

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 22 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 fastener quantity.

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



At 140 mm high, HDCLT is completely concealed once the floor membranes, insulation and acoustic layers are in place.



Benefits:

- High-strength: up to 22 kN uplift resistance
- Low height: completely concealed within the floor structure
- Flexible: allows up to 25 mm tolerance to ensure optimal fastener edge distance where a concrete to CLT interlayer exists.

Material:

- Tension Tie: S250 GD + Z275 according to DIN EN
- Washer: S235JR according to EN 10025

Corrosion Protection:

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

Suitable on:

- Supporting Member: CLT, Concrete, Steel, Solid Timber
- Supported Member: CLT

Fastener:

- CSA Ø5 mm or CNAØ4 mm according to ETA-04/0013
- On concrete: Heavy Duty Wedge Anchor, Injection system for concrete, High capacity undercut anchor, concrete screw

Technical Support Contact your local Simpson Strong-Tie technical support team at any time during the design stage. We can advise the optimal density and thickness combination for the project.

Product Dimensions

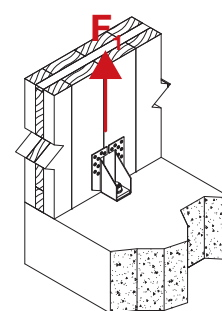
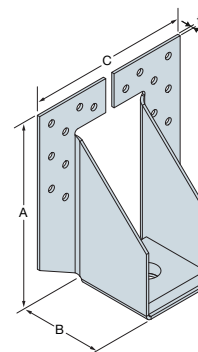
References	Product dimensions [mm]			
	A	B	C	t
HDCLT140	137	60	119	2,0

Product Characteristic Capacities – Timber C24 [kN]

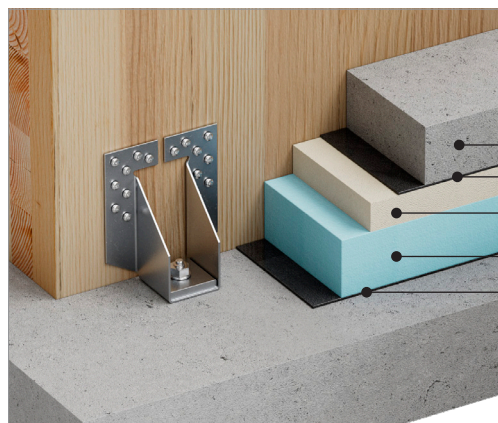
References	$R_{1,k}$				
	CNA4.0x40	CNA4.0x50	CNA4.0x60	CSA5.0x40	CSA5.0x50
HDCLT140	7.6	10.1	12.6	min (22,1; 24,2/ k_{mod})	min (26,1; 24,2/ k_{mod})

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
- The profile design permits up to 25 mm concrete to CLT interlayer



Up to 25 mm concrete to CLT interlayer



Cement floor
Waterproof membrane
Acoustic insulation
Insulation
Waterproof membrane