WHT PLATE T TIMBER

PLATE FOR TENSILE LOADS

DESIGN REGISTERED

UK CA EN 14545

CE EN 14545

COMPLETE RANGE

Available in five versions of different thickness, material and height. HBS PLATE screws enable fast and safe assembly.

TENSION

Ready-to-use plates: calculated, certified for tensile loads on timber-to-timber joints. Available in five 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 200 kN.

USA, Canada and more design values available online.

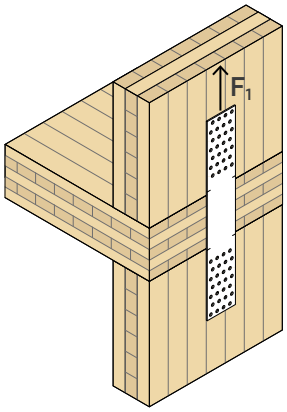
SERVICE CLASS SC1 SC2

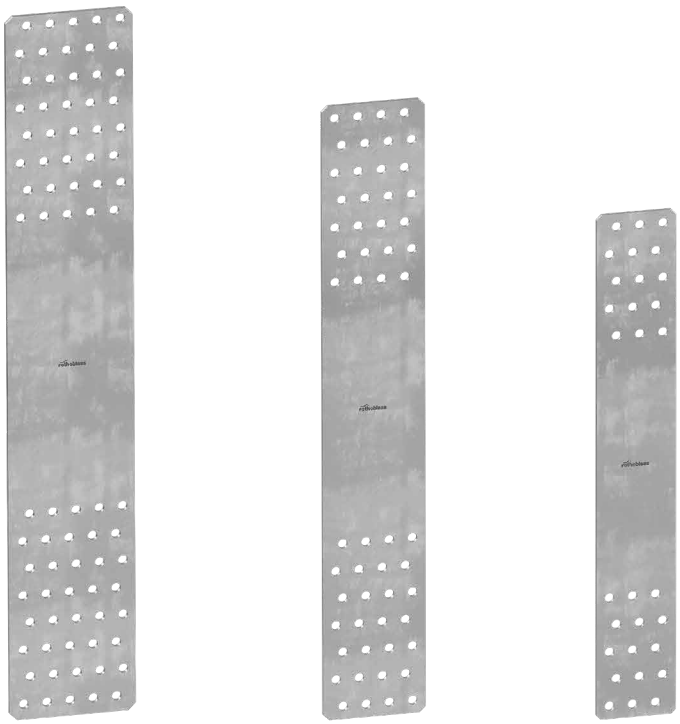
MATERIAL

S350 Z275 **WHTPT300** e **WHTPT530**: S350GD + Z275 carbon steel

S355 Fe/Zn12c **WHTPT600, WHTPT720 and WHTPT820**: S355 + Fe/Zn12c carbon steel

EXTERNAL LOADS



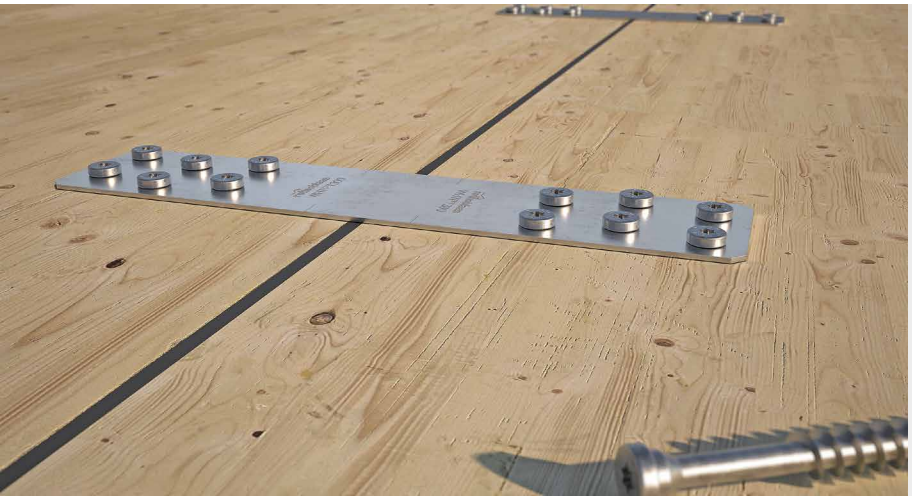


FIELDS OF USE

Tensile joints for timber walls, beams or floors. Timber-to-timber configuration.

Can be applied to:

- solid timber and glulam
- CLT and LVL panels



HBS PLATE

Ideal in combination with HBS PLATE or HBS PLATE EVO screws to securely and reliably fasten plates to timber. Disassembling the connection at the end of its life is quick and safe.

FLOOR JOINTS

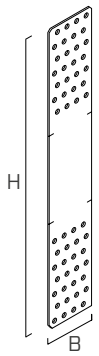
The new models TTP530 and TTP300 are also suitable for tensile joints between CLT panels in floors.

CODES AND DIMENSIONS

WHT PLATE T

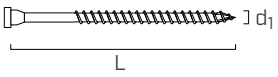
CODE	H	B	s	*H*	*B*	*s*	n_V Ø11 *n_V Ø0.44*	pcs
	[mm]	[mm]	[mm]	*[in]*	*[in]*	*[in]*	[pcs]	
WHTPT300(*)	300	67	2	*11 3/4*	*2 5/8*	*0.08*	6 + 6	10
WHTPT530(*)	530	67	2,5	*20 7/8*	*2 5/8*	*0.10*	8 + 8	10
WHTPT600	594	91	3	*23 3/8*	*3 9/16*	*0.12*	15 + 15	10
WHTPT720	722	118	4	*28 7/16*	*4 5/8*	*0.16*	28 + 28	5
WHTPT820	826	145	5	*32 1/2*	*5 11/16*	*0.20*	40 + 40	1

(*)Not holding UKCA marking.

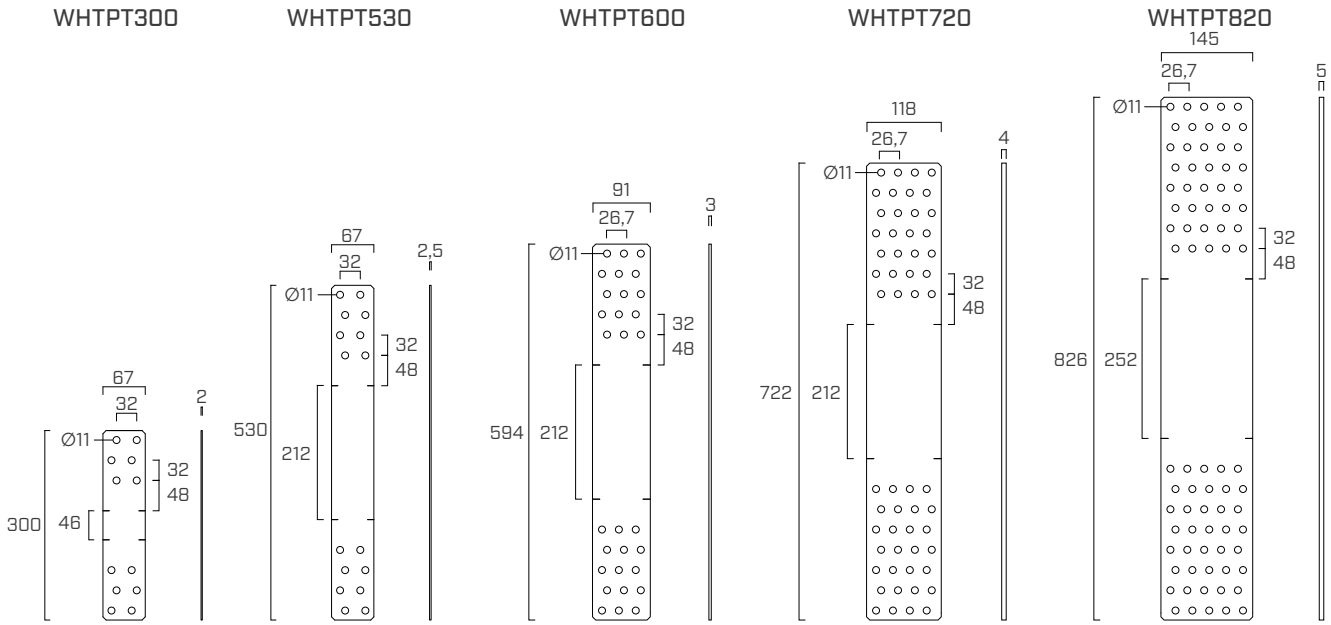


HBS PLATE

CODE	d_1	L	b	*d_1*	*L*	*b*	TX	pcs
	[mm]	[mm]	[mm]	*[in]*	*[in]*	*[in]*		
HBSPL880	8	80	55	*0.32*	*3 1/8*	*2 3/16*	TX40	100
HBSPL8100	8	100	75	*0.32*	*4*	*2 15/16*	TX40	100



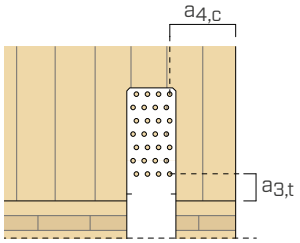
GEOMETRY



INSTALLATION

MINIMUM DISTANCES | INSTALLATION ON WALL

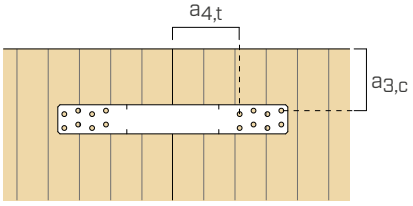
TIMBER minimum distances			screws HBS PLATE Ø8
CLT	$a_{4,c}$	[mm]	≥ 20
	$a_{3,t}$	[mm]	≥ 48



MINIMUM DISTANCES | INSTALLATION ON FLOOR

By using the WHTPT300 and WHTPT530 plates, the tensile connection between floors can be implemented. The minimum distances for this application are as follows:

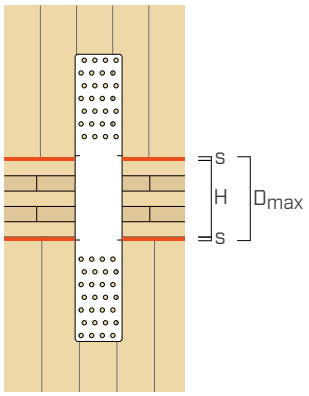
TIMBER minimum distances			screws HBS PLATE Ø8
CLT	$a_{4,t}$	[mm]	≥ 48
	$a_{3,c}$	[mm]	≥ 48



MAXIMUM DISTANCE BETWEEN PANELS D_{max}

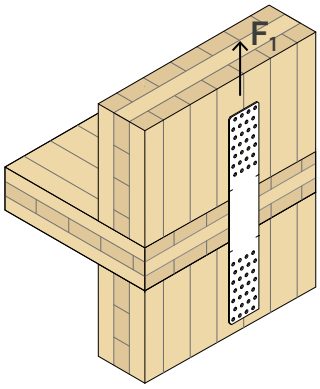
WHT PLATE T plates are designed for different floor thickness values including resilient acoustic profile. The positioning notches, as an assembly aid, indicate the maximum permitted distance (D) between the CLT wall panels in compliance with the minimum distances for HBS PLATE Ø8 mm screws. This distance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

CODE	D_{max} [mm]	H_{max} floor [mm]	$s_{acoustic}$ [mm]
WHTPT300	46	-	-
WHTPT530	212	200	6 + 6
WHTPT600	212	200	6 + 6
WHTPT720	212	200	6 + 6
WHTPT820	252	240	6 + 6



STRUCTURAL VALUES | TIMBER-TO-TIMBER | F_1

CODE	TIMBER			STEEL	
	fastening holes Ø11		$R_{1,k\ timber}$	$R_{1,k\ steel}$	
	HBS PLATE Ø x L [mm]	n_V [pcs]	[kN]	[kN]	γ_{steel}
WHTPT300	Ø8 x 80	6+6	**23,0**	**34,0**	γ_{M2}
	Ø8 x 100	6+6	**28,9**		
WHTPT530	Ø8 x 80	8+8	**30,5**	**42,5**	γ_{M2}
	Ø8 x 100	8+8	**38,4**		
WHTPT600	Ø8 x 80	15 + 15	**56,8**	**80,3**	γ_{M2}
	Ø8 x 100	15 + 15	**71,6**		
WHTPT720	Ø8 x 80	28 + 28	**104,7**	**135,9**	γ_{M2}
	Ø8 x 100	28 + 28	**132,3**		
WHTPT820	Ø8 x 80	40 + 40	**166,7**	**206,6**	γ_{M2}
	Ø8 x 100	40 + 40	**202,7**		



GENERAL PRINCIPLES

- Characteristic values comply with the EN 1995:2014 standard in accordance with ETA-11/0030.
- Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{k\ timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{k\ steel}}{\gamma_{M2}} \end{cases}$$

The coefficients k_{mod}, γ_M and γ_{M2} should be taken according to the current regulations used for the calculation.

- A timber density of ρ_k = 350 kg/m^3 was considered for the calculation process.
- Dimensioning and verification of the timber elements must be carried out separately.

INTELLECTUAL PROPERTY

- WHT PLATE T plates are protected by the following Registered Community Designs:
  - RCD 008254353-0019;
  - RCD 008254353-0020;
  - RCD 008254353-0021;
  - RCD 015051914-0007;
  - RCD 015051914-0008.