



The BTALU concealed hanger is one solution to connecting timber members together without seeing the connector. It is designed to be fixed to the header timber and then fully inserted into a slot in the in-coming beam, and held in place with dowels. Holes are drilled through the timber and fin of the BTALU, allowing accurate alignment. This method provides an aesthetically pleasing connection for feature beams.



[ETA-07/0245](#), [UK-DoP-e07/0245](#)

### FEATURES



### Material

Aluminium

### Benefits

- Accurate alignment of dowels
- Aesthetically pleasing

### APPLICATIONS

#### For Connecting

Glulam timbers

#### For Use With

Carried and carrying Glulam member

TECHNICAL DATA

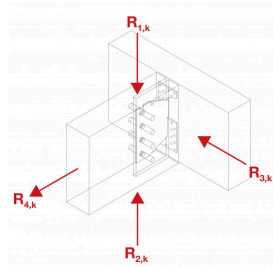
Product Dimensions

References	Product Dimensions [mm]				Header holes
	A	B	C	t	Ø5
BTALU90	86	109	62	6	16
BTALU120	116	109	62	6	20
BTALU160	156	109	62	6	28
BTALU200	196	109	62	6	36
BTALU240	236	109	62	6	44
BTALU1200	1180	109	62	6	-
BTALU3000	3000	109	62	6	-

The holes for the joist has to be drill acc. to the hole pattern of the ETA.

The size A can be up to 4mm less for cutting from the raw length, the cut shall be between the nail holes.

Performance Values



References	Product Capacities [kN]									
	Number of Fasteners				$R_{1,k} = R_{2,k}$					
	Header		Joist		Dowels length [mm]					
	Qty	Type	Qty	Type	60	80	100	120	140	160
BTALU90	16	CNA4.0x50	4	STD8	10.8	11.8	12.9	13.7	13.7	13.7
BTALU120	20	CNA4.0x50	3	STD12	17.3	18.2	19.4	20.7	22.3	23.9
BTALU160	28	CNA4.0x50	4	STD12	28	29.5	31.2	33.3	35.7	38.2
BTALU200	36	CNA4.0x50	5	STD12	39.8	41.9	44.3	47.2	50.4	53.9
BTALU240	44	CNA4.0x50	6	STD12	52.2	54.9	57.9	61.7	65.9	70.3

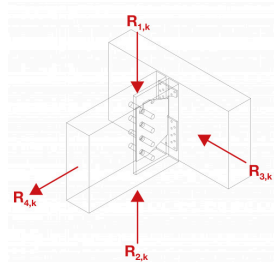
The joist shall have as minimum a width = length of steel dowel.

For beams with a slope  $\beta$  the capacities shall be multiply with the factor.

$\beta$	0°	15°	30°	45°
factor	1.0	0.95	0.90	0.85

It's only necessary for connection with less than 7 steel dowel in the joist.

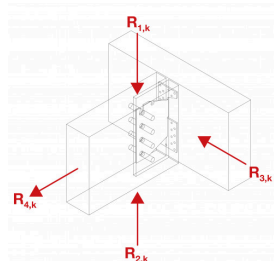
**Product characteristic capacities - Timber beam to timber beam -  $R_{3,k}$  and  $R_{4,k}$**



References	Product Capacities [kN]										
	Number of Fasteners				Product characteristic capacities - Timber C24 [kN]						
	Header		Joist		$R_{3,k}$						$R_{4,k}$
	Qty	Type	Qty	Type	Dowels length [mm]						
				60	80	100	120	140	160		
BTALU90	16	CNA4.0x50	4	STD8	1.5	1.9	2.3	2.7	3.1	3.6	7.8
BTALU120	20	CNA4.0x50	3	STD12	2.2	2.9	3.5	4.2	4.8	5.6	9.8
BTALU160	28	CNA4.0x50	4	STD12	2.9	3.6	4.4	5.3	6.2	7	13.7
BTALU200	36	CNA4.0x50	5	STD12	3.5	4.4	5.4	6.4	7.4	8.4	17.6
BTALU240	44	CNA4.0x50	6	STD12	4.2	5.3	6.4	7.4	8.6	9.8	21.6

The joist shall have as minimum a width = length of steel dowel.  
The capacities R4 are for all length of steel dowel.

**Product characteristic capacities - Timber beam to timber post**



References	Product characteristic capacities - Timber beam to timber post - partial nailing										
	Number of Fasteners				Post width	Product characteristic capacities - Timber C24 [kN]					
	Header		Joist		Min	$R_{1,k} = R_{2,k}$					
	Qty	Type	Qty	Type		Dowels length [mm]					
						60	80	100	120	140	160
BTALU90	8	CNA4.0x50	4	STD8	96	9	9.9	10.9	11.6	11.6	11.6
BTALU120	12	CNA4.0x50	3	STD12	96	14.7	15.5	16.6	17.9	19.4	20.7
BTALU160	16	CNA4.0x50	4	STD12	96	23.2	24.4	26	27.9	30	32
BTALU200	20	CNA4.0x50	5	STD12	96	32.4	34.1	36.2	38.7	41.2	43.4
BTALU240	24	CNA4.0x50	6	STD12	96	42.1	44.3	46.8	49.7	52.3	53.2

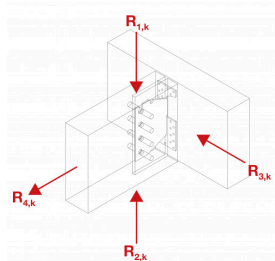
The joist shall have as minimum a width = length of steel dowel.  
For beams with a slope  $\beta$  the capacities shall be multiplywith the factor.

$\beta$	0°	15°	30°	45°
factor	1.0	0.95	0.90	0.85

It's only necessary for connection with less than 7 steel dowel in the joist.  
The capacities R4 are for all length of steel dowel.

The capacities from this table are also valid for partial nailing beam to beam.

**Product characteristic capacities - Timber beam to timber post -  $R_{3,k}$  and  $R_{4,k}$**



References	Product characteristic capacities - Timber beam to timber post - partial nailing											
	Number of Fasteners				Post width	Product characteristic capacities - Timber C24 [kN]						
	Header		Joist			$R_{3,k}$						$R_{4,k}$
	Qty	Type	Qty	Type	Min		Dowels length [mm]					
60							80	100	120	140	160	
BTALU90	8	CNA4.0x50	4	STD8	96	1.5	1.9	2.3	2.7	2.7	2.7	3.9
BTALU120	12	CNA4.0x50	3	STD12	96	2.2	2.9	3.5	4.2	4.8	5.6	5.9
BTALU160	16	CNA4.0x50	4	STD12	96	2.9	3.6	4.4	5.3	6.2	7	7.8
BTALU200	20	CNA4.0x50	5	STD12	96	3.5	4.4	5.4	6.4	7.4	8.4	9.8
BTALU240	24	CNA4.0x50	6	STD12	96	4.2	5.3	6.4	7.4	8.6	9.8	11.8

The joist shall have as minimum a width = length of steel dowel.  
The capacities  $R_4$  are for all length of steel dowel.

