



These concealed hangers ensure a completely invisible assembly. The slot in the head facilitates on-site installation. TUBSL or TUBSR, factory bent, are suitable for skewed applications.



[ETA-07/0245](#), [UK-DoP-e07/0245](#)

FEATURES



Material

- Steel S250GD + Z275 according to NF EN 10346.
- Thickness 3.5 mm.
- Half-hour fire resistance subject to a special installation.

Benefits

Invisible assembly

Mounting on wood or concrete

Optimized implementation complies with Eurocodes



APPLICATIONS

Header member

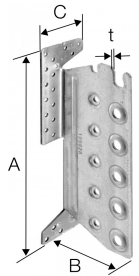
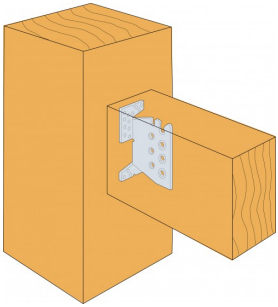
- **Supporting member:** solid wood, glued-laminated wood, composite lumber.
- **Supported member:** solid wood, glued-laminated wood, composite lumber.

For Use With

- Joists.
- Purlins.
- Supporting beam.

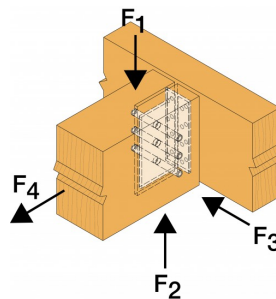
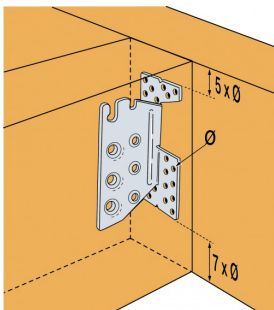
TECHNICAL DATA

Product Dimensions



References	Joist Size [mm]					Product Dimensions [mm]				Header holes	Joist holes	
	Width		Height			A	B	C	t	Ø5	Ø8,5	Ø12,5
	Min	Max.	Min β=0	Min β≠0	Max.							
TU12	45	120	120	160	200	96	97.5	40	3.5	6	4	-
TU16	60	160	160	190	240	134	104.5	60	3.5	18	-	3
TU20	60	160	200	225	280	174	104.5	60	3.5	22	-	4
TU24	60	160	240	260	300	214	104.5	60	3.5	26	-	5
TU28	60	160	280	295	340	254	104.5	60	3.5	30	-	6

Product Capacities



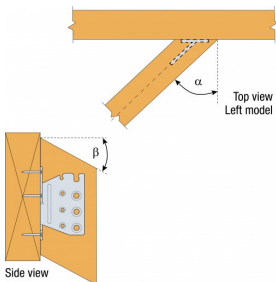
References	Product Capacities															
	Number of Fasteners				Product characteristic capacities - Timber C24 [kN]											
	Header		Joist		R _{1,k}				R _{2,k}				R _{3,k}			
	Qty	Type	Qty	Type	Dowels length [mm]				Dowels length [mm]				Dowels length [mm]			
				60	80	100	120	60	80	100	120	60	80	100	120	
TU12	6	CSA5,0x4	4	STD8	8.1	9	10.1	10.7	6.1	6.8	7.6	8	1.2	1.7	2.2	2.8
TU16	18	CSA5,0x4	3	STD12	17.5	18.1	19.2	20.5	11.7	12.1	12.8	13.7	1.6	2.2	2.9	3.6
TU20	22	CSA5,0x4	4	STD12	26.7	27.6	29.2	31.1	20	20.7	21.9	23.3	2.2	2.9	3.8	4.6
TU24	26	CSA5,0x4	5	STD12	36.6	37.7	39.8	42.5	29.3	30.2	31.8	34	2.7	3.6	4.7	5.8
TU28	30	CSA5,0x4	6	STD12	46.9	48.3	50.9	54.1	39.1	40.3	42.4	45.1	3.2	4.4	5.5	6.7

Characteristic Capacities - Sloped Installation (Slope upto 45°, Skew = 0°)



References	Characteristic Capacities - Sloped Installation (Slope upto 45°, Skew = 0°)															
	Number of Fasteners				Product characteristic capacities - Timber C24 [kN]											
	Header		Joist		R _{1,k} - Slope β=15°				R _{1,k} - Slope β=30°				R _{1,k} - Slope β=45°			
	Qty	Type	Qty	Type	Dowels length [mm]				Dowels length [mm]				Dowels length [mm]			
60					80	100	120	60	80	100	120	60	80	100	120	
TU12	6	CSA5,0x4	4	STD8	8.1	9	10.1	10.7	8.1	9	10.1	10.7	8.1	9	10.1	10.7
TU16	18	CSA5,0x4	3	STD12	16.9	17.4	18.3	19.4	16.5	16.8	17.5	18.5	15.9	16.4	17	17.9
TU20	22	CSA5,0x4	4	STD12	25.8	26.4	27.8	29.5	25.1	25.6	26.7	28.1	24.4	25.1	26.1	27.4
TU24	26	CSA5,0x4	5	STD12	35.4	36.2	38	40.2	34.3	35.2	36.6	38.6	33.6	34.7	36	37.8
TU28	30	CSA5,0x4	6	STD12	45.5	46.4	48.6	51.4	44	45.3	47.1	49.5	43.4	44.9	46.5	48.7

Product capacities - Safe working loads



References	Safe working loads (skew = 0°)															
	Number of Fasteners				Slope = 0°				Slope = 45°				Slope = 0°			
	Header		Joist		R _{1,SWL} [kN]				R _{1,SWL} [kN]				R _{3,SWL} [kN]			
	Qty	Type	Qty	Type	Dowels length [mm]				Dowels length [mm]				Dowels length [mm]			
60					80	100	120	60	80	100	120	60	80	100	120	
TU12	6	CSA5,0x4	4	STD8	2.6	3.6	4.3	-	2.3	3.1	3.9	-	0.6	0.8	1	1.2
TU16	18	CSA5,0x4	3	STD12	3.4	4.8	6.1	7.5	3	4.1	5.3	5.3	0.8	1.1	1.4	1.6
TU20	22	CSA5,0x4	4	STD12	5.5	7.7	9.8	12	4.8	6.7	8.5	8.5	1.1	1.5	1.8	2.1
TU24	26	CSA5,0x4	5	STD12	8	11.1	14.2	17.4	6.9	9.6	12.3	12.3	1.4	1.8	2.2	2.7
TU28	30	CSA5,0x4	6	STD12	10.7	14.9	19.2	21.5	9.3	12.9	16.6	16.6	1.8	2.2	2.7	3.2

INSTALLATION

Fixing

On supporting wood member: TU/TUB/TUBS

- CNA annular ring-shank nails dia. 4.0 x 50 mm or CSA screws dia. 5.0 x 40 mm.
- Lag screws and bolts dia. 10 mm only for TUB/TUBS.

On supported member: Steel dowel S235JR type STD12

- TU12: dia. 8 mm type STD 8.
- TU16 to 28: dia. 12 mm type STD 12.
- TUB/TUBS: dia. 12 mm type STD 12.

The length of the dowels is less than or equal to the width of the supported joist.

TU: wood/wood fastening only with nails/screws.

TUB: wood/wood fastening only with nails/screws or lag screws.

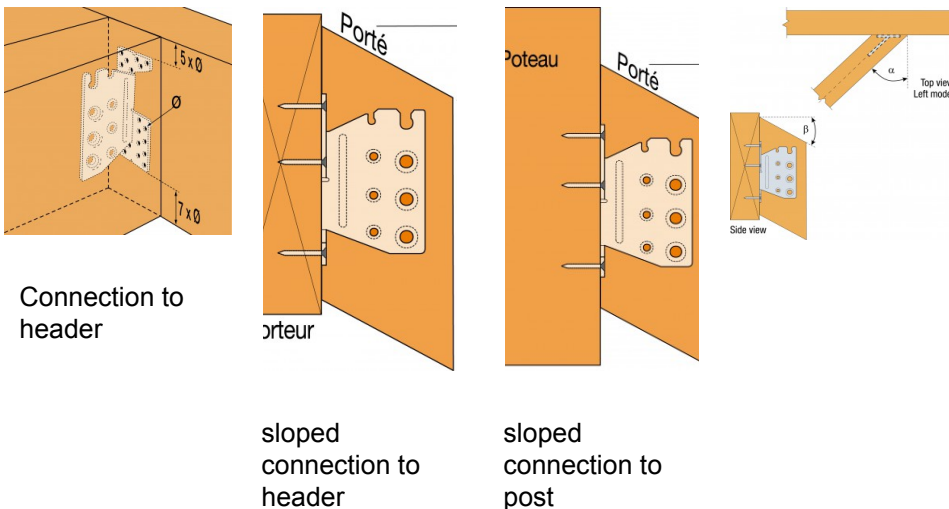
TUBS: wood/wood fastening only with nails/screws or lag screws.

Concrete and steel substrate:

It is not recommended to use hangers on concrete or steel substrate as the size of the bolts makes the distance from the edge of the wood to the dowels non-compliant with Eurocode 5.

Installation

1. Make a vertical notch in the joist end (width 6mm for TU12 and 9mm for TU16 to TU28),
2. Mark the position of the dowels on the joist before drilling holes - diameter of the hole according to the diameter of the dowel
3. Insert the top dowel in the joist
4. Route a 6mm deep pocket in either the joist end or the header. This is not compulsory, it is used to improve the aesthetic of the connection
5. Fix Install the joist onto the concealed beam hanger by hooking the joist onto the concealed beam hanger. Top dowel hooks into slotted top hole on the concealed beam hanger.
6. Install remaining dowels the concealed beam hanger to the header with nails or screws



Connection to header

Porteur

sloped connection to header

sloped connection to post

TECHNICAL NOTES