



„Innovationen im Holzbau“

## GH - Timber connector screw

ETA-13/0523



0769

### Properties

Steel grade C 20 D  
 Surface Fe/Zn , min. 7c

### Fasteners to ETA-13/0523

### in timber

GH screw 5.0 x 25 / 35 / 40 / 50 / 60 / 70 mm

### Joint variations

Material thickness of the connector from 1.5 to 6.0mm

### Use

GH timber connector screws are used for connections of two or three-dimensional timber connectors used in load-bearing timber constructions without predrilling subject to the edge distances and (centre-to-centre) spacings to Eurocode 5 or the corresponding ETA of the connector. The reduction in edge distances and spacings in accordance with Eurocode 5 through predrilling is possible.

### Approved wood-based panels

- Solid wood, glulam, cross-laminated timber, ... according to European Technical Assessment
- Plywood to EN 636
- Solid wood panels to EN 13353 and EN 13986
- Laminated veneer lumber to EN 14374
- Particle boards, performance classes P4 to P7 to EN 312
- Oriented strand board OSB / 3 and OSB / 4 to EN 300
- or according to European Technical Assessment

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](http://www.holzverbinder.de)

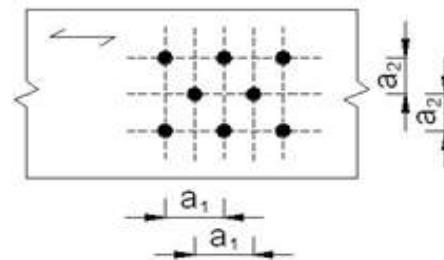
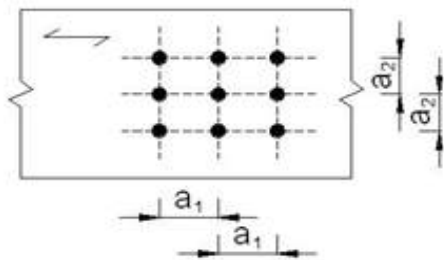


**Minimum spacings**

to EN 1995-1-1 for Ø 5 mm in nailing plates,  $\rho_k \leq 420 \text{ kg/m}^3$

Spacings without predrilling		Force parallel to the grain	Force perpendicular to the grain
$a_1$	in grain direction	42 mm	17.5 mm
$a_2$	perpendicular to the grain direction	17.5 mm	17.5 mm
$a_{3,t}$	loaded end	75 mm	50 mm
$a_{3,c}$	unloaded end	50 mm	50 mm
$a_{4,t}$	loaded edge	25 mm	50 mm
$a_{4,c}$	unloaded edge	25 mm	25 mm

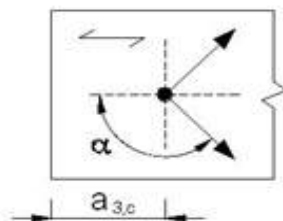
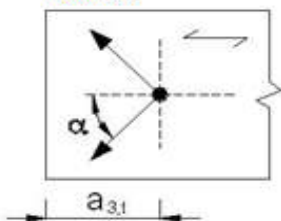
For angles other than those given between the force and grain, see EN 1995-1-1 Tab.8.2



End grain

loaded

unloaded



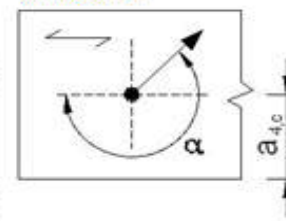
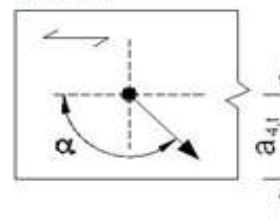
$-90^\circ \leq \alpha \leq 90^\circ$

$90^\circ \leq \alpha \leq 270^\circ$

Lateral edge

loaded

unloaded



$0^\circ \leq \alpha \leq 180^\circ$

$180^\circ \leq \alpha \leq 360^\circ$



**Resistance table\* for GH screw to ETA-13/0523**

Screw	kN	R <sub>k</sub>	Design value R <sub>d</sub>				
			permanent	long-term	medium-term	short	instantaneous
5x25	F <sub>v,Rk/d</sub>	1,41	0,65	0,76	0,87	0,98	1,19
	F <sub>ax,Rk/d</sub>	1,10	0,51	0,59	0,68	0,76	0,93
5x35	F <sub>v,Rk/d</sub>	1,83	0,84	0,98	1,12	1,26	1,55
	F <sub>ax,Rk/d</sub>	1,63	0,75	0,88	1,00	1,13	1,38
5x40	F <sub>v,Rk/d</sub>	2,00	0,93	1,08	1,23	1,39	1,70
	F <sub>ax,Rk/d</sub>	1,89	0,87	1,02	1,16	1,31	1,60
5x50	F <sub>v,Rk/d</sub>	2,14	0,99	1,15	1,31	1,48	1,81
	F <sub>ax,Rk/d</sub>	2,42	1,11	1,30	1,49	1,67	2,04
5x60	F <sub>v,Rk/d</sub>	2,27	1,05	1,22	1,39	1,57	1,92
	F <sub>ax,Rk/d</sub>	2,94	1,36	1,58	1,81	2,04	2,49
5x70	F <sub>v,Rk/d</sub>	2,40	1,11	1,29	1,48	1,66	2,03
	F <sub>ax,Rk/d</sub>	3,47	1,60	1,87	2,13	2,40	2,93

\* Softwood / glulam in strength classes C24 / GL24c with density 350 kg/m<sup>3</sup>

Other plate thicknesses, timber types and densities possible in accordance with ETA -13/0523

Connectors/sheet/plate 2 mm thick

F<sub>v</sub> = Load-carrying capacity per shear plane and fastener

F<sub>ax</sub> = Axial withdrawal capacity of the fastener