

TITAN PLATE T TIMBER



EN 14545

PLATES FOR SHEAR LOADS

TIMBER-TO-TIMBER

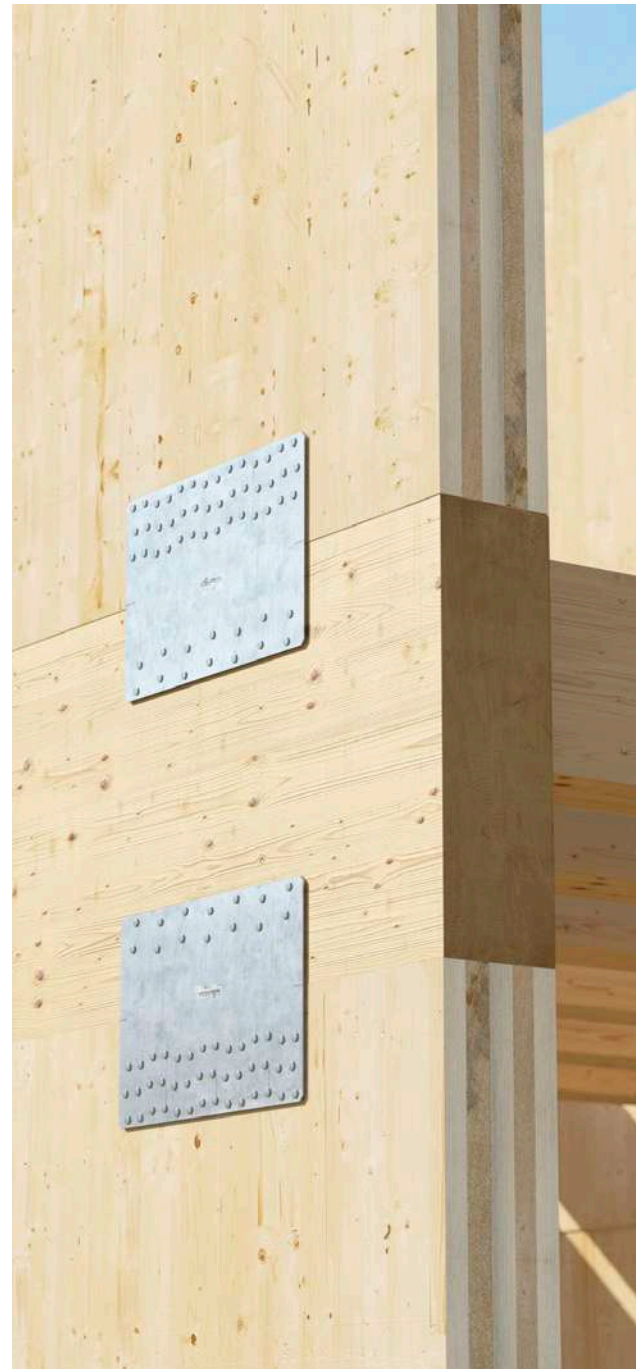
These plates are ideal for the flat connection of the timber platform beams to load-bearing timber panels.

SHEAR PLATES

Shear strengths calculated with both partial and total fastening for solid timber, glulam and CLT.

CALCULATED AND CERTIFIED

CE marking according to European standard EN 14545. Available in 2 versions. TTP300 version ideal for CLT.



CHARACTERISTICS

FOCUS	timber-to-timber shear joint
HEIGHT	200 300 mm
THICKNESS	3,0 mm
FASTENERS	LBA, LBS



MATERIAL

Bright zinc plated carbon steel, two dimensional perforated plate.


FIELDS OF USE

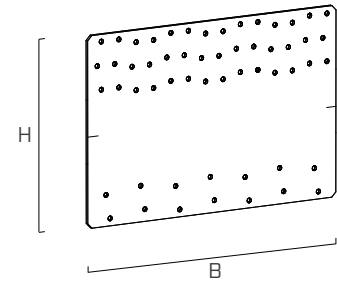
Timber-to-timber shear joints for panels and timber beams

- CLT, LVL
- solid timber and glulam
- framed structures (platform frame)

CODES AND DIMENSIONS

TITAN PLATE TTP

CODE	B [mm]	H [mm]	$n_{v1} \text{ } \varnothing 5$ [pcs]	$n_{v2} \text{ } \varnothing 5$ [pcs]	s [mm]		pcs
TTP200	200	105	7	7	3		10
TTP300	300	200	42	14	3		5



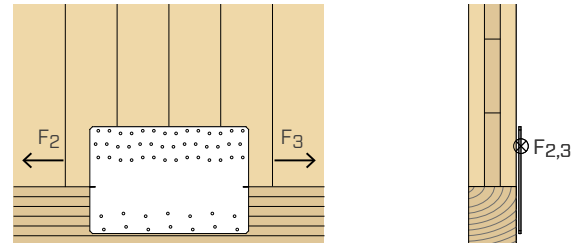
MATERIAL AND DURABILITY

TTP200: bright zinc plated carbon steel.
 TTP300: bright zinc plated carbon steel.
 To be used in service classes 1 and 2 (EN 1995-1-1).





FIELD OF USE

- Timber-to-timber joints

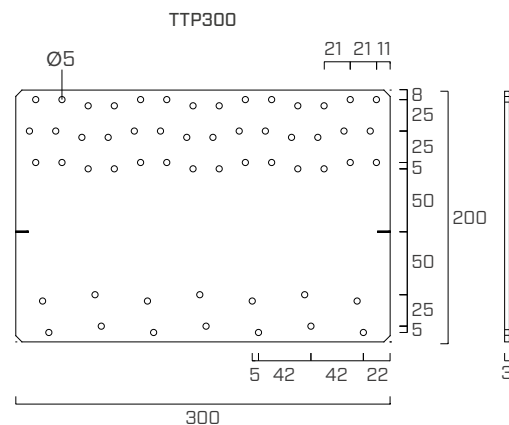
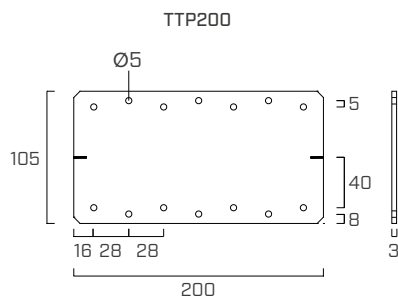
EXTERNAL LOADS



ADDITIONAL PRODUCTS - FASTENING

type	description		d [mm]	support	page
LBA	Anker nail		4		548
LBS	screw for plates		5		552

GEOMETRY



CLT

The 300 mm version is specially designed to maximise shear strength in CLT structures. Ideal for the connection of the floor platform beams to the load-bearing walls.

TIMBER FRAME

The 200 mm version also allows fastening the platform beams in the foundation (height higher than 8 cm) to the upper supporting panel, both in CLT and TIMBER FRAME structures.

INSTALLATION

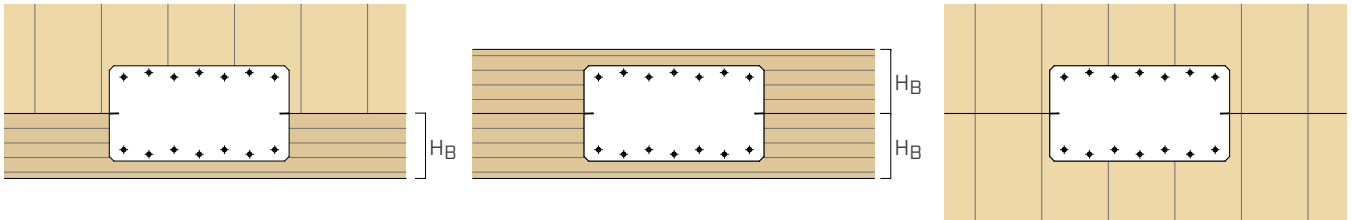
TTP plates can be used on both CLT and solid timber/glulam elements and must be positioned with the assembly notches at the timber-to-timber interface.

In the case of fastening on beam/platform beam, the minimum H_B dimension of the elements is shown in the table with reference to the installation diagrams.

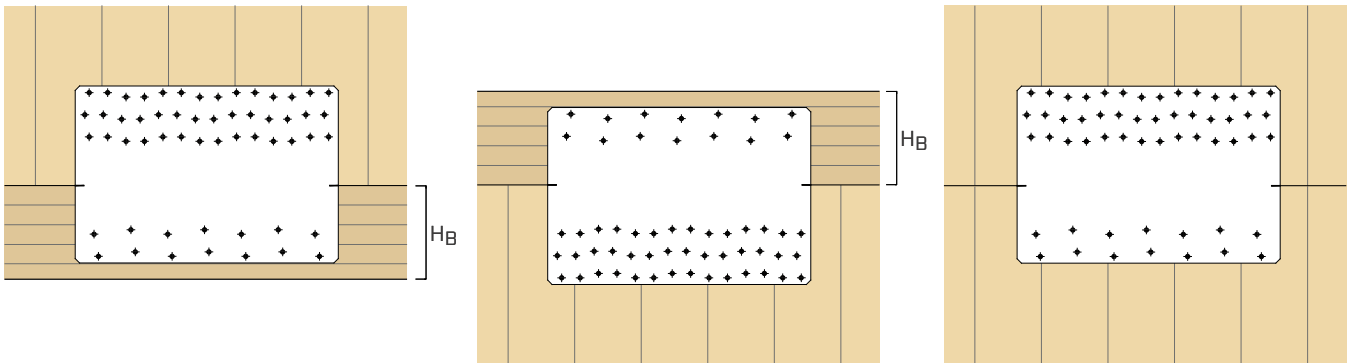
		$H_{B \text{ MIN}}$ [mm]	
		nails LBA Ø4	screws LBS Ø5
TTP200	total fastening	75	-
TTP300	total fastening	100	105
	partial fastening	110	130

The H_B height is determined taking into account the minimum distances for solid timber or glulam consistent with EN 1995-1-1 according to ETA considering a timber density $\rho_k \leq 420 \text{ kg/m}^3$

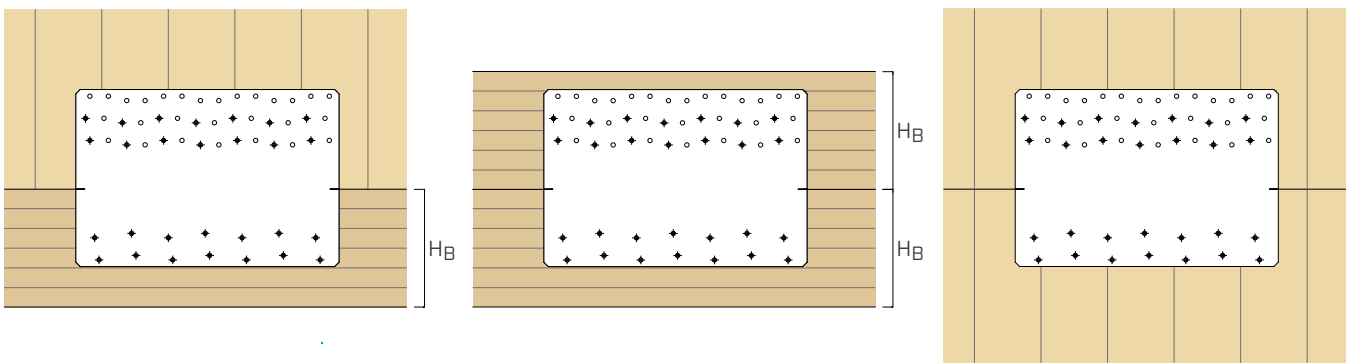
TTP200 | TOTAL FASTENING



TTP300 | TOTAL FASTENING

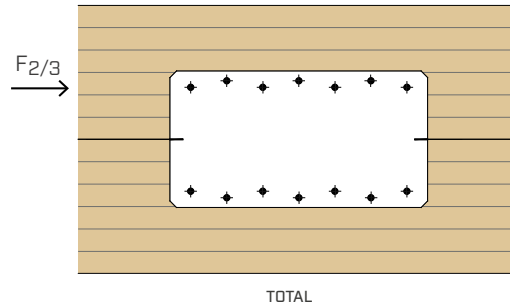


TTP300 | PARTIAL FASTENING



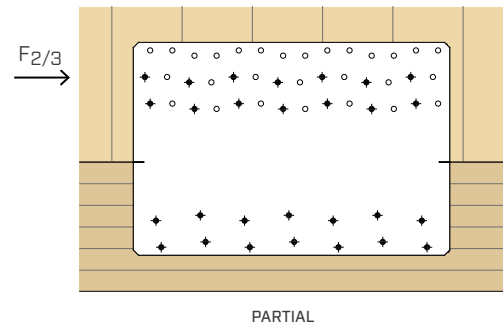
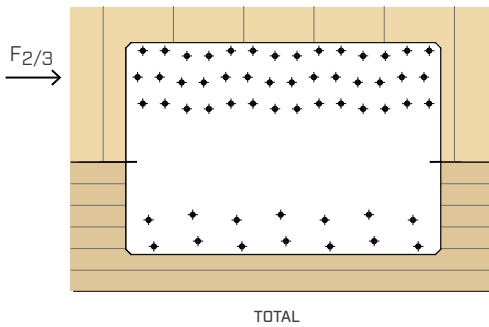
STATIC VALUES | SHEAR JOINT | TIMBER-TO-TIMBER

TTP200



configuration	TIMBER				$R_{2/3,k \text{ timber}}^{(1)}$ [kN]
	type	holes fastening Ø5 Ø x L [mm]	n_{v1} [pcs]	n_{v2} [pcs]	
• total fastening	LBA nails	Ø4,0 x 60	7	7	7,8

TTP300



configuration	TIMBER				$R_{2/3,k \text{ timber}}^{(1)}$ [kN]
	type	holes fastening Ø5 Ø x L [mm]	n_{v1} [pcs]	n_{v2} [pcs]	
• total fastening	LBA nails	Ø4,0 x 60	42	14	28,0
	LBS screws	Ø5,0 x 60	42	14	27,7
• partial fastening	LBA nails	Ø4,0 x 60	14	14	15,3
	LBS screws	Ø5,0 x 60	14	14	15,1

NOTES:

⁽¹⁾ Strength values are valid for all full/partial configurations indicated in the INSTALLATION section.

GENERAL PRINCIPLES:

- Characteristic values according to EN 1995-1-1.

The connection design strength values are obtained from the values on the table as follows:

$$R_d = \frac{R_{k \text{ timber}} \cdot k_{mod}}{\gamma_M}$$

The coefficients k_{mod} , γ_M should be taken according to the current regulations used for the calculation.

- For the calculation process a timber density $\rho_k = 350 \text{ kg/m}^3$ has been considered.
- Dimensioning and verification of the timber elements must be carried out separately.