



Straviwood WallBracket Datasheet

Straviwood WallBracket is an angle bracket for structural joints with acoustical decoupling features thanks to an excellent behaviour of resilient pads in the bracket giving a significant reduction of flanking sound transmissions. The bracket is ideal for CLT constructions where shear and vertical load distribution between structural elements is intended.



CHARACTERISTICS

- Ideal for wall-floor decoupling in CLT constructions
- Suited for all wood-based materials
- Compression via foolproof system
- No additional tooling required for correct installation
- Galvanized steel
- Height: 120 mm



PHYSICAL & MECHANICAL PROPERTIES

Length (mm)	Width (mm)	Height (mm)	Fastening Holes		t (mm)
			Flange A	Flange B	
120	100	120	3Ø11	3Ø11	4

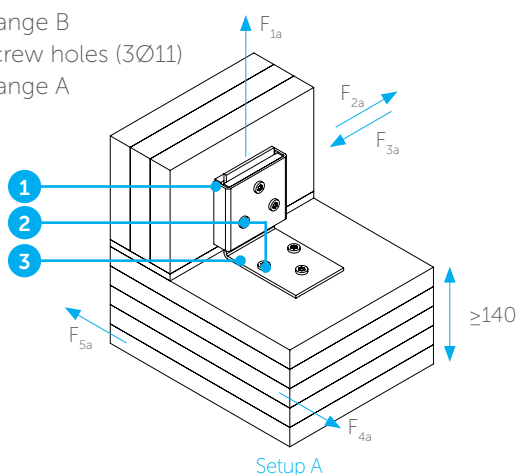


CHARACTERISTIC VALUES

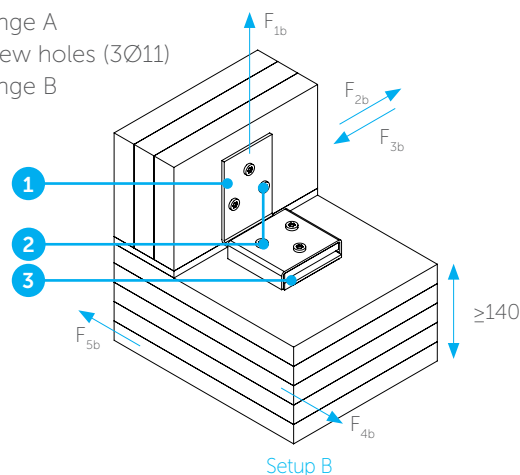
- Characteristic value per connection.
- Valid for 1 bracket per connection; timber to timber.
- Applicable in service class 1 & 2 (EN 1995-1-1:2004+A1:2008).
- Referential values valid when using 3 HECO-TOPIX-plus 10x100, flange head screws (ETA-19/0553) per flange, and CLT C24 of 120 mm thickness with 3 layers of 40 mm.
- Extension of these values to other fasteners or other CLT types should be assessed according to the existing regulations by the structural engineer of the specific project.
- The amount of brackets per linear meter needs to be calculated on a project basis by the structural engineer.

	R _{1,k} [N]	K _{ser,1} [N/mm]	R _{2/3,k} [N]	K _{ser,2/3} [N/mm]	R _{4,k} [N]	K _{ser,4} [N/mm]	R _{5,k} [N]	K _{ser,5} [N/mm]
Setup A	6391	664	5746	463	7783	579	11130	799
Setup B	7783	579	5746	463	6391	664	13683	1526

1. Flange B
2. Screw holes (3Ø11)
3. Flange A



1. Flange A
2. Screw holes (3Ø11)
3. Flange B



**X-JUNCTION****Test configuration:**

Upper wall: 100 mm 5-ply CLT (w 4.75 m x h 3 m)
 Lower wall: 100 mm 5-ply CLT (w 4.75 m x h 3.1 m)
 Slab: 140 mm 5-ply CLT (w 4.75 m x l 7.5 m)

Note:

The parasitic airborne path was treated with mineral wool shielding.
 $\bar{K}_{ij}$ is the arithmetic average of K_{ij} values within the frequency range of 200 to 1250 Hz (one-third octave bands).

Fastening system:

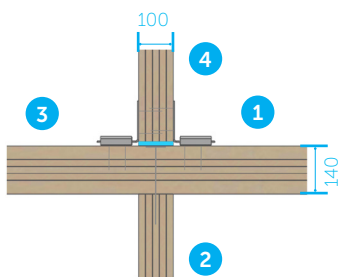
Walls and slabs in 2 pieces fastened together by half-lap joint with screws @ 250 mm o.c.
 Slabs fastened to the lower wall with Ø8 x 240 mm flange-head screws @ 500 mm o.c.

Resilient profile:**Option 1: Straviwood Wallbreak-S**

Strip position: between the upper wall and the slab
 Strip dimensions: width = 100 mm, thickness = 12.5 mm, length = 4.75 m
 Type: continuous strip (same width as the wall)

Applied load for both options:

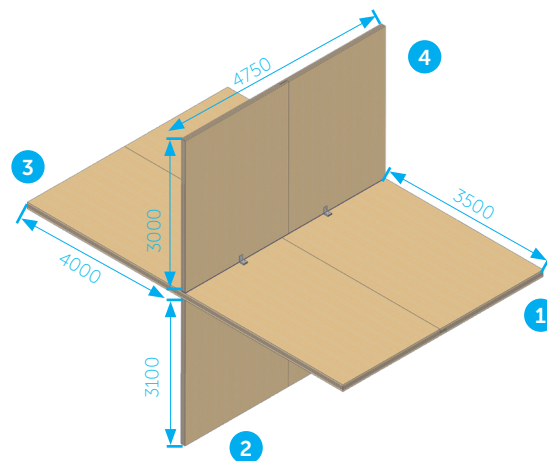
Unloaded case (dead load of upper wall) = 0.0138 MPa
 Loaded case (for the strip) = 0.375 MPa (75% SLS load)
 Loaded case (for the bare junction) = 0.138 MPa (load for which the bare junction results were converging)



All dimensions are in mm.

 K_{14}/K_{34} : Upper wall to slab path

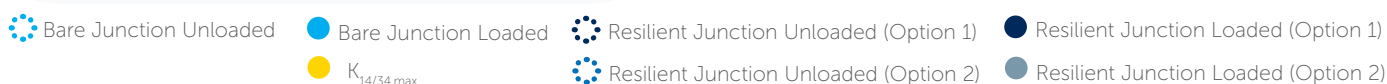
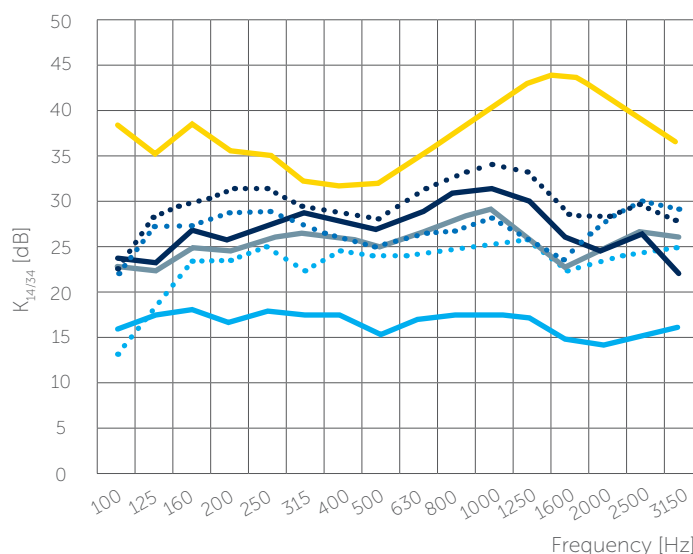
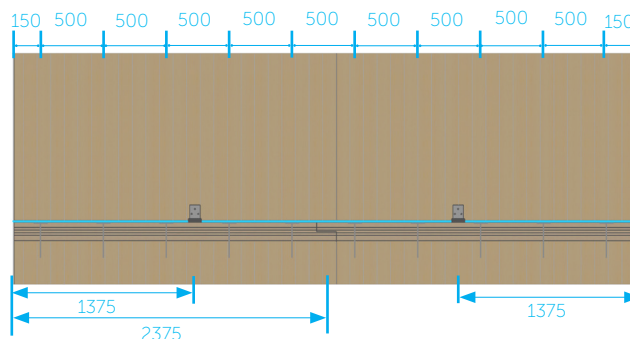
Frequency [Hz]	Bare Junction Unloaded	Bare Junction Loaded	Resilient Junction Unloaded (Option 1)	Resilient Junction Loaded (Option 1)	Resilient Junction Unloaded (Option 2)	Resilient Junction Loaded (Option 2)
100	13.2	16.1	21.9	23.8	22.4	22.9
125	17.9	17.6	28.7	23.5	27.3	22.8
160	23.4	18.1	30.1	27.1	27.6	25.1
200	23.4	16.8	31.5	25.7	29.1	24.8
250	25.1	17.9	32.0	27.6	29.0	26.2
315	22.8	17.3	29.4	29.0	27.3	27.0
400	24.4	17.5	28.8	28.2	26.4	26.3
500	24.0	15.5	28.3	27.1	25.4	25.3
630	24.1	16.9	31.2	28.8	26.8	26.3
800	25.0	17.3	33.3	31.2	26.7	28.2
1000	25.7	17.6	34.6	31.9	28.4	29.6
1250	25.8	17.1	33.7	30.2	26.1	25.9
1600	22.8	14.8	29.1	26.1	23.6	22.7
2000	23.8	13.9	28.6	24.6	28.1	24.7
2500	24.2	15.3	30.0	26.8	30.1	26.8
3150	25.2	16.2	28.0	22.1	29.7	26.2
$\bar{K}_{14}/\bar{K}_{34}$	24.5	17.1	31.4	28.9	27.2	26.6

**Option 2: Straviwood Wallbreak-S + Straviwood Wallbracket**

Bracket position: Wallbrackets spaced at 2000 mm o.c.
 (2 on each side of the junction)

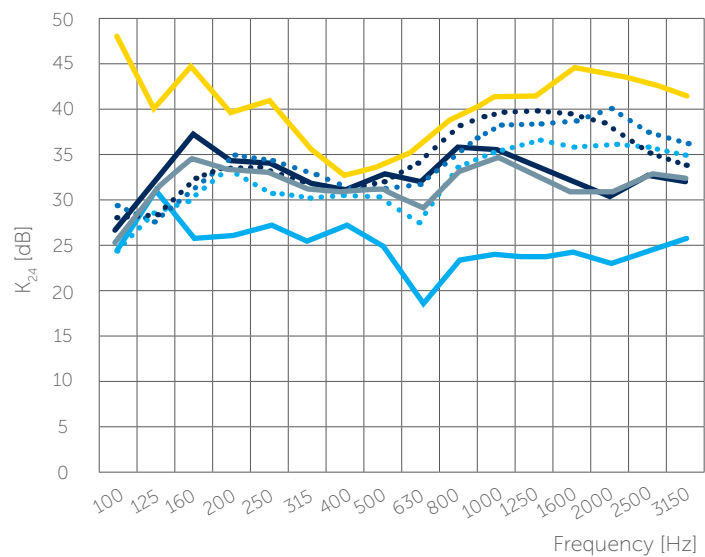
Bracket fasteners: 6 x flange head screws Ø10 x 100 mm for each Wallbracket

Strip position: between the upper wall and the slab
 Type: continuous strip (same width as the wall)



K₂₄: Upper wall to lower wall path

Frequency [Hz]	Bare Junction Unloaded	Bare Junction Loaded	Resilient Junction Unloaded (Option 1)	Resilient Junction Loaded (Option 1)	Resilient Junction Unloaded (Option 2)	Resilient Junction Loaded (Option 2)
100	24.9	23.8	27.6	26.2	28.9	24.8
125	28.2	30.7	27.7	31.6	27.1	30.9
160	29.8	25.2	31.8	37.0	30.9	34.2
200	33.1	25.7	33.3	34.1	34.5	33.0
250	30.2	26.6	32.9	33.6	34.1	33.0
315	29.6	25.2	32.8	31.5	32.9	31.0
400	30.3	26.8	30.8	30.7	31.0	30.2
500	29.9	24.2	31.8	32.6	30.8	30.7
630	27.0	17.9	33.8	31.7	31.3	28.6
800	33.5	22.9	38.0	35.5	35.4	33.0
1000	35.1	23.7	39.3	35.1	38.0	34.5
1250	36.3	23.2	39.5	33.7	38.2	32.3
1600	35.4	23.8	39.2	31.8	38.5	30.6
2000	35.7	22.5	38.1	30.0	39.8	30.3
2500	35.6	24.0	34.9	32.4	37.0	32.5
3150	34.6	25.3	33.5	31.5	36.0	32.0
K ₂₄	31.7	24.0	34.7	33.2	34.0	31.8



- Bare Junction Unloaded
- Bare Junction Loaded
- Resilient Junction Unloaded (Option 1)
- Resilient Junction Loaded (Option 1)
- Resilient Junction Unloaded (Option 2)
- Resilient Junction Loaded (Option 2)
- K_{24,max}

Note: results for other parameter variations available upon request. Due to slight measurement variations, in case a K_{ij} value was higher than the K_{ij,max} value, this K_{ij} value was capped to the K_{ij,max} value.

VERTICAL T-JUNCTION

Test configuration:

Upper wall: 100 mm 5-ply CLT (w 4.75 m x h 3 m)
Lower wall: 100 mm 5-ply CLT (w 4.75 m x h 3.1 m)
Slab: 140 mm 5-ply CLT (w 4.75 m x l 4 m)

Note:

The parasitic airborne path was treated with mineral wool shielding.
 $\bar{K}_{ij}$ is the arithmetic average of K_{ij} values within the frequency range of 200 to 1250 Hz (one-third octave bands)

Fastening system:

Walls and slabs in 2 pieces fastened together by half-lap joint with screws @ 250 mm o.c.

Slabs fastened to the lower wall with Ø8 x 240 mm flange-head screws @500 mm o.c.

Resilient profile:

Option 1: Straviwood Wallbreak-S

Strip position: between the upper wall and the slab
Strip dimensions: width = 100 mm, thickness = 12.5 mm, length = 4.75 m

Type: continuous strip (same width as the wall)

Option 2: Straviwood Wallbreak-S + Straviwood Wallbracket

Bracket position: Wallbrackets spaced at 2000 mm o.c.

Bracket fasteners: 6 x flange head screws Ø10 x 100 mm for each Wallbracket

Strip position: between the upper wall and the slab

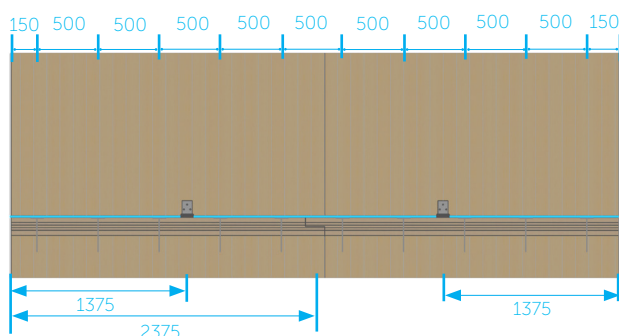
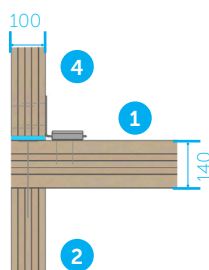
Type: continuous strip (same width as the wall)

Applied load for both options:

Unloaded case (dead load of upper wall) = 0.0138 MPa

Loaded case (for the strip) = 0.375 MPa (75% SLS load)

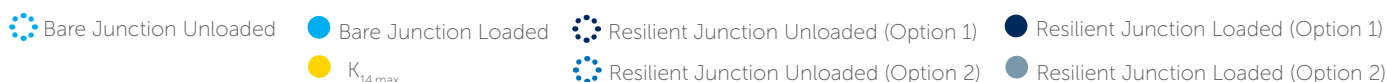
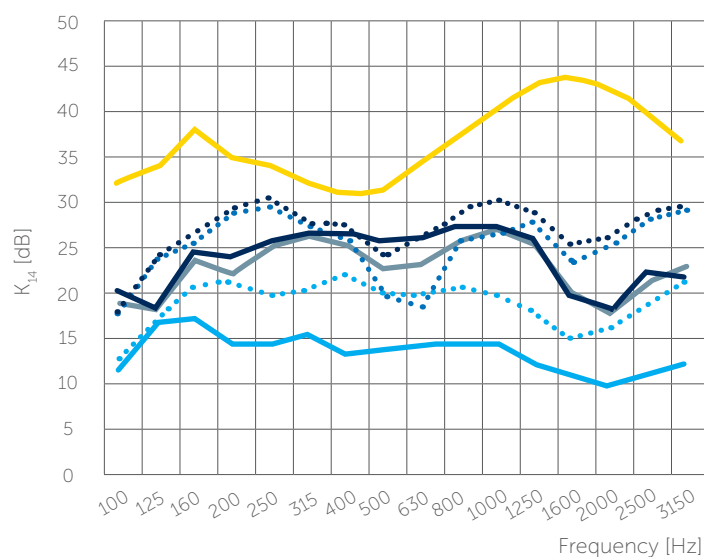
Loaded case (for the bare junction) = 0.138 MPa (load for which the bare junction results were converging)



All dimensions are in mm.

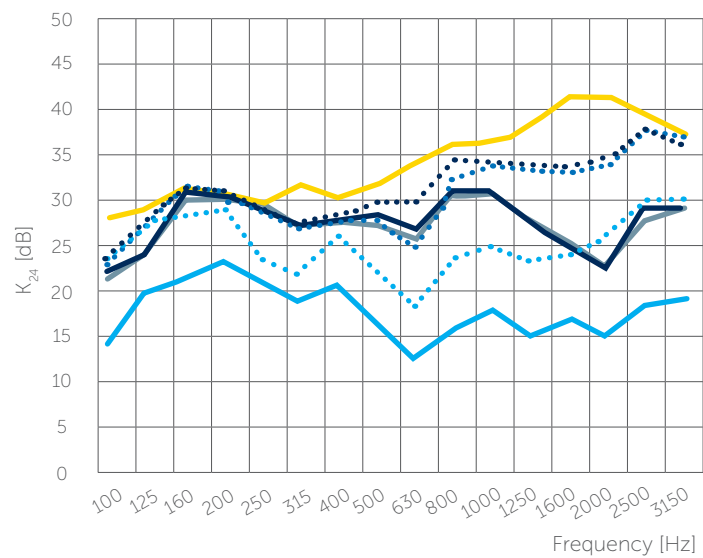
K_{14} : Upper wall to slab path

Frequency [Hz]	Bare Junction Unloaded	Bare Junction Loaded	Resilient Junction Unloaded (Option 1)	Resilient Junction Loaded (Option 1)	Resilient Junction Unloaded (Option 2)	Resilient Junction Loaded (Option 2)
100	12.7	11.4	17.9	20.5	17.7	19.0
125	17.4	16.7	24.1	18.4	23.7	18.3
160	20.8	17.1	27.2	24.9	25.7	23.8
200	21.3	14.4	29.7	23.8	29.0	22.4
250	19.8	14.4	30.8	26.0	29.8	25.2
315	20.7	15.4	27.8	26.8	27.5	26.5
400	22.3	13.4	27.6	26.7	26.6	25.5
500	20.2	14.0	24.3	25.9	19.7	22.7
630	19.6	14.3	25.5	26.1	18.5	23.3
800	20.7	14.3	29.2	27.6	25.5	26.2
1000	20.1	14.2	30.6	27.6	26.7	27.1
1250	18.1	12.1	29.3	26.2	28.1	25.6
1600	15.1	10.8	25.3	19.7	23.5	20.2
2000	16.3	9.9	26.1	18.0	25.3	18.0
2500	19.3	10.8	29.0	22.1	28.2	21.3
3150	21.4	12.0	29.8	22.0	29.2	23.1
$\bar{K}_{14}$	20.3	14.1	28.3	26.3	25.7	24.9



K₂₄: Upper wall to lower wall path

Frequency [Hz]	Bare Junction Unloaded	Bare Junction Loaded	Resilient Junction Unloaded (Option 1)	Resilient Junction Loaded (Option 1)	Resilient Junction Unloaded (Option 2)	Resilient Junction Loaded (Option 2)
100	23.5	13.8	23.3	22.0	22.9	21.5
125	27.5	19.9	28.2	23.9	27.2	24.0
160	28.3	20.9	31.3	31.0	31.3	30.1
200	28.9	23.0	31.0	30.5	31.0	30.0
250	23.3	20.9	29.4	29.4	29.4	29.4
315	21.7	19.1	26.9	27.2	27.0	27.3
400	25.8	20.2	28.1	27.9	28.1	27.7
500	22.0	15.9	29.9	28.5	27.6	27.3
630	18.2	12.2	29.8	26.8	24.4	25.6
800	23.4	15.5	34.5	31.0	32.3	30.7
1000	24.8	17.7	34.6	30.9	33.8	30.8
1250	23.2	15.1	34.2	27.4	33.7	27.7
1600	23.9	16.8	33.9	25.2	33.3	25.2
2000	26.1	15.2	34.5	22.6	33.7	22.7
2500	30.0	18.2	37.5	29.4	38.0	27.8
3150	30.3	19.1	36.3	29.4	37.2	29.3
K ₂₄	23.5	17.7	30.9	28.8	29.7	28.5



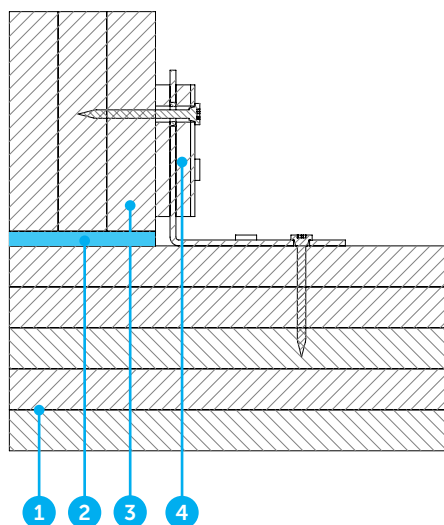
- Bare Junction Unloaded
- Bare Junction Loaded
- Resilient Junction Unloaded (Option 1)
- Resilient Junction Loaded (Option 1)
- Resilient Junction Unloaded (Option 2)
- Resilient Junction Loaded (Option 2)
- K_{24,max}

Note: results for other parameter variations available upon request. Due to slight measurement variations, in case a K_{ij} value was higher than the $K_{ij,max}$ value, this K_{ij} value was capped to the $K_{ij,max}$ value.

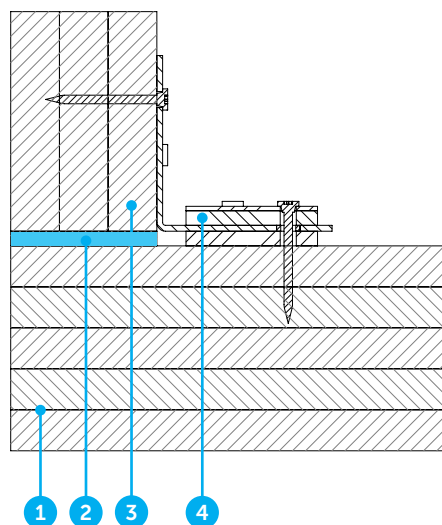


TYPICAL ASSEMBLIES

1. Structural CLT floor
2. Straviwood WallBreak-S



3. CLT wall
4. Straviwood WallBracket



DISCLAIMER

This information is accurate to the best of our knowledge at the time of issue. Information, data and recommendations provided are based on industry accepted testing and prior product usage. It is intended as descriptive of the general capabilities and performance of our products and does not endorse applicability for any particular project. We reserve the right to change products, performance, and data without notice. This document replaces all information supplied prior to the publication hereof.