

Technical data sheet

SIMPSON

Strong-Tie

HDCLT

Concealed solution for connecting CLT walls to concrete foundations.

High strength, low profile, seamlessly secure. Designed specifically for connecting cross-laminated timber (CLT) wall panels to concrete foundations: the HDCLT tension tie provides a robust design uplift capacity of up to 18.6 kN, yet due to its low profile of just 140 mm, remains completely concealed within the subfloor and floor covering layers.

To help reduce installation time, the fastener configuration has been optimised for maximum performance with the most efficient screw quantity.

HDCLT includes an 8mm thick washer integrated with the tension tie seat, which provides additional strength where it is most needed. The profile design permits up to 25mm concrete-CLT panel interlayer thickness.



NEW

CE

SC 2

ETA

INDOOR

Z275

Applications

Material

Tension Tie: S 250 GD + Z 275 according to DIN EN

Washer: S235JR according to EN 10025

Corrosion Protection:

275 g/m² galvanized on both sides 20mm washer: ~ 55µm according to EN1461

Suitable For

Supporting Member:

- CLT, Concrete, Steel, Solid Timber

Supported Member:

- CLT, Solid wood, Engineered Timber

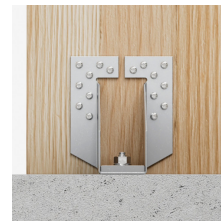
Fastener

- CSA Ø5mm or CNAØ4mm according to ETA-04/0013
- On concrete: Heavy Duty Wedge Anchor, Injection system for concrete, High capacity undercut anchor, concrete screw

Installation

The connection to the wood is made with CNA nails or CSA connector screws.

The bolt must be verified for the tensile force to be absorbed.



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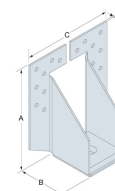
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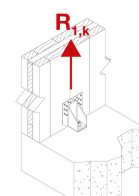
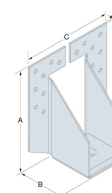
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Product dimensions



| References | Dimensions [mm] | | | | Holes in flange A | Holes in flange B | Weight [kg] |
|------------|-----------------|----|-----|---|-------------------|-------------------|-------------|
| | A | B | C | t | Ø 5 | Ø 18 | |
| HDCLT140 | 137 | 60 | 119 | 2 | 16 | 1 | 0.48 |



Product capacities

| References | Characteristic capacities - Timber C24 [kN] | | | | |
|------------|---|-----------|-----------|----------------------|----------------------|
| | $R_{1,k}$ | | | | |
| | CNA4.0x40 | CNA4.0x50 | CNA4.0x60 | CSA5.0x40 | CSA5.0x50 |
| HDCLT140 | 7.6 | 10.1 | 12.6 | min(22.1; 24,2/kmod) | min(26.1; 24,2/kmod) |

| HDCLT140 | With Washer – US50/50/8 | | | |
|----------|--|-----------------------|-----------------------------|------------------|
| | Fasteners (Flange A) | CSA5.0x50 | | CNA4.0x50 |
| | R_d (kN) | 20.47 | | 8.55 |
| | Anchor (Flange B) | FM 753 EVO M16-151/30 | FM-753 CRACK 3DG M16-150/30 | AT-HP + LMAS M16 |
| | Concrete Option | 7 | 1 | 1 |
| | Effective embedment depth (h_{ef}) | 80 | 86 | 192 |
| | Min. Member thickness (h_{min}) | 160 | 170 | 222 |
| | Charac. Spacing ($s_{cr,N}$) | 240 | 258 | 576 |
| | Charac. Edge distance ($c_{cr,N}$) | 120 | 120 | 288 |
| | N_{Rd} (kN) | 23.5 | 23.3 | 51.4 |

Non-cracked concrete C20/25
No reinforcement for splitting
kmod: **1,1**; service class : **2**

Product capacities [kser]

| References | k_{ser} [kN/mm] | | | | |
|------------|-------------------|-----------|-----------|-----------|-----------|
| | CNA4.0x40 | CNA4.0x50 | CNA4.0x60 | CSA5.0x40 | CSA5.0x50 |
| HDCLT140 | 1.2 | 1.5 | 1.9 | 4.4 | 5.2 |

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