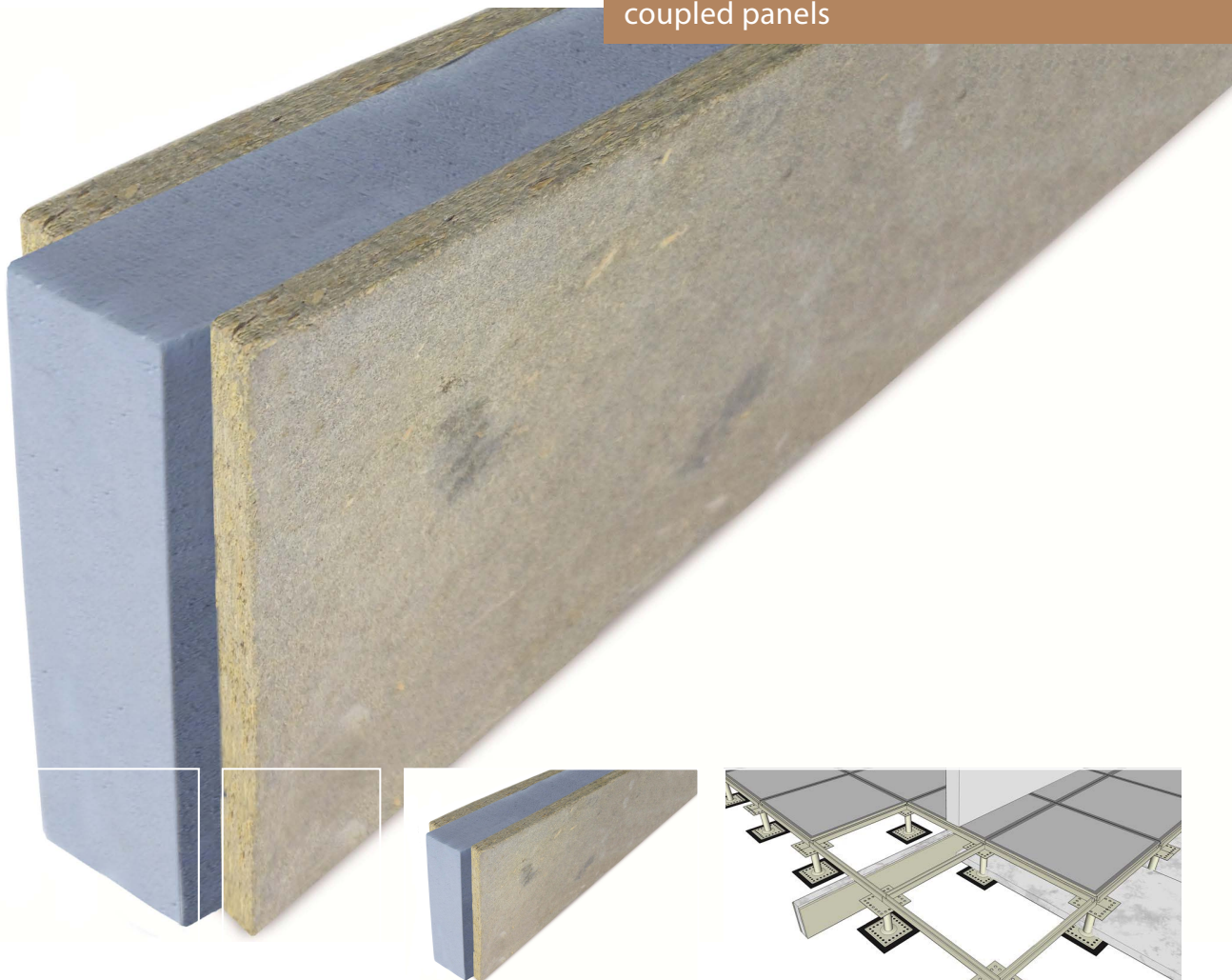


Betonsilent

Sandwich insulating panel in cement bonded particle board and extruded polystyrene XPS

Beton  **Wood**

Acoustic partition with coupled panels



| AREAS OF APPLICATION

Betonsilent is an extremely versatile product because it is suitable for many building applications. The advantages of two materials are joined in one coupled: on one hand the cement with a high mass, high density, high compressive strength, suitable for the direct gluing of ceramics and resilient floors, which is essential to obtain an adequate thermal displacement and a great noise reduction; on the other, an XPS extruded polystyrene panel characterized by lightness, high insulation capacity and ease of processing.

Both materials are of excellent quality, worked with the most advanced technologies, subjected to strict process controls, CE marked.

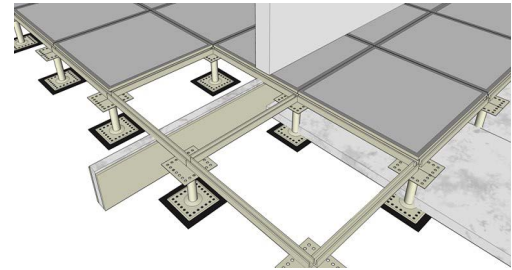
The Betonsilent panel propose itself as completion element of light walls with thermal-acoustic insulation inside.

It is presented as a sandwich panel made of two cement bonded particle boards BetonWood 20 mm thick, between which a 50 mm thick extruded polystyrene panel is placed. The length of the septum is 1200 mm, while the height can vary from 100 to 300 mm.

It can be used in:

- thermal and acoustic insulation of floors for raised floors;
- correction of thermal bridges;
- thermal and acoustic insulation of countertops;
- isolated systems for windows;
- dry screeds.

For more informations about the uses and the installation, our offices are ready to answer your questions on www.betowood.com



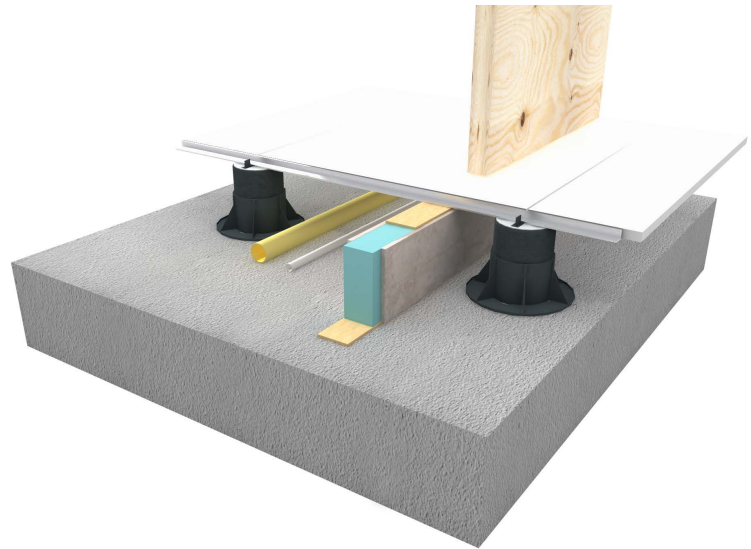
| MATERIAL

Betonsilent is therefore a vertical element for filling the plenum of false ceilings and raised floors, essential to avoid compromising the acoustic performance of the partition. Using it under the raised floor, the septum can be laid without any fixing, to allow easy removal in case of maintenance. In case of use above the false ceiling, it is instead necessary to mechanically fasten the ceiling intrados.

For further thermal and acoustic insulation it is advisable to lay above and below the sandwich, then in the contact surfaces with the floor intrados and the floating floor panels, a strip of natural insulating FiberTherm Soundstrip made of flexible pressed wood fiber. It can easily be seen from the image and stratigraphy below.

| AVAILABLE SIZES

Betonsilent present itself as a sandwich panel made of two cement bonded particle boards BetonWood 20 mm thick, between which a 50,5 mm thick extruded polystyrene panel is placed; so the total results 90,5 mm. The length of the septum is 1200 mm, while the height can vary from 100 to 300 mm. The installation will also be greatly facilitated and the insulation increased by the special Tongue & Groove profile which makes each panel intersect with the other.

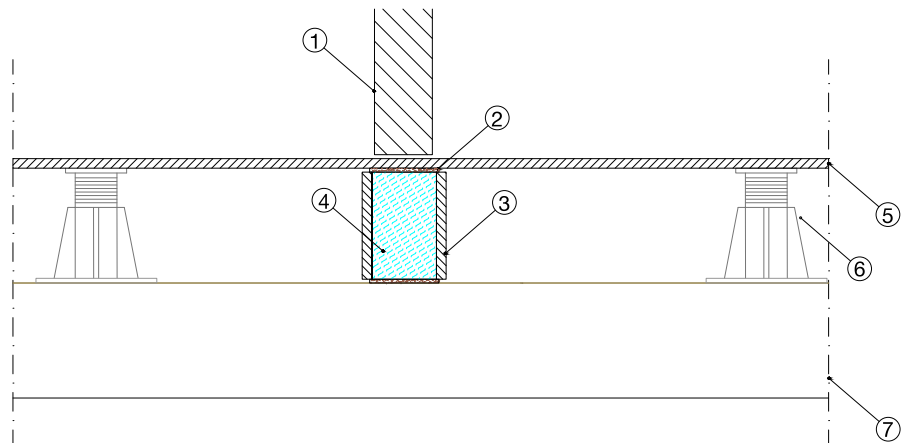


| SPECIFICATION

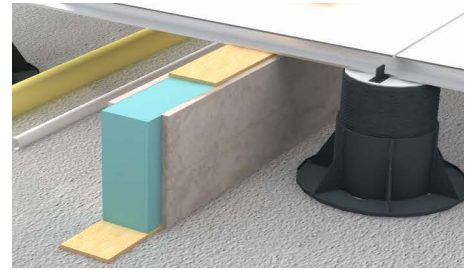
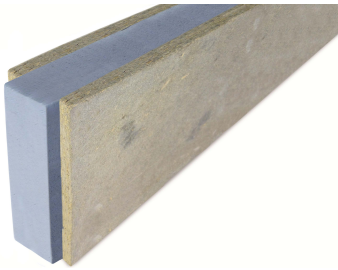
Hard insulating panel BetonSilent with a thickness of 90,5 mm, consist in three-level sandwich panel. Two of these layers are realized in cement bonded particle boards BetonWood with high density (1350Kg/m³) and with a thickness equal to 20 mm. The third central panel is made of insulating extruded polystyrene Styx XPS type; it has a thickness ... mm. The cement bonded particle boards have the following thermo-dynamics characteristics: declared thermal conductivity $\lambda=0,26$ W/mK, specific heat $c=1,88$ KJ/Kg K, water vapour diffusion resistance factor $\mu=22,6$ and fire reaction class A2-fl-s1, according to the standard EN 13501-1. The extruded polystyrene panel is characterized by the following thermo-dynamics characteristics: coefficient of thermal conductivity $\lambda = 0,026 \div 0,036$ W / mK, specific heat $c = 1,450$ J / Kg K, coeff. of resistance to vapor penetration $\mu = 50 \div 100$. The panel is supplied already coupled with dimensions ... mm.

Building materials certified CE.

| STRATIGRAPHY



1. Movable wall
2. Thermo-acoustic insulating flexible wood fiber FiberTherm Soundstrip
3. n°2 hard lateral panels in cement bonded particle boards of Betonsilent
4. Central insulating panel in extruded polystyrene of Betonsilent
5. Floating floor paneling in calcium silicate
6. Adjustable supports
7. Substratum



| USES

UNBEATABLE in case of INSULATION FLOORS as base RAISED OR FLOATING FLOORS.

The installation in cases of acoustic sound under floating floor, Betonsilent is fixed to the substrate with metal brackets with an "L" profile. The brackets are fixed with bolts and metal screws.

| CERTIFICATIONS

The Beton silent panels are produced with CE certified materials in accordance with current regulations. Product certificates are available on request.



| TECHNICAL CHARACTERISTICS Betonsilent

Cement bonded particle board

Density ρ [kg /m ³]		1350
Reaction to fire in order to the standard EN 13501-1		A2-fl-s1
Thermal conductivity coefficient λ_D [W / (m * K)]		0,26
Specific heat c [J / (kg * K)]		1.880
Steam penetration resistance μ		22,6
Coefficient of linear thermal expansion α		0,00001
Swelling in thickness after 24h of storage in water		1,5%
Superficial PH value		11
Flexural strength σ [N /mm ²]		min.9
Transversal tensile strength N [N /mm ²]		min.0,5
Air permeability l/min. m ² Mpa		0,133
Modulus of elasticity E [N /mm ²]		4500
Shear strength τ [N /mm ²]		0,5
Resistance to distributed load kPa		9000
Resistance to concentrated load kN		9

| TECHNICAL CHARACTERISTICS Betonsilent

Extruded polystyrene XPS panel

Density ρ [kg /m ³]		15 ÷ 35
Edges		sharp
Thermal conductivity coefficient λ_D [W / (m * K)]		0,026 ÷ 0,036
Specific heat c [J / (kg * K)]		1.450
Water vapour diffusion resistance factor μ		50 ÷ 100
Fire resistance class according to EN 13501-1		E
Compressive Stress at 10% deformation kPa		120 ÷ 250
Compressive Creep kPa		≤ 100 mm = 130 kPa > 100 mm = 110KPa
Dimensional stability under specified conditions 70°C; 90% r.h. %		≤ 5
Deformation under specified compressive load of 40 kPa and temperature conditions at 70°C %		≤ 5
Freeze-thaw resistance after long term water absorption by diffusion vol. %		≤100mm ≤ 1 >100 ≤200mm ≤ 2
Modulus of elasticity		12.000

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