



GH - Angle bracket Type LLG

ETA-09/0322



Properties

Steel grade S 250 GD / DX 51 D / 1.4301 / 1.4401 / 1.4541 / 1.4571
 Surface Z 275 / Stainless steel

For angle bracket basic principles, see download document

Fasteners

Fixing in concrete, masonry, steel, ...

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

Fixing in timber with fasteners to ETA-13/0523

GH connector nails (threaded nails) 4.0 x 35 / 40 / 50 / 60 / 75 / 100 mm
 GH screw 5.0 x 25 / 35 / 40 / 50 / 60 / 70 mm

The joint can also be made with an interlayer (e.g. OSB).

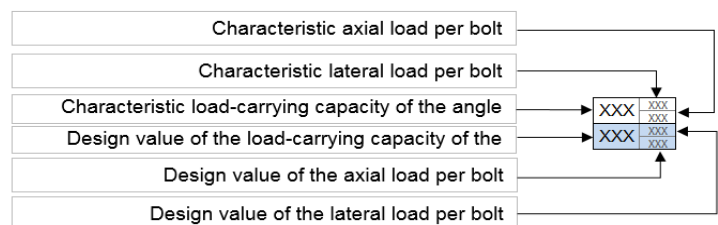
Nail pattern

Full nailing / partial nailing, see technical drawing or ETA

Calculation of the design value of the load-carrying capacities to ETA-09/0322

The tables contain characteristic load-carrying capacities (resistances) and design values of the load-carrying capacity (resistance) "short-term" in kN

b = Purlin / joist width
 e = Distance of the load application point from the bottom of the angle bracket



Remarks:

Timber strength class 350 kg/m³ char. density.

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. 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



„Innovationen im Holzbau“

Angle bracket Type LLG

Art. No. 3691015

90 x 60 x 60 x 1.5 mm

Timber-to-concrete joint with full nailing

Characteristic load-carrying capacity (resistance) and design value of the load-carrying capacity (resistance) ("short-term") in kN,

Load direction $F_{2,3}$ for one angle bracket

	Fasteners			
	4x40		4x50	
char.	7,2	$\frac{7,2}{0,0}$	8,4	$\frac{8,4}{0,0}$
short-term	5,0	$\frac{5,0}{0,0}$	5,8	$\frac{5,8}{0,0}$

Load direction $F_{2,3}$ for two angle brackets

	Fasteners			
	4x40		4x50	
char.	14,4	$\frac{14,4}{0,0}$	16,9	$\frac{16,9}{0,0}$
short-term	10,0	$\frac{10,0}{0,0}$	11,7	$\frac{11,7}{0,0}$

Load direction F_4 for one angle bracket

	Height of the load application point e in [mm]																			
	40		60		80		100		120		140		160		180		200			
	Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners			
	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50		
char.	0,1	$\frac{0,1}{1,5}$	0,1	$\frac{0,1}{1,5}$	0,1	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$	0,0	$\frac{0,1}{1,5}$
short-term	0,1	$\frac{0,1}{1,4}$	0,1	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$	0,0	$\frac{0,1}{1,4}$



„Innovationen im Holzbau“

Angle bracket Type LLG

Art. No. 3691025

90 x 60 x 60 x 2.5 mm

Timber-to-concrete joint with full nailing

Characteristic load-carrying capacity (resistance) and design value of the load-carrying capacity (resistance) ("short-term") in kN,

Load direction $F_{2,3}$ for one angle bracket

	Fasteners			
	4x40		4x50	
char.	7,1	$\frac{7,1}{0,0}$	8,4	$\frac{8,4}{0,0}$
short-term	4,9	$\frac{4,9}{0,0}$	5,8	$\frac{5,8}{0,0}$

Load direction $F_{2,3}$ for two angle brackets

	Fasteners			
	4x40		4x50	
char.	14,2	$\frac{14,2}{0,0}$	16,9	$\frac{16,9}{0,0}$
short-term	9,8	$\frac{9,8}{0,0}$	11,7	$\frac{11,7}{0,0}$

Load direction F_4 for one angle bracket

	Height of the load application point e [mm]																			
	40		60		80		100		120		140		160		180		200			
	Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners		Fasteners			
	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50	4x40	4x50		
char.	0,1	$\frac{0,2}{2,6}$	0,1	$\frac{0,2}{2,6}$	0,1	$\frac{0,1}{2,6}$	0,1	$\frac{0,1}{2,6}$	0,1	$\frac{0,1}{2,6}$	0,0	$\frac{0,1}{2,6}$	0,0	$\frac{0,1}{2,6}$	0,0	$\frac{0,0}{2,6}$	0,0	$\frac{0,0}{2,6}$	0,0	$\frac{0,0}{2,6}$
short-term	0,1	$\frac{0,2}{2,4}$	0,1	$\frac{0,2}{2,4}$	0,1	$\frac{0,1}{2,4}$	0,1	$\frac{0,1}{2,4}$	0,0	$\frac{0,1}{2,4}$	0,0	$\frac{0,1}{2,3}$	0,0	$\frac{0,1}{2,2}$	0,0	$\frac{0,0}{2,4}$	0,0	$\frac{0,0}{2,1}$	0,0	$\frac{0,0}{2,4}$