



GH - Top Vario 240 / 280 tension tie

ETA-10/0010



Properties

Steel grade S 250 GD / DX 51 D
Surface Z 275

Fasteners

Fixing on the floor in concrete, masonry, steel, timber

Concrete screw, stud anchor, chemical anchor, screws and bolts to DIN 601 / ISO 4016

Wall fixing in timber with connectors to ETA-13/0523

GH connector nails (threaded nails) 4.0 x 40 / 50 / 60 / 75 / 100 mm
GH screw 5.0 x 35 / 40 / 50 / 60 / 70 mm

The wall/column joint can also be made with an interlayer (e.g. OSB) according to ETA-10/0010

Nail pattern

Minimum number of nails/screws, see load-capacity table, "min. Nail/screw".column

Calculation of the design value of the load-carrying capacities to ETA-10/0010

n_1	=	Structurally useful number of holes, timber (vertical flange)
n_2	=	Number of holes, concrete
LDC	=	Load duration class to EN 1995-1-1
$n_{\text{nail/screw}}$	=	Minimum number of nails \varnothing 4 mm or screws \varnothing 5 mm in the vertical flange
$F_{z,Rk}$	=	Characteristic value of the load-carrying capacity in the load direction F_z
$F_{z,Rd}$	=	Design value of load-carrying capacity in load direction F_z
k_t	=	Factor for calculating the tensile force in the anchor bolt/concrete dowel: $F_{B,Ed} = k_t \cdot F_{z,Ed}$

Remarks:

The load-bearing capacities only apply to the given minimum number of fasteners $\min n_{\text{nail/screw}}$.

The table values apply to a char. density of timber of at least 350 kg/m³.

The fastener minimum edge distances to EC5 shall be satisfied. Minimum distance of the fastener from the end-grain end $a_{3,t}$: 60 mm for nails \varnothing 4 mm and 75 mm for screws \varnothing 5 mm.

All calculations and values are exclusively for GH products and their fasteners.

The load-bearing capacities were determined on the basis of ETA 13/0523. It is not possible to transfer the values to third party

Disclaimer:

Despite careful calculations and checking, no liability is accepted for the technical data.

Subject to change without notice

For technical drawing, see website www.holzverbinder.de



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Resistances (load-carrying capacities) with washer

Art.No.	Description	Dimensions [mm]				n ₁ Ø 5.0	n ₂ Ø	LDC	4x40 5x40		4x50 5x50		4x60 5x60		k _t
		H	L	B	T				min. n _{Nä/screw}	F _z [kN]	min. n _{Nä/screw}	F _z [kN]	min. n _{Nä/screw}	F _z [kN]	
110850	Top Vario 240	240	x 120	x 55	x 2,0	17	2x	short-term	13	15,9	11	15,9	11	1,49	
							18x26	instantaneous	10		9		9		
								charac.	9		8		8		
110867	Top Vario 280	280	x 120	x 55	x 2,0	22	2x	short-term	13	15,9	11	15,9	11	1,49	
							18x26	instantaneous	10		9		9		
								charac.	9		8		8		
111345	Top washer		114	x 55	x 20,0										
111352	Top washer		114	x 55	x 20,0										