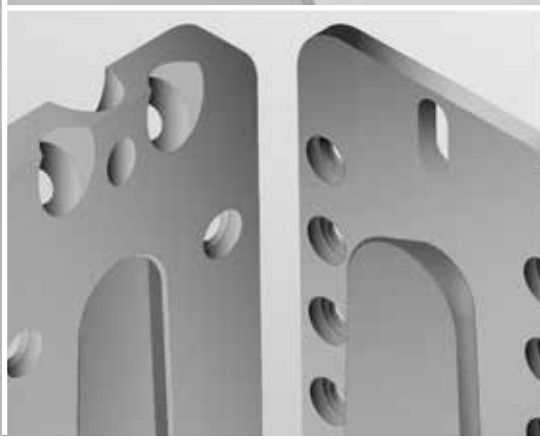
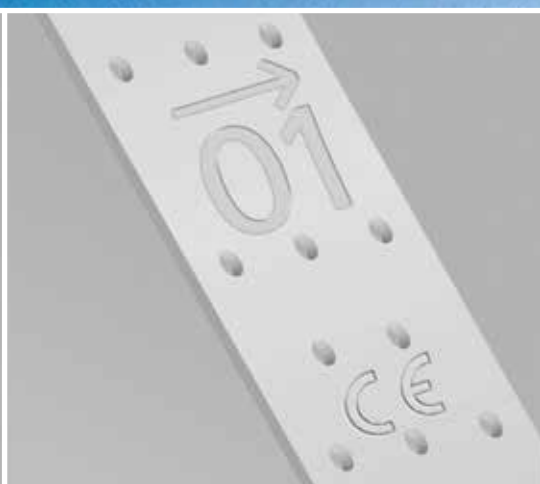
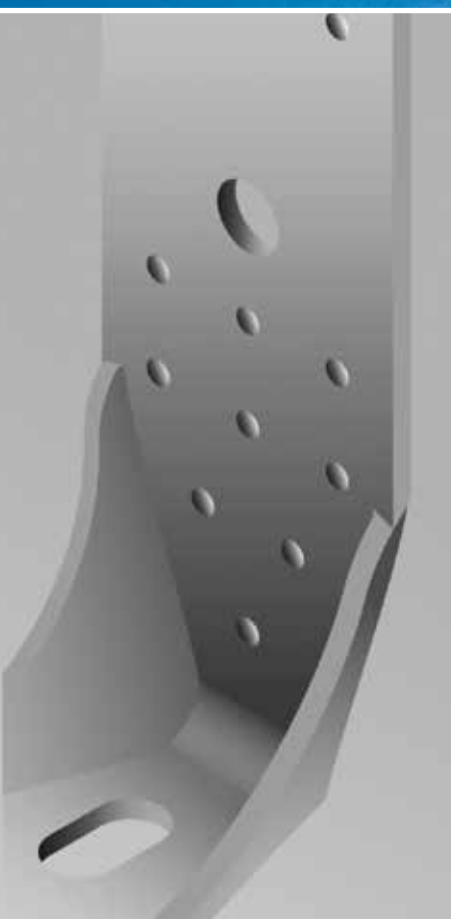


*„Innovations in
Timber Construction“*



**Lead through
specialisation!**



Product Overview

www.holzverbinder.de

HGH[®]
BAUBESCHLÄGE

Dear Customers,

In 2011 and 2018 we began to take a large step towards the future. With the construction of an additional production and warehouse building in Weilheim/Teck and the merger of two strong partner firms, GH Baubeschläge & EuP (Eisen- und Plastikverarbeitung GmbH & Co. KG), we initiated a further step to secure Germany as our production location. In 2018, Eisen- und Plastikverarbeitung GmbH & Co. KG was completely taken over by GH Baubeschläge GmbH, although the production site in Werdohl, and the GH headquarters in Weilheim are retained as 2 production facilities. With this merger and the acquisition of the EuP brand as a second brand, we assure a high degree of flexibility, security and availability for our customers.

A very important factor for us is that we know the needs of the trade and also those of the building trades and installers such as the carpenters and joiners, and are able to flexibly respond to them at any time, which is ultimately the recipe for success for each innovative and accepted product.

In 2012, we initiated a new era with a new product line alongside the successful, innovative "TOPline" range. With the "Greenline", in future we will also increasingly concentrate on the ecological aspect, with the objective of achieving resource-saving production without changing the structural values. We achieve this through new production processes and special materials.

Many years ago, we were the first manufacturer of timber connectors to successfully take this route with the 1.5 mm joist hanger and the 1.5 mm bracing strip. We have now continued down this path with many additional products.

In our production facility in Weilheim/Teck and now also in Werdohl, we produce and distribute more than 4,000 products for modern timber construction.

A very important aspect in the development of new products is our close contact to the end users such as joiners and carpenters, who repeatedly give us the right impetus for viable future products. In 2016 and 2017 we also patented further products such as the 2-piece tension tie HT2, which were developed in cooperation with timber contractors.

We continued to be convinced that securing our location in Germany protects quality and innovation. In this way, we ensure that this individuality, flexibility and high availability enables you, our valued customers, to set yourself apart from your competitors.

As an ISO 9001:2008-certified company, we guarantee optimum processes from the acceptance of the order through to delivery.



Past, present and future.

Our long company history began after World War II, when it was founded by Karl Krammer as a metalworking shop focussing on sheet metal blanks and gratings. In 1959, the firm was then renamed Günter Hartmann KG with its focus on iron and sheet metals.

In 1979, in an extension of Günter Hartmann GmbH, sheet metal goods were produced for the wholesale trade. The production at that time focussed on building hardware, which a short time after was then reflected in the new company name, GH Baubeschläge Hartmann GmbH.

As the 3rd generation entered the company in 1980, the production building was extended and new machines and modern production processes were introduced. 1981 was then the year of the first wind bracing approval for a combination joist hanger, which established the cornerstone for quality and safety at that time. In the following years the production and logistics were reorganised by increasing the land available; the company had grown to meet the continuously increasing requirements.

At the beginning of the 1990s, the first patent for "Twist straps usable on both sides" was applied for and further innovative products were successfully launched on the market. In the mid-1990s an additional production building was necessary. The increased demand and securing the continued future of GH made an extension unavoidable, yet the GH site in Bad Oeynhausen no longer provided the space necessary. The decision of

the new management to relocate GH to Weilheim in southern Germany with effect from 1 January 2007, was made due to the good location conditions available there.

Since 1 January 2007 the company has produced in the new buildings and stored its products in modern high-bay racks on a site with more than 10,000 sqm floor space.

In 2009, the CE (ETA) marking was successfully completed for almost all products. As a result, we are one of the few timber connector manufacturers in Europe to hold not only many national approvals, but also a European approval.

Due to a sharp increase in demand, at the beginning of 2011 an additional production and warehouse building with 1,800 sqm was commissioned. In September 2011, through the merger of GH and EuP, the course was set for a new future and was completed at the start of 2018 with the complete takeover of EuP by GH Baubeschläge.

In 2012, we received the (Best OF) industrial prize for our GH-TOP products. This was followed in 2016 by first place in the Trade Partner 2016 award! We, the GH team, will undertake every necessary effort to continue to be a partner for you in future, that meets all your expectations.

Dirk Weiss

IMPORTANT NOTE!



On the following pages you will find an excerpt from our diverse product range with technical drawings and information about approvals, patents and structural calculations.



You will also find a note about downloading approvals, technical drawings and photos for the products from www.holzverbinder.de.

If you have any questions or need further documents from us, please contact our engineering department by phone on +49 7023 743323-40.

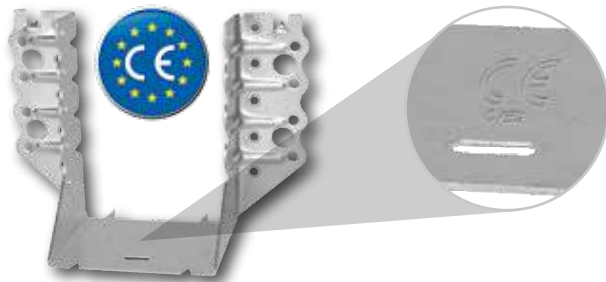


On the respective pages, before the product heading, you will find a green or orange square. The products with a green square are Greenline products. These have been produced resource-efficiently compared to the standard products to date. This is achieved by reducing our use of raw materials and/or energy, with the objective of achieving similar or comparable structural values.



Load-bearing capacity, safety and durability are basic elements that distinguish our products.

This is enhanced by German approvals and the ETA (CE marking) procedure, which we have carried out for many of our products.



WE ARE THERE FOR YOU

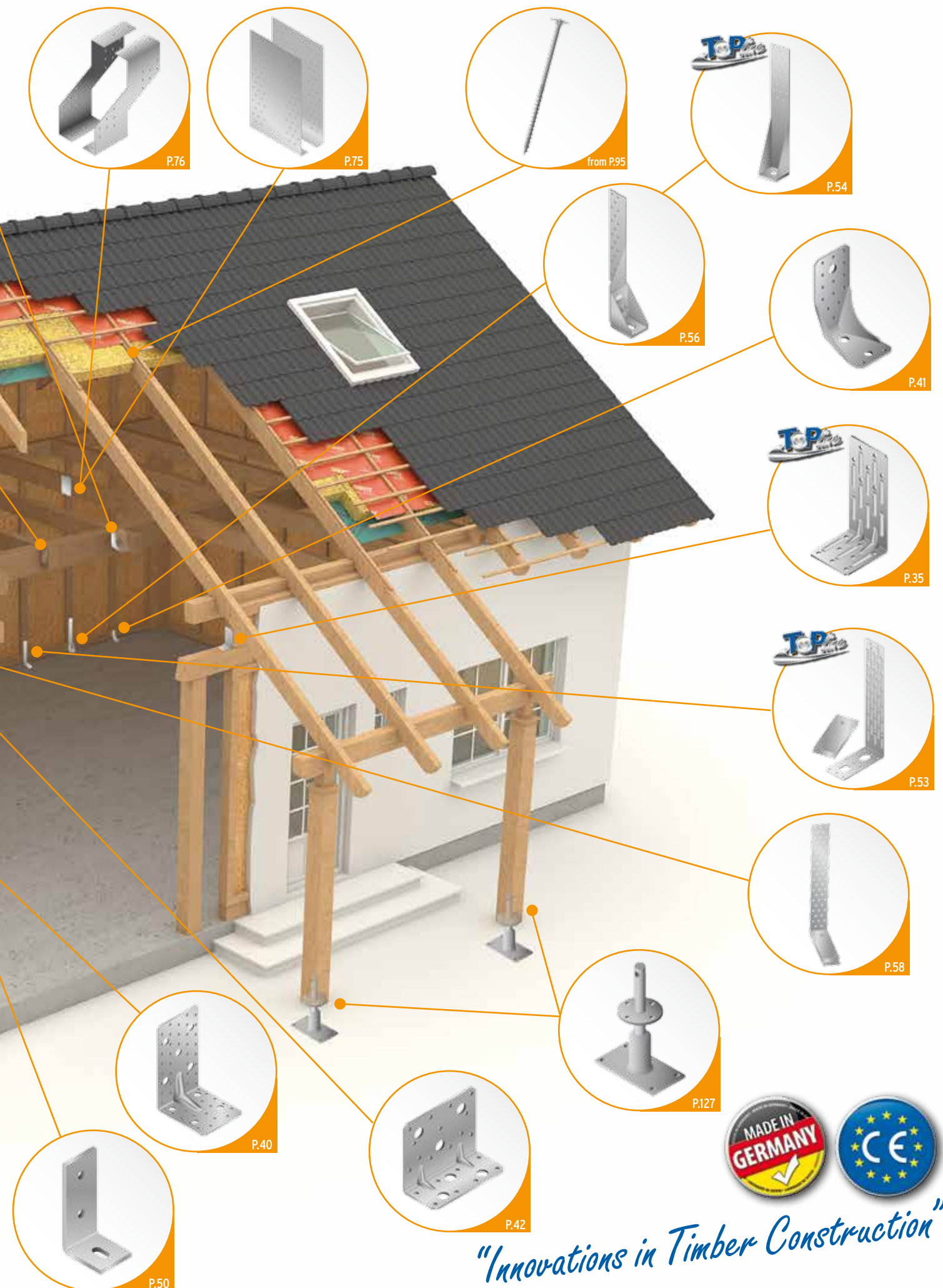
Sales / advice	Phone:	+49 7023 743323-0
	Fax:	+49 7023 743323-29
Engineering	Phone:	+49 7023 743323-40
	Fax:	+49 7023 743323-29
Accounting	Phone:	+49 7023 743323-30
	Fax:	+49 7023 743323-39
Management	Phone:	+49 7023 743323-10
	Fax:	+49 7023 743323-81
Internet	www.holzverbinder.de	
Email	info@holzverbinder.de	

All photos, drawings and texts may only be used with the prior written consent of GH Baubeschläge GmbH.
We do not accept any liability for printing errors.

	JOIST HANGERS FROM PAGE 8	1
	CONCEALED CONNECTORS FROM PAGE 26	2
	ANGLE BRACKETS FROM PAGE 34	3
	TENSION TIES FROM PAGE 52	4
	CONNECTORS (OTHER) FROM PAGE 62	5
	TRUSS CLIPS AND TWIST STRAPS FROM PAGE 68	6
	WIDTH-ADJUSTABLE JOIST HANGERS AND PURLIN CLEATS FROM PAGE 74	7
	NAILING PLATES AND NAILING BRACKETS FROM PAGE 78	8
	WIND BRACING STRIPS / WIND BRACING JOINTS FROM PAGE 84	9
	NAILS / GH SCREWS / DOWELS FROM PAGE 88	10
	PRODUCTS IN VA FROM PAGE 93	11
	TIMBER SCREWS / COUNTERSUNK WASHERS FROM PAGE 94	12
	COLUMN BASES IN CONCRETE FROM PAGE 112	13
	COLUMN BASES IN CONCRETE, ADJUSTABLE FROM PAGE 120	14
	COLUMN BASES ON CONCRETE FROM PAGE 122	15
	COLUMN BASES ON CONCRETE, ADJUSTABLE FROM PAGE 126	16
	TOOLS FROM PAGE 134	17

A detailed table of contents is provided from page 136.





Your TOPline advantages!

- Time savings during installation
- Quick and simple use
- Safe due to approvals
- Flexible application
- Quality products "Made in Germany"

GH-TOPline products
Innovations "Made in Germany"
More flexibility in connection technology.



Catalog page 30



Catalog page 27



Catalog page 53



Catalog page 54



Catalog page 9



Catalog page 85



Catalog page 86





"Innovations in Timber Construction"



Catalog page 56



Catalog page 37



Catalog page 35



Catalog page 59

Top products innovatively packaged!



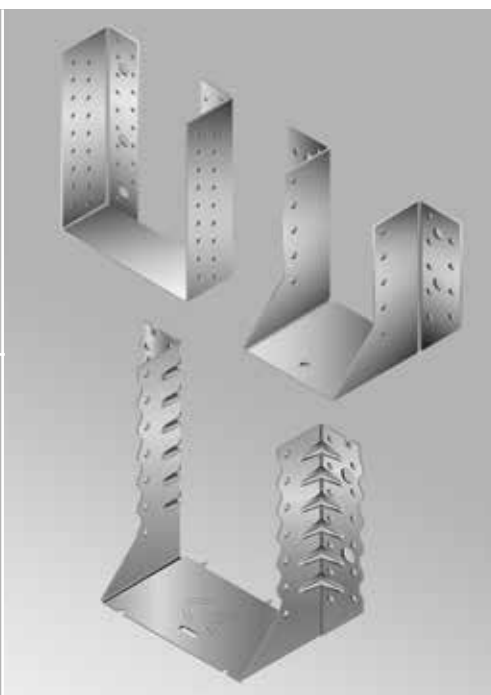
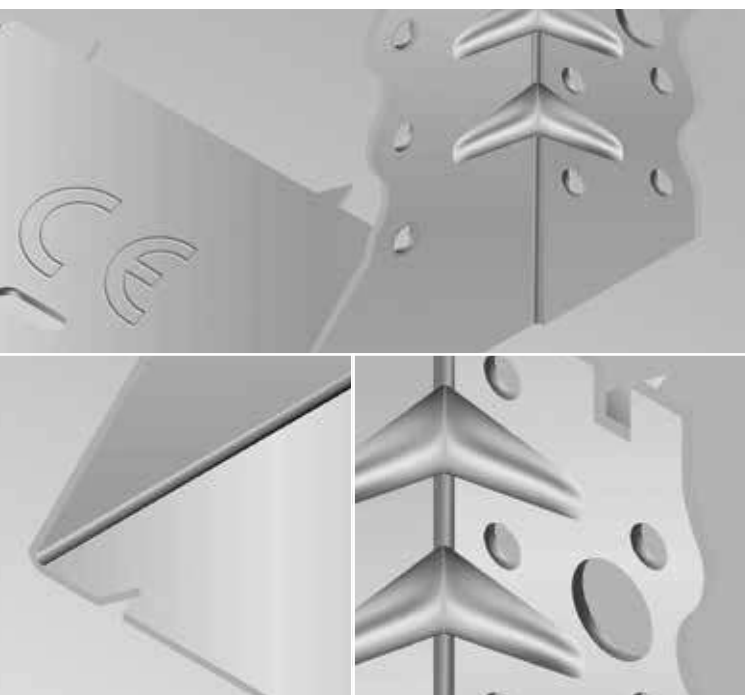
Catalog page 69

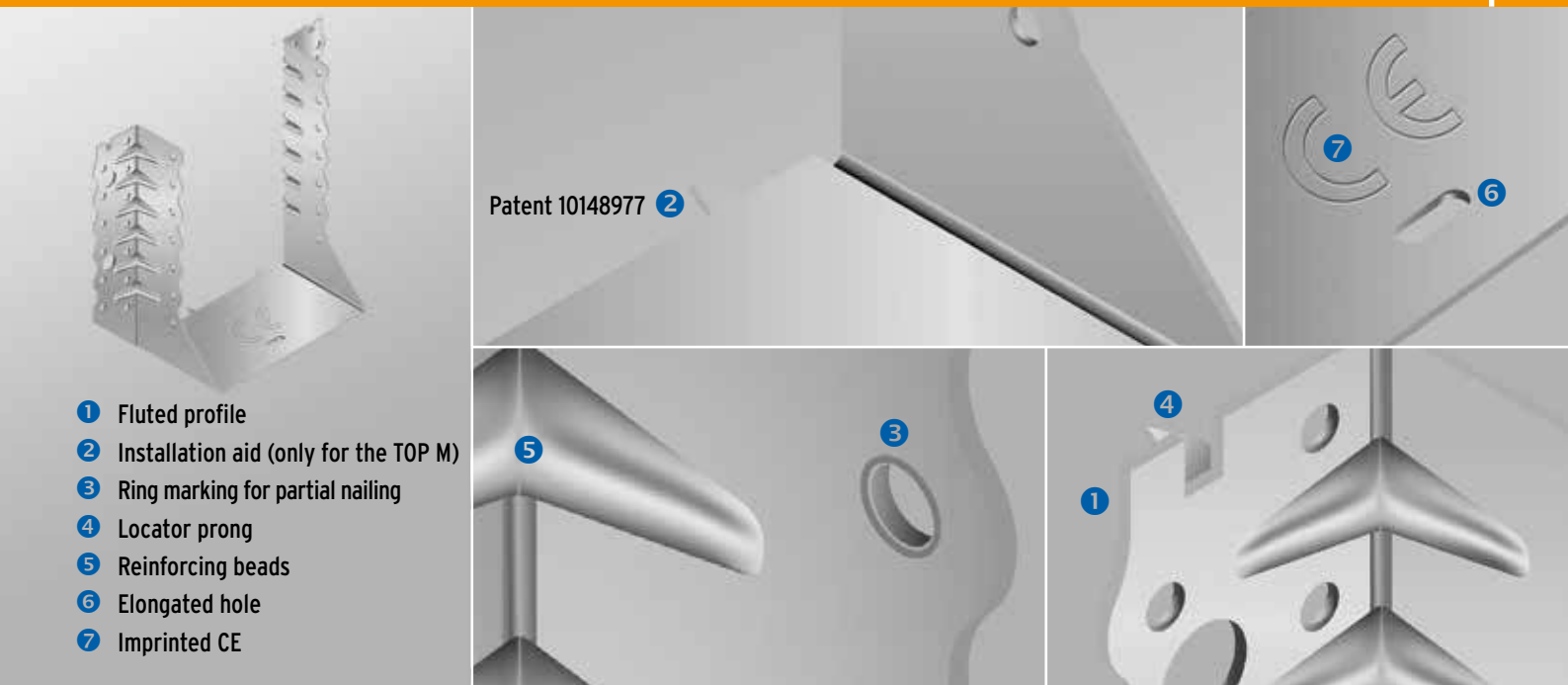
You can also contact us to request further information on the TOPline series as well as the new GH-TOPline flyer in DIN-long format or simply download it from www.holzverbinder.de.

1



JOIST HANGERS

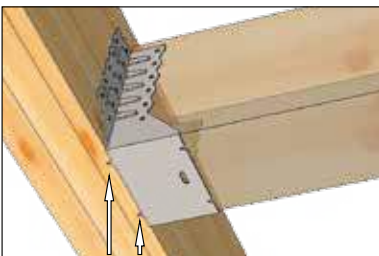




TOP / TOP M / TOP K INSTALLATION ADVANTAGES

JOIST HANGER TYPE TOP M

- 2 Installation aid (Top M)
- Always flush and always perpendicular to the main member
 - Immediate and dimensionally stable seating of the joist hanger after pressing on only once
 - Millimetre-precision installation on the layout line in case of different timber cross-sections



Installation aid Patent no. 10148977

ADDITIONAL ADVANTAGES FOR TIMBER FRAME CONSTRUCTION

- Approved joint directly on wood-based panels including in the middle in the panel (with GH screw approval: ETA-13/0523)
- First and only approved joist hanger for installation on wood-based panels in the middle of the panel, regardless of structural timbers between the timber studs
Example: BS Top 80 x 120 characteristic load-bearing capacity on OSB3: 4.4 kN, with GH screw 5 x 25 mm
- Additional cant strip not necessary in the renovation
- Joist grid for intermediate ceilings independent of that of the timber frame wall
- Continuous air-tight plane
- Small thermal bridge
- Fast and cost-effective installation



BS TOP, TOP M, TOP K JOIST HANGERS

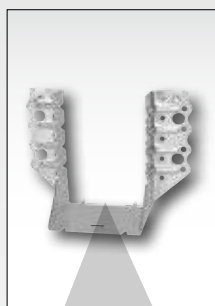


- 1 Modern fluted profile
- 4 Locator prong, the third hand during installation
 - Time-saving, fast installation through independent grip for further use
 - Easier installation, e.g. for overhead installation
- 3 Ring marking on the nail holes for fast and proper partial nailing (40 % fewer nails)
- 5 Beads
 - The beads provide additional stability for the joist hangers for maximum standards (including 2-axial loading)
 - Approved transverse installation
- 7 Joints/connections to German and European approval to:
 - Timber-to-timber
 - via intermediate layer, e.g. OSB
 - only on wood-based panels, e.g. OSB
 - Timber-to-concrete, timber-to-steel

TOP K IN THE INSTALLATION PLANE

- The same performance characteristics and dimensions as BS TOP
- Installation depth only 50 mm
- Especially for concealed mounting in the installation plan in timber frame construction
No restriction in the load-bearing capacity
- Approved joint on wood-based panels, including in the middle of the panel

JOIST HANGER TYPE TOP M



With patented
installation aid
Patent no. 1014897



●

●

●

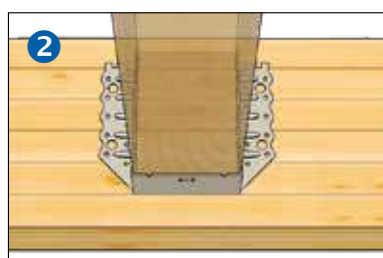
●

● **Standard sizes** | nH^1 = number of holes in the flanges facing the main member | nN^2 = number of holes in the flanges facing the secondary member

Art. No.	Dimensions [mm]					nH^1	nN^2	nH^1	0769	EAN	Weight kg	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11					
30601TOPM	40	x	110	x	1.5	14	8	2	ETA-08/0264	122495	0.187	1200	50
30602TOPM	45	x	108	x	1.5	14	8	2	ETA-08/0264	122556	0.187	1200	50
30603TOPM	51	x	105	x	1.5	14	8	2	ETA-08/0264	122563	0.187	1200	50
30502TOPM	60	x	100	x	1.5	14	8	2	ETA-08/0264	122501	0.187	1200	50
30609TOPM	60	x	130	x	1.5	18	10	4	ETA-08/0264	122587	0.231	1200	50
30604TOPM	64	x	98	x	1.5	14	8	2	ETA-08/0264	122570	0.187	1200	50
30610TOPM	64	x	128	x	1.5	18	10	4	ETA-08/0264	122594	0.231	1200	50
30611TOPM	70	x	125	x	1.5	18	10	4	ETA-08/0264	122600	0.231	1200	50
30612TOPM	73	x	124	x	1.5	18	10	4	ETA-08/0264	122617	0.231	1200	50
30613TOPM	76	x	122	x	1.5	18	10	4	ETA-08/0264	122624	0.231	1200	50
30505TOPM	80	x	120	x	1.5	18	10	4	ETA-08/0264	122518	0.231	1200	50
30620TOPM	80	x	150	x	1.5	22	12	4	ETA-08/0264	122631	0.274	1200	50
30621TOPM	90	x	145	x	1.5	22	12	4	ETA-08/0264	122648	0.274	1200	50
30622TOPM	98	x	141	x	1.5	22	12	4	ETA-08/0264	122655	0.274	1200	50
30508TOPM	100	x	140	x	1.5	22	12	4	ETA-08/0264	122525	0.274	1200	50
30628TOPM	100	x	170	x	1.5	26	14	4	ETA-08/0264	122662	0.317	1200	50
30629TOPM	115	x	163	x	1.5	26	14	4	ETA-08/0264	122679	0.317	1200	50
30511TOPM	120	x	160	x	1.5	26	14	4	ETA-08/0264	122532	0.317	1200	50



JOIST HANGER TYPE TOP M



Position the patented installation aid at the bottom edge and press lightly on the top locator prongs to fix the joist hanger. The joist hanger pulls itself from the joist at the bottom edge and is therefore fixed precisely flush and at right-angles.

Installation in the middle of flush at the top
If the secondary member is installed in the middle or flush at the top of the main member, both installation aids are pressed directly onto the datum level line.
As a result, the Top M is aligned at right-angles and fixed without additional aids.

See advantages on page 9.



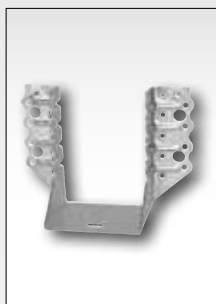
GH screw
Approval ETA-13/0523 (page 90)



Connector nails
Approval ETA-13/0523 (page 89)



JOIST HANGER TYPE TOP



Like Top M, however,
without installation aid.

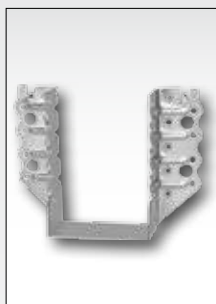


Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	0769	EAN	Weight	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11			kg		
30653TOP	32	x	114	x	1.5	14	8	2	ETA-08/0264	123010	0.187	1200	50
30654TOP	32	x	174	x	1.5	22	12	4	ETA-08/0264	123034	0.274	1200	50
30655TOP	38	x	111	x	1.5	14	8	2	ETA-08/0264	123027	0.187	1200	50
30601TOP	40	x	110	x	1.5	14	8	2	ETA-08/0264	122723	0.187	1200	50
30605TOP	40	x	140	x	1.5	18	10	4	ETA-08/0264	122761	0.231	1200	50
30656TOP	40	x	170	x	1.5	22	12	4	ETA-08/0264	123041	0.274	1200	50
30602TOP	45	x	108	x	1.5	14	8	2	ETA-08/0264	122730	0.187	1200	50
30606TOP	45	x	138	x	1.5	18	10	4	ETA-08/0264	122778	0.231	1200	50
30607TOP	48	x	136	x	1.5	18	10	4	ETA-08/0264	122785	0.231	1200	50
30614TOP	48	x	166	x	1.5	22	12	2	ETA-08/0264	122853	0.274	1200	50
30603TOP	51	x	105	x	1.5	14	8	2	ETA-08/0264	122747	0.187	1200	50
30608TOP	51	x	135	x	1.5	18	10	4	ETA-08/0264	122792	0.231	1200	50
30615TOP	51	x	165	x	1.5	22	12	4	ETA-08/0264	122860	0.274	1200	50
30623TOP	51	x	195	x	1.5	26	14	4	ETA-08/0264	122945	0.317	600	25
30502TOP	60	x	100	x	1.5	14	8	2	ETA-08/0264	122686	0.187	1200	50
30609TOP	60	x	130	x	1.5	18	10	4	ETA-08/0264	122808	0.231	1200	50
30616TOP	60	x	160	x	1.5	22	12	4	ETA-08/0264	122877	0.274	1200	50
30624TOP	60	x	190	x	1.5	26	14	4	ETA-08/0264	122952	0.317	1200	50
30604TOP	64	x	98	x	1.5	14	8	2	ETA-08/0264	122754	0.187	1200	50
30610TOP	64	x	128	x	1.5	18	10	4	ETA-08/0264	122815	0.231	1200	50
30611TOP	70	x	125	x	1.5	18	10	4	ETA-08/0264	122822	0.231	1200	50
30617TOP	70	x	155	x	1.5	22	12	4	ETA-08/0264	122884	0.274	1200	50
30612TOP	73	x	124	x	1.5	18	10	4	ETA-08/0264	122839	0.231	1200	50
30618TOP	73	x	154	x	1.5	2	12	4	ETA-08/0264	122891	0.274	1200	50
30625TOP	73	x	184	x	1.5	26	14	4	ETA-08/0264	122969	0.317	600	25
30613TOP	76	x	122	x	1.5	18	10	4	ETA-08/0264	122846	0.231	1200	50
30619TOP	76	x	152	x	1.5	22	12	4	ETA-08/0264	122907	0.274	1200	50
30626TOP	76	x	182	x	1.5	26	14	4	ETA-08/0264	122976	0.317	600	25
30505TOP	80	x	120	x	1.5	18	10	4	ETA-08/0264	122693	0.231	1200	50
30620TOP	80	x	150	x	1.5	22	12	4	ETA-08/0264	122914	0.274	1200	50
30627TOP	80	x	180	x	1.5	26	14	4	ETA-08/0264	122983	0.317	1200	50
30621TOP	90	x	145	x	1.5	22	12	4	ETA-08/0264	122921	0.274	1200	50
30622TOP	98	x	141	x	1.5	22	12	4	ETA-08/0264	122938	0.274	1200	50
30508TOP	100	x	140	x	1.5	22	12	4	ETA-08/0264	122709	0.274	1200	50
30628TOP	100	x	170	x	1.5	26	14	4	ETA-08/0264	122990	0.317	1200	50
30629TOP	115	x	163	x	1.5	26	14	4	ETA-08/2064	123003	0.317	1200	50
30511TOP	120	x	160	x	1.5	26	14	4	ETA-08/0264	122716	0.317	1200	50

● Standard sizes | nH¹ = number of holes in the flanges facing the main member nN² = number of holes in the flanges facing the secondary member



JOIST HANGER TYPE TOP K 50



Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	0769	EAN	Weight kg	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11					
30601TOPK	40	x	110	x	1.5	14	8	2	ETA-08/0264	502761	0.174	1200	50
30605TOPK	40	x	140	x	1.5	18	10	4	ETA-08/0264	502778	0.231	1200	50
30602TOPK	45	x	108	x	1.5	14	8	2	ETA-08/0264	502785	0.187	1200	50
30606TOPK	45	x	138	x	1.5	18	10	4	ETA-08/0264	502792	0.231	1200	50
30607TOPK	48	x	136	x	1.5	18	10	4	ETA-08/0264	503409	0.231	1200	50
30614TOPK	48	x	166	x	1.5	22	12	2	ETA-08/0264	503416	0.274	1200	50
30603TOPK	51	x	105	x	1.5	14	8	2	ETA-08/0264	503423	0.187	1200	50
30608TOPK	51	x	135	x	1.5	18	10	4	ETA-08/0264	503430	0.231	1200	50
30615TOPK	51	x	165	x	1.5	22	12	4	ETA-08/0264	503447	0.274	1200	50
30623TOPK	51	x	195	x	1.5	26	14	4	ETA-08/0264	503454	0.317	1200	50
30502TOPK	60	x	100	x	1.5	14	8	2	ETA-08/0264	503461	0.187	1200	50
30609TOPK	60	x	130	x	1.5	18	10	4	ETA-08/0264	503478	0.231	1200	50
30616TOPK	60	x	160	x	1.5	22	12	4	ETA-08/0264	503485	0.274	1200	50
30624TOPK	60	x	190	x	1.5	26	14	4	ETA-08/0264	503492	0.317	1200	50
30604TOPK	64	x	98	x	1.5	14	8	2	ETA-08/0264	501412	0.231	1200	50
30610TOPK	64	x	128	x	1.5	18	10	4	ETA-08/0264	501405	0.187	1200	50
30611TOPK	70	x	125	x	1.5	18	10	4	ETA-08/0264	501429	0.231	1200	50
30617TOPK	70	x	155	x	1.5	22	12	4	ETA-08/0264	501436	0.274	1200	50
30612TOPK	73	x	124	x	1.5	18	10	4	ETA-08/0264	501443	0.231	1200	50
30618TOPK	73	x	154	x	1.5	22	12	4	ETA-08/0264	501450	0.274	1200	50
30625TOPK	73	x	184	x	1.5	26	14	4	ETA-08/0264	501467	0.317	1200	50
30613TOPK	76	x	122	x	1.5	18	10	4	ETA-08/0264	501474	0.231	1200	50
30619TOPK	76	x	152	x	1.5	22	12	4	ETA-08/0264	501481	0.274	1200	50
30626TOPK	76	x	182	x	1.5	26	14	4	ETA-08/0264	501498	0.317	1200	50
30505TOPK	80	x	120	x	1.5	18	10	4	ETA-08/0264	502105	0.231	1200	50
30620TOPK	80	x	150	x	1.5	22	12	4	ETA-08/0264	502112	0.274	1200	50
30627TOPK	80	x	180	x	1.5	26	14	4	ETA-08/0264	502129	0.317	1200	50
30621TOPK	90	x	145	x	1.5	22	12	4	ETA-08/0264	502136	0.274	1200	50
30622TOPK	98	x	141	x	1.5	22	12	4	ETA-08/0264	502143	0.274	1200	50
30508TOPK	100	x	140	x	1.5	22	12	4	ETA-08/0264	502150	0.274	1200	50
30628TOPK	100	x	170	x	1.5	26	14	4	ETA-08/0264	502167	0.317	1200	50
30629TOPK	115	x	163	x	1.5	26	14	4	ETA-08/0264	502174	0.317	1200	50
30511TOPK	120	x	160	x	1.5	26	14	4	ETA-08/0264	502181	0.317	1200	50

● **Standard sizes** | nH¹ = number of holes in the flanges facing the main member nN² = number of holes in the flanges facing the secondary member



Installation depth only 50 mm – especially for concealed mounting in the installation plane in timber frame construction.

Joint on wood-based panels –

Only approved joist hanger for mounting on wood-based panels in the middle of the panel.

2-axial loading – transverse installation
(timber-to-timber and wood-based panels-to-timber).

Joint options: Timber-to-timber, timber-to-wood-based panels,
Timber-to-concrete, timber-to-steel.

Made of hot-dip galvanised steel sheet.

For fixing with GH connector nails (page 89), GH screws (page 90).

For further advantages see page 9.

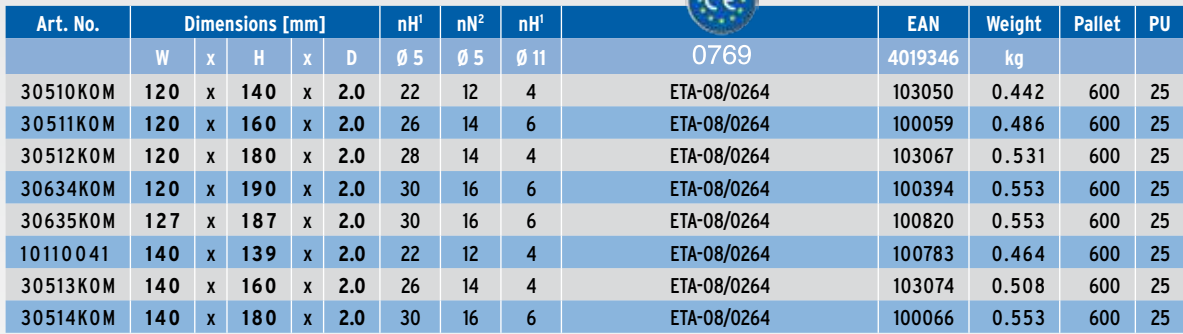


JOIST HANGER TYPE 04 COMBINATION

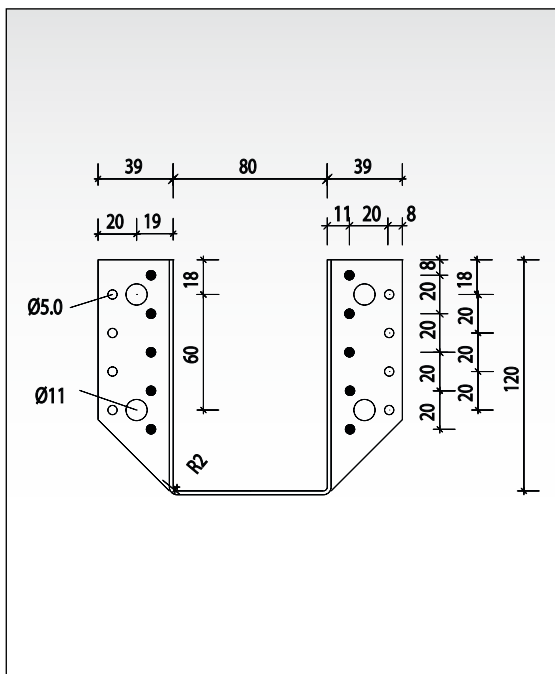
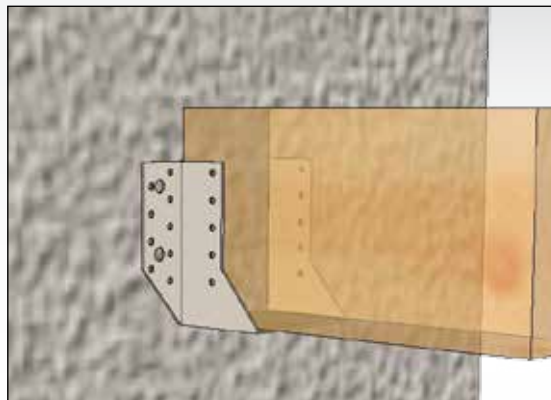


Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	0769	EAN	Weight kg	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11					
10110032	32	x	114	x	2.0	14	8	4xØ9	ETA-08/0264	100462	0.270	1200	50
10110314	32	x	144	x	2.0	18	10	4	ETA-08/0264	101605	0.354	1200	50
10110033	32	x	174	x	2.0	22	12	4	ETA-08/0264	100400	0.420	1200	50
30637KOM	36	x	142	x	2.0	18	10	4	ETA-08/0264	101612	0.354	1200	50
30655KOM	38	x	111	x	2.0	14	8	4xØ9	ETA-08/0264	100912	0.270	1200	50
30601KOM	40	x	110	x	2.0	14	8	4xØ9	ETA-08/0264	100073	0.270	1200	50
30605KOM	40	x	140	x	2.0	18	10	4	ETA-08/0264	100110	0.354	1200	50
30656KOM	40	x	170	x	2.0	22	12	4	ETA-08/0264	100929	0.420	1200	50
30602KOM	45	x	108	x	2.0	14	8	4xØ9	ETA-08/0264	100080	0.270	1200	50
30606KOM	45	x	138	x	2.0	18	10	4	ETA-08/0264	100127	0.354	1200	50
30607KOM	48	x	136	x	2.0	18	10	4	ETA-08/0264	100134	0.354	1200	50
30614KOM	48	x	166	x	2.0	22	12	4	ETA-08/0264	101308	0.420	1200	50
30603KOM	51	x	105	x	2.0	14	8	4xØ9	ETA-08/0264	100097	0.270	1200	50
30608KOM	51	x	135	x	2.0	18	10	4	ETA-08/0264	100141	0.354	1200	50
30615KOM	51	x	165	x	2.0	22	12	4	ETA-08/0264	100202	0.420	1200	50
30623KOM	51	x	195	x	2.0	26	14	6	ETA-08/0264	100288	0.486	600	25
30639KOM	60	x	80	x	2.0	8	4	2	ETA-08/0264	101681	0.228	1200	50
30502KOM	60	x	100	x	2.0	14	8	4xØ9	ETA-08/0264	100011	0.270	1200	50
30609KOM	60	x	130	x	2.0	18	10	4	ETA-08/0264	100158	0.354	1200	50
30616KOM	60	x	160	x	2.0	22	12	4	ETA-08/0264	100219	0.420	1200	50
30624KOM	60	x	190	x	2.0	26	14	6	ETA-08/0264	100295	0.486	600	25
30630KOM	60	x	220	x	2.0	30	16	6	ETA-08/0264	100356	0.553	600	25
30604KOM	64	x	98	x	2.0	14	8	4xØ9	ETA-08/0264	100196	0.269	1200	50
30610KOM	64	x	128	x	2.0	18	10	4	ETA-08/0264	100165	0.354	1200	50
30611KOM	70	x	125	x	2.0	18	10	4	ETA-08/0264	100028	0.354	1200	50
30617KOM	70	x	155	x	2.0	22	12	4	ETA-08/0264	100226	0.420	1200	50
30612KOM	73	x	124	x	2.0	18	10	4	ETA-08/0264	100172	0.354	1200	50
30618KOM	73	x	154	x	2.0	22	12	4	ETA-08/0264	100233	0.420	1200	50
30625KOM	73	x	184	x	2.0	26	14	6	ETA-08/0264	100301	0.486	600	25
30613KOM	76	x	122	x	2.0	18	10	4	ETA-08/0264	100189	0.354	1200	50
30619KOM	76	x	152	x	2.0	22	12	4	ETA-08/0264	100240	0.420	1200	50
30626KOM	76	x	182	x	2.0	26	14	6	ETA-08/0264	100318	0.486	600	25
30504KOM	80	x	100	x	2.0	14	8	2	ETA-08/0264	103012	0.309	1200	50
30505KOM	80	x	120	x	2.0	20	10	4	ETA-08/0264	100035	0.354	1200	50
30506KOM	80	x	140	x	2.0	18	10	4	ETA-08/0264	103029	0.398	1200	50
30620KOM	80	x	150	x	2.0	22	12	4	ETA-08/0264	100257	0.420	1200	50
30627KOM	80	x	180	x	2.0	26	14	6	ETA-08/0264	100325	0.486	600	25
30631KOM	80	x	210	x	2.0	30	16	6	ETA-08/0264	100363	0.553	600	25
30621KOM	90	x	145	x	2.0	22	12	4	ETA-08/0264	100264	0.420	1200	50
30622KOM	98	x	141	x	2.0	22	12	4	ETA-08/0264	100271	0.420	1200	50
30644KOM	100	x	90	x	2.0	12	6	2	ETA-08/0264	101766	0.332	1200	50
30507KOM	100	x	120	x	2.0	18	10	2	ETA-08/0264	103036	0.376	1200	50
30508KOM	100	x	140	x	2.0	22	12	4	ETA-08/0264	100042	0.420	1200	50
30509KOM	100	x	160	x	2.0	24	12	4	ETA-08/0264	103043	0.464	600	25
30628KOM	100	x	170	x	2.0	26	14	6	ETA-08/0264	100332	0.486	600	25
30632KOM	100	x	200	x	2.0	30	16	6	ETA-08/0264	100370	0.553	600	25
30629KOM	115	x	163	x	2.0	26	14	6	ETA-08/0264	100905	0.486	600	25
30633KOM	115	x	192	x	2.0	30	16	6	ETA-08/0264	100387	0.553	600	25
10110040	120	x	120	x	2.0	18	10	4	ETA-08/0264	100776	0.398	600	25

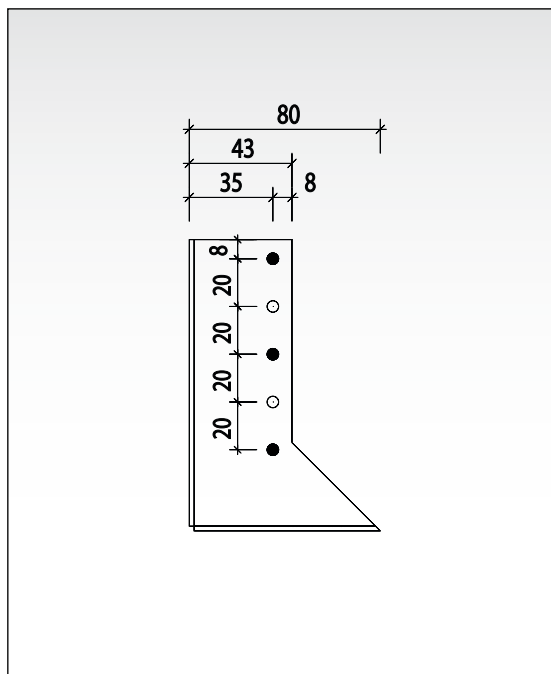
● Standard sizes | nH¹ = number of holes in the flanges facing the main member | nN² = number of holes in the flanges facing the secondary member



A technical drawing showing a corner joint between two wooden beams. A metal bracket is attached to the end of one beam, with screws visible. The drawing is a perspective view, showing the 3D structure of the joint and the bracket.



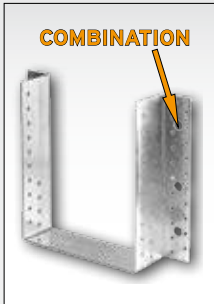
Approval also for partial nailing and for timber to concrete, masonry and steel joints.



Type I (flanges folded inwards) page 21.

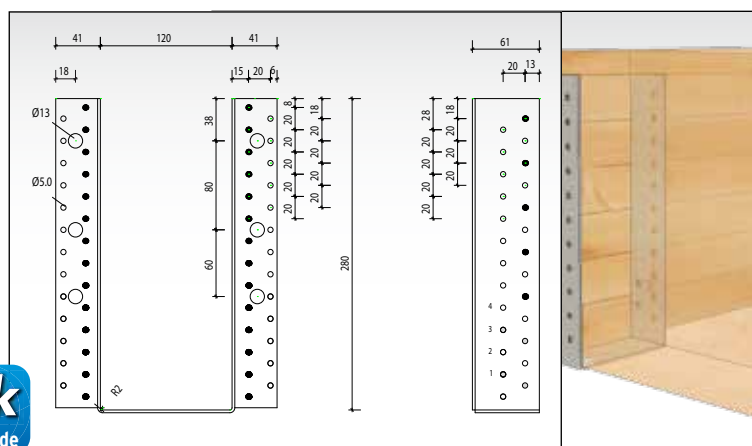


JOIST HANGER TYPE 05 / 2.5 COMBINATION, EXTRA STRONG



Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	0769	EAN	Weight kg	Pallet	PU
	W	x	H	x	D								
40501KOM	100	x	240	x	2.5	46	30	6	ETA-08/0264	100486	0.995	480	20
40502KOM	100	x	280	x	2.5	54	34	6	ETA-08/0264	100493	1.133	480	20
40503KOM	100	x	300	x	2.5	58	36	6	ETA-08/0264	100509	1.201	480	20
40504KOM	100	x	320	x	2.5	62	38	6	ETA-08/0264	017500	1.270	480	20
40505KOM	120	x	240	x	2.5	46	30	6	ETA-08/0264	100547	1.030	480	20
40506KOM	120	x	280	x	2.5	54	34	6	ETA-08/0264	017517	1.167	480	20
40507KOM	120	x	300	x	2.5	58	36	6	ETA-08/0264	017524	1.236	480	20
40508KOM	120	x	320	x	2.5	62	38	6	ETA-08/0264	017531	1.304	480	20
40513KOM	140	x	200	x	2.5	38	22	6	ETA-08/0264	018101	0.927	480	20
40509KOM	140	x	240	x	2.5	46	30	6	ETA-08/0264	017548	1.064	480	20
40549KOM	140	x	260	x	2.5	50	32	6	ETA-08/0264	018118	1.133	480	20
40510KOM	140	x	280	x	2.5	54	34	6	ETA-08/0264	017555	1.201	480	20
40511KOM	140	x	300	x	2.5	58	36	6	ETA-08/0264	017562	1.270	480	20
40512KOM	140	x	320	x	2.5	62	38	6	ETA-08/0264	017579	1.338	360	15
40516KOM	160	x	160	x	2.5	30	18	4	ETA-08/0264	100790	0.824	360	15
40517KOM	160	x	200	x	2.5	38	22	6	ETA-08/0264	017586	0.961	360	15
40518KOM	160	x	240	x	2.5	46	30	6	ETA-08/0264	017593	1.098	360	15
40561KOM	160	x	260	x	2.5	50	32	6	ETA-08/0264	018125	1.168	360	15
40519KOM	160	x	280	x	2.5	54	34	6	ETA-08/0264	017609	1.236	360	15
40532KOM	160	x	300	x	2.5	58	36	6	ETA-08/0264	018132	1.305	360	15
40520KOM	160	x	320	x	2.5	62	38	6	ETA-08/0264	017616	1.373	360	15
40542KOM	180	x	180	x	2.5	34	20	4	ETA-08/0264	018149	0.927	240	10
40521KOM	180	x	200	x	2.5	38	22	6	ETA-08/0264	017623	0.995	240	10
40522KOM	180	x	220	x	2.5	42	26	6	ETA-08/0264	017630	1.064	240	10
40523KOM	180	x	240	x	2.5	46	30	6	ETA-08/0264	017647	1.133	240	10
40524KOM	180	x	280	x	2.5	54	34	6	ETA-08/0264	017654	1.270	240	10
40555KOM	180	x	320	x	2.5	62	38	6	ETA-08/0264	018156	1.408	240	10
40527KOM	200	x	200	x	2.5	38	22	6	ETA-08/0264	100806	1.030	240	10
40525KOM	200	x	240	x	2.5	46	30	6	ETA-08/0264	017661	1.167	240	10
40526KOM	200	x	280	x	2.5	54	34	6	ETA-08/0264	018163	1.305	240	10
40529KOM	220	x	260	x	2.5	50	32	6	ETA-08/0264	017869	1.202	240	10
40533KOM	240	x	280	x	2.5	54	34	6	ETA-08/0264	017876	1.441	240	10

- **Standard sizes** | nH¹ = number of holes in the flanges facing the main member nN² = number of holes in the flanges facing the secondary member
Further dimensions on request.



• for partial nailing

The GH joist hangers Type 05/2.5 mm are also produced as Type I (flanges folded inwards), see page 22.

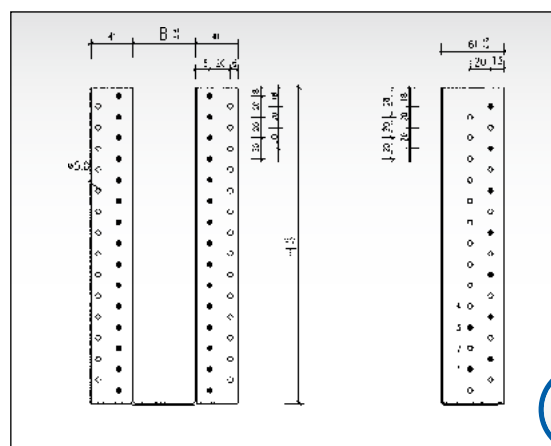
European approval.

Made of hot-dip galvanised steel sheet t = 2.5 mm.

For fixing with GH connector nails (page 89), GH screws (page 90).



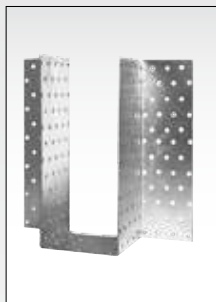
A 3D perspective diagram showing two vertical wooden beams joined at a corner. A grey metal L-shaped bracket is used to secure the joint. The bracket is fastened to the beams with numerous screws, arranged in two vertical columns on each beam. The wooden beams are light-colored with visible grain.



The GH joist hangers Type 05/2.0 mm are also produced as Type I (flanges folded inwards), see page 23.



JOIST HANGER TYPE 07



Art. No.	Dimension [mm]					nH ^I Ø 5	EAN	Weight kg	PU
	W	x	H	x	D				
60501	100	x	240	x	2.0	214	4019346	1.274	10
60502	100	x	280	x	2.0	246	104002	1.45	10
60503	100	x	300	x	2.0	262	104019	1.538	10
60504	100	x	320	x	2.0	278	104026	1.625	10
60505	120	x	240	x	2.0	219	104033	1.318	10
60506	120	x	280	x	2.0	251	104040	1.494	10
60507	120	x	300	x	2.0	267	104057	1.581	10
60508	120	x	320	x	2.0	283	106064	1.669	10
60509	140	x	240	x	2.5	223	104071	1.702	10
60510	140	x	280	x	2.5	255	104088	1.922	10
60511	140	x	300	x	2.5	271	104095	2.032	10
60512	140	x	320	x	2.5	287	104101	2.142	10
60517	160	x	200	x	2.5	196	104118	1.538	10
60518	160	x	240	x	2.5	228	104125	1.757	10
60519	160	x	280	x	2.5	260	104132	1.977	10
60520	160	x	320	x	2.5	292	104149	2.142	10
60521	180	x	200	x	2.5	200	104156	1.592	10
60522	180	x	220	x	2.5	216	104163	1.702	10
60523	180	x	240	x	2.5	232	104170	1.812	10
60524	180	x	280	x	2.5	264	104187	2.032	10
							104194		

Further dimensions available at short notice

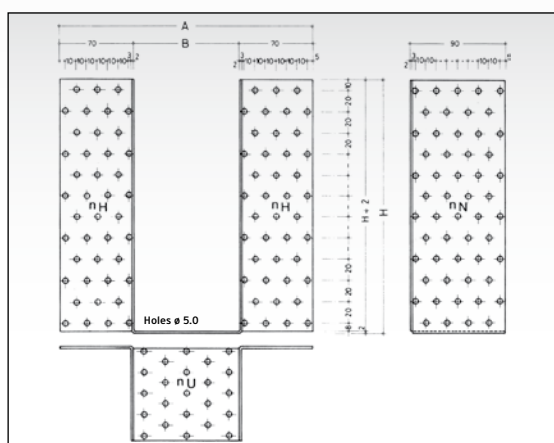


Fig. by way of example

GH joist hanger Type 07 is also available as Type I (flanges folded inwards).



Made of hot-dip galvanised steel sheet $t = 2.0$ mm and 2.5 mm.
For fixing with GH connector nails (page 89), GH screws (page 90).



JOIST HANGER TYPE I 04 COMBINATION

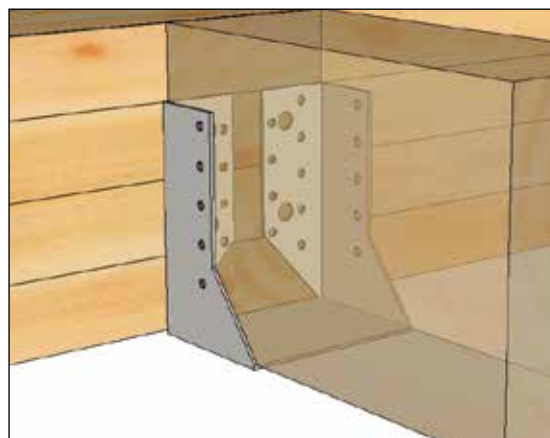
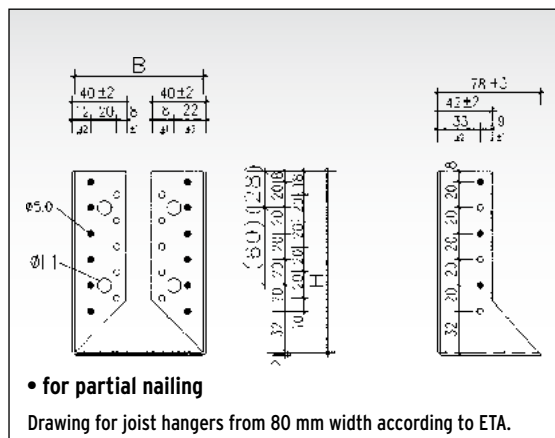


Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹		EAN	Weight	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11	0769	4019346	kg		
30653I	32	x	114	x	2.0	8	8	-	ETA-08/0264	101803	0.270	1200	50
30654I	32	x	174	x	2.0	12	12	-	ETA-08/0264	101810	0.420	1200	50
30655I	38	x	111	x	2.0	8	8	-	ETA-08/0264	101827	0.270	1200	50
30601I	40	x	110	x	2.0	8	8	-	ETA-08/0264	101070	0.270	1200	50
30605I	40	x	140	x	2.0	10	10	-	ETA-08/0264	101834	0.354	1200	50
30656I	40	x	170	x	2.0	12	12	-	ETA-08/0264	101841	0.420	1200	50
30602I	45	x	108	x	2.0	8	8	-	ETA-08/0264	101858	0.270	1200	50
30606I	45	x	138	x	2.0	10	10	-	ETA-08/0264	101865	0.355	1200	50
30607I	48	x	136	x	2.0	10	10	-	ETA-08/0264	101872	0.354	1200	50
30614I	48	x	166	x	2.0	12	12	-	ETA-08/0264	101889	0.420	1200	50
30603IKO	51	x	105	x	2.0	8	8	4 x Ø 9 *	ETA-08/0264	101087	0.270	1200	50
30608IKO	51	x	135	x	2.0	10	10	4*	ETA-08/0264	101094	0.355	1200	50
30615IKO	51	x	165	x	2.0	12	12	4*	ETA-08/0264	101896	0.420	1200	50
30623IKO	51	x	195	x	2.0	14	14	4*	ETA-08/0264	101902	0.486	600	25
30502IKO	60	x	100	x	2.0	8	8	4 x Ø 9 *	ETA-08/0264	101018	0.270	1200	50
30609IKO	60	x	130	x	2.0	10	10	4*	ETA-08/0264	101100	0.354	1200	50
30616IKO	60	x	160	x	2.0	12	12	4*	ETA-08/0264	101117	0.420	1200	50
30624IKO	60	x	190	x	2.0	14	14	4*	ETA-08/0264	101919	0.486	600	25
30604IKO	64	x	98	x	2.0	8	8	4 x Ø 9 *	ETA-08/0264	101926	0.270	1200	50
30610IKO	64	x	128	x	2.0	10	10	4*	ETA-08/0264	101933	0.354	1200	50
30611IKO	70	x	125	x	2.0	10	10	4*	ETA-08/0264	101025	0.354	1200	50
30617IKO	70	x	155	x	2.0	12	12	4*	ETA-08/0264	101124	0.420	1200	50
30612IKO	73	x	124	x	2.0	18	10	4*	ETA-08/0264	101940	0.355	1200	50
30618IKO	73	x	154	x	2.0	22	12	4*	ETA-08/0264	101957	0.420	1200	50
30625IKO	73	x	184	x	2.0	26	14	4*	ETA-08/0264	101964	0.486	600	25
30613IKO	76	x	122	x	2.0	18	10	4*	ETA-08/0264	101971	0.354	1200	50
30619IKO	76	x	152	x	2.0	22	12	4*	ETA-08/0264	101001	0.420	600	25
30626IKO	76	x	182	x	2.0	26	14	4*	ETA-08/0264	101988	0.486	600	25
30505IKO	80	x	120	x	2.0	18	10	4	ETA-08/0264	101032	0.354	1200	50
30620IKO	80	x	150	x	2.0	22	12	4	ETA-08/0264	101223	0.420	1200	50
30627IKO	80	x	180	x	2.0	26	14	6	ETA-08/0264	101131	0.486	600	25
30631IKO	80	x	210	x	2.0	30	16	6	ETA-08/0264	101230	0.553	600	25
30621IKO	90	x	145	x	2.0	22	12	4	ETA-08/0264	101995	0.420	1200	50
30622IKO	98	x	141	x	2.0	22	12	4	ETA-08/0264	101513	0.420	1200	50
30644IKO	100	x	90	x	2.0	12	6	2	ETA-08/0264	101315	0.332	1200	50
30508IKO	100	x	140	x	2.0	22	12	4	ETA-08/0264	101049	0.420	1200	50
30628IKO	100	x	170	x	2.0	26	14	6	ETA-08/0264	101193	0.486	600	25
30632IKO	100	x	200	x	2.0	30	16	6	ETA-08/0264	101247	0.553	600	25
30629IKO	115	x	163	x	2.0	26	14	4	ETA-08/0264	101520	0.486	600	25
10110040IKO	120	x	120	x	2.0	18	10	4	ETA-08/0264	101285	0.398	600	25
30511IKO	120	x	160	x	2.0	26	14	6	ETA-08/0264	101056	0.486	600	25
30634IKO	120	x	190	x	2.0	30	16	6	ETA-08/0264	101254	0.553	600	25
30636IKO	140	x	140	x	2.0	22	12	4	ETA-08/0264	101278	0.464	600	25
30513IKO	140	x	160	x	2.0	26	14	4	ETA-08/0264	101209	0.534	600	25
30514IKO	140	x	180	x	2.0	30	16	6	ETA-08/0264	101063	0.553	600	25



Standard sizes | nH¹ = number of holes in the flanges facing the main member nN² = number of holes in the flanges facing the secondary member

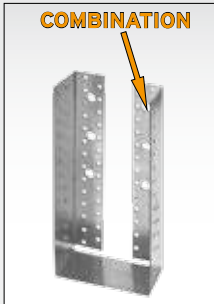
* with combination holes, approval only for timber-to-timber joint.
Further dimensions on request.



For fixing with GH connector nails (page 89), GH screws (page 90).



JOIST HANGER TYPE I 05 / 2.5 COMBINATION, EXTRA STRONG

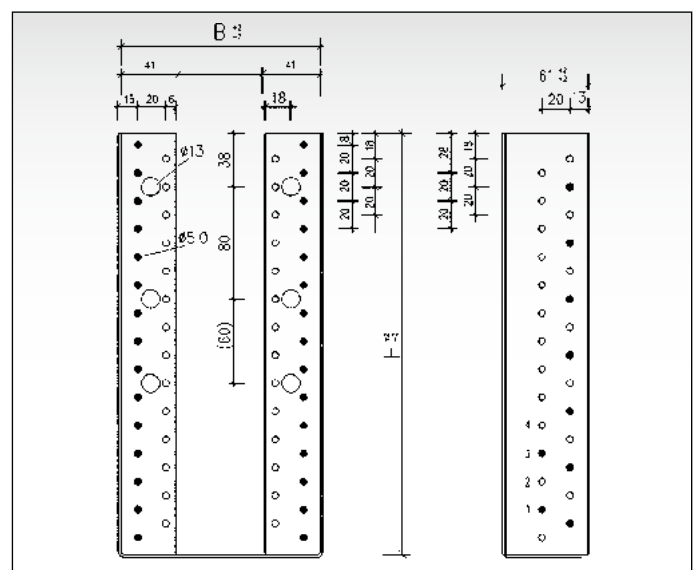


Art. No.	Dimensions [mm]					nH¹	nN²	nH¹		EAN	Weight	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 13	0769	4019346	kg		
40501IK0	100	x	240	x	2.5	46	30	6	ETA-08/0264	017883	0.995	480	20
40502IK0	100	x	280	x	2.5	54	34	6	ETA-08/0264	017890	1.133	480	20
40503IK0	100	x	300	x	2.5	58	36	6	ETA-08/0264	017906	1.201	480	20
40504IK0	100	x	320	x	2.5	62	38	6	ETA-08/0264	017913	1.270	480	20
40505IK0	120	x	240	x	2.5	46	30	6	ETA-08/0264	101506	1.030	480	20
40506IK0	120	x	280	x	2.5	54	34	6	ETA-08/0264	017920	1.167	480	20
40507IK0	120	x	300	x	2.5	58	36	6	ETA-08/0264	017937	1.236	480	20
40508IK0	120	x	320	x	2.5	62	38	6	ETA-08/0264	017944	1.304	480	20
40513IK0	140	x	200	x	2.5	38	22	6	ETA-08/0264	018170	0.927	480	20
40509IK0	140	x	240	x	2.5	46	30	6	ETA-08/0264	100738	1.064	480	20
40549IK0	140	x	260	x	2.5	50	32	6	ETA-08/0264	018187	1.133	480	20
40510IK0	140	x	280	x	2.5	54	34	6	ETA-08/0264	017951	1.201	480	20
40511IK0	140	x	300	x	2.5	58	36	6	ETA-08/0264	017968	1.270	480	20
40512IK0	140	x	320	x	2.5	62	38	6	ETA-08/0264	017975	1.338	480	20
40516IK0	160	x	160	x	2.5	30	18	4	ETA-08/0264	100745	0.824	360	15
40517IK0	160	x	200	x	2.5	38	22	6	ETA-08/0264	100752	0.961	360	15
40518IK0	160	x	240	x	2.5	46	30	6	ETA-08/0264	017982	1.098	360	15
40561IK0	160	x	260	x	2.5	50	32	6	ETA-08/0264	018194	1.168	360	15
40519IK0	160	x	280	x	2.5	54	34	6	ETA-08/0264	017999	1.236	360	15
40532IK0	160	x	300	x	2.5	58	36	6	ETA-08/0264	018200	1.305	360	15
40520IK0	160	x	320	x	2.5	62	38	6	ETA-08/0264	018002	1.373	360	15
40542IK0	180	x	180	x	2.5	34	20	4	ETA-08/0264	102220	0.925	240	10
40521IK0	180	x	200	x	2.5	38	22	6	ETA-08/0264	018019	0.995	240	10
40522IK0	180	x	220	x	2.5	42	26	6	ETA-08/0264	100714	1.064	240	10
40523IK0	180	x	240	x	2.5	46	30	6	ETA-08/0264	018026	1.133	240	10
40524IK0	180	x	280	x	2.5	54	34	6	ETA-08/0264	018033	1.270	240	10
40555IK0	180	x	320	x	2.5	62	38	6	ETA-08/0264	020319	1.408	240	10
40527IK0	200	x	200	x	2.5	38	22	6	ETA-08/0264	017685	1.030	240	10
40525IK0	200	x	240	x	2.5	46	30	6	ETA-08/0264	100769	1.167	240	10
40529IK0	220	x	260	x	2.5	50	32	6	ETA-08/0264	018040	1.202	240	10
40533IK0	240	x	280	x	2.5	54	34	6	ETA-08/0264	018057	1.441	240	10

- **Standard sizes** | nH^1 = number of holes in the flanges facing the main member nN^2 = number of holes in the flanges facing the secondary member
Further dimensions on request.



Type I 05 / 2.5



- for partial nailing

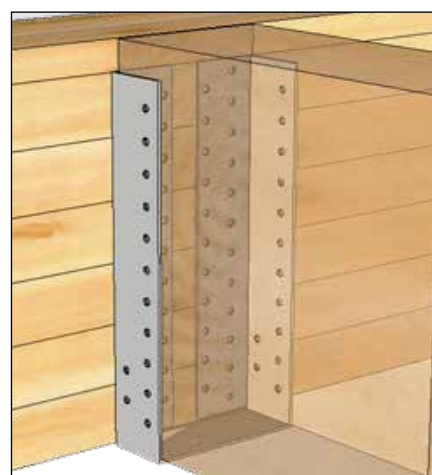
European approval. Made of hot-dip galvanised steel sheet.

For fixing with GH connector nails (page 89), GH screws (page 90).





Further dimensions on request.



Type I 05 / 2.0

For fixing with GH connector nails (page 89), GH screws (page 90).

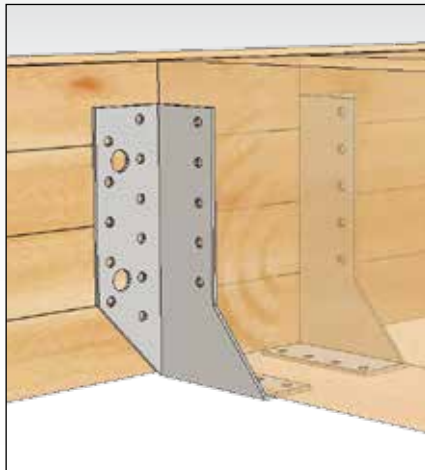


JOIST HANGER 2-PIECE



Art. No.	Dimensions [mm]					nH ¹ Ø 5	nN ² Ø 5	nH ¹ Ø 11	ETA application submitted	EAN 4019346	Weight kg	Pallet	PU
	W	x	H	x	D								
802	25	x	80	x	2.0	10	4	2	ETA application submitted	102053	0.260	1800	25
102	25	x	100	x	2.0	14	6	2	ETA application submitted	102060	0.300	1800	25
122	25	x	120	x	2.0	18	8	4	ETA application submitted	102008	0.340	1800	25
142	25	x	140	x	2.0	22	10	4	ETA application submitted	102015	0.380	1350	25
162	25	x	160	x	2.0	26	12	4	ETA application submitted	102022	0.420	1350	25
182	25	x	180	x	2.0	30	14	6	ETA application submitted	102039	0.460	1350	25
202	25	x	200	x	2.0	34	16	6	ETA application submitted	102046	0.500	1350	25

nH¹ = number of holes in the flanges facing the main member | nN² = number of holes in the flanges facing the secondary member



Fastener:

GH connector nails (page 89)

GH screw (page 90)

Stud anchor

Concrete screw

Joint on: Timber-to-timber

Timber-to-timber via

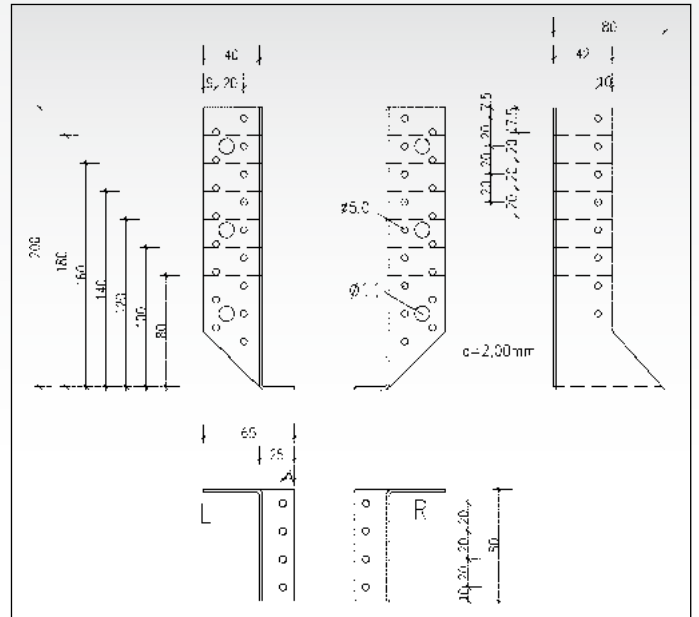
intermediate layer

Timber-to-concrete

Timber-to-masonry

Timber-to-steel

Made of hot-dip galvanised steel sheet.



GH 2-piece combination joist hangers can be used from a width of 50 mm for different secondary member widths (including intermediate dimensions).





GREENline

stands for "ecological, resource efficiency and economical"

The "Greenline" product line, alongside the successful, innovative "TOPline" range is dedicated to an increasingly important aspect for the future. The objective is to achieve resource-saving manufacture of products with almost unchanged structural values. Through new production processes and special materials with higher strength, it is possible to produce the products with reduced cross-sections. In addition to the ecological sense, this is also economically advantageous for everyone involved.



"Innovations in Timber Construction"



Catalog page 10



Catalog page 14



Catalog page 85



Catalog page 37



Catalog page 35



Catalog page 59



Catalog page 69



Catalog page 83



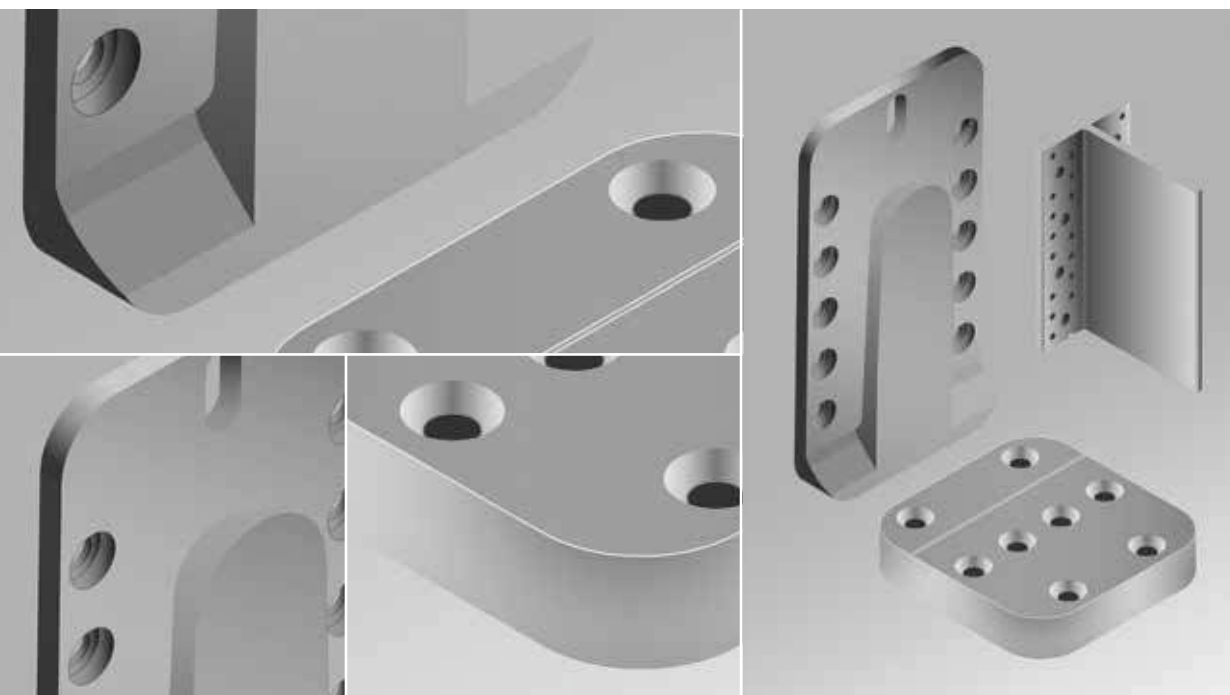
Catalog page 38

Lead through specialisation!

GREENline The innovative GH series. Convincing advantages.

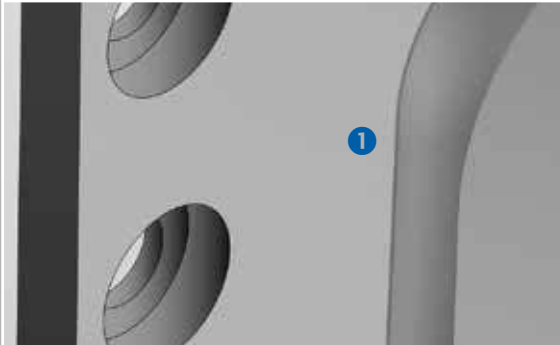
2

CONCEALED CONNECTORS

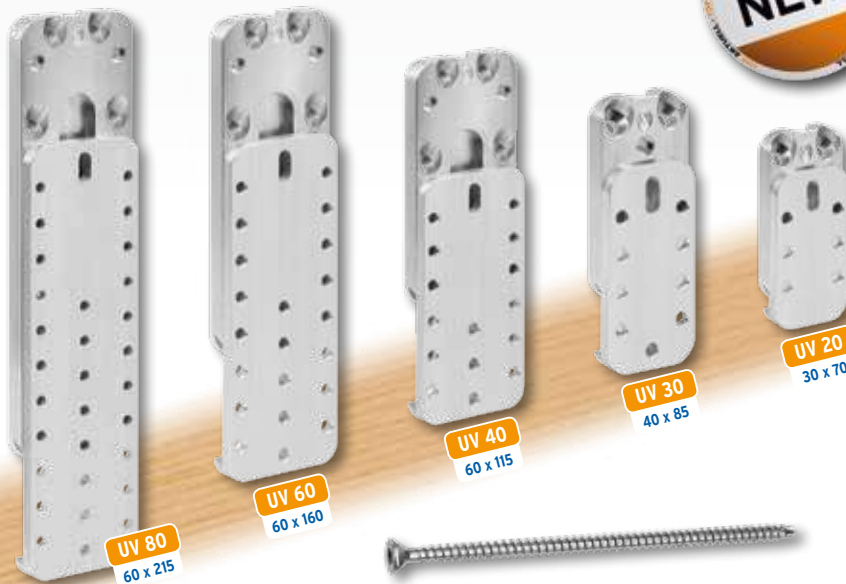




- 1 Dovetail guide
- 2 Protection against unhooking
- 3 For GH connector nails or GH screws
- 4 Conical guide, tightens
- 5 Cutting radii



TOP UV TIMBER-TO-TIMBER CONNECTOR



UV fully-threaded screw $\varnothing$ 6.0 x 100 - 6.0 x 200



GH TOP UV

2-piece aluminium connector with protection against unhooking and dovetail guide

Advantages:

- Concealed dovetail connection
- Joints between secondary members made of timber on timber; concrete; masonry; steel with concrete screws
- Chemical anchor studs, metric screws
- Can be loaded in up to 4 directions
- With protection against hooking for all jointing options
- Fast installation of the secondary member
- Connector tightens due to conical sliding surfaces
- Connection can be dismantled as required
- Protection against unhooking
- The load-bearing capacity is determined by the number of screws in the main member (HT) and the screw length in the NT
- 2 connectors² next to each other = double load-bearing capacity

¹ UVB 40, UVB 60 and UVB 80

² ≥ 15.0 mm

TOP UVB TIMBER-TO-CONCRETE CONNECTOR¹



Protection against unhooking

TOP UV TIMBER-TO-TIMBER CONNECTOR



UV 20



UV 30



UV 40



UV 60



UV 80

Art. No.	Type	Dimensions [mm]					nH	nN	CE	EAN	Weight	PU
		H	x	W	x	D						
1103070	UV 20	70	x	30	x	16	6(8')	6(7) x Ø 4.0	0769	4019346	kg	25
1104085	UV 30	85	x	40	x	16	9(11')	4(5)	ETA-11/0036	018910	0.071	25
11060110	UV 40	115	x	60	x	16	15(17')	6(7)	ETA-11/0036	018927	0.123	25
11060160	UV 60	160	x	60	x	16	21(25')	6(7)	ETA-11/0036	018903	0.214	25
11060215	UV 80	215	x	60	x	16	30(34')	8(9)	ETA-11/0036	018941	0.384	10
									ETA-11/0036	018965	0.515	10

nH = number of holes facing the main member | nN = number of holes facing the secondary member (') protection against unhooking The plate on the secondary member has at least 2 holes for installation screws Ø 5.0 to fix the plate on the secondary member with precise positioning. Partial unscrewing possible according to approval

UV FULLY-THREADED SCREWS



Art. No.	Dimensions [mm]			CE	EAN	Weight	PU
	Ø	x	L				
				0769	4019346	kg	
116100	6.0	x	100	ETA-11/0036	019009	1.180	100
116120	6.0	x	120	ETA-11/0036	019016	1.390	100
116140	6.0	x	140	ETA-11/0036	019023	1.630	100
116160	6.0	x	160	ETA-11/0036	019030	1.850	100
116200	6.0	x	200	ETA-11/0036	019047	2.310	100
505070	5.0	x	70	ETA-11/0036	400043	0.550	200

OK = installation from top of secondary member [mm] | Min.NT = minimum height of secondary member | $F_{Z,c,Rk}$ = compressive loads | $F_{Z,t,Rk}$ = lifting loads
 $F_{Z,y,Rk}$ = 2-axial loading | $F_{Z,x,Rk}$ = tensile loading

TIMBER-TO-TIMBER STRUCTURAL CALCULATIONS

Art. No.	Type	Full unscrewing	Partial unscrewing	Min. secondary member [mm]	
		$F_{Z,Rk}$ [kN]		Width	Height
1103070	UV 20	8.4 to 12.2	5.6 to 8.15	45	100
1104085	UV 30	19.2 to 21.6	12.7 to 12.0	60	120
11060110	UV 40	31.8 to 36.0	17.1 to 19.2	80	175
11060160	UV 60	31.8 to 50.3	21.2 to 26.4	80	175
11060215	UV 80	42.4 to 71.9	21.2 to 38.4	80	215



Properties

- 2-piece aluminium connector with dovetail guide for concealed joints
- Optimised hole pattern in 5 different sizes
- Dovetail guide with large sliding surfaces and conical guide; as a result the secondary and main member tighten during installation
- From timber cross-sections 45 mm x 100 mm

Applications:

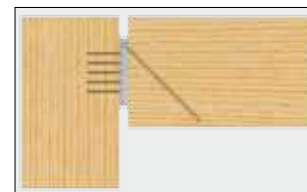
- Joint of secondary member on main member (Timber; concrete; masonry; steel)
- Right-angled
- Right-angled inclined upwards +90° / downwards -30°
- Inclined joints to the left +45° / to the right +45°
- Horizontal member joints
- Column joints, with and without shadow gaps
- Joints via intermediate layer
- Joints directly on wood-based panels possible, e.g. OSB

Load directions:

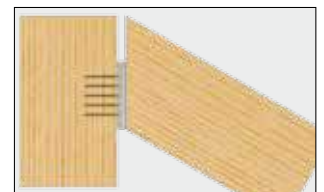
- F_2 In compression (in insertion direction, Z-axis)
- F_3 Lifting (against the insertion direction, Z-axis)
- F_4 2-axis (inclined installation, Y-axis)
- F_1 on pulling out (X-axis)

Application examples

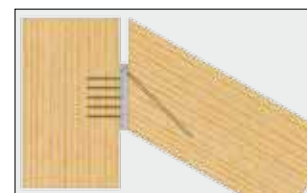
TOP UV timber-to-timber connector



90° connection



Pitched connection



Inclined joint



Protection against unhooking

TOP UVB TIMBER-TO-CONCRETE CONNECTOR



Art. No.	Type	Dimensions [mm]						nN	nN	nH	CE	EAN	Weight	PU
		H	x	W	x	D	Ø 5.0	Ø 6.0	Ø 12					
12060115	UVB 40	115	x	60	x	24	2 ¹	6	2		0769	4019346	kg	
12060160	UVB 60	160	x	60	x	24	4 ¹	6	2		ETA-11/0036	018934	0.400	10
12060215	UVB 80	215	x	60	x	24	4 ¹	8	3		ETA-11/0036	018958	0.574	10
											ETA-11/0036	018972	0.774	10

incl. screws 2 x M5 x 20 and washers for protection against unhooking



UVB 40



UVB 60



UVB 80

TIMBER-TO-CONCRETE STRUCTURAL CALCULATIONS

Detailed structural values
can be found at:
www.holzverbinder.de

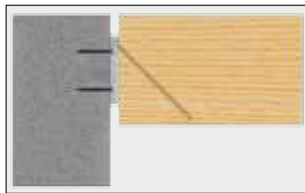
Art. No.	Type	NT full unscrewing	HT joint Concrete-to-masonry	Min. secondary member [mm]		
				Width	Height	Screw length
12060115	UVB 40	31.8 to 36.0	The dowel verification must be provided separately	80	175	100
12060160	UVB 60	31.8 to 50.3		80	175	100
12060215	UVB 80	42.4 to 71.9		80	215	100



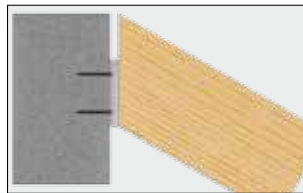
Protection against unhooking

Application examples

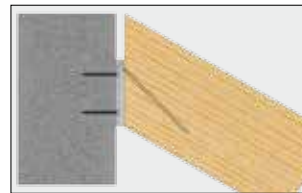
TOP UV timber-to-concrete connector



90° connection



Inclined joint



Pitched connection

Extensive design and dimensioning of our GH timber connectors in the new GH "DC-Statik" structural calculations software

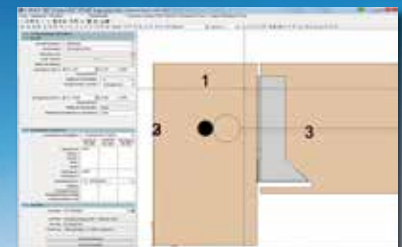
The GH DC structural calculations software is available to download,
free of charge, from dc-statik.holzverbinder.de.
If you have any questions, you can reach our engineering department by
phone on +49 (0) 7023-743323-40 or by email at statik@holzverbinder.de



DC Statik

dc-statik.holzverbinder.de

page 138



*Timber-to-timber joist hangers, integral connectors, UV timber-to-timber connectors, OV connectors, column bases



TOP OV CONNECTORS



Art. No.	Type	Dimensions [mm]					nH	nN		CE	EAN	Weight	PU
		W	x	L	x	H				0769	4019346	kg	
110040	OV 40	40	x	104	x	20	1	3		ETA-12/0171	017692	0.200	10
110060	OV 60	60	x	104	x	20	2	5		ETA-12/0171	017708	0.304	10
110100	OV 100	100	x	104	x	20	2	6		ETA-12/0171	017722	0.537	10

nH = number of holes facing the main member | nN = number of holes facing the secondary member

OV FULLY-THREADED SCREWS / STRUCTURAL CALCULATIONS

Art. No.	Dimensions [mm]			Load-bearing capacity [kN]				EAN	Weight	PU
	Ø	x	L [mm]	R _k [kN]	OV 40	OV 60	OV 100	4019346	kg	
110120	8.0	x	120	F _{Z,c,Rk}	10.06	15.10	20.13	017739	3.000	50
				F _{Z,t,Rk}	2.40	3.60	6.00			
110140	8.0	x	140	F _{Z,c,Rk}	11.86	17.79	23.72	017746	3.100	50
				F _{Z,t,Rk}	2.40	3.60	6.00			
110160	8.0	x	160	F _{Z,c,Rd}	13.62	20.44	27.25	017753	3.520	50
				F _{Z,t,Rd}	2.40	3.60	6.00			
110200	8.0	x	200	F _{Z,c,Rk}	15.11	25.42	27.82	017777	4.370	50
				F _{Z,t,Rk}	2.40	3.60	6.00			
110220	8.0	x	220	F _{Z,c,Rk}	15.11	25.42	27.82	017784	4.790	50
				F _{Z,t,Rk}	2.40	3.60	6.00			

F_{Z,c,Rk} = compressive loads

F_{Z,t,Rk} = lifting loads, strength class C24 / NKL 1-2, max. screw length: Beam height -10 mm



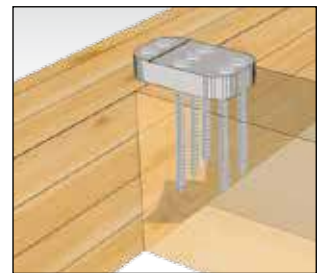
page 138

TOP OV
More flexibility in connection technology

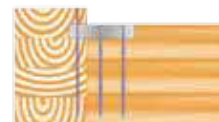
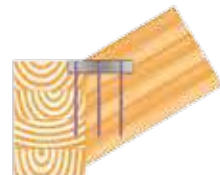
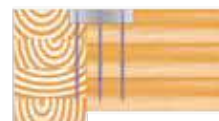
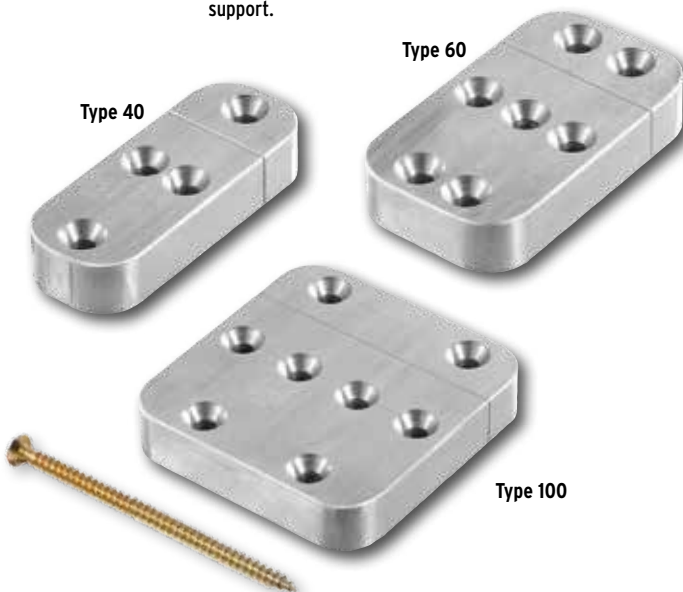
Two steps to success: "Simple and ingenious"

In the factory: Simply cut out the connector shape or, as shown in Figure 2, only place on top. Install GH TOP OV with max. 4 tension and 2 compression screws on the secondary member.

On the construction site: Insert the secondary member in the recess of the main member, or only place it in position. Screw 2 compression screws into the main member/ support.



"Simple and ingenious"
"Innovations in Timber Construction"



BEAM HANGER TYPE ALU KOMBI (ALUMINIUM, COMBINATION)



Art. No.	Dimensions [mm]							nH		0769	EAN	Weight kg	Pallet	PU
	H	x	W	x	L	x	D	Ø 5	Ø 9					
30400	80	x	80	x	109.4	x	6.0	12	4	ETA-16/0044	105207	0.232	750	25
30401	120	x	80	x	109.4	x	6.0	22	6	ETA-16/0044	105214	0.337	750	25
30402	160	x	80	x	109.4	x	6.0	30	8	ETA-16/0044	105221	0.454	750	25
30403	200	x	80	x	109.4	x	6.0	38	10	ETA-16/0044	105238	0.562	450	15
30404	240	x	80	x	109.4	x	6.0	46	12	ETA-16/0044	105245	0.674	450	15
30422	2200	x	80	x	109.4	x	6.0	362	110	ETA-16/0044	105252	6.178	-	1

nH = number of holes facing the main member

The ALU integral connector does not have any predrilled holes for dowels. These are not drilled until the secondary member has been installed and are made in the connector and the wood at the same time; this enables exact precision of fit. The position and spacings of the dowels must be selected as described in ETA-16/0044.

*Joints on the main member can be made with partial or full nailing, using the GH screw or connector nails.

Main member fasteners

*Timber-to-timber	Timber-to-concrete	Timber-to-masonry
Connector nails 4.0 x 60	Concrete screw	Concrete screw
GH screw 5.0 x 50	Bonding mortar	Bonding mortar
Type Maxi SD16	Anchor rods	
Connector nails 6.0 x 60		

Secondary member fixings

Self-drilling dowels /GH dowels.



BEAM HANGER TYPE ALUMINIUM COMBINATION SD 12.0



Art. No.	Dimensions [mm]				nH		nN	0769	EAN	Weight kg	PU
	H	W	t	T	Ø 5	Ø 9	Ø 13				
30601	120	80	109.4	6	22	6	3	ETA-16/0044	104309	0.350	25
30602	160	80	109.4	6	30	8	4	ETA-16/0044	104316	0.460	25
30603	200	80	109.4	6	38	10	5	ETA-16/0044	104323	0.570	15
30604	240	80	109.4	6	46	12	6	ETA-16/0044	104330	0.690	15
30605	280	80	109.4	6	54	14	7	ETA-16/0044	104347	0.770	15
30606	320	80	109.4	6	62	16	8	ETA-16/0044	104354	0.850	8
30607	360	80	109.4	6	70	18	9	ETA-16/0044	104361	0.920	8

nH = number of holes facing the main member | nN = number of holes facing the secondary member

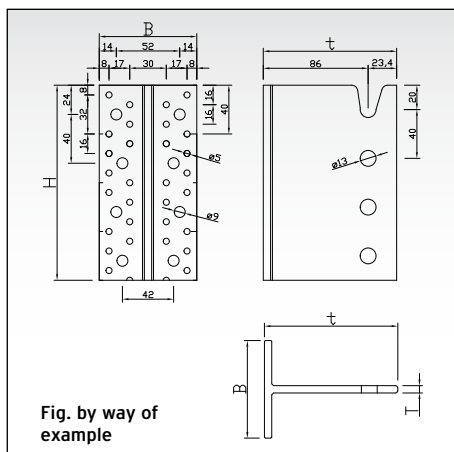
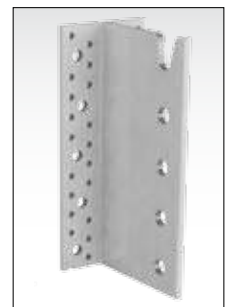


BEAM HANGER TYPE ALUMINIUM, COMBINATION MAXI SD 16

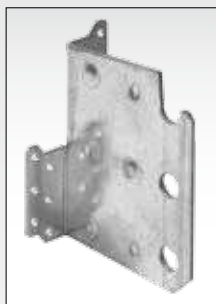


Art. No.	Dimensions [mm]				nH		nN	0769	EAN	Weight kg	PU
	H	W	t	D	Ø 7.5	Ø 17	Ø 17				
30800	384	130	172	10	48	12	6	ETA-16/0044	104378	3.160	1
30801	512	130	172	10	64	16	8	ETA-16/0044	104385	4.200	1
30802	640	130	172	10	80	20	10	ETA-16/0044	104392	5.220	1
30803	768	130	172	10	96	24	12	ETA-16/0044	104408	6.280	1
30822	2176	130	172	10	272	68	34	ETA-16/0044	104415	17.400	1

nH = number of holes facing the main member | nN = number of holes facing the secondary member | Dowel Ø 16.0 Connector nails 6.0 x 60



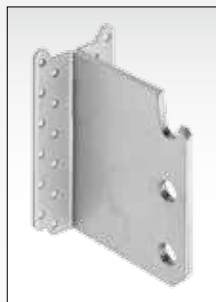
INTEGRAL CONNECTOR, 2-ROWS TYPE M WITH FIXED MOUNTING PLATE



Art. No.	Type	Dimensions [mm]					nH		nN	CE	EAN	Weight	Pallet	PU
		H	x	L	x	D	Ø 5	Ø 13						
										0769	4019346	kg		
30200	M 0	84	x	98	x	3.0	8	2		ETA-10/0009	105061	0.195	1200	25
30201	M I	124	x	98	x	3.0	12	3		ETA-10/0009	105078	0.295	900	25
30202	M II	164	x	98	x	3.0	16	4		ETA-10/0009	105085	0.395	1000	25
30203	M III	204	x	98	x	3.0	20	5		ETA-10/0009	105092	0.495	600	25
30204	M IV	244	x	98	x	3.0	24	6		ETA-10/0009	105108	0.595	600	25

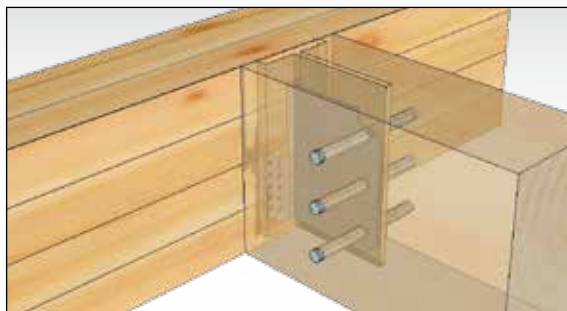
nH = number of holes facing the main member | nN = number of holes facing the secondary member

INTEGRAL CONNECTOR, 4-ROWS TYPE M WITH FIXED MOUNTING PLATE



Art. No.	Type	Dimensions [mm]					nH		nN	CE	EAN	Weight	Pallet	PU
		H	x	L	x	D	Ø 5	Ø 13						
										0769	4019346	kg		
302004	M 0 -4	84	x	98	x	6.0	16	2		ETA-10/0009	479704	0.390	1000	25
302014	M I -4	124	x	98	x	6.0	24	3		ETA-10/0009	479711	0.590	1000	25
302024	M II -4	164	x	98	x	6.0	32	4		ETA-10/0009	479728	0.790	1000	25
302034	M III -4	204	x	98	x	6.0	40	5		ETA-10/0009	479735	0.990	600	25
302044	M IV -4	244	x	98	x	6.0	48	6		ETA-10/0009	479742	1.190	600	25

nH = number of holes facing the main member | nN = number of holes facing the secondary member



Dowels from page 91.

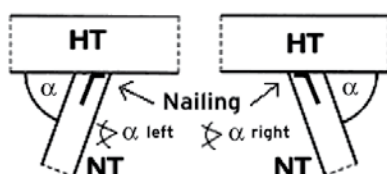
INTEGRAL CONNECTOR, 2-ROWS TYPE M INCLINED JOINT OF 30° - 90°

Art. No.	Type	Dimensions [mm]					nH		nN	CE	EAN	Weight	PU
		H	x	L	x	D	Ø 5	Ø 13					
											4019346	kg	
30200L	Type 0 -L	84	x	98	x	3.0	8	2			595053	0.195	1
30200R	Type 0 -R	84	x	98	x	3.0	8	2			105306	0.195	1
30201L	Type I -L	124	x	98	x	3.0	12	3			595060	0.295	1
30201R	Type I -R	124	x	98	x	3.0	12	3			105320	0.295	1
30202L	Type II -L	164	x	98	x	3.0	16	4			595077	0.395	1
30202R	Type II -R	164	x	98	x	3.0	16	4			105344	0.395	1
30203L	Type III -L	204	x	98	x	3.0	20	5			595084	0.495	1
30203R	Type III -R	204	x	98	x	3.0	20	5			105368	0.495	1
30204L	Type IV -L	244	x	98	x	3.0	24	6			595091	0.595	1
30204R	Type IV -R	244	x	98	x	3.0	24	6			105382	0.595	1

Setup costs per degree value and stop direction

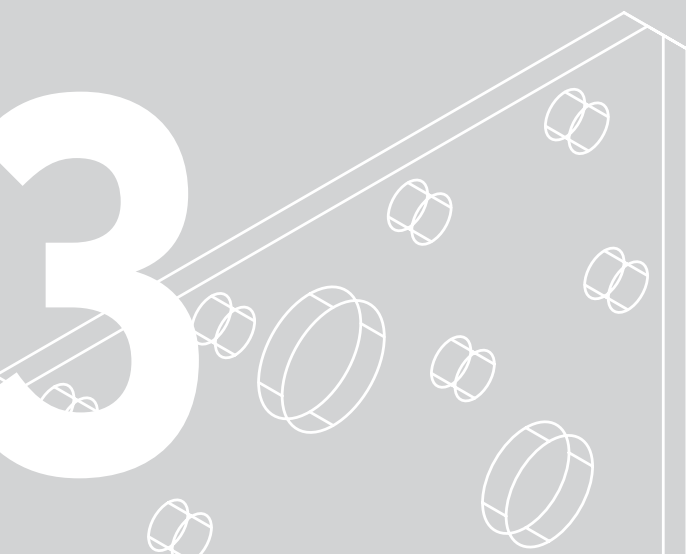
30210	Setup costs	105405	0	1
-------	-------------	--------	---	---

nH = number of holes facing the main member | nN = number of holes facing the secondary member

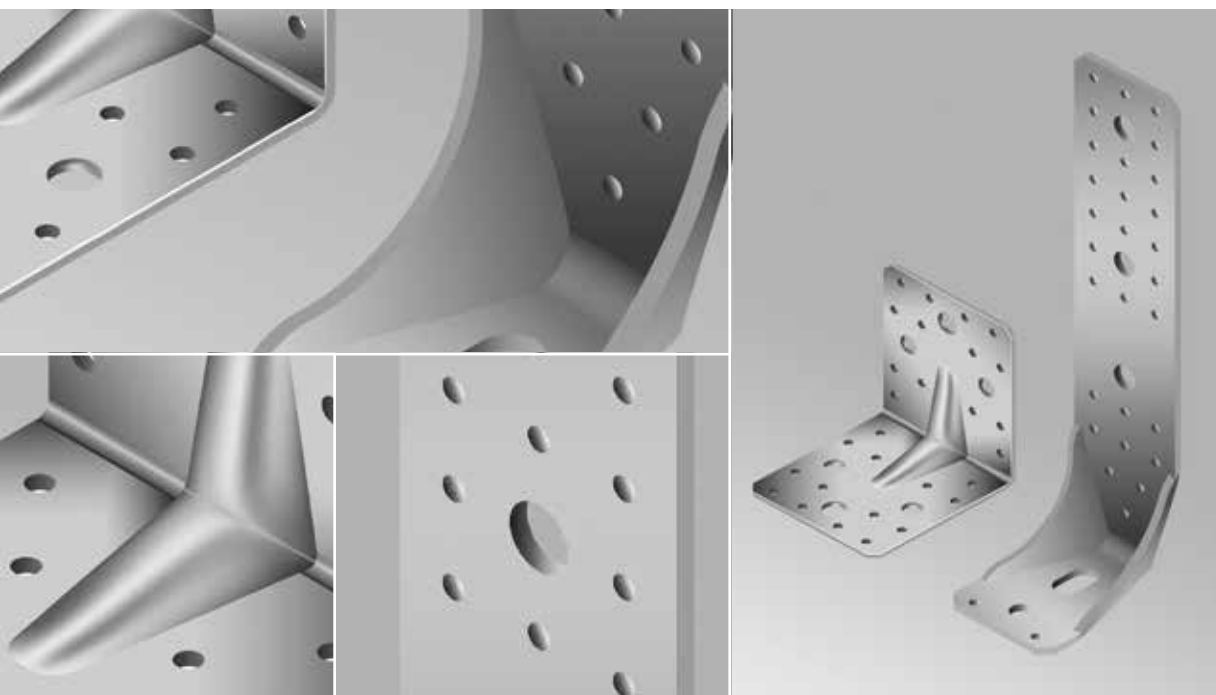


Inclined joints
left/right from
30° - 90° available





ANGLE BRACKETS



Art. No.	Type	Dimensions [mm]							n'		EAN	Weight	Pallet	PU
		H	x	L	x	W	x	D	Ø 5			kg		
110805	TOP 80	80	x	60	x	55	x	2.0	15	ETA-09/0322	110805	0.106	7200	100
110812	TOP 120	120	x	60	x	55	x	2.0	15	ETA-09/0322	110812	0.136	6000	100

A close-up photograph of a metal bracket, likely a Simpson Strong-Tie L-Bracket, securing the corner of a wooden frame. The bracket is silver-colored and has four pre-drilled holes for screws. It is attached to two light-colored wooden beams, one running horizontally and the other vertically. The background is a plain, light-colored wall.

Beading in the flat area 6 x 30 mm.
Beading in the angle area 12 x 25 mm.



No disrupting middle gusset during installation.
Full nailing is always possible.
High degree of stability due to special beads,
positioned so as not to get in the way.

Short leg on the continuous timber passing through
From timber width 80 mm
On timber-timber; timber/panel materials

Technical drawing of a mechanical part, showing a top view and a side view. The top view is a rectangle with rounded corners, containing a dashed line pattern representing a channel. The side view shows the profile of the part, which is L-shaped. Dimensions are given in millimeters (mm).

Top View Dimensions:

- Overall width: 55 mm
- Overall height: 50 mm
- Channel width: 20 mm
- Channel depth: 20 mm
- Channel radius: R10
- Channel offset: 10 mm

Side View Dimensions:

- Overall height: 50 mm
- Channel depth: 20 mm
- Channel radius: R10
- Channel offset: 10 mm

Reduced nailing pattern

No fixing in the edge zone

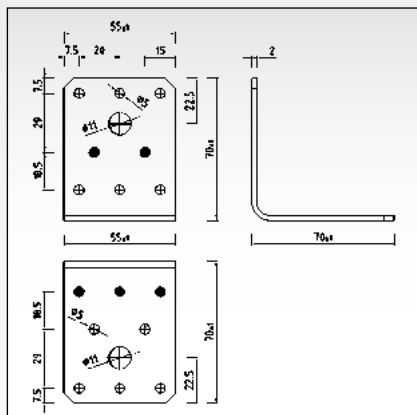
No fixing in the edge zone
For timber-to-concrete connections, see also Top 80 / Top 120 Vario
(page 59)

ANGLE BRACKET TYPE 55/70 S 2.0

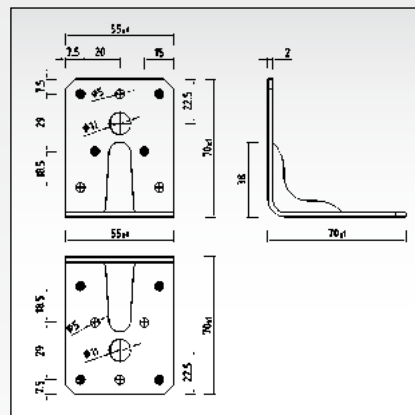


Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
5501S	with rib	70	x	70	x	55	x	2.0	14	2	ETA-09/0323	110089	0.102	4800	100
5502S	w/o rib	70	x	70	x	55	x	2.0	16	2	ETA-09/0323	110072	0.102	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



5502S

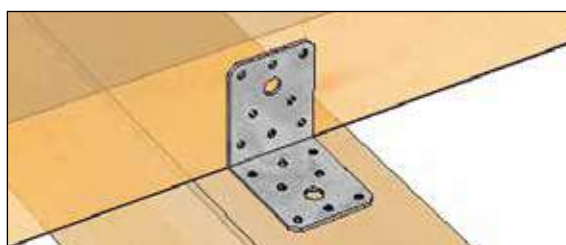


5501S

ANGLE BRACKET TYPE 55/70 S 1.5

Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
5501S15	with rib	70	x	70	x	55	x	1.5	16	2	ETA-13/0900	024607	0.077	4800	100
5502S15	w/o rib	70	x	70	x	55	x	1.5	17	2	ETA-13/0900	024614	0.077	4800	100

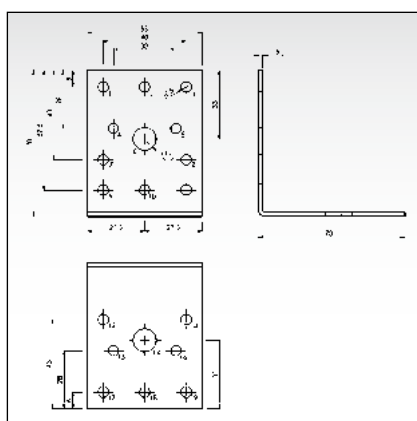
n¹ = Number of holes, timber | n² = Number of holes, concrete



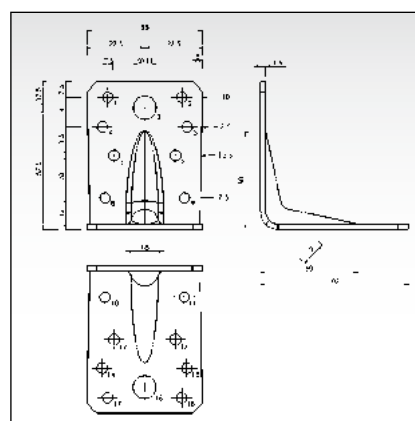
The application range is very extensive: e.g. fixing the bearing of timber purlins, side or bay rails on posts, carport construction, pergola construction, etc.



GH angle brackets 55/70 are fixed using GH connector nails Ø 4.0 mm (page 89) or GH screws (page 90).



5502S15



5501S15



ANGLE BRACKET TOP KR 90E (EXTRA)



Art. No.	Dimensions [mm]							n ¹	n ²	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13				
110090E	95	x	85	x	65	x	1.5	19	1	0769	4019346	kg	
										ETA-09/0324	110898	0.121	4000 100

n¹ = Number of holes, timber | n² = Number of holes, concrete

Advantages

40 % lighter weight compared to the 90 x 90 x 65 x 2.5 mm. Hole Ø 13 mm. High degree of stability due to upstand on both sides.

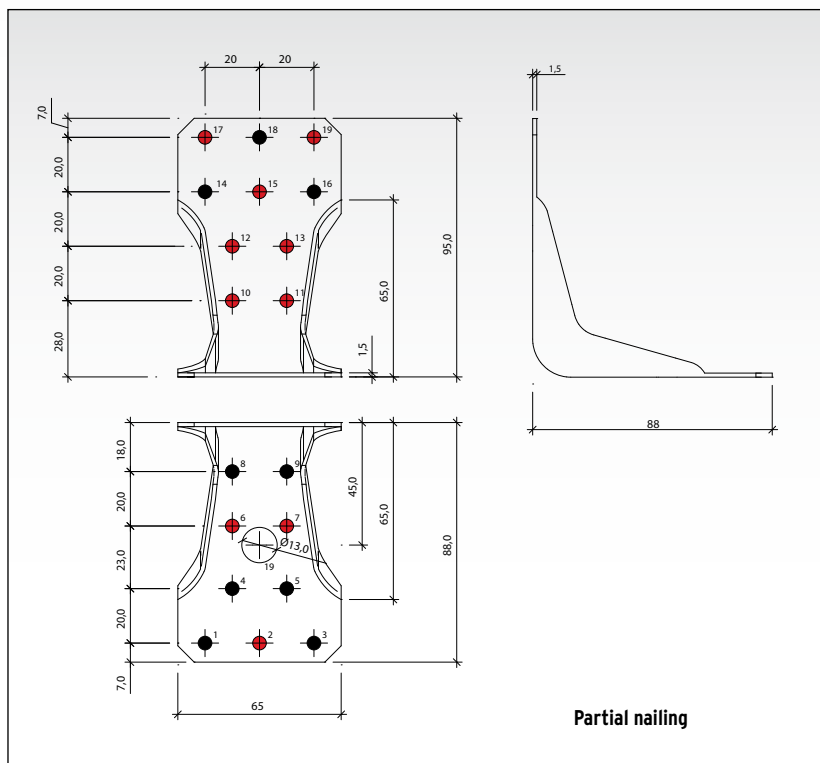
Diverse possible uses.

Can be used as an alternative to various angle brackets such as 70 x 70 x 55 mm and 90 x 90 x 65* mm, therefore lower stocking costs.

Due to the nailing pattern for timber-to-timber joints and the webs located on the outside on both sides, the TOP KR 90E is very suitable for F2/F3 and F1 loads. The fixing can be made not only using GH connector nails but also the GH screw. Joints on masonry or concrete are also possible due to the 13 mm hole.



* The TOP KR 90E angle bracket can be used, for example, as an alternative to the angle bracket Type 65/90S (90 x 90 x 65 x 2,5 mm) or similar angle brackets provided consideration is given to the required loads.

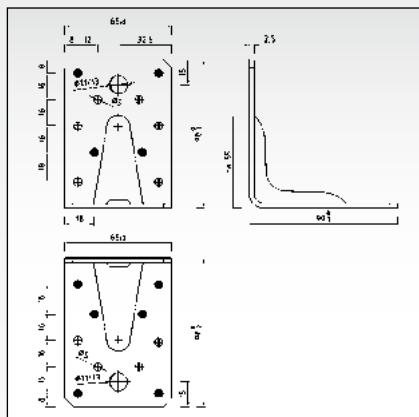


ANGLE BRACKET TYPE 65/90S 2.5

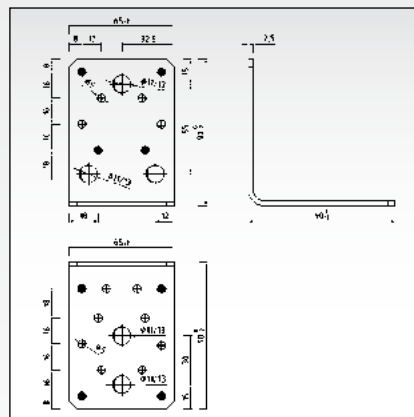


Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
6503S	with rib	90	x	90	x	65	x	2.5	20	2	ETA-09/0323	110119	0.190	4800	100
6504S	w/o rib	90	x	90	x	65	x	2.5	20	5	ETA-09/0323	110126	0.190	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



6503S / 6503S13

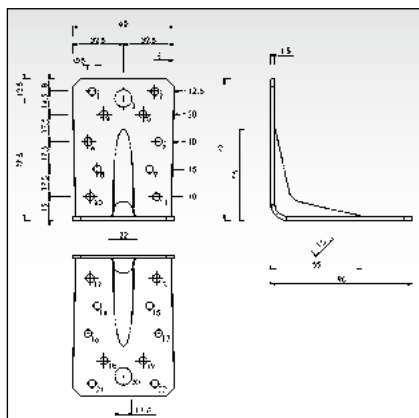


6504S / 6503S13

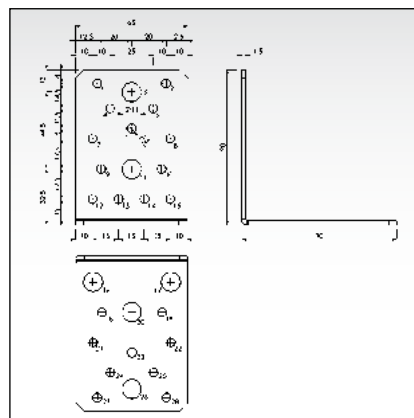
ANGLE BRACKET TYPE 65/90S 1.5

Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
6503S15	with rib	90	x	90	x	65	x	1.5	20	2	ETA-13/0900	024621	0.114	4800	100
6504S15	w/o rib	90	x	90	x	65	x	1.5	22	6	ETA-13/0900	024638	0.114	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



6503S15



6504S15

ANGLE BRACKET TYPE 65/90S13 2.5 / Ø 13 MM HOLE

Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
6503S13	with rib	90	x	90	x	65	x	2.5	20	2	ETA-09/0323	110614	0.185	4800	100
6504S13	w/o rib	90	x	90	x	65	x	2.5	22	6	ETA-09/0323	110621	0.185	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



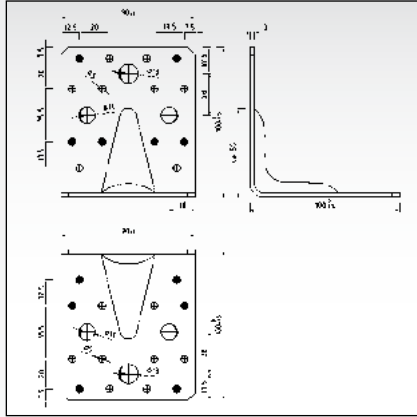
Type S13 - with 13 mm hole!

ANGLE BRACKET TYPE 90/100S 3.0

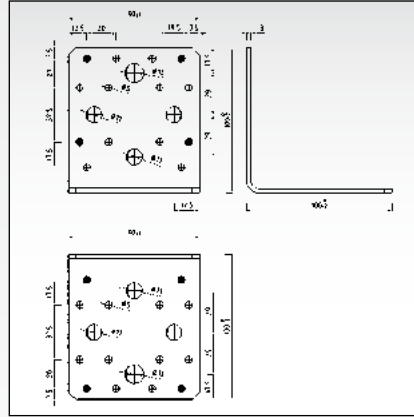


Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	n ² Ø 13	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D								
9003S	with rib	100	x	100	x	90	x	3.0	28	4	2	ETA-09/0323	110034	0.352	3000	50
9004S	w/o rib	100	x	100	x	90	x	3.0	28	6	2	ETA-09/0323	110041	0.352	3000	50

n¹ = Number of holes, timber | n² = Number of holes, concrete



9003S



9004S

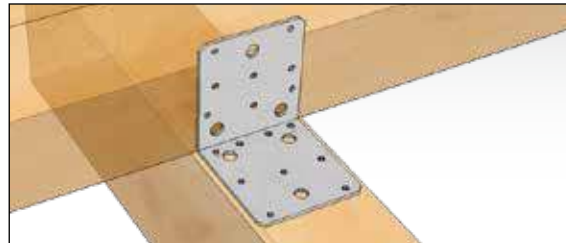
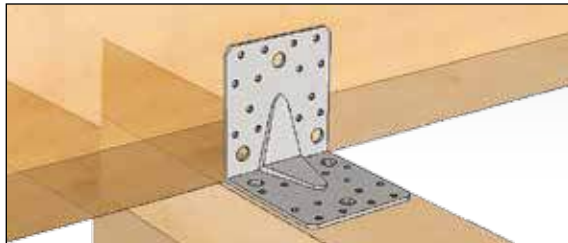


ANGLE BRACKET TYPE 90/100S 2.0

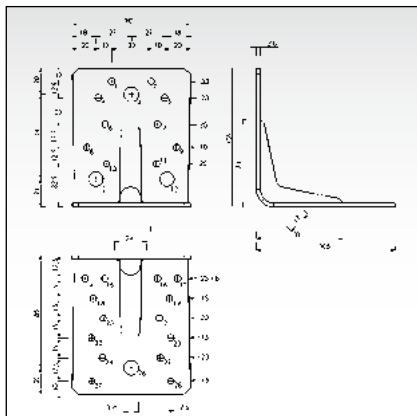


Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
9003S20	with rib	105	x	105	x	90	x	2.0	24	4	ETA-13/0900	024669	0.235	3000	50
9004S20	w/o rib	105	x	105	x	90	x	2.0	19	6 (Ø 11)	ETA-13/0900	024676	0.235	3000	50

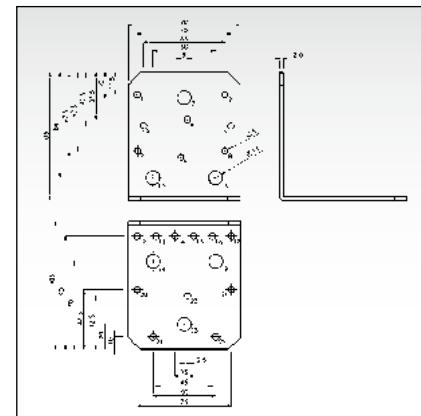
n¹ = Number of holes, timber | n² = Number of holes, concrete



GH angle brackets 90/100 S are used wherever very large force transfer is required.



9003S20



9004S20

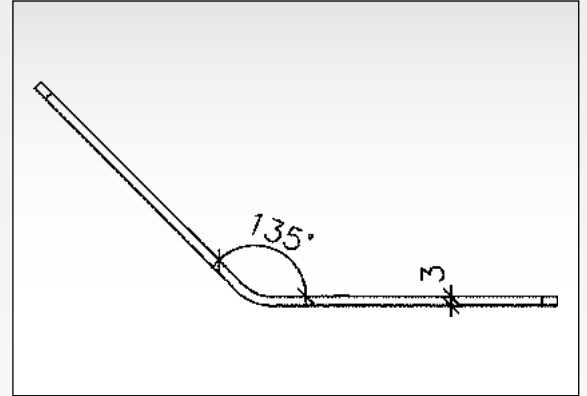
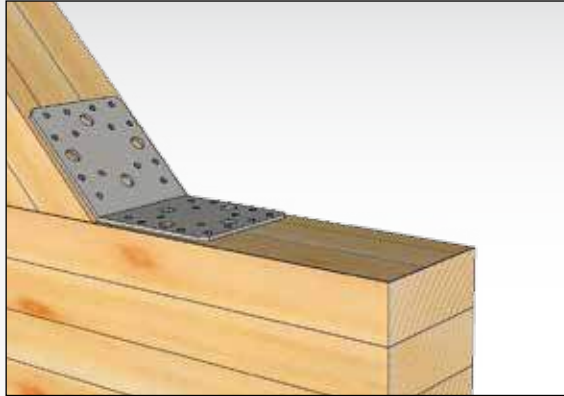


STRUT CONNECTOR WITH 135°



Art. No.	Dimensions [mm]							n ¹ Ø 5	n ¹ Ø 7	n ² Ø 11	n ² Ø 13	0769	EAN 4019346	Weight kg	Pallet 4500	PU 100
	H	x	L	x	W	x	D									
1867	90	x	90	x	65	x	2.5	20	8	2	-	ETA-09/0322	130124	0.190	2400	40
2197	100	x	100	x	90	x	3.0	28	-	6	2	ETA-09/0322	130131	0.352	2400	40

n¹ = Number of holes, timber | n² = Number of holes, concrete

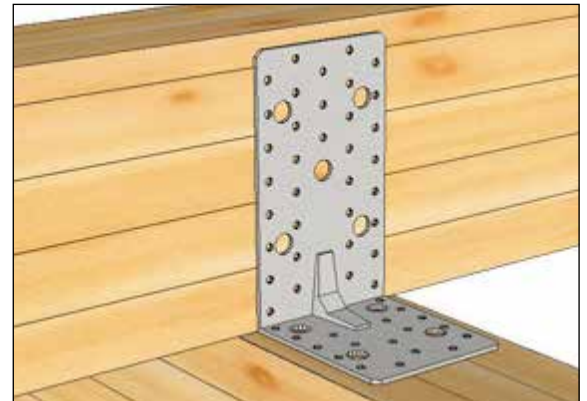
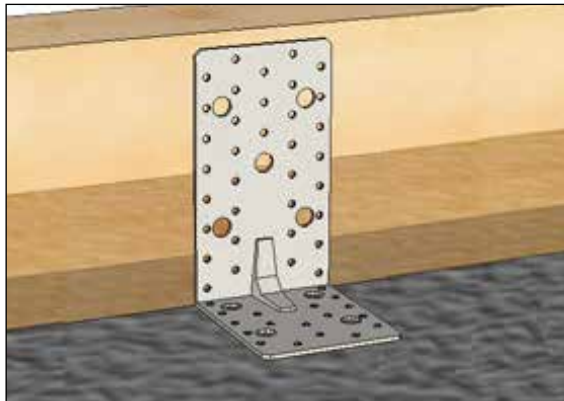


ANGLE BRACKET 110/170 S



Art. No.	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN 4019346	Weight kg	Pallet 1500	PU 25
	H	x	L	x	W	x	D							
110170L	170	x	110	x	95	x	3.0	53	9	ETA-09/0322	215593	0.556	1500	25

n¹ = Number of holes, timber | n² = Number of holes, concrete



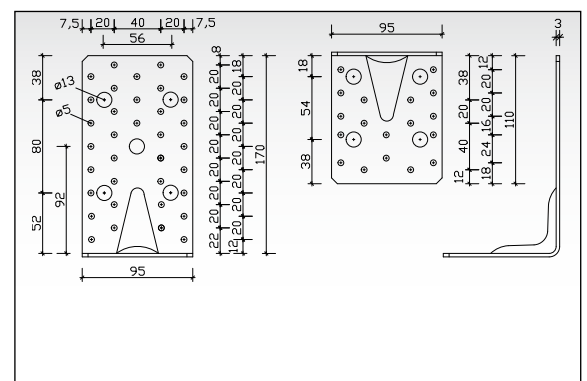
This unequal leg, 3 mm thick angle bracket with 9 x Ø 13 mm holes, can be used for very universal purposes with higher loads, e.g. to secure high sills or thresholds. The angle is also excellently suited to absorbing F2 and F3 loads.

Standard connections such as post/column, side rail/column, wall plate/concrete, etc.

Types of joint:

- Timber-to-timber
- Timber-to-concrete, masonry
- Timber-to-steel
- Timber-to-Halfen cast-in channels

For fixing with GH connector nails (page 89), GH screws (page 90).



ANGLE BRACKET KR, ELONGATED HOLE

Art. No.	Dimensions [mm]							n ¹	n ²	0769	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13.5					
110095L	95	x	88	x	65	x	4.0	11	-	ETA-09/0324	110911	0.322	1200	25
110135L	135	x	88	x	65	x	4.0	16	1	ETA-09/0324	110935	0.405	1200	25
110285L	285	x	88	x	65	x	4.0	28	3	ETA-09/0324	110959	0.695	600	25

ANGLE BRACKET KR, ELONGATED HOLE

Art. No.	Dimensions [mm]							n ¹	n ²	0769	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13.5					
1100953L	95	x	90	x	65	x	3.0	11	-	ETA-09/0324	110997	0.241	1200	25
1101353L	135	x	90	x	65	x	3.0	16	1	ETA-09/0324	111000	0.303	1200	25
1102853L	285	x	90	x	65	x	3.0	28	3	ETA-09/0324	111017	0.521	600	25

n¹ = Number of holes, timber | n² = Number of holes, concrete
Hole Ø Leg L: 2 x 5 mm, 1 x 11 mm, 1 x elongated hole 13.5 x 24.5 mm

hot-dip galvanised

zinc electroplated



Elongated hole

ANGLE BRACKET KR, ROUND HOLE

Art. No.	Dimensions [mm]							n ¹	n ²	0769	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13.5					
110095	95	x	88	x	65	x	4.0	11	-	ETA-09/0324	110904	0.327	1200	25
110135	135	x	88	x	65	x	4.0	16	1	ETA-09/0324	110928	0.411	1200	25
110285	285	x	88	x	65	x	4.0	28	3	ETA-09/0324	110942	0.712	600	25

ANGLE BRACKET KR, ROUND HOLE

Art. No.	Dimensions [mm]							n ¹	n ²	0769	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13.5					
1100953	95	x	90	x	65	x	3.0	11	-	ETA-09/0324	110966	0.245	1200	25
1101353	135	x	90	x	65	x	3.0	16	1	ETA-09/0324	110973	0.308	1200	25
1102853	285	x	90	x	65	x	3.0	28	3	ETA-09/0324	110980	0.534	600	25

n¹ = Number of holes, timber | n² = Number of holes, concrete
Hole Ø Leg L: 2 x 5 mm, 1 x 11 mm, 1 x round hole 13.5 mm

hot-dip galvanised

zinc electroplated



Round hole

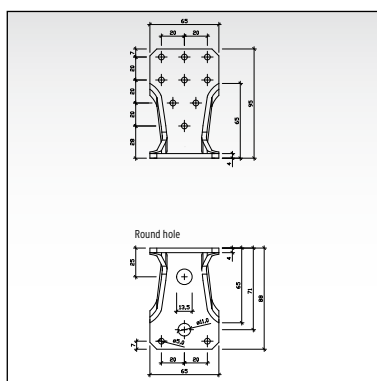
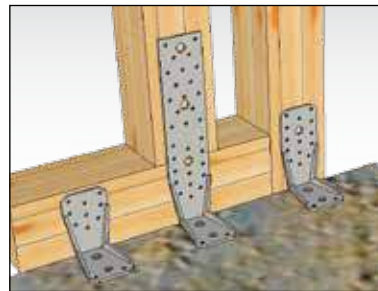
Fixing on timber:

- GH connector nails 4.0 mm (p. 89)
- GH screw 5.0 mm (p. 90)
- GH TOP Fix Duo (p. 109)

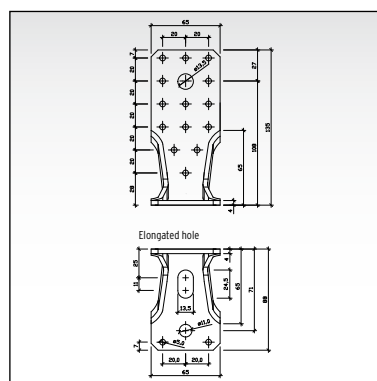
Fixing on concrete:

- Stud anchors
- T-head bolts

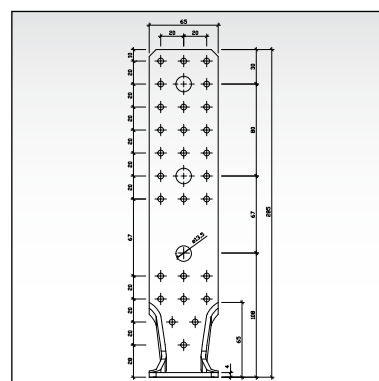
The GH angle bracket KR can be used for fast and easy joints between timber-to-timber; timber-to-concrete; timber-to-steel; timber-to-masonry, etc. Due to the webs in the bending radius, the KR connectors are very stable and can be used economically and cost-effectively for extreme loads. These properties are mainly required for joints on columns, sills, timber framing and trusses.



KR95



KR135



KR285



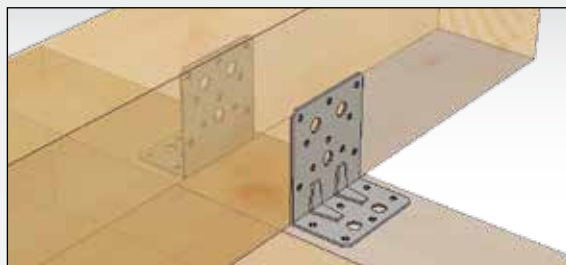
ANGLE BRACKET TYPE 50 / TYPE 80



TYPE 50 / TYPE 80

Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN 4019346	Weight kg	Pallet 6000	PU 100
		H	x	L	x	W	x	D							
595	Type 50	90	x	50	x	50	x	3.0	10	3	ETA-09/0322	110096	0.144	3000	100
598	Type 80	90	x	50	x	80	x	3.0	16	5	ETA-09/0322	110300	0.231	3000	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



GH angle brackets Type 50 and Type 80 are strong unequal leg angle connector.

For fixing with GH connector nails (page 89), GH screws (page 90).

Made of hot-dip galvanised steel sheet t = 3 mm.

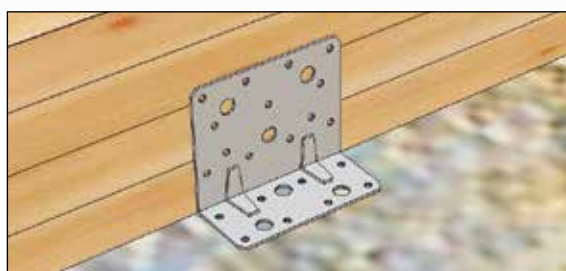
ANGLE BRACKET TYPE 110



TYPE 110

Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN 4019346	Weight kg	Pallet 1500	PU 50
		H	x	L	x	W	x	D							
5911	Type 110	90	x	50	x	110	x	3.0	21	6	ETA-09/0322	110317	0.317	1500	50
59114	D-plate	-	-	40	x	43	x	10.0	-	Ø 14	-	217740	0.110	-	50

n¹ = Number of holes, timber | n² = Number of holes, concrete



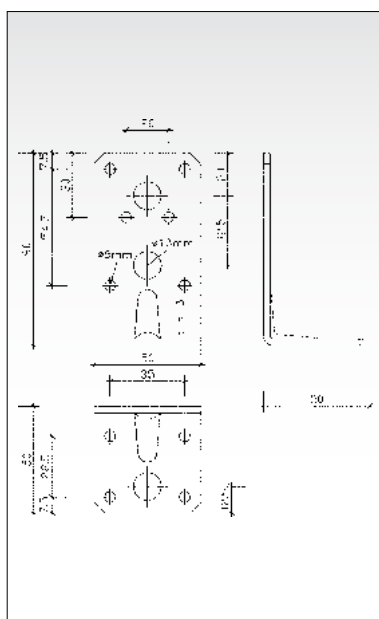
The GH angle bracket Type 110 is a strong unequal leg angle connector. Even higher loads can be absorbed by using an additional washer.

For fixing with GH connector nails (page 89), GH screws (page 90).

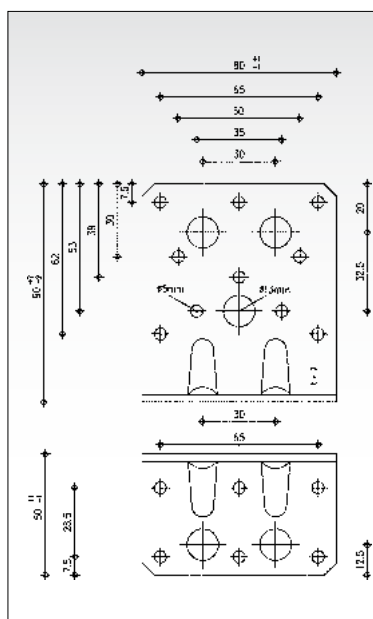
Made of hot-dip galvanised steel sheet t = 3 mm.



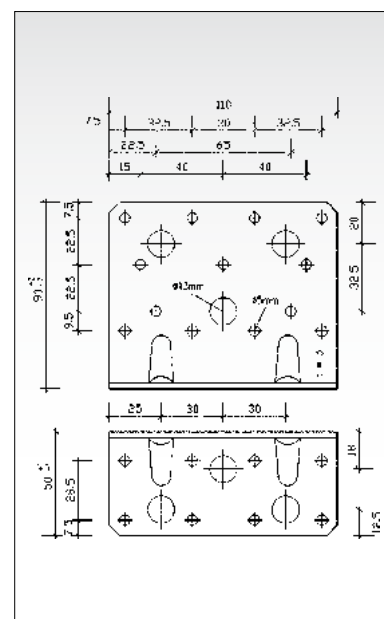
Washer



Type 50



Type 80



Type 110

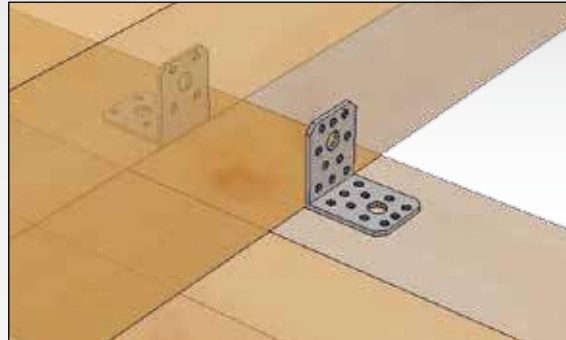
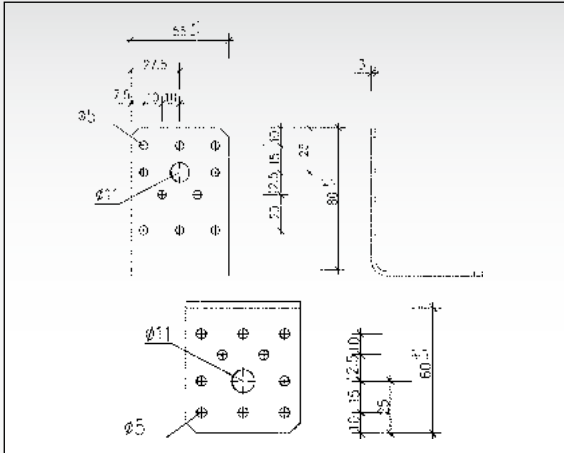


ANGLE BRACKET TYPE 55 / 80



Art. No.	Dimensions [mm]							n ¹	n ²	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 11		kg		
653	80	x	60	x	55	x	3.0	20	2	ETA-09/0322	110249	0.159	4800 100

n¹ = Number of holes, timber | n² = Number of holes, concrete



The GH angle bracket Type 55 / 80 is an unequal leg angle connector. The area of use is very extensive. E.g. for connecting timber to timber, timber to steel, timber to concrete.

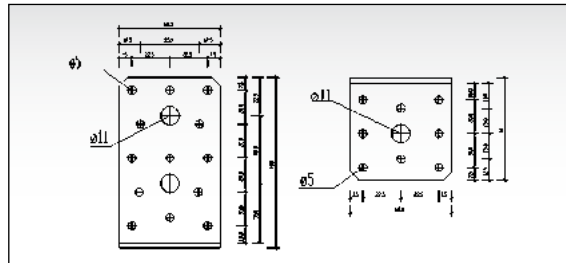
For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet t = 3 mm.

ANGLE BRACKET TYPE 60 / 100



Art. No.	Dimensions [mm]							n ¹	n ²	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 11		kg		
16625	100	x	60	x	60	x	2.5	21	3	ETA-13/0900	101780	0.173	3000 100

n¹ = Number of holes, timber | n² = Number of holes, concrete

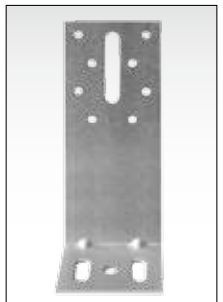
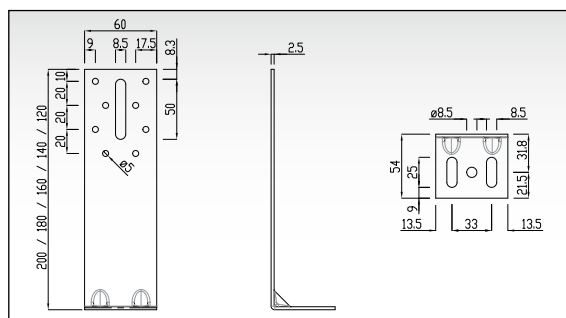


ANGLE BRACKET



Art. No.	Dimensions [mm]							n ¹	n ²	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 8.5		kg		
1205460	120	x	54	x	60	x	2.5	8	1	ETA-13/0900	004104	0.198	3000 100
1405460	140	x	54	x	60	x	2.5	8	1	ETA-13/0900	004111	0.221	3000 100
1605460	160	x	54	x	60	x	2.5	8	1	ETA-13/0900	004128	0.244	3000 100
1805460	180	x	54	x	60	x	2.5	8	1	ETA-13/0900	004135	0.268	3000 100
2005460	200	x	54	x	60	x	2.5	8	1	ETA-13/0900	004142	0.291	3000 100

Long leg 1 x elongated hole 8.5 x 50
Short leg 2 x elongated hole 8.5 x 25



ANGLE BRACKET TYPE 40 / TYPE 45



Art. No.	Type	Dimensions [mm]							n ¹	n ²	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D	Ø 5	Ø 11				
543	40/50	50	x	50	x	40	x	2.5	8	2	ETA-09/0322	110058	10500	150
645	45/60	60	x	60	x	45	x	2.5	12	2	ETA-09/0322	110232	3500	50
993	40/90	90	x	90	x	40	x	3.0	16	4	ETA-09/0322	110065	5100	100

n¹ = Number of holes, timber | n² = Number of holes, concrete

The GH angle brackets Type 40 / Type 45 are strong equal leg angle connectors. The area of application is where the requirements regarding the force to be connected are not very high.

E.g. in structural framework or timber on timber, timber on steel, timber on concrete. The GH angle bracket 50/50/40/2.5 is our smallest standard angle connector.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised sheet steel t = 2.5 or 3 mm.



40/50



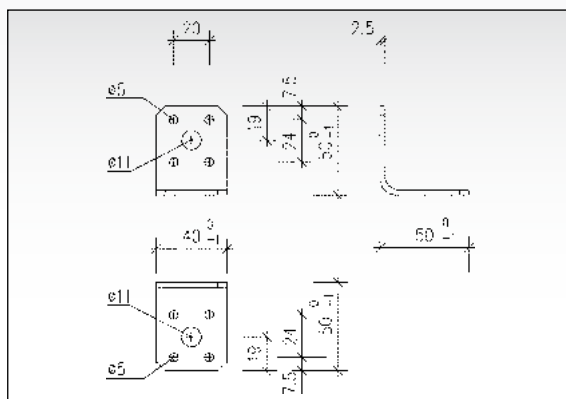
45/60



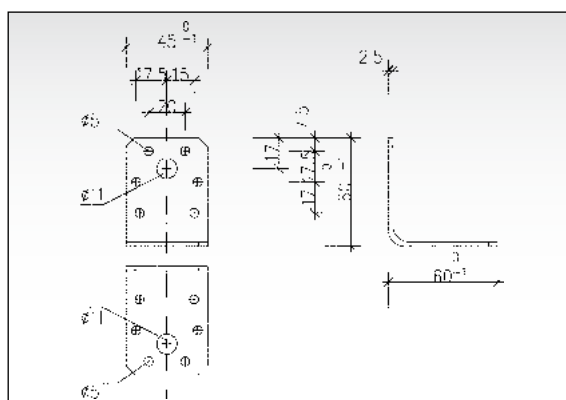
40/90



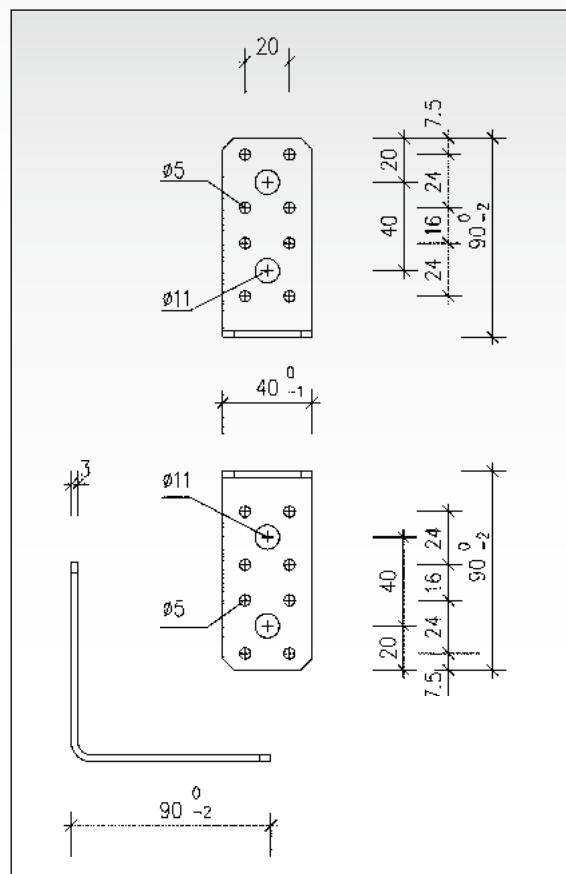
40/90



40/50



45/60



40/90

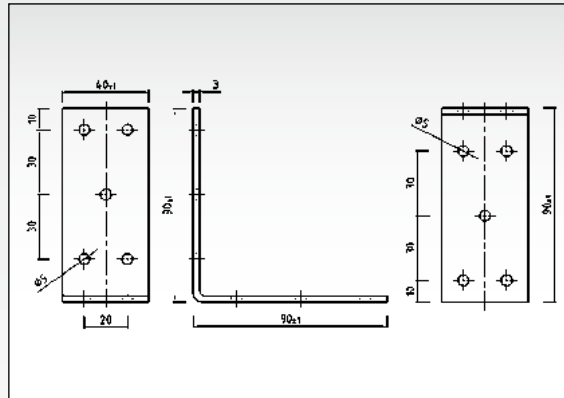
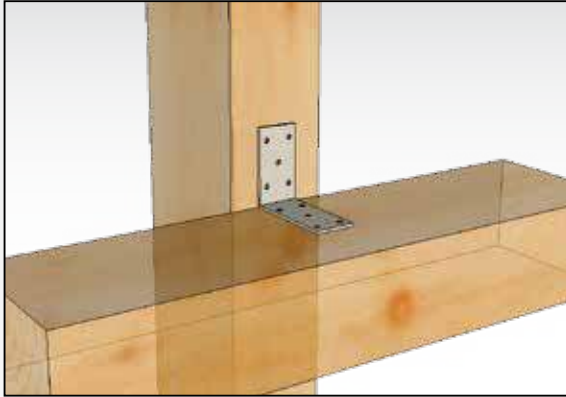


ANGLE BRACKET TYPE 40 / 90



Art. No.	Dimensions [mm]							n'			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5				kg		
994	90	x	90	x	40	x	3.0	10		0769	4019346	0.179	5100	100
										ETA-09/0322	110102			

n' = number of holes, timber



The GH angle bracket Type 40 / 95 is a strong equal leg angle connector.

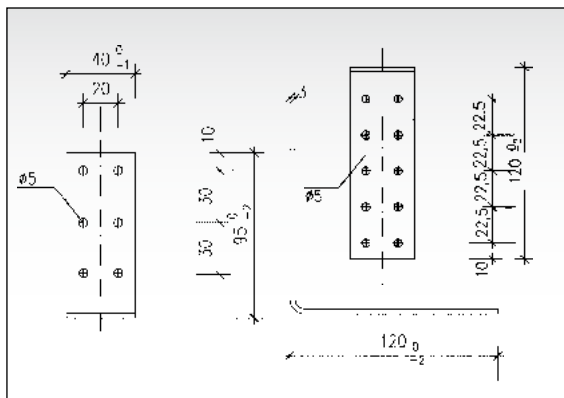
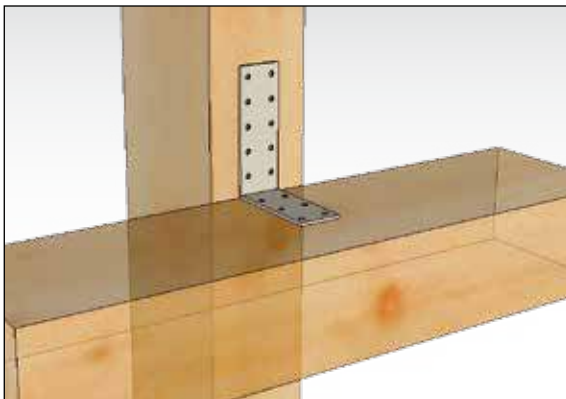
It is used wherever the requirements for the force to be connected are not very high. E.g. purlins on glulam beams, side rails on columns, etc. We recommend installing 2 angle connectors for each joint. For fixing with GH connector nails (page 89), GH screws (page 90).

ANGLE BRACKET TYPE 40 / 120



Art. No.	Dimensions [mm]							n'			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5				kg		
1293	120	x	95	x	40	x	3.0	16		0769	4019346	0.177	5100	100
										ETA-09/0322	110331			

n' = number of holes, timber



The GH angle bracket Type 40 / 120 is a strong unequal leg angle connector. The area of application is where the requirements regarding the force to be connected are not very high.

E.g. purlins on glulam beams.

In truss structures, post joint on the wall plate, etc.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet $t = 3$ mm.

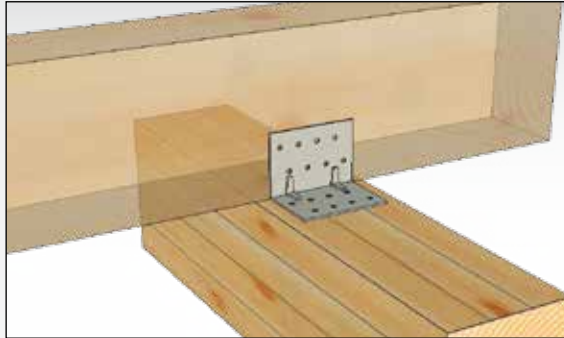


ANGLE BRACKET TYPE 692



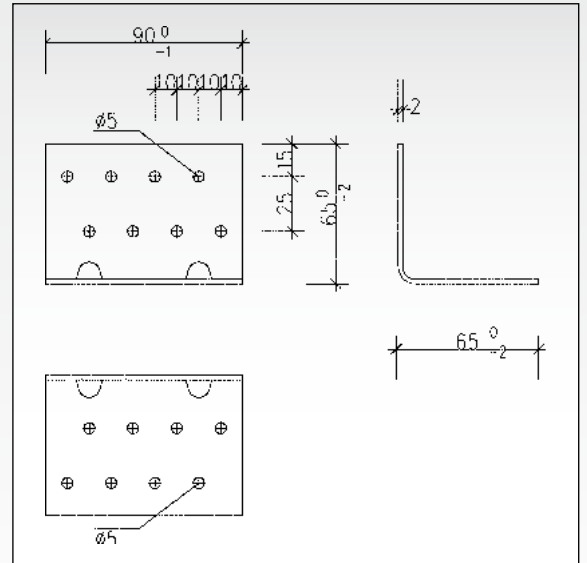
Art. No.	Dimensions [mm]							n'			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	0769		4019346	kg		
692	65	x	65	x	90	x	2.0	16		ETA-13/0900	110348	0.161	4000	100

n' = number of holes, timber



The GH angle bracket 65/65/90/2.0 is an angle connector for diverse possible uses, wherever the requirements regarding the force to be connected are not very high. E.g. truss structures, purlins on glulam beams, etc. We recommend installing 2 angle connectors for each joint.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet $t = 2$ mm.

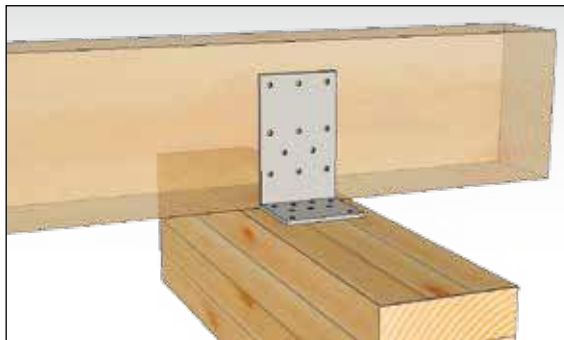


ANGLE BRACKET, EXTRA STRONG



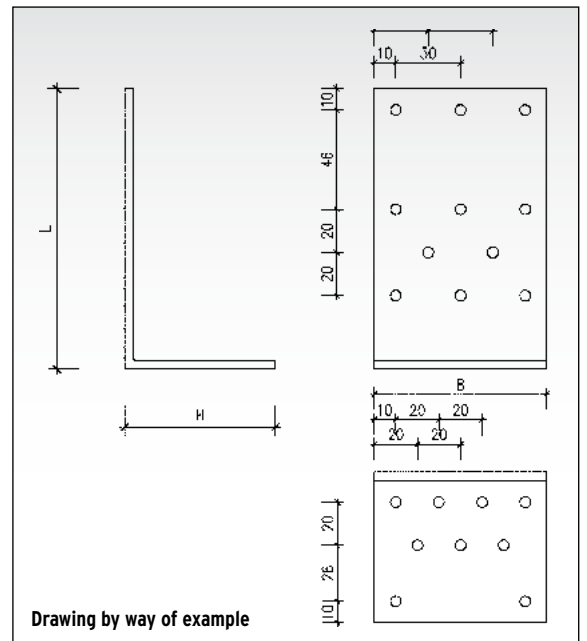
Art. No.	Dimensions [mm]							n'			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5		0769	4019346	kg		
1884	130	x	70	x	80	x	4.0	20		ETA-13/0900	110355	0.439	1275	25
12116186	160	x	80	x	60	x	4.0	15		ETA-13/0900	165706	0.445	1500	50
12116188	160	x	80	x	80	x	4.0	20		ETA-13/0900	165713	0.588	900	25
12116181	160	x	80	x	100	x	4.0	33		ETA-13/0900	165720	0.724	1050	25

n' = number of holes, timber



These angle brackets have been especially developed for use at the crossing points of columns and timber beams supported on them. They are able to absorb suction forces, and at the same time serve to secure the timber beam in its position on the column.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet $t = 4$ mm.



Drawing by way of example



ANGLE BRACKET TYPE RL



Art. No.	Dimensions [mm]							n ¹	n ²			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø	LL			kg		
16910	90	x	60	x	60	x	2.5	9	1x10	5x30	ETA-09/0322	110362	0.154	4800	100
16913	90	x	60	x	60	x	2.5	9	1x12	5x30	ETA-09/0322	110379	0.154	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete



TYPE RL



TYPE LL



TYPE LLG

ANGLE BRACKET TYPE LL



Art. No.	Dimensions [mm]							n¹	n²			EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	LL	LL				kg	
26910	90	x	60	x	60	x	2.5	9	10x28	5x28	ETA-09/0322	4019346	0.154	4800	100
26913	90	x	60	x	60	x	2.5	9	13x28	5x28	ETA-09/0322	110393	0.154	4800	100

n¹ = Number of holes, timber | n² = Number of holes, concrete

ANGLE BRACKET TYPE LLG



Art. No.	Dimensions [mm]							n¹	n²	n²		EAN	Weight	Pallet	PU	
	H	x	L	x	W	x	D	Ø 5	LL	LL			kg			
3691015	90	x	60	x	60	x	1.5	11	10.5x28	10x30	ETA-09/0322	4019346	111505	0.093	4800	100
3691025	90	x	60	x	60	x	2.5	11	10.5x28	10x30	ETA-09/0322	4019346	111512	0.154	4800	100

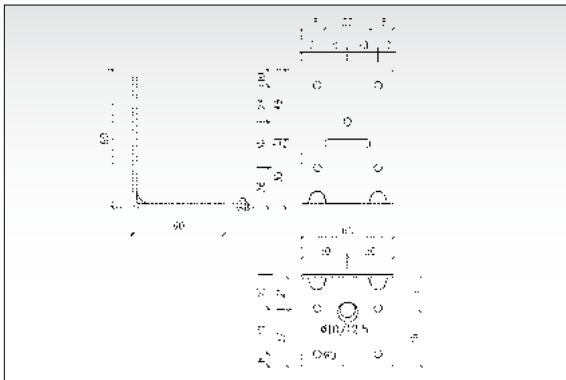
n¹ = Number of holes, timber | n² = Number of holes, concrete

These GH angle brackets are primarily suitable for securing the bearing of columns on concrete slabs, steel girders and timber sills.

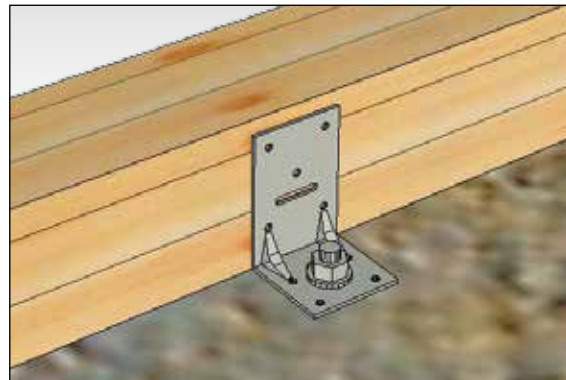
They can also be used for reliably securing rafter bearings on trusses. The advantage of the angle connector with elongated hole is that it allows greater variability of use in the area of the joint, as is often necessary, for example, if the dowel could not be attached in the element with precise fit.

The elongated hole nevertheless ensures optimum seating of the angle connector. The elongated hole is also advantageous when used in conjunction with Halfen cast-in channels.

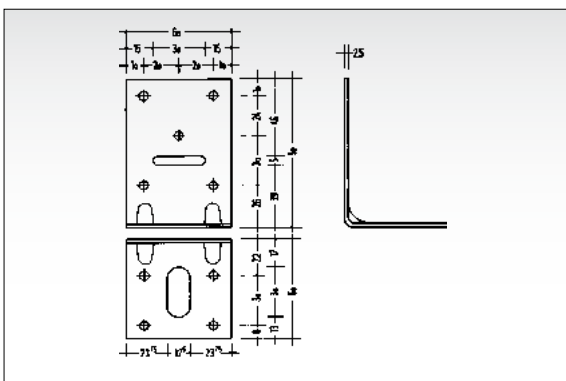
To be fixed with GH connector nails (page 89), GH screws (page 90). Made of hot-dip galvanised steel sheet.



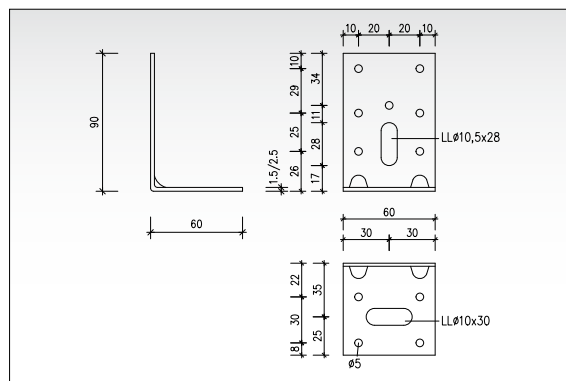
TYPE RL



TYPE LLG



TYPE LL



GH training room



In our training room for up to 50 persons, we also show participants practical application examples from.

CONCRETE BRACKETS TYPE A, HOT-DIP GALVANISED

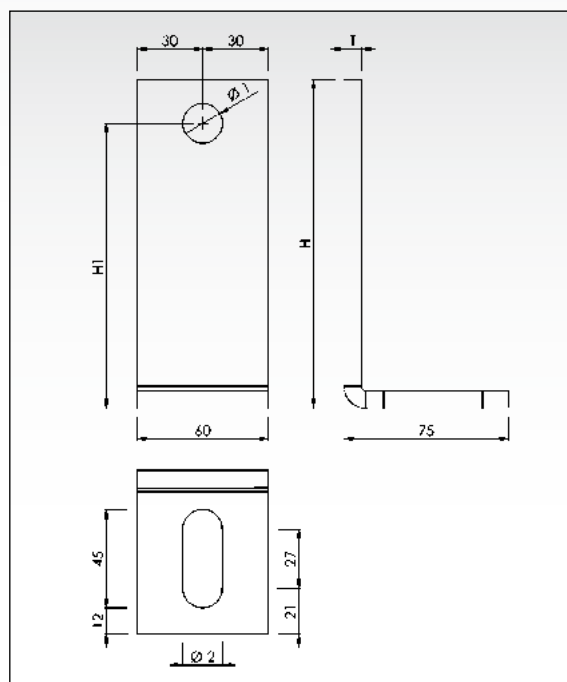
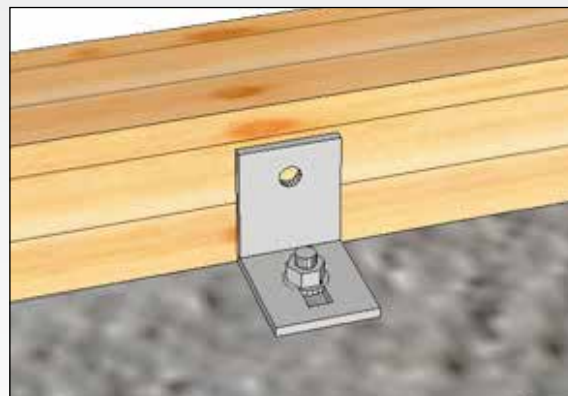


Art. No.	Dimensions [mm]										EAN	Weight kg	Pallet	PU
	H	x	L	x	W	x	D	Ø ₁	Ø ₂	H ₁				
110 A	75	x	75	x	60	x	6.0	14	14 x 45	59	110485	0.371	2000	40
111 A	100	x	75	x	60	x	6.0	14	14 x 45	70	110492	0.432	1500	20
112 A	150	x	75	x	60	x	8.0	14	14 x 45	114	110508	0.741	1000	20
115AX	150	x	75	x	60	x	8.0	18	18 x 45	114	110003	0.741	1000	20

n² = number of holes, concrete

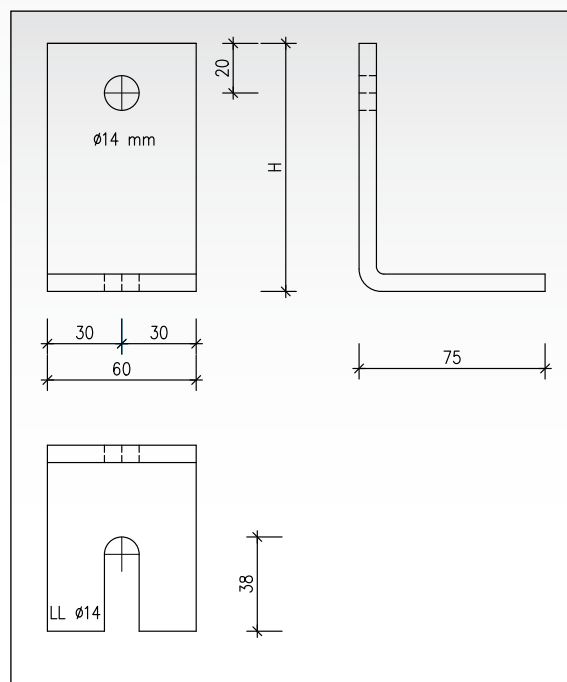


TYPE B on request



TYPE A

GH concrete brackets Type A and B are suitable for fixing timber parts on concrete; 2 types are produced.
Type A with elongated hole, Type B with open elongated hole on request.
The listed sizes are kept in stock.



TYPE B on request

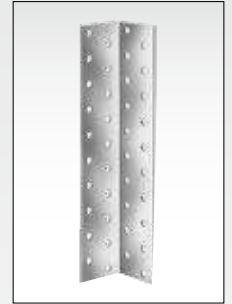
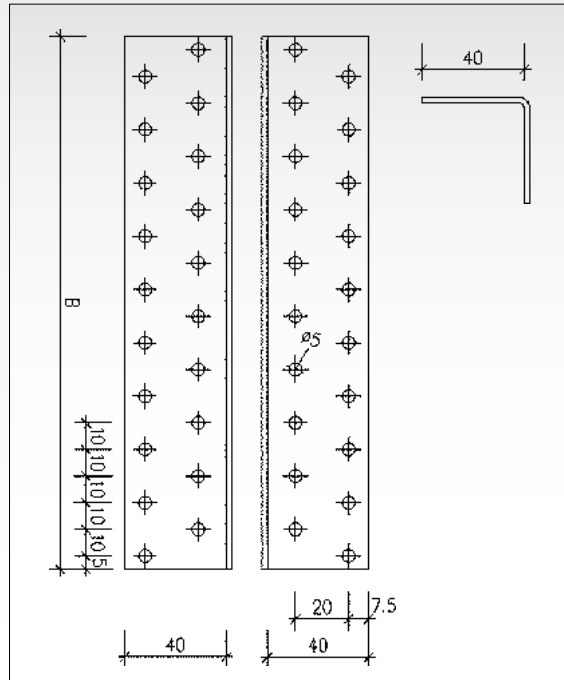
Other sizes can be produced very quickly.
GH angle brackets are hot-dip galvanised after production.



CORNER ANGLE BRACKET

Art. No.	Dimensions [mm]								n'	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5					
11541	40	x	40	x	100	x	2.0	20		4019346	kg		
11542	40	x	40	x	150	x	2.0	30		110447	0.120	3500	50
11543	40	x	40	x	200	x	2.0	40		110454	0.185	3000	50
11544	40	x	40	x	250	x	2.0	50		110461	0.235	3000	50
										110478	0.295	2400	50

n' = number of holes, timber



TECHNICAL ADVICE ON TIMBER CONNECTORS AND TIMBER SCREWS

Our engineering team offers you comprehensive advice on all aspects of our timber connectors and timber screws.

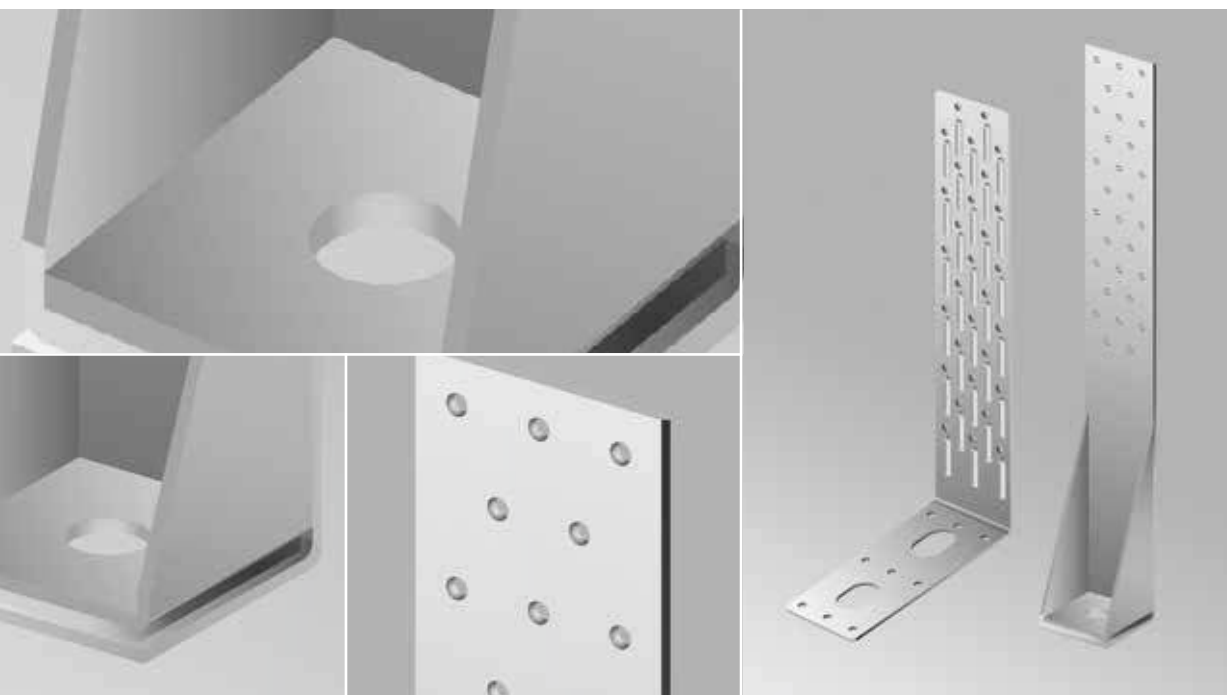
Whether for the trade, users, or civil engineers, if you need detailed technical information about timber connectors or screws or have specific questions about structural or building physics problems, contact our

TECHNICAL HOTLINE: +49 7023 743323-40
or EMAIL to statik@holzverbinder.de.



4

TENSION TIES

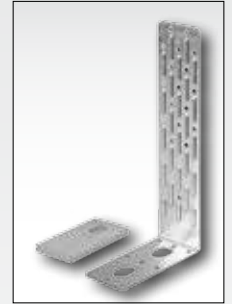


TENSION TIES TOP 240 / TOP 280 VARIO



Art. No.	Type	Dimensions [mm]							n ¹ Ø 5	n ² Ø 18x26	0769	EAN	Weight kg	Pallet	PU
		H	x	L	x	W	x	D							
110850	TOP240	240	x	120	x	55	x	2.0	18+9	2	ETA-10/0010	110850	0.272	1600	50
110867	TOP280	280	x	120	x	55	x	2.0	23+9	2	ETA-10/0010	110867	0.302	1600	50

n¹ = Number of holes, timber | n² = Number of holes, concrete



WASHER FOR TENSION TIES TOP 240 / TOP 280 VARIO

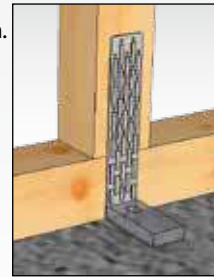
Art. No.	Dimensions [mm]						n ²	EAN	Weight kg	Pallet	PU
	L	x	W	x	D						
111345	114	x	55	x	20.0	Ø 14x26		111345	0.861	1080	10
111352	114	x	55	x	20.0	Ø 18x26		111352	0.861	1080	10

n² = number of holes, concrete

GH tension tie in conjunction with the GH plain washer is the complete set for base anchoring in timber frame construction. The tensile force is transferred into the concrete by the angle connector with washer and dowel with perfect structural results.

Properties and advantages:

- Approved joint via intermediate layer
- Efficient wall or column joint on concrete
- High degree of preproduction possible in timber/timber framework construction
- Fast and practical use
- Estimating advantage due to easy complete assembly
- Time savings through the removal for the need of complicated markings and dowel holes in advance
- Safe and reliable use due to the coordinated system
- Direct joint possible, e.g. on OSB boards between the timber studs using GH screw (page 90)



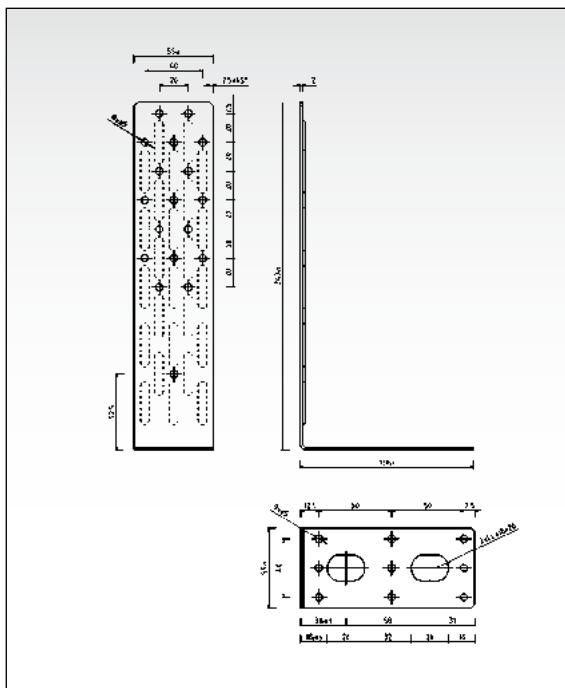
Suitable for fixing on:

- OSB particleboard*
- Particleboard*
- Hard wood fibreboard*
- "Kerto" laminated veneer lumber*
- "MICRO LAM LVL 2.0"*
- Solid and glulam timber

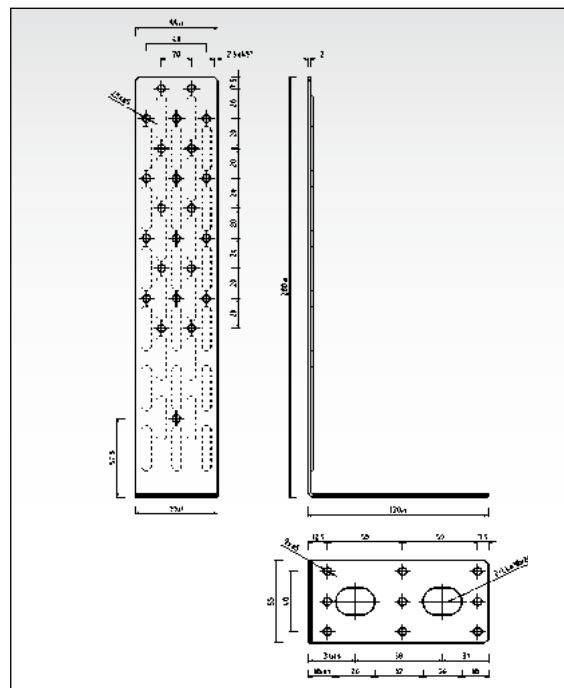
* Using GH screw

Technical details:

- Coordinated GH tension ties und plain washers system
- Clear structural calculations possible
- Variable use options due to the rotatable GH plain washer
- Flexible application options, depending on the forces to be absorbed



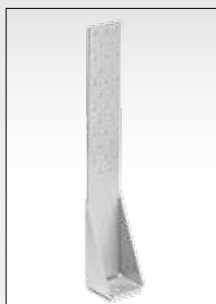
Type 240



Type 280



HT TENSION TIES



Art. No.	Type	Dimensions [mm]							n ¹	n ²		EAN	Weight	Pallet	PU
		H	x	L	x	W	x	D	Ø 5	Ø			kg		
11060340	HT16	340	x	60	x	63	x	3.0	20	17	ETA-10/0010	479506	0.904	240	10
11060440	HT22	440	x	60	x	63	x	3.0	30	17	ETA-10/0010	479513	1.032	240	10
11060540	HT28	540	x	60	x	63	x	3.0	42	17	ETA-10/0010	479520	1.169	150	10
11080620	HT34	620	x	80	x	83	x	3.0	52	22	ETA-10/0010	479537	2.190	150	10

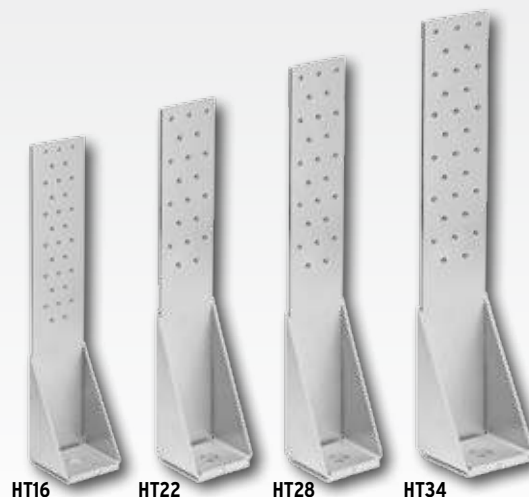
n¹ = Number of holes, timber | n² = Number of holes, concrete

GH HT advantages

- Absorbing of high tensile loads in timber framework construction
- Reduced overall height
- Short web height (150 mm)
- Optimised hole pattern
- GH HT are also suitable for column joints
- Washers are optional
- Use of washers for tensile loads up to 85 kN
- Without washers for tensile loads up to 42 kN



Fixing in timber, also via intermediate layers,
with GH connector nails 4.0 x 50 to 75 mm
(page 89) or GH screws Ø 5.0 mm (page 90).

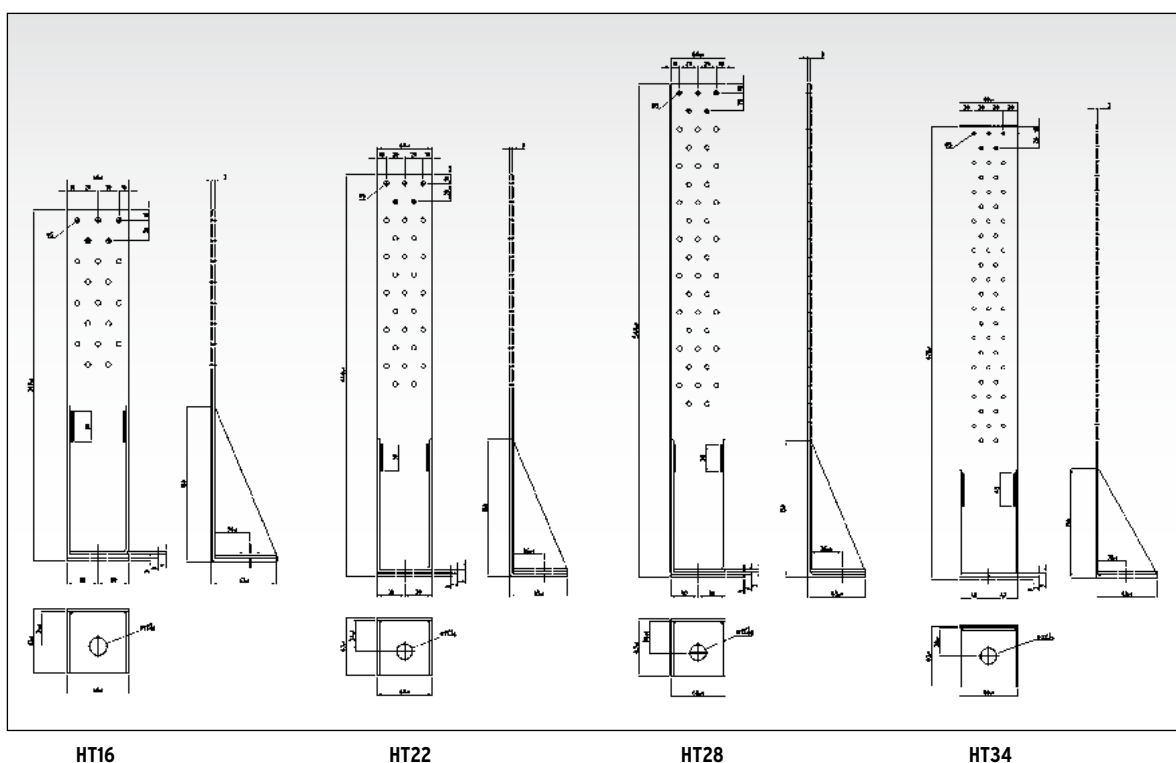


HT WASHERS



Washer
(optional, for tensile loads
larger than 42.0 kN)

Art. No.		Dimensions [mm]						n²		EAN	Weight	PU
		L	x	W	x	D	Ø			4019346	kg	
1105056	for HT16 - HT28	50	x	56	x	10	18			479605	0.230	10
1107077	for HT 34	70	x	77	x	20	22			479612	0.870	10



Modern warehouse at the Weilheim/Teck location

Our GH timber connectors and GH timber screws are stored on more than 4,500 sqm of storage space with 4,800 pallet slots. The ordered goods are ready for dispatch within a few hours.

With 1176 modules, we have one of the most modern solar systems in our area. With its 320 kWp output, our system produces approx. 300,000 kWh per year. This covers the annual demand of around 75 households (4 persons).

PLEASE LOOK OUT FOR THE CE MARKING WHEN BUYING TIMBER CONNECTORS!



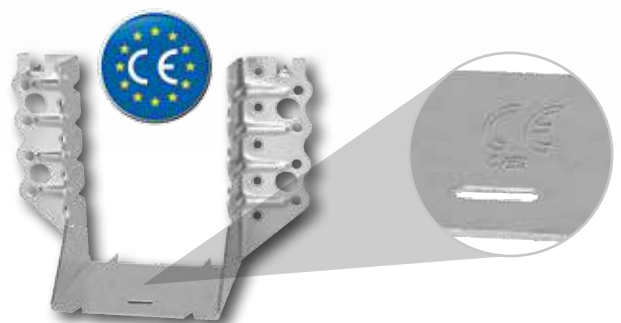
The CE marking on the timber connectors of GH building hardware is your guarantee for safe and tested connectors, which conform to the building regulations for all of Europe and promise you additional building regulation safety.

In our modern production facilities, which are solely located in Germany and are certified to ISO 9001:2008, we can produce very flexibly and to a high production standard.

Almost the entire GH timber connector portfolio has national and international approvals and can be used within the whole EU area.

Your GH advantage:

- High quality standard through certification and monitoring
- Groundbreaking innovations (TOP Line)
- Ecological, resource-efficient and economical (Green Line)
- Approved products for your safety
- Technical hotline
- CE marking
- Product training for trade and building trades
- ISO 9001:2008 certified production facilities in Germany
- Flexible production "Made in Germany"



TENSION TIE HT2



European patent
EP 2 642 035



GH HT tension tie, 2-piece

Preassembly during wall production

The fishplates are pre-installed during production of the walls and the wall is completely closed.

For flush installation of the wall sheathing, we recommend a 3.0 mm deep routing in the wall plate.

Final installation on the construction site

The base angle connector is mounted flush on the floor slab on the construction site. Unevenness in the floor slab of up to 30 mm is quickly and easily adjusted for by the serrations and the connector is fixed using a nut M10.

Fishplate installation options

Left-hand or right-hand type

The fishplate is mounted on the left or right-hand side of the post using GH connector nails or GH screws.

Only one routing of 3.0 mm in the wall plate is recommended to ensure absolute wind-tightness.

Straight type

The fishplate is mounted on the front of the post.

A recess of at least 5.0 mm is recommended in the post + wall plate or in the OSB board.

Alternatively, the fishplate can also be mounted via the intermediate layer in the post.

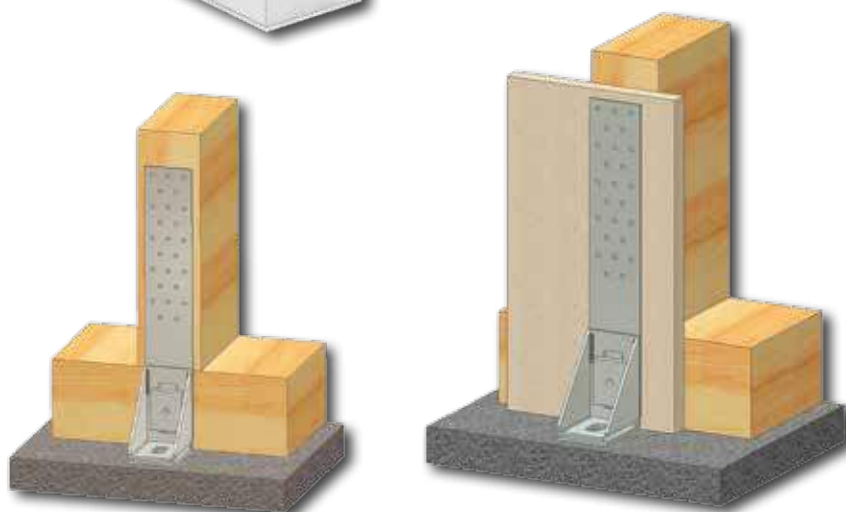
All fishplates and base angle brackets can be combined as required.

Advantages

- Installation of the fishplate during wall production
- Internal walls can be completely sheathed and completed
- No protruding parts during transport
- Fast and easy level compensation on the construction site
- Transfer of high tensile loads
- No making-good work on the construction site

Fixings

- Wall-to-column, also via intermediate layer using GH connector/anchor nails or GH screws ETA-13/0523
- Fixing on the floor with stud anchor, concrete screw



TENSION TIE HT2 STRAIGHT FISHPLATE

Art. No.	Dimensions [mm]							n	Ø 5	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090340	340	x			60	x	3.0	20		ETA-10/0010	032671	0.551		10

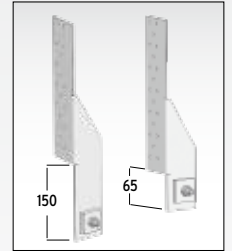
incl. toothed plate, washer, nut M10 tightening torque **max. 18 Nm**



TENSION TIE HT2 OFFSET FISHPLATES, LEFT-HAND SIDE

Art. No.	Dimensions [mm]							n	Ø 5	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090340L	340	x			60/60	x	3.0	20		ETA-10/0010	032688	0.648		10
11090350L	425	x	73	x	60/60	x	3.0	20		ETA-10/0010	032725	0.756		10

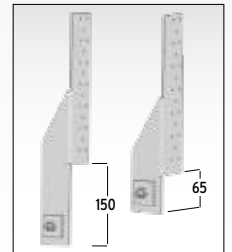
incl. toothed plate, washer, nut M10 tightening torque **max. 18 Nm**



TENSION TIE HT2 OFFSET FISHPLATES, RIGHT-HAND SIDE

Art. No.	Dimensions [mm]							n	Ø 5	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090340R	340	x			60/60	x	3.0	20		ETA-10/0010	032695	0.648		10
11090350R	425	x	73	x	60/60	x	3.0	20		ETA-10/0010	032732	0.756		10

incl. toothed plate, washer, nut M10 tightening torque **max. 18 Nm**



TENSION TIE HT2, BASE ANGLE CONNECTOR WITH WEB - 30 MM HEIGHT-ADJUSTABLE

Art. No.	Dimensions [mm]							n	Ø 17x30	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090341	103	x	73	x	60	x	3.0	1		ETA-10/0010	032701	0.535		10

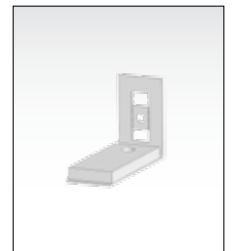
The base angle connector can be combined with all fishplates



TENSION TIE HT2 BASE ANGLE CONNECTOR WITH WASHER - 30 MM HEIGHT-ADJUSTABLE

Art. No.	Dimensions [mm]							n	Ø 17x30	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090343	103	x	144	x	60	x	3.0	1		ETA-10/0010	032749	1.235		10

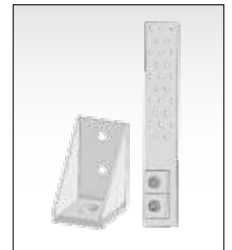
Incl. washer 140 x 60 x 15, base angle connector can be combined with all fishplates



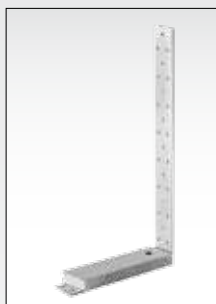
TENSION TIE HT2-SET/NOT HEIGHT-ADJUSTABLE

Art. No.	Dimensions [mm]							n	Ø 5	0769	4019346	Weight	kg	PU
	H	x	L	x	W	x	D							
11090352	340	x			60	x	3.0	20		ETA-10/0010	032763	1.172		10
	103	x	73	x	60	x	3.0	Ø 17x30						

with 2 bolts - incl. washers and nuts M10



TENSION TIE INCLUDING WASHER



Art. No.	Dimensions [mm]							DOWEL Ø	n¹	Washer	0769	EAN	Weight kg	Pallet	PU
	H	x	L	x	W	x	D								
110310	142	x	93	x	60	x	2.0	M12	17	90 x 50 x 12	ETA-10/0010	007037	0.658	1000	20
110305	280	x	122	x	40	x	2.0	M12	11	90 x 50 x 12	ETA-10/0010	007020	0.689	400	10
110405	340	x	182	x	40	x	2.0	M12	23	160 x 50 x 15	ETA-10/0010	017791	1.275	400	10
110410	400	x	123	x	40	x	3.0	M16	23	110 x 60 x 15	ETA-10/0010	017807	1.228	400	10
110415	420	x	222	x	60	x	2.0	M16	38	200 x 60 x 20	ETA-10/0010	017814	2.490	160	10
110420	420	x	102	x	60	x	2.0	M20	38	85 x 60 x 20	ETA-10/0010	017821	1.240	320	10
110425	480	x	123	x	60	x	2.5	M20	38	115 x 70 x 20	ETA-10/0010	017838	1.870	320	10
110430	520	x	222	x	60	x	2.5	M16	18	220 x 60 x 25	ETA-10/0010	017494	3.500	-	4

n¹ = number of holes, timber

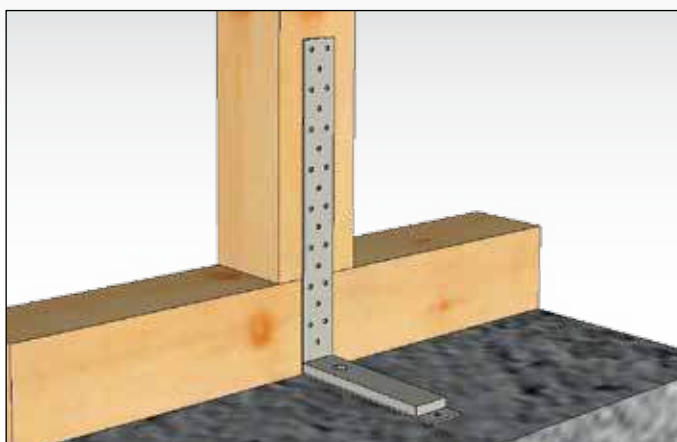
Basepoint anchorings in timber frame construction are quickly and easily solved with this system.

Due to the large baseplates, the loads are transferred into the concrete and this can be verified through structural calculations.

Holes Ø 5.0 mm.

For fixing with GH connector nails (page 89), GH screws (page 90).

Made of hot-dip galvanised steel sheet t = 2.0, 2.5 and 3 mm.



TOP 80 / TOP 120 VARIO CONNECTORS



Art. No.	Dimensions [mm]							n ¹	n ²	EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D	Ø 5	Ø 13.5				
110829	80	x	60	x	55	x	2.0	13	L=21.0	0769	4019346	kg	
										ETA-09/0322	110829	0.115	6000 100
110836	120	x	60	x	55	x	2.0	13	L=21.0	ETA-09/0322	110836	0.150	6000 100

n¹ = Number of holes, timber | n² = Number of holes, concrete

WASHER FOR TOP 80 / TOP 120 VARIO CONNECTORS

Art. No.	Dimensions [mm]					n²	n²		EAN	Weight	Pallet	PU
	L	x	W	x	D	Ø 11.5	Ø 13.5		4019346	kg		
111314	56	x	50	x	10.0	L=22	-	for M10	111 314	0.198	1100	50
111307	56	x	50	x	10.0	-	L=26	for M12	111 307	0.193	1100	50

n² = hole, concrete



The GH TOP VARIO connectors have been especially developed for the following areas of use:

1. Wall plate on concrete (tension + compression)
2. Column on concrete (pressure only).

No disrupting middle gusset during installation.

Full nailing always possible.

High degree of stability due to special beads, positioned so as not to get in the way.

No nail too many – optimum matching of the angle.

No fixing in the edge zone due to optimum hole pattern.

Summarising:

The special connector for concrete joints under tensile loading!

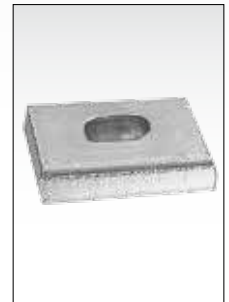
For timber-to-timber connections, see Top 80 / Top 120 (page 35).



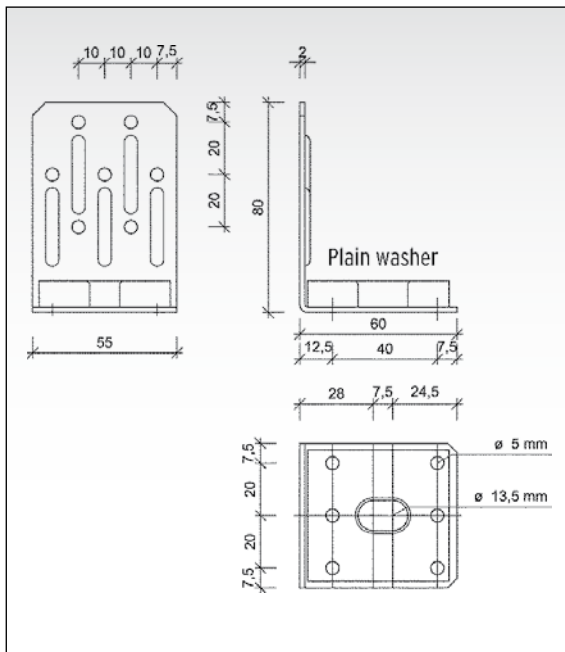
TOP 80 Vario



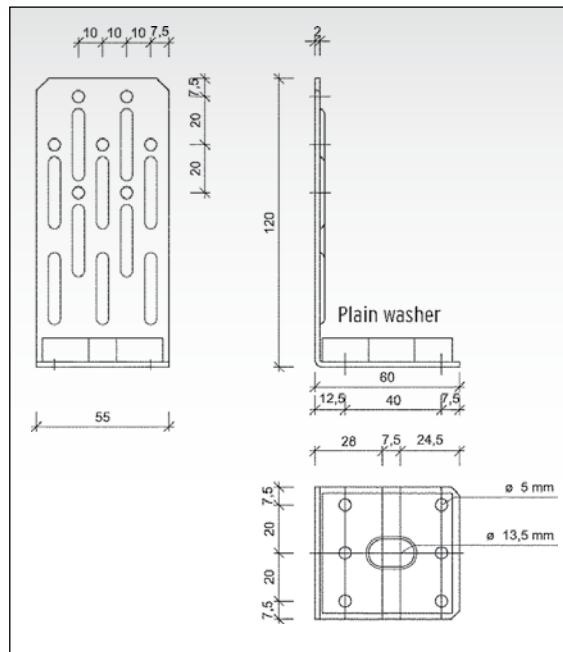
TOP 120 Vario



Washer 56x50x10



TOP 80 Vario



TOP 120 Vario



ANGLE BRACKET TYPE HS



TYPE HS

Art. No.	Dimensions [mm]							n ¹ Ø 5	n ² Ø 11	0769	EAN 4019346	Weight kg	Pallet	PU
	H	x	L	x	W	x	D							
943	90	x	35	x	40	x	3.0	11	1	ETA-13/0900	110256	0.103	5400	100
944	110	x	35	x	40	x	3.0	13	1	ETA-13/0900	110263	0.119	5400	100
945	130	x	35	x	40	x	3.0	15	1	ETA-13/0900	110270	0.136	5100	100

n¹ = number of holes in timber | n² = number of holes in concrete

ANGLE BRACKET TYPE HB

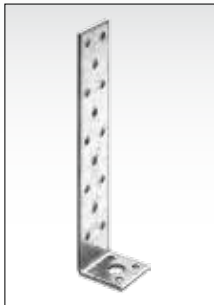


TYPE HB

Art. No.	Dimensions [mm]							n ¹ Ø 5	n ² Ø 13	0769	EAN 4019346	Weight kg	Pallet	PU
	H	x	L	x	W	x	D							
1543	155	x	50	x	40	x	3.0	14	3	ETA-10/0010	110324	0.169	4200	100

n¹ = Number of holes, timber | n² = Number of holes, concrete

ANGLE BRACKET TYPE HSB / FLAT STEEL ANCHOR



TYPE HSB

Art. No.	Dimensions [mm]							n ¹ Ø 5	n ² Ø 14	0769	EAN 4019346	Weight kg	Pallet	PU
	H	x	L	x	W	x	D							
522	200	x	40	x	40	x	2.0	19	1	ETA-10/0010	110706	0.132	4200	100
532	300	x	40	x	40	x	2.0	27	1	ETA-10/0010	110713	0.187	2400	50
542	400	x	40	x	40	x	2.0	34	1	ETA-10/0010	110720	0.242	1800	50
90504	500	x	40	x	40	x	2.0	37	1	ETA-10/0010	135075	0.297	2000	20
90505	600	x	40	x	40	x	2.0	44	1	ETA-10/0010	135082	0.351	2000	20
524	200	x	40	x	40	x	4.0	19	1	ETA-10/0010	110737	0.264	2100	50
534	300	x	40	x	40	x	4.0	27	1	ETA-10/0010	110744	0.373	1600	50
544	400	x	40	x	40	x	4.0	34	1	ETA-10/0010	110751	0.483	900	25
90512	500	x	40	x	40	x	4.0	37	1	ETA-10/0010	135099	0.593	1000	20
90513	600	x	40	x	40	x	4.0	44	1	ETA-10/0010	135006	0.703	1000	20

n¹ = Number of holes, timber | n² = Number of holes, concrete

HSB angle brackets are mainly used to dissipate suction forces.

WASHER FOR ANGLE BRACKET HB AND HSB



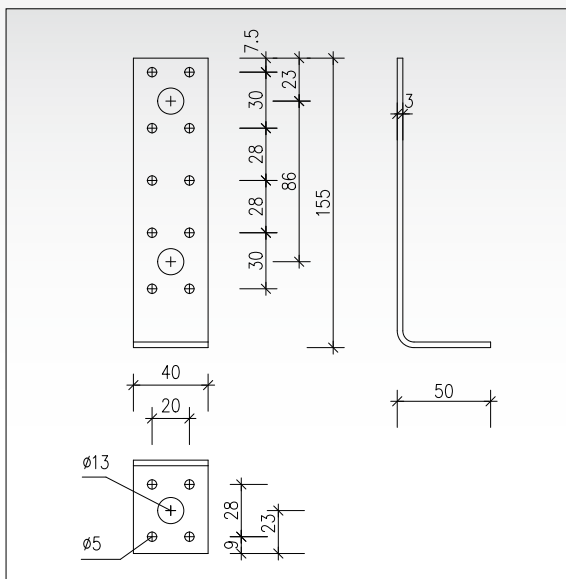
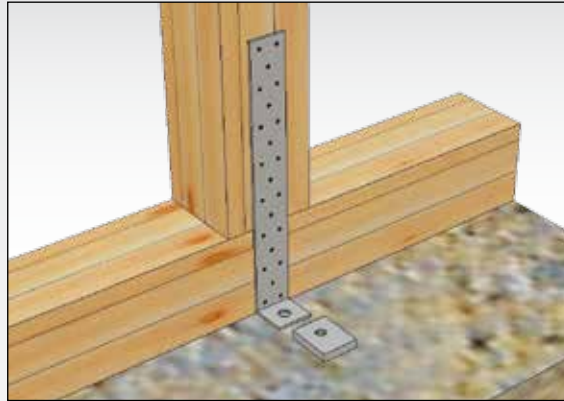
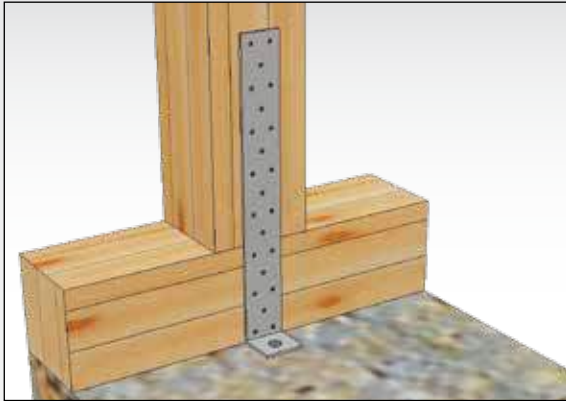
Washer

Art. No.	Dimensions [mm]					n ² Ø 14	EAN 4019346	Weight kg	Pallet	PU
	L	x	W	x	D					
555	40	x	43	x	10.0	1	109991	0.137	5000	50

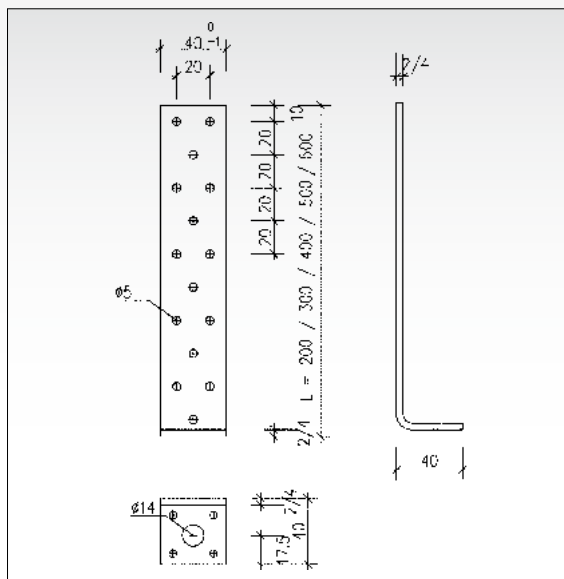
n² = number of holes, concrete

The angle connectors can be used in combination with the washer to absorb higher tensile forces.





HB



HSB

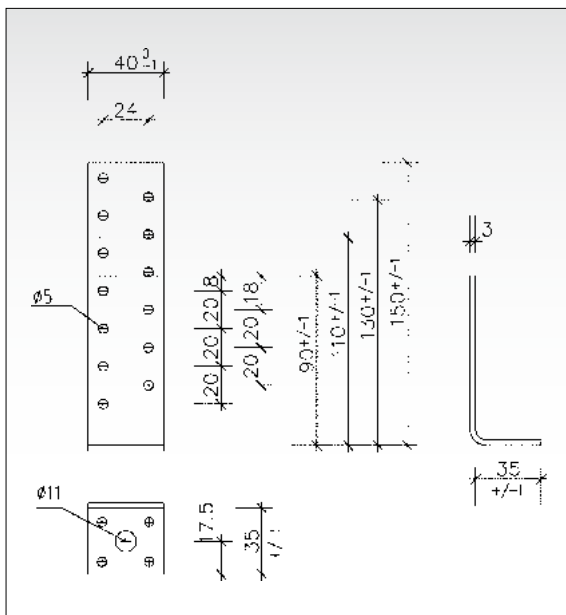
GH HSB angle brackets can also be used at flat steel anchors. The folded part is cast in the concrete.

GH HS angle brackets are used for safe and reliable fixing of timber elements on other construction materials, e.g. concrete or steel. The short leg, together with an M 10 bolt (+ plain washer Ø 30), transfers a suction force into the substructure.

By installing an anchor rail (e.g. Halfen HTA 28/15 channel), subsequent adjustability is achieved and this makes installation significantly easier.

We recommend using 2 angle connectors per joint to prevent twisting of the timber elements. Timber element joint using GH connector nails (page 89) or GH screw (page 90).

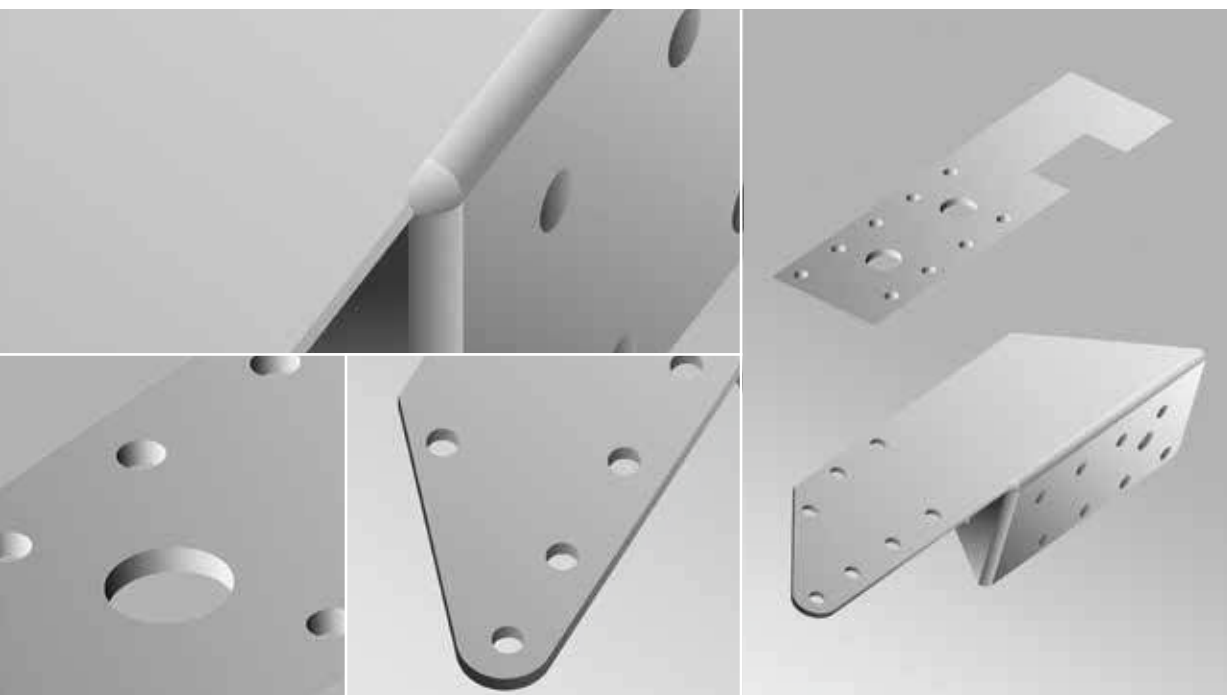
Made of hot-dip galvanised steel sheet.



HS



CONNECTORS (OTHER)



PROFILE-ANCHOR



Art. No.	Dimensions [mm]					n ¹	n ²	Halfen cast-in		EAN	Weight	Pallet	PU
	L	x	W	x	D	Ø 5	Ø 13	channels	0769	4019346	kg		
281	100	x	34	x	3.0	6	1	1	EN14545	165010	0.080	8100	100
286	140	x	34	x	3.0	10	1	1	EN14545	165041	0.115	6000	100
287	160	x	34	x	3.0	10	2	1	EN14545	165058	0.135	6000	100
285	180	x	34	x	3.0	12	2	1	EN14545	165072	0.155	6000	100
282	140	x	34	x	3.0	10	1	2	EN14545	165034	0.115	6000	100
283	160	x	34	x	3.0	10	2	2	EN14545	165027	0.135	6000	100
284	180	x	34	x	3.0	12	2	2	EN14545	165065	0.155	6000	100

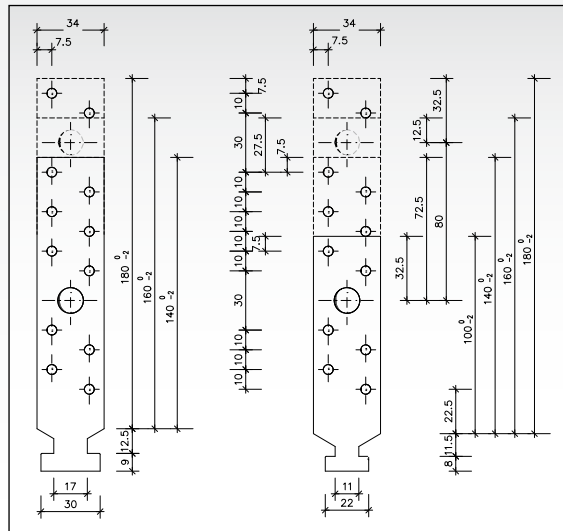
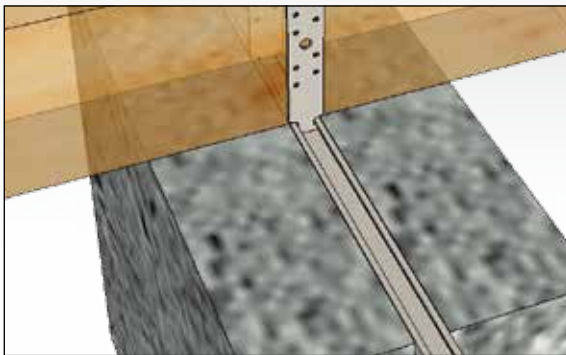
n^1 = Number of holes, timber | n^2 = Number of holes, concrete

1 = for 28/15

2 = for 38/17 and 40/22

GH profile-anchors are intended for fixing timber beams, rafters, purlins, etc. on anchor rails (e.g. Halfen cast-in channels).

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet.



TYPE 2

TYPE 1



T-BEAM ANCHORS

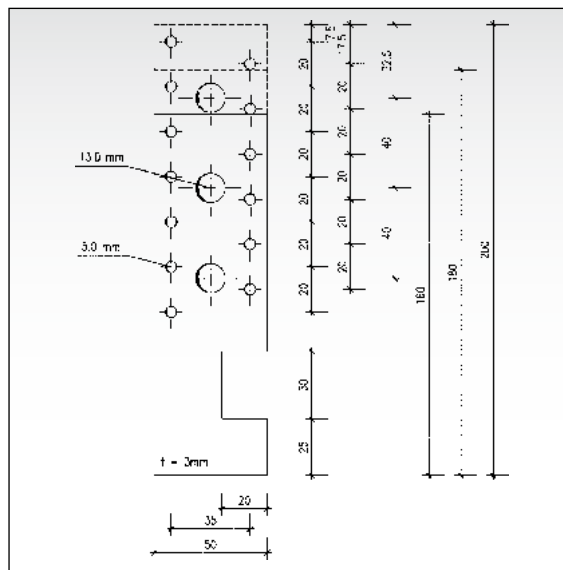
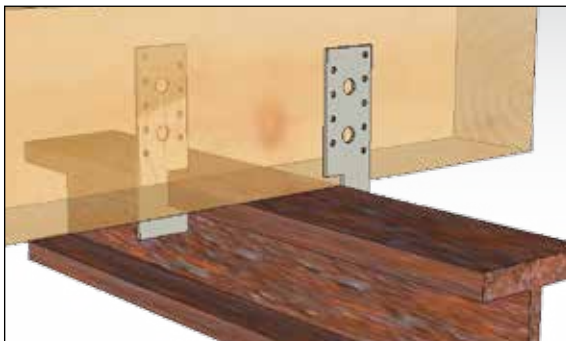


Art. No.	Dimensions [mm]					n¹	n²			EAN	Weight	Pallet	PU
	L	x	W	x	D	Ø 5	Ø 13						
70501	160	x	50	x	3.0	9	2		0769	4019346	kg		
70502	180	x	50	x	3.0	11	3		EN14545	160015	0.178	6000	100
70503	200	x	50	x	3.0	13	3		EN14545	160022	0.202	4000	100
									EN14545	160039	0.226	4000	100

n^1 = Number of holes, timber | n^2 = Number of holes, concrete

GH T-beam anchors are connectors for simple connection on steel girders. The GH T-beam anchors should always be attached on both sides or diagonally, to absorb the forces to be joined uniformly and to ensure secure connection.

For fixing with GH connector nails (page 89), GH screws (page 90).



FLAT CONNECTOR PLATE, LIGHT DUTY

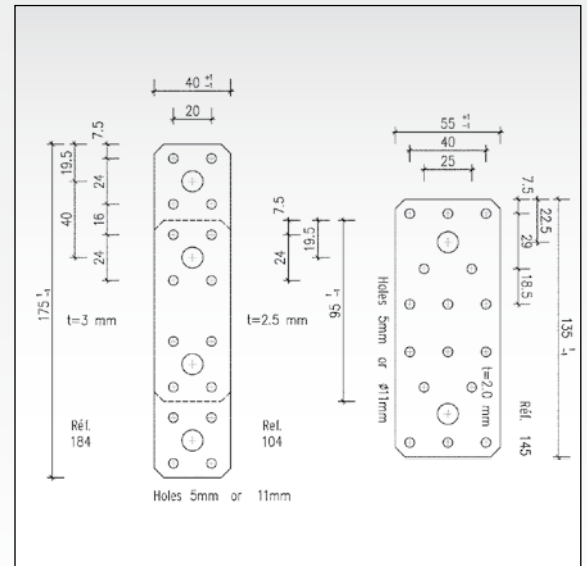


Art. No.	Dimensions [mm]					n ¹ Ø 5	n ² Ø 11	CE	EAN	Weight kg	Pallet	PU
	L	x	W	x	D							
104	95	x	40	x	2.5	8	2	0769	4019346			
184	175	x	40	x	3.0	16	4	EN14545	130025	0.065	12150	150
145	135	x	55	x	2.0	16	2	EN14545	130049	0.144	4000	100
								EN14545	130032	0.102	4200	100

n¹ = Number of holes, timber | n² = Number of holes, concrete

GH flat connectors are simple connectors for fixing narrow timber elements. They are an alternative to the GH nailing strap ties and can also be fixed, for example on concrete, using expanding anchors, chemical anchor studs, etc.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet t = 2.0 mm, 2.5 mm and 3 mm.



FLAT CONNECTOR PLATE, HEAVY DUTY

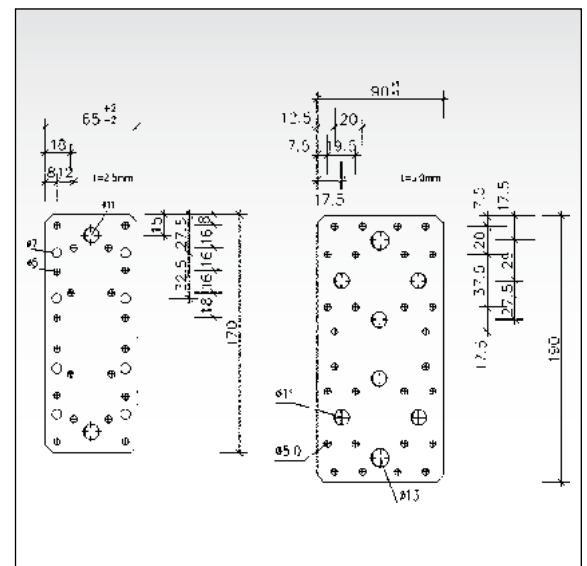


Art. No.	Dimensions [mm]					n ¹ Ø 5	n ¹ Ø 7	n ² Ø 11	n ² Ø 13	CE	EAN	Weight kg	Pallet	PU
	L	x	W	x	D									
1865	170	x	65	x	2.5	20	8	2	-	0769	4019346	0.190	3500	50
2190	190	x	90	x	3.0	28	-	6	2	EN14545	130117	0.352	2400	50

n¹ = Number of holes, timber | n² = Number of holes, concrete

GH flat connectors, heavy duty are for fixing large areas and for transferring large loads.
They can also be fixed on concrete using expanding anchors, chemical anchor studs, etc.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet t = 2.5 or 3 mm.



UNIVERSAL CONNECTOR

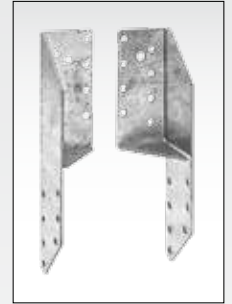
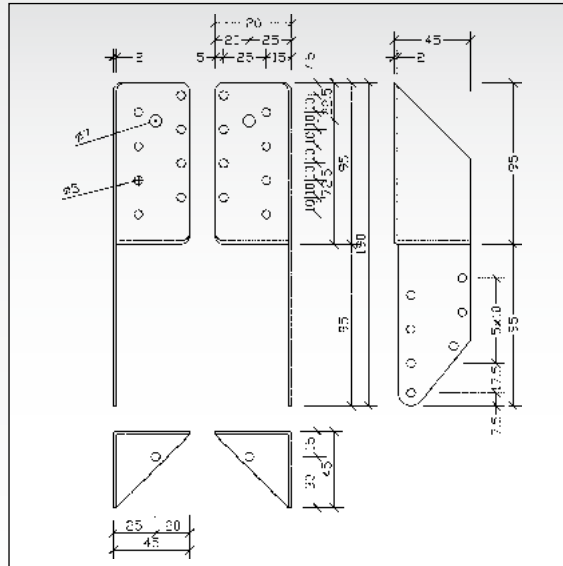
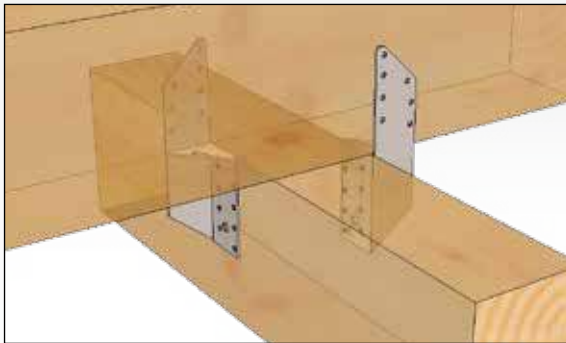
Art. No.	Dimensions [mm]					n ^l		EAN	Weight	Pallet	PU
	L	x	W	x	D	Ø 5	Ø 7				
20601	190	x	45	x	2.0	16	1	4019346 180006	kg 0.170	1000	50

n^l = number of holes, timber

PU = 25 lhs + 25 rhs

GH universal connectors are especially suitable for securing rafter supporting purlins against wind suction forces and for wall rail joints.

For fixing with GH connector nails (page 89), GH screws (page 90).
Made of hot-dip galvanised steel sheet t = 2 mm.



GH PACKAGING



Our GH boxes are very stable and are protected by a special coating.

The box sizes are optimised not only for the packaging units but also for storage on pallets.

We print all relevant information on our labels, such as approvals, article name/description, dimensions, EAN code and images of the article. Through the additional abbreviated marking on the long side of the box, the content details are also visible if the boxes are stored cross-wise.





Type C1

TOOTHED PLATE CONNECTORS, DOUBLE SIDED, MADE OF HOT-DIP GALVANISED STEEL SHEET

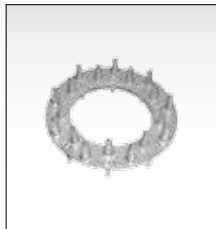
Art. No.	Dimensions [mm]		CE 0769	EAN	Weight	PU
	Outside Ø	Screw Ø				
D48	50	M12	EN 912	039908	1.410	200
D62	62	M12	EN 912	039915	2.900	200
D75	75	M16	EN 912	039922	4.020	100
D95	95	M16	EN 912	039939	8.730	40
D117	117	M20	EN 912	039946	14.680	25



Type C2

TOOTHED PLATE CONNECTORS, SINGLE SIDED, MADE OF HOT-DIP GALVANISED STEEL SHEET

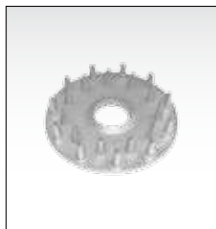
Art. No.	Dimensions [mm]		CE 0769	EAN	Weight	PU
	Outside Ø	Screw Ø				
E48	50	M12	EN 912	039953	1.650	300
E62	62	M12	EN 912	039960	3.110	200
E75	75	M16	EN 912	039977	4.920	100
E95	95	M16	EN 912	039984	7.620	50
E117	117	M20	EN 912	039991	13.230	40



Type C10

GEKA CONNECTORS, DOUBLE SIDED, GALVANISED

Art. No.	Dimensions [mm]		EAN	Weight	PU
	Outside Ø	Screw Ø			
D50V	50	M12	040003	4.410	50
D65V	65	M16	040010	8.630	50
D80V	80	M20	040027	10.650	25
D95V	95	M24	040034	13.800	25
D115V	115	M24	040041	19.630	25



Type C11

GEKA CONNECTORS, SINGLE SIDED, GALVANISED

Art. No.	Dimensions [mm]		EAN	Weight	PU
	Outside Ø	Screw Ø			
E50V	50	M12	040058	4.510	50
E65V	65	M16	040065	8.400	50
E80V	80	M20	040072	12.680	25
E95V	95	M24	040089	16.060	25
E115V	115	M24	040096	26.440	25



Type A1

SPLIT RING CONNECTORS, DOUBLE SIDED, ALUMINIUM

Art. No.	Dimensions [mm]		EAN	Weight	PU
	Outside Ø	Screw Ø			
A65	65	M12	040607	5.560	100
A80	80	M12	040614	8.520	100
A95	95	M12	040621	10.110	50
A126	126	M12	040638	13.310	1
A128	128	M12	040645	24.200	1
A160	160	M16	040652	38.000	1
A190	190	M16	040669	46.570	1



Type B1

DISC CONNECTORS, SINGLE SIDED, ALUMINIUM

Art. No.	Dimensions [mm]		EAN	Weight	PU
	Outside Ø	Screw Ø			
AE65	65	M12	040676	5.600	100
AE80	80	M12	040683	9.200	100
AE95	95	M12	040690	13.700	50
AE128	128	M12	040706	29.900	1
AE160	160	M16	040713	49.320	1
AE190	190	M16	040720	74.520	1

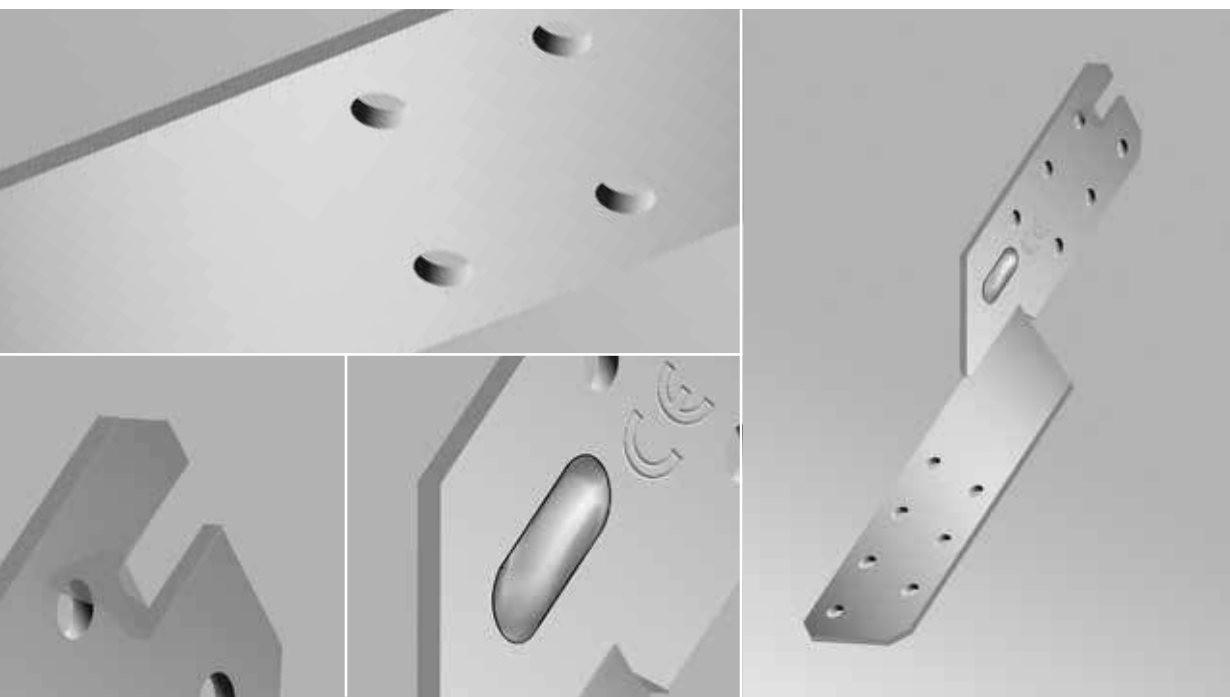


holzverbinder.de



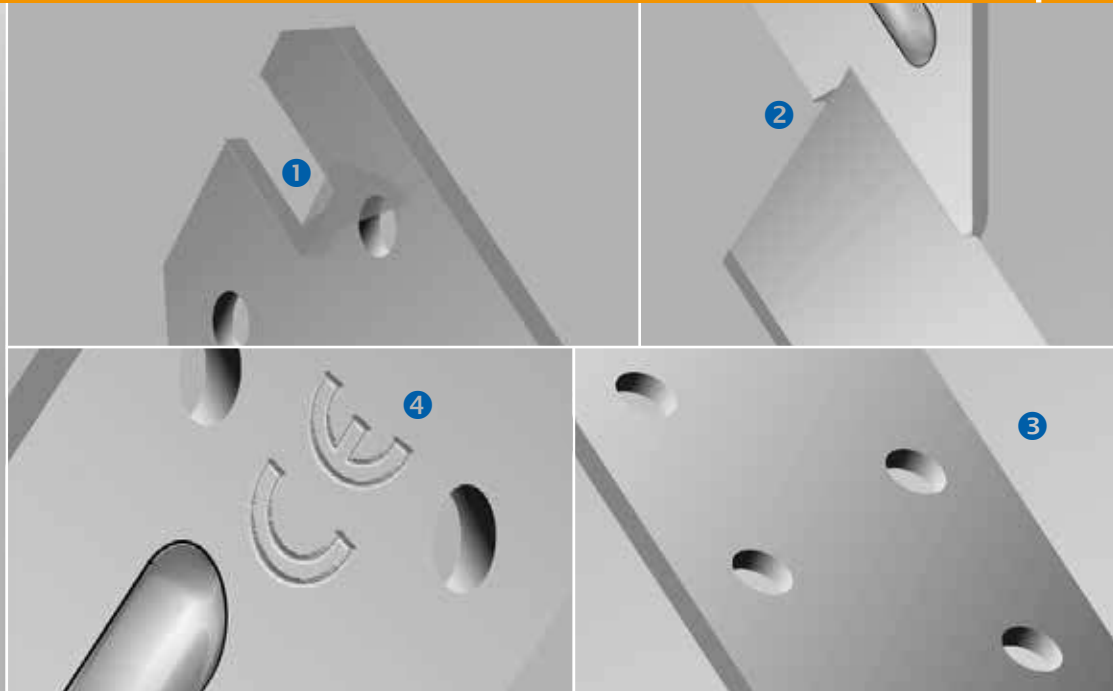


TWIST STRAP / TRUSS CLIPS





- 1 Locator prong
- 2 For any roof pitch
- 3 Optimised nail pattern
- 4 CE approval



TWIST STRAP RL-D WITH LOCATOR PRONG

Art. No.	Dimensions [mm]					n'	Ø 5	CE	EAN	Weight kg	Pallet	PU
	L	x	W	x	D							
100501RLD	170	x	36	x	2.0	9		0769	4019346	0.080	4200	100
100502RLD	210	x	36	x	2.0	13		ETA-10/0007	115244	0.104	4200	100
100503RLD	250	x	36	x	2.0	17		ETA-10/0007	115275	0.124	4200	100

n' = number of holes, timber

TWIST STRAP RL-D 1.5 WITH LOCATOR PRONG

Art. No.	Dimensions [mm]					n'	Ø 5	CE	EAN	Weight kg	Pallet	PU
	L	x	W	x	D							
100501RLD15	170	x	36	x	1.5	9		0769	4019346	0.060	4200	100
100502RLD15	210	x	36	x	1.5	13		ETA-10/0007	026007	0.078	4200	100
100503RLD15	250	x	36	x	1.5	17		ETA-10/0007	026014	0.093	4200	100

n' = number of holes, timber

GH Twist strap

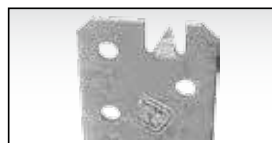
GH has developed a Twist strap, which enables the same products to be used on both sides of the rafter.

The shaping necessary for this is patent protected.

The advantages in use are obvious, as there is no differentiation between the right and left-hand side versions.

The locator prong provided enables fast and exact fixing of the GH Twist strap RL-D usable on both sides without a nail.

Full or partial nailing with GH connector nails (page 89) or GH screws (page 90).



Locator prong



This shaping enables easy use on any rafter inclination.

Instructions for use and load-bearing values are available on our internet site at www.holzverbinder.de

GH Twist straps are particularly suitable for dissipating wind suction forces and for securing the bearing of rafter-supporting purlins on roof trusses.

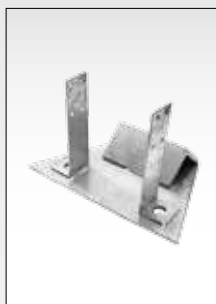
For drawing see page 70



- Can be used on the right and left.
- Can be used with any rafter inclination.
- Can be quickly fixed using locator prong.



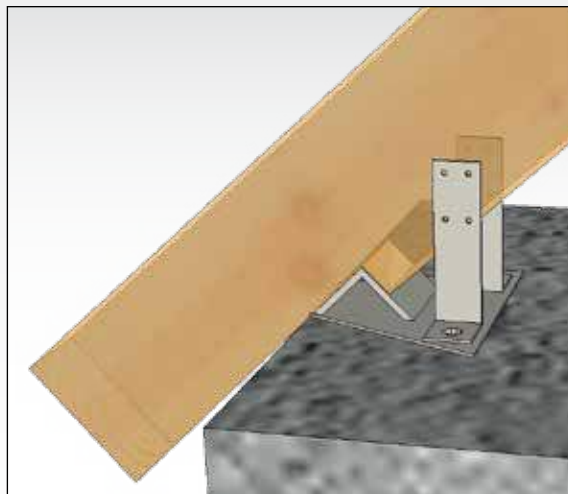
TRUSS clips TYPE B (CONCRETE)



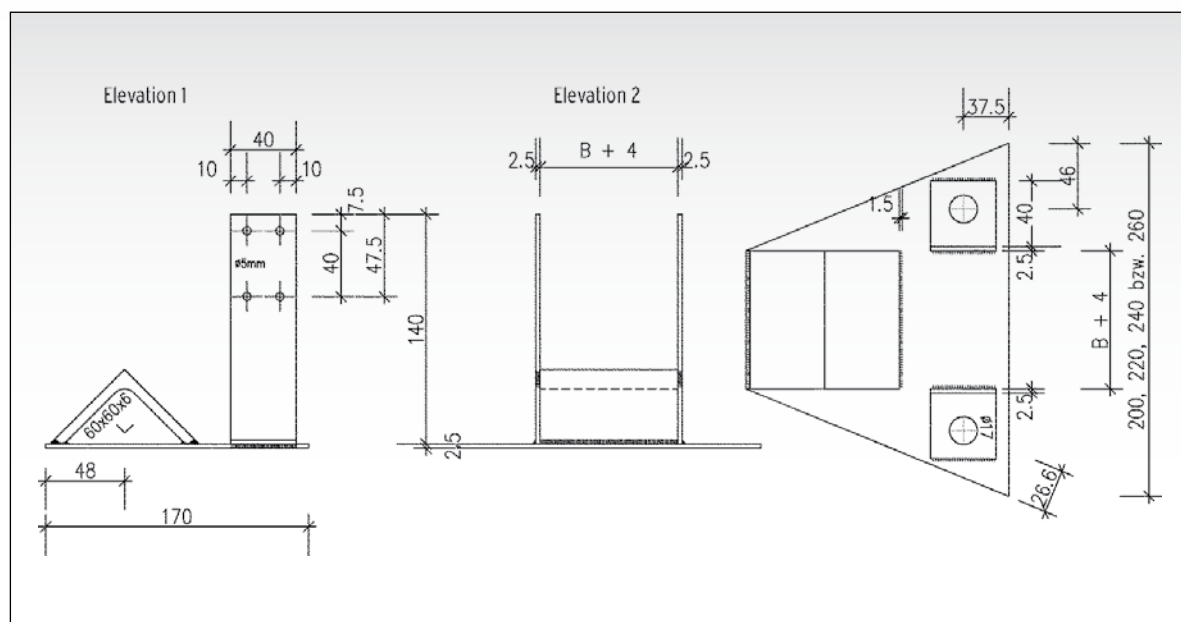
Art. No.	Dimensions [mm]					n ¹ Ø 5	n ² Ø 17		EAN	Weight kg	Pallet	PU
	W	x	L	x	D							
21100	60	x	170	x	2.5	8	2	ETA application submitted	155080	1.020	360	15
21101	80	x	170	x	2.5	8	2	ETA application submitted	155035	1.200	360	15
21102	100	x	170	x	2.5	8	2	ETA application submitted	155042	1.350	360	15
21103	120	x	170	x	2.5	8	2	ETA application submitted	155066	1.500	240	10

n¹ = number of holes timber | n² = number of holes concrete

Hot-dip galvanised surface.



GH truss clips Type B are suitable as the abutment of rafters on concrete. The connection between the concrete and the GH truss clip is made by 2 concrete screws M 16 or expanding anchors, chemical anchor studs, or similar.



For fixing with GH connector nails (page 89), GH screws (page 90).
Made of sheet steel $t = 2.5$ mm and angle section $60 \times 60 \times 6.0$ mm.

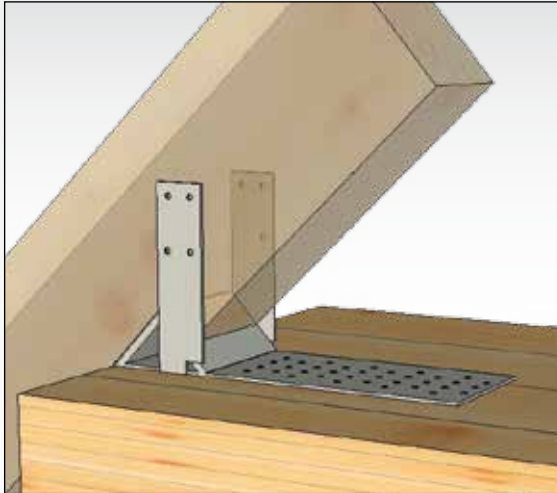


TRUSS clips TYPE H (TIMBER)



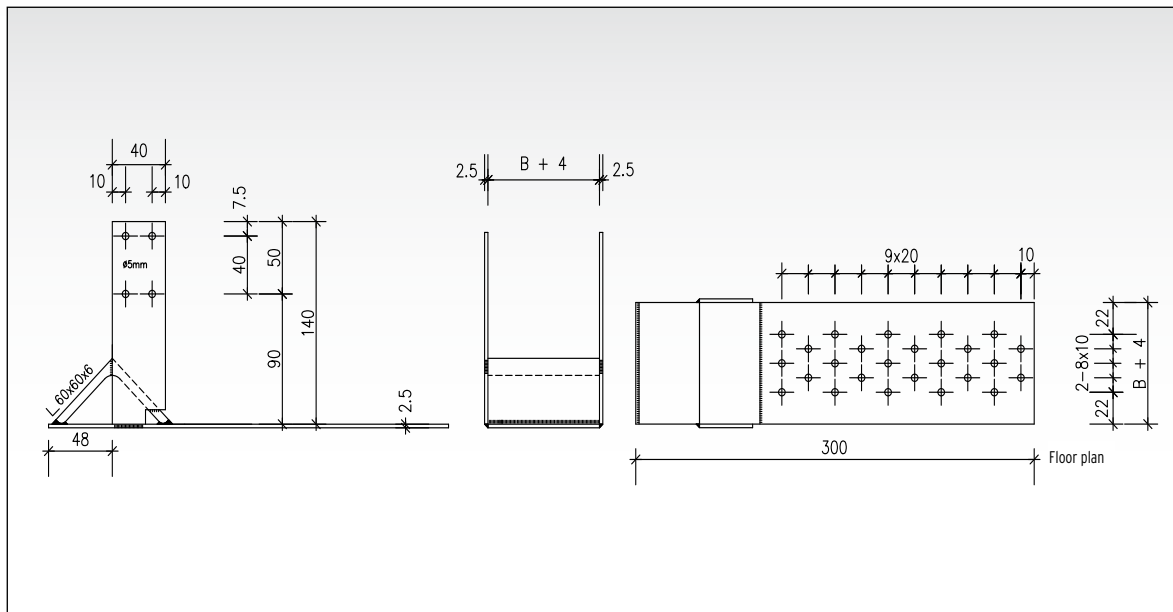
Art. No.	Dimensions [mm]					n¹	ETA application submitted	EAN	Weight kg	Pallet	PU
	W	x	L	x	D						
22100	60	x	300	x	2.5	8	ETA application submitted	155059	1.150	480	20
22101	80	x	300	x	2.5	8	ETA application submitted	155011	1.310	240	10
22102	100	x	300	x	2.5	8	ETA application submitted	155028	1.470	240	10
22103	120	x	300	x	2.5	8	ETA application submitted	155073	1.620	240	10

n¹ = number of holes, timber
Hot-dip galvanised surface.



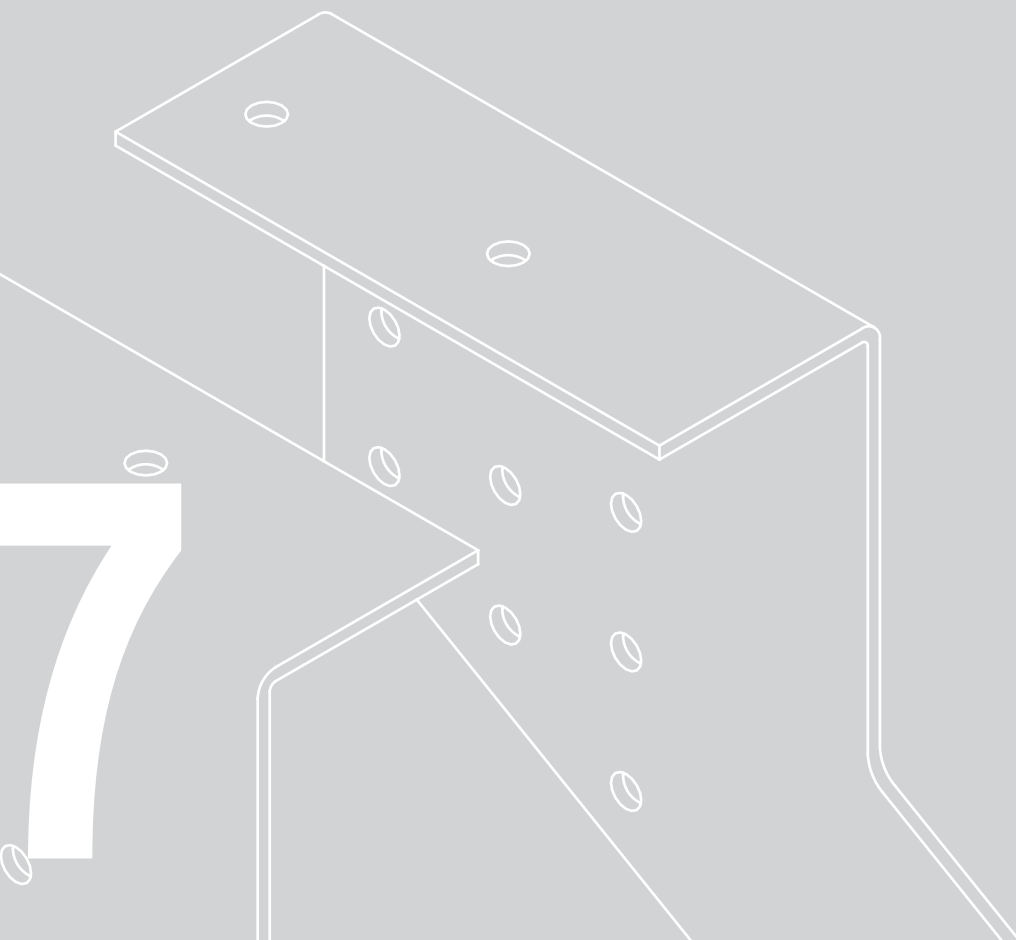
GH truss clip TYPE H (timber) is suitable as the abutment of rafters on joists.

Removes the need for time-consuming offset and the inclined stud or clamping bolts.

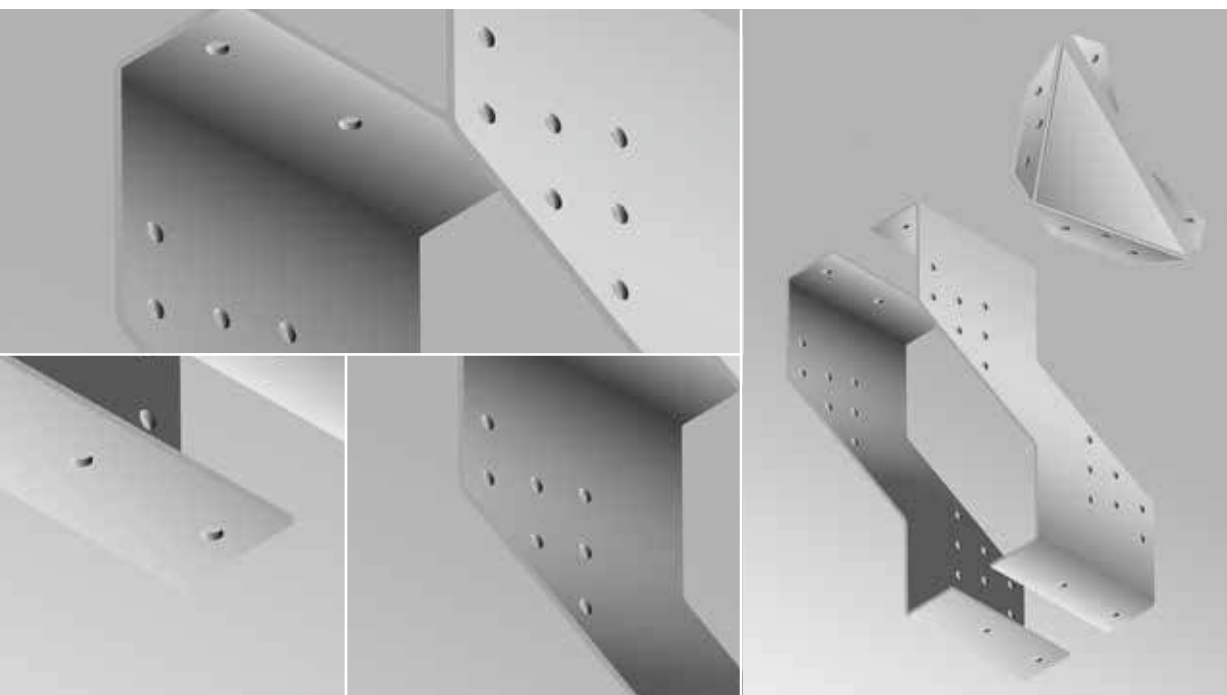


For fixing with GH connector nails (page 89), GH screws (page 90).
Made of sheet steel t = 2.5 mm and angle section 60 x 60 x 6.0 mm.





WIDTH-ADJUSTABLE JOIST HANGERS AND PURLIN CLEATS

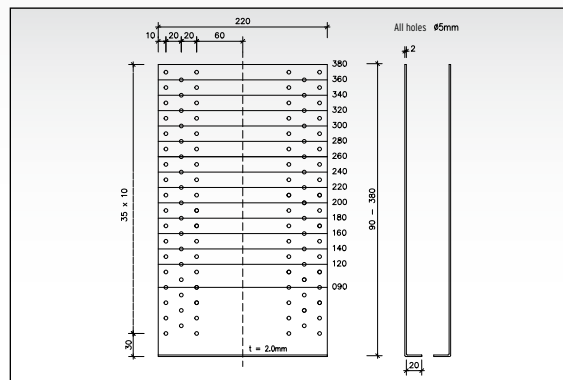
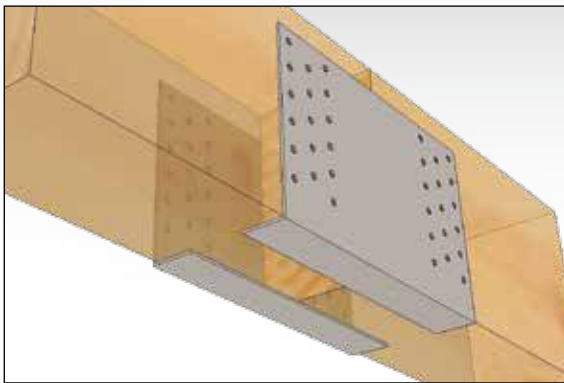
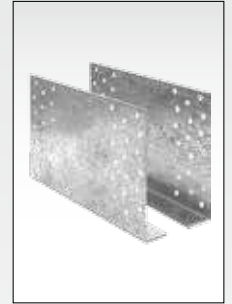


WIDTH ADJUSTABLE JOIST HANGER TYPE 3 (2-PIECE)



ETA application submitted

Art. No.	Dimensions [mm]					n ¹ Ø 5	Total number of holes	EAN 4019346	Weight kg	Pallet	PU Pair
	H	x	W	x	D						
209	90	x	220	x	2.0	2x9	36	177051	0.780	480	20
212	120	x	220	x	2.0	2x15	60	177068	0.995	480	20
214	140	x	220	x	2.0	2x17	68	177006	1.100	480	20
216	160	x	220	x	2.0	2x20	80	177075	1.225	480	20
218	180	x	220	x	2.0	2x23	92	177013	1.350	360	15
220	200	x	220	x	2.0	2x26	108	177020	1.460	360	15
222	220	x	220	x	2.0	2x29	118	177037	1.590	360	15
224	240	x	220	x	2.0	2x32	128	177082	1.770	240	10
226	260	x	220	x	2.0	2x35	140	177044	1.840	240	10
228	280	x	220	x	2.0	2x38	144	177099	1.981	240	10
230	300	x	220	x	2.0	2x41	162	177105	2.120	240	10
232	320	x	220	x	2.0	2x44	176	177112	2.260	240	10
234	340	x	220	x	2.0	2x47	188	177129	2.400	240	10
236	360	x	220	x	2.0	2x50	200	177136	2.540	240	10
238	380	x	220	x	2.0	2x53	212	177143	2.680	240	10

n¹ = number of holes, timber

GH width-adjustable joist hangers, Type 3 are used for simple formation of a joint of hinged ridge purlins in the point of zero moment.

Both timber members are cut straight.

In addition to material costs, high production costs are also saved, as there is no need to make notches or to drill holes.

Due to the large distance of the nails from the joint ($120/2 = 60$ mm),

the nail spacing is also kept parallel with the fibre (loaded edge). Tailor-made versions can be made to your particular wishes.

For fixing with GH connector nails (page 89), GH screws (page 90).

Made of hot-dip galvanised steel sheet $t = 2$ mm.

NOTE: WIDTH-ADJUSTABLE JOIST HANGER TYPE 2 (2-PIECE) NOW ON PAGE 76



WIDTH ADJUSTABLE JOIST HANGER TYPE 2 (2-PIECE)



Art. No.	Dimensions [mm]					n'	EAN	Weight	Pallet	PU
	H	x	W	x	D	Ø 5				
812	120	x	180	x	2.0	4x5	ETA application submitted	0.460	600	25
814	140	x	180	x	2.0	4x6	ETA application submitted	0.520	600	25
816	160	x	180	x	2.0	4x7	ETA application submitted	0.640	600	25
818	180	x	180	x	2.0	4x7	ETA application submitted	0.700	600	25
820	200	x	180	x	2.0	4x8	ETA application submitted	0.760	600	25

n' = number of holes, timber

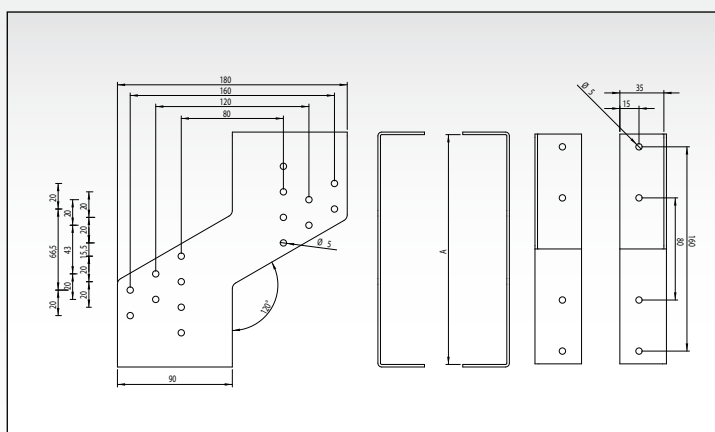


Figure by way of example

GH width-adjustable joist hangers, Type 2 (2-piece) are used for simple formation of a joint of hinged ridge purlins in the point of zero moment.

Both timber members are cut straight.

For fixing with GH connector nails (page 89).

GH screws (page 90).

Made of hot-dip galvanised steel sheet $t = 2$ mm.

PURLIN CLEAT



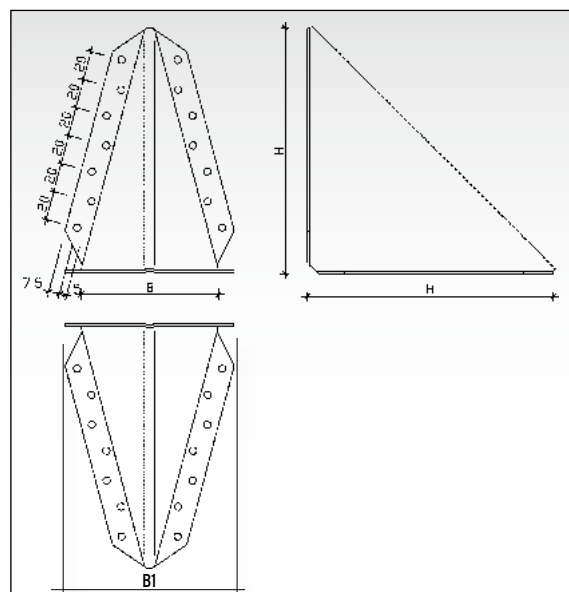
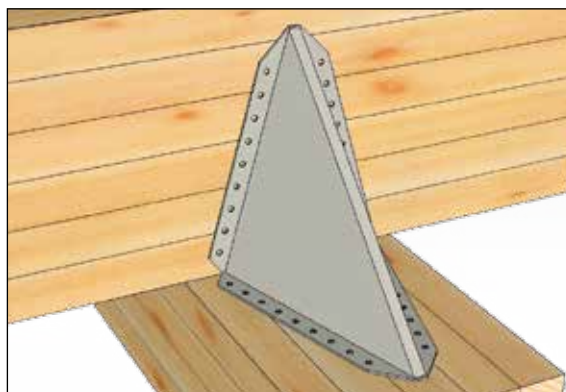
Art. No.	Dimensions [mm]				n'	EAN	Weight	Pallet	PU
	H	x	W	B1	Ø 5				
20501	90	x	45	78	4x4	ETA application submitted	0.180	2040	40
20502	130	x	75	108	4x5	ETA application submitted	0.410	1200	40
20503	170	x	85	122	4x6	ETA application submitted	0.550	840	20
20504	210	x	95	138	4x10	ETA application submitted	1.000	600	20
20505	250	x	150	178	4x10	ETA application submitted	1.500	320	20

n' = number of holes, timber

GH purlin cleats are connects with very good load-bearing capacities and are particularly suitable for fixing rafter-supporting purlins at risk of tilting on steep trusses against lifting and tilting.

For fixing with GH connector nails (page 89), GH screws (page 90).

Made of hot-dip galvanised steel sheet $t = 2$ mm.



Modern high-bay warehouse!

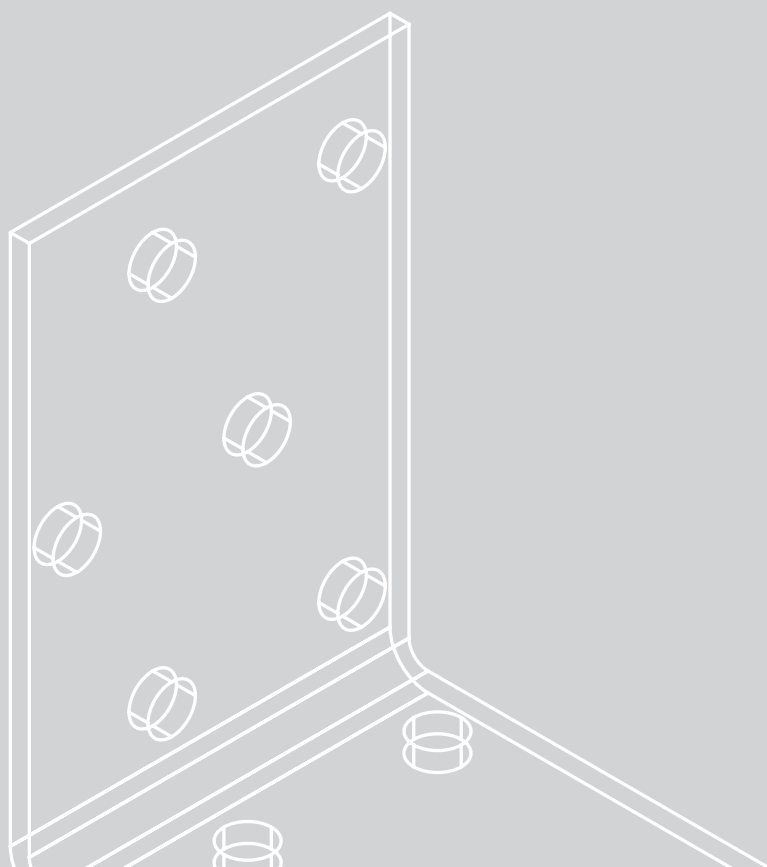
15,000,000 articles per year are produced and placed in storage!

More than 4,500 sqm storage space with 4,800 pallet slots!

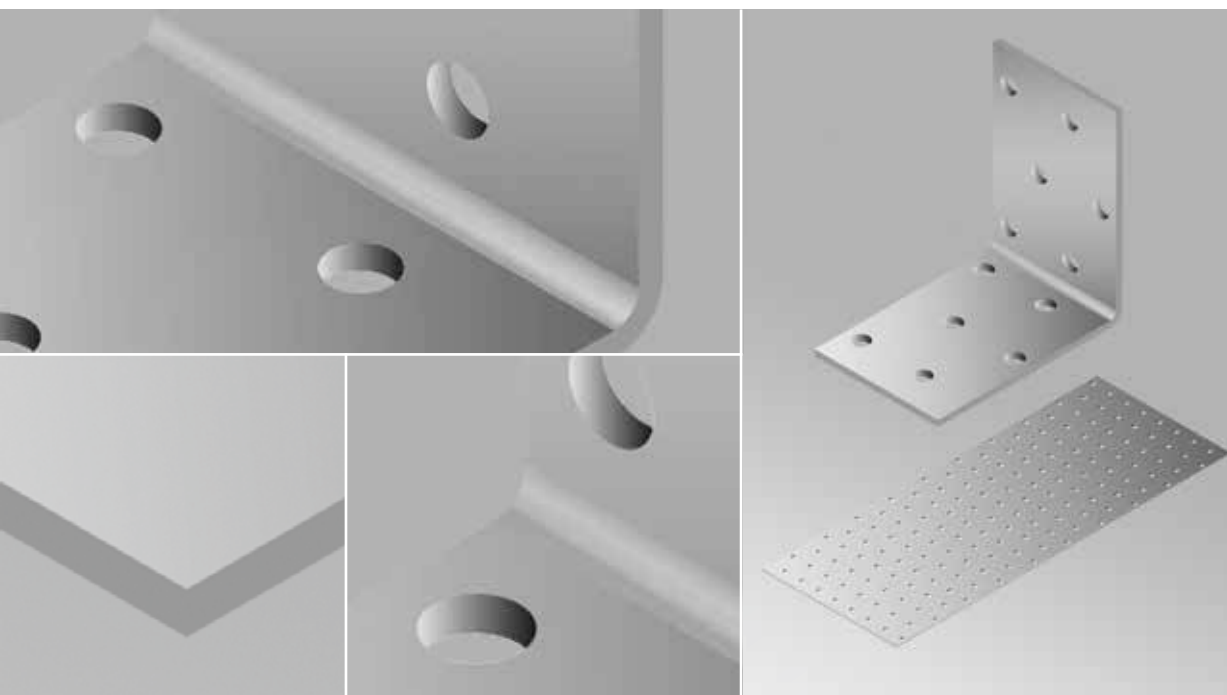
Due to this large stock, we are able to send almost any dimension of our portfolio to our customers on the same day as ordered.



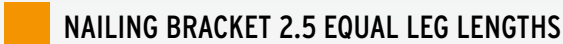
8



NAILING PLATES AND NAILING BRACKETS



n^1 = number of holes, timber



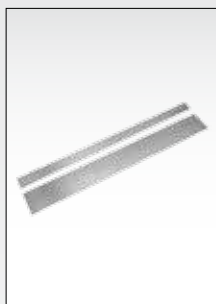
n^1 = number of holes, timber



n^1 = number of holes, timber



NAILING STRAP TIES 2.0



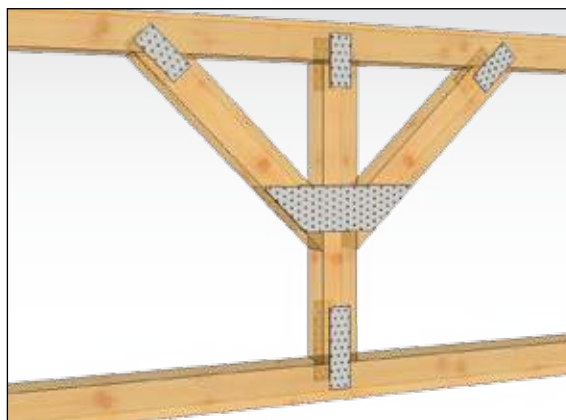
Art. No.	Dimensions [mm]					n'	CE	EAN	Weight	Pallet	PU
	W	x	L	x	D	Ø 5					
101563	40	x	1200	x	2.0	120	0769	4019346	kg	1200	20
101526	60	x	1200	x	2.0	180	EN14545	125007	0.659	780	20
101527	80	x	1200	x	2.0	240	EN14545	125014	0.988	600	20
101528	100	x	1200	x	2.0	300	EN14545	125021	1.318	420	20
101529	120	x	1200	x	2.0	360	EN14545	125038	1.647	360	10
101530	140	x	1200	x	2.0	420	EN14545	125045	1.977	300	10
101531	160	x	1200	x	2.0	480	EN14545	125052	2.306	300	10
101532	180	x	1200	x	2.0	540	EN14545	125069	2.636	200	10
101533	200	x	1200	x	2.0	600	EN14545	125076	2.965	200	5
101534	220	x	1200	x	2.0	660	EN14545	125083	3.295	150	5
101535	240	x	1200	x	2.0	720	EN14545	125090	3.624	150	5
101536	260	x	1200	x	2.0	780	EN14545	125106	3.954	100	5
101537	280	x	1200	x	2.0	840	EN14545	125113	4.283	100	5
101538	300	x	1200	x	2.0	900	EN14545	125120	4.613	100	5
101543	400	x	1200	x	2.0	1200	EN14545	125137	4.942	100	5
							EN14545	125182	6.589	100	5

n' = number of holes, timber

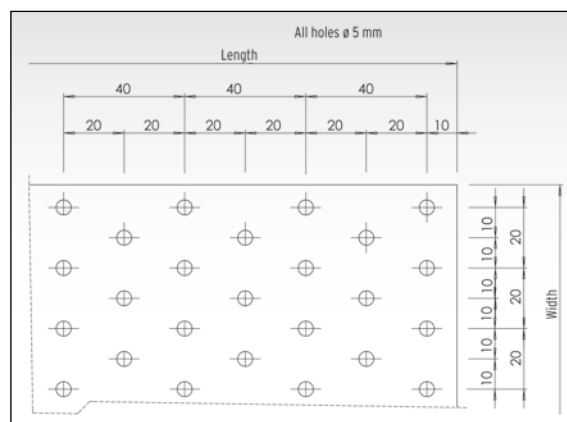
NAILING STRAP TIES 2.5

Art. No.	Dimensions [mm]					n'	CE	EAN	Weight	Pallet	PU
	W	x	L	x	D	Ø 5					
101564	40	x	1200	x	2.5	120	0769	4019346	kg	1200	10
101544	60	x	1200	x	2.5	180	EN14545	125199	0.824	780	10
101545	80	x	1200	x	2.5	240	EN14545	125205	1.236	600	10
101546	100	x	1200	x	2.5	300	EN14545	125212	1.647	420	10
101547	120	x	1200	x	2.5	360	EN14545	125229	2.059	360	10
101548	140	x	1200	x	2.5	420	EN14545	125236	2.471	300	5
101549	160	x	1200	x	2.5	480	EN14545	125243	2.883	300	5
101550	180	x	1200	x	2.5	540	EN14545	125250	3.295	200	5
101551	200	x	1200	x	2.5	600	EN14545	125267	3.707	200	5
101552	220	x	1200	x	2.5	660	EN14545	125274	4.118	150	5
101553	240	x	1200	x	2.5	720	EN14545	125281	4.530	150	5
101554	260	x	1200	x	2.5	780	EN14545	125298	4.942	100	5
101555	280	x	1200	x	2.5	840	EN14545	125304	5.354	100	5
101556	300	x	1200	x	2.5	900	EN14545	125311	5.766	100	5
101561	400	x	1200	x	2.5	1200	EN14545	125328	6.178	100	5
							EN14545	125373	8.237	100	5

n' = number of holes, timber



GH nailing strap ties are simple connectors for fixing narrow timber elements or for large surface connection and high stability.



Further dimensions and thicknesses available on request.

For fixing with GH connector nails (page 89), GH screws (page 90). Made of hot-dip galvanised steel sheet $t = 2$ or 2.5 mm.



Product of special parts!

There's no such thing as can't!

True to this motto, in our production we can produce products for you to your drawings, sketches or samples.

Welding work and special production of building hardware is our daily work.



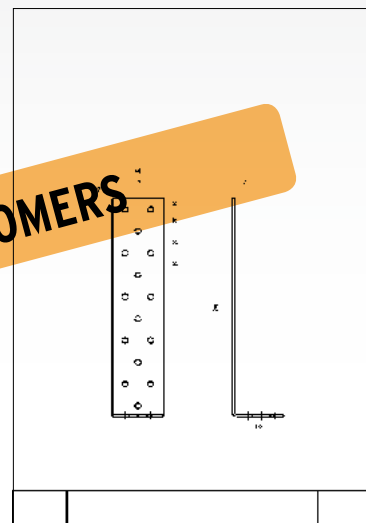
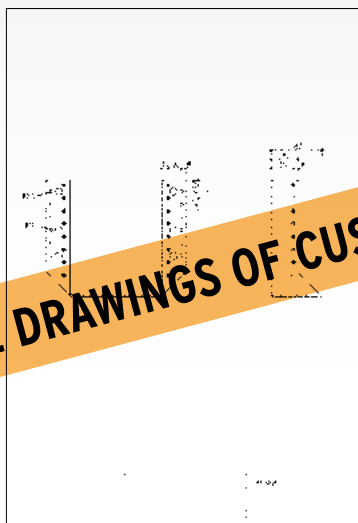
TAILOR-MADE PRODUCTS – CUSTOMER WISH

We produce to customer wishes.

One of our strengths is special production, in which we produce all kinds of different special parts or welded parts to customer's drawings.

Thanks to a special modular system, in which we have all relevant plates in stock, we are generally able to have almost any size of joist hanger, external and internal ready for dispatch as the same day as the order.

We look forward to receiving your enquiry!



EXAMPLE DRAWINGS OF CUSTOMERS

NAILING PLATES 2.0 MM

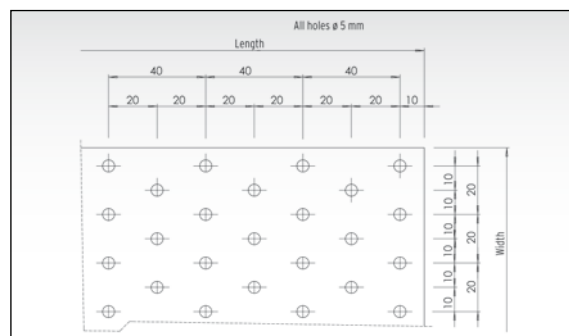
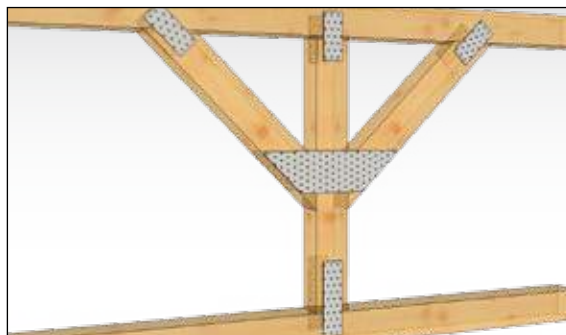


Art. No.	Dimensions [mm]					n¹		CE	EAN	Weight kg	Pallet	PU
	W	x	L	x	D	Ø 5						
101501	40	x	1 2 0	x	2.0	12		0769	4019346			
101502	40	x	1 6 0	x	2.0	16		EN 14545	127018	0.066	12600	200
101562	50	x	2 0 0	x	2.0	25		EN 14545	127100	0.088	7000	100
101503	60	x	1 4 0	x	2.0	21		EN 14545	127117	0.137	7200	150
15102110	60	x	1 6 0	x	2.0	24		EN 14545	127025	0.115	6300	150
101504	60	x	2 0 0	x	2.0	30		EN 14545	127407	0.144	4800	100
101505	60	x	2 4 0	x	2.0	36		EN 14545	127032	0.165	4800	100
15102302	60	x	3 0 0	x	2.0	45		EN 14545	127049	0.198	4800	100
15102136	60	x	3 4 0	x	2.0	48		EN 14545	127414	0.257	1600	50
15102137	60	x	4 2 0	x	2.0	63		EN 14545	127421	0.291	1600	50
15102304	60	x	5 0 0	x	2.0	75		EN 14545	127438	0.360	900	50
101506	80	x	2 0 0	x	2.0	40		EN 14545	127445	0.428	1350	50
101507	80	x	2 4 0	x	2.0	48		EN 14545	127056	0.220	3500	50
101508	80	x	3 0 0	x	2.0	60		EN 14545	127063	0.264	2400	50
101509	100	x	1 4 0	x	2.0	35		EN 14545	127070	0.329	2550	50
101510	100	x	2 0 0	x	2.0	50		EN 14545	127070	0.192	3500	50
101511	100	x	2 4 0	x	2.0	60		EN 14545	127087	0.275	2400	50
101565	100	x	2 6 0	x	2.0	70		EN 14545	127131	0.329	2400	50
101512	100	x	3 0 0	x	2.0	80		EN 14545	127148	0.357	2550	50
101513	100	x	4 0 0	x	2.0	100		EN 14545	127094	0.412	2550	50
101514	100	x	5 0 0	x	2.0	125		EN 14545	127155	0.549	900	20
101515	120	x	2 0 0	x	2.0	60		EN 14545	127162	0.686	900	20
101516	120	x	2 4 0	x	2.0	72		EN 14545	127179	0.329	2400	50
101566	120	x	2 6 0	x	2.0	82		EN 14545	127186	0.395	2400	50
101517	120	x	3 0 0	x	2.0	90		EN 14545	127193	0.428	1700	50
101518	120	x	4 0 0	x	2.0	120		EN 14545	127209	0.494	1700	50
101519	120	x	5 0 0	x	2.0	150		EN 14545	127216	0.659	675	15
15102311	140	x	3 0 0	x	2.0	105		EN 14545	127223	0.824	675	15
101520	140	x	4 0 0	x	2.0	140		EN 14545	127452	0.630	1200	25
101521	140	x	5 0 0	x	2.0	175		EN 14545	127230	0.769	675	15
101522	160	x	4 0 0	x	2.0	160		EN 14545	127247	0.961	675	15
101523	160	x	5 0 0	x	2.0	200		EN 14545	127254	0.879	675	15
101524	180	x	4 0 0	x	2.0	180		EN 14545	127261	1.098	675	15
101525	180	x	5 0 0	x	2.0	225		EN 14545	127278	0.988	675	15
101567	200	x	3 0 0	x	2.0	180		EN 14545	127285	1.236	600	15
								EN 14545	127292	0.824	480	15

NAILING PLATE PANELS 2.0 - 3.0 MM

101600	1200	x	2500	x	2.0			EN 14545	127308	40.855		1
101700	1200	x	2500	x	2.5			EN 14545	127315	51.068		1
101800	1200	x	2500	x	3.0			EN 14545	127322	61.282		1

n¹ = number of holes, timber Made of hot-dip galvanised steel sheet.



There are numerous possible applications for GH nailing plates. Mainly as a node connector in all kinds of different forms for connecting timber constructions. E.g. for strut connections, wind bracing nodes, framework and truss connectors, etc.

Further dimensions and thicknesses available on request. For fixing with GH connector nails (page 89), GH screws (page 90).



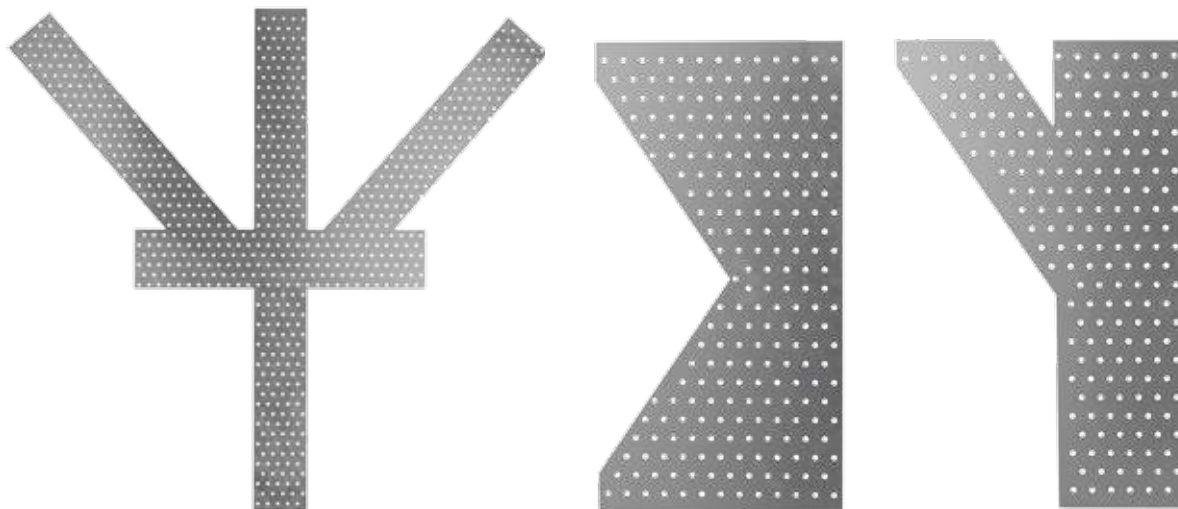
NAILING PLATES 1.5 MM



Art. No.	Dimensions [mm]					n¹	0769	EAN	Weight	Pallet	PU
	W	x	L	x	D						
						Ø 5			kg		
10150115	40	x	120	x	1.5	12	EN 14545	032206	0.049	12600	200
10150215	40	x	160	x	1.5	16	EN 14545	032220	0.066	7000	100
10156215	50	x	200	x	1.5	25	EN 14545	032244	0.103	7200	150
10150315	60	x	140	x	1.5	21	EN 14545	032251	0.086	6300	150
1510211015	60	x	160	x	1.5	24	EN 14545	032268	0.108	4800	100
10150415	60	x	200	x	1.5	30	EN 14545	032275	0.124	4800	100
10150515	60	x	240	x	1.5	36	EN 14545	032282	0.148	4800	100
1510230215	60	x	300	x	1.5	45	EN 14545	032299	0.193	1600	50
1510213615	60	x	340	x	1.5	48	EN 14545	032305	0.218	1600	50
1510213715	60	x	420	x	1.5	63	EN 14545	032312	0.277	900	25
1510265015	60	x	500	x	1.5	75	EN 14545	032329	0.321	1350	50
10150615	80	x	200	x	1.5	40	EN 14545	032336	0.165	3500	50
10150715	80	x	240	x	1.5	48	EN 14545	032343	0.198	2400	50
10150815	80	x	300	x	1.5	60	EN 14545	032350	0.255	2550	50
10150915	100	x	140	x	1.5	35	EN 14545	032367	0.144	3500	50
10151015	100	x	200	x	1.5	50	EN 14545	032374	0.206	2400	50
10151115	100	x	240	x	1.5	60	EN 14545	032381	0.247	2400	50
10156515	100	x	260	x	1.5	70	EN 14545	032398	0.268	2550	50
10151215	100	x	300	x	1.5	80	EN 14545	032404	0.309	2550	50
10151315	100	x	400	x	1.5	100	EN 14545	032411	0.412	900	20
10151415	100	x	500	x	1.5	125	EN 14545	032428	0.514	900	20
10151515	120	x	200	x	1.5	60	EN 14545	032435	0.247	2400	50
10151615	120	x	240	x	1.5	72	EN 14545	032442	0.296	2400	50
10156615	120	x	260	x	1.5	82	EN 14545	032459	0.321	1700	50
10151715	120	x	300	x	1.5	90	EN 14545	032466	0.370	1700	50
10151815	120	x	400	x	1.5	120	EN 14545	032473	0.370	675	15
10151915	120	x	500	x	1.5	150	EN 14545	032480	0.618	675	15
1510231115	140	x	300	x	1.5	105	EN 14545	032497	0.472	1200	25
10152015	140	x	400	x	1.5	140	EN 14545	032503	0.577	675	15
10152115	140	x	500	x	1.5	175	EN 14545	032510	0.721	675	15
10152215	160	x	400	x	1.5	160	EN 14545	032534	0.659	675	15
10152315	160	x	500	x	1.5	200	EN 14545	032558	0.823	675	15
10152415	180	x	400	x	1.5	180	EN 14545	032589	0.741	675	15
10152515	180	x	500	x	1.5	225	EN 14545	032596	0.927	600	15
10156715	200	x	300	x	1.5	180	EN 14545	032602	0.618	480	15

n¹ = number of holes, timber

We produce nailing plates to drawings and customer wishes.

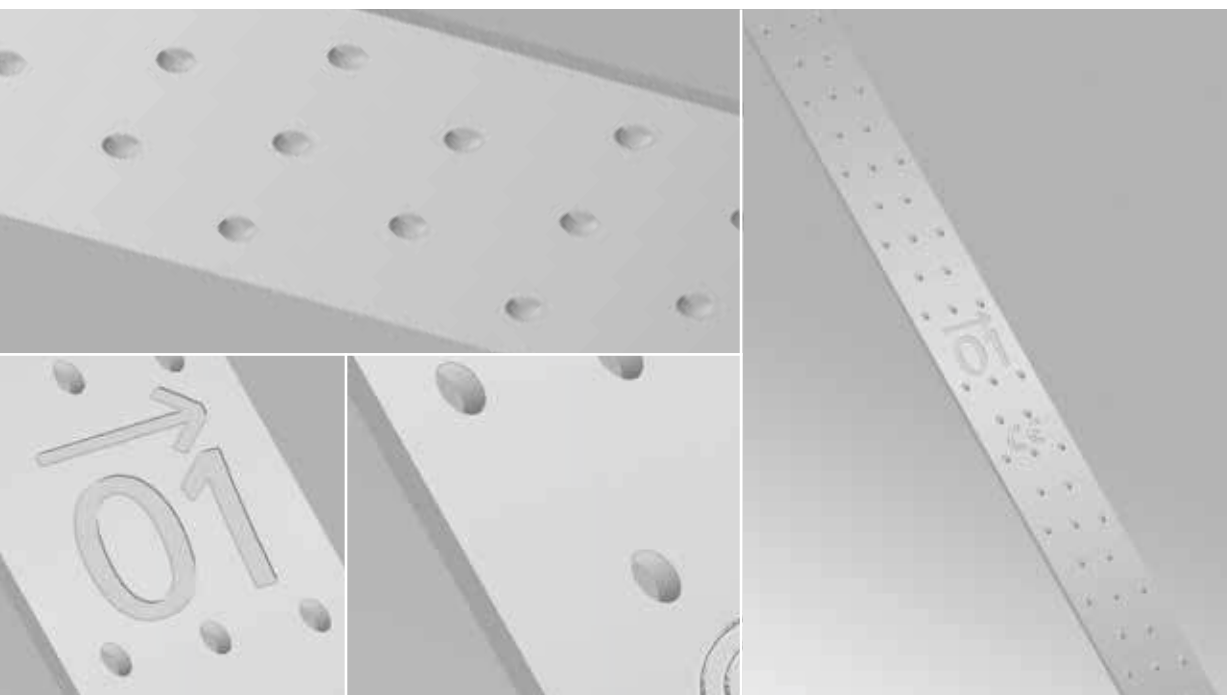


Cut blanks: We cut nailing plates, 1.5 – 3.0 mm thick, to size for you to your dimensions or drawings.



9

WIND BRACING STRIPS / WIND BRACING JOINTS



- 1 Metre marking
- 2 25 % lower weight
- 3 Higher tensile strength
- 4 CE approval
- 5 galvanised edges*

WIND BRACING STRIP TYPE Z WITH WIND BRACING APPROVAL



Art. No.	Dimensions [mm]					EAN	Weight	Pallet	PU
	W	x	L	x	D				
						0769			
4215	40	x	25000	x	1.5	EN 14545	017852	10.300	30
4515	40	x	50000	x	1.5	EN 14545	140055	20.100	30
6515	60	x	50000	x	1.5	EN 14545	140062	32.150	20
8215	80	x	25000	x	1.5	EN 14545	140079	20.100	10
453	40	x	50000	x	3.0	EN 14545	140017	40.500	10

GH wind bracing strip Type Z

- With building control approval
- Metre marking from 1 – 50 metres*
- Installation without measuring tape
- Work facilitated by low weight

- 25 % less weight (freight cost savings)
- Easy unrolling and tensioning
- Suitable for existing unwinders and tensioning systems, page 133.

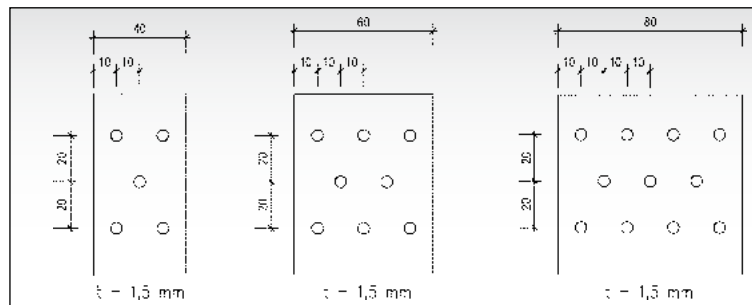
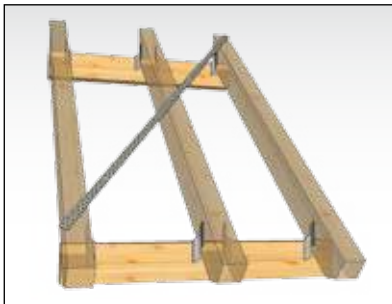
Special lengths on request.



with *galvanised edges, therefore improved protection against rust and reduced risk of cutting injuries.

*Can be supplied with and without galvanised edges.

Please ensure that cut-proof work gloves are worn when installing the wind bracing strips.



The wind bracing strip can be attached directly on the top or underside of the rafters.

The small thickness prevents obstruction for the fixing of the roof battens, gypsum boards, sheathing, etc.

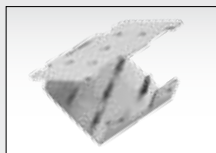
At least 2 GH connector nails 4.0/40 are required at each crossing point with the timber structure. If one wind bracing strip is not sufficient structurally, 2 or more wind bracing strips can be arranged next to each other.

MOUNTING STRIP IN PLASTIC BOX

Art. No.	Dimensions [mm]					EAN	Weight	Pallet	PU
	W	x	L	x	D				
1101275	12	x	10000	x	0.750	046500	0.674	360	5
1101775	17	x	10000	x	0.750	046517	0.942	360	5
1102575	25	x	10000	x	0.750	046524	1.371	360	5



CLIP-FIX CONNECTOR TYPE 40 / TYPE 60

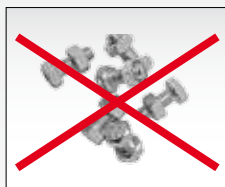


Art. No.	Dimensions [mm]								EAN	PU
	W	x	H	x	L	x	D	0769	4019346	
Type 40										
1109540	58	x	20	x	80	x	2.0	ETA-15/0018	048009	20
Type 60										
1109560	76	x	20	x	78	x	2.0	ETA-15/0018	143506	20

Type 40 for wind bracing strip 40 x 1.5/2.0 and Type 60 for wind bracing strip 60 x 1.5/2.0.

For simple and cost-effective extension of wind bracing strip and for wind bracing joints as an alternative to time-intensive screwing.

Installation: Insert both ends of the wind bracing strip on top of each other in the Clip-Fix connector and press together the top plate until it latches into position.



No screws are required for the installation!



Open

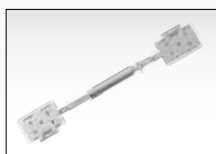


Insert the wind bracing strip



click and finished

CLIP-FIX TENSIONER TYPE 40 / TYPE 60



Art. No.	Dimensions [mm]								0769	EAN	PU
	W	x	H	Thread	L	x	D				
Type 40											
1109541	58	x	20	M 12	350 to 410	x	2.0	ETA-15/0018	048016	10	
Type 60											
1109561	76	x	20	M 16	334 to 404	x	2.0	ETA-15/0018	143513	10	

Type 40 for wind bracing strip 40 x 1.5/2.0 and Type 60 for wind bracing strip 60 x 1.5/2.0.

For tensioning or retensioning wind bracing strip 40 x 1.5/2.0 or 60 x 1.5/2.0. Fast and easy installation due to the Clip-Fix system.

The retightening is carried out using open-ended spanners and is fixed using a lock nut.

CLIP-FIX SET TYPE 40 / TYPE 60



Art. No.		Dimensions [mm]							n1	n2	n3		EAN	PU
		W	x	H	x	L	x	D	Ø 5	Ø 5	Ø 13		4019346	Set
Type 40														
1109542	4x connection plates	254	x	181	x	43	x	3.0	9	14	1/2		048023	1
	2x Clip-Fix tensioners M12	76	x	20	x	350 to 410	x	2.0						
	2x Clip-Fix connection	76	x	20	x	140	x	2.0						
Type 60														
1109562	4x connection plates	254	x	181	x	43	x	3.0	9	14	1/2		143537	1
	2x Clip-Fix tensioners M16	76	x	20	x	334 to 404	x	2.0						
	2x Clip-Fix connection	76	x	20	x	150	x	2.0						

Type 40 for wind bracing strip 40 x 1.5/2.0 and Type 60 for wind bracing strip 60 x 1.5/2.0.

The Clip-Fix set for 2 diagonal joints.

The fixing is made using GH connector nails (page 89) or GH screw (page 90).



"Click and Fix"



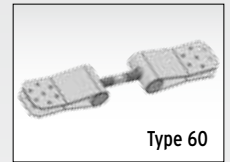
Advantages:

- Fast and toolless installation on the wind bracing strip
- No screws, bolts and nuts
- Large time savings during installation
- No additional installation tools necessary
- C preassembled

WRB TENSIONER TYPE S40 / TYPE S60 / TYPE S80

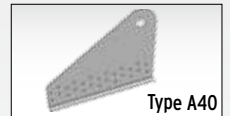
Art. No.	Type	Dimensions [mm]						Thread		EAN	Weight	PU
		W	x	L	x	D	Ø 5	Ø 21				
110914	Type S40	40	x	300 to 350	x	2.0	5+5		M 12	AF 10	0.700	4
110916	Type S60	60	x	300 to 375	x	2.0	7+7		M 16	AF 12	1.325	4
110918	Type S80	80	x	300 to 375	x	2.0	11+10	1	M 16	AF 12	1.779	4

incl. bolts/nuts | Type S80 additionally with hole Ø 21, for connection plates

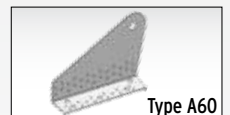


WRB CONNECTION PLATES

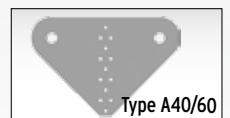
Art. No.	Type	Dimensions [mm]						EAN	Weight	*PU
		W	x	L	x	H	x D			
110931	A 40	198	x	289	x	15.0	x 2.0	1	0.25451	2



Art. No.	Type	Dimensions [mm]						EAN	Weight	*PU
		W	x	L	x	H	x D			
110932	A 60	198	x	289	x	63.0	x 3.0	1	0.25468	2



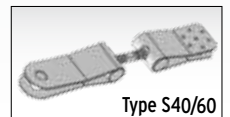
Art. No.	Type	Dimensions [mm]						EAN	Weight	*PU
		W	x	L	x	H	x D			
110933	A 40/60	190	x	290	x	2.0	x 2.0	2	0.25475	10



WRB TENSIONER TYPE S 40/60 FOR CONNECTION PLATES (Wind bracing strip 40 x 1.5/2.0 and 60 x 1.5/2.0)

Art. No.	Type	Dimensions [mm]						EAN	Weight	PU
		W	x	L	x	D	Ø 5			
110921	S40/60	60	x	300 to 350	x	2.0	7	M16	0.25444	4

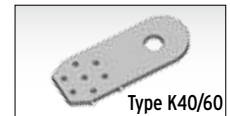
incl. screws/nuts/bolts/spring cotter pins



WRB COMBINATION CONNECTOR K 40/60 FOR CONNECTION PLATES (Wind bracing strip 40 x 1.5/2.0 and 60 x 1.5/2.0)

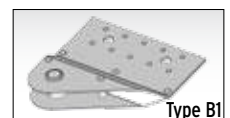
Art. No.	Type	Dimensions [mm]						EAN	Weight	PU
		W	x	L	x	D	Ø 5			
110920	K40/60	60	x	157	x	2.0	7	0.25437	0.364	4

incl. screws/nuts/bolts/spring cotter pins



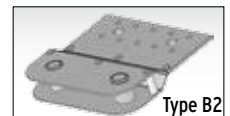
WIND BRACING JOINTS TYPE B1

Art. No.	Type	Dimensions [mm]						EAN	Weight	PU
		W	x	L	x	H	x D			
110934	B 1	216	x	238	x	40.0	x 30.0	2	0.25482	4



WIND BRACING JOINTS TYPE B2

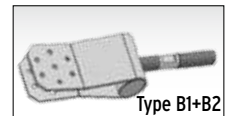
Art. No.	Type	Dimensions [mm]						EAN	Weight	PU
		W	x	L	x	H	x D			
110935	B2	216	x	238	x	40.0	x 30.0	2	0.25499	4



The wind bracing serves as a structural construction element in the roof and hall-type building system, to absorb or transfer wind and suction loads. The GH clamping units and GH connection plates are suitable for wind bracing strips with material thicknesses 1.5 / 2.0 and 3.0 mm.

WIND BRACING STRIP JOINT FOR TYPE B1+B2

Art. No.	Type	Tensioning range	Ø 5	M16	Thread, lh/rh	EAN	Weight	PU
110940	B1+B2	75 mm	7			0.26106	0.813	8



THREADED PART JOINT

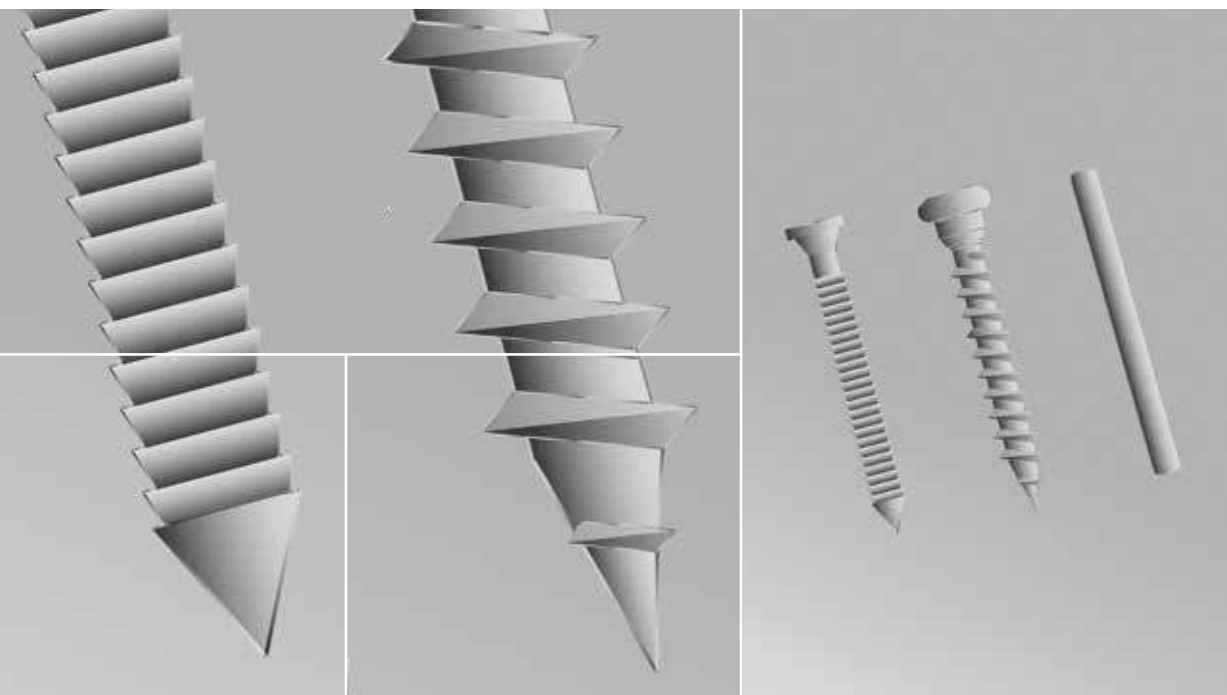
Art. No.	Tensioning range	Connection	EAN	Weight	PU
110941	75 mm	M16	0.26113	0.550	8

For connections to Type B1 and B2 with threaded rods M16



10

NAILS / SCREWS / DOWELS

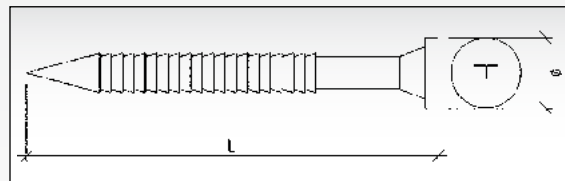


CONNECTOR NAILS

Art. No.	Dimensions [mm]			CE	EAN	Weight kg/1000	Pallet	Outer box PU	PU
	Ø	x	L						
				0769	4019346			PU	
403	4.0	x	35	ETA-13/0523	210093	3.400	120000	3000	250
404	4.0	x	40	ETA-13/0523	210017	4.200	120000	3000	250
405	4.0	x	50	ETA-13/0523	210024	5.200	120000	3000	250
406	4.0	x	60	ETA-13/0523	210031	6.100	120000	3000	250
407	4.0	x	75	ETA-13/0523	210048	7.600	120000	2000	250
408	4.0	x	100	ETA-13/0523	210055	10.200	90000	2000	250
606	6.0	x	60	ETA-13/0523	210062	14.500	50000	1000	250
608	6.0	x	80	ETA-13/0523	210079	19.000	40000	1000	250
601	6.0	x	100	ETA-13/0523	210086	23.000	40000	1000	250

GH connector nails are used for fixing GH timber connectors, in timber construction, engineering timber construction.

- Increased structural values due to ETA approval



GH screws for fixing timber connectors can be found on page 90.

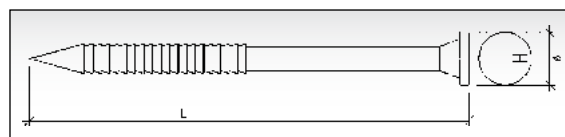
- Approval for fixing in "Baubuche" laminated veneer timber



PURLIN NAILS

Art. No.	Dimensions [mm]			CE	EAN	Weight kg/100	Pallet	PU
	Ø	x	L					
				Standard	0769	4019346		
39600080	6.0	x	80	DIN 1052	EN14592	230008	1.900	20000 250
39600110	6.0	x	110	DIN 1052	EN14592	230015	2.600	20000 250
39600150	6.0	x	150	DIN 1052	EN14592	230022	3.520	10000 250
39600180	6.0	x	180	DIN 1052	EN14592	230039	4.200	10000 100
39600210	6.0	x	210	DIN 1052	EN14592	230046	4.900	10000 100
39600230	6.0	x	230	DIN 1052	EN14592	230053	5.300	10000 100
39600260	6.0	x	260	DIN 1052	EN14592	230060	6.000	10000 100
39600280	6.0	x	280	DIN 1052	EN14592	230077	6.500	10000 100
39600300	6.0	x	300	DIN 1052	EN14592	230084	6.900	10000 100
39600330	6.0	x	330	DIN 1052	EN14592	230091	7.600	10000 100
39600360	6.0	x	360	DIN 1052	EN14592	230107	8.200	10000 100

GH rafter nails made of wire rod to DIN 17140 (80 to 150 mm long) and made of quenched and tempered steel 1.0501 (180 to 330 mm long). The nail shank has barbed profiling. This profiling enables large allowable loading in the shank direction (pulling out).



With classification certificate in load-bearing class III



GH TIMBER CONNECTOR SCREW

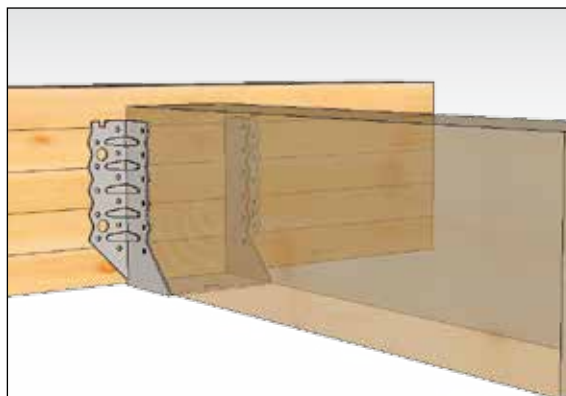
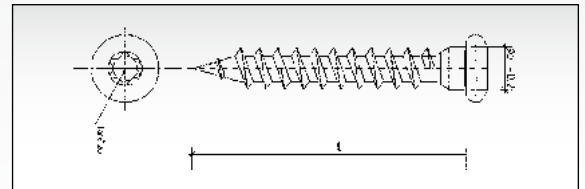
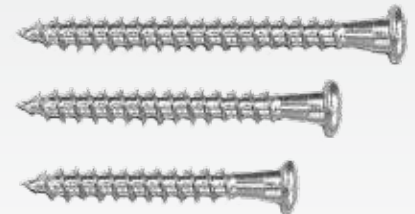


Art. No.	Dimensions [mm]			Drive		EAN	Weight	Pallet	PU
TX T20	Ø	x	L			0769	4019346	kg/100	
505025	5.0	x	25	TX 20	ETA-13/0523	400050	0.231	145000	500
505035	5.0	x	35	TX 20	ETA-13/0523	400005	0.323	145000	500
505040	5.0	x	40	TX 20	ETA-13/0523	400012	0.356	145000	500
505050	5.0	x	50	TX 20	ETA-13/0523	400029	0.427	72000	200
505060	5.0	x	60	TX 20	ETA-13/0523	400036	0.480	58000	200
505070	5.0	x	70	TX 20	ETA-13/0523	400043	0.554	58000	200

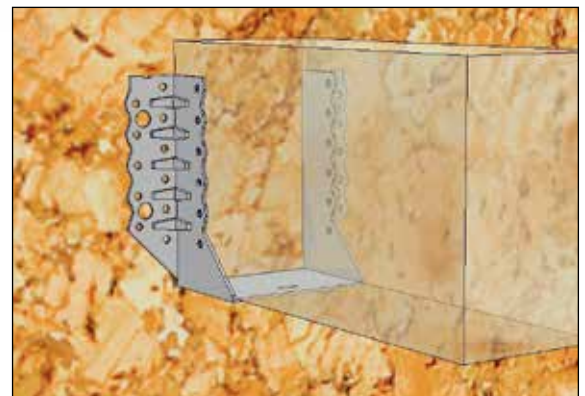
Due to the special geometry, the GH screw with approval can be used for fixing timber connectors as an alternative to the anchor / connector nail. In solid timber and glulam, higher load-bearing values are achieved with the screw than with anchor / connector nails.

In addition, the GH screw is approved with the joist hangers Type Top; Type Top M and Type Top K (from p. 9 to 15) for installation on:

- "Baubuche" laminated veneer timber - predrilled
- OSB boards Type OSB/3 and OSB/4, minimum thickness 12.0 mm to EN 13986 (EN 300⁶) and DIN V 20000-1 or according to approval
- "Kerto" laminated veneer timber according to approval Z-9.1-100
- Hard fibreboards, minimum thickness 8.0 mm to EN 13986 (EN 622-2⁴) and DIN V 20000-1 or according to approval
- Synthetic resin bonded particleboards, minimum thickness 12.0 mm to EN 13986 (EN 312⁵) and DIN V 20000-1 or according to approval



Higher load-bearing capacities than with connector nails



Fixing on wood-based panels





DOWEL Ø 8.0 MM TO CE EN 14592

DOWEL Ø 10.0 MM TO CE EN 14592

Art. No.	Dimensions [mm]			EAN	Weight kg/100	PU
	Ø	x	L			
08040	8	x	40	038505	1.560	250
08050	8	x	50	216385	2.000	100
08060	8	x	60	216392	2.340	100
08070	8	x	70	038529	2.730	100
08080	8	x	80	216248	3.120	100
08090	8	x	90	216255	3.510	100
08100	8	x	100	216262	3.900	100
08110	8	x	110	216422	4.250	100
08120	8	x	120	216279	4.680	100
08130	8	x	130	216446	5.100	100
08140	8	x	140	216286	5.460	100
08150	8	x	150	216453	5.900	100
08160	8	x	160	216460	6.200	100
08170	8	x	170	216477	6.600	100
08180	8	x	180	216484	7.000	100
08190	8	x	190	038635	7.410	100
08200	8	x	200	216491	7.800	100
081000	8	x	1000	217719	39.000	1

Further dimensions on request.

Also available in hot-dip galvanised, V2A and V4A grade steel.

Art. No.	Dimensions [mm]			EAN	Weight kg/100	PU
	Ø	x	L			
01040	10	x	40	038659	2.480	100
01050	10	x	50	038666	3.100	100
01060	10	x	60	216361	3.720	100
01070	10	x	70	038697	4.340	100
01080	10	x	80	216101	4.960	100
01090	10	x	90	038727	5.580	100
10100	10	x	100	216118	6.200	100
10110	10	x	110	216538	6.800	100
10120	10	x	120	216293	7.440	100
10130	10	x	130	216552	8.100	100
10140	10	x	140	213094	8.680	100
10150	10	x	150	216125	9.300	100
10160	10	x	160	216576	9.920	100
10170	10	x	170	038802	10.540	100
10180	10	x	180	216583	11.160	100
10190	10	x	190	038833	11.780	100
10200	10	x	200	216132	12.400	100
10210	10	x	210	216590	13.000	100
10220	10	x	220	216606	13.600	100
10230	10	x	230	216613	14.300	100
10240	10	x	240	216620	14.900	100
10250	10	x	250	216637	15.500	100
10260	10	x	260	216644	16.100	100
10270	10	x	270	038857	16.740	100
10280	10	x	280	216651	17.300	100
10290	10	x	290	038864	17.900	100
10300	10	x	300	216668	18.600	100
10400	10	x	400	038871	24.800	100
101000	10	x	1000	217726	62.000	1

Further dimensions on request.

Also available in hot-dip galvanised, V2A and V4A grade steel.



All dimensions can also be supplied at short notice
in S 355 galvanised or hot-dip galvanised.





DOWEL Ø 12.0 MM TO CE EN 14592



Art. No.	Dimensions [mm]			EAN	Weight kg/100	PU
	Ø	x	L			
01240	12	x	40	038888	3.560	100
01250	12	x	50	216149	4.500	100
01260	12	x	60	216002	5.340	100
01270	12	x	70	216019	6.230	100
01280	12	x	80	216026	7.120	100
01290	12	x	90	216033	8.010	100
12100	12	x	100	216040	8.900	100
12110	12	x	110	216705	9.790	100
12120	12	x	120	216057	10.680	100
12130	12	x	130	216729	11.570	100
12140	12	x	140	216064	12.460	100
12150	12	x	150	216071	13.350	100
12160	12	x	160	216088	14.240	100
12170	12	x	170	216743	15.100	100
12180	12	x	180	216750	16.020	100
12190	12	x	190	216767	16.900	100
12200	12	x	200	216095	17.800	100
12210	12	x	210	216774	18.700	100
12220	12	x	220	216781	19.600	100
12230	12	x	230	216798	20.500	100
12240	12	x	240	216804	21.360	100
12250	12	x	250	216811	22.300	100
12260	12	x	260	039021	23.100	100
12270	12	x	270	216828	24.000	100
12280	12	x	280	216835	25.000	100
12290	12	x	290	039038	25.800	100
12300	12	x	300	039045	26.700	100
12400	12	x	400	039052	35.600	50
121000	12	x	1000	216699	89.000	1

Further dimensions on request.

Also available in hot-dip galvanised, V2A and V4A grade steel.

All dimensions can also be supplied at short notice in S 355 galvanised or hot-dip galvanised.



DOWEL Ø 16.0 MM TO CE EN 14592

Art. No.	Dimensions [mm]			EAN	Weight kg/100	PU
	Ø	x	L			
16080	16	x	80	216903	12.600	50
16090	16	x	90	216910	14.200	50
16100	16	x	100	216156	15.800	50
16110	16	x	110	216927	17.400	50
16120	16	x	120	216316	19.000	50
16130	16	x	130	216941	20.500	50
16140	16	x	140	216323	22.100	50
16150	16	x	150	216163	23.700	50
16160	16	x	160	216330	25.300	50
16170	16	x	170	216965	26.900	50
16180	16	x	180	216972	28.400	50
16190	16	x	190	216989	30.000	50
16200	16	x	200	216170	31.600	50
16210	16	x	210	216996	33.200	50
16220	16	x	220	217009	34.800	50
16230	16	x	230	217016	36.300	50
16240	16	x	240	039069	37.900	50
16250	16	x	250	217023	39.500	50
16260	16	x	260	217030	41.000	50
16270	16	x	270	039076	42.260	50
16280	16	x	280	217047	44.240	50
16290	16	x	290	039083	45.820	50
16300	16	x	300	216187	47.400	50
16400	16	x	400	216194	63.200	25
161000	16	x	1000	217702	158.000	1

Further dimensions on request.

Also available in hot-dip galvanised, V2A and V4A grade steel.



DOWEL Ø 20.0 MM TO CE EN 14592

Art. No.	Dimensions [mm]			EAN	Weight kg/100	PU
	Ø	x	L			
20100	20	x	100	039090	24.700	50
20110	20	x	110	039106	27.170	50
20120	20	x	120	217078	29.600	50
20130	20	x	130	039113	32.110	50
20140	20	x	140	039120	34.580	50
20150	20	x	150	039137	37.050	50
20160	20	x	160	216347	39.500	50
20170	20	x	170	039144	42.000	50
20180	20	x	180	216354	44.500	50
20190	20	x	190	217085	46.900	50
20200	20	x	200	216200	49.500	50
20210	20	x	210	039151	51.870	50
20220	20	x	220	217092	54.340	50
20230	20	x	230	039168	56.820	50
20240	20	x	240	039175	59.280	50
20250	20	x	250	216217	61.800	50
20260	20	x	260	039182	64.220	50
20270	20	x	270	039199	66.700	50
20280	20	x	280	039205	69.200	50
20290	20	x	290	039212	71.600	50
20300	20	x	300	216224	74.100	50
20400	20	x	400	216231	99.000	25
201000	20	x	1000	217733	247.000	1

Further dimensions on request.

Also available in hot-dip galvanised, V2A and V4A grade steel.



Other products and dimensions in stainless steel A4 (rustproof) available on request.

JOIST HANGERS TYPE O4 COMBINATION

Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	EAN	Weight	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11				
30502KA4	60	x	100	x	2.0	14	8	4x9	220009	0.292	1200	50
30505KA4	80	x	120	x	2.0	18	10	4	220016	0.370	1200	50
30508KA4	100	x	140	x	2.0	22	12	4	220023	0.440	1200	50
30511KA4	120	x	160	x	2.0	26	14	6	220030	0.507	600	25
30514KA4	140	x	180	x	2.0	30	16	6	220047	0.577	600	25



JOIST HANGERS TYPE I O4 COMBINATION

Art. No.	Dimensions [mm]					nH ¹	nN ²	nH ¹	EAN	Weight	Pallet	PU
	W	x	H	x	D	Ø 5	Ø 5	Ø 11				
30502IKA4	60	x	100	x	2.0	8	8	4x9	220504	0.292	1200	50
30505IKA4	80	x	120	x	2.0	18	10	4	220511	0.370	1200	50
30508IKA4	100	x	140	x	2.0	22	12	4	220528	0.440	1200	50
30511IKA4	120	x	160	x	2.0	26	14	6	220535	0.507	600	25
30514IKA4	140	x	180	x	2.0	30	16	6	220542	0.577	600	25



ANGLE BRACKET TYPE 55 / 70

Art. No.	Dimensions [mm]							EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D				
5501SA4	70	x	70	x	55	x	2.0	14	2	4800	100
5502SA4	70	x	70	x	55	x	2.0	16	2	4800	100



ANGLE BRACKET TYPE 65 / 90 S

Art. No.	Dimensions [mm]							EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D				
6503SA4	90	x	90	x	65	x	2.5	20	2	4800	100
6504SA4	90	x	90	x	65	x	2.5	20	5	4800	100



ANGLE BRACKET TYPE 90 / 100 S

Art. No.	Dimensions [mm]							EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D				
9003SA4	100	x	100	x	90	x	2.5	28	2x13	3000	50
9004SA4	100	x	100	x	90	x	2.5	28	2x13	3000	50



ANGLE BRACKET TYPE 40 / 90

Art. No.	Dimensions [mm]							EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D				
994A4	90	x	90	x	40	x	2.0	10	0.091	5100	150



NAILING BRACKET

Art. No.	Dimensions [mm]							EAN	Weight	Pallet	PU
	H	x	L	x	W	x	D				
10500A4	40	x	40	x	40	x	2.0	8	0.046	14000	200
10521A4	50	x	50	x	40	x	2.0	12	0.073	14000	200
10504A4	60	x	60	x	60	x	2.0	18	0.103	7000	100



TWIST STRAP

Art. No.	Dimensions [mm]					EAN	Weight	Pallet	PU
	L	x	W	x	D				
100501A4	170	x	36	x	2.0	20	0.092	8000	100
100502A4	210	x	36	x	2.0	28	0.128	8000	100
100503A4	250	x	36	x	2.0	36	0.165	4500	100



CONNECTOR NAILS

Art. No.	Dimensions [mm]			EAN	Weight	PU
	Ø	x	L			
4044A4	4.0	x	40	221006	4.200	250
4055A4	4.0	x	50	221013	5.200	250
4066A4	4.0	x	60	221020	6.100	250
6066A4	6.0	x	60	221037	14.500	200





"Innovations in Timber Construction"

12



GH timber screw "S"
from page 96



*GH wafer head screw "SK"
from page 98



*GH wafer head countersunk screw "KF"
Stainless steel 1.4006
from page 100

Advantages

- 1 ✓ Extra deep TX drive with entry chamfer
- 2 ✓ Shank cutting flutes for stress-free insertion
- 3 ✓ Cutting flutes at the head
- 4 ✓ Tapered cutting head
- 5 ✓ Notched drill point, no pre-drilling
- 6 ✓ Fast thread
- 7 ✓ Thread up to the tip
- 8 ✓ Special "Gleit-Mot" lubricant coating
- 9 ✓ Deep thread for optimum pull-out values
- 10 ✓ *1 Torx bit per PU
- 11 ✓ CE marking
- 12 ✓ Approval ETA-12/0501
- 13 ✓ Pre-drilling with approval
- 14 ✓ Calculation software
- 15 ✓ Head markings including length data
- 16 ✓ Coating made of trivalent chrome Cr³⁺
Substitute for hexavalent chrome Cr⁶

GH screw packaging

- Stable and coated cartonboard box
- Individual removal by lifting up the flap at the front
- Removal of large quantities: to this end the packaging can be additionally opened at the side



*GH wafer head, countersunk decking screw "KKT" from page 102

*GH fully-threaded screw !WZ! from page 104

*GH double thread screw "DGZ" from page 106



TIMBER SCREW



Extra deep TX drive
with entry chamfer
for easy positioning and secure grip

Special "Gleit-Mot" lubricant coating
for reducing the insertion resistance

Trailing extended shank
cutting flutes
for easy use

Faster thread

Set-back notched drill point
for precise positioning

Use with
countersunk washers possible
to increase the head pull-through values
see page 108

Head markings
including length data

Underhead cutting flutes
for clean head finish

Coating made of trivalent chrome Cr³⁺
Substitute for hexavalent chrome Cr⁶

Deep thread for secure grip
within the boundary area and soft substructure

Thread up to the tip
for good "bite"



S TIMBER SCREWS, GALVANISED



Art. No.	Dimensions [mm]			EAN	PU
TX 20	Ø	x	L	4019346	
92990025	4.0	x	40	517307	500
92990027	4.0	x	45	517314	200
92990029	4.0	x	50	517321	200
92990031	4.0	x	60	517338	200
92990033	4.0	x	70	517345	200
92990035	4.5	x	40	517352	250
92990037	4.5	x	45	517369	250
92990039	4.5	x	50	517376	250
92990041	4.5	x	60	517383	200
92990043	4.5	x	70	517390	200
92990045	4.5	x	80	517406	100

Art. No.	Dimensions [mm]			EAN	PU
TX 25	Ø	x	L	4019346	
92990047	5.0	x	50	518700	200
92990049	5.0	x	60	517437	200
92990051	5.0	x	70	517444	100
92990053	5.0	x	80	517451	100
92990055	5.0	x	90	517468	100
92990057	5.0	x	100	517475	100
92990059	5.0	x	120	517482	100

Art. No.	Dimensions [mm]			EAN	PU
TX 30	Ø	x	L	4019346	
92990061	6.0	x	60	517499	100
92990063	6.0	x	70	517505	100
92990065	6.0	x	80	517512	100
92990067	6.0	x	90	517529	100
92990069	6.0	x	100	517536	100
92990071	6.0	x	120	517543	100
92990073	6.0	x	140	517550	100
92990077	6.0	x	160	517574	100
92990079	6.0	x	180	517581	100
92990081	6.0	x	200	517598	100
92990083	6.0	x	220	517604	100
92990085	6.0	x	240	517611	100
92990087	6.0	x	260	517628	100
92990089	6.0	x	280	517635	100
92990091	6.0	x	300	517642	100

Art. No.	Dimensions [mm]			EAN	PU
TX 40	Ø	x	L	4019346	
92991001	8.0	x	80	517659	100
92991003	8.0	x	100	517666	100
92991005	8.0	x	120	517673	100
92991007	8.0	x	140	517680	100
92991009	8.0	x	160	517697	100
92991011	8.0	x	180	517703	100
92991013	8.0	x	200	517710	100
92991015	8.0	x	220	517727	100
92991017	8.0	x	240	517734	100
92991019	8.0	x	260	517741	100
92991021	8.0	x	280	517758	100
92991023	8.0	x	300	517765	100
92991025	8.0	x	320	517772	100
92991027	8.0	x	340	518717	100
92991029	8.0	x	360	518724	100
92991031	8.0	x	380	517802	100
92991033	8.0	x	400	517819	100

Art. No.	Dimensions [mm]			EAN	PU
TX 40	Ø	x	L	4019346	
92991205	10.0	x	120	517864	50
92991207	10.0	x	140	517871	50
92991209	10.0	x	160	517888	50
92991211	10.0	x	180	517895	50
92991213	10.0	x	200	517901	50
92991215	10.0	x	220	517918	50
92991217	10.0	x	240	517925	50
92991219	10.0	x	260	517932	50
92991221	10.0	x	280	517949	50
92991223	10.0	x	300	517956	50
92991225	10.0	x	320	517963	50
92991227	10.0	x	340	517970	50
92991229	10.0	x	360	517987	50
92991231	10.0	x	380	517994	50
92991233	10.0	x	400	518588	50



For advantages, see page 94 – 95



GH SK

"Innovations in Timber Construction"



WWW.HOLZBAUSCHRAUBEN.DE

WAFER HEAD SCREW



Extra deep TX drive
with entry chamfer
for easy positioning

Wafer head
for high pull-through values

Trailing extended shank
cutting flutes
for easy use

Special "Gleit-Mot" lubricant coating
for reducing the
insertion resistance

Faster thread

Set-back notched drill point
for precise positioning

Head markings
including length data

Clean head finish

Coating made of trivalent chrome Cr³⁺
Substitute for hexavalent chrome Cr⁶

Deep thread for secure grip
within the boundary area and soft substructure

Keyed connection
of steel parts possible

Thread up to the tip
for good "bite"



*incl.
1 bit

SK WAFLER HEAD, GALVANISED, TX 30 Ø 6 MM, HEAD DIAMETER Ø 15.5 MM

Art. No.	Dimensions [mm]			EAN	PU
TX 30	Ø	x	L		
92902510	6.0	x	100	512012	50
92902512	6.0	x	120	512036	50
92902514	6.0	x	140	512043	50
92902516	6.0	x	160	512050	50
92902518	6.0	x	180	512067	50
92902520	6.0	x	200	512074	50

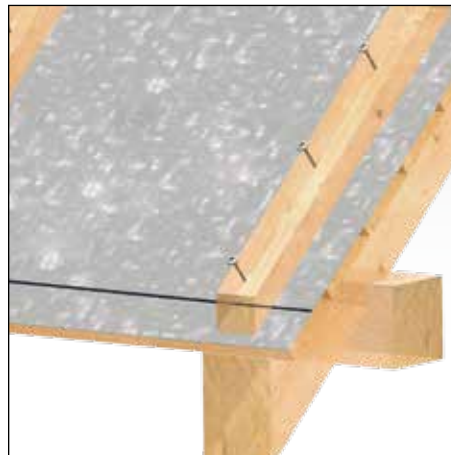


GH SK wafer head screw

The head diameter of the GH wafer head screws was chosen so that the screw does not lose grip immediately, through which it would no longer have any structural value, if inserted too deep. This gives the installer the certainty that the head torque values are retained.

SK WAFLER HEAD, GALVANISED, TX 40 Ø 8 MM, HEAD DIAMETER Ø 19 MM

Art. No.	Dimensions [mm]			EAN	PU
TX 40	Ø	x	L		
92902212	8.0	x	120	516836	50
92902214	8.0	x	140	516843	50
92902216	8.0	x	160	516850	50
92902218	8.0	x	180	516867	50
92902220	8.0	x	200	516874	50
92902222	8.0	x	220	516881	50
92902224	8.0	x	240	516898	50
92902226	8.0	x	260	516904	50
92902228	8.0	x	280	516911	50
92902230	8.0	x	300	516928	50
92902232	8.0	x	320	516935	50



Our service for you!

Your or your customer need a calculation according to the approval for rafter insulation.

We produce this for you without delay and without charge.

Simply download the design form in the Download area on www.holzbauschrauben.de, fill it out and send it to us by email or fax.



For advantages, see page 94 – 95



WAFER HEAD COUNTERSUNK SCREW



- **Martensitic stainless steel, rustproof**
for patio decking and façades, especially for fixing hardwoods
- **Optimum thread / shank ratio**
for high thread pull-out values

Head markings
including length data

Extra deep TX drive
with entry chamfer
for easy positioning

Clean head finish
due to cone-shaped bearing surface
with undercut head

Trailing extended shank
cutting flutes
for easy use

Deep thread for secure grip
within the boundary area and soft substructure

Fine pitch thread
for exact adjusting of the length of engagement

Thread up to the tip
for good "bite"

Set-back notched drill point
for precise positioning



*incl.
1 bit

KF WAFER HEAD COUNTERSUNK SCREWS, STAINLESS STEEL, TX 25

Art. No.	Dimensions [mm]			EAN	PU
TX 25	Ø	x	L		
92793565	5.0	x	50	516683	250
92793570	5.0	x	60	516690	250
92793575	5.0	x	70	516706	200



GH KF wafer head countersunk screw
Made of martensitic stainless steel 1.4006 for indoor and outdoor use.
The special alloy, which among other things reduces the insertion resistance significantly, is also suitable for fixing hardwoods.



The wafer countersunk head ensures a clean head finish on the surface of the timber. The deep thread flanks ensure a secure grip, even in soft substructures.



- | | | | |
|------|------|------|------|
| 1 ✓ | 2 ✓ | 3 ✓ | 4 ✓ |
| 5 ✓ | 6 ✓ | 7 ✓ | 9 ✓ |
| 10 ✓ | 11 ✓ | 12 ✓ | 15 ✓ |

For advantages, see screw overview on page 94 – 95



GH KKT

"Innovations in Timber Construction"

WAFFER HEAD, COUNTERSUNK DECKING SCREW



WWW.HOLZBAUSCHRAUBEN.DE



KKT G



Powder coated

KKT VA

Powder coated and
in stainless steel

Extra small tapered head

Opposing thread
up to under the head

Fine pitch thread
for exact adjusting of the length of engagement

Nail tip with set-back notch
for precise positioning

Thread up to the tip
for good "bite"





KKT G SCREW Ø 5.0 MM GREEN POWDER COATED, TX 20

KKT V4A SCREW Ø 5.0 MM STAINLESS STEEL, TX 20

Art. No.	Dimensions [mm]			EAN	PU
TX 20	Ø	x	L		
92976550	5.0	X	50	136966	200
92976560	5.0	X	60	136973	200
92976570	5.0	X	70	136980	100

Art. No.	Dimensions [mm]			EAN	PU
TX 20	Ø	x	L		
92977550	5.0	x	50	137611	200
92977560	5.0	X	60	137628	200
92977570	5.0	X	70	137635	100


KKT G

KKT VA


Tapered underhead

If the screw is inserted flush with the timber surface, the wood fibres surround the tapered head. This reduces or prevents the penetration of moisture.

The small tapered underhead diameter prevents the wood fibres from being torn out and reduces the splitting effect in the boundary area.



Opposing thread

This in turn relieves the screw head and the load is carried by the counter thread. Reduced edge clearances are possible, even without predrilling.

1 ✓

5 ✓

6 ✓

7 ✓

8 ✓

9 ✓

10 ✓

11 ✓

12 ✓

For advantages, see screw overview on page 94 – 95



GH WZ

"Innovations in Timber Construction"



WWW.HOLZBAUSCHRAUBEN.DE

FULLY-THREADED SCREW



Extra deep TX drive
with entry chamfer
for easy positioning

Optimised screw diameter
for narrow attached parts

Special "Gleit-Mot" lubricant coating
for reducing the insertion resistance

Head markings
including length data

Fully-threaded screw
for timber-to-timber or steel-to-timber connections

Keyed connection
of steel parts possible

Predrilling possible with approval

Coating made of trivalent chrome Cr^{3+}
Substitute for hexavalent chrome Cr^6

Deep thread
for high force transfer

Thread up to the tip
for good "bite"

Faster thread

Set-back notched drill point
for precise positioning

Easy countersinking
due to cylindrical head

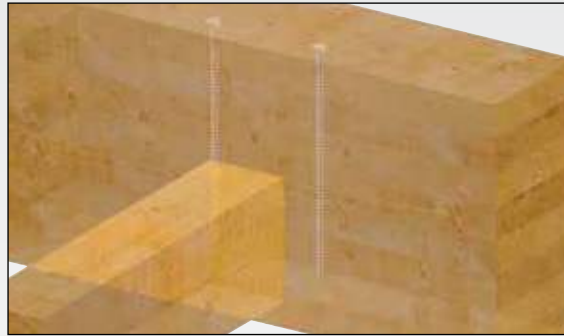


*incl.
1 bit

WZ Ø 7.0 MM, TX 30



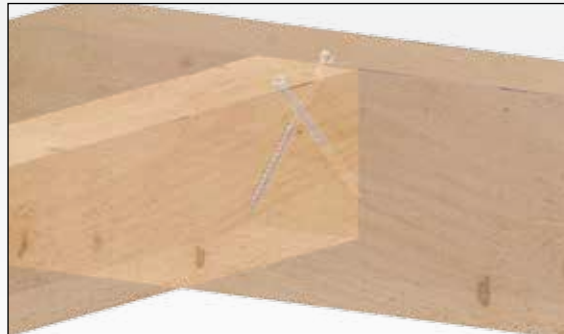
Art. No.	Dimensions [mm]			EAN	PU
TX 30	Ø	x	L		
92971140	7.0	x	140	103210	25
92971180	7.0	x	180	103227	25



WZ Ø 9.0 MM, TX 40



Art. No.	Dimensions [mm]			EAN	PU
TX 40	Ø	x	L		
92972160	9.0	x	160	103272	25
92972200	9.0	x	200	103289	25
92972240	9.0	x	240	103296	25
92972280	9.0	x	280	103906	25
92972320	9.0	x	320	103913	25



INSTALLATION GAUGE FOR WZ

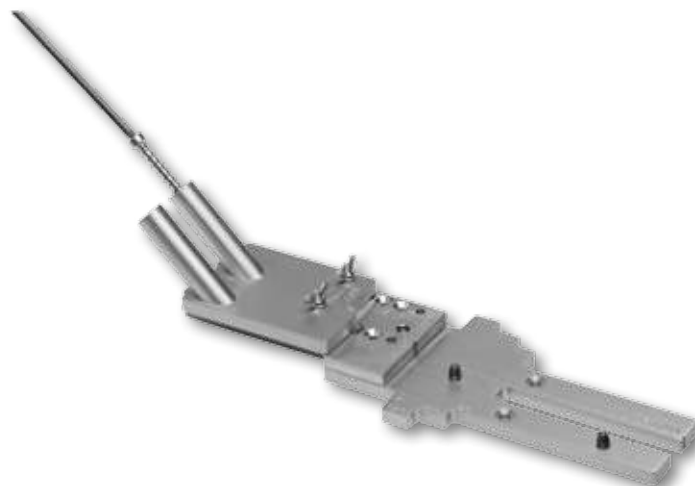
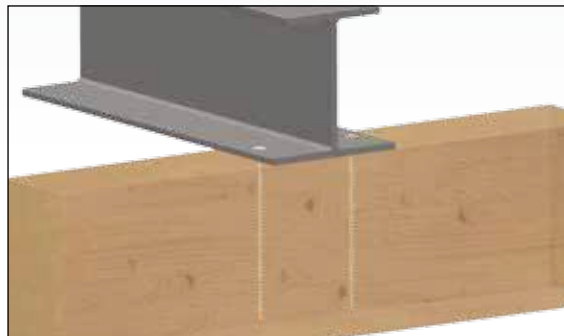
Art. No.	EAN	WEIGHT	PU
	4019346		
33000500	103968	5.300	1

Installation gauge set

for main/secondary member connections with GH WZ fully-threaded screws
Ø 7.0 and 9.0 mm, incl. fixing screws

1 bit Torx 40x200

1 bit Torx 30x200



For advantages, see screw overview on page 94 – 95



GH DGZ

"Innovations in Timber Construction"



WWW.HOLZBAUSCHRAUBEN.DE

DOUBLE-THREAD SCREW



Head markings
including length data

Cylindrical head for countersunk
installation

For yielding and pressure-resistant insulation

For yielding insulation material in the roof, the counter battens are held at a distance by the thread under the screw head. Compaction of the insulation material due to the roof load or walking on the battening is excluded.

Coating made of trivalent chrome Cr³⁺
Substitute for hexavalent chrome Cr⁶

Thread extends up to below
the head
for easy adjustment of the joist

Special "Gleit-Mot" lubricant coating
for reducing the insertion resistance

For insulation up to 300 mm thick

Set-back notched drill point
for precise positioning

Thread up to the tip
for good "bite"





DGZ SCREW Ø 7.0 MM GALVANISED, TX 30

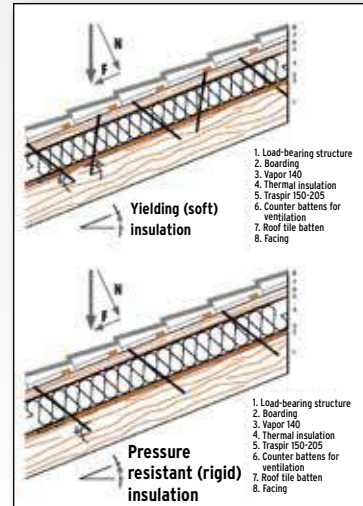
Art. No.	Dimensions [mm]			EAN	PU
TX 30	Ø	x	L		
92973220	7.0	X	220	136508	50
92973260	7.0	X	260	136515	50
92973300	7.0	X	300	136522	50
92973340	7.0	X	340	136539	50

DGZ SCREW Ø 9.0 MM GALVANISED, TX 40

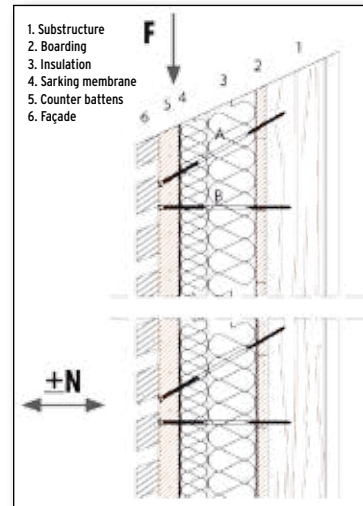
Art. No.	Dimensions [mm]			EAN	PU
TX 40	Ø	x	L		
92974320	9.0	X	320	136720	50
92974360	9.0	X	360	136737	50
92974400	9.0	X	400	136744	50



Roof insulation



Façade insulation



For advantages, see screw overview on page 94 – 95

TOP-FIX COUNTERSUNK WASHERS



Art. No.	Dimensions [mm]			Weight kg	PU
	Ø I	Ø A	D		
94841003	8.4	25	5.0	1.000	200
94841010	10.5	30	6.0	1.700	100
94841045	13.5	45	8.0	4.060	100

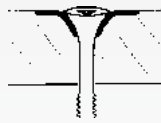
TOP-FIX countersunk washers for visible timber constructions, galvanised.

COUNTERSUNK WASHERS, PRESSED

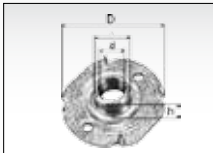


Art. No.	Dimensions [mm]			Weight kg	PU
	Ø I	Ø A	D		
94841008	8.4	25	-	0.620	250
94841011	10.5	30	-	1.200	250

Countersunk washers, pressed for rafter insulation, sink completely into the timber. Yellow galvanised.



DRIVE-IN NUTS



Art. No.	Dimensions [mm]				Weight kg	PU
	Ø	h	b	D		
93861012	M12	15	18	60	7.800	50
93861016	M16	15	22	60	7.700	50
93861020	M20	16	25	60	7.560	50

TOP-FIX WASHERS DIN 1052, GALVANISED



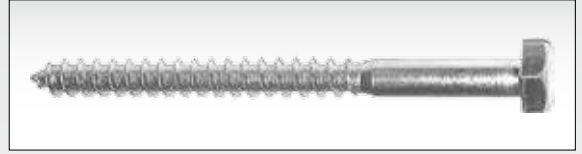
Art. No.	Dimensions [mm]						Weight kg	PU
	for Ø	Ø	x	D	x	D		
94151010	M10	11	x	50	x	4.0	5.700	100
94151001	M12	14	x	58	x	6.0	11.300	50
94151002	M16	18	x	68	x	6.0	15.300	50
94151003	M20	23	x	80	x	8.0	25.300	25
94151004	M22	25	x	92	x	8.0	38.800	25
94151005	M24	27	x	105	x	8.0	44.000	20

TOP-FIX WASHERS DIN 440, GALVANISED



Art. No.	Dimensions [mm]						Weight kg	PU
	for Ø	Ø	x	D	x	D		
94111002	M6	6.6	x	22	x	2.0	0.543	200
94111003	M8	9.0	x	28	x	3.0	1.300	200
94111004	M10	11.0	x	34	x	3.0	1.910	200
94111005	M12	13.5	x	44	x	4.0	4.330	200
94111006	M16	17.5	x	56	x	5.0	8.720	100
94111007	M20	22.0	x	72	x	6.0	17.400	50
94111008	M22	24.0	x	80	x	6.0	21.500	25
94111009	M24	26.0	x	85	x	6.0	24.200	25
94111010	M27	30.0	x	98	x	6.0	32.200	25
94111011	M30	33.0	x	105	x	6.0	36.800	20
94111013	M36	39.0	x	125	x	8.0	69.500	10
94111014	M39	42.0	x	140	x	8.0	88.100	1
94111015	M42	45.0	x	150	x	8.0	101.000	1

HEX HEAD WOOD SCREWS DIN 571



Hex head wood screws DIN 571

Type: galvanised, hot-dip galvanised, V2A, V4A

Ø	x	Length [mm]		
6	x	20	to	120
8	x	25	to	200
10	x	30	to	500
12	x	40	to	1000
16	x	60	to	1000
20	x	100	to	1000
24	x	100	to	600

Special dimensions on request

CONSTRUCTION BOLTS DIN 601



Construction bolts DIN 601, with normal shank

Type: galvanised

Ø	x	Length [mm]		
10	x	80	to	400
12	x	100	to	900
16	x	100	to	900
20	x	100	to	900
24	x	100	to	900

Special dimensions on request.



These column bases
will soon also be
available in ZinTOP!

The column bases, which must fulfil the requirements of service class 3, are subsequently hot-dip galvanised or have our new ZinTOP coating.
ZinTOP not only has optimum corrosion resistances but is also visually more attractive.
In the foreseeable future we will also supply a larger selection of column bases with the ZinTOP surface.
The new ZinTOP coating is approved for service class 3.

Advantages of the ZinToP coating

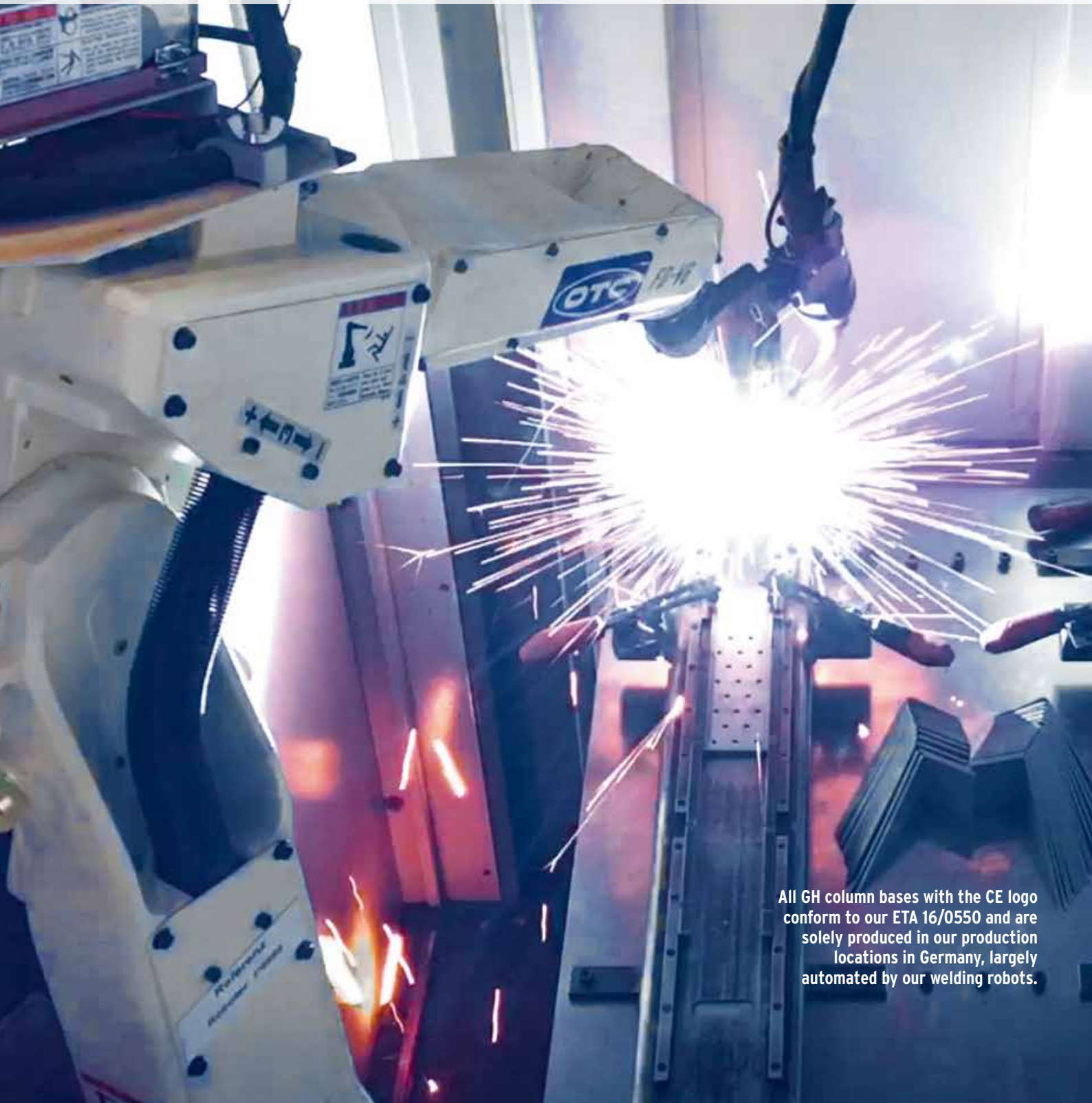
- Uniform surface
- High corrosion resistance
- No contact corrosion in conjunction with stainless steel
- Approved for service class 3 in timber construction
- High surface hardness
- Uniform coat thickness, also on threaded parts

The service class must be defined for the relevant application in accordance with EN 1995-1-1 2.3.1.3 Service classes.
The following definition is solely given as an indication:

- Service class 1** The timber element is in a heated building
Service class 2 The timber element is under the roof and is not exposed to direct weathering
Service class 3 The timber element can be exposed to the weather and spray water

The structural values given in the catalogue are solely for orientation.
Detailed load-bearing capacity tables for the determination of combined loads with design examples can be found at:
www.holzverbinder.de/product/holzverbinder/stuetzenfuesse

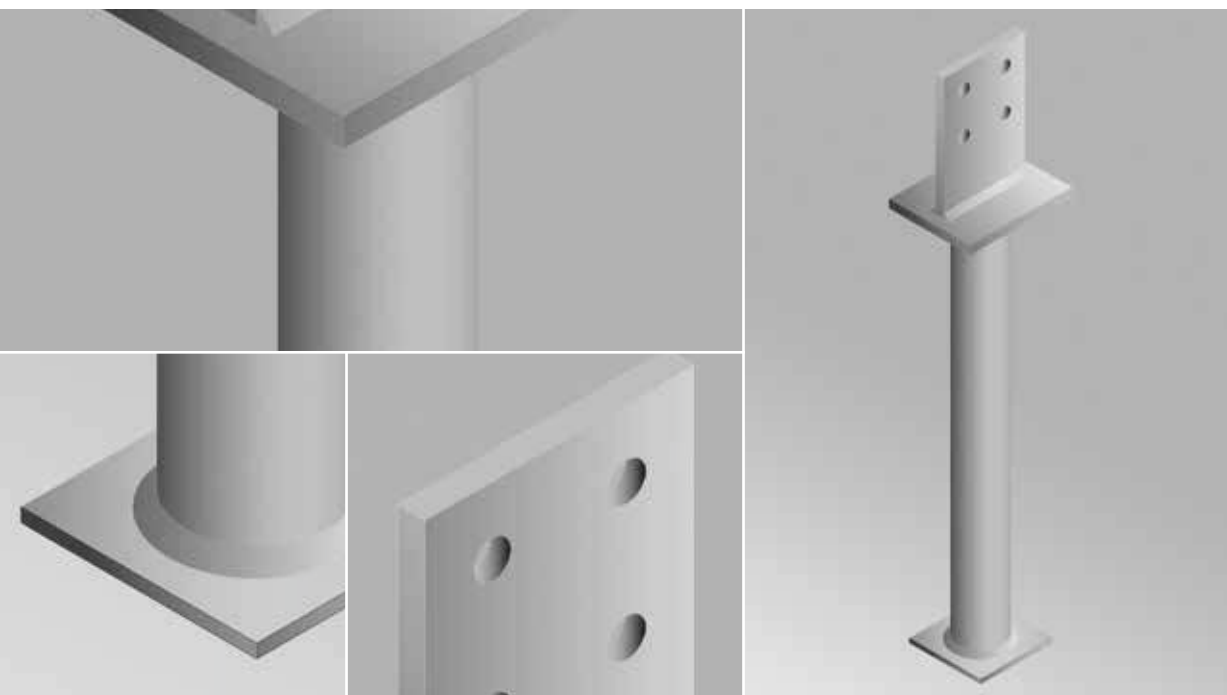
Innovative welding!



All GH column bases with the CE logo conform to our ETA 16/0550 and are solely produced in our production locations in Germany, largely automated by our welding robots.

13

COLUMN BASES IN CONCRETE



Product of special parts!

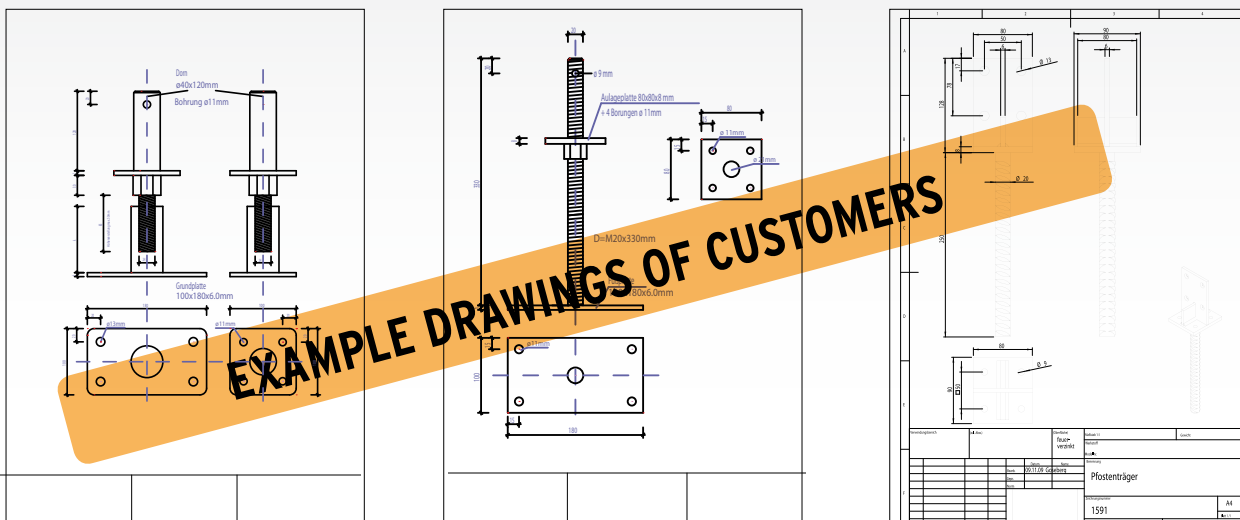
There's no such thing as can't!
True to this motto, in our production
we can produce column bases for you to
your drawings, sketches or samples.

WELDED PARTS TO CUSTOMERS' WISHES



Thanks to our state-of-the-art production technology our welding shop can quickly respond to your requirements.

We will be pleased to draw up a quotation for you for welded parts and column bases to your specifications.



COLUMN BASE TYPE T01 IN CONCRETE



Art. No.	Dimensions [mm]			Mounting plate [mm]					CE	EAN	Weight	PU
	A x W x T	D	Ø 11	A	x	A	x	D				
19810201	80x130x8	Ø 20x250	4	80	x	80	x	8	0769	4019346	kg	
19810240	80x130x8	Ø 20x400	4	80	x	80	x	8	ETA-16/0550	505007	1.670	10
									ETA-16/0550	003503	2.150	10

Surface: hot-dip galvanised

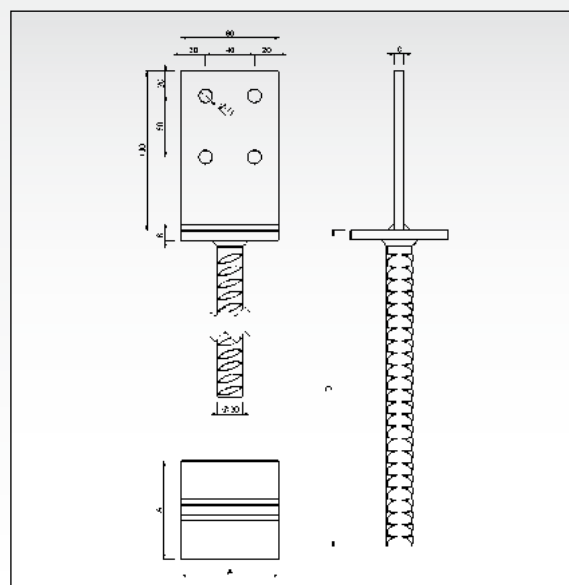
Fixing with: Ø 10 mm GH dowel (see page 91)

Drilling template see page 124.

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19810201	100	100	63.5	57.1	3.11	4.77
19810240	100	100	63.5	57.1	2.38	3.63

4 dowels Ø 10



COLUMN BASE TYPE T02 IN CONCRETE



Art. No.	Dimensions [mm]			Mounting plate [mm]					CE	EAN	Weight	PU
	A x W x T	D	Ø 11	A	x	A	x	D				
19810203	80x130x8	Ø 48.3x300	4	80	x	80	x	8	0769	4019346	kg	
19810204	80x130x8	Ø 48.3x500	4	80	x	80	x	8	ETA-16/0550	505021	2.030	10
									ETA-16/0550	505038	2.490	10

Surface: hot-dip galvanised

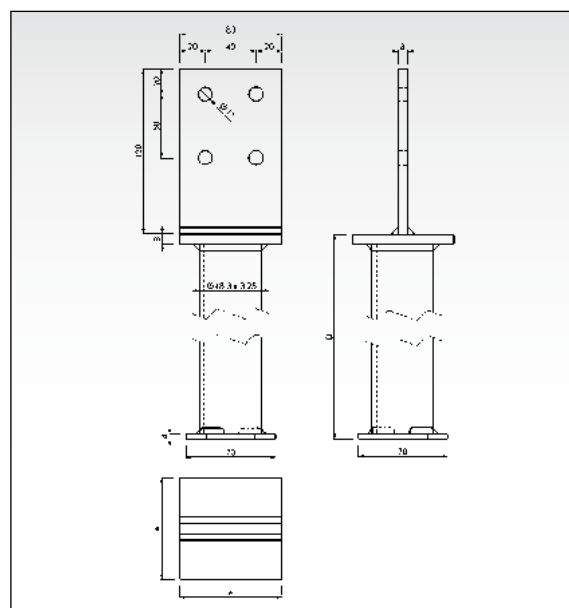
Ø 10 mm GH dowel (see page 91)

Drilling template see page 124.

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19810203	100	120	108	87.3	7.53	9.50
19810204	100	120	108	87.3	5.07	6.70

4 dowels Ø 10



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de



GH COLUMN BASE TYPE T03 IN CONCRETE



Art. No.	Dimensions [mm]			Mounting plate [mm]						EAN	Weight	PU
	A x W x T	D	Ø 13	A	x	A	x	D				
									0769	4019346	kg	
19810212	100x170x8	Ø 48.3x300	4	100	x	100	x	8	ETA-16/0550	010549	2.900	5
19810206	100x170x8	Ø 48.3x500	4	100	x	100	x	8	ETA-16/0550	505052	3.140	5

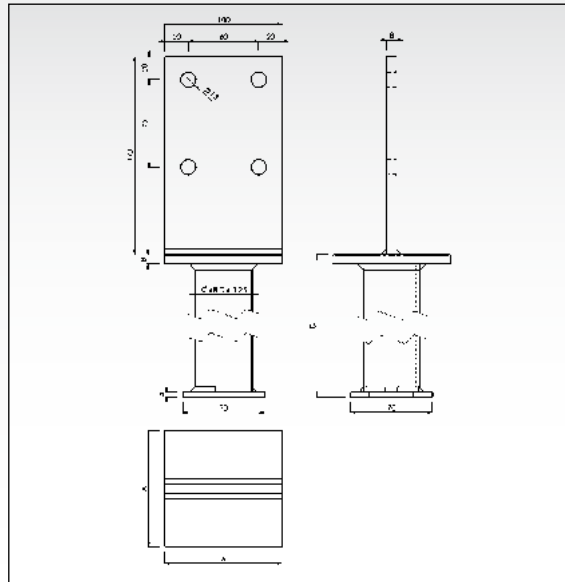
Surface: hot-dip galvanised

Fixing with: GH dowel Ø 12 mm (see page 91)

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19810212	120	156	108.0	88.6	4.48	6.70
19810206	120	156	108.0	88.6	5.24	8.54

4 dowels Ø 10



COLUMN BASE TYPE T04 EXTRA STRONG IN CONCRETE



ETA-16/0550

Art. No.	Dimensions [mm]			Mounting plate [mm]					Baseplate [mm]					EAN	Weight	PU
	A x W x T	D	Ø 13	A	x	A	x	D	L	x	W	x	D	4019346	kg	
19810210	90x105x8	Ø 70x323	2	120	x	120	x	15	90	x	90	x	10	505700	5.540	1

Surface: hot-dip galvanised

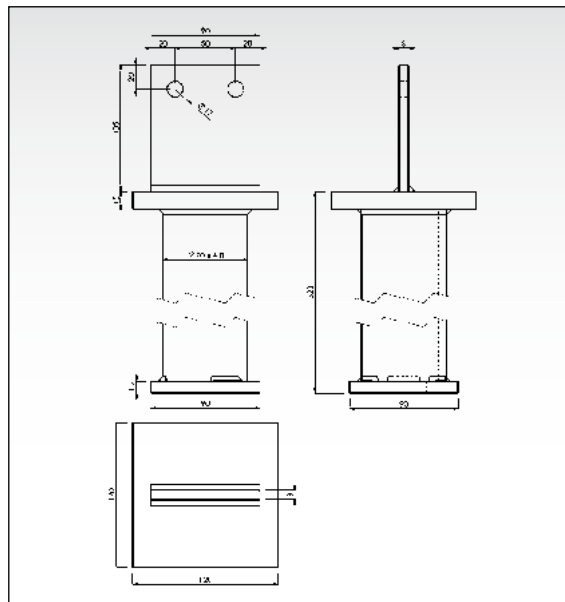
The mounting plate is 15.0 mm thick. For timber constructions with the highest static compressive loading.

Fixing with: GH dowel Ø 12.0 mm (see page 92)

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19810210	140	136	283.0	111.0	30.0	10.70

4 dowels Ø 12



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de



COLUMN BASE TYPE D IN CONCRETE



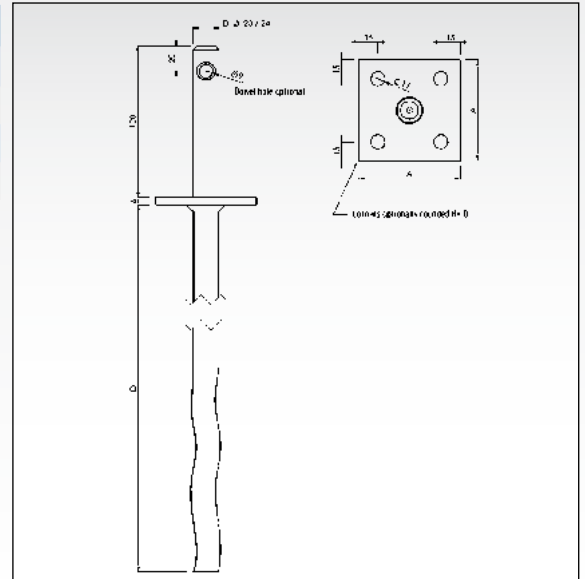
Art. No.	Dimensions [mm]			Mounting plate [mm]							EAN	Weight	PU
	Pin	D	Ø 9	A	x	A	x	D	Ø 11				
										0769	4019346	kg	
19620080	Ø 20x120	Ø 20x374	1	80	x	80	x	6	4	ETA-16/0550	510 001	1.620	10
19620100	Ø 20x120	Ø 20x374	1	100	x	100	x	6	4	ETA-16/0550	510 018	1.720	10
19820400	Ø 24x120	Ø 24x374	1	100	x	100	x	6	4	ETA-16/0550	003510	2.290	5

Surface: hot-dip galvanised

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19620080	100	100	41.2	13.0	3.33	3.33
19620100	120	120	41.9	11.5	3.33	3.33
19820400	120	120	38.8	10.9	5.76	5.76

4 screws Ø 10 x 120



COLUMN BASE TYPE DS IN CONCRETE



Art. No.	Dimensions [mm]			Mounting plate [mm]							EAN	Weight	PU
	Pin	D	Ø 11	A	x	A	x	D	Ø 11				
19820220	Ø 24x120	Ø 48.3x500	1	100	x	100	x	6	4	ETA-16/0550	510148	2.320	10
19820221	Ø 24x120	Ø 48.3x400	1	100	x	100	x	6	4	ETA-16/0550	010556	2.900	10
19820420	Ø 40x120	Ø 48.3x500	1	100	x	100	x	6	4	ETA-16/0550	510131	3.090	10

Surface: hot-dip galvanised

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19820220	120	120	108.0	19.0	8.08	8.08
19820221	120	120	108.0	19.0	16.9	16.9
19820420	120	120	108.0	15.0	8.08	8.08

4 screws Ø 10 x 120

Stable hot-dip galvanised column base for encasing in concrete, so that loads are transferred directly into the foundation. Due to the dowels 24 and 40 mm, fast, cost-effective and concealed connection is possible.

Pin Ø 40.0 mm; for tenoning machines

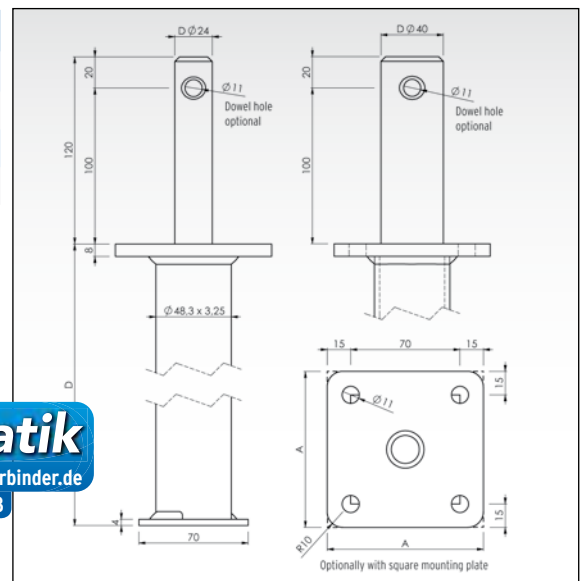
Fixing with:

GH dowel Ø 10.0 mm (see page 91)

TOP-FIX DUO screw (see page 109)



* Drilling template for Article 19820220 Pin 24 x 120 (see page 127)



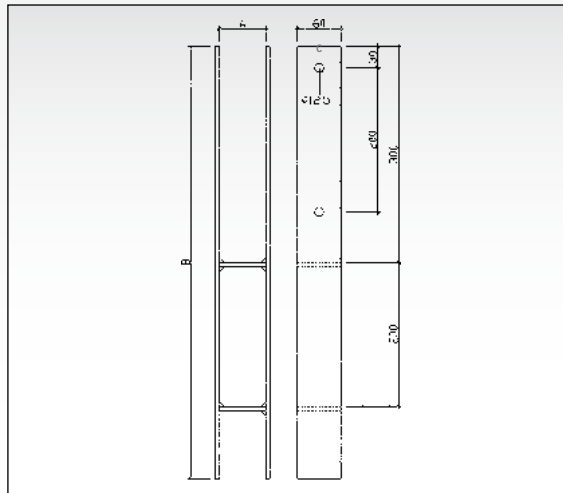
*The load bearing capacities are only indicative. Detailed structural information is provided on our website at: www.holzverbinder.de



COLUMN BASE GROUP S – TYPE H IN CONCRETE

Art. No.	Dimensions [mm]				EAN	Weight kg	Pallet	PU
	A	W	D	C				
19840080	71	600	5.0 - 6.0	60	4019346	3.800	200	1
19840090	81	600	5.0 - 6.0	60	515129	3.850	200	1
19840100	91	600	5.0 - 6.0	60	515136	3.900	200	1
19840105	95	600	5.0 - 6.0	60	515105	3.930	200	1
19840110	101	600	5.0 - 6.0	60	515143	3.960	200	1
19840111	111	600	5.0 - 6.0	60	515112	4.150	200	1
19840120	121	600	5.0 - 6.0	60	515150	4.075	200	1
19840140	141	600	5.0 - 6.0	60	515167	4.190	200	1
19841120	121	800	5.0 - 6.0	80	515181	7.000	100	1
19841140	141	800	5.0 - 6.0	80	515082	7.200	100	1
					515099			

Surface: hot-dip galvanised



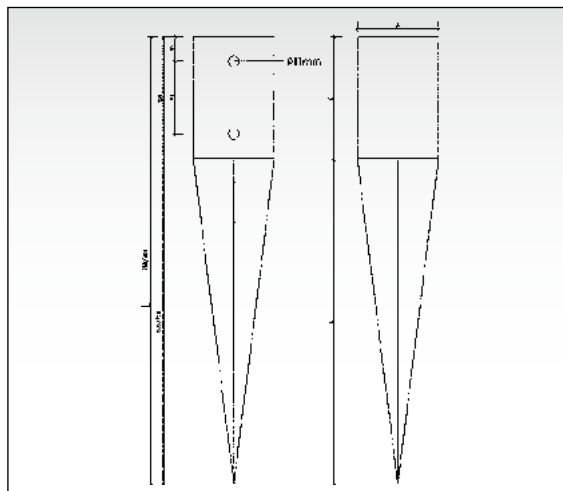
Hole pattern can vary



COLUMN BASE GROUP S – TYPE R

Art. No.	Dimensions [mm]		EAN	Weight kg	Pallet	PU
	A	L				
19880271	71x71	750	4019346	1.460	392	1
19880291	91x91	750	515235	1.980	240	1
19880071	71x71	900	515242	1.740	377	1
19880091	91x91	900	515204	2.140	240	1
19880101	101x101	900	515211	2.820	180	1
			515228			

Surface: hot-dip galvanised



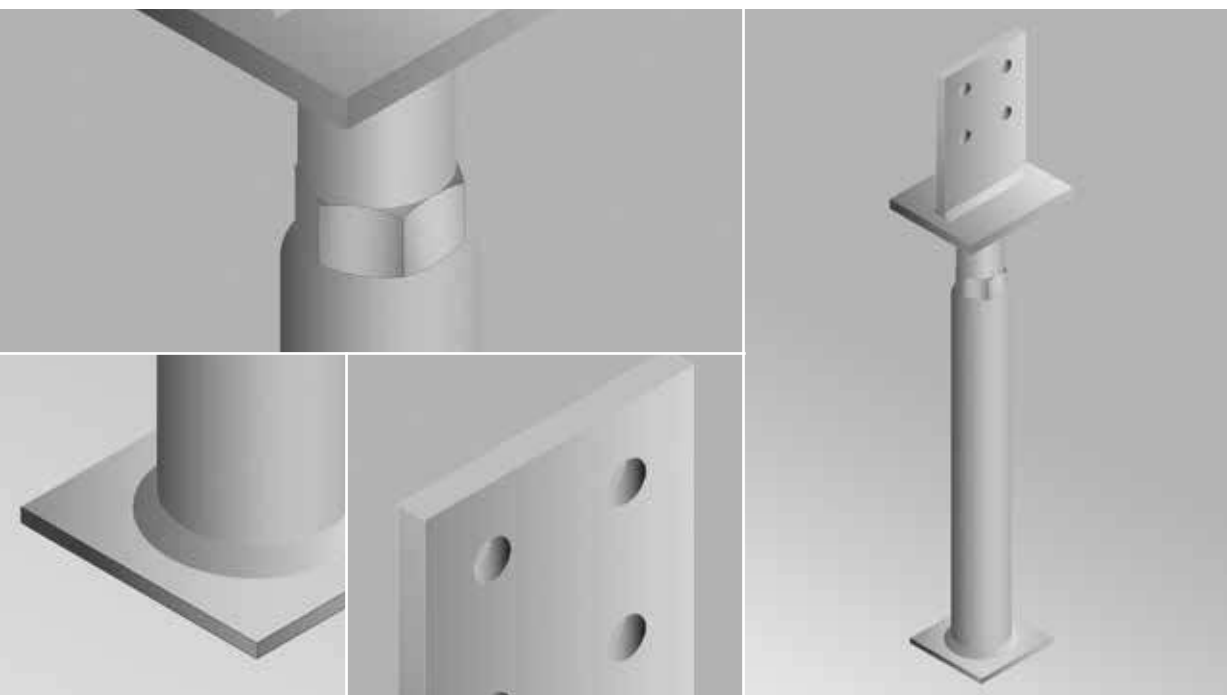
Hole pattern can vary



14



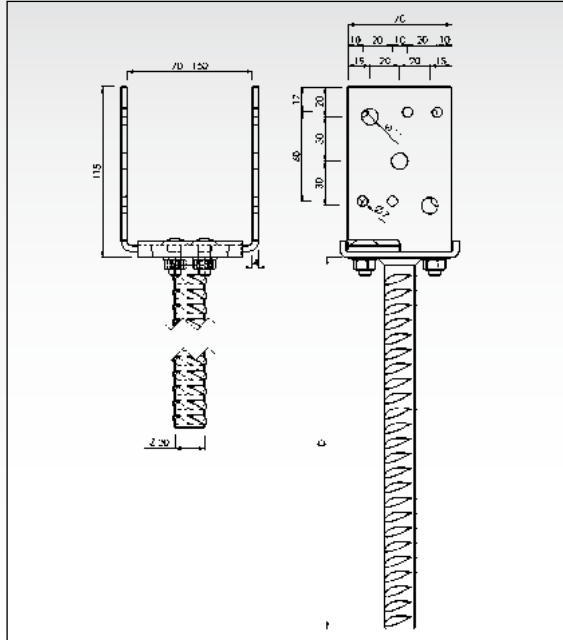
COLUMN BASES IN CONCRETE, ADJUSTABLE



Art. No.	Dimensions [mm]				EAN	Weight	PU
	A	D	C	0769	4019346	kg	
19850102	70 - 150	Ø 20x250	70	ETA-16/0550	5 01016	1.250	10
19850202	70 - 150	Ø 20x400	70	ETA-16/0550	003527	2.120	10

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19850102	70 - 150	100	10.9	-	-	-
19850202	70 - 150	70	10.9	-	-	-

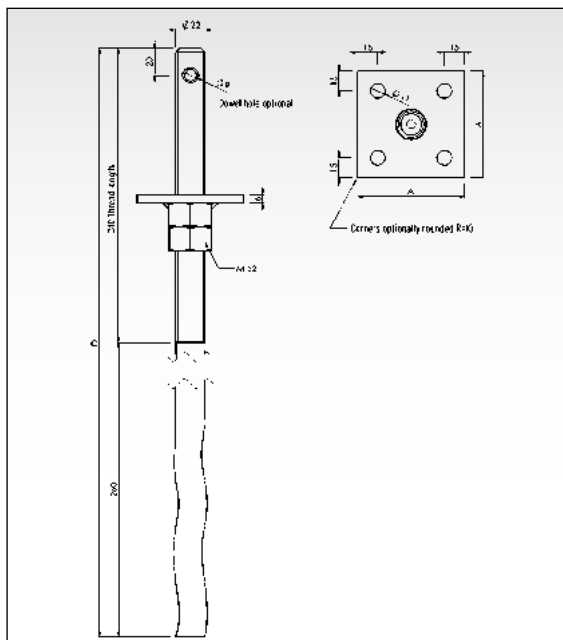
 **DC Statik**
dc-statik.holzverbinder.de
page 138



Art. No.	Dimensions [mm]			Mounting plate [mm]							EAN	Weight	Pallet	PU
	Pin	D	Ø 9	L	x	W	x	D	Ø 11	0769	4019346	kg		
19621080	M22x240	Ø 22x500	1	80	x	80	x	6	4	ETA-16/0550	510 0 25	1.630	200	10
19621100	M22x240	Ø 22x500	1	100	x	100	x	6	4	ETA-16/0550	510 0 32	1.750	200	10

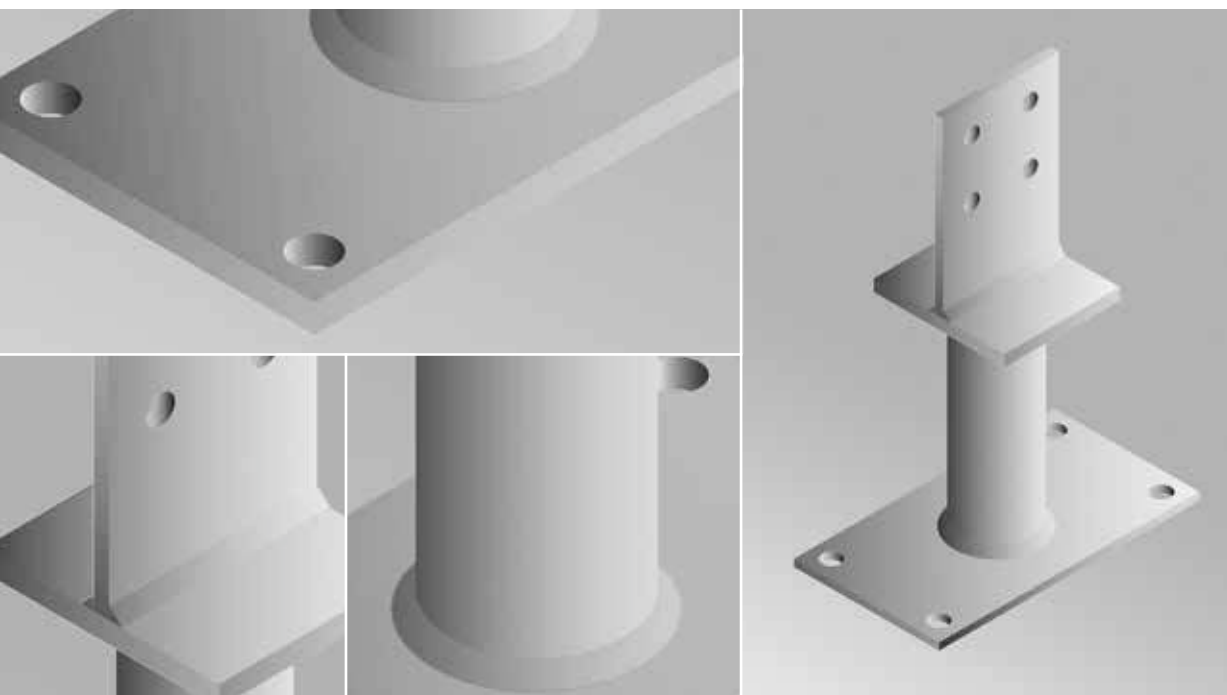
Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19621080	100	100	41.0	12.6	1.53	1.53
19621100	120	120	41.0	11.2	1.53	1.53

 **DC Statik**
dc-statik.holzverbinder.de
page 138



15

COLUMN BASES ON CONCRETE



COLUMN BASE TYPE P ON CONCRETE

Art. No.	Dimensions [mm]			Mounting plate [mm]				Baseplate [mm]							EAN	Weight	PU
	D	x	H	A		A	Ø 11	L	x	W	x	D	Ø 13				
19832060	Ø 48.3	x	60	100	x	100	4	130	x	130	x	6	4	ETA-16/0550	510209	1.460	10
19832100	Ø 48.3	x	100	100	x	100	4	130	x	130	x	6	4	ETA-16/0550	510216	1.540	10
19832150	Ø 48.3	x	150	100	x	100	4	130	x	130	x	6	4	ETA-16/0550	510223	1.610	10

Surface: hot-dip galvanised

Fixing with:

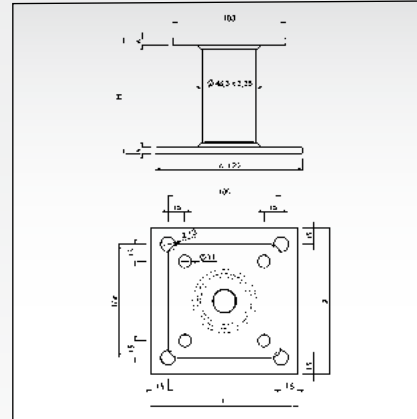
TOP-FIX DUO screw (see page 109)



*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19832060	120	120	93.4	10.6	7.71	7.71
19832100	120	120	93.4	10.6	4.53	4.53
19832150	120	120	93.4	10.6	2.99	2.99

4 screws Ø 10 x 120



COLUMN BASE TYPE D EXTRA STRONG ON CONCRETE



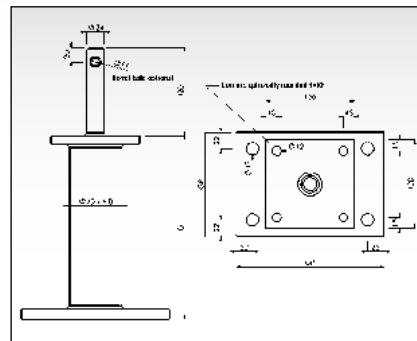
ETA-16/0550

Art. No.	Dimensions [mm]			Mounting plate [mm]					Baseplate [mm]					EAN	Weight	PU		
	Pin	D	Ø 11	L	x	W	x	D	Ø 12	L	x	W	x	D	Ø 17			
19813210	Ø 24x120	Ø 70x250	1	120	x	120	x	12	4	200	x	140	x	15	4	003565	7.190	1

Surface: hot-dip galvanised

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19813210	140	140	200.0	53.3	18.4	12.0



COLUMN BASE TYPE T05 EXTRA STRONG ON CONCRETE



ETA-16/0550

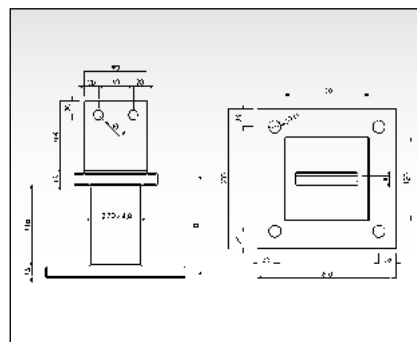
Art. No.	Dimensions [mm]							Mounting plate [mm]					Baseplate [mm]							EAN	Weight	PU
	A	x	W	x	D	Ø 13	D	A	x	A	x	D	L	x	W	x	D	Ø 17		4019346	kg	
19812210	90	x	105	x	8	2	Ø 70x148	120	x	120	x	15	200	x	200	x	15	4		505717	8.050	1

Surface: hot-dip galvanised

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19812210	140	140	283.0	36.4	19.8	9.77

2 dowels Ø 12



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de



Type P / T05



Type P / T05

COLUMN BASE TYPE T01 ON CONCRETE



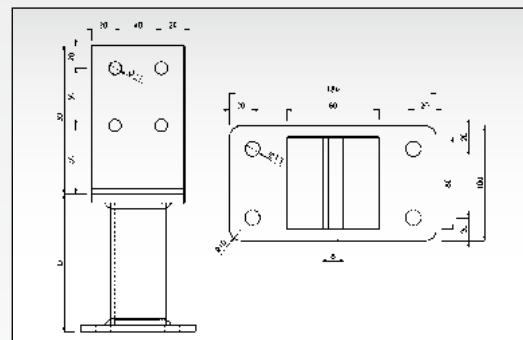
Art. No.	Dimensions [mm]					Mounting plate [mm]				Baseplate [mm]				EAN	Weight	PU
	A x W x T	D	x	H	Ø 11	A	x	A	x	L	x	W	Ø 13			
19812301	80x130x8	Ø 48.3	x	70	4	80	x	80	x	180	x	100	4	505083	2.000	10
19812302	80x130x8	Ø 48.3	x	120	4	80	x	80	x	180	x	100	4	505090	2.100	10
19812303	80x130x8	Ø 48.3	x	200	4	80	x	80	x	180	x	100	4	505113	2.300	10
19812638	80x130x8	Ø 48.3	x	250	4	80	x	80	x	180	x	100	4	003541	2.500	10
19812639	80x130x8	Ø 48.3	x	300	4	80	x	80	x	180	x	100	4	003558	2.600	10

Surface: Hot-dip galvanised, fixing with: Dowel Ø 10.0 mm (see page 91)

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19812301	100	100	108.0	6.88	1.87	4.61
19812302	100	100	108.0	6.88	1.45	3.05
19812303	100	100	108.0	6.88	1.07	1.98
19812638	100	100	108.0	6.88	0.92	1.61
19812639	100	100	108.0	6.88	0.81	1.36

4 dowels Ø 10



COLUMN BASE TYPE D ON CONCRETE



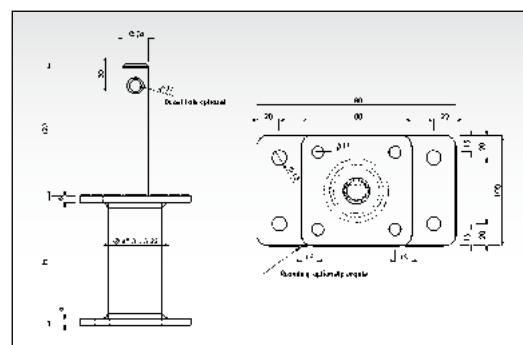
Art. No.	Dimensions [mm]					Mounting plate [mm]				Baseplate [mm]				EAN	Weight	PU
	Pin	D	x	H	Ø 11	A	x	A	x	L	x	W	Ø 13			
19823065	Ø 24x120	Ø 48.3	x	70	1	100	x	100	x	180	x	100	6	011935	1.950	10
19823120	Ø 24x120	Ø 48.3	x	120	1	100	x	100	x	180	x	100	6	011928	2.200	10
19823150	Ø 24x120	Ø 48.3	x	150	1	100	x	100	x	180	x	100	6	011201	2.300	10
19823200	Ø 24x120	Ø 48.3	x	200	1	100	x	100	x	180	x	100	6	011218	2.500	10
19823250	Ø 24x120	Ø 48.3	x	250	1	100	x	100	x	180	x	100	6	011225	2.700	10
19823300	Ø 24x120	Ø 48.3	x	300	1	100	x	100	x	180	x	100	6	011232	2.900	10

Surface: Hot-dip galvanised, fixing with: Dowel Ø 10.0 mm (see page 91)

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19823065	120	120	138.0	6.88	6.61	5.09
19823120	120	120	138.0	6.88	3.71	2.86
19823150	120	120	138.0	6.88	2.94	2.26
19823200	120	120	138.0	6.88	2.18	1.68
19823250	120	120	138.0	6.88	1.73	1.33
19823300	120	120	138.0	6.88	1.44	1.11

4 screws Ø 10 x 120



DRILLING TEMPLATE TYPE T (FOR FIN 80 x 130)



Art. No.	Description	EAN	Weight	PU
33000115	Drilling template Type T	4019346	kg	
		000724	1.38	1

Suitable for all GH column bases Type T with fin 80 x 130 mm



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de

SCREW-ON GROUND SLEEVE

Art. No.	Dimensions [mm]		EAN	Weight	Pallet	PU
	A	W				
19894071	71x71	150	4019346	kg		
19894091	91x91	150	515068	0.940	200	1
19894101	101x101	150	515075	1.060	200	1
			515198	1.180	100	1

Surface: hot-dip galvanised



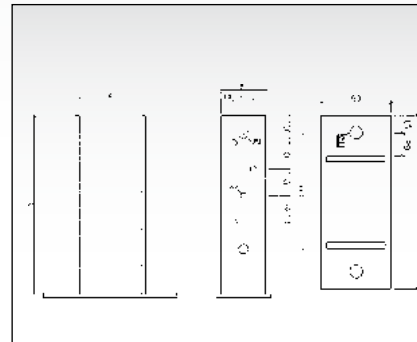
COLUMN BASE GROUP S – TYPE B ON CONCRETE

Art. No.	Dimensions [mm]			EAN	Weight	Pallet	PU
	A	W	C				
19874201	71	50x200	150x60	4019346	kg		
19874202	81	50x200	160x60	515013	1.200	320	10
19874203	91	50x200	170x60	515006	1.250	320	10
19874204	101	50x200	180x60	515020	1.300	320	10
19874205	121	50x200	200x60	515037	1.320	320	10
19874206	141	50x200	220x60	515044	1.370	320	10
				515051	1.430	320	10

Surface: hot-dip galvanised

Fixing with:

TOP-FIX DUO screw (see page 109)



Hole pattern can vary



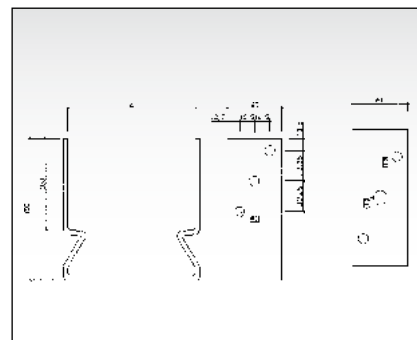
COLUMN BASE GROUP S – TYPE B ON CONCRETE WITH BEAD

Art. No.	Dimensions [mm]		EAN	Weight	Pallet	PU
	A	W				
19874071	71	60x150	4019346	kg		
19874081	81	60x150	516003	0.840	600	20
19874091	91	60x150	516010	0.860	600	20
19874101	101	60x150	516027	0.880	600	20
19874111	121	60x150	516034	0.910	600	20
19874121	141	60x150	516041	0.970	600	20

Surface: hot-dip galvanised

Fixing with:

TOP-FIX DUO screw (see page 109)

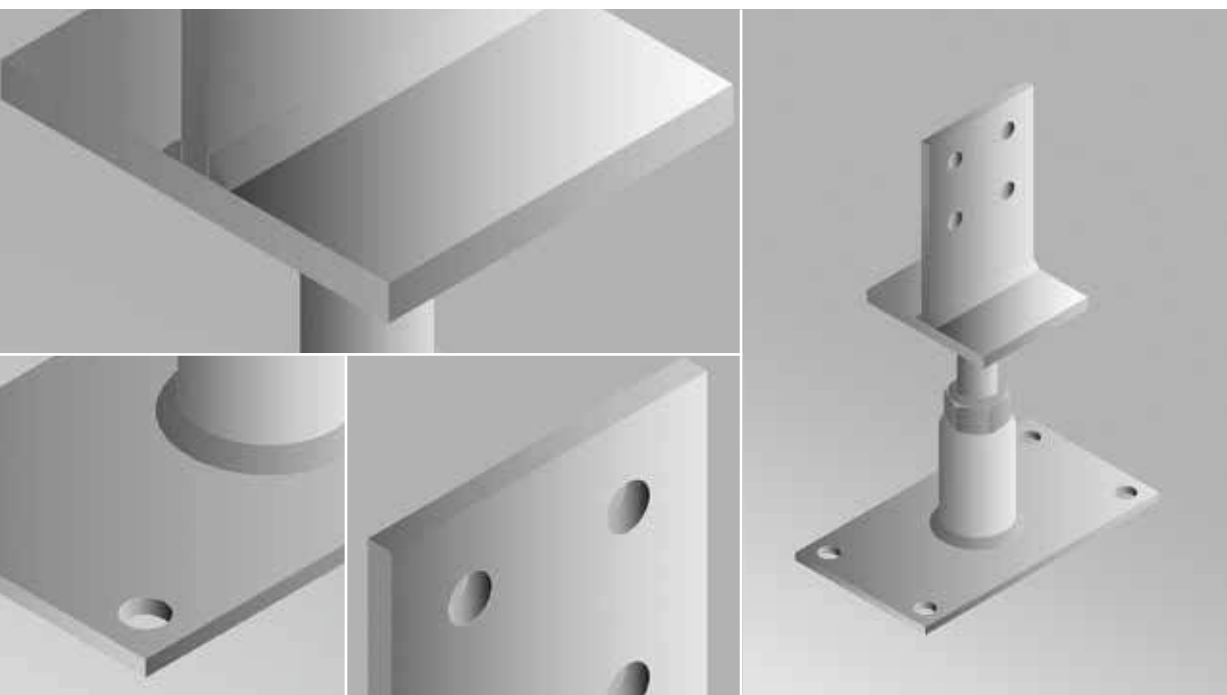


Hole pattern can vary



16

COLUMN BASES ON CONCRETE, ADJUSTABLE



COLUMN BASE TYPE D ON CONCRETE HEIGHT-ADJUSTABLE WITH PIN 24 x 120



Art. No.	Dimensions [mm]			Mounting plate [mm]			Baseplate [mm]						EAN	Weight	PU
	Pin	D	Ø 11	Ø	Ø 11		L	x	W	x	D	Ø 13			
19823130	Ø 24x120	Ø 48.3x140-210	1	100	4		180	x	100	x	6	4	4019346	kg	
19823180	Ø 24x120	Ø 48.3x190-260	1	100	4		180	x	100	x	6	4	510087	2.520	10
19823230	Ø 24x120	Ø 48.3x240-310	1	100	4		180	x	100	x	6	4	510094	2.690	10
19823280	Ø 24x120	Ø 48.3x290-360	1	100	4		180	x	100	x	6	4	510100	2.870	10
							180	x	100	x	6	4	510117	3.060	10

Surface: Hot-dip galvanised, height-adjustable when installed, via thread M 24 up to 70 mm, preassembly of the mounting plate with pin possible

Fixing with:

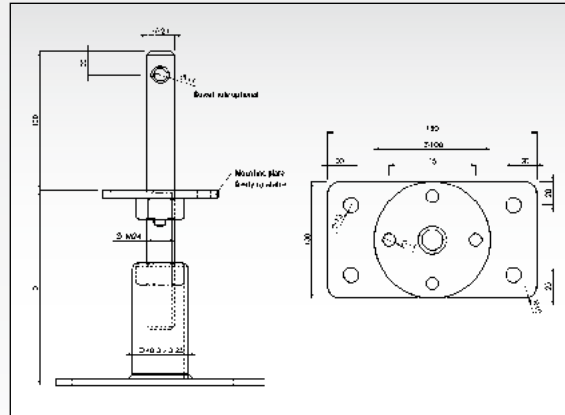
GH dowel Ø 10.0 mm (see page 91)

TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19823130	120	120	95.5	6.66	2.01	1.55
19823180	120	120	95.5	6.66	1.63	1.25
19823230	120	120	95.5	6.66	1.36	1.05
19823280	120	120	95.5	6.66	1.18	0.90

4 screws Ø 10 x 120 (load case $F_{1,t}$: + 1 dowel Ø 10)



COLUMN BASES TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE WITH PIN 40 x 120 especially for tenoning machines



Art. No.	Dimensions [mm]			Mounting plate [mm]			Baseplate [mm]						EAN	Weight	PU
	Pin	D	Ø 11	Ø	Ø 11		L	x	W	x	D	Ø 13			
19823134	Ø 40x120	Ø 48.3x140-210	1	100	4		180	x	100	x	6	4	501214	3.270	5
19823184	Ø 40x120	Ø 48.3x190-260	1	100	4		180	x	100	x	6	4	501252	3.440	5
19823234	Ø 40x120	Ø 48.3x240-310	1	100	4		180	x	100	x	6	4	501269	3.700	5
19823284	Ø 40x120	Ø 48.3x290-360	1	100	4		180	x	100	x	6	4	011911	3.900	5

Surface: hot-dip galvanised

Fixing with:

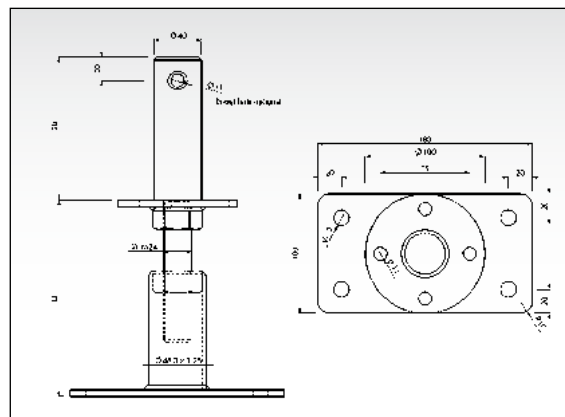
GH dowel Ø 10.0 mm (see page 91)

TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19823134	120	120	67.9	6.66	2.01	1.55
19823184	120	120	67.9	6.66	1.63	1.25
19823234	120	120	67.9	6.66	1.36	1.05
19823284	120	120	67.9	6.66	1.18	0.90

4 screws Ø 10 x 120



DRILLING TEMPLATE TYPE D (FOR PIN 24 x 120)

Art. No.	Description	EAN	Weight	PU
		4019346	kg	
33000116	For column bases Type D 19823130 to 19823280 and 19821540 – 19820220	000717	1.550	1



*The load bearing capacities are only indicative.
Detailed structural information is provided on our
website at: www.holzverbinder.de

COLUMN BASE TYPE T 01 H ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16/0550



Art. No.	Dimensions [mm]			Mounting plate [mm]				Baseplate [mm]							EAN	Weight	PU	
	A x W x T	D	Ø 11	A	x	A	x	D	L	x	W	x	D	Ø 13		4019346	kg	
19613101	80x130x8	M20x150-200	4	80	x	80	x	8	180	x	100	x	6	4		505106	2.520	5

Surface: galvanised

In installed condition, height adjustable from 150 – 200 mm

Fixing with:

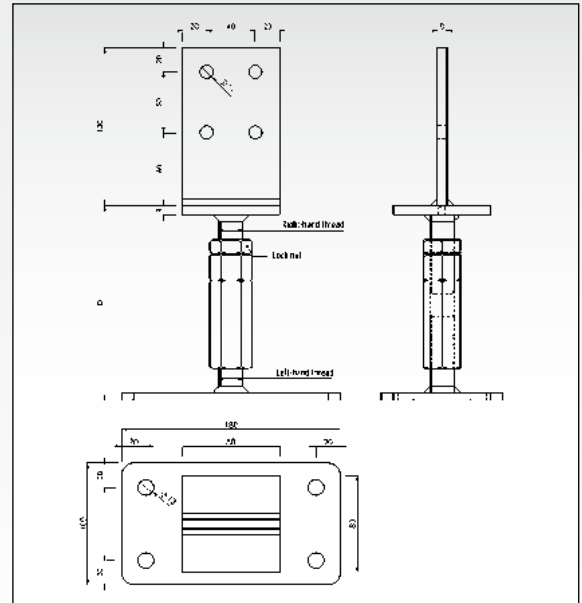
GH dowel Ø 10.0 mm (see page 91)

Drilling template (see page 124)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h				
19613101	100	100	28.7	6.66	0.63	0.96

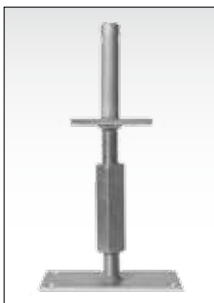
4 dowels Ø 10



COLUMN BASE TYPE D 03 ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16/0550



Art. No.	Dimensions [mm]			Mounting plate [mm]				Baseplate [mm]						EAN	Weight	PU
	Pin	D	Ø 11	Ø	x	D	Ø 11	L	x	W	x	D	Ø 13			
19613201	M24x120	M24x165-236	1	100	x	6	4	180	x	100	x	6	4	4019346	kg	10
														003534	2.850	10

Surface: galvanised

Height-adjustable in installed condition, from 165 – 236 mm

Fixing with:

GH dowel Ø 10.0 mm (see page 91)

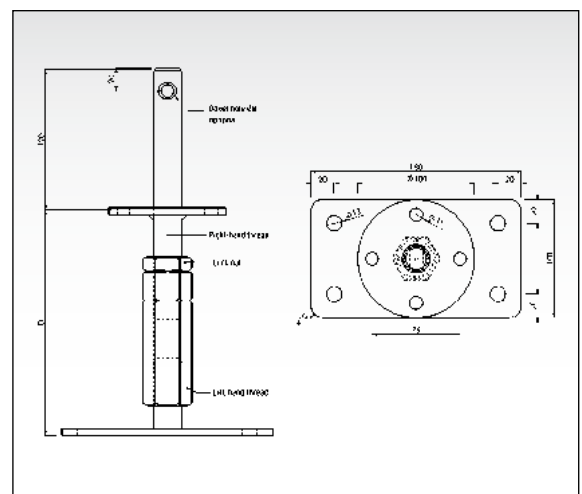
TOP-FIX DUO screw (see page 109)

Drilling template (see page 127)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h				
19613201	120	120	59.2	6.66	1.66	1.66

4 screws Ø 10 x 120



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de



COLUMN BASE TYPE D ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16/0550

Art. No.	Dimensions [mm]			Mounting plate [mm]						Baseplate [mm]						EAN	Weight	PU
	Pin	D	Ø 9	A	x	A	x	D	Ø 11	L	x	W	x	D	Ø 13			
19523101	M20	M20x330	1	80	x	80	x	6	4	180	x	100	x	6	4	4019346	kg	
19620998	M24	M24x330	-	100	x	100	x	6	4	180	x	100	x	6	4	510070	1.900	10
19620999	M30	M30x330	-	120	x	120	x	8	4	180	x	100	x	6	4	217757	2.230	10
																501245	3.400	1

Surface: galvanised

Nut welded onto mounting plate

Fixing with:

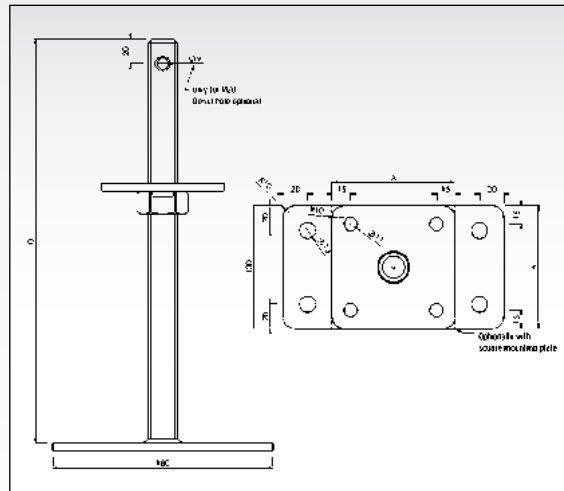
GH dowel Ø 8.0 mm (see page 91)

TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h				
19523101	100	100	36.8	6.66	1.64	1.64
19620998	120	120	69.1	6.66	2.34	2.34
19620999	140	140	122.0	6.66	2.61	2.01

4 screws Ø 10 x 120 h = 170 mm



COLUMN BASE TYPE D 05 ON CONCRETE HEIGHT-ADJUSTABLE



ETA-16/0550

Art. No.	Dimensions [mm]			Mounting plate [mm]						Baseplate [mm]						EAN	Weight	PU
	Pin	D	Ø 9	A	x	A	x	D	Ø 11	L	x	W	x	D	Ø 13			
19623080	M22x250	M22x350	1	80	x	80	x	6	4	180	x	100	x	6	4	4019346	kg	
19623100	M22x250	M22x350	1	100	x	100	x	6	4	180	x	100	x	6	4	510056	2.160	10
																510063	2.240	10

Surface: Galvanised, 2 nuts M22 loose

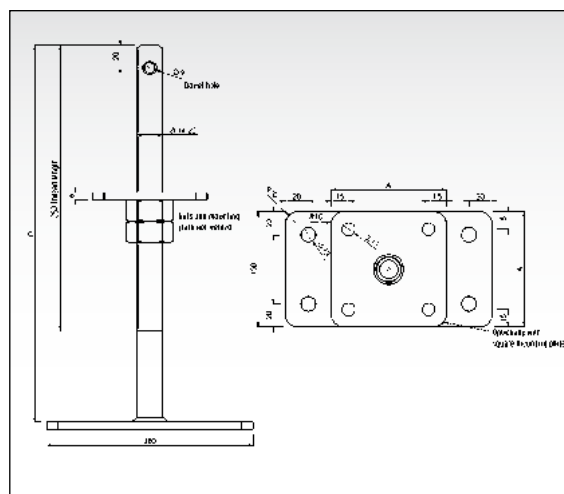
Fixing with:

GH dowel Ø 8.0 mm (see page 91)

TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h				
19623080	100	100	50.7	6.66	2.01	2.01
19623100	120	120	50.7	6.66	2.01	2.01

4 screws Ø 10 x 120 (load case $F_{1,t}$; + 1 dowel Ø 10)
h = 170 mm*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de

COLUMN BASE TYPE P ON CONCRETE / HEIGHT-ADJUSTABLE



ETA-16/0550



Art. No.	Dimensions [mm]	Mounting plate [mm]						Baseplate [mm]						EAN	Weight	PU
	D	A	x	A	x	D	Ø 9	L	x	W	x	D	Ø 11	4019346	kg	
19533070	M20x150-200	80	x	70	x	5	4	150	x	70	x	5	4	501221	1.260	10

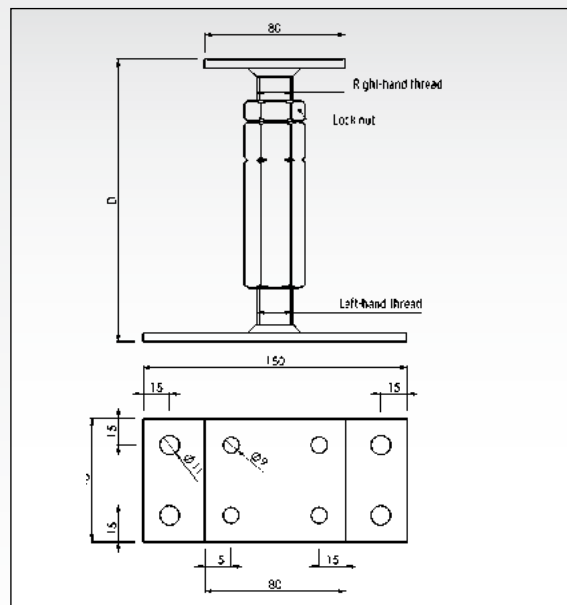
Surface: Galvanised, in installed condition, height adjustable from 150 – 200 mm

Fixing with: TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19533070	100	90	33.2	3.84	1.05	0.81

4 screws Ø 8 x 70



COLUMN BASE TYPE P 24 ON CONCRETE / HEIGHT-ADJUSTABLE



ETA-16/0550



Art. No.	Dimensions [mm]	Mounting plate [mm]						Baseplate [mm]						EAN	Weight	PU
	D	A	x	A	x	D	Ø 11	L	x	W	x	D	Ø 13	4019346	kg	
19533101	M24x150-200	100	x	100	x	6	4	180	x	100	x	6	4	011249	2.940	10

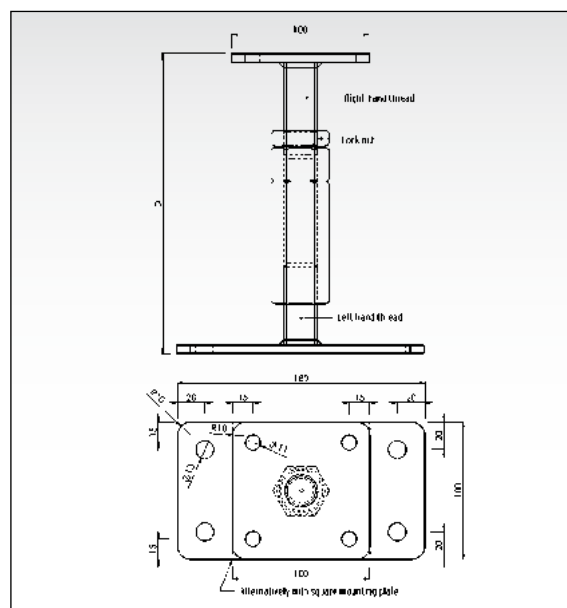
Surface: Galvanised, in installed condition, height adjustable from 150 – 200 mm

Fixing with: TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19533101	120	120	70.3	6.66	1.87	1.87

4 screws Ø 10 x 120



*The load bearing capacities are only indicative.
Detailed structural information is provided on our website at: www.holzverbinder.de

COLUMN BASE TYPE PR ON CONCRETE, HEIGHT-ADJUSTABLE



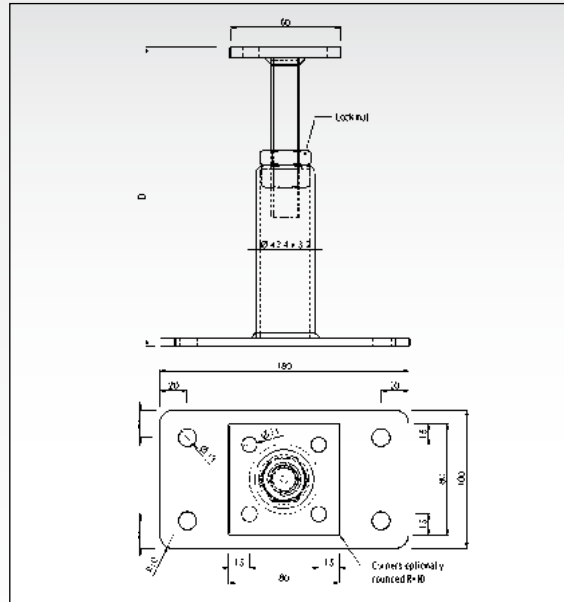
ETA-16/0550

Art. No.	Dimensions [mm]	Mounting plate [mm]						Baseplate [mm]						EAN	Weight kg	PU
	D	A	x	A	x	D	Ø 11	L	x	W	x	D	Ø 13			
19534100	M22x135-215	80	x	80	x	8	4	180	x	100	x	6	4	4019346	1.700	10
19534110	M22x185-265	80	x	80	x	8	4	180	x	100	x	6	4	011263	1.900	10
19534120	M22x235-315	80	x	80	x	8	4	180	x	100	x	6	4	011270	2.100	10

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19534100	100	100	54.1	6.66	1.99	1.53
19534110	100	100	54.1	6.66	1.61	1.24
19534120	100	100	54.1	6.66	1.35	1.04

4 screws Ø 10 x 120



COLUMN BASE TYPE U-70 ON CONCRETE HEIGHT-/LATERALLY ADJUSTABLE



ETA-16/0550

Art. No.	Dimensions [mm]			Baseplate [mm]						EAN	Weight kg	PU
	A	D	C	L	x	W	x	D	Ø 13			
19653201	70 - 150	M20x150-200	70	180	x	100	x	6	4	0769	501054	10

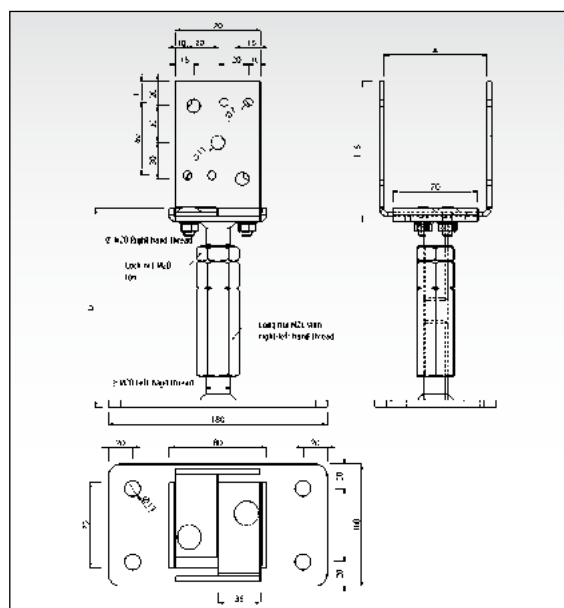
Surface: Galvanised, in installed condition, height adjustable from 150 – 200 mm

Fixing with: TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure $F_{1,Rk}$	Tension $F_{1,Rk}$	$F_{2/3,Rk}$	$F_{4/5,Rk}$
	min w	min h	Steel [kN]			
19653201	70 - 150	100	8.89	-	-	-

4 screws Ø 10 x 60



*The load bearing capacities are only indicative.
Detailed structural information is provided on our
website at: www.holzverbinder.de

COLUMN BASE TYPE PB ON CONCRETE, HEIGHT-ADJUSTABLE



ETA-16/0550



Art. No.	Dimensions [mm]		Mounting plate [mm]				Baseplate [mm]							EAN	Weight	PU
	Ø	D	A	x	A	Ø	L	x	W	x	D	Ø 11		4019346	kg	
19823161	M16	100	70	x	70	2x5.0	100	x	100	x	6	4		510902	0.860	20
19823201	M20	100	80	x	80	4x11.0	100	x	100	x	6	4		510919	1.080	20
19823202	M20	200	80	x	80	4x11.0	100	x	100	x	6	4		510926	1.300	10

Surface: hot-dip galvanised

Height-adjustable in the installed condition
Mounting plate can be preassembled.

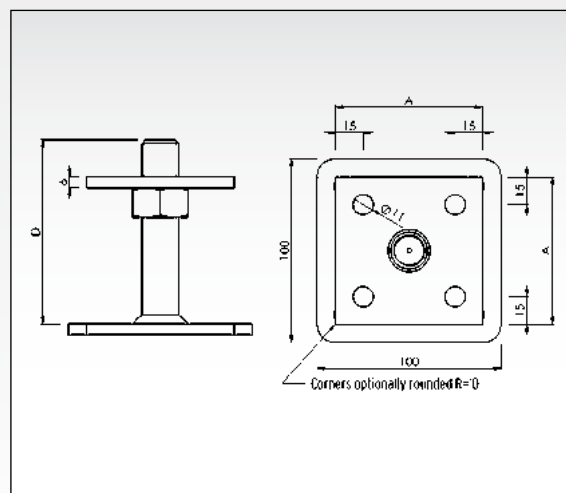
Fixing with:

TOP-FIX DUO screw (see page 109)

*Structural calculation example

Art. No.	Post [mm]		Pressure F _{1,Rk}	Tension F _{1,Rk}	F _{2/3,Rk}	F _{4/5,Rk}
	min w	min h	Steel [kN]			
19823161	90	90	30.8	-	-	-
2 screws Ø 4 x 60						
19823201	100	100	54.4	-	2.83	2.83
19823202	100	100	30.0	-	1.37	1.37

4 screws Ø 10 x 120



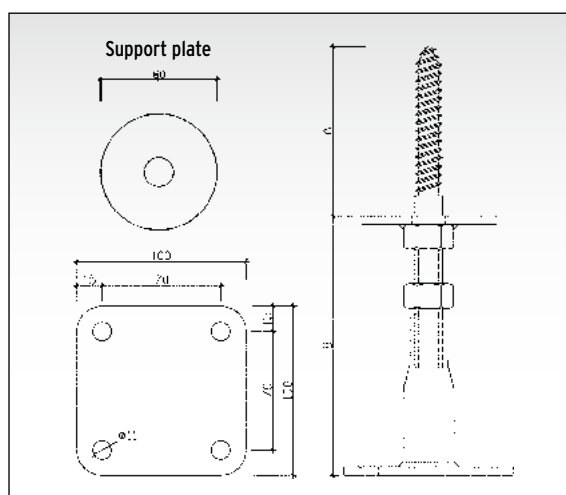
FIX COLUMN BASE ON CONCRETE, HEIGHT-ADJUSTABLE



Art. No.	Dimensions [mm]		Mounting plate [mm]	Baseplate [mm]	EAN	Weight kg	PU
	Pin	D	Ø	L x W x D Ø 11			
19523110	16x90	130-170	80	100 x 100 x 5 4	165508	1.050	10

Surface: galvanised

In installed condition, height adjustable from 130 – 170 mm



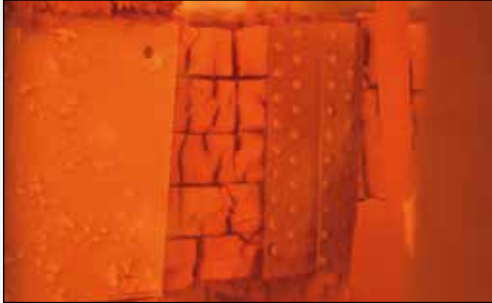
Type PB / fixed column base



*The load bearing capacities are only indicative.
Detailed structural information is provided on our
website at: www.holzverbinder.de

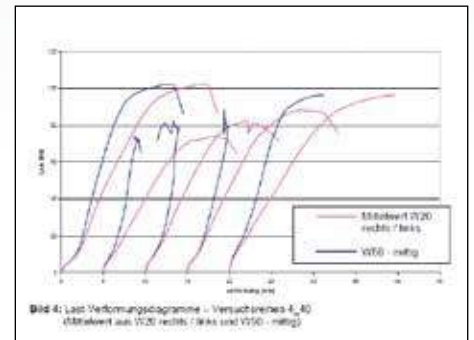
ON THE SAFE SIDE WITH GH!

GH FIRE SAFETY TEST



Fire safety tests with Munich's technical university (TU München).

GH STATIC TESTS



Static tests at the TU KIT Karlsruhe with GH products.

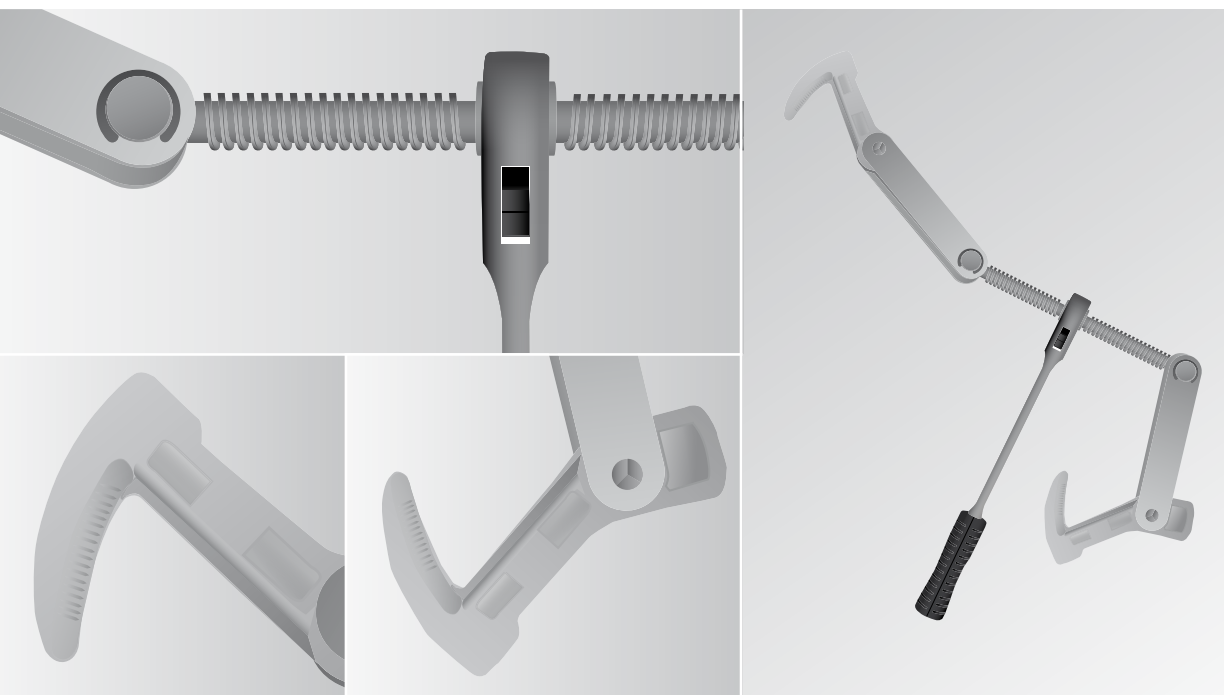
GH CERTIFICATES AND APPROVALS



We are certified and approved in many areas - nationally and internationally.

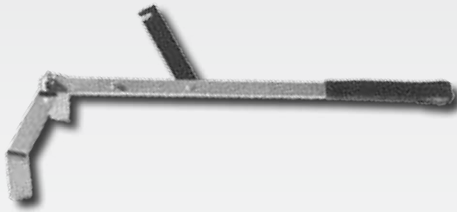
17

TOOLS



WIND BRACING STRIP TENSIONER WITH SAFETY CLIP

Art. No.	EAN	Weight	PU
	4019346	kg	
33000117	000748	1.38	1



With safety clip, no wood damage, non-slip handle, easy use.

WIND BRACING STRIP UNWINDER

Art. No.	Belt width	EAN	Weight	PU
		4019346	kg	
33000122	40	000755	14.00	1
33000124	60 - 80	000779	16.70	1



GH wind bracing strip unwinder

For transport and use of the wind bracing strip in the workshop and on the construction site.

The advantages:

- easy to pull off
- no risk of injuries due to protruding strip parts
- easy to use
- 160 mm rubber tyre wheels with rolling bearings ensure very easy running
- the device is completely hot-dip galvanised, i.e. no rusting
- holder for shears provided on the device

RAFTER CLAMP

Art. No.	EAN	Weight	PU
	4019346	kg	
33000200	167106	2.37	1



Rafter clamp

For clamping, pulling and pressing together the timbers when handling. The rafter clamp has die-forged hooks, whose impact contact points are not hardened due to the risk of splintering. The rafter clamp has riveted connections instead of welds, which can crack due to the impacts. There are no screws in the ratchet that could loosen. The new generation with ergonomic rubber handle for secure grip. 5-year guarantee on threaded parts!

Use these advantages!

BRACING STRIP TENSIONER WITH THREAD

FOR GH RAFTER CLAMP

Art. No.	EAN	Weight	PU
	4019346	kg	
33000121	000786	1.16	1



Used in conjunction with the rafter clamp, is the ideal tensioner for all bracing strip dimensions. Is screwed onto one side of the rafter clamp.

WIND BRACING STRIP SHEARS

Art. No.	EAN	Weight	PU
	4019346	kg	
33000123	000762	2.70	1



Wind bracing strip shears

- long cutting edges prevent deformation on cutting the strips and perforated metal sheets
- cut through 40 mm strip with one cut
- suitable for all bracing strip dimensions and perforated metal sheets of any widths
- easy cutting due to lever design

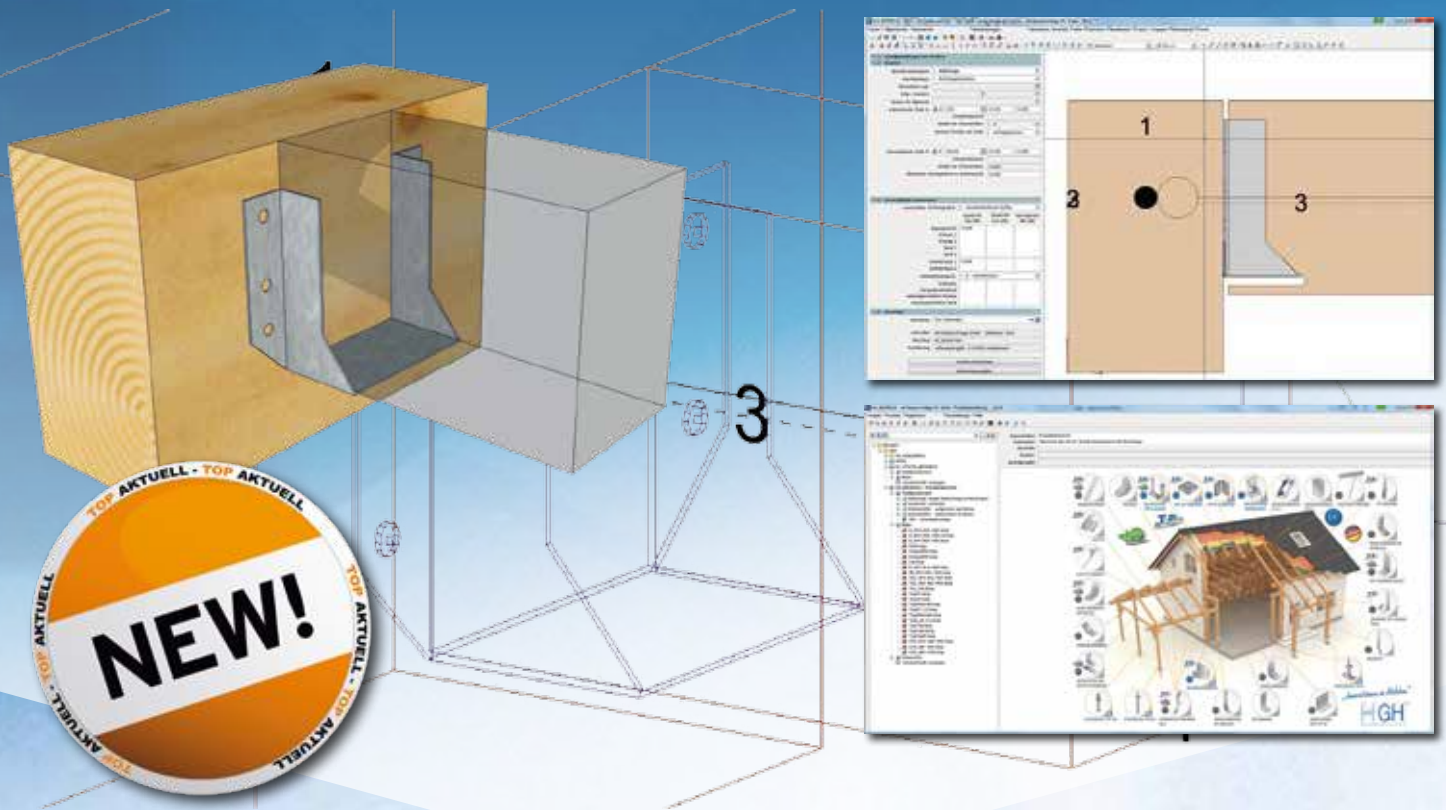
Product name	Page
A	
Anchor nails	89
Angle brackets	43
Angle bracket - Z	48
Angle bracket Type 40 / 90	45
Angle bracket Type 40 / 120	45
Angle bracket Type 40 / Type 45	44
Angle bracket Type 50 / Type 80	42
Angle bracket Type 55 / 70 S	36
Angle bracket Type 55 / 80	43
Angle bracket Type 65 / 90 S	38
Angle bracket Type 90 / 100 S	39
Angle bracket Type 110	42
Angle bracket Type 692	46
Angle bracket Type HB	60
Angle bracket Type HS	60
Angle bracket Type HSB	60
Angle bracket Type RL / LL / LLG	47
Angle brackets 110/170 S	40
Angle brackets from page	34
Angle brackets KR, elongated hole / round hole	41
Angle brackets, chair	48
Angle brackets, concrete	50
Angle brackets, entrance door	48
Angle brackets, extra strong	46
Angle brackets, stainless steel	93
Angle brackets, strong	48
Angle brackets, TOP 80 / TOP 120	35
Angle brackets, TOP-KR90E(XTRA)	37
B	
Beam hangers from page	31
Beam hangers Type aluminium	31
Beam hangers, 2-rows, Type M, inclined joint	32
Bracing strip tensioner with thread for rafter clamp	135
Bracing strip Type Z with approval	85
C	
Chair bracket connectors	48
Clamping equipment	135
Clip-Fix wind bracing joints, Type 40 / Type 60	86
Column base Group S – Type B on concrete	125
Column base Group S – Type B on concrete with bead	125
Column base in concrete from page	112
Column base in concrete, adjustable, from page	120
Column base on concrete from page	122
Column base on concrete, adjustable, from page	126
Column base Type D 03 on concrete, height-adjustable	128
Column base Type D 05 on concrete, height-adjustable	129
Column base Type D extra strong on concrete	123
Column base Type D in concrete	118
Column base Type D in concrete, height-adjustable	121
Column base Type D on concrete	124
Column base Type D on concrete, height-adjustable	129
Column base Type D pin 24 on concrete, height-adjustable	127
Column base Type D pin 40 on concrete, height-adjustable	127
Column base Type DS in concrete	118

Product name	Page
Column base Type H in concrete	119
Column base Type L-60 in concrete	113
Column base Type P on concrete	123
Column base Type P on concrete, height-adjustable	130
Column base Type P24 on concrete, height-adjustable	130
Column base Type R in concrete	119
Column base Type T01 in concrete	116
Column base Type T01 on concrete	124
Column base Type T01H on concrete, height-adjustable	128
Column base Type T02 in concrete	116
Column base Type T03 in concrete	117
Column base Type T04 extra strong in concrete	117
Column base Type T05 extra strong on concrete	123
Column base Type U-60 in concrete	113
Column base Type U-70 in concrete	114
Column base Type U-70 in concrete, laterally adjustable	121
Column base Type U-70 on concrete, height/laterally adjustable	131
Column base Type U-90 in concrete	114
Column base, Type PB on concrete, height-adjustable	132
Column base, Type PR on concrete, height-adjustable	131
Concealed beam hanger, 2-rows Type M with fixed mounting plate	32
Concealed beam hanger, 4-rows Type M with fixed mounting plate	32
Concealed connector TOP OV	30
Concealed connector TOP UV	27
Concealed connectors from page	26
Concealed connectors from page	26
Concrete, angle brackets	50
Connector nails	89
Connector nails, stainless steel	93
Construction bolts DIN 601	108
Corner angle bracket	51
Countersunk washers	108
D	
Decking screw KKT Ø 5.0 mm	102
DIN 571	108
DIN 601	108
Disc connectors	66
Toothed plate connectors	66
Dowel Ø 8.0 mm to CE EN 14592	91
Dowel Ø 10.0 mm to CE EN 14592	91
Dowel Ø 12.0 mm to CE EN 14592	92
Dowel Ø 16.0 mm to CE EN 14592	92
Dowel Ø 20.0 mm to CE EN 14592	92
Dowels from page	91
Drilling template for beam hangers/integral connectors	33
Drilling template Type D	127
Drilling template Type T	124
Drive-in ground sleeve	119
Drive-in nuts	108
F	
Fix column base, height-adjustable on concrete	132
Flat connector plate, heavy duty	64
Flat connector plate, light duty	64
Flat steel anchors	60
Flat steel concrete anchors	60
Front door angle bracket	48

Product name	Page
Fully-threaded screws DGZ Ø 7.0 mm – Ø 9.0 mm	106
Fully-threaded screws for OV	30
Fully-threaded screws for TOP UV	28
G	
GEKA connectors	66
GH screw with approval	90
GreenLine series (overview)	25
Ground sleeve	125
H	
H post supports	119
HE anchors	63
Hex head wood screws DIN 571	108
HT tension ties	54
HT tension ties - two-piece	56
I	
Integral connector Type aluminium	31
Integral connector, 2-rows Type M with fixed mounting plate	32
Integral connector, 2-rows Type M, inclined joint	32
Integral connector, 4-rows Type M with fixed mounting plate	32
Joist hanger 2-piece	24
Joist hanger Type 05 / 2	19
Joist hanger Type 05 / 2.5 combination, extra strong	18
Joist hanger Type 07	20
Joist hanger Type GH 04 Combination	16
Joist hanger Type I GH 04 / Combination	21
Joist hanger Type I GH 05 / 2	23
Joist hanger Type I GH 05 / 2.5 Combination, extra strong	22
Joist hanger Type TOP	12
Joist hanger Type TOP-K 50	14
Joist hanger Type TOP-M	9
Joist hangers from page	8
K	
KR angle brackets, elongated hole / round hole	41
M	
Mounting strip in plastic box	85
N	
Nailing bracket, unequal leg lengths	79
Nailing brackets, equal legs 2.0 mm and 2,5 mm	79
Nailing brackets, stainless steel	93
Nailing plate panels 2.0 mm - 3.0 mm	82
Nailing plates 1.5 mm	83
Nailing plates 2.0 mm	82
Nailing strap ties 2.0 mm and 2.5 mm	80
O	
OV concealed connectors	30
P	
Plain washers DIN 1052 – DIN 440	108
Post holders from page	112
Post supports from page	112
Profile-anchors	63
Purlin anchors from page	69
Purlin cleats	76
Purlin nails	89
R	
Rafter clamp	135
Rafter cleats	71

Product name	Page
Twist strap RL-D with locator prong	69
Twist straps	71
Twist straps from page	69
Twist straps RL	70
Twist straps, stainless steel	93
S	
Screw GH with approval	90
Screw TOP-FIX Duo Ø 8.0 – Ø 12.0 mm	109
Screw-on ground sleeve	125
Split ring connectors	66
Stainless steel joist hangers	93
Stainless steel timber connectors	93
Stainless steel timber connectors V4A	93
Strut connectors with 135° angle	40
T	
T-beam anchors	63
Tension tie connectors TOP 80 / TOP 120 Vario	59
Tension ties from page	52
Tension ties HT	54
Tension ties HT - two-piece	56
Tension ties including plain washer	58
Tension ties TOP 240 / TOP 280 Vario	53
Timber screw GH S countersunk head Ø 3.5 – Ø 10.0 mm	96
Timber screws from page	94
Tools	135
TopLine series overview	6
Truss clips from page	72
Truss clips Type B (concrete)	72
Truss clips Type H (timber)	73
Truss clips, 2-piece	71
U	
Universal connector	65
UV concealed connector	27
W	
Wafer head countersunk screws KF stainless steel Ø 4.0 – Ø 6.0 mm	100
Wafer head GH SK Ø 6.0 – Ø 8.0 mm	98
Wafer head screw GH SK Ø 6.0 – Ø 8.0 mm	98
Washer for angle bracket HB and HSB	60
Washer for tension ties HT	54
Washer for tension ties TOP 240/280 Vario	53
Washer for TOP 80 / TOP 120 Vario connectors	59
Width adjustable joist hanger Type 2 (2-piece)	76
Width adjustable joist hanger Type 3 (2-piece)	75
Wind bracing joints, Clip Fix	86
Wind bracing joints, standard	87
Wind bracing strip shears	135
Wind bracing strip tensioner	135
Wind bracing strip unwinder	135
Wind bracing strips	85
Wind stiffening set, Clip Fix	86
Z	
Z-angle brackets	48

Extensive design and dimensioning of our GH timber connectors* in the new GH "DC-Statik" structural calculations software



You can have GH products in the catalog with this information button calculated using the GH DC structural calculations software.



With the GH DC structural calculations software you can design the GH timber connectors in the catalog marked with the GH DC structural calculations ("Statik") button, quickly and easily on the basis of the respective approval and taking into account national application documents.

The following are currently available to choose from:

- EC - Eurocode with national annexes for Germany, Austria and France
- SIA - Swiss standard
- NTC - Italian standard

By entering the design criteria, the timber cross-sections and the loads, you are given a choice of possible connectors. With a few clicks you receive checkable structural calculations of the design as a PDF document.

The GH DC structural calculations software is available to download, free of charge, from dc-statik.holzverbinder.de. If you have any questions, you can reach our engineering department by phone on +49 (0) 7023-743323-40 or by email to statik@holzverbinder.de

*Timber-to-timber joist hangers, integral connectors, UV timber-to-timber connectors, OV connectors, column bases



On www.holzverbinder.de you will find much more information on the GH products. You can download approvals, structural calculations, drawings and CAD files from the product groups area.



On www.holzbauschrauben.de you will find much more information on our timber screws. In addition to approvals and structural calculations, in the download area you can also download our new GH Calc software for our new fully-threaded screws.





GH Baubeschläge GmbH
Austraße 34
73235 Weilheim/Teck, Germany
Phone +49 70 23 743323-0
Fax +49 70 23 743323-29
www.holzverbinder.de
info@holzverbinder.de

GH[®]
BAUBESCHLÄGE