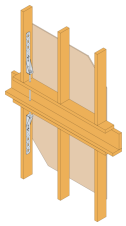
Technical Sheet

HTT
Hold Down

Ideal for existing or new construction, HTT Tension ties provide a high strength timber to concrete, or timber to masonry, tension connection
The long vertical leg makes it possible to add the required number of fasteners (CNA Nails and CSA Screws) in a vertical post and still comply to relevant standards with regards to fastener spacing requirements.
The unique design of the HTT - a multi ply seat formed from a single piece of steel - gives the tension tie extra strength at the concrete / masonry anchorage point







HTT4 & HTT5



HTT22E & HTT31





HTT5 + US50-50-8G-B profile.jpg

Features

Material

Z275 Pre-galvanised mild steel.

Benefits

- Enables a connection to concrete structure.

Applications

Connections

Timber Members

When to Use

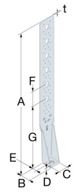
- Timber structures which exerted to high uplift forces can be connected to concrete structures with the HTT Hold Down.
- Tension force connection between timber floor joists and masonry walls

Technical Sheet

HTT
Hold Down

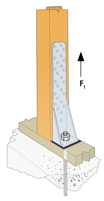
Technical Data

Product Dimensions



Reference	Connector Dimensions													
	Other			Product Dimensions[mm]						Joist			Flange B	
	Tun / DB nr.	NOB nr.	Qty per Box	A[mm]	B[mm]	C[mm]	d[mm]	E[mm]	t[mm]	Round			Round	
										Ø4.7	Ø5[mm]	Ø21	Ø17.5	Ø18[mm]
HTT4	1388657	42922721	16.0	314	60	64	11.4	35	2.8	18	-	-	1	-
HTT5	1388655	42922755	10.0	403	56	64	11.4	35	2.8	26	-	-	1	-
HTT22E	2049836	-	10.0	558	60	63	12	33	3	-	31	3	-	1
HTT31	2151752	-	5.0	790	60	90	12	33	3	-	41	6	-	-
HTT140	-	-	-	833	83	140	33	40	3	-	45	10	-	-

Capacities

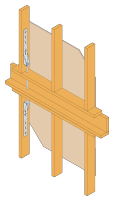


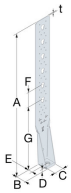
Reference
Qty
Type
2
downs capacity
cities - Timber to Concre
Ca
US50/50/8 washer)
CSA5.0x35

Capacities
See full table online ➡️

Technical Sheet

HTT
Hold Down

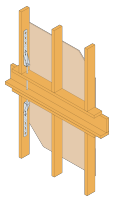


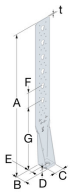


Product capacities - simplified values

Reference	Holdowns capacity													
	Simplified product capacities - Timber to Concrete													
	Number of Fasteners						Simplified Characteristic capacities - Timber C24 to concrete[kN]							
	Joist				Flange B		R1,k (without US50/50/8 washer)							
	Qty	Type	Qty 2	Type 2	Qty	Type	CNA4.0x35	CNA4.0x40	CNA4.0x50	CNA4.0x60	CSA5.0x35	CSA5.0x40	CSA5.0x50	CSA5.0x80
HTT4	18.0	CNA	-	-	1.0	M16	15.4	18.6	24.7	31	-	-	-	-
HTT5	18.0	CNA	-	-	1.0	M16	15.4	18.6	24.7	31	-	-	-	-
HTT22E	26.0	CNA/CSA	-	-	1.0	M16	32.6	39.6	42.3	52.3	44.8	50.6	52.3	52.3
HTT31	39.0	CNA/CSA	-	-	1.0	M24	58.1	64.1	77.4	77.4	69.7	77.4	77.4	77.4
HTT140	45.0	CSA	4.0	SSH8x120	1.0	M24	74.7	82.4	99.9	106.2	89.6	101.3	118.4	127.3

Simplified numerical characteristic capacities values are based on load duration and service class assumption (Instantaneous, Service class 2, k_{mod} = 1.1). For other load duration, service class and fasteners, please refer to ETA-07/0285.
For HTT31, 4 CSA5.0x50 must always be installed on the bottom extremity of the oblong holes to reach the capacities given in the table. For other fasteners in these holes, the calculation shall be calculated according to ETA.





Product capacities with Zyklop, simplified

Reference
HTT22E
HTT31
HTT140

The capacities for the ZYKT69 are determine for an embendingth length of the screws of the ZYKT of 280 mm.
Details of the Zyklop are givne in ETA-07/0317.
The essential CNA / CSA have to be place in the oblong holes (lower side), and for the HTT22E also in the 2 lowermost holes Ø5 mm.
Simplified numerical characteristic capacities values are based on load duration and service class assumption (Instantaneous, Service class 2, k_{mod} = 1.1). For other load duration, please refer to ETA-07/0285.

Installation

Fixing

Fastening into Timber Stud:

- 4mm CNA Nails
- 5mm CSA Screws

for fastener & capacity options see 'Product Capacities - Simplified Values' table
Fastening to the concrete:

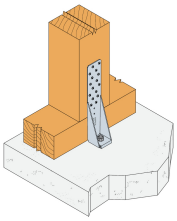
- Mechanical anchors: M16 WA Anchor or BOAX-II
- Chemical anchors: injection mortar SET-XP or AT-HP + M16 threaded rod LMAS

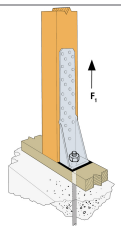
Installation

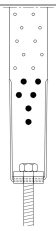
- The connector is mounted with a suitable M16 bolt to the concrete or masonry wall, and the vertical leg is fastened with 4mm CNA Nails, or 5.0mm CSA Screws, to the timber.

Technical Sheet

HTT
Hold Down

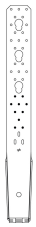






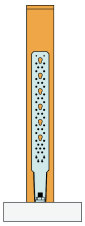


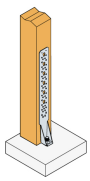
For HTT5 these holes must always be filled.

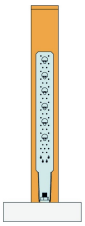


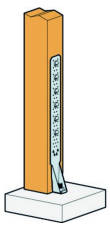
For HTT22E these holes must always be filled

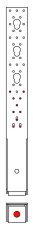




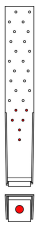


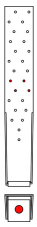












HTT
Hold Down

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2026-11-15