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 150 kN.

CANADIAN DESIGN VALUES
USA, EU and more design values available online.

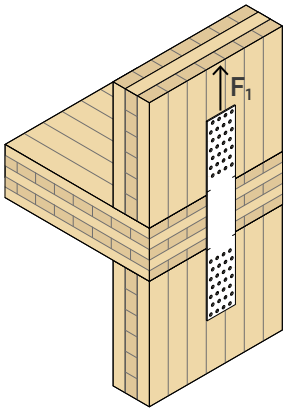
SERVICE CLASS DRY

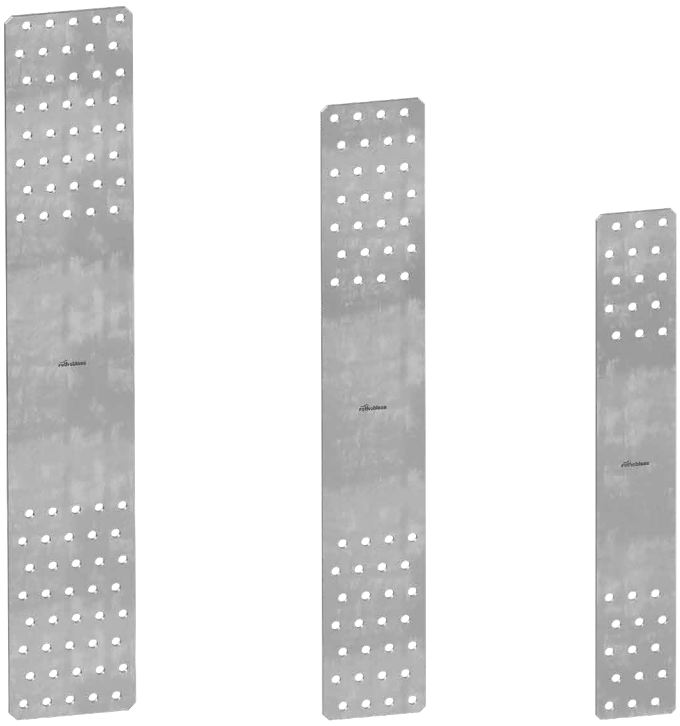
MATERIAL

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

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

EXTERNAL LOADS

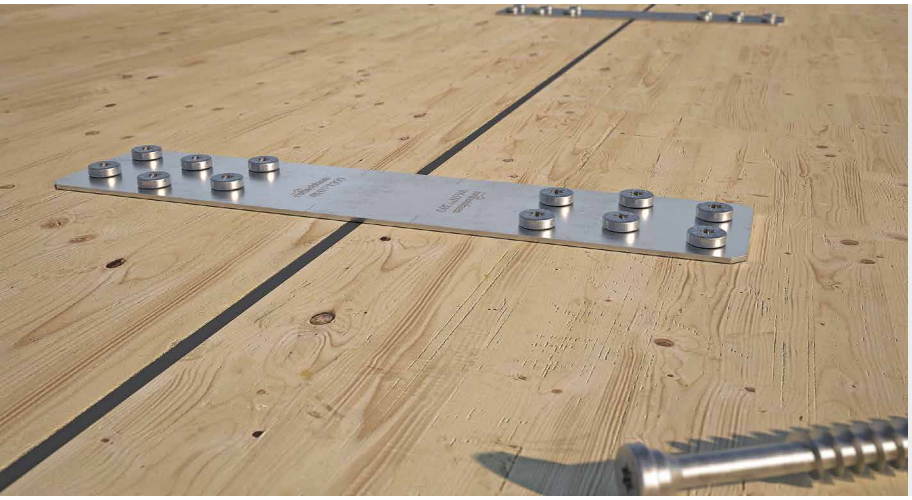




FIELDS OF USE

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

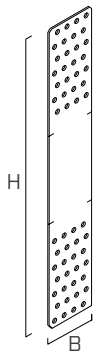
The new models WHTPT530 and WHTPT300 are also suitable for tensile joints between CLT panels in floors.

CODES AND DIMENSIONS

WHT PLATE T

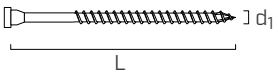
CODE	H	B	s	*H*	*B*	*s*	n_V Ø11 *n_V Ø0.44*	pcs
	[mm]	[mm]	[mm]	*[in]*	*[in]*	*[in]*	[pcs]	
WHTPT300(*)	300	67	2	*11 3/4*	*2 5/8*	*0.08*	6 + 6	10
WHTPT530(*)	530	67	2,5	*20 7/8*	*2 5/8*	*0.10*	8 + 8	10
WHTPT600	594	91	3	*23 3/8*	*3 9/16*	*0.12*	15 + 15	10
WHTPT720	722	118	4	*28 7/16*	*4 5/8*	*0.16*	28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

(*)Not holding UKCA marking.

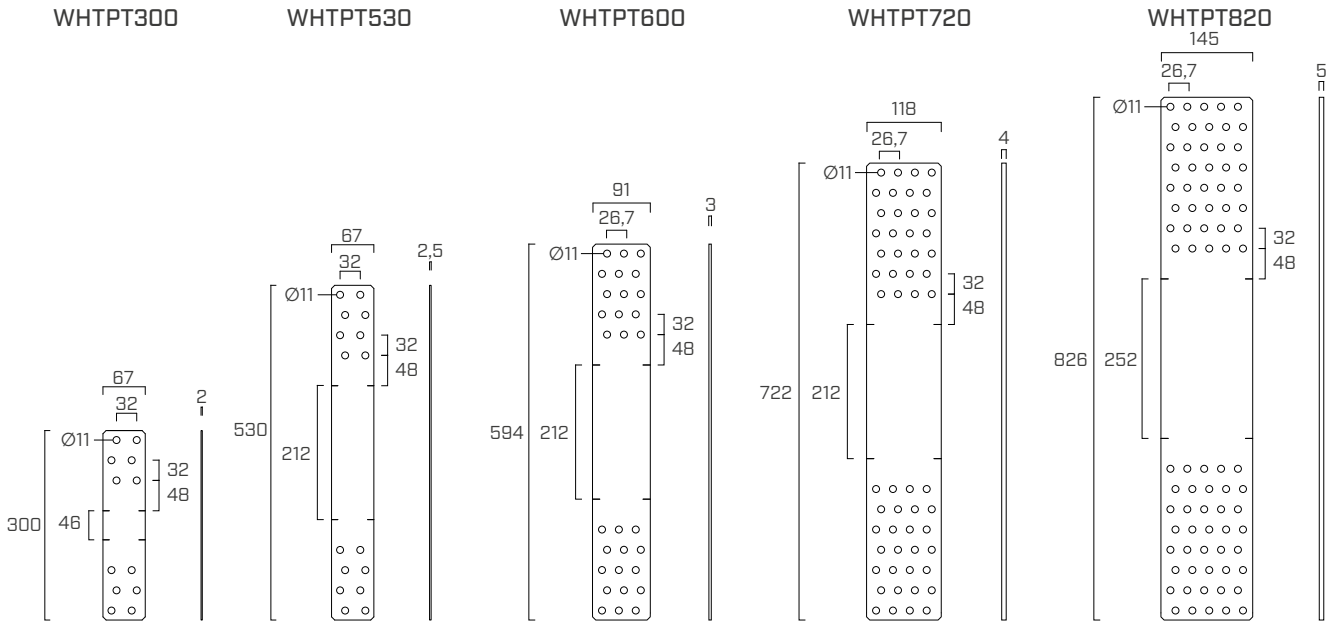


HBS PLATE

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



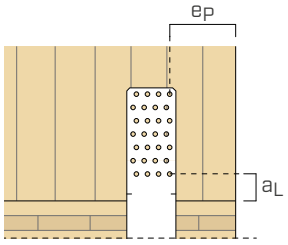
GEOMETRY



INSTALLATION

MINIMUM DISTANCES | INSTALLATION ON WALL

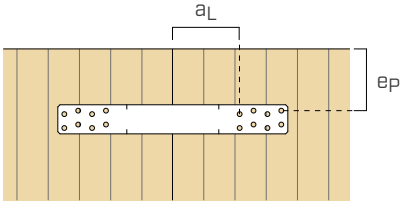
TIMBER minimum distances			screws HBS PLATE Ø8 not pre-drilled G ≤ 0.44	screws HBS PLATE Ø8 not pre-drilled 0.44< G ≤ 0.5	screws HBS PLATE Ø8 pre-drilled any G
CLT	e_P	[mm]	≥ 40	≥ 56	≥ 24
	a_L	[mm]	≥ 120‡	≥ 176	≥ 96†



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 not pre-drilled G ≤ 0.44	screws HBS PLATE Ø8 not pre-drilled 0.44< G ≤ 0.5	screws HBS PLATE Ø8 pre-drilled any G
CLT	e_P	[mm]	≥ 40	≥ 56	≥ 24
	a_L	[mm]	≥ 120‡	≥ 176	≥ 96†



G = mean relative density of wood
†For Douglas Fir-Larch and Western Red Cedar, this minimum spacing shall be increased by 50%.
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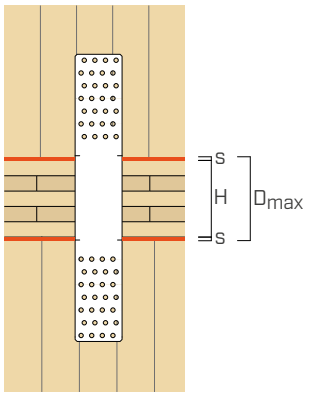
MAXIMUM DISTANCE BETWEEN PANELS D_{max}

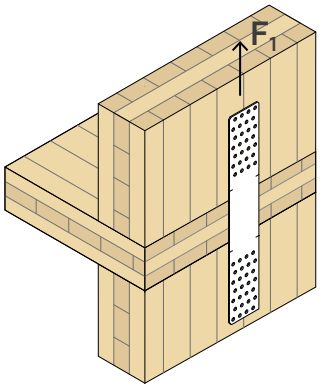
WHT PLATE T plates are designed for different floor thickness values including resilient acoustic profile. The positioning notches, as an assembly aid, indicate the maximum permitted distance (D) between the CLT wall panels in compliance with the minimum distances for HBS PLATE Ø8 mm screws. This distance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

CODE	fastening holes Ø11		N_r [1][2] Factored lateral resistance (K_D=1.15)			
	HBS PLATE Ø x L [mm]	n_V [pcs]	G = 0.35 [kN]	G = 0.42 [kN]	G = 0.49 [kN]	G = 0.55 [kN]
WHTPT300	Ø8 x 80	6+6	16,5	18,9	21,2	22,8
	Ø8 x 100	6+6	17,7	19,6	21,4	22,8
WHTPT530	Ø8 x 80	8+8	22,0	25,2	28,3	30,4
	Ø8 x 100	8+8	23,6	26,1	28,5	30,4
WHTPT600	Ø8 x 80	15 + 15	41,1	47,1	52,9	57,1
	Ø8 x 100	15 + 15	44,2	49,0	53,4	57,1
WHTPT720	Ø8 x 80	28 + 28	62,5	87,5	98,2	106,5
	Ø8 x 100	28 + 28	79,7	91,4	99,7	106,5
WHTPT820	Ø8 x 80	40 + 40	69,9	124,4	139,6	152,1
	Ø8 x 100	40 + 40	89,5	130,6	142,5	152,1



GENERAL PRINCIPLES

- The steel plate made of carbon steel S350 has a specified tensile strength equal to 350 MPa.
- The steel plate made of carbon steel S355 has a specified tensile strength equal to 355 MPa.
- The specified bending yield strength value of HPS PLATE (HBSPL) with a diameter of 8 mm is f_{yb}= 1047 MPa.
- G is the mean relative density according to Table A.12 in CSA O86:2025. Most common wood species are assumed such as Northern species (G = 0.35), Spruce-Pine-Fir (G = 0.42), Douglas Fir (G = 0.49), and Southern Pine (G =0.55).
- Dimensioning and verification of the timber elements must be carried out separately.

NOTES

[1] Values for factored lateral resistance for self-taping screws are determined following the guidelines in Section 12.12 in CSA-O86 2020. Short term load duration factor (K_D = 1.15), dry service condition factor (K_{SF} = 1.0), and treatment factor (K_T = 1.0) are assumed.

[2] Adjustment factor for connections (J_x) is assumed to be equal to 0.9 for CLT connections.

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.