WHT PLATE T TIMBER

PLATES FOR TENSILE LOADS

CE
EN 14545

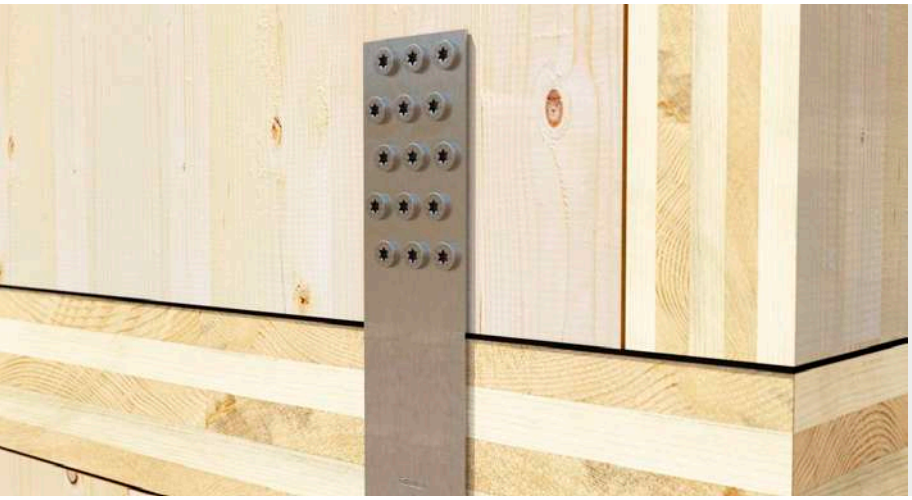
COMPLETE RANGE
Available in three versions of different thickness, material and height. The Pythagorean triple provides different levels of tensile strength.

TENSION
Ready-to-use plates: calculated, certified for tensile loads on timber-to-timber joints. Available in three different strength levels.

EARTHQUAKE AND MULTISTORY
Ideal for the design of multi-storey buildings for different floor thickness values. Characteristic tensile strength of more than 150 kN.

CHARACTERISTICS

FOCUS	tensile joints on timber
HEIGHT	from 600 to 820 mm
THICKNESS	from 3,0 to 5,0 mm
FASTENERS	HBS PLATE, HBS PLATE EVO

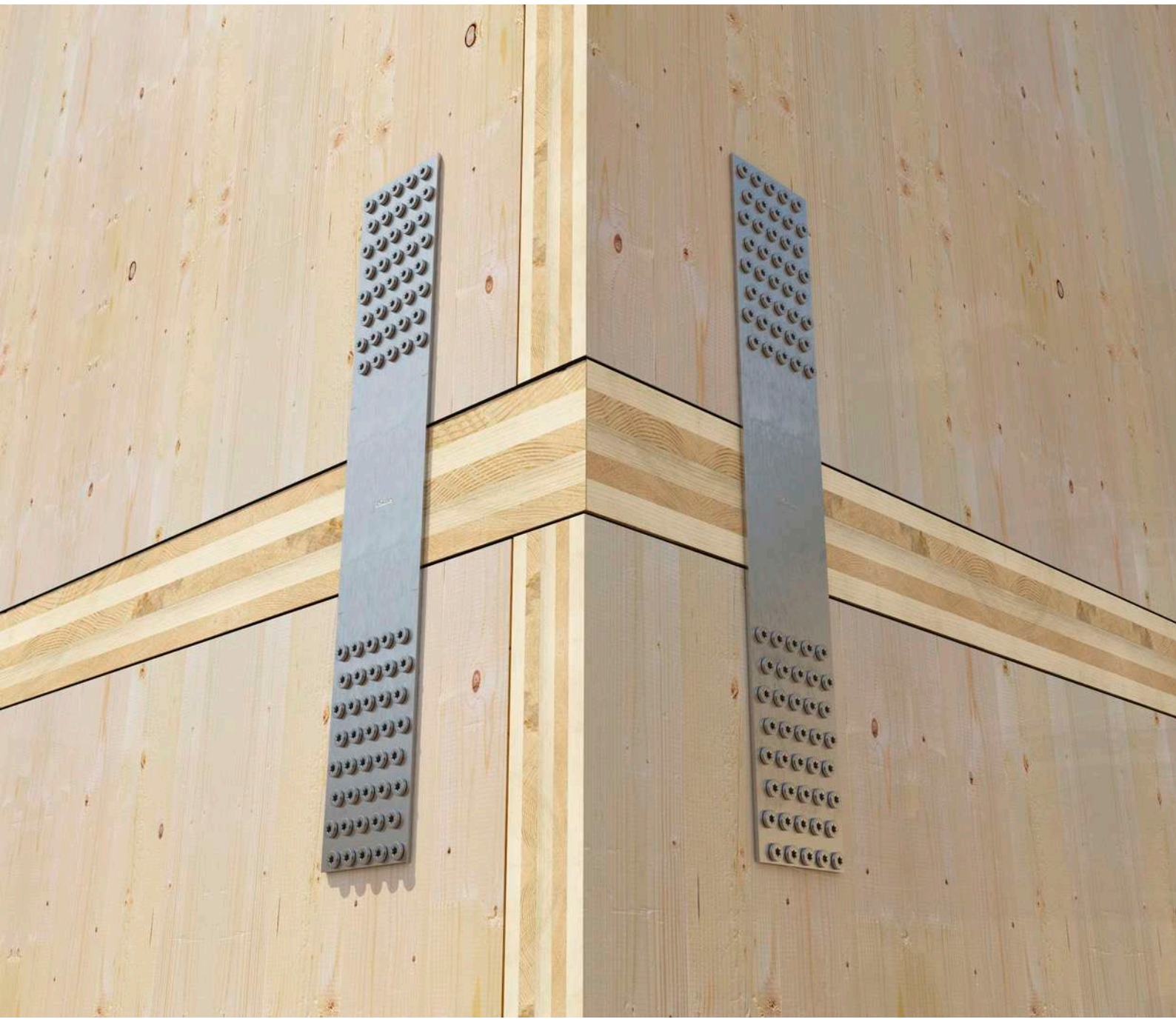


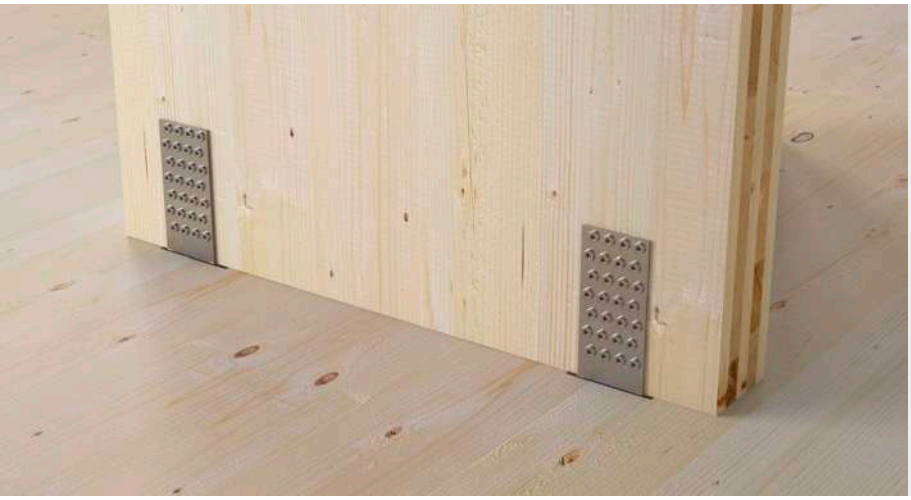
MATERIAL

Bright zinc plated carbon steel, two dimensional perforated plate.

FIELDS OF USE

Timber-to-timber tensile joints for panels and timber beams
- CLT, LVL
- solid timber and glulam
- framed structures (platform frame)
- timber based panels





MULTI-STOREY

Ideal for tensile joints in CLT multi-storey buildings where high tensile strengths are required. Optimised geometry for secure fastening.

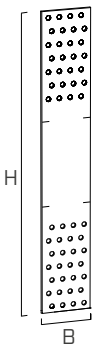
HBS PLATE

Ideal in combinations with HBS PLATE or HBS PLATE EVO screws. The head of the screws has a shoulder and the thickness is increased for the plates completely safe, reliable fastening to the timber.

CODES AND DIMENSIONS

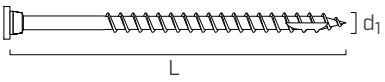
WHT PLATE T

CODE	H	B	n_v Ø11	s	pcs
	[mm]	[mm]	[pcs]	[mm]	
WHTPT600	594	91	30	3	10
WHTPT720	722	118	56	4	5
WHTPT820	826	145	80	5	1



HBS PLATE

CODE	d_1	L	b	TX	pcs
	[mm]	[mm]	[mm]		
HBSP880	8	80	55	TX40	100
HBSP8100	8	100	75	TX40	100



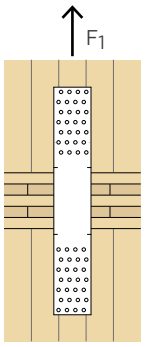
MATERIAL AND DURABILITY

WHT PLATE T: S355 bright zinc plated carbon steel.
To be used in service classes 1 and 2 (EN 1995-1-1).

FIELD OF USE

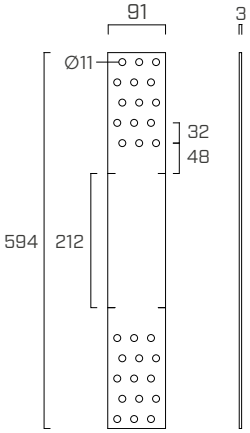
- Timber-to-timber joints

EXTERNAL LOADS

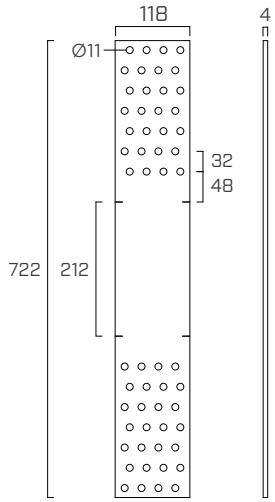


GEOMETRY

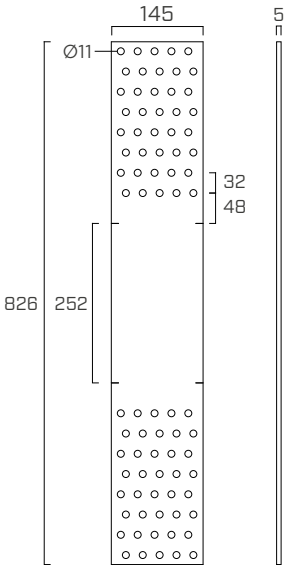
WHTPT600



WHTPT720

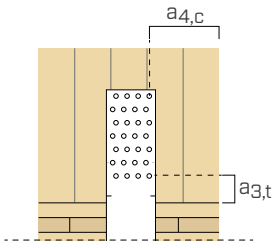


WHTPT820

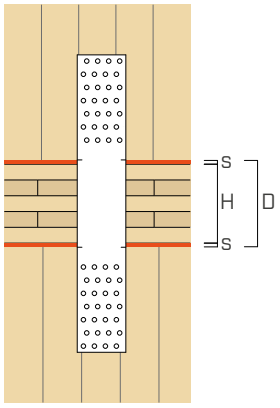


INSTALLATION

TIMBER minimum distances			screws HBS PLATE Ø8
CLT	$a_{4,c}$	[mm]	≥ 20
	$a_{3,t}$	[mm]	≥ 48



WHT PLATE T plates are designed for different floor thickness values including resilient acoustic profile. The positioning notches, as an assembly aid, indicate the maximum permitted distance (D) between the CLT wall panels in compliance with the minimum distances for HBS PLATE Ø8 mm screws. This distance includes the space required for the acoustic profile housing ($s_{acoustic}$).

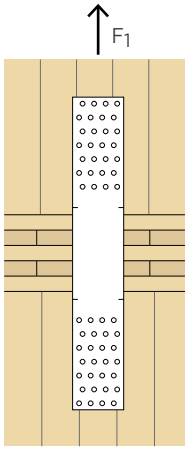


CODE	D [mm]	H_{max} floor [mm]	$s_{acoustic}$ [mm]
WHTPT600	212	200	6 + 6
WHTPT720	212	200	6 + 6
WHTPT820	252	240	6 + 6

STATIC VALUES | TIMBER-TO-TIMBER TENSILE JOINT

WHT PLATE T

	$R_{1,K}$ TIMBER			$R_{1,K}$ STEEL	
CODE	holes fastening Ø11 HBS PLATE Ø x L [mm]	n_v [pcs]	$R_{1,k\ timber}$ [kN]	$R_{1,k\ steel}$ [kN]	γ_{steel}
WHTPT600	Ø8,0 x 80	15 + 15	**56,8**	**80,3**	γ_{M2}
	Ø8,0 x 100	15 + 15	**62,1**		
WHTPT720	Ø8,0 x 80	28 + 28	**104,7**	**135,9**	γ_{M2}
	Ø8,0 x 100	28 + 28	**115,8**		
WHTPT820	Ø8,0 x 80	40 + 40	**158,5**	**206,6**	γ_{M2}
	Ø8,0 x 100	40 + 40	**176,1**		



GENERAL PRINCIPLES:

- Characteristic values are consistent with EN 1995 1-1 and ETA-11/0030.
  The design values are obtained from the characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{k\ timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{k\ steel}}{\gamma_{steel}} \end{cases}$$

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

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