



GH - Twist strap (rafter-to-purlin wind tie)

ETA-10/0007



0769



Properties

Steel grade S 250GD , 1.4571
 Surface Z 275g/m² both sides, approx. 20 µm

Fasteners

in timber

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

Nail pattern

Minimum number, see resistance table n_H Ø5 column. Corresponds to full nailing for types RL/..

Basis of calculation

n_H Ø5 = Number of holes in timber per flange
 LDC = Load duration class
 F_{Z,Rd/Rk} = Design value or characteristic tensile resistance of the twist strap

Remarks:

Timber strength class 350 kg/m³ char. density.
 Verification of tension perpendicular to the grain must be provided separately according to EN 1995-1-1 8.1.4.
 The fastener minimum edge distances to EC 5 shall be satisfied.

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 or EN 14592. It is not possible to transfer the values to third party makes.

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



Resistances as per ETA-10/0007

Load-bearing capacities (resistances) for two diagonally arranged twist straps.

GH Twist straps RL/D					
Art. No.	Type	n _H Ø 5	LDC	F _{Z,Z,Rd} [kN] 4.0 x 40 ²	F _{Z,Z,Rd} [kN] 5.0 x 40 ³
100501RL	170	4 + 5	short-term	5,84	7,00
100501RLD			medium-term	5,19	6,52
100501RLD15			permanent	3,90	4,89
			charact.	7,70	7,70
100502RL	210	6 + 7	short-term	7,00	7,00
100502RLD			medium-term	7,00	7,00
100502RLD15			permanent	6,05	7,00
			charact.	7,70	7,70
100503RL	250	8 + 9	short-term	7,00	7,00
100503RLD			medium-term	7,00	7,00
100503RLD15			permanent	7,00	7,00
			charact.	7,70	7,70

GH Twist straps lhs + rhs					
Art. No.	Type	n _H Ø 5	LDC	F _{Z,Z,Rd} [kN] 4.0 x 40 ²	F _{Z,Z,Rd} [kN] 5.0 x 40 ³
100501	170	4 + 4	short-term	3,86	4,85
			medium-term	3,43	4,31
			permanent	2,57	3,24
			charact.	5,57	7,01
100502	210	6 + 6	short-term	7,1	8,9
			medium-term	6,3	7,9
			permanent	4,7	5,9
			charact.	10,2	10,2
100503	250	8 + 8	short-term	9,3	9,3
			medium-term	9,3	9,3
			permanent	7,2	9,1
			charact.	10,2	10,2
100504	290	10 + 10	short-term	9,3	9,3
			medium-term	9,3	9,3
			permanent	9,3	9,3
			charact.	10,2	10,2
100505	330	12 + 12	short-term	9,27	9,27
			medium-term	9,27	9,27
			permanent	9,27	9,27
			charact.	10,20	10,20
100506	370	14 + 14	short-term	9,3	9,3
			medium-term	9,3	9,3
			permanent	9,3	9,3
			charact.	10,2	10,2

² GH connector nails (threaded nails)

³ GH screw

The load-carrying capacities can be doubled if a four twist strap arrangement is chosen.