

Technical data sheet

ETC Truss hangers

SIMPSON
Strong-Tie

These hangers are used in small trusses with Fasteners a cross-section of 38 mm. They enable to make a hip by assembling hip and jack half trusses. The models differ depending on the installation type.

Features

Material

- Galvanized steel S250GD + Z275 according to NF EN 10346.

Benefits

- Utilisable dans de multiples configurations,
- Fixation sur bois ou sur béton...

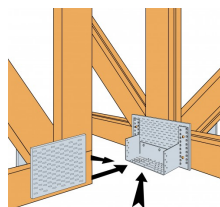
Applications

Header member

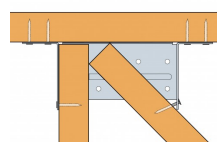
- Supporting member:** solid wood, composite lumber, glued-laminated wood, concrete, steel.
- Supported member:** solid wood.

When to Use

- Truss end hip hanger



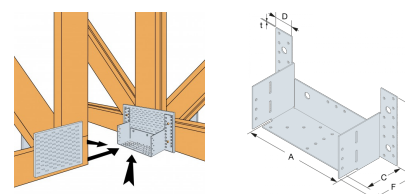
ETC



ETC434 Assemblages 2
éléments 1 arêtier simple -
1 empannon

Technical Data

Product Dimensions



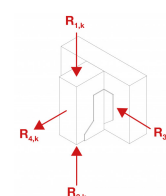
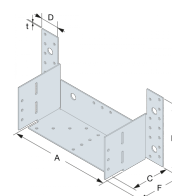
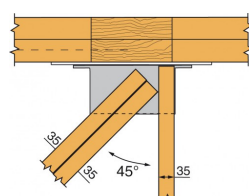
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References	Product Dimensions [mm]						Holes					Weight [kg]
	A	B	C	D	F	t	Header		Joist			
							Ø5	Ø13	Side Flanges		Base	
									Ø5	Ø5x7.5	Ø5	
ETC434	140	145	80	225	100	1.5	24	4	6	8	10	0.55
ETC485R	195	145	110	279	90	2	24	4	12	-	31	0.85
ETC502	206	145	98	290	89	2	24	4	6	-	12	0.85
ETC835	355	240	110	481	143	3	40	4	14	-	33	2.8

* Currently not CE marked.

ETC392 application requires vertical member (king post), min. width 97 mm.

Product capacities - Timber to timber - Header ≥ 200mm



ETC485R Assemblages 2
éléments 1 arêtier double - 1
empannon

References	Timber sections and fasteners							Characteristic capacity - Header ≥197mm - Timber C24 [kN]					
	Header	Jack			Hip			R _{1,k}			R _{2,k}		
	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	Jack	Hip	Total	Jack	Hip	Max.
ETC434	27 (27)	1	147	6	1 (2)	147	6 (7)	3 (4.2)	9 (12.6)	12 (16.8)	5.3 (5.3)	4.7 (5.7)	3.3 (3.3)
ETC485R	24	1	97	11	2	97	10	5.6	16.8	22.4	5.9	5.7	3.8
ETC502	27	1	97	4	1	97	6	4.6	9.3	23.2	1.2	5.6	4.4
ETC835	44	1	147	5	2	147	28	5.8	11.7	29.2	1.8	5.8	7.7

Uplift capacities are calculated as : $R_{2,k} = \min(\text{Jack} + \text{No. of Hip} \times \text{Hip}; \text{Max})$

Values between () are in case of a double hip.

Load path is :

25 % on jack, 75 % on hip for ETC434 and ETC485R

20 % on jack, 40 % on each hip for ETC502 and ETC835

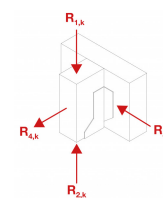
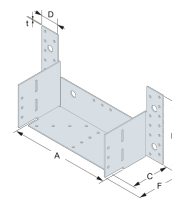
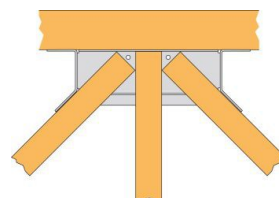
Please refer to the installation section to see images of the different possible installations.

Technical data sheet

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ETC Truss hangers

Product capacities - Timber to timber -
Header $\geq 195\text{mm}$



ETC502 Assemblages 3
éléments 2 arêtières simples - 1
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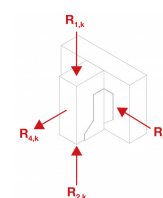
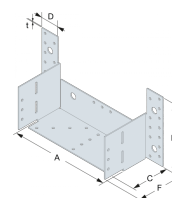
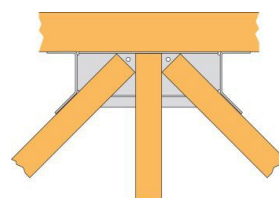
References	Timber sections and fasteners							Characteristic capacity - Header $\geq 197\text{mm}$ - Timber C24 [kN]					
	Header	Jack			Hip			$R_{1,k}$			$R_{2,k}$		
	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	Jack	Hip	Total	Jack	Hip	Max.
ETC502	25	1	97	4	1	97	6	6.6	4.9	16.4	1.2	5.6	4.4

Uplift capacities are calculated as : $R_{2,k} = \min(\text{Jack} + 2 \cdot \text{Hip}; \text{Max})$

Load path is :

40 % on jack, 30% on each hip for ETC502.

Product capacities - Timber to timber -
Header $\geq 145\text{mm}$



ETC502 Assemblages 3
éléments 2 arêtières simples - 1
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References	Timber sections and fasteners							Characteristic capacity - Header $\geq 147\text{mm}$ - Timber C24 [kN]					
	Header	Jack			Hip			$R_{1,k}$			$R_{2,k}$		
	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	Jack	Hip	Total	Jack	Hip	Max.
ETC502	23	1	97	4	1	97	6	5.8	4.3	14.4	1.2	5.6	3.3

Uplift capacities are calculated as : $R_{2,k} = \min(\text{Jack} + 2 \cdot \text{Hip}; \text{Max})$

Load path is :

40 % on jack, 30% on each hip for ETC502

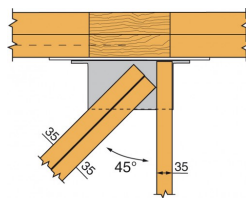
Technical data sheet

ETC
Truss hangers

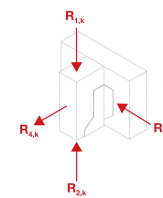
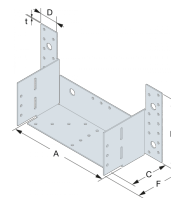
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Product capacities - Timber to timber -
Header $\geq 97\text{mm}$



*ETC485R Assemblages 2
éléments 1 arêtier double - 1
empannon*



References	Timber sections and fasteners								Characteristic Capacities - Header ≥97mm - Timber C24 [kN]					
	Header		Jack			Hip			R _{1,k}			R _{2,k}		
	No. of plies	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	No. of plies	Min. height	CNA4,0x35	Jack	Hip	Total	Jack	Hip	Max.
ETC434	-	19	1	147	6	1 (2)	147	6 (7)	5.3	4,7 (5,7)	5.5	5.3	4,7 (5,7)	3.3
ETC485R	-	20	1	97	11	2	97	10	-	-	-	5.9	5.7	3.8
ETC502	-	15	1	97	4	1	97	6	4.5	3.4	11.4	1.2	5.6	3.3
ETC835	-	26	1	147	5	2	147	28	-	-	-	1.8	5.8	7.7

Download capacities are calculated as: $R_{1,k} = \min(\text{Jack} + 2 * \text{Hip}; \text{Total})$

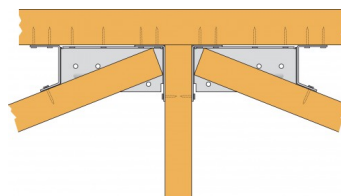
Uplift capacities are calculated as: $R_{2,k} = \min(\text{Jack} + 2 \cdot \text{Hip}; \text{Max})$

Capacities between () are the ones to be used if hip is double.

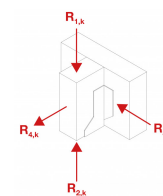
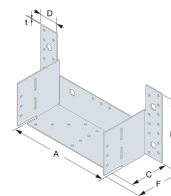
Load path for download is :

ETC434 : 25% on jack, 75% on hip

ETC502 : 40 % on jack, 30% on each hip



*ETC434G and ETC434D - on each side
of the central rafter*



Product capacities - Timber to timber - 1 Left model + 1 Right model

Table "Product capacities - Timber to timber - 1 Left model + 1 Right model" cannot be displayed : no references available.

Installation

Fasteners on supported member

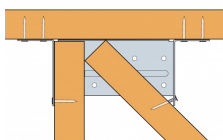
- CNA annular ring-shank nails dia. 4.0 x 35 mm.

Fasteners on supporting member

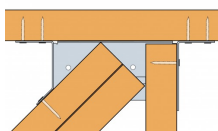
- **Wood element:** CNA annular ring-shank nails dia. 4.0 x 35 mm.
- **Steel element:** bolts dia. 12 mm (bolt diameter cannot be more than 2 mm smaller than the drill hole diameter).
- **Concrete element:** WA M12-104/5 mechanical anchor or chemical anchor (AT-HP resin + LMAS M12 x 150 threaded rod).

Installation

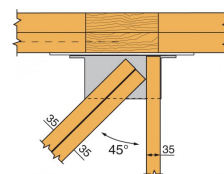
Use all the specified fasteners for a given installation. Elements made with 2 plies must be assembled with each other so that they act as a single element (see Eurocode 5).



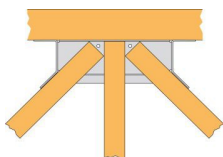
ETC434 Assemblages 2 éléments 1 arêtier simple - 1 empannon



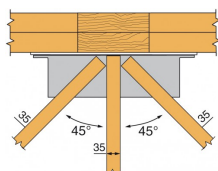
ETC434 Assemblages 2 éléments 1 arêtier double - 1 empannon



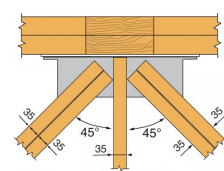
ETC485R Assemblages 2 éléments 1 arêtier double - 1 empannon



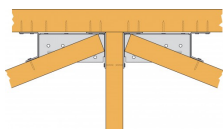
ETC502 Assemblages 3 éléments 2 arêtiers simples - 1 empannon



ETC835 Assemblages 3 éléments 2 arêtiers simples - 1 empannon



ETC835 Assemblages 3 éléments 2 arêtiers doubles - 1 empannon



ETC434G and ETC434D - on each side of the central rafter

