

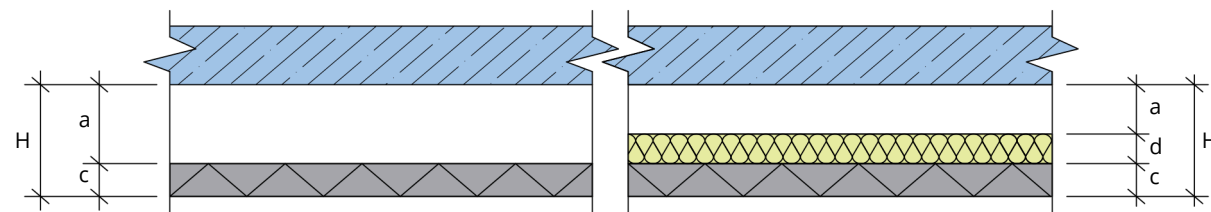


About acoustics

The Echo wood wool acoustic panels are friendly both to environment and human health, they're made from premium quality wood wool by adding white cement and water. It is comfortable and resistant. They help to maintain a pleasant microclimate characteristic to wood in the facilities.

The main feature of panels is sound absorption & characteristic look.

Practical sound absorption coefficient in the α_p octave band according to standard EN ISO 354, Extended sound absorption coefficient α_w and sound absorption class



H – height; a – air gap; d – mineral wool; c – ECHOWOOL panel

A particularly effective usage of the panels is sound absorbing structures in large rooms for reducing the space's sound reverberation time and improving the working environment. The panels can be used for making plate-shaped screens with a pronounced absorbing nature for reducing the noise emission of equipment in the range of high-tone frequencies. An even more effective acoustic solution is to create three-dimensional finishing elements, such as pyramids, which exhibit a much higher absorption coefficient value, thanks to sound diffraction around the edges.

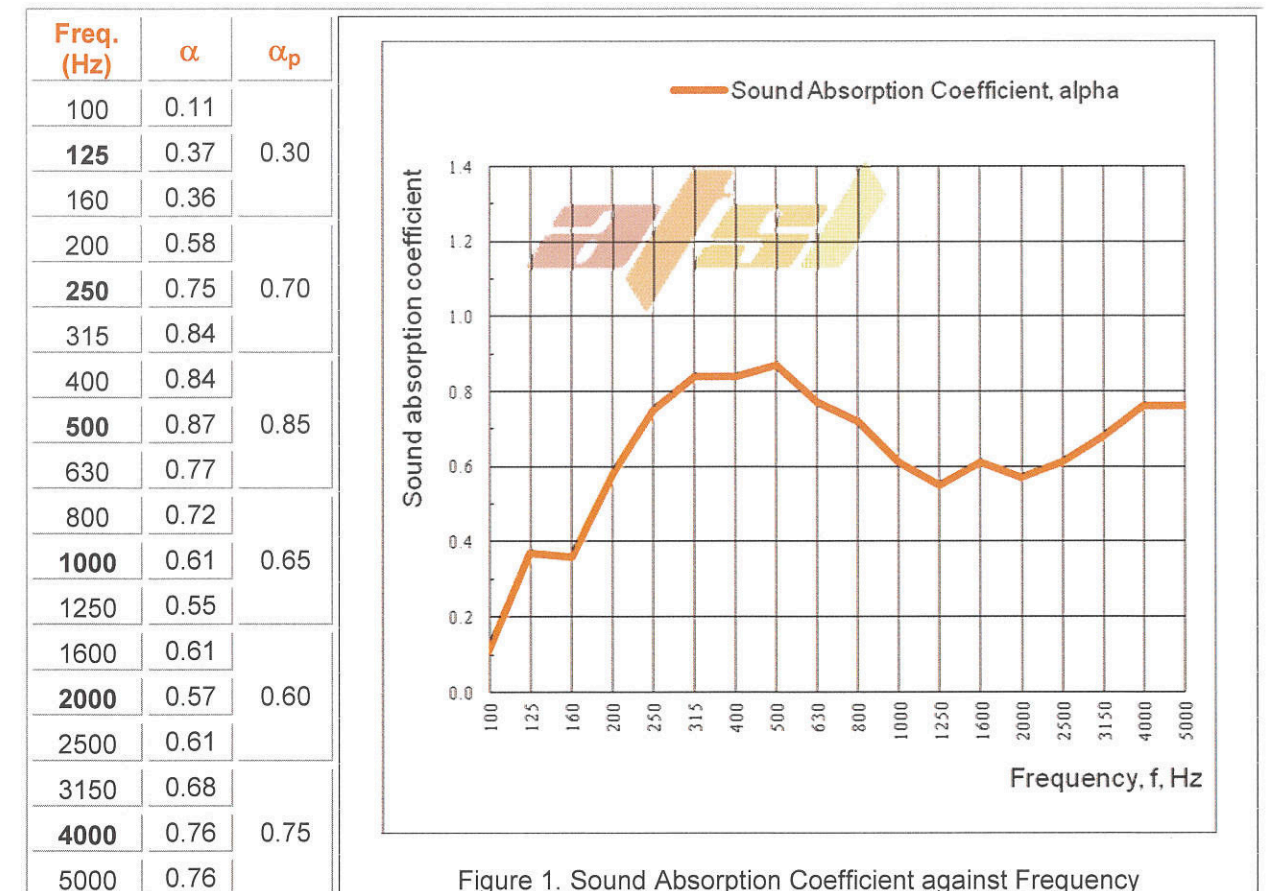
It made from wood wool and with higher density, better ensure the sound absorption at the low frequencies. In turn, panels made from 1 mm and 1.5 mm wide wood wool have better absorption properties in the high frequency range. The optimal sound absorption solution can be achieved by combining acoustic panels with a mineral wool insulation layer.



6. TEST RESULTS

Room Volume:	200 m ³	
Specimen Dimension:	3600 mm (width) X 3000 mm (length)	
Type of Mounting:	Type E-75 as per Annex B of BS EN ISO 354:2003 Annex B	
Temperature:	Empty Room Measurement: 24 °C	Measurement with Specimen: 24 °C
Humidity:	65 %	65 %

The measured Sound Absorption Coefficients of Unit Under Test were tabulated as follow:-



$$\alpha_w = 0.65(L)$$

Classification of Unit Under Test according to Annex B of BS EN ISO 11654:1997:

$$\text{Sound Absorption Class} = C$$

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ATS12-062-RP002



Page 6 of 10

Design tiles

Design tiles is a new direction and proof of wood wool versatility and aesthetic features. Each tile is custom made with personal touch and it allows to create unique or classic interiors not only by professional architects, designers but also by private users. Tiles are available in various colours and shapes to meet every customer demand.

Wood wool: 1.0 mm / 1.5mm / 2.0mm / 3.0 mm

Panel thickness: 15mm , 20mm , 25 mm, other available upon request.

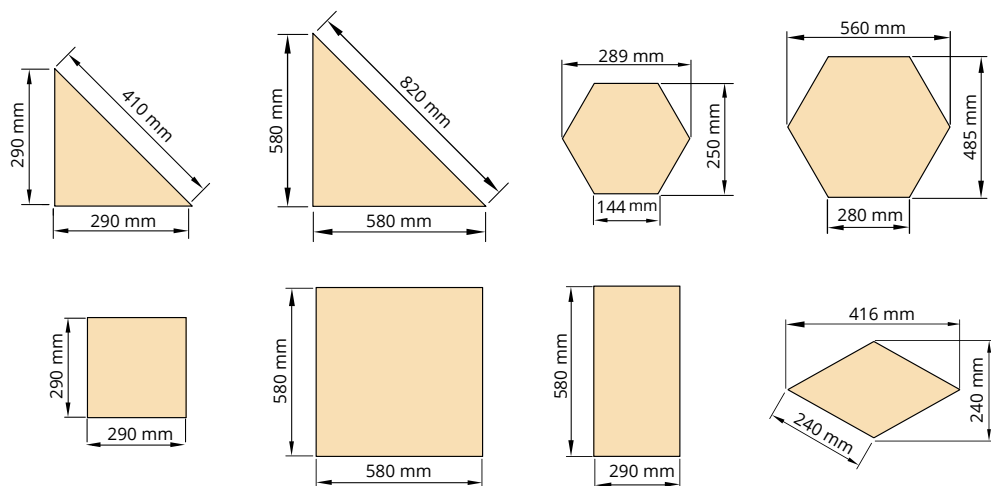
Applications

- Ceilings
- Walls
- Decorative elements

High-quality wood wool

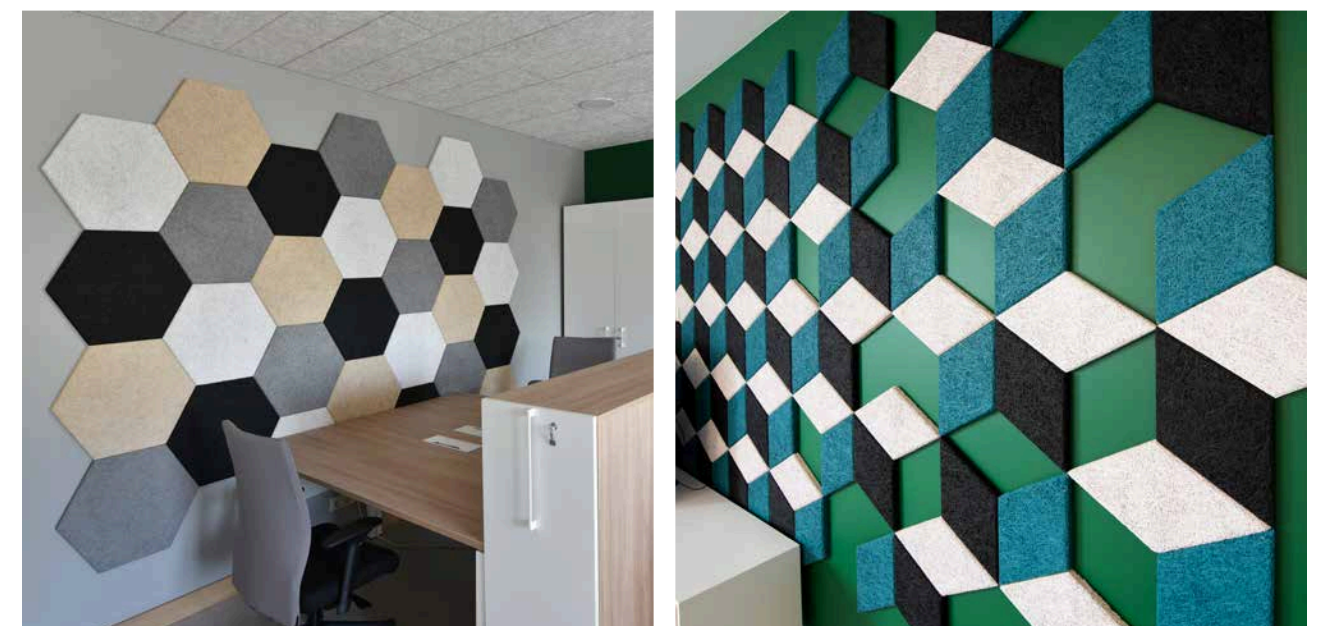
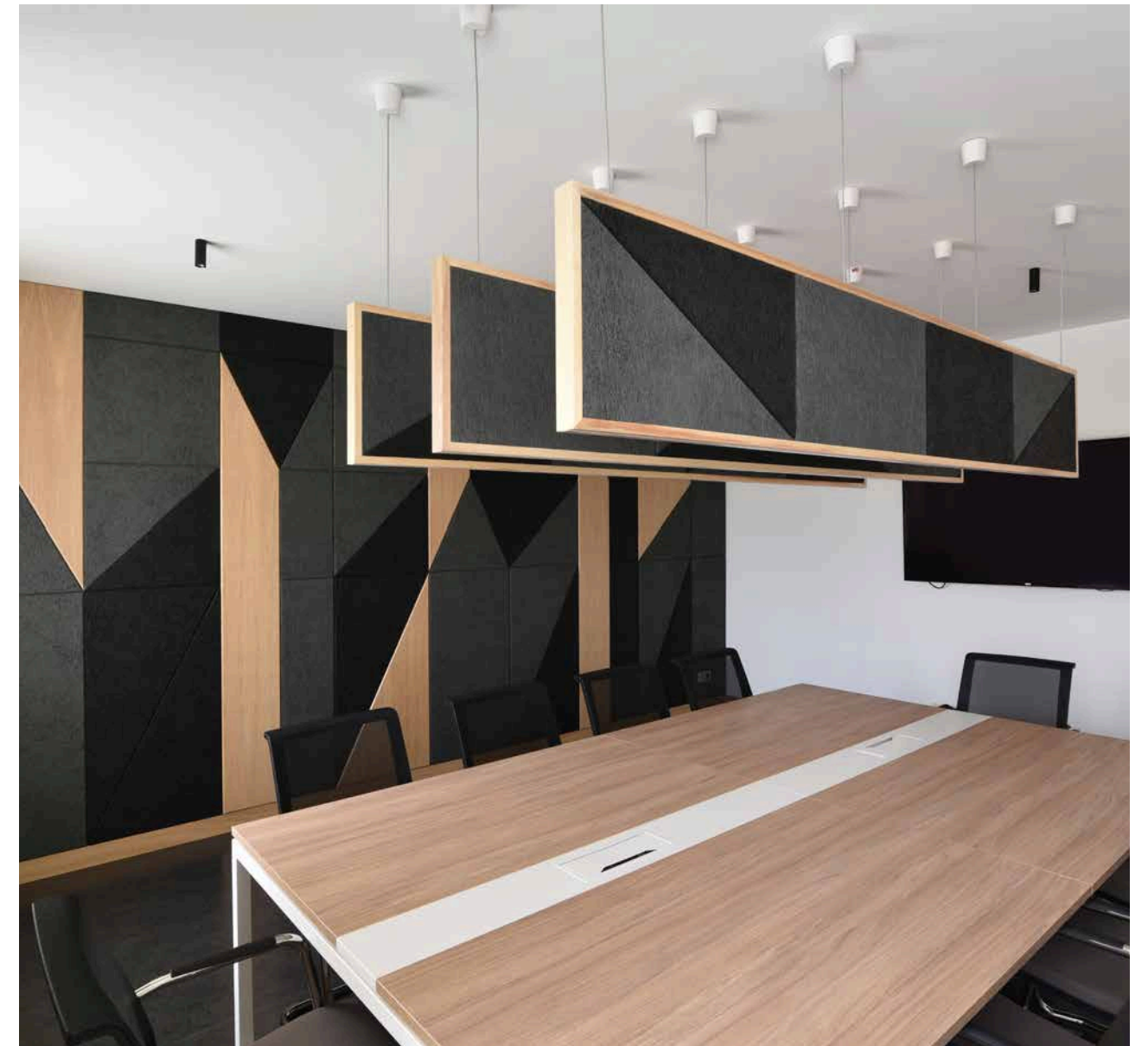
- Durable
- Various finishes & colours
- Consistent thickness & dimensions
- Clean corners
- Cost-effective
- Versatile – ceiling or wall mount as a surface finish
- An effective sound absorber

Top-selling shapes



Mounting of Design tiles

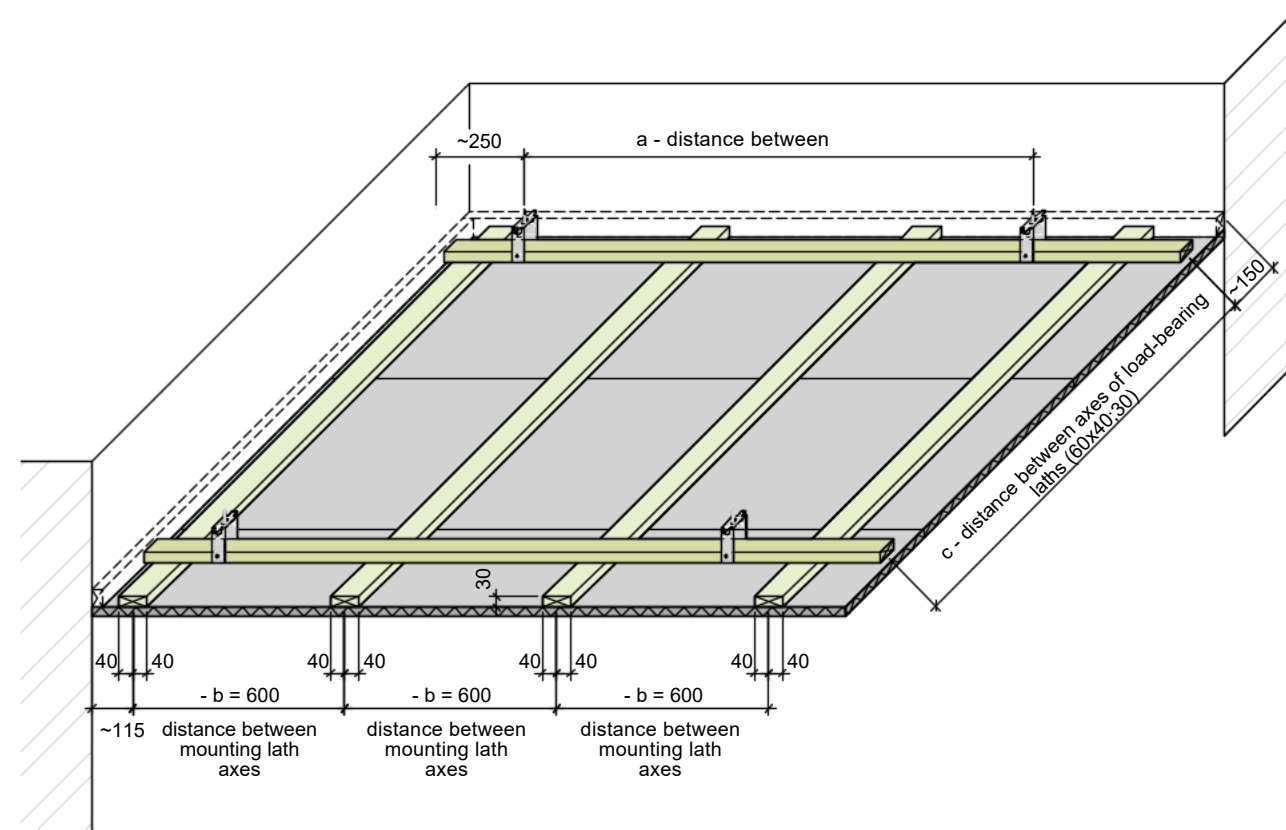
Design tiles allow creating an expressive wall finishing. The design tiles are attached with adhesive filler or mounting glue on to a base of plasterboard panels or other resistant bases. The type of glue is determined by the manufacturer of base panels. The frame of fastening of plasterboard panels is made of wood laths or tin steel profiles.



Fastening on wood laths

The frame for fastening of panels is formed of:

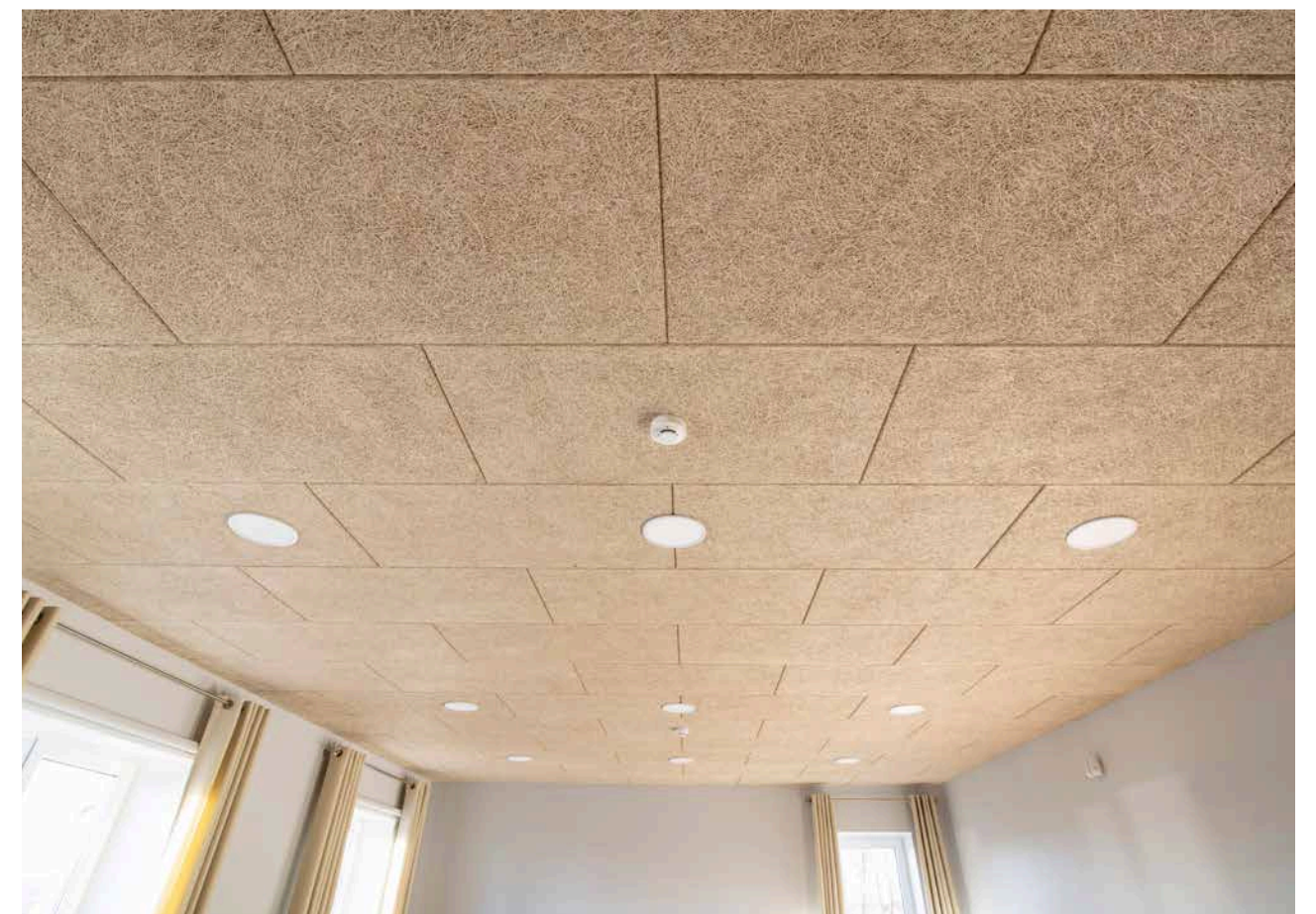
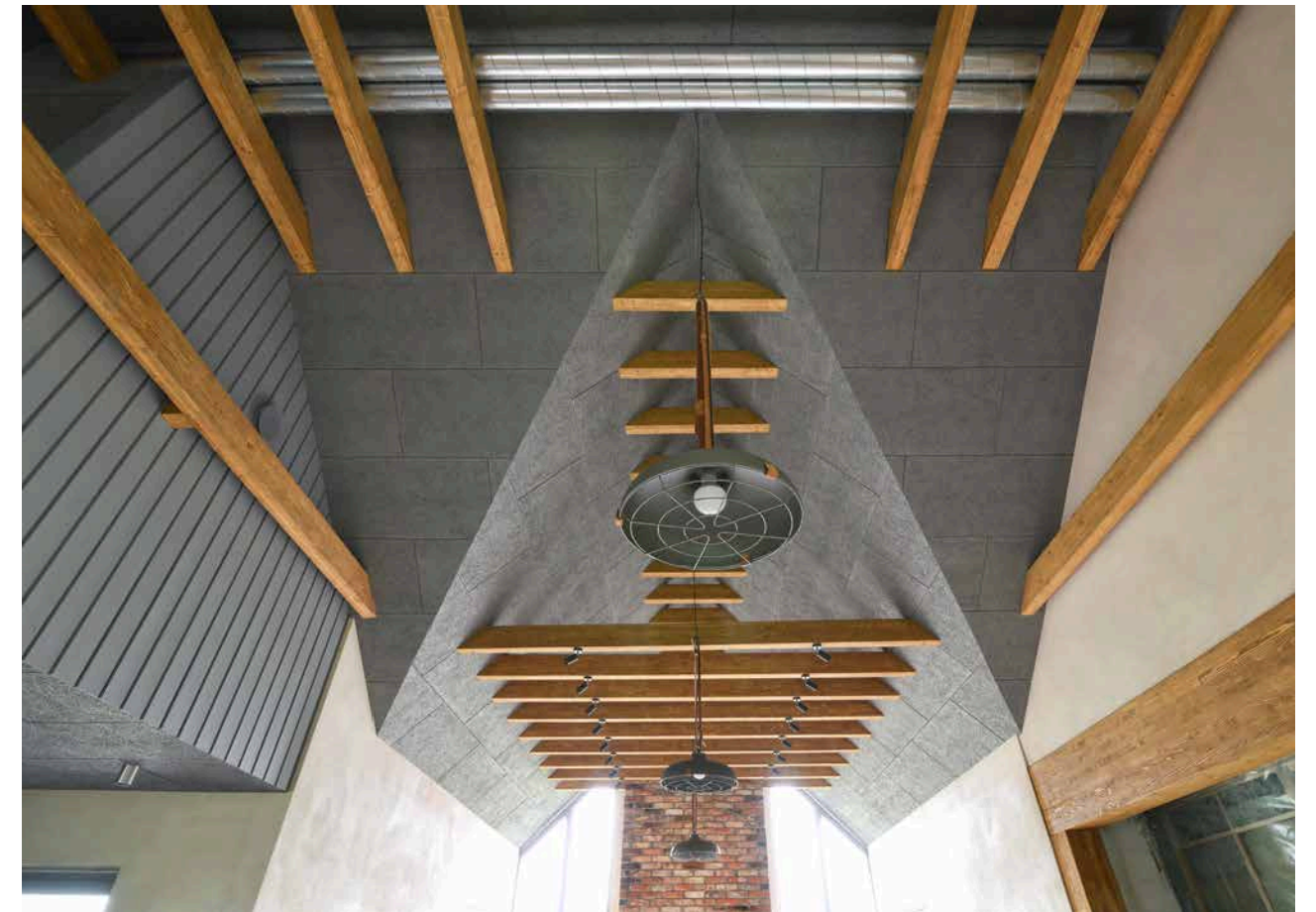
- load-bearing laths, which with suspension elements are fastened onto the building's load-bearing structures;
- mounting laths fastened onto load-bearing laths, onto which acoustic panels are attached.



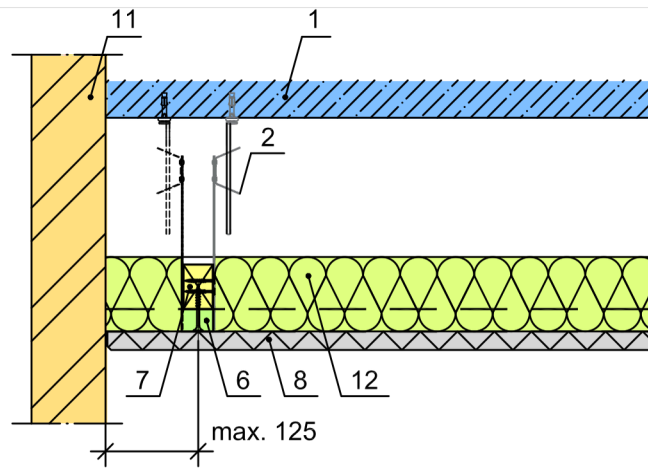
Mounting distances of frame lathing

Load-bearing lath, cross section 60/40 or 60/30 distance between axes – c - mm	Mounting lath, cross section 80/30 distance between axes – b - mm	a - suspension distances/fastenings Load class kN/m ²		
		up to 0.15	up to 0.30	up to 0.50
600	600	1150	900	750
900	600	1000	800	
1000	600	950		
1200	600	900		

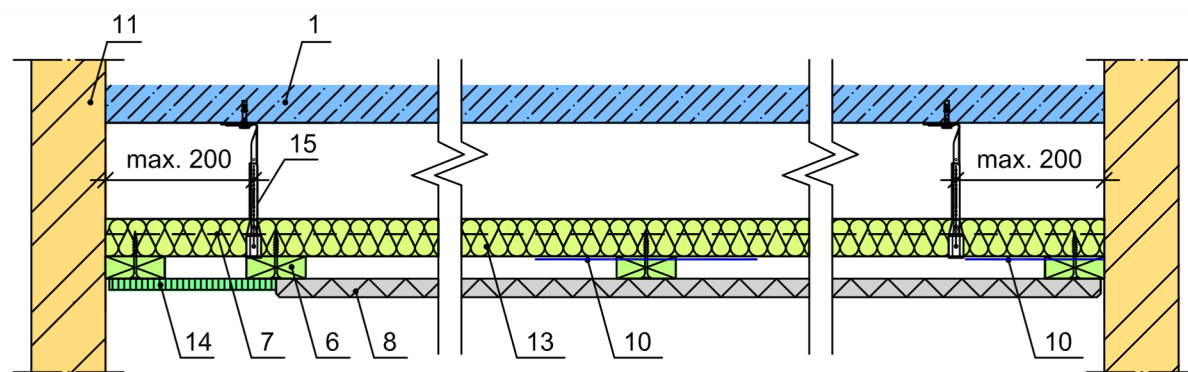
Must use suspensions with load resistance of 0.40 kN
Assume load-bearing lath cross section of 60x40 mm or 60x30 mm depending on calculated loads and the used type of fastenings.



Acoustic panel ceiling (fastening with quick suspension). Joint without shadow gap.



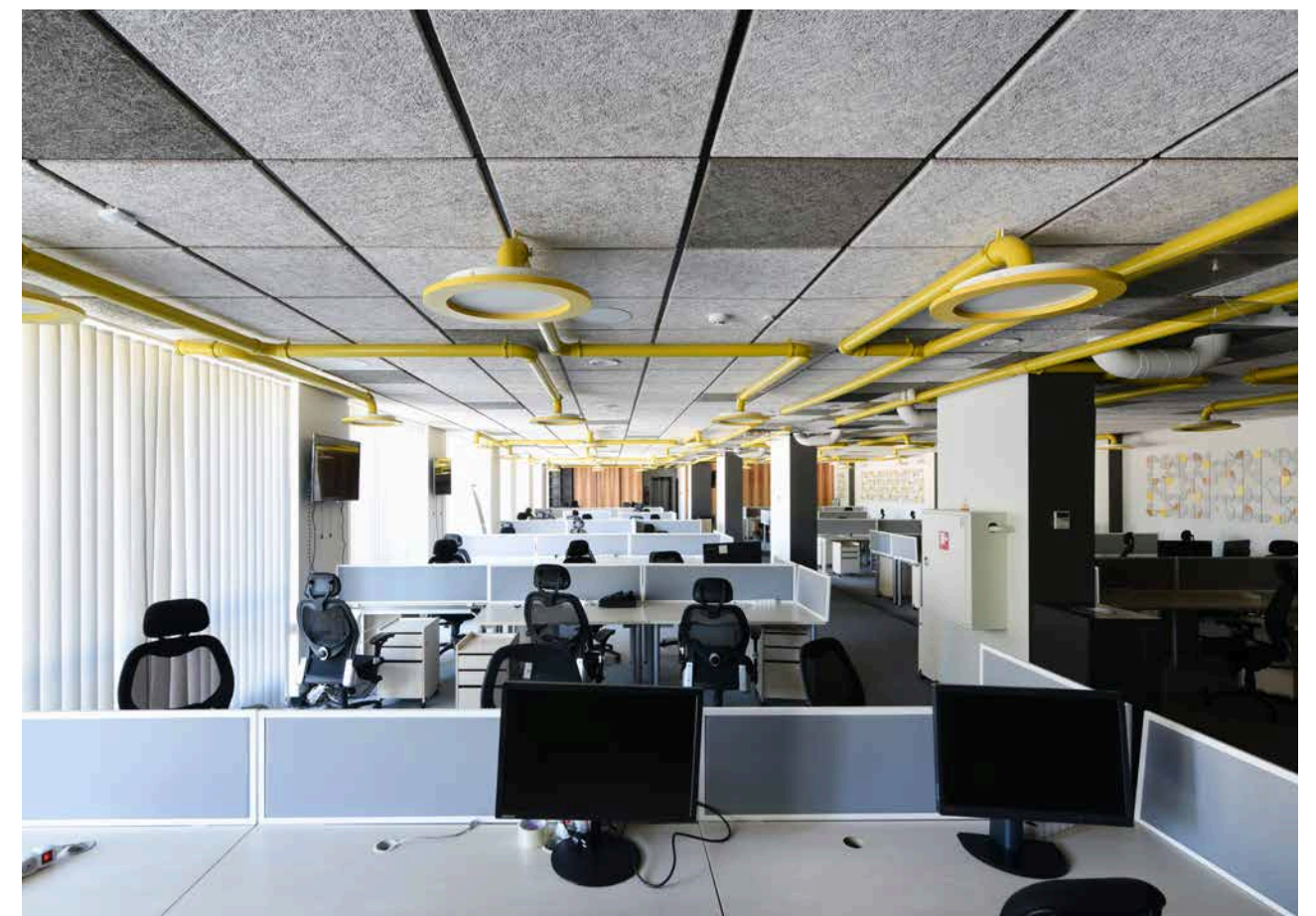
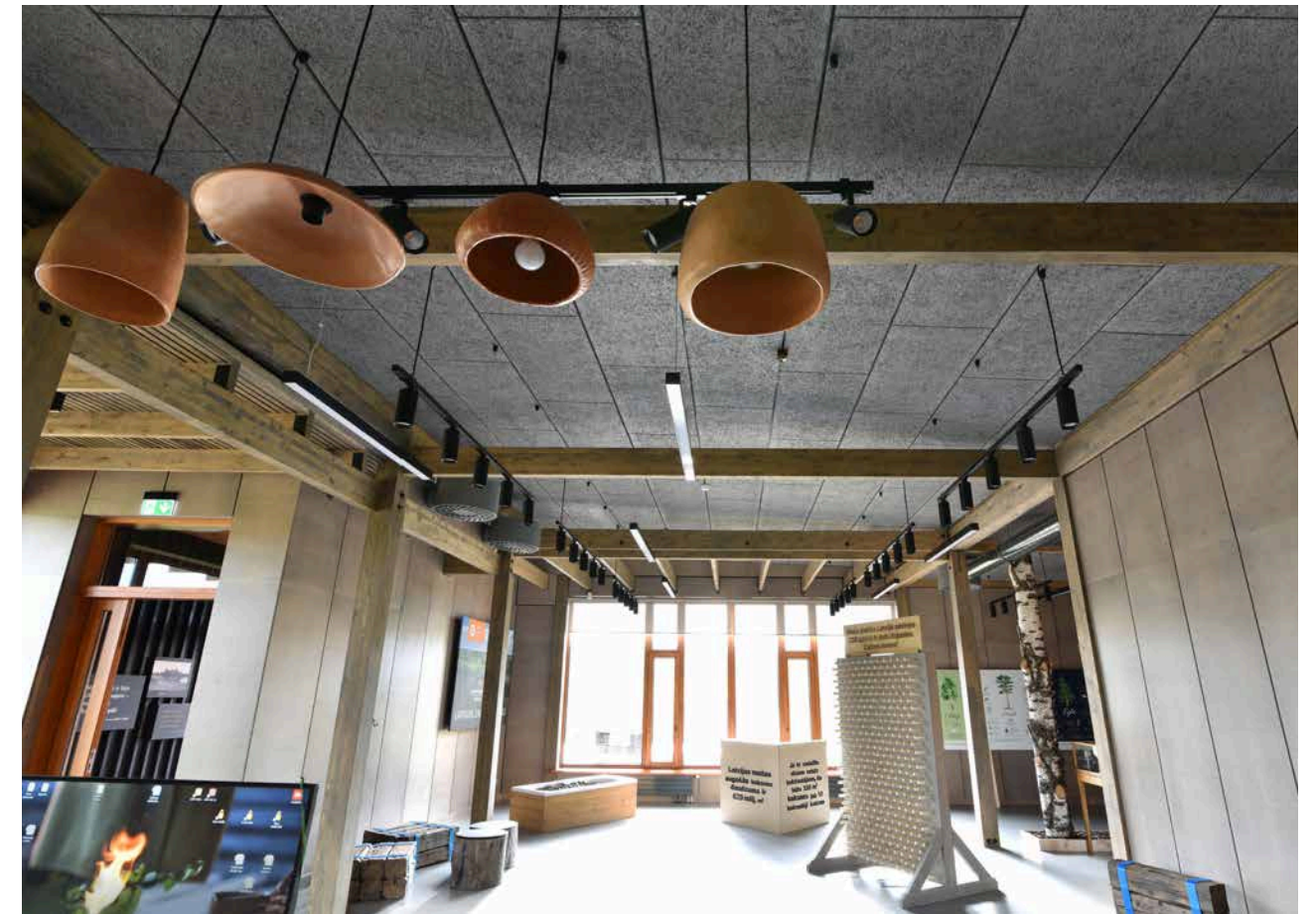
Acoustic panel ceiling (fastening with Nonius suspension 0.40 kN, maximum mounting step 900 mm).



Explanation of numbering:

1. Load-bearing slab structure.
2. Quick suspension 0.15 kN.
6. Mounting lath 80x30 (h) mm.
7. Load-bearing lath of 60x30 mm or 60x40 mm depending on calculated loads and the used type of fastening.
8. Acoustic panels.
10. Metal sheet 300/30/0.8, step 400 mm.
11. Existing wall structure.
12. Mineral wool 30 kg/m³, thickness ≥ 80 mm.
13. Mineral wool 90 kg/m³, thickness 50 mm.
14. Plasterboard GFK-A2, thickness 15 mm.
15. Nonius suspension 0.40 kN.

Note: Type and thickness of mineral wool shall be determined in the building project.



Before installing

Instructions for storage and preparation of panels before installing.

Primary inspection

Upon delivery, check the panels for accordance with the order and for any visible defects. If you find any inadequacy, immediately contact the producer or vendor as the defects reported after installing don't meet the warranty.

Storage conditions

Wood wool acoustic panels for indoor use are made from high-quality wood wool and cement. The fireproof material has great acoustic and thermal insulation capacities, and is perfectly suitable for the widest range of interior solutions.

The panels maintain their properties at the temperature +23 (+/- 2) °C and the relative humidity of 50% (+/- 5%). To ensure the best properties, the panels should be allowed to adopt the ambient conditions. The optimal period for acclimatization is one to two weeks.

If stored outdoors, the panels can be protected with a cover of tarpaulin or similar material. The material should not be kept outdoors for long periods of time, it should definitely not be stored directly on the ground.

When storing the panels indoors, the packaging material should be removed to avoid accumulation of condensation and to ensure better acclimatisation. It is recommended not to expose the material to direct heat, humidity and dust.

Before installing the panels should be stored horizontally, on a flat and stable foundation, as palettes or a platform.

Best conditions for acclimatization are achieved if the material is kept in layers, separated with slats. The material has very good physical indicators, it maintains the same humidity and temperature, as the surrounding environment, for example wooden floors.

It is not recommended to start installing of the panels before the construction works are finished or just before starting of the heating system.

The panels have undergone a full drying cycle during the production process, but there can be accumulation of humidity during the transportation and storing, so there should be an acclimatization period to assure the best resistance. Yet the environmentally caused mass fluctuations of the material cannot cause it to expand or shrink, and do not influence the other parts of the building.



After installing

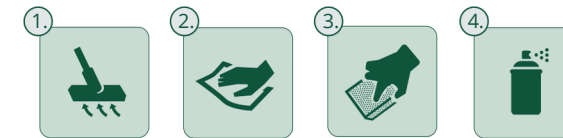
Instructions for care and maintenance of panels after installing.

Few weeks after finishing installing the panels small dust particles may be present, due to the mounting process. To get rid of the dust use a vacuum cleaner with a brush nozzle.

If the panels are dirty or abraded during the installation, clean the surface with a damp cloth. In case the mounting works have caused surface defects, process the panel with a fine sandpaper.

If necessary, the colouring of the decorative/acoustic panels can be restored with a spray paint.

Choose the corresponding colour and make sure to shake the spray can for about a minute before spraying.



Operation and maintenance

Once installed, the panels do not require any additional maintenance. The surface cleaning can be done together with the general cleaning of the premises.

General cleaning is easy and can be carried out with a vacuum cleaner with a brush nozzle. If additional cleaning is needed, use a damp cloth.

The colouring can be refreshed using a spray paint or a roller with long bristles. Applying water-based colour does not affect the the sound absorption properties of the panels.

Decorative / Acoustic panels for indoor use are made from high-quality wood wool and cement. The fireproof material has great acoustic and thermal insulation capacities, and is perfectly suitable for the widest range of interior solutions.

The robust and durable material does not change when exposed to humidity, the panels are mold-safe and vermin-free.

Due to the contained cement the panels retain their shape and do not change under humidity, but the wood wool-made body ensures easy and convenient handling and mounting.

