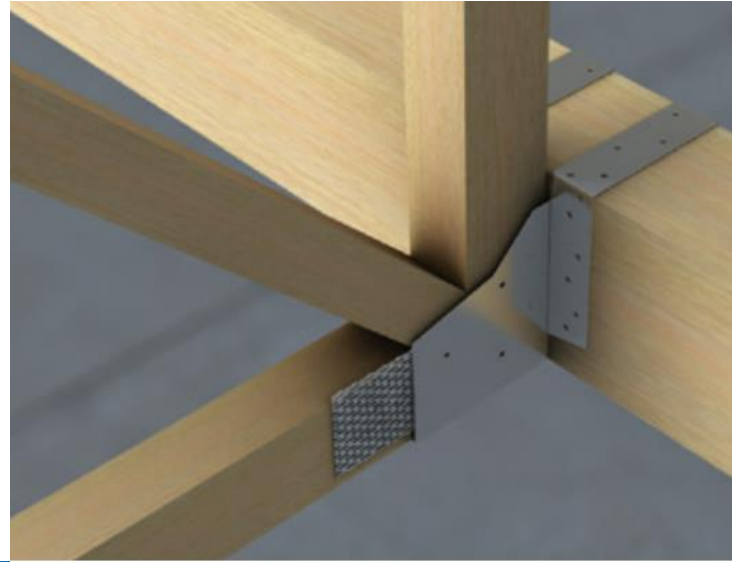
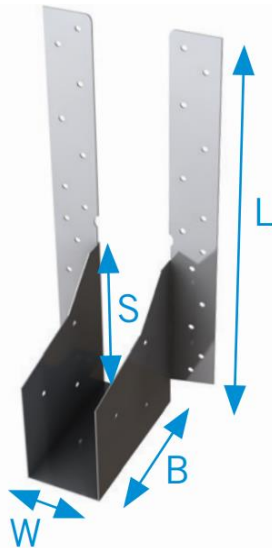


## Timber Engineering Hardware

A comprehensive range of connectors produced from galvanised steel to BS EN 10346:2009 +G275 as standard or stainless steel to order. Galvanised hangers must be fixed using 30 x 3.75mm sheradised square nails in all pre-punched holes.



### GTS Girder Truss Shoe

Designed to provide a structural connection between a truss and a girder truss or beam. Manufactured from 1.2mm thick galvanised steel to BS EN 10346:2009 + G275. Features a location tab allowing easy accurate alignment of the hanger. The holes in the bearing surface are within this tab, so they provide fixing points to the bottom edge of the header rather than the joist. Suitable for face fix or wrap-over fixing. **Box quantity 50.**

### Test Standard

Tested by BMTRADA to ETAG015

Verified by TZUS to EAD 130186-00-0603. – ETA 20/0915.

Declaration of Performance – Joist Hangers 19-0681-001

### Dimensions

Product code	Dimensions [mm]				Holes no. x Ø [mm]		
	W	L	B	S	in leg length	in side plate	in bearing surface
GTS800/38	38	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/44	44	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/47	47	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/50	50	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/63	63	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/75	75	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/88	88	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/91	91	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0
GTS800/100	100	343	100	116	26 x 4.0	8 x 4.0	2 x 4.0

\*Values may be used for wrapped over the top edge of the header

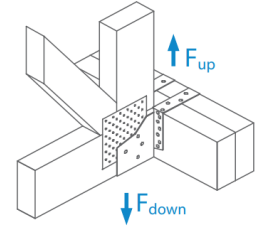
Minimum 2 x 9 No. fasteners fixed in the header face and 2 x 3 No. fasteners fixed in the header top edge

\*\* Use C24 values for wrapped header plates



## Load Data

These properties should be used for design in accordance with EN 1995-1-1:2004/A1 (Eurocode 5) or an appropriate national code. The load-carrying capacities have been derived by calculation or design assisted by testing or by testing.



Product code	Characteristic Capacity [kN]											
	C16 timber				C24 timber*				TR26 timber**			
	Type A nails		Type B nails		Type A nails		Type B nails		Type A nails		Type B nails	
	F <sub>up</sub>	F <sub>down</sub>	F <sub>up</sub>	F <sub>down</sub>	F <sub>up</sub>	F <sub>down</sub>	F <sub>up</sub>	F <sub>down</sub>	F <sub>up</sub>	F <sub>down</sub>	F <sub>up</sub>	F <sub>down</sub>
GTS800/38	3.71	13.70	3.89	13.95	4.19	14.92	4.40	15.19	4.43	15.42	4.65	15.71
GTS800/44	4.14	14.27	4.51	14.77	4.67	15.56	5.09	16.12	4.94	16.10	5.38	16.69
GTS800/47	4.14	14.27	4.82	15.18	4.67	15.56	5.44	16.58	4.94	16.10	5.75	17.18
GTS800/50	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25
GTS800/63	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25
GTS800/75	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25
GTS800/88	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25
GTS800/91	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25
GTS800/100	4.14	14.27	4.86	15.23	4.67	15.56	5.48	16.64	4.94	16.10	5.80	17.25

## Fixings

Fix using either Type A, 30 x 3.75mm Sherardised Square Twist Nails OR Type B, 35 x 3.75mm. Sherardised Square Twist nails in all pre-punched holes.

Type	Description	d <sup>1</sup> (mm)	l (mm)	f <sub>ax,k</sub> <sup>2</sup> (N/mm <sup>2</sup> )	f <sub>u</sub> (N/mm <sup>2</sup> )
A	Square twist nails Sherardized finish Normally supplied loose for manual fixing	3.4	30	4.78	600
B	Square twist nails Sherardized finish Normally supplied collated for a nail gun	3.4	35	4.3	700

<sup>1</sup> This diameter is the minimum cross-section dimension in accordance with EN 14592. Square twist nails are often described in the market by their largest cross-section dimension, so that a 3.4 mm diameter nail will be sold as being 3.75 mm diameter.

<sup>2</sup> In timber with a characteristic density  $\rho_k$  of 350 kg/m<sup>3</sup>, i.e. C24 timber. At other values of  $\rho_k$  the value is modified so  $f_{ax,k} = f_{ax,k} \cdot \min\left(\frac{\rho_k}{350}, 1.1\right)$

## Installation

BPC Connectors are deemed fit for their intended use provided:

- The joints are designed in accordance with Eurocode 5 or an appropriate National Code using the characteristic values given in the Annexes. Design and detailing of structures should be carried out by suitably experienced persons in accordance with the manufacturer's instructions.
- Sides of the hanger should be at least 60% of the timber height to prevent rotation.
- Joist ends to be cut square with no more than 6mm gap from the rear of the hanger.



- Verifiable calculation, notes and drawings are prepared taking account of the loads to be carried
- The widths of the joist narrower than the exact joist hanger width does not exceed the tolerance of +0/-4mm to the joist hanger width
- The header supporting the joist is adequately restrained against rotation.
- Specified fasteners are installed in all available holes of the same diameter.
- Timber should be free of wane in the connectors.
- The actual maximum bearing capacity of the joist itself is checked separately by the designer of the structure.
- The eccentricity of the acting forces relative to the axis of the connection is not excessive.
- The connectors have been installed correctly by appropriately qualified personnel using adequate tools, in accordance with the relevant building regulations, the manufacturer's specifications and the drawing prepared for that purpose.