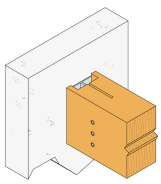
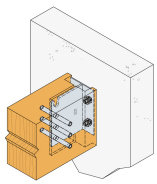
Technical Sheet

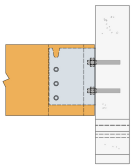
BTC
Concealed Beam Hanger

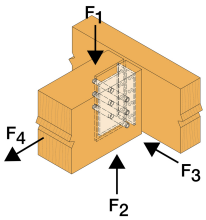
The BTC is designed for concealed connections between timber joists/beam and the concrete structure. The number of dowels and anchors can be chosen, depending on the applied load. BTC concealed beam hangers are approved to take load in all 3 directions. Therefore beam connections with a roof pitch can also be built in an easy and safe way.











Features

Material

Steel:
S 250 GD +Z 275 acc. EN 10326
Corrosion protection:
275 g/m2 on both sides - correspond to a zinc layer of approx. 20 µm

Benefits

- The variety of connection options are given in the ETA 07/0245, here you will find also information of:
- densities > 350kg/m³
- different slopes
- connections of concrete

Applications

Suitable On

Supporting member:
concrete, steel
Supported member:
solid wood, engineered wood

Scope

- The beam hangers serve as concealed connections of joists to the main beams or columns.
- connections with slopes up to 45 ° can be performed.

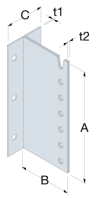
Technical Sheet

BTC
Concealed Beam Hanger

Technical Data

Product Dimensions

Reference	Connector Dimensions										
	Timber size[mm]	Other		Product Dimensions[mm]					Header holes[mm]		Joist holes[mm]
	Height[mm]	Qty per Box	Weight[kg]	A[mm]	B[mm]	C[mm]	t1[mm]	t2[mm]	40-A1-A2-A3[mm]	Round	Round
	Min[mm]									Ø14	Ø13[mm]
BTC120-B	160	15.0	1	120	131	96	3	6	40	2	3
BTC160-B	200	15.0	1.3	160	131	96	3	6	40-80	4	4
BTC200-B	240	12.0	1.7	200	131	96	3	6	40-120	4	5
BTC240-B	280	10.0	2	240	131	96	3	6	40-160	4	6
BTC320-B	360	6.0	2.7	320	131	96	3	6	40-120-120	6	8
BTC560-B	600	4.0	4.7	560	131	96	3	6	40-160-160-160	8	14



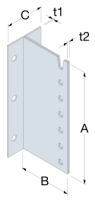
Wood/rigid substrate fastening - Characteristic values in kN

Reference	Hanger capacity													
	Product characteristic capacities - Timber beam to rigid support (concrete or steel)													
	Number of Fasteners				Product characteristic capacities - Timber C24[kN]									
	Header		Joist		$R_{1,k}$						$R_{2,k}$			
	Qty	Type	Qty	Type	Dowels length[mm]						Dowels length[mm]			
					80	100	120	140	160	180	80	100	120	140	160	180
BTC120-B	2.0	Ø 12	3.0	STD12	11.5	12.7	14.2	15.8	17.2	17.2	7.7	8.5	9.5	10.5	11.5	11.5
BTC160-B	4.0	Ø 12	4.0	STD12	18.5	20.4	22.8	25.3	27.8	27.8	13.9	15.3	17.1	19	20.9	20.9
BTC200-B	4.0	Ø 12	5.0	STD12	26.7	29.4	32.7	36.4	40.3	40.3	21.4	23.5	26.2	29.1	32.2	32.2
BTC240-B	4.0	Ø 12	6.0	STD12	35.8	39.4	43.8	48.6	53.8	54.3	29.8	32.8	36.5	40.5	44.8	45.3
BTC320-B	6.0	Ø 12	8.0	STD12	56	61.4	68.1	75.5	83.4	85.5	49	53.7	59.6	66.1	73	74.8
BTC560-B	8.0	Ø 12	12.0	STD12	100.5	109.5	120.7	133.4	147	147	100.5	109.5	120.7	133.4	147	147

For load combination:
\sum\left(\frac{F_{i,d}} {R_{i,d}}\right)^2\le1
$R_{2,k}$ capacities are calculated as $R_{2,k} = R_{1,k}$ x (nb of dowels - 1) / (nb of dowels).
The top dowel is not considered for the uplift capacities as it is placed in an open hole.
The anchors resistance and their number have to be checked according to the ETA and the type of header.
The number of anchors given in the table is the maximum. If their resistance is decisive, it is the resistance to consider for the connection.

Technical Sheet

BTC
Concealed Beam Hanger



Product characteristic capacities - Timber beam to rigid support - R3.k and R4.k

Reference	Hanger capacity												
	Product characteristic capacities - Timber beam to rigid support (concrete or steel)												
	Number of Fasteners				Product characteristic capacities - Timber C24[kN]								Simplified Characteristic Capacities - C24
	Header		Joist		$R_{4,k}$	$R_{3,k}$							$R_{4,k}$[kN]
						Dowels length[mm]							
	Qty	Type	Qty	Type		60	80	100	120	140	160	180	
BTC120-B	2.0	Ø 12	3.0	STD12	6,7/kmod	2.6	2.9	3.5	4	4.5	5.2	5.3	6.1
BTC160-B	4.0	Ø 12	4.0	STD12	13,4/kmod	3.2	3.9	4.4	5	5.9	6.5	7	12.2
BTC200-B	4.0	Ø 12	5.0	STD12	13,4/kmod	4	4.9	5.5	6.3	7.2	7.8	8.8	12.2
BTC240-B	4.0	Ø 12	6.0	STD12	13,4/kmod	4.8	5.7	6.6	7.5	8.4	9.1	10.4	12.2
BTC320-B	6.0	Ø 12	8.0	STD12	20,1/kmod	6.4	7.3	8.6	9.7	10.8	11.8	13.4	18.3
BTC560-B	8.0	Ø 12	12.0	STD12	26,8/kmod	11.2	12.3	14.3	16.2	18	20.5	22.3	24.4

The anchors resistance and their number have to be checked according to the ETA and the type of header. The number of anchors given in the table is the maximum. If their resistance is decisive, it is the resistance to consider for the connection.

Installation

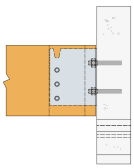
Fixing

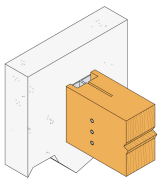
The following fasteners need to be used:

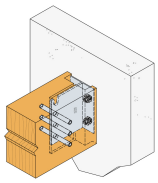
- steel dowels Ø12 mm, length acc. width of the joist
- bolts M12 acc. static requirements

Installation

d







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