

# Features

### Material

• Pre-galvanised mild steel.

### **Benefits**

- Reinforced.
- Multiple applications. ٠

# Applications

# Suitable On

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

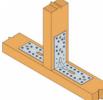
# When to Use

- Fastening of small trusses.
- Cladding plates, cladding uprights. ٠
- Rafter anchors, cantilevers, headers, etc. ٠













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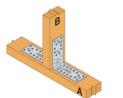


# **Technical Data**

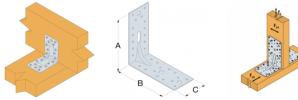
## Product Dimensions

| References | Product Dimensions [mm] |       |    |     | Joist |     |        | Holes flange B |     | Box Quantity |
|------------|-------------------------|-------|----|-----|-------|-----|--------|----------------|-----|--------------|
|            | Α                       | В     | C  | t   | Ø5    | Ø11 | Ø11x34 | Ø5             | Ø11 | DUN QUAITULY |
| E9/2.5     | 154                     | 152.5 | 65 | 2.5 | 14    | 1   | 1      | 14             | 2   | 50           |

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



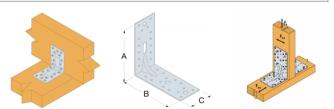




|            | Product capacities - Timber beam to timber beam - Max nailing |                 |   |                     |           |           |  |  |  |
|------------|---|-----------------|---|---------------------|-----------|-----------|--|--|--|
| References | Numbe   | er of Fasteners | Characteristic capacities - Timber C24 - 2 angle brackets per connection [kN] |                     |           |           |  |  |  |
|            | Joist   | Flange B        | R   | $R_{2.k} = R_{3.k}$ |           |           |  |  |  |
|            | Qty   | Qty             | CNA4.0x35   | CNA4.0x50           | CNA4.0x35 | CNA4.0x50 |  |  |  |
| E9/2.5     | 12  | 14              | 5.1 / kmod^(-0.1)   | 8.5 / kmod^(-0.1)   | 9.5       | 13        |  |  |  |

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       | $R_{2,k} = R_{3,k}$ |           |  |  |  |  |
|            | Qty   | Qty      | CNA4.0x35   | CNA4.0x50 | CNA4.0x35           | CNA4.0x50 |  |  |  |  |
| E9/2.5     | 10  | 14       | 3.1   | 5.1       | 6.7                 | 8.6       |  |  |  |  |

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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# 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:

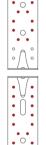
• Chemical anchor: AT-HP or POLY-GP resin + LMAS M12-150/35 threaded rod + SH M16-130 screen.

#### On steel:

• Bolts.

Installation

### Use specified nails.



Fastening on wood support

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# **Technical Notes**

### Informations techniques

#### 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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