

ABAI + SIT

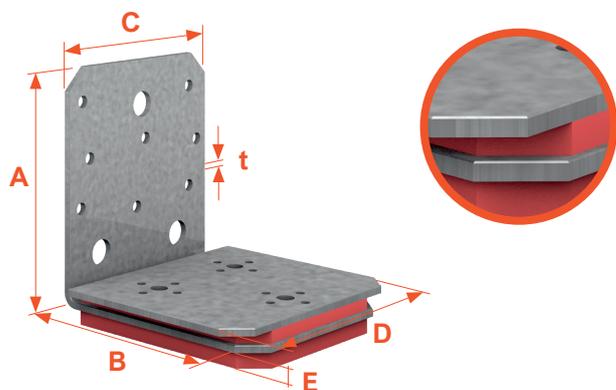
Sound insulation system for CLT



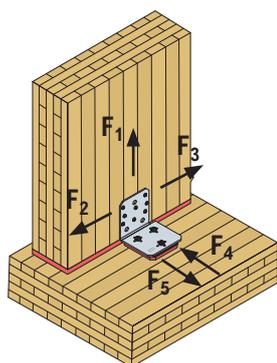
Metal connectors for **CLT**

ABAI+SIT

Sound insulation system for CLT



Angle bracket for static load-capacity connections between construction elements of walls and floors made of cross-laminated timber, separated by a 12 mm acoustic tape.



Connection diagram
wall - ceiling

ABAI

Massive wooden structures are sensitive to low-frequency acoustic vibrations. The elimination of sound transmission between solid wooden elements (wall-ceiling) is a big challenge for this type of structure.

In order to eliminate unwanted sounds in wooden structures and houses made in the CLT technology, it may be helpful to connect the wall to the ceiling with ABAI angle bracket connector.

The ABAI angle bracket is a new type connectors. Angle bracket create a static load-capacity connection between the walls and ceiling elements made of CLT panels that are acoustically insulated through a 12 mm SIT insulation layer. The ABAI angle connects both design elements without increasing sound transfer.

The ABAI angle is one of the solutions that can be used to ensure excellent acoustic insulation. ABAI has a special SIT polyurethane layer that crosses the acoustic vibration transmission path.



Hot Dip Galvanized

Service class 2 ACC. to EC5

FEATURES and APPLICATION

- Walls and ceilings connection made of CLT
- Forces transfer in all directions
- Sound transmission control between the structural elements

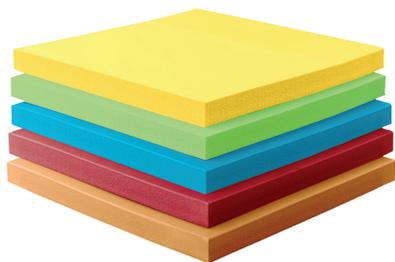
AVAILABLE SIZES

Item No	Dimensions [mm]						Holes	
	A	B	C	D	E	t	Flange A	Flange B
ABAI	113	103	90	106	18	3,0	8Ø5; 3Ø11	3Ø7

CAPACITY

Item No	Fixing		Characteristic capacity [kN] one angle bracker per connection			
	Flange A	Flange B	R _{1,k}	R _{2/3,k}	R _{4,k}	R _{5,k}
ABAI	8xCNA4.0x60	3x SDS25600	2.0/k _{mod}	2.0/k _{mod}	3.3/k _{mod}	2.3/k _{mod}

SIT



- Thickness: 12.5 mm
 - Width: up to 500 mm
 - Length: 1m pcs (Possibly 2 m pcs)
- Other types, thicknesses, larger widths and shapes on request.

Acoustic insulation in wooden structures is one of the conditions that should be met in order to ensure the acoustic comfort of the house. The spread of sound can be significantly reduced by the use of high-performance SIT acoustic insulation tapes.

The SIT acoustic insulation tape is an effective material that provides excellent acoustic insulation between wooden walls and the ceiling. The tape is made of a flexible polyurethane mixture. The choice of belt density depends on the required pressure capacity. The SIT tape can be used to break all contact points connecting the wall with the ceiling, or the side paths of the structure.

FEATURES

- Decreased edge sound transmission
- Improvement of windproofness thanks to the use of SIT tape under external walls
- Various load combinations depending on the color of the tape
- Width can be cut on request
- Indicative design service life of 50 years

Item No	Properties				
	 SIT75/12	 SIT150/12	 SIT350/12	 SIT750/12	 SIT1500/12
Static pressure [N/mm ²] ⁽¹⁾	0,075	0,150	0,350	0,750	1,500
Dynamic pressure [N/mm ²] ⁽¹⁾	0,120	0,250	0,500	1,200	2,000
Peak pressure [N/mm ²] ⁽¹⁾	2,0	3,0	4,0	6,0	8,0
Mechanical loss factor ⁽²⁾	0,06	0,03	0,03	0,04	0,05
Static E-modulus ⁽²⁾	0,63	1,25	2,53	5,21	9,21
Dynamic E-modulus [N/mm ²] ⁽²⁾	0,92	1,65	3,25	8,88	16,66
Static shear modulus [N/mm ²] ⁽²⁾	0,16	0,22	0,35	0,80	1,15
Dynamic shear modulus [N/mm ²] ⁽²⁾	0,27	0,35	0,52	1,22	1,69
Compressive strength at 10% deformation 10% [N/mm ²]	0,083	0,16	0,32	0,59	0,94
Permanent deformation after compression [%]	< 5	< 5	< 5	< 6	< 8
Tensile strength [N/mm ²]	> 1,5	> 2,0	> 3,5	> 5,0	> 7,0
Elongation at break [%]	> 500	> 500	> 500	> 500	> 500
Tear resistance [N/mm]	> 1,6	> 2,1	> 2,5	> 4,3	> 5,6
Rebound elasticit [%]	70	70	70	70	70
Volume resistivity [Ω-cm]	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹	> 10 ¹¹
Thermal conductivity [W/(m-K)]	0,06	0,075	0,09	0,10	0,11
Operating temperature [°C]	-30 do +70				
Extreme temperature [°C]	+120				
Flammability	Class E / EN 13501-1				

¹⁾ Values apply for a shape factor $q = 3$

²⁾ Measured by the upper limit of the static performance sector

MORE INFO

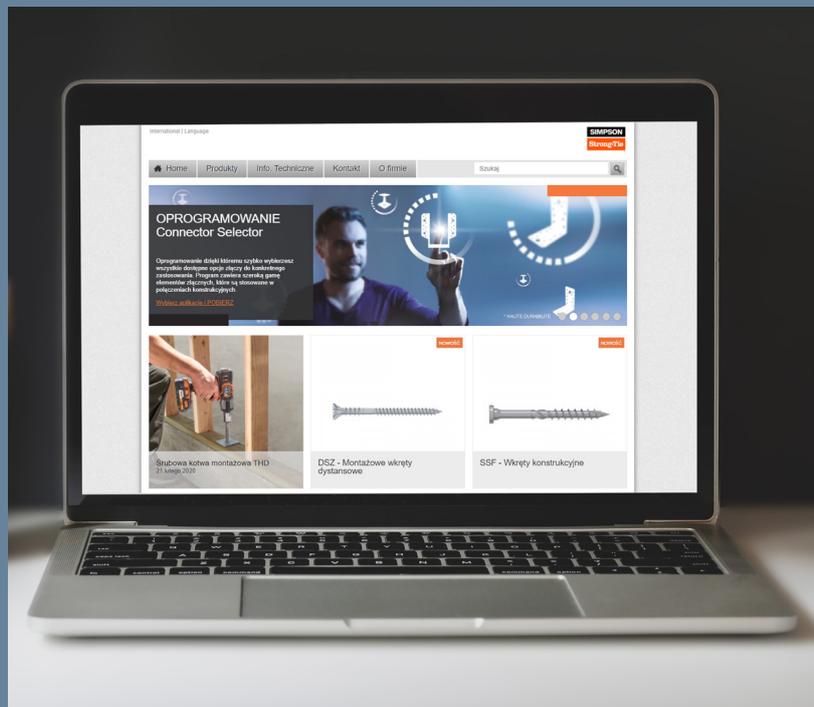
The flyer contains information that is updated periodically. The drawings and photos of the products are for reference only and have been made for the correct identification of technical data. To verify the accuracy of the data presented, please contact Simpson Strong-Tie for updated information or visit strongtie.lv.

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A convenient and fast way to use our interactive technical materials. Go to the required information / technical application, find it and select the products to download the selected document to store it on your computer.

Our website also includes:

- Technical catalog that contains the most important information about the product, application for wood to wood, wood to concrete and wood to masonry joints and characteristic values which are based on the European Technical Assessments ETA and the EN 1995 standard (Eurocode 5).
- The Screws and Nails catalog is a professional Premium fastener system that complements the wide range of Simpson Strong-Tie.



On our website you will also find:

- Free software



Connector Selector software:

Quickly and easily identify the connectors or fastenings you will need based on the specific requirement you have. Connector Selector software define and select connection dimensions and prepare a product list.



Anchor Designer Software:

Anchor Designer will quickly and efficiently verify the existing project, analyze the connections in terms of limit states, as well as suggest an optimal solution. Design and calculation is carried out in real time in a full interactive 3D model.



Solid Wood software:

The application has a wide range as well as technical information and properties of fasteners. In just four steps you will be able to quickly and efficiently choose the connector you need to match your needs.



CAD library:

Updated CAD drawing library. Our archive allows you to quickly download the drawing needed for the project. Thanks to this you can choose the most convenient format, just a few clicks to download a DWG drawing in 2D or 3D of our products.

- Declarations of Performances
- European Technical Assessments
- Video installations
- Technical literature - catalogs and brochures



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