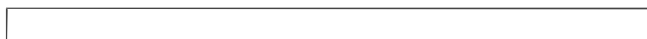




[UK-DoP-e07/0245](#)
[ETA-07/0245](#)



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.

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

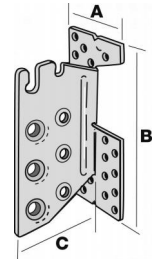
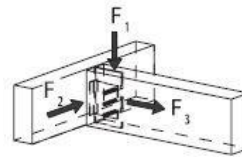
- **Supporting member:** solid wood, glued-laminated wood, composite lumber.
- **Supported member:** solid wood, glued-laminated wood, composite lumber.

For Use With

- Joists.
- Purlins.
- Supporting beam.

TECHNICAL DATA

Dimensions



References	Dimensions				Holes		Dowels	
	A [mm]	B [mm]	C [mm]	Thickness [mm]	Ø5	Qty [nb]	Diameter [mm]	
TU12	40	96	101	3.5	6	4	8	
TU16	60	134	108	3.5	18	3	12	
TU20	60	174	108	3.5	22	4	12	
TU24	60	214	108	3.5	26	5	12	
TU28	60	254	108	3.5	30	6	12	
TUS12	40	96	101	3.5	6	4	8	
TUS16	60	134	108	3.5	18	3	12	
TUS20	60	174	108	3.5	22	4	12	
TUS24	60	214	108	3.5	26	5	12	
TUS28	60	254	108	3.5	30	6	12	

Performance Values skew = 90°

Reference	Header screws		Joist Dowels		Standard installation (Slope = 0°)								Sloped installation (Slope = 45°)							
	Qty	Type	Qty	Ø	Safe Working Loads [kN]				Characteristic Capacity [kN]				Safe Working Loads [kN]				Characteristic Capacity [kN]			
					Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]			
					60	80	100	120	60	80	100	120	60	80	100	120	60	80	100	120
TU12	6	5.0x40	4	8	2.6	3.6	4.3	-	8.08	9.02	9.84	10.66	2.3	3.1	3.9	-	8.08	9.02	9.84	10.66
TU16	18	5.0x40	3	12	3.4	4.8	6.1	7.5	17.53	18.13	19.33	20.53	3	4.1	5.3	5.3	15.95	16.4	17.15	17.89
TU20	22	5.0x40	4	12	5.5	7.7	9.8	12	26.7	27.57	29.36	31.14	4.8	6.7	8.5	8.5	24.36	25.14	26.26	27.39
TU24	26	5.0x40	5	12	8	11.1	14.2	17.4	36.61	37.73	40.1	42.47	6.9	9.6	12.3	12.3	33.61	34.73	36.26	37.79
TU28	30	5.0x40	6	12	10.7	14.9	19.2	21.5	46.93	48.28	51.2	54.13	9.3	12.9	16.6	16.6	43.43	44.87	46.8	48.74

Performance Values skewed connections

Reference	Header Screws		Joist Dowels		Skewed Installation (Slope = 0°)								Skewed Installation (Slope = 45°)							
	Qty	Type	Qty	Ø	Safe Working Loads [kN]				Characteristic Capacity [kN]				Safe Working Loads [kN]				Characteristic Capacity [kN]			
					Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]			
					60	80	100	120	60	80	100	120	60	80	100	120	60	80	100	120
TUS12	6	5.0x40	4	8	2.5	2.5	2.5	-	7.4	8.16	8.84	9.52	2.3	2.5	2.5	-	6.6	7.12	7.81	8.5
TUS16	18	5.0x40	3	12	3.4	4.8	6.1	6.1	16.34	16.86	17.87	18.87	6	4.1	5.3	5.3	15.01	15.37	16	16.63
TUS20	22	5.0x40	4	12	5.5	7.7	9.8	9.8	24.89	25.6	27.15	28.66	4.8	6.7	8.5	8.5	22.87	23.49	24.44	25.39
TUS24	26	5.0x40	5	12	8	11.1	13.3	13.3	34.21	35.2	37.22	39.24	6.9	9.6	12.3	12.3	31.53	32.45	33.75	35.04

Reference	Header Screws		Joist Dowels		Skewed Installation (Slope = 0°)								Skewed Installation (Slope = 45°)							
	Qty	Type	Qty	Ø	Safe Working Loads [kN]				Characteristic Capacity [kN]				Safe Working Loads [kN]				Characteristic Capacity [kN]			
					Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]				Dowel Embedment Length [mm]			
					60	80	100	120	60	80	100	120	60	80	100	120	60	80	100	120
TUS28	30	5.0x40	6	12	10.7	14.9	16.3	16.3	44.03	45.24	47.76	50.28	9.3	12.9	16.3	16.3	40.78	42	43.65	45.3

The skew may be made by the order of products in range of # = 30° to 88°
 # = the angle between header and joist

Performance Values lateral

References	Minimum Joist Height [mm]	Safe Working Loads [kn]				Characteristic Lateral Capacity [kN]			
		Dowel Embedment Length [mm]				Dowel Embedment Length [mm]			
		60	80	100	120	60	80	100	120
TU12	120	0.6	0.8	1	1.2	1.2	1.7	2.2	2.8
TU16	160	0.8	1.1	1.4	1.6	1.6	2.2	2.9	3.6
TU20	200	1.1	1.5	1.8	2.1	2.2	2.9	3.8	4.6
TU24	240	1.4	1.8	2.2	2.7	2.7	3.6	4.7	5.8
TU28	280	1.8	2.2	2.7	3.2	3.2	4.4	5.5	6.7

The force is acting on the upper side of the TU hanger.
 Connection with CNA5.0x50

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. Réaliser une entaille verticale dans la poutre portée (largeur 6 mm pour le TU12 et largeur 9 mm pour les TU16 à TU28),
1. Identifier la position des broches sur la poutre avant de percer transversalement,
2. Insérer uniquement la première broche dans la poutre sur la partie supérieure (diamètre de perçage fonction du diamètre de la broche),
2. Réaliser un lamage d'une profondeur de 6 mm dans le support. Ce lamage n'est pas obligatoire, il permet d'améliorer l'esthétique de l'assemblage,
3. Fixer l'étrier sur le support à l'aide de pointes ou de vis,
3. Présenter la poutre portée de manière à placer la broche déjà en place dans l'encoche de l'étrier,
4. Mettre en place les broches restantes.

TECHNICAL NOTES