

# WHT PLATE T TIMBER

## PLATE FOR TENSILE LOADS

### 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

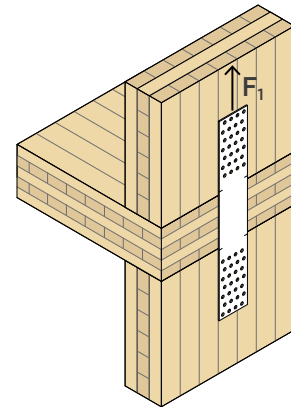
S350  
Z275

WHTPT300 e WHTPT530: S350GD + Z275 carbon steel

S355  
Fe/Zn12c

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

EXTERNAL LOADS

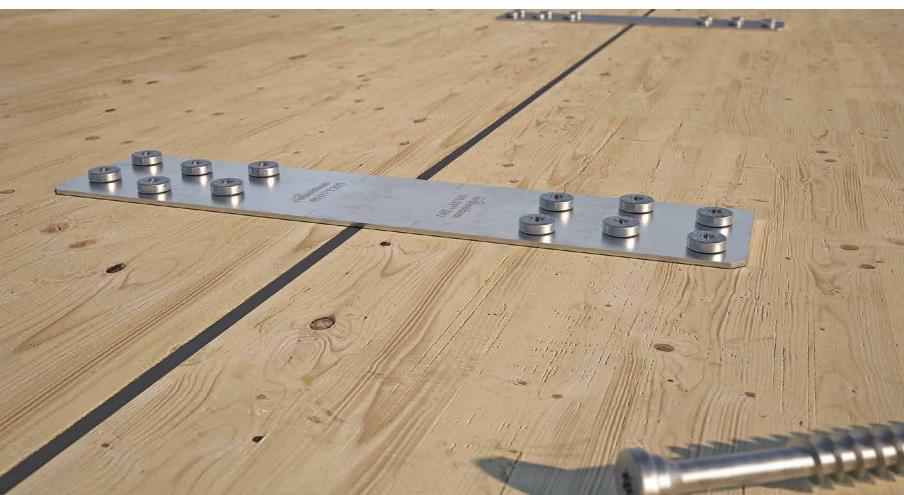
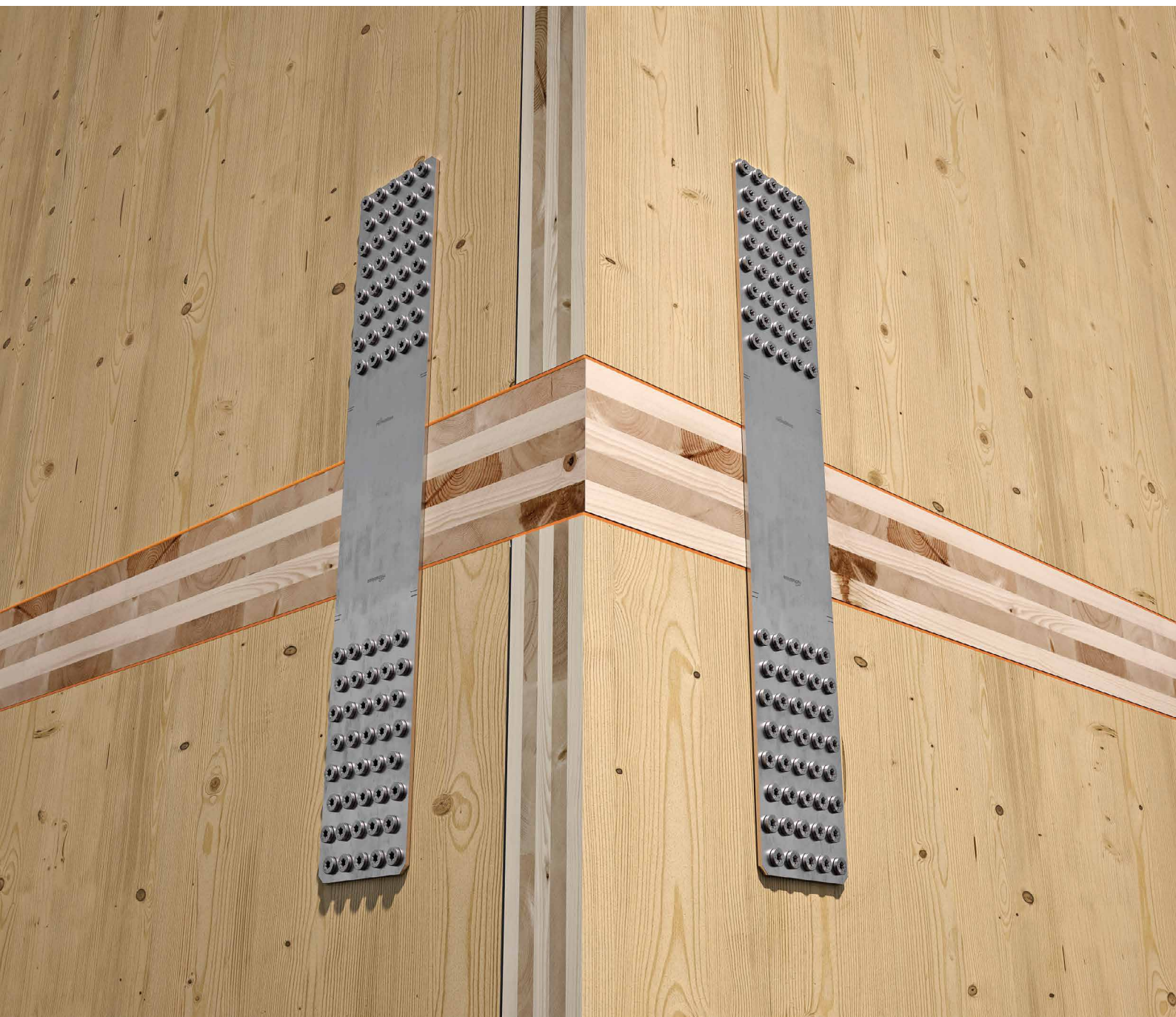


### FIELDS OF USE

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

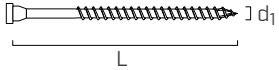
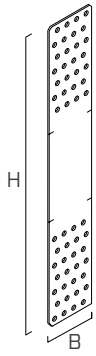
### WHT PLATE T

| CODE        | H    | B    | s    | H       | B       | s    | $n_V \varnothing 11$<br>$n_V \varnothing 0.44$ | 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   |

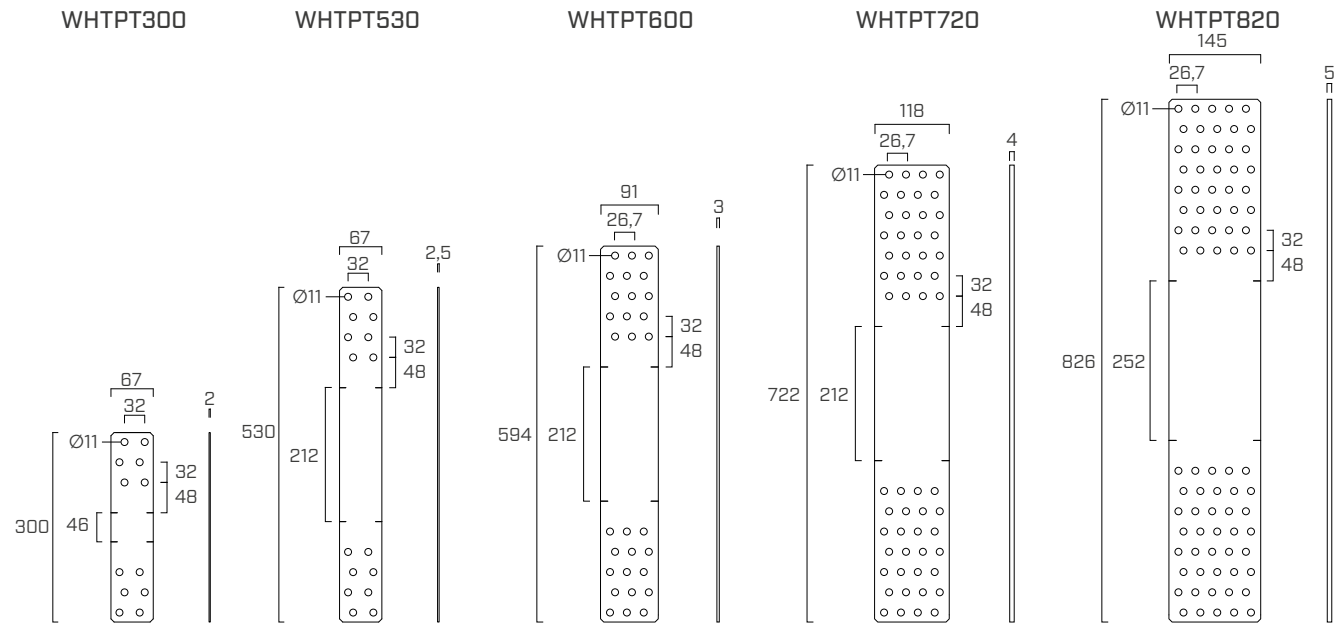
(\*)Not holding UKCA marking.

### HBS PLATE

| CODE      | d <sub>1</sub> | L    | b    | d <sub>1</sub> | 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 |



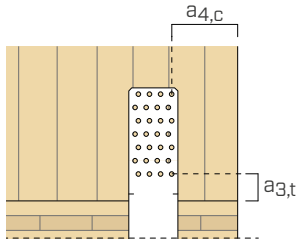
## GEOMETRY



## INSTALLATION

### MINIMUM DISTANCES | INSTALLATION ON WALL

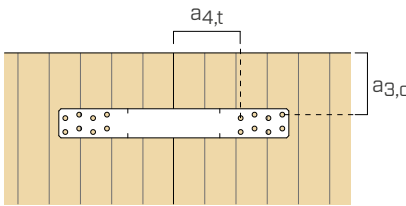
| TIMBER<br>minimum distances |                       | screws<br>HBS PLATE Ø8 |
|-----------------------------|-----------------------|------------------------|
| CLT                         | a <sub>4,c</sub> [mm] | ≥ 20                   |
|                             | a <sub>3,t</sub> [mm] | ≥ 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:

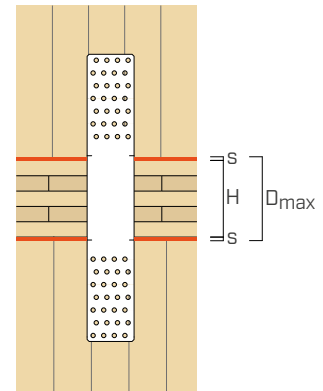
| TIMBER<br>minimum distances |                       | screws<br>HBS PLATE Ø8 |
|-----------------------------|-----------------------|------------------------|
| CLT                         | a <sub>4,t</sub> [mm] | ≥ 48                   |
|                             | a <sub>3,c</sub> [mm] | ≥ 48                   |



## MAXIMUM DISTANCE BETWEEN PANELS $D_{\max}$

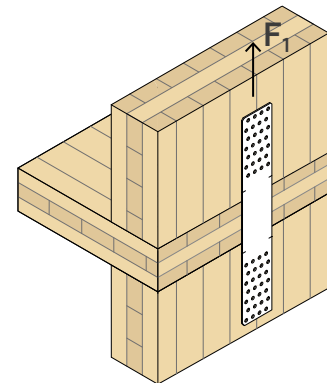
WHT PLATE T plates are designed for different floor thickness values including resilient acoustic profile. The positioning notches, as an assembly aid, indicate the maximum permitted distance (D) between the CLT wall panels in compliance with the minimum distances for HBS PLATE Ø8 mm screws. This distance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

| CODE     | $D_{\max}$<br>[mm] | $H_{\max \text{ floor}}$<br>[mm] | $s_{\text{acoustic}}$<br>[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        |                | $R_{1,k \text{ timber}}$<br>[kN] | $R_{1,k \text{ steel}}$ |                         |
|          | HBS PLATE<br>Ø x L<br>[mm] | $n_v$<br>[pcs] |                                  | [kN]                    | $\gamma_{\text{steel}}$ |
| WHTPT300 | Ø8 x 80                    | 6+6            | 23,0                             | 34,0                    | $\gamma_{M2}$           |
|          | Ø8 x 100                   | 6+6            | 28,9                             |                         |                         |
| WHTPT530 | Ø8 x 80                    | 8+8            | 30,5                             | 42,5                    | $\gamma_{M2}$           |
|          | Ø8 x 100                   | 8+8            | 38,4                             |                         |                         |
| WHTPT600 | Ø8 x 80                    | 15 + 15        | 56,8                             | 80,3                    | $\gamma_{M2}$           |
|          | Ø8 x 100                   | 15 + 15        | 71,6                             |                         |                         |
| WHTPT720 | Ø8 x 80                    | 28 + 28        | 104,7                            | 135,9                   | $\gamma_{M2}$           |
|          | Ø8 x 100                   | 28 + 28        | 132,3                            |                         |                         |
| WHTPT820 | Ø8 x 80                    | 40 + 40        | 166,7                            | 206,6                   | $\gamma_{M2}$           |
|          | 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:

$$R_d = \min \left\{ \begin{array}{l} \frac{R_{k \text{ timber}} \cdot k_{\text{mod}}}{\gamma_M} \\ \frac{R_{k \text{ steel}}}{\gamma_{M2}} \end{array} \right.$$

The coefficients  $k_{\text{mod}}$ ,  $\gamma_M$  and  $\gamma_{M2}$  should be taken according to the current regulations used for the calculation.

- A timber density of  $\rho_k = 350 \text{ kg/m}^3$  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.