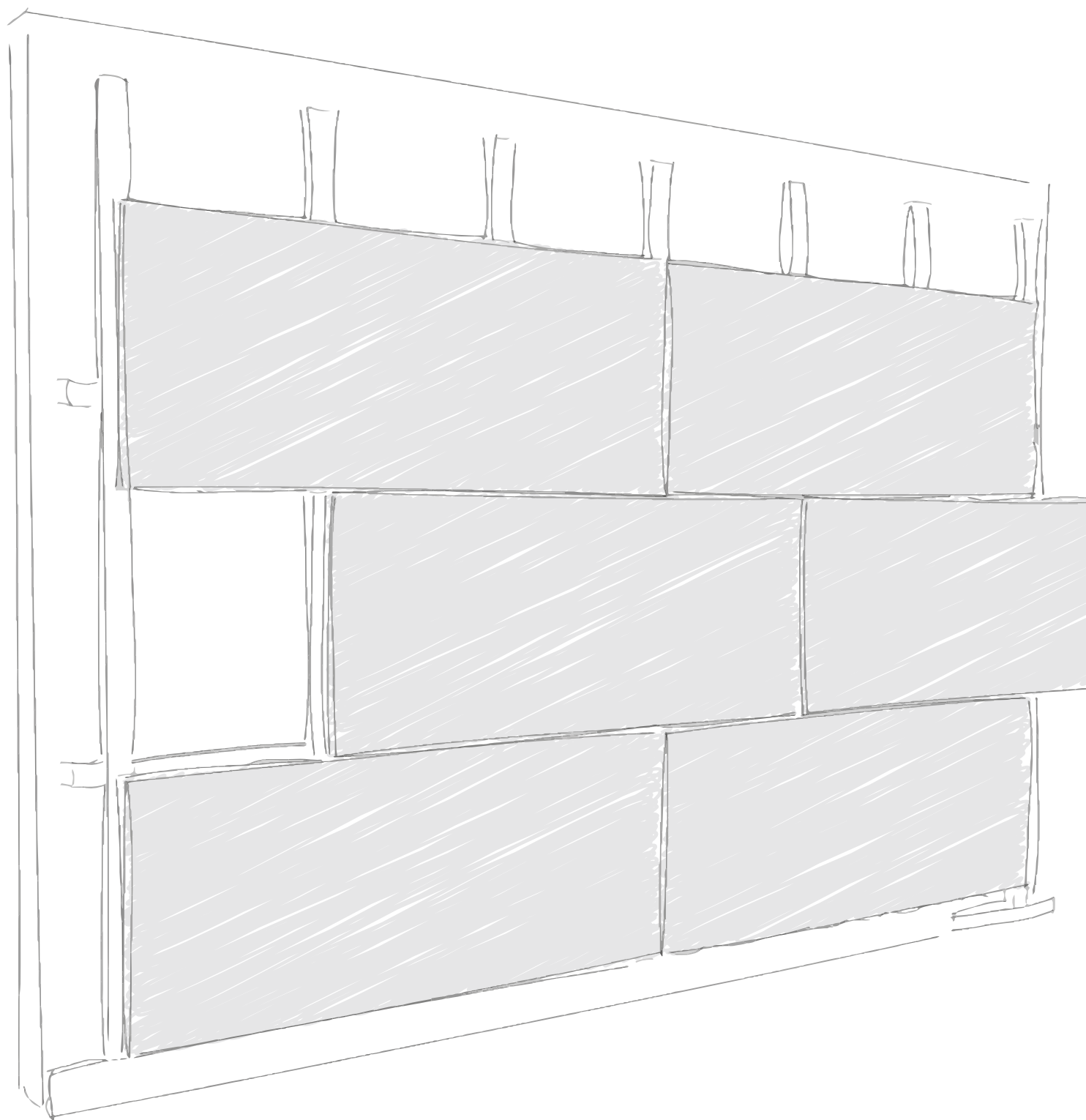




WALL COVERINGS HIDDEN METAL STRUCTURE





QKING CORESTaurant Milano, IT
design: MODOURBANO Associati Milano | photo: Simone Bossi

Item specifications

CELENIT sound absorbing wall covering with hidden metal structure, model ACOUSTIC ..., with thermal and acoustic insulation, eco-friendly and sound absorbing boards - CELENIT ... product range, CELENIT ... item No. ... - made of mineralized ... fir wood wool bound with white Portland cement, it complies with EN 13168 and EN 13964 standards, it can be coupled with rock wool (ACOUSTIC MINERAL product range); dim.: ... x ... mm; th.: ... mm; texture: ...; straight edges (code: D) or chamfered edges (code: S4); weight: ... kg/m²; λ_D : ... W/mK; R_D : ... m²K/W; compressive stress σ_{10} : $\geq$... kPa; water vapour transmission μ : 5; reaction to fire: Euroclass B-s1, d0 or A2-s1, d0 (EN 13501-1 standard); sound absorption: α_w ... / NRC ...; durability: class C; light reflection: 50.7 o 74.0% (painted white 05/15); release of formaldehyde: class E1; it does not contain asbestos.

Wood wool boards must be certified by ANAB-ICEA and natureplus for eco-compatibility of materials and manufacturing process, PEFC™ or FSC® for the sustainability of wood raw material, ICEA for the content of recycled material and for the attestation of LEED credits, EPD for the environmental statement.

C profiles 60x27 or C 50x27 with ... mm spacing, suspended by fixed spacers/adjustable brackets or supported by clip profiles/C profiles, suspended by hangers. Fixings per boards: ...; screws diameter: 3.5 mm; fixings scheme: ... x ... mm.

Products



CELENIT ACOUSTIC range

ABE - AB

CELENIT ACOUSTIC A2 range

ABE/A2 - AB/A2

Boards made of mineralized wood wool bound with white Portland cement



Straight edges

D for all thicknesses



Chamfered edges

S4 for all thicknesses



Shiplap edges

RD10 for thicknesses 25 - 35 mm

RD20 for thicknesses 25 - 35 mm



CELENIT ACOUSTIC MINERAL range

L2ABE25 - L2AB25 - L2ABE25C

CELENIT ACOUSTIC MINERAL A2 range

L2ABE25/A2 - L2AB25/A2 - L2ABE25C/A2

Boards made of mineralized wood wool bound with white Portland cement coupled to a layer of rock wool



Straight edges

D for all thicknesses



Chamfered edges

S4 for all thicknesses

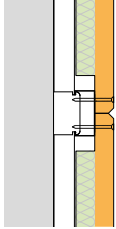
The boards are supplied with dimensions 1200x600 mm with rock wool 1200x500 mm, for direct application to the structure.

Except for **L2ABE25C** and **L2ABE25C/A2** which are supplied with rock wool 1200x600 mm and sufficient compression strength to avoid crushing during the laying. They can be screwed directly to the structure, either with orthogonal or parallel installation.

Single structure

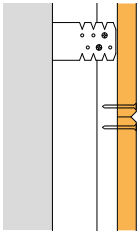
Available for CELENIT ACOUSTIC boards or CELENIT ACOUSTIC MINERAL boards with rock wool thickness until 40 mm.

System with fixed spacer



- The system with fixed spacer allows to have a single structure.
- Spacers anchored to the wall with suitable fixings depending on the type of the support.
- Maximum distance between spacers 80 cm.
- The boards will be fixed directly to the C profiles according to the fixing schemes (page 10).

System with adjustable bracket

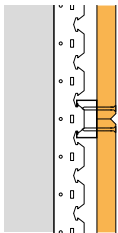


- The system with adjustable bracket allows to have a single structure.
- The bracket allows adjustable air-gap.
- Spacers anchored to the wall with suitable fixings depending on the type of the support.
- Maximum distance between bracket 80 cm.
- The boards will be fixed directly to the C profiles according to the fixing schemes (page 10).

Double structure

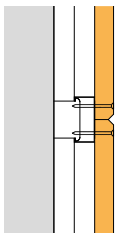
Available for CELENIT ACOUSTIC boards or CELENIT ACOUSTIC MINERAL boards with rock wool thickness 18 - 25 mm.

System with clip steel profile



- Clip steel profile anchored to the wall with suitable fixings depending on the type of the support.
- C profiles fixed on clip steel profile, with a maximum distance of 60 cm.
- The boards will be fixed directly to the C profiles according to the fixing schemes (page 10).

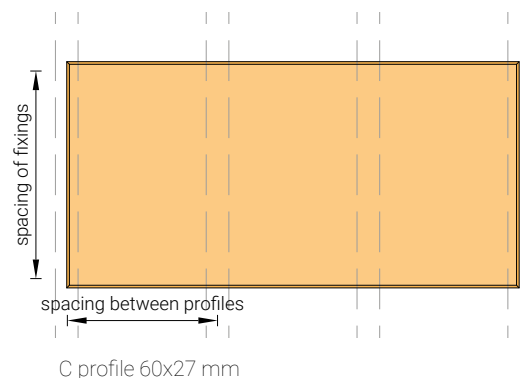
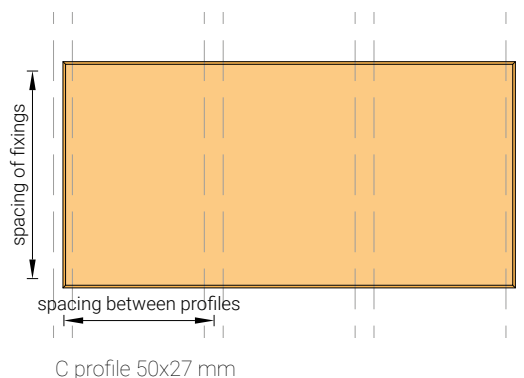
System with double C profiles



- Fixed spacer anchored to the wall with suitable fixings depending on the type of the support.
- Secondary C profiles with a maximum distance of 60 cm, fixed to the primary C profiles with a clip hook.
- The boards will be fixed directly to the C profiles according to the fixing schemes (page 10).

The profiles can be anticorrosion treated on demand for high relative humidity applications: swimming pools, saunas, kitchens, changing rooms of gym and health centers.

Orthogonal installation to the structure

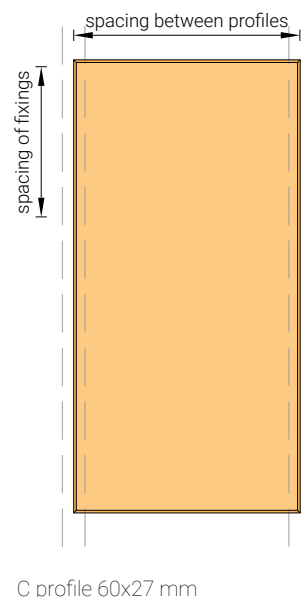
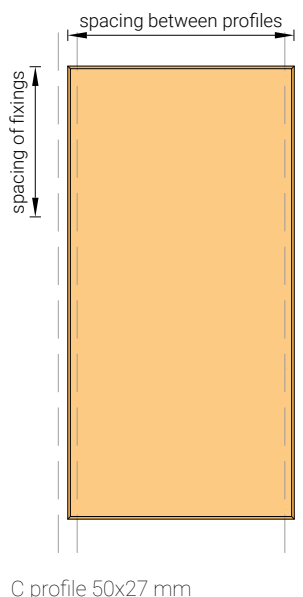


Only for CELENIT ACOUSTIC panels

- Secondary C profile fixed according to panel length. Generally C profile are fixed every 400 mm or 600 mm; for boards length 2000 mm C profiles can be fixed every 500 mm.
- Secondary C profile dimensions 50x27x0.6 mm; also available section 60x27 mm.

- C profile will be mounted vertically
- System anchored to the ceiling with suitable fixings depending on the type of the support.

Parallel installation to the structure

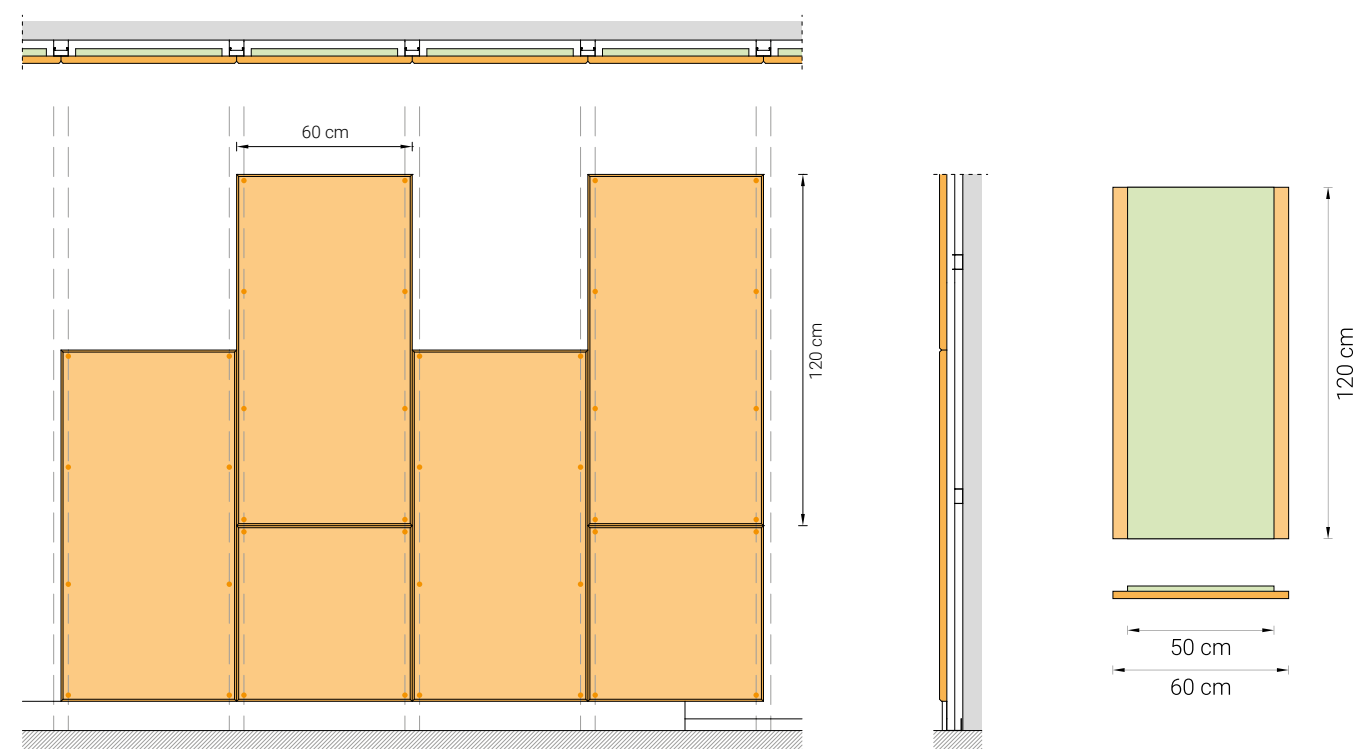


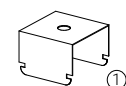
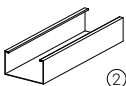
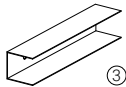
Available for CELENIT ACOUSTIC MINERAL boards or CELENIT ACOUSTIC boards

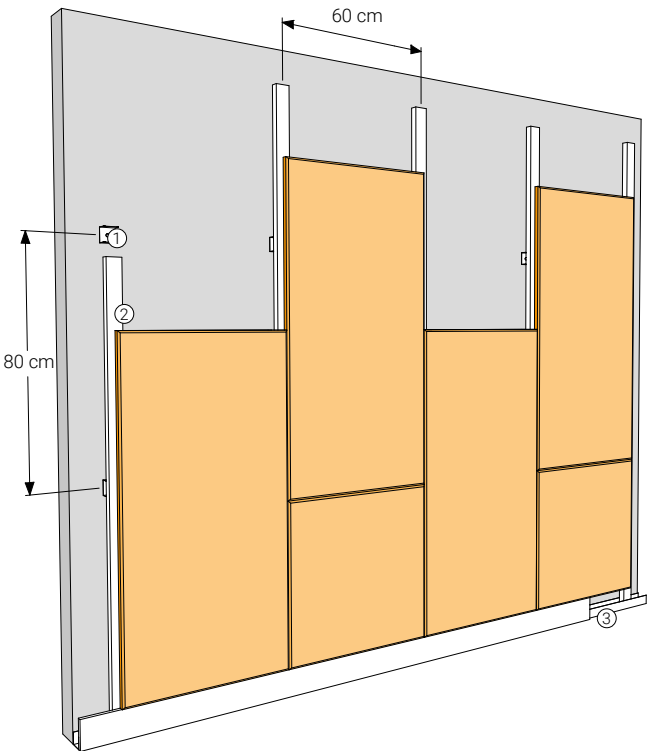
- System generally used for adhered application, to containing the total thickness.
- C profile fixed every 600 mm.
- C profile dimensions 50x27x0.6 mm; also available section 60x27 mm.

- C profile will be mounted vertically
- System anchored to the ceiling with suitable fixings depending on the type of the support.

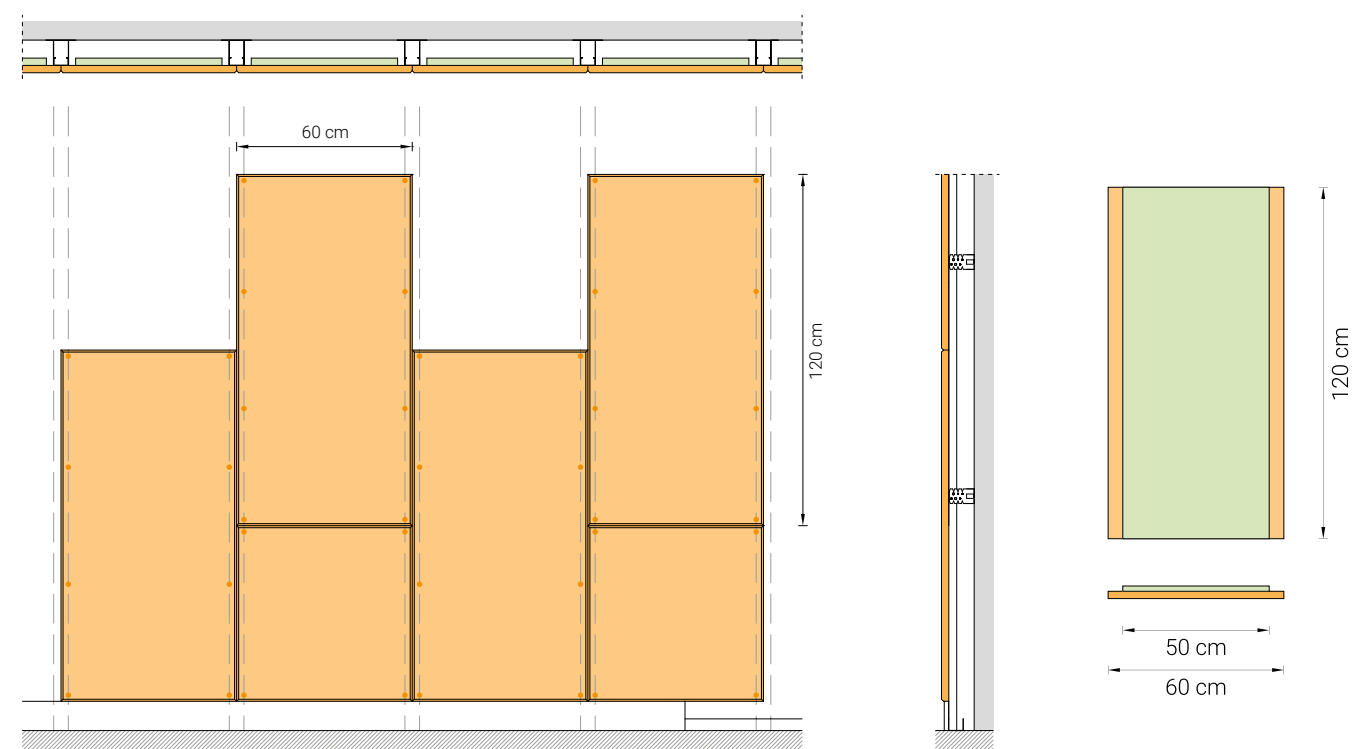
Single structure with fixed spacers and C profiles



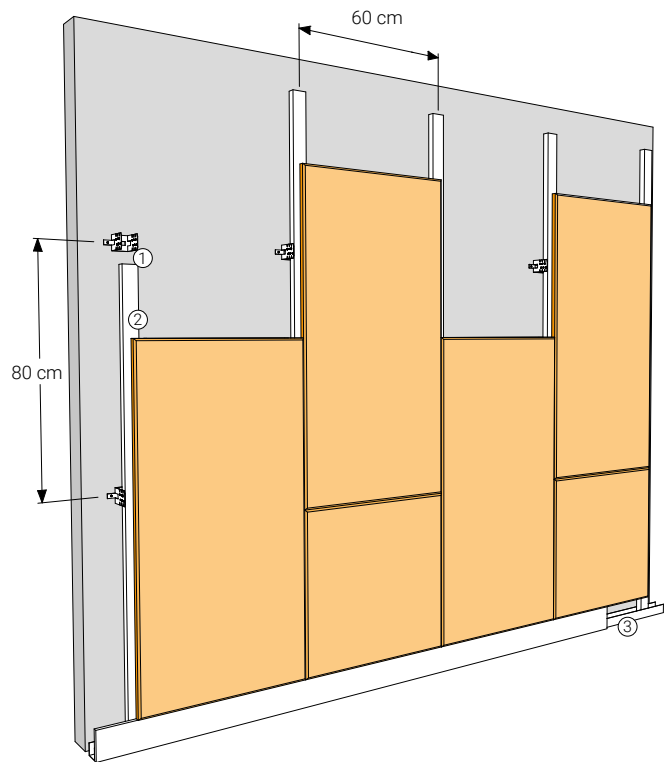
-  Galvanized steel fixed spacer for C profile
Dimensions 50x30 mm or 60x30 mm, rounded edge
-  Galvanized steel C profile
Dimensions 27x50x27 mm or 27x60x27 mm, thickness 0.6 mm, rounded edge
-  U-shaped perimeter guide
Dimensions 28x30x28 mm
Thickness 0.6 mm
-  Selftapping steel screw for plasterboard
Countersunk head
Dimensions 3.5x35 - 3.5x45 - 3.5x55 mm



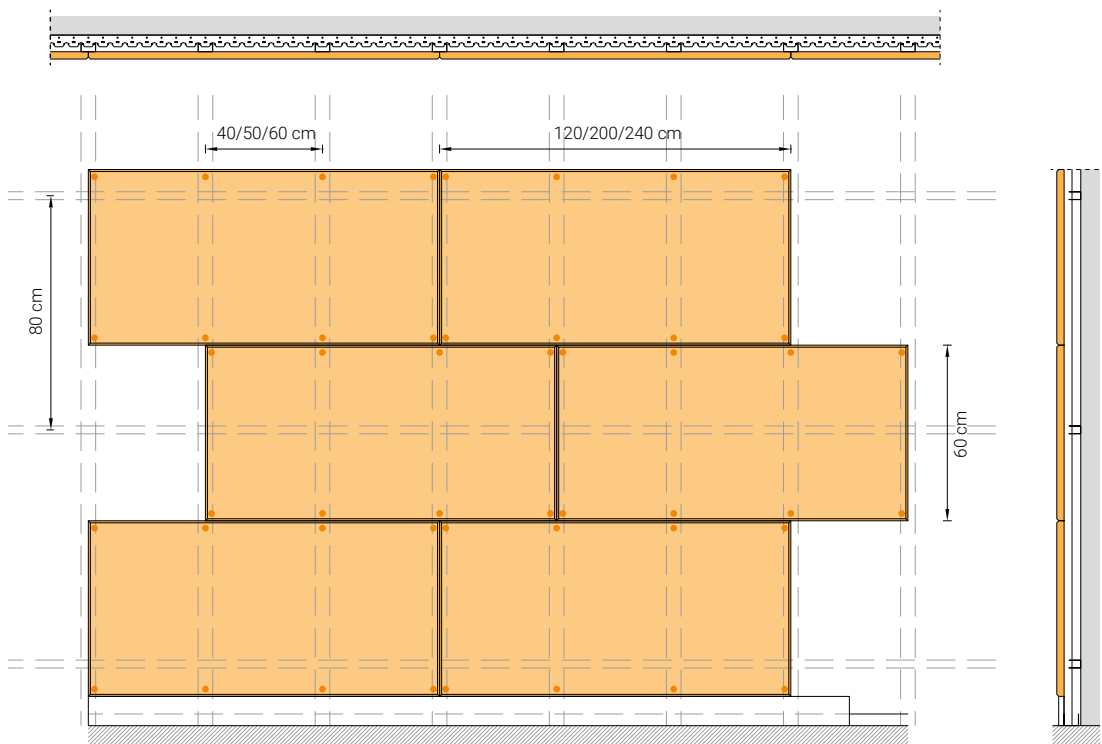
Single structure with adjustable brackets and C profiles



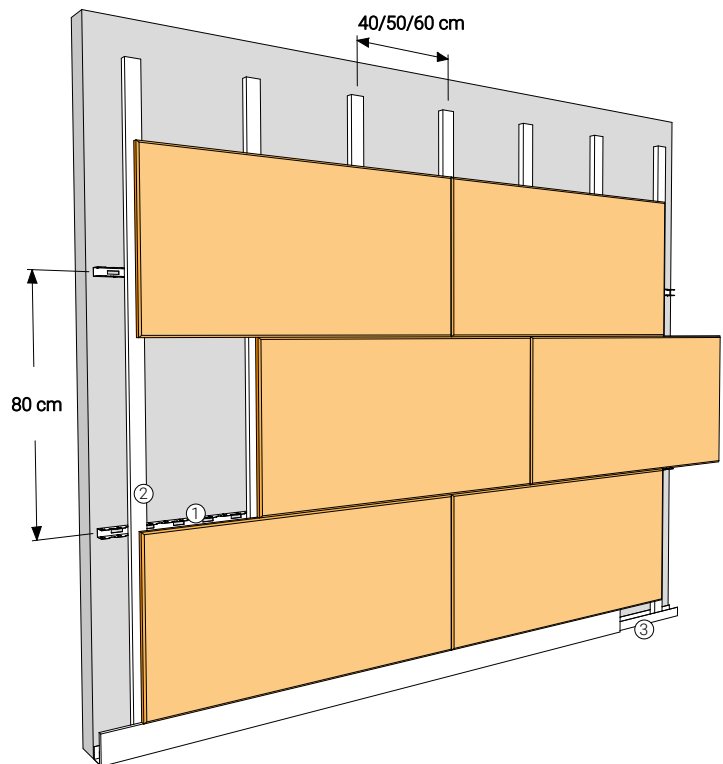
- ① Adjustable steel bracket for C profile
Width 50 mm or 60 mm
- ② Galvanized steel C profile
Dimensions 27x50x27 mm or 27x60x27 mm,
thickness 0.6 mm, rounded edge
- ③ U-shaped perimeter guide
Dimensions 28x30x28 mm
Thickness 0.6 mm
- Selftapping steel screw for plasterboard
Countersunk head
Dimensions 3.5x35 - 3.5x45 - 3.5x55 mm



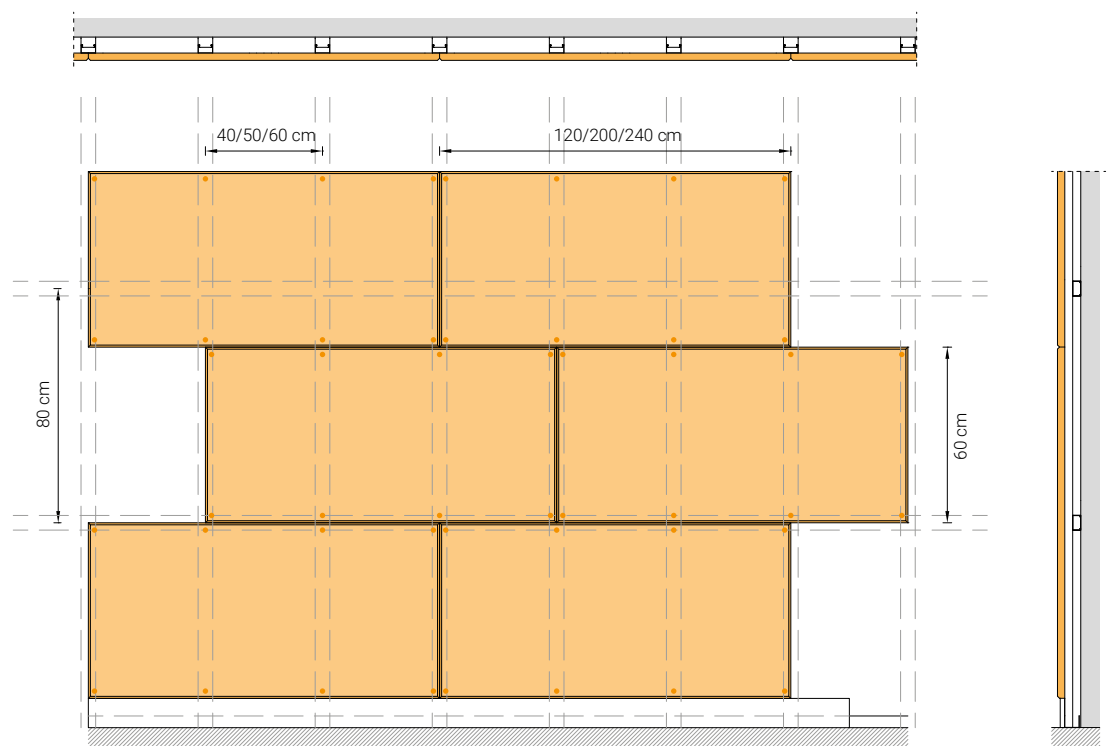
Double structure with clip steel profiles and C profiles



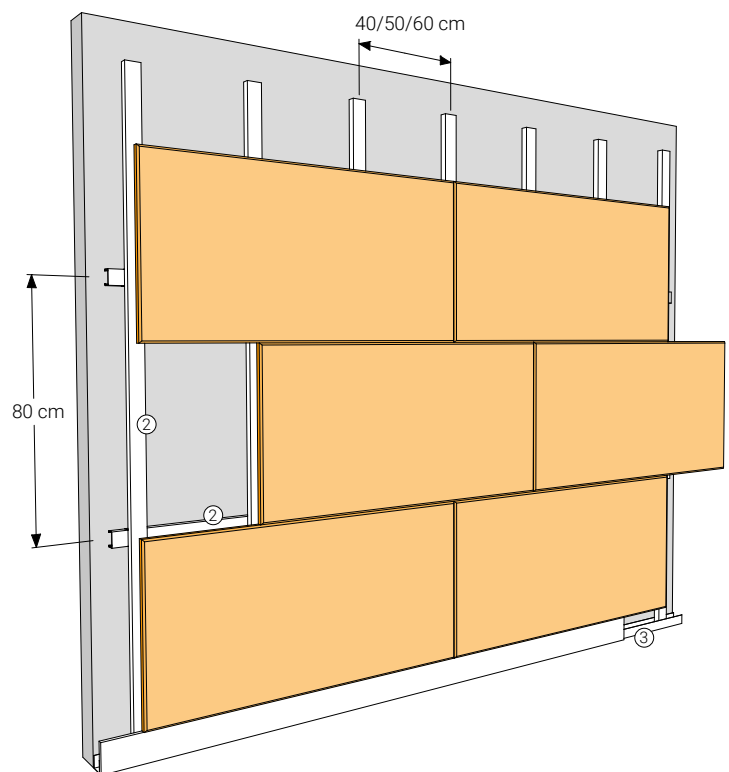
- ① Primary galvanized steel clip profile for C profile
Dimensions 43x28 mm, thickness 0.6 mm, rounded edge
- ② Galvanized steel C profile
Dimensions 27x50x27 mm or 27x60x27 mm, thickness 0.6 mm, rounded edge
- ③ U-shaped perimeter guide
Dimensions 28x30x28 mm
Thickness 0.6 mm
- Selftapping steel screw for plasterboard
Countersunk head
Dimensions 3.5x35 - 3.5x45 - 3.5x55 mm



Double structure with double C profiles



- ① Galvanized steel fixed spacer for C profile
Dimensions 50x30 mm or 60x30 mm,
rounded edge
- ② Galvanized steel C profile
Dimensions 27x50x27 mm or 27x60x27 mm,
thickness 0.6 mm, rounded edge
- ③ U-shaped perimeter guide
Dimensions 28x30x28 mm
Thickness 0.6 mm
- Selftapping steel screw for plasterboard
Countersunk head
Dimensions 3.5x35 - 3.5x45 - 3.5x55 mm

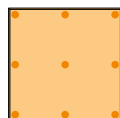


C 27x60x27 profiles must be used for wall coverings ball-impact resistant by adjusting the size of the fixed spacers and the hangers (see pages 15-16).

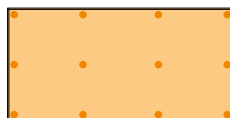
Fixings schemes

CELENIT ACOUSTIC range

- thickness 15 mm

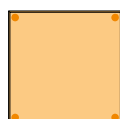


600x600 mm - 9 screws
Orthogonal installation:
 Spacing of fixings 300 mm
 C profile fixed every 300 mm



1200x600 mm - 12 screws
Orthogonal installation:
 Spacing of fixings 300 mm
 C profile fixed every 400 mm

- thicknesses 25/35 mm



600x600 mm - 4 screws
Orthogonal/parallel installation:
 Spacing of fixings 600 mm
 C profile fixed every 600 mm



2000x600 mm - 10 screws
Parallel installation:
 Spacing of fixings 500 mm
 C profile fixed every 600 mm
Orthogonal installation:
 Spacing of fixings 600 mm
 C profile fixed every 500 mm



1200x600 mm - 8 screws
Parallel installation:
 Spacing of fixings 400 mm
 C profile fixed every 600 mm
Orthogonal installation:
 Spacing of fixings 600 mm
 C profile fixed every 400 mm



2400x600 mm - 10 screws
Orthogonal/parallel installation:
 Spacing of fixings 600 mm
 C profile fixed every 600 mm

Board thickness [mm]	Dimensions [mm]	Screws per board [No.]	Screws per m ² [No./m ²]	Spacing between profile [mm]	Screw dimensions [mm]
15	600x600	9	25.0	300	3.5x35
	1200x600	12	16.7	400	
25	600x600	4	11.2	600	3.5x45
	1200x600	8	11.2	400 *	
	2000x600	10	8.4	500	
	2400x600	10	7.0	600	
35	600x600	4	11.2	600	3.5x55
	1200x600	8	11.2	400 *	
	2000x600	10	8.4	500	
	2400x600	10	7.0	600	

* C profile every 600 mm are also available, with screws spacing 300 mm and 9 screws per board (12.5 fixings/m²)

CELENIT ACOUSTIC MINERAL range

- wood wool thickness 25 mm

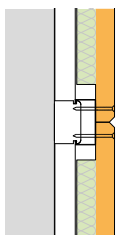


1200x600 mm - 8 screws
Parallel installation:
 Spacing of fixings 400 mm
 C profile fixed every 600 mm

Wood wool board thickness [mm]	Dimensions [mm]	Screws per board [No.]	Screws per m ² [No./m ²]	Spacing between profile [mm]	Screw dimensions [mm]
25	1200x600	8	11.2	600	3.5x45

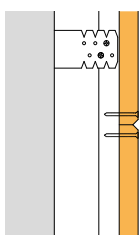
Indicative quantities

Application with fixed spacers and C profiles



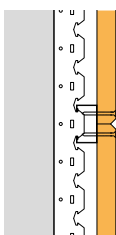
Type	Section [mm]	Length [mm]	Spacing [mm]	Indicative quantities
Galvanized steel fixed spacer for C profile	50x30 (30x60)	-	800 ^{*1}	2.10 pcs/m ² C profiles every 600 mm
				2.50 pcs/m ² C profiles every 500 mm
				3.10 pcs/m ² C profiles every 400 mm
C profile	27x50x27 (27x60x27)	3000/4000	600	1.70 m/m ²
			500	2.00 m/m ²
			400	2.30 m/m ²
U-shaped perimeter guide	28x30x28	3000/4000	-	Perimeter ^{*2}

Application with adjustable brackets and C profiles



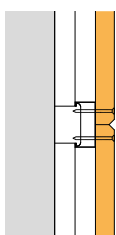
Type	Section [mm]	Length [mm]	Spacing [mm]	Indicative quantities
Adjustable steel bracket for C profile	50 (60)	-	800 ^{*1}	2.10 pcs/m ² C profiles every 600 mm
				2.50 pcs/m ² C profiles every 500 mm
				3.10 pcs/m ² C profiles every 400 mm
C profile	27x50x27 (27x60x27)	3000/4000	600	1.70 m/m ²
			500	2.00 m/m ²
			400	2.30 m/m ²
U-shaped perimeter guide	28x30x28	3000/4000	-	Perimeter ^{*2}

Application with clip steel profiles and C profiles



Type	Section [mm]	Length [mm]	Spacing [mm]	Indicative quantities
Primary galvanized steel clip profile for C profile	40x28	4000	800	1.15 m/m ²
			600	1.70 m/m ²
			600	1.70 m/m ²
C profile	27x50x27 (27x60x27)	3000/4000	500	2.00 m/m ²
			400	2.30 m/m ²
			-	Perimeter ^{*2}

Application with double C profiles



Type	Section [mm]	Length [mm]	Spacing [mm]	Indicative quantities
Primary C profile	27x50x27 (27x60x27)	3000/4000	900	1.11 m/m ²
			800	1.15 m/m ²
			600	1.70 m/m ²
Galvanized steel fixed spacer for C profile	50x30 (30x60)	-	-	- ^{*3}
Secondary C profile	27x50x27 (27x60x27)	3000/4000	600	1.70 m/m ²
			500	2.00 m/m ²
			400	2.30 m/m ²
U-shaped perimeter guide	28x30x28	3000/4000	-	Perimeter ^{*2}

^{*1} The spacing between the hangers (spacers/ brackets) is the distance between them along the bearing profile

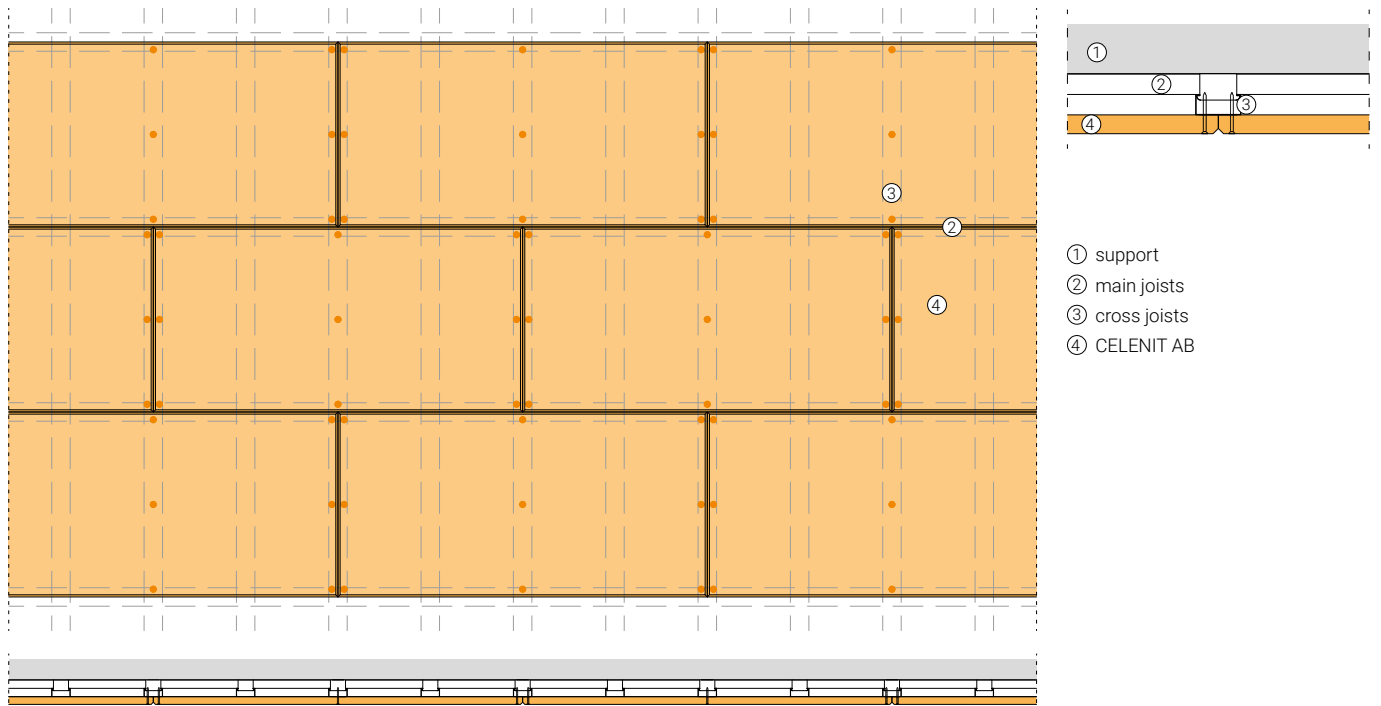
^{*2} The quantities of the U-shaped guide is equal to the perimeter of the false ceiling

^{*3} The quantities of fixed spacer to use is equal to the number of crosses between primary structure and secondary structure

False wall with CELENIT AB 25 mm thick, ball impact resistant according to DIN 18032/Part 3 standards

	Type of board	Structure	Certificate * No. / Date	Standard	Results
	CELENIT AB Thickness: 25 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 300 mm Distance between centers of main joists: 600 mm Number of screws per board: 9	324044 27.04.2015	DIN 18032-3	Visual examination Pass

* The certificate is based on tests carried out at the Giordano Institute (Bellaria - RN - Italy)



Description

CELENIT AB boards dimensions 1200x600 mm, 25 mm thick, with chamfered edges on 4 sides (code S4) with staggered laying on the short side. Boards are optionally painted and directly fixed to the cross joists made of C-shaped steel profile, section 60x27 mm and thickness 0.6 mm, placed orthogonally with a distance between centers of 300 mm. Cross joists

are supported by main joists made of C-shaped steel profile, section 60x27 mm and thickness 0.6 mm, placed orthogonally with a distance between centers of 600 mm. The boards are fixed on the underside to the cross joists using self-tapping screws, diameter 3.5 mm and spacing 300x600 mm (9 screws per board).

Test results

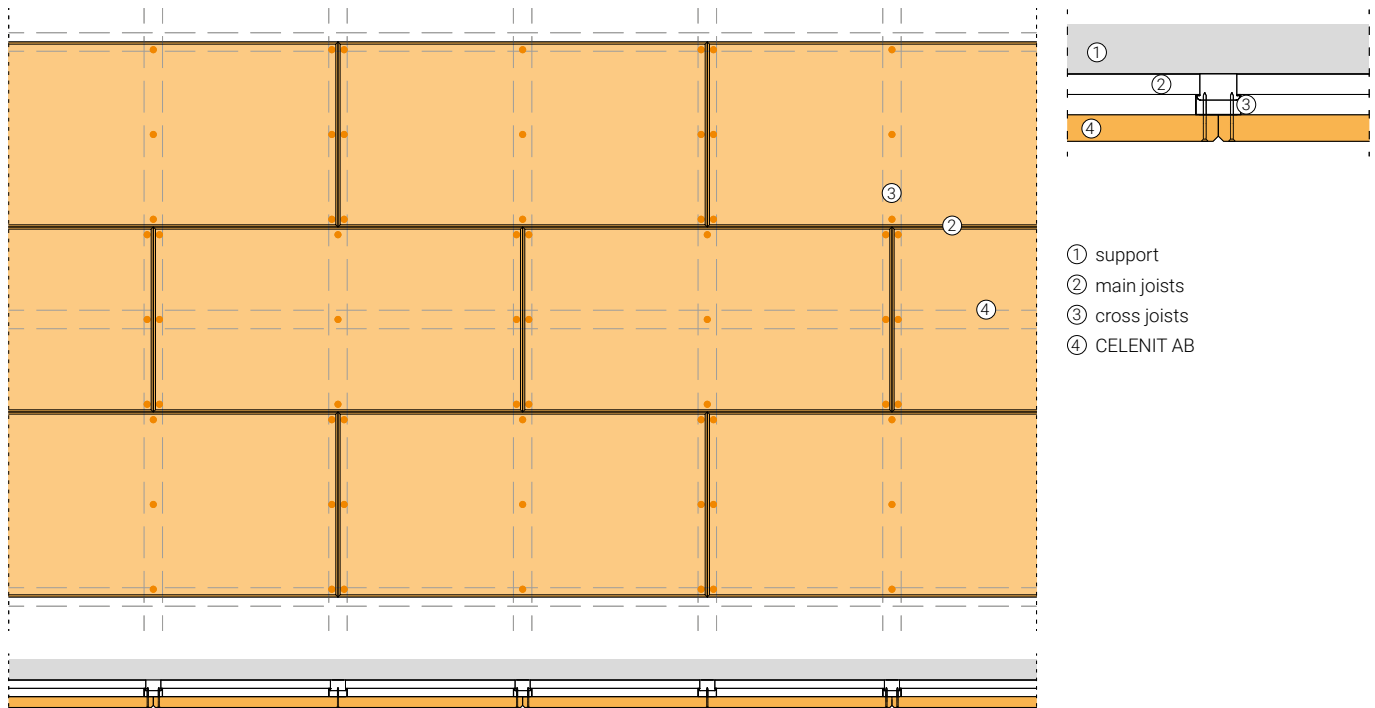
Impacts	Impact angle	Nominal velocity [m/s]	Visual examination *
30	90°	23.5 ± 1.2	Pass
12	45°		Pass
12	45° (opposite direction)		Pass

* After firing the shots in accordance with clause 7 "Auswertung" of standard DIN 18032-3:1997, the strength, function and safety of the wall elements are not adversely affected and their appearance has not changed.

False wall with CELENIT AB 35 mm thick, ball impact resistant according to DIN 18032/Part 3 standards

	Type of board	Structure	Certificate * No. / Date	Standard	Results
	CELENIT AB Thickness: 35 mm Dimensions: 1200x600 mm Edges: Chamfered - S4	C metal section 27x60x27 mm Distance between centers of cross joists: 600 mm Distance between centers of main joists: 600 mm Number of screws per board: 9	324043 27.04.2015	DIN 18032-3	Visual examination Pass

* The certificate is based on tests carried out at the Giordano Institute (Bellaria - RN - Italy)



Description

CELENIT AB boards dimensions 1200x600 mm, 35 mm thick, with chamfered edges on 4 sides (code S4) with staggered laying on the short side. Boards are optionally painted and directly fixed to the cross joists made of C-shaped steel profile, section 60x27 mm and thickness 0.6 mm, placed orthogonally with a distance between centers of 600 mm. Cross joists

are supported by main joists made of C-shaped steel profile, section 60x27 mm and thickness 0.6 mm, placed orthogonally with a distance between centers of 600 mm. The boards are fixed on the underside to the cross joists using self-tapping screws, diameter 3.5 mm and spacing 300x600 mm (9 screws per board).

Test results

Impacts	Impact angle	Nominal velocity [m/s]	Visual examination *
30	90°	23.5 ± 1.2	Pass
12	45°		Pass
12	45° (opposite direction)		Pass

* After firing the shots in accordance with clause 7 "Auswertung" of standard DIN 18032-3:1997, the strength, function and safety of the wall elements are not adversely affected and their appearance has not changed.

Storage, use and maintenance

The boards must be stored on a pallet placed on a flat surface, protected from rain and direct sunlight. Pallets must be handled with care on site. Bumping the corners of the pallets can cause damage to the boards. For more information see the "Storage, use and maintenance" information available in the download area of the website www.celenit.com.



CELENIT boards are dimensionally stable (EN 13168), however, they must be installed after acclimating to the same room they are going to be installed in, as well as after all concrete works are finished and the doors, windows, heating and ventilation systems have been installed.

Room temperature must be kept constant before and after installation. Do not suddenly change the temperature of the room after installation.

General installation instructions

- The boards have one side that should be visible (front of the board) and another side that should be placed against the structure (back of the board). The back of the board usually has the CELENIT logo or shows calibration marks. The front may be painted and/or has worked edges. In the absence of paint or edges, the front can be identified according to the pallet layout: the front of the boards faces the top and the back faces the pallet.
- With the aid of a laser level mark the positions for the fixings of the fixed elements (fixed spacer, brackets, clip steel profile) and fix them.
- Design the secondary profiles position starting from the center of the ceiling to have a symmetric layout. The structure will be connected to the spacer elements or clip profiles by aligning them with a laser leveler.
- If a vapour barrier is necessary, it'll install on the secondary profile with butyl double-sided adhesive tape. The tape also acts as a seal for the fixings of CELENIT boards.

- Fix the boards to the structure according to fixing schemes at page 10. Take maximum care while handling the panels. Corners and paint are easy to damage. Use clean gloves when installing the panels. Please find more information on stocking, use and maintenance at www.celenit.com.
- We recommend boards with chamfered edges and staggered laying on the short side to ensure a nicer visual effect. The installation of boards with straight edge may be possible anyway.
- It is possible to insert mineral wool panels or wood fiber panels in the background of CELENIT panels to improve acoustic and thermal performances while laying CELENIT boards.
- After the installation please follow the recommendations in the section "Storage, use and maintenance" at www.celenit.com.

Important remarks

15 mm panels are not recommended for outdoor applications (with a roof protection) or in presence of high humidity.

CELENIT boards with DT edges code are not available because dimensions are not suitable for this system.