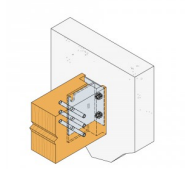
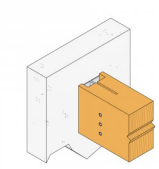
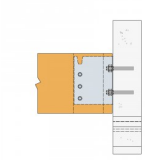
Datasheet

BTC - CONCEALED BEAM HANGER







They are designed for concealed connetions between timber members and concrete. The number of dowels and anchors can be chosen free, depending on the applicated load. BTC concealed beam hangers are approved to take load in all 3 directions. Therefore beam connections with a roof pitch can also be build in a easy and safety way.

ETA-07/0245, NL-DoP-e07/0245

KENMERKEN

Materiaal

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

Voordelen

- The variety of connection options are given in the ETA 07/0245, here you will find also information of:
- densities > 350kg/m³
- different slopes
- smaller timber widths
- other CNA nails / CSA screws
- connections of concrete
- connections to headers, wich are free to rotate

TOEPASSINGEN

Ondergrond

Supporting member:

concrete, steel

Supported member:

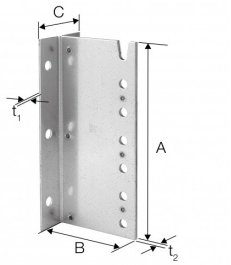
solid wood, engineered wood

Toepassingsgebieden

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

TECHNISCHE GEGEVENS

Afmetingen



Referentie	Afmetingen gedragen bouwdeel [mm]	Afmetingen [mm]					Drager Boorgaten	Gedragen boorgaten
	Hoogte Min.	A	B	C	Dikte 1	t_2	Ø14	Ø13
BTC120	160	120	128	96	3	6	2	3
BTC160	200	160	128	96	3	6	4	4
BTC200	240	200	128	96	3	6	4	5
BTC240	280	240	128	96	3	6	4	6
BTC280	320	280	128	96	3	6	6	7
BTC320	360	320	128	96	3	6	6	8
BTC360	400	360	128	96	3	6	6	9
BTC400	440	400	128	96	3	6	8	10
BTC440	480	440	128	96	3	6	8	11
BTC480	520	480	128	96	3	6	8	12
BTC520	560	520	128	96	3	6	8	13
BTC560	600	560	128	96	3	6	8	14
BTC600	640	600	128	96	3	6	8	15

Karakteristieke waarden Neerwaartse belasting (in kN) - Harde ondergrond - Doorsteekanker WA

Referentie	Bevestigingen				Karakteristieke waarden - Hout C24 [kN]											
	Drager		Spanwijdte		$R_{1,k}$						$R_{2,k}$					
	Aantal	Type	Aantal	Type	Lengte van de pennen [mm] [mm]						Lengte van de pennen [mm] [mm]					
					80	100	120	140	160	180	80	100	120	140	160	180
BTC120	2	Ø 12	3	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	4	Ø 12	4	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	4	Ø 12	5	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	4	Ø 12	6	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
BTC280	6	Ø 12	7	STD12	45.6	50.1	55.6	61.7	68.3	69.4	39.1	42.9	47.7	52.9	58.5	59.5
BTC320	6	Ø 12	8	STD12	56	61.4	68.1	75.5	83.4	85.5	49	53.7	59.6	66.1	73	74.8
BTC360	6	Ø 12	9	STD12	66.8	73.1	80.9	89.6	99	102.2	59.4	65	71.9	79.6	88	90.8
BTC400	8	Ø 12	10	STD12	77.9	85.1	94	104.1	114.8	119.5	70.1	76.6	84.6	93.7	103.3	107.6
BTC440	8	Ø 12	11	STD12	89.1	97.2	107.3	118.7	130.9	133.3	81	88.4	97.5	107.9	119	121.2
BTC480	8	Ø 12	12	STD12	100.5	109.5	120.7	133.4	147	147	92.1	100.4	110.6	122.3	134.8	134.8
BTC520	8	Ø 12	12	STD12	100.5	109.5	120.7	133.4	147	147	100.5	109.5	120.7	133.4	147	147
BTC560	8	Ø 12	12	STD12	100.5	109.5	120.7	133.4	147	147	100.5	109.5	120.7	133.4	147	147
BTC600	8	Ø 12	12	STD12	100.5	109.5	120.7	133.4	147	147	100.5	109.5	120.7	133.4	147	147

For load combination:

$$\sum \left(\frac{F_{i,d}}{R_{i,d}} \right)^2 \leq 1$$

$R_{2,k}$ 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.

Product characteristic capacities - Timber beam to rigid support - R_{3.k} and R_{4.k}

Referentie	Bevestigingen				Karakteristieke waarden - Hout C24 [kN]							Bevestigingen				Karakteristieke waarden - Hout C24 [kN]
	Drager		Spanwijdte		$R_{3,k}$							Drager		Spanwijdte		$R_{4,k}$
	Aantal	Type	Aantal	Type	Lengte van de pennen [mm] [mm]							Aantal	Type	Aantal	Type	
					60	80	100	120	140	160	180					
BTC120	2	Ø 12	3	STD12	2.6	2.9	3.5	4	4.5	5.2	5.3	2	Ø 12	3	STD12	6,7/kmod
BTC160	4	Ø 12	4	STD12	3.2	3.9	4.4	5	5.9	6.5	7	4	Ø 12	4	STD12	13,4/kmod
BTC200	4	Ø 12	5	STD12	4	4.9	5.5	6.3	7.2	7.8	8.8	4	Ø 12	5	STD12	13,4/kmod
BTC240	4	Ø 12	6	STD12	4.8	5.7	6.6	7.5	8.4	9.1	10.4	4	Ø 12	6	STD12	13,4/kmod
BTC280	6	Ø 12	7	STD12	5.6	6.5	7.6	8.7	9.6	10.4	11.9	6	Ø 12	7	STD12	20,1/kmod
BTC320	6	Ø 12	8	STD12	6.4	7.3	8.6	9.7	10.8	11.8	13.4	6	Ø 12	8	STD12	20,1/kmod
BTC360	6	Ø 12	9	STD12	7.2	8.1	9.5	10.8	12	13.2	14.9	6	Ø 12	9	STD12	20,1/kmod
BTC400	8	Ø 12	10	STD12	8	8.9	10.5	11.9	13.2	14.7	16.4	8	Ø 12	10	STD12	26,8/kmod
BTC440	8	Ø 12	11	STD12	8.8	9.7	11.4	13	14.4	16.1	17.8	8	Ø 12	11	STD12	26,8/kmod
BTC480	8	Ø 12	12	STD12	9.6	10.6	12.4	14.1	15.6	17.6	19.3	8	Ø 12	12	STD12	26,8/kmod
BTC520	8	Ø 12	12	STD12	10.4	11.4	13.3	15.1	16.8	19.1	20.8	8	Ø 12	12	STD12	26,8/kmod
BTC560	8	Ø 12	12	STD12	11.2	12.3	14.3	16.2	18	20.5	22.3	8	Ø 12	12	STD12	26,8/kmod
BTC600	8	Ø 12	12	STD12	12	13.2	15.2	17.3	19.2	22	23.8	8	Ø 12	12	STD12	26,8/kmod

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.

PLAATSING

Bevestigingen

The following fasteners need to be used:

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