



Installation instructions
Wooden acoustic panels
ACOUSTICs GEO

TRANSPORT AND STORAGE

Admonter Acoustic Geo must be transported in the original packaging or protected from moisture on all sides with plastic film and stored level/flat.

Any complaints must be submitted in writing immediately after delivery and before installation begins.

BEFORE THE START OF ASSEMBLY

Planning and installation exclusively by qualified personnel!

As the visible side of Admonter Acoustic consists exclusively of solid wood, natural differences in colour and structure occur. This is intentional and does not constitute grounds for complaint.

Climatic conditions:

Ensure the correct room climate - see „Admonter comfort diagram“ <https://admonter.com/downloads/>. The maximum permissible values are shown in **Tab. 1**.

The climatic values, especially the air humidity, during installation should correspond as closely as possible to the average values that will prevail later.

Movement joints should be provided to walls and other immovable building-parts. If climatic fluctuations and/or large room dimensions are to be expected, movement joints should also be planned in the area every 5m. These movement joints must also be provided in the sub-construction. Functional joints of the building are to be taken over in any case.

Room temperature	10-30°C
Humidity	25-65%

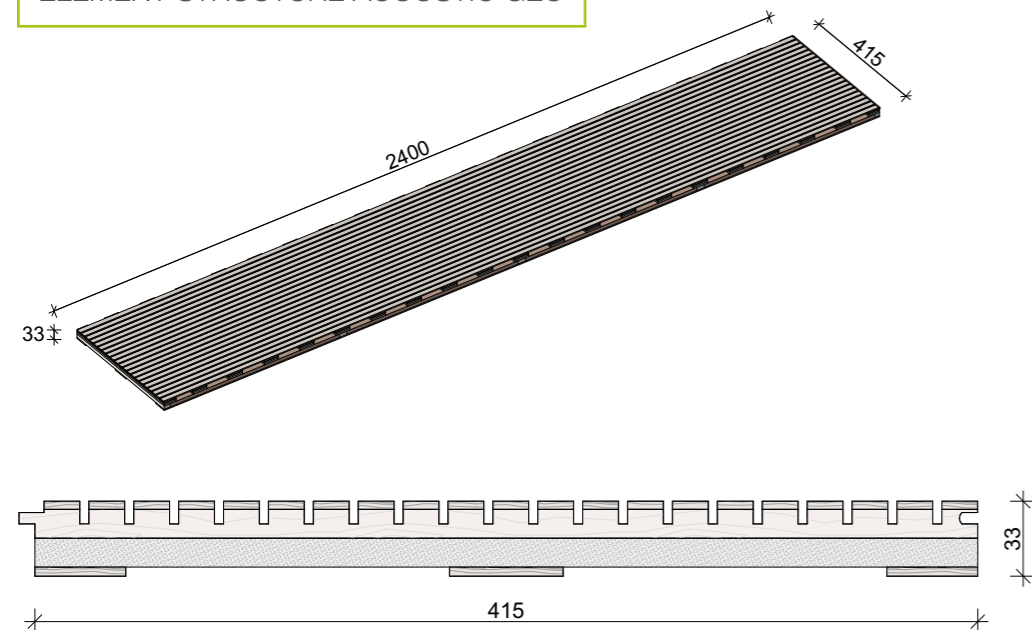
Tab. 1: Maximum climate range for Acoustic Geo

Direct contact with metals on visible parts of the element must be avoided to prevent any chemical colour changes that may occur.

Since the acoustic element is a non-load-bearing suspended ceiling layer component, additional loads such as lighting fixtures or furnishings must be attached to the appropriately dimensioned sub-construction below using suitable mounting materials.

Recessed luminaires must not exceed an operating temperature of 50°C in continuous operation and must be installed according to the respective manufacturer's instructions. No cavity damping is to be installed in the area of the recessed luminaires.

ELEMENT STRUCTURE ACOUSTIC GEO



PROCESSING OF THE ACOUSTIC ELEMENTS

If possible, drill holes with a diameter of 10mm or more using a drilling template.

When working with a box drill or jigsaw, the slats must be secured against breaking out (e.g. insert slat strips into the slots). Cut-outs with the jigsaw must be made from the back of the element.

To avoid tear-out when cutting close to the edge, stick a masking tape over the kerf.

CEILING MOUNTING

Sub-construction with sheet steel profiles:

Fig. 1a and Fig. 2a show the sub-construction in galvanised sheet steel profiles according to EN 14195.

Fig. 1a: The supporting structure (CD 60/27 according to EN 14195) of the first sub-construction level is to be suspended from the raw ceiling with a direct hanger/nonius hanger approved for this purpose. Depending on the building material, the hangers must be fastened in the raw ceiling with approved or standardised anchoring elements.

Suspension **height A** according to construction example construction 2 or construction 3 as per tender texts or the respective requirements according to the specifications of acoustically competent planners (**see Fig. 2a**).

Centre **distance B** of the first sub-construction level: **850mm**.

Centre **distance C** nonius hanger: 850mm: UNLESS the minimum load-bearing capacity per hanger is 0.4 kN, its fasteners in the raw ceiling and the ceiling itself have sufficient load-bearing capacity and no other additional loads have to be absorbed! Otherwise, individual static dimensioning is required.

Execution of the sub-construction according to ÖNORM B 3415:2009.

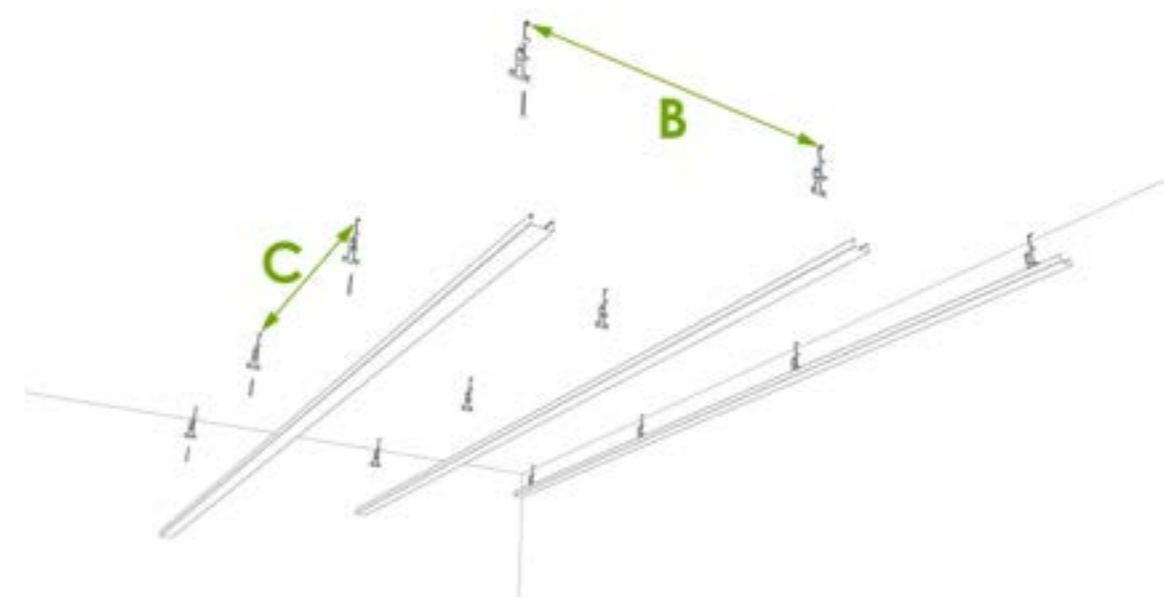


Fig. 1a: First sub-construction with sheet steel profiles

For the second sub-construction level, either steel sheet profiles (CD 60/27 according to EN 14195) (see Fig. 2a) or wooden slats (grading class S10 or C24 according to ÖNORM DIN 4074-1: 2004) with a minimum thickness of 27mm are to be used. The board width should not be less than 120mm (see Fig. 2b). The second sub-construction level is fastened at 90° to the first sub-construction level with fastening material approved for this purpose. Two screws are to be used per intersection point of the two sheet steel profiles (e.g.: drywall screws min. 4x20mm) (see detail 2a). With sheet steel and wood, two screws must also be used (see Fig. 3a). The length of the screws should be chosen according to the thickness of the wood battens.

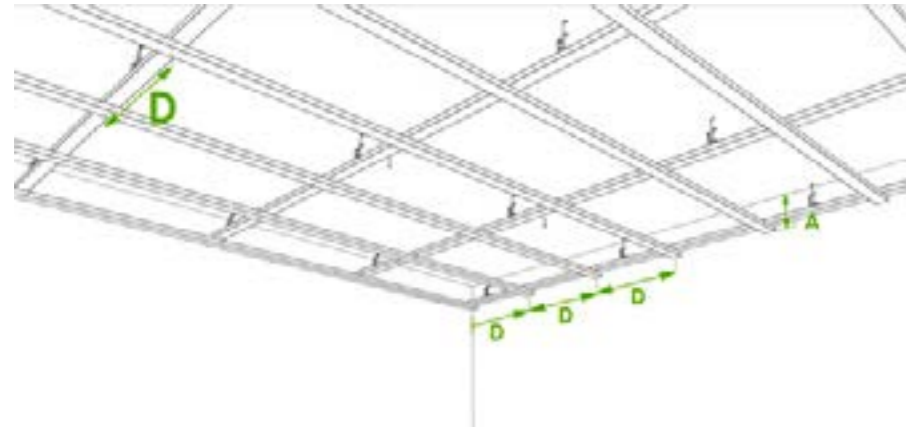


Fig. 2a Second sub-construction with sheet steel profiles
Centre distance $D=600\text{mm}$ (mandatory!)
 A = Distance from raw ceiling to lower edge of second substructure



Detail 2a

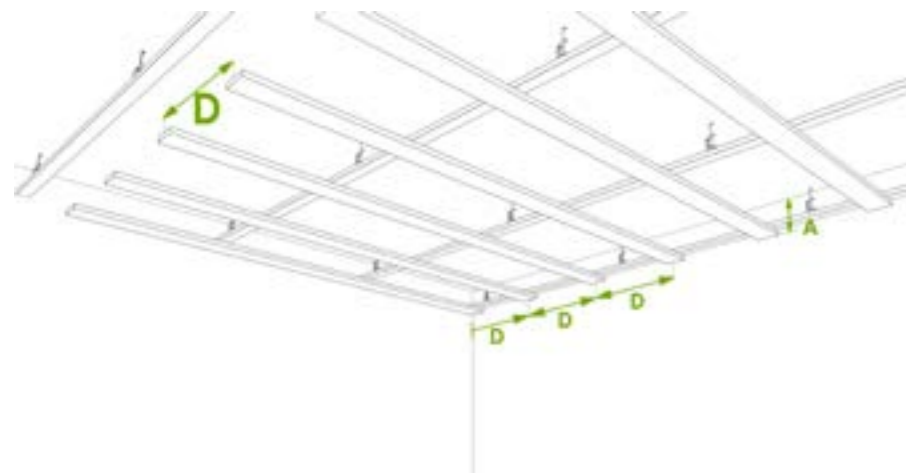


Fig. 2b Second sub-construction with wooden battens
Centre distance $D=600\text{mm}$ (mandatory!)



Fig. 3a

Sub-construction with wooden slats

Fig. 1c and Fig. 2c show the sub-construction made of wooden battens (grading class S10 or C24 according to ÖNORM DIN 4074-1: 2004).

Fig. 1c: The load-bearing battens of the first sub-construction level are to be suspended from the raw ceiling with a direct hanger/nonius hanger approved for this purpose. Depending on the building material, the hangers must be fastened in the raw ceiling with approved or standardised anchoring elements.

Suspension height **A** is to be selected according to construction example construction 2 or construction 3 as per tender texts or according to the respective requirements as per the specifications of acoustically competent planners (see detail 2c).

Centre distance **B** of the first sub-construction level: 850mm.

Centre distance **C** of hangers: 850mm: UNLESS the minimum load-bearing capacity per hanger is 0.4 kN, its fasteners in the raw ceiling and the ceiling itself have sufficient load-bearing capacity and no other additional loads have to be absorbed! Otherwise, individual static dimensioning is required.

Execution of the sub-construction according to ÖNORM B 3415: 2009.

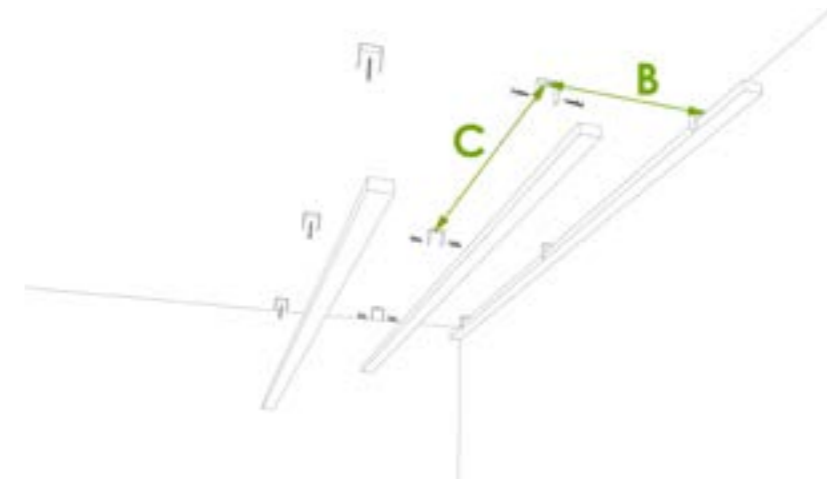


Fig. 1c Substructure with wooden slats

Fig. 2c For the second substructure level, planed boards (grading class S10 or C24 according to ÖNORM DIN 4074-1: 2004) with a minimum thickness of 27mm are to be used. The board width should not be less than 120mm. The boards are fastened at 90° to the first sub-construction level or to the later alignment of the acoustic elements with fastening material approved for this purpose¹⁾.



Fig. 2b Second substructure with wooden battens
Centre distance $D=600\text{mm}$ (mandatory!)



Detail 2c Fastening with 2 screws,
Suspension height A = Distance from raw ceiling to lower edge of the second substructure

Longitudinal joints are to be doubled up and screwed.

In the case of complex floor plans, a combination of the assembly variants may be advantageous under certain circumstances.

¹⁾ e.g.: „SPEED wood construction screw countersunk head 5.0x 60 TG TX25 galvanised-blue“, or equivalent

INSTALLATION OF ACOUSTIC ELEMENTS

General:

Cavity damping can be inserted between the second (lower) sub-construction level (wooden battens or sheet steel) to improve the absorption behaviour.

For this purpose, rock wool boards (bulk density 35- 40kg/m³, as well as a length-related flow resistance of ≥ 6 kPa-s/m²) with a thickness of 50mm (Rockwool Sonorock or equivalent) are used according to the tender texts or the respective requirements according to the specifications of acoustically competent planners.

Installation: The section of the last element of a row can be used as the start of the next row, but the length must be $1.5 \times$ element width **E** (approx. 60cm) (centre distance second sub-construction level!). For a regular arrangement of the cross layers, the gating must be adjusted in length once again (see Fig. 3e). End joints in the bond should be offset by at least $2 \times$ panel widths **E** (approx. 80cm) (see Fig. 3c).

The first row of acoustic elements must be aligned absolutely true to line and secured against unintentional shifting towards the wall with wedges!

Depending on the size of the room, a distance of at least 5mm must be maintained on all sides from walls and other immovable building-parts; if higher humidity is expected, at least 10mm is required - see chapter „Climatic conditions“.

Information on production tolerances for panel construction: If the overall thickness remains the same, the thickness of the visible and reverse sides may vary by approx. ± 0.7 mm. The joint depth can vary from 7-11mm. The position of the cross layers in the longitudinal section may be subject to deviations in the millimetre range due to production.

Installation on battens

The panels are mounted invisibly in the acoustic joint by means of screws as standard (see Fig. 3d.) An alternative fastening by means of clamps (invisible in acoustic joint) is also possible. The panels are fastened with fasteners approved for this purpose (see Table 2). Figs. 3a to 3d show the installation.

	Dry interior	Damp room ^(*)
Uniboring screw 3.0x45/27 steel galvanised T20	✓	
Unibolt 3.0x45/27 Stainless steel A4 T20/Niro A4	✓	✓
Clamps type KG VZ- KG 700 GALV (KMR) 45mm steel wire galvanised and resinated ^o .	✓	

Tab. 2: approved fasteners

(^o e.g. swimming pool, not suitable for sauna use!)

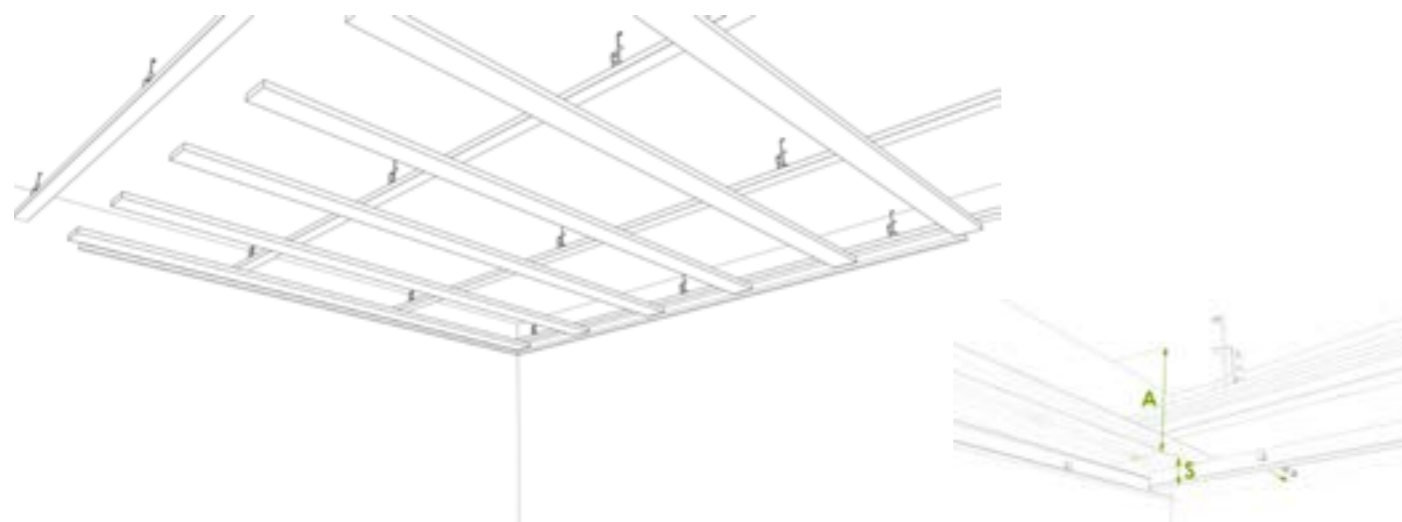


Fig. 3a Sub-construction with wall connection bracket

Detail: 3a shows the wall connection angle installed deeper by the thickness **S** of the acoustic element. Alternatively, the connection to the wall can be made with a shadow gap. **A** is the distance from the raw ceiling to the lower edge of the sub-construction.

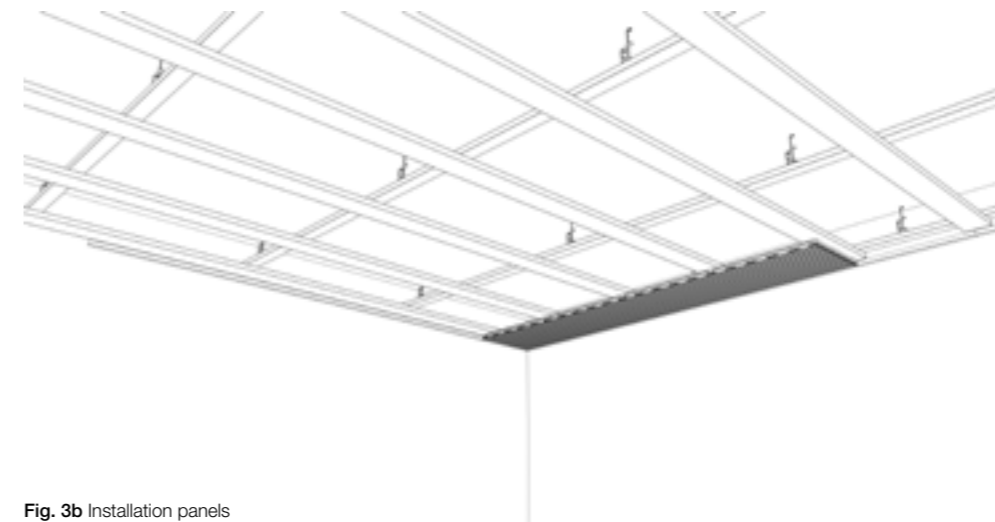


Fig. 3b Installation panels

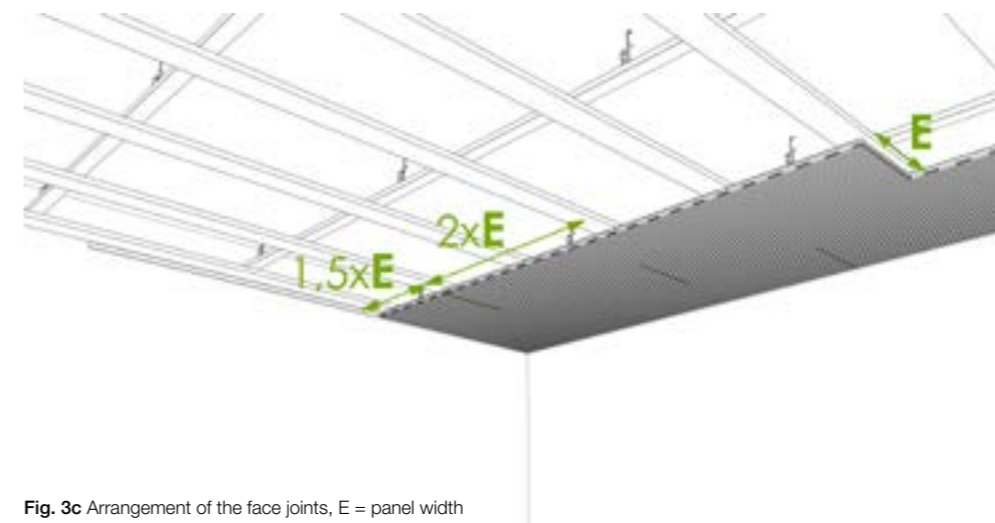


Fig. 3c Arrangement of the face joints, E = panel width

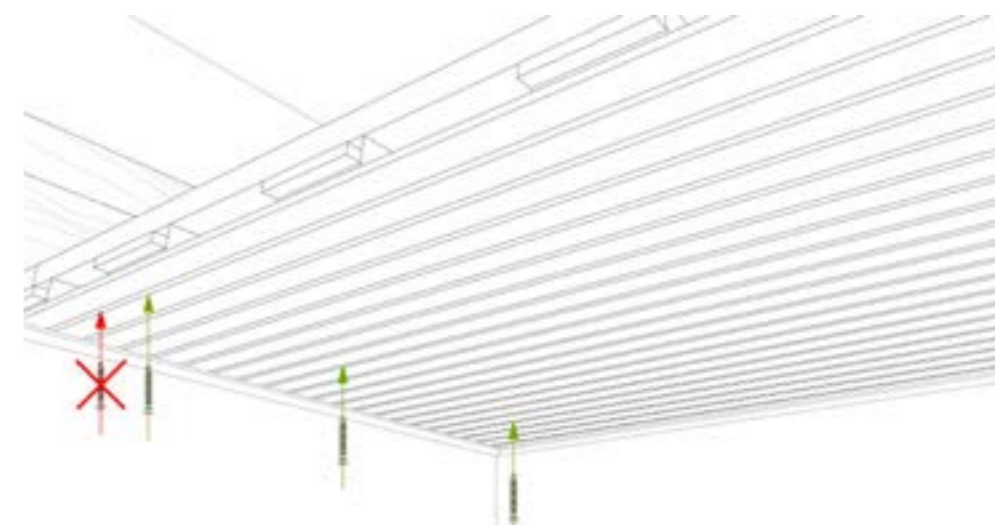


Fig. 3d Installation by means of screws

Three fastening points (screws or clamps) are to be attached per intersection point of an element crossbar and a sub-construction cross layer (see Fig. 3d). For a whole panel, at least twelve screws or clamps are required at corresponding fixing points.

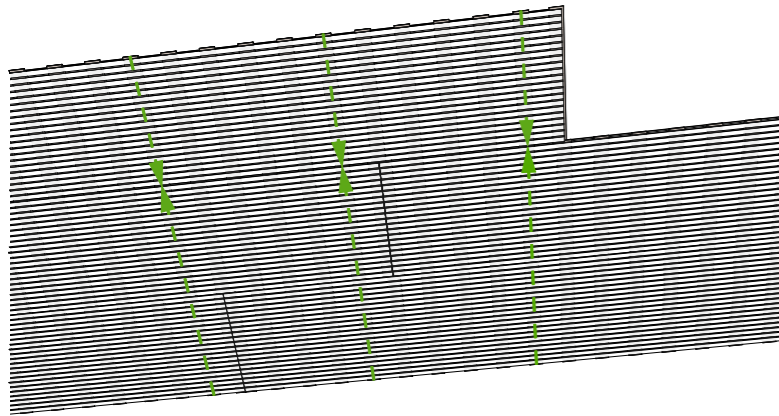


Fig. 3e Correct course of the visible cross layers.

Installation on metal sub-construction

The panels are fixed invisibly in the acoustic joint using special screws. It is recommended to fix the panels with a clamp when screwing! The panels are fastened with approved fasteners (see Tab. 3). Fig. 3a to 3d above show the assembly.

	Dry interior	Damp room ¹⁾
Uniboring screw 3.0x45/27 steel galvanised T20	✓	
Unibolt 3.0x45/27 Stainless steel A4 T20/Niro A4	✓	✓

Tab. 3 approved fasteners

¹⁾ e.g. swimming pool, not suitable for sauna use!

MATCHING TRIM

Construction examples according to tender texts.

WALL INSTALLATION

In general:

When installing the acoustic elements, basic construction details must be observed, e. g. installation on exterior walls only with rear ventilation, no direct contact with the floor (moisture during cleaning), etc.

If necessary, increased requirements must be placed on the sub-construction in the action of chair backs or similar (reduced center distance).

Sub-construction

Fig. 4a (horizontal panel assembly) and Fig. 4b (vertical panel assembly) show the sub-construction executed with wooden battens (grading class S10 or C24 according to ÖNORM DIN 4074-1: 2004):



Fig. 4a Sub-construction horizontal panel mounting
Centre distance D of the mounting battens is 600mm (mandatory!)

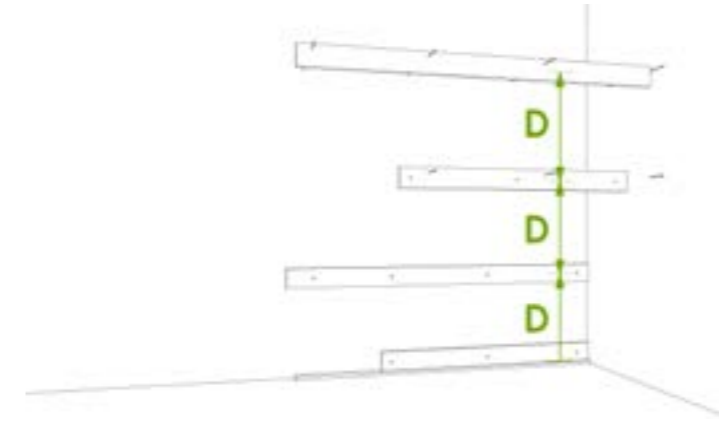


Fig. 4b Sub-construction vertical panel mounting
Centre distance D of the mounting battens is 600mm (mandatory!)

Fig. 4a and 4b: The load-bearing battens with a dimension of at least 27/120mm must be fastened with approved or standardised anchoring elements, depending on the building material.

Fig. 4c: The construction height A is to be produced according to the construction example for construction 2 or construction 3 in accordance with the tender texts or according to the respective requirements according to the specifications of acoustically competent planners by means of several sub-construction levels or doublings.

The fastening is carried out at 90° to the later alignment of the acoustic elements with fastening material approved for this purpose.

Centre distance D of the mounting battens is 600mm (mandatory!) (see Fig. 4a and 4b).

Fig. 4d: Suggested flush finish to the floor: In order to protect the acoustic elements from the effects of moisture, e.g. during cleaning work, a suitable connection must be implemented on site or the floor profile must be installed.

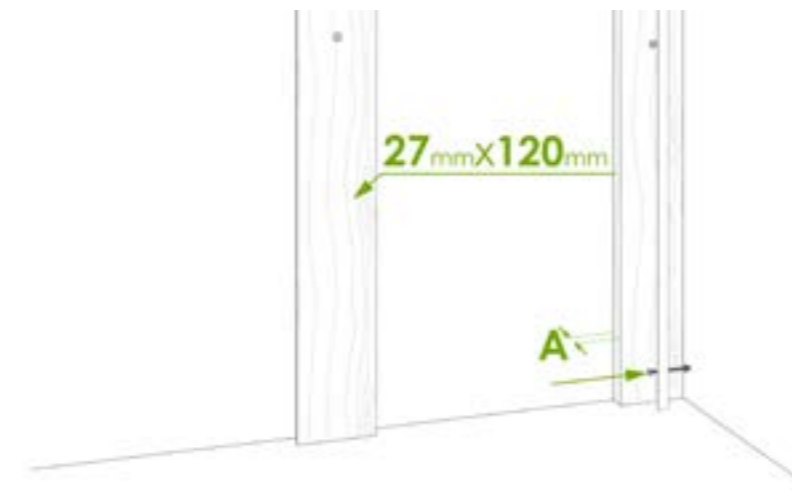


Fig. 4c: Installation wall connection profile
A = Distance from wall to outer edge of substructure



Fig. 4d Detail: Suggestion of flush finish to the floor - floor profile

INSTALLATION OF ACOUSTIC ELEMENTS

When assembling the first row, ensure straight alignment. The section of the last panel of a row can be used as the start of the next row, but the length must be at least 1.5 x the panel width **E**. It must also be ensured that the visible cross layers of the panels are in alignment. If necessary, shorten the panel at the already cut end (see Fig. 4h). The end joints in the bond must be offset by at least 1.5 panel widths **E** (see Fig. 4g).

The first row of acoustic elements must be aligned absolutely straight and secured against unintentional shifting!
The wall installation must be carried out in such a way that the dead weight of the panels rests on an appropriate initial profile/baseboard and the fasteners (screws or clamps) are not exposed to vertical gravitational forces.

Information on production tolerances for panel construction: If the overall thickness remains the same, the thickness of the visible and reverse sides may vary by approx. $\pm 0.7\text{mm}$. The joint depth can vary from 7-11mm. The position of the cross layers in the longitudinal section may be subject to deviations in the millimetre range due to production.

Depending on the size of the room, a distance of at least 5mm must be maintained on all sides from walls and other immovable building-parts components; if higher humidity is expected, at least 10mm is required - see chapter „Climatic conditions“.

Installation on battens

The panels are installed invisibly in the acoustic joint using as standard (see Fig. 4e). An alternative fastening by means of special screws (invisible in acoustic joint) is also possible. The panels are fastened with fasteners approved for this purpose (see Tab. 4). The following Fig. 4d to 4h show the installation.

	Dry interior	Damp room
Uniboring screw 3.0x45/27 steel galvanised T20	✓	
Unibolt 3.0x45/27 Stainless steel A4 T20/Niro A4	✓	✓
Clamps type KG VZ- KG 700 GALV (KMR) 45mm steel wire galvanised and resinated	✓	

Tab. 4 approved fasteners (° e.g. swimming pool, not suitable for sauna use!)

Fig. 4d – 4h show the installation of the acoustic elements.

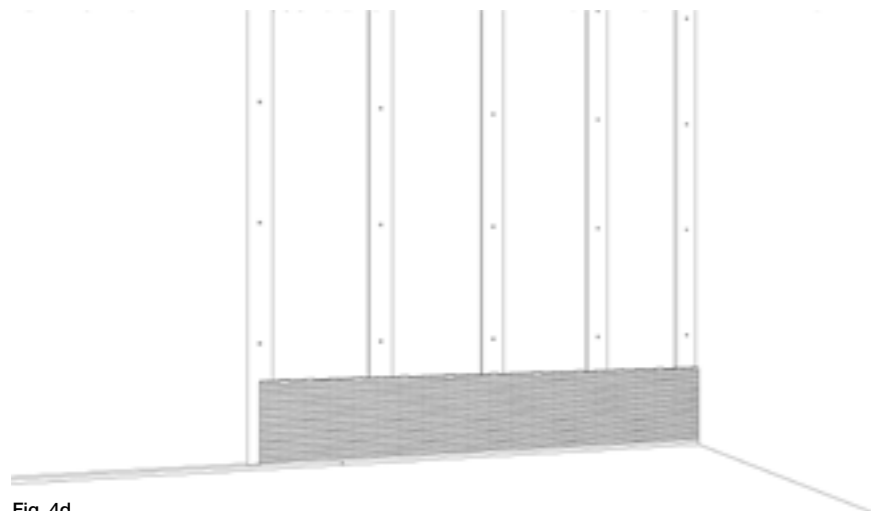


Fig. 4d

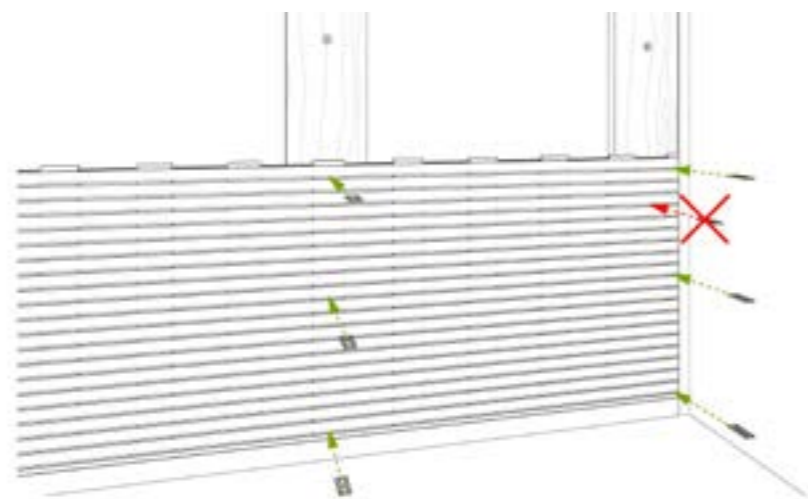


Fig. 4e

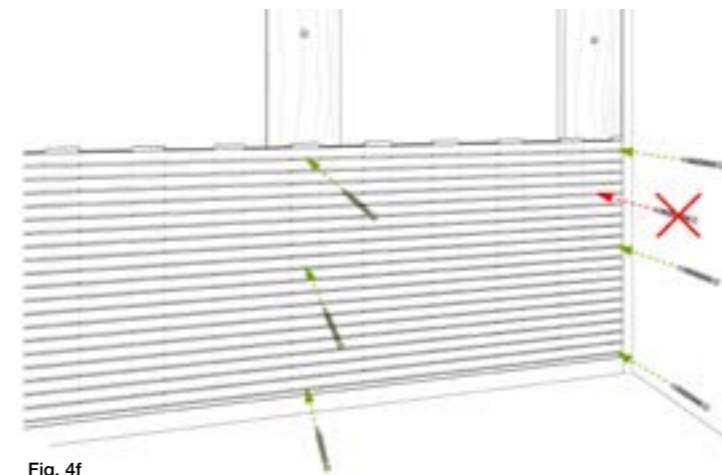


Fig. 4f

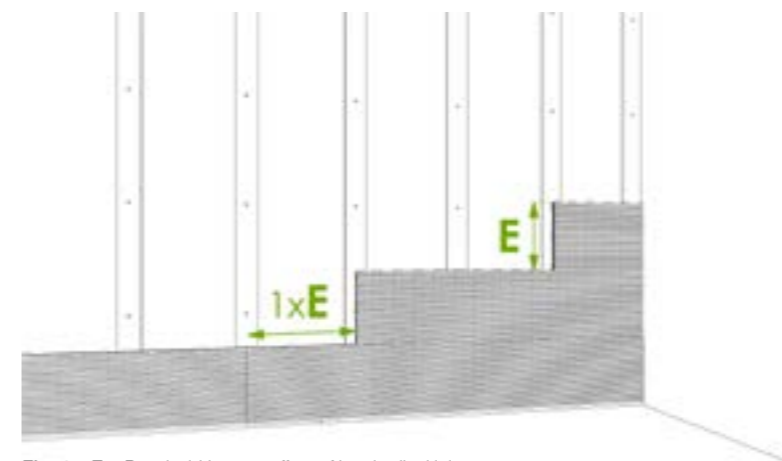


Fig. 4g E = Panel width, note offset of longitudinal joints

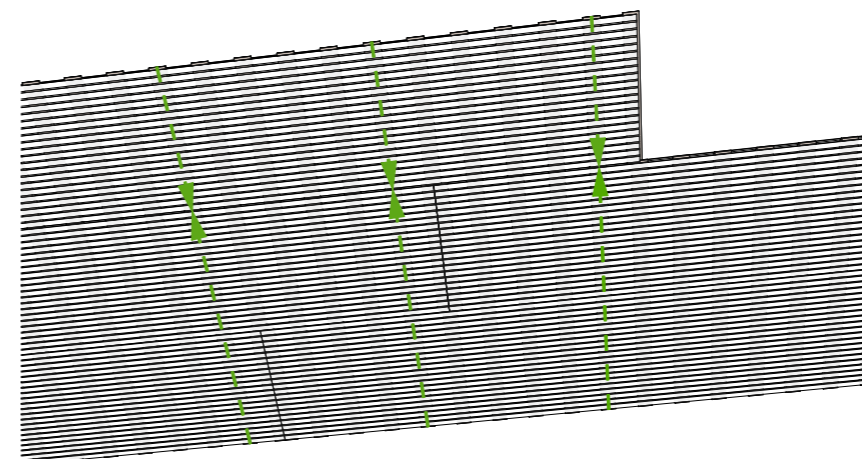


Fig. 4h Correct arrangement of the cross layers

In order to protect the acoustic elements from the effects of moisture, e.g. during cleaning work, a suitable connection must be implemented on site or a floor profile must be installed (see Fig. 4d). **Direct contact with the floor is not permitted under any circumstances!**

BALL-PROOF IMPACT

The Acoustics Geo products are tested for ball impact resistance according to DIN 18032-3:2018 (handball against wall) in the 20-40/07 coniferous wood versions. Sub-construction - wooden battens min. 27 x 120 (SxW)mm, center distance 300mm (=0.5 x D). End joints of the elements must be made in the area of the underlying battens. Fastening with 3 screws 3.0x45mm per intersection point with the sub-construction. Clamps are not permitted. Use as a „force-reducing construction in the sense of a deflector plate is not approved.“

For more information, please visit:
<https://admonter.com/en/installation-care/>
<http://service.admonter.at>

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