



A new word in decorative acoustics



Belner presents premium decorative acoustic panels finished with fine wood veneer. The thinnest layer of wood gives them an elegant look and serves as a guarantee of environmental friendliness.

Belner pushes the limits of the ordinary so that any design ideas would find a worthy embodiment.

BELNER

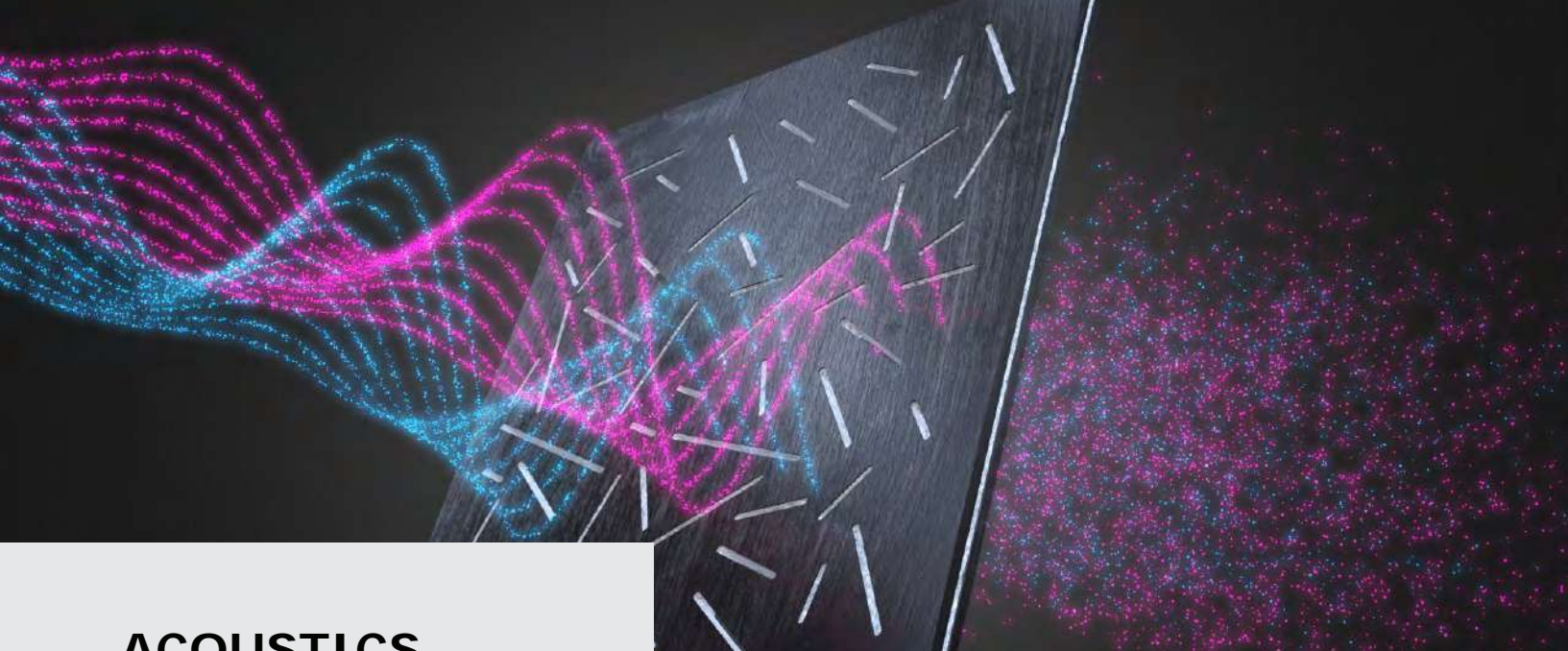


8 (495) 2-666-444

www.belner.ru

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ACOUSTICS

Belner decorative acoustic panels are characterized by their sound-absorbing acoustic properties combined with attractive appearance. Panels form an aesthetic surface that in itself is a decoration of the interior.



DESIGN

The system of Belner decorative acoustic panels is suitable for the implementation of the most complex and unusual architectural and design solutions.

PROPERTIES

Panels are resistant to mechanical stress and possess high impact property. The option of seamless joints creates the effect of a uniform surface.

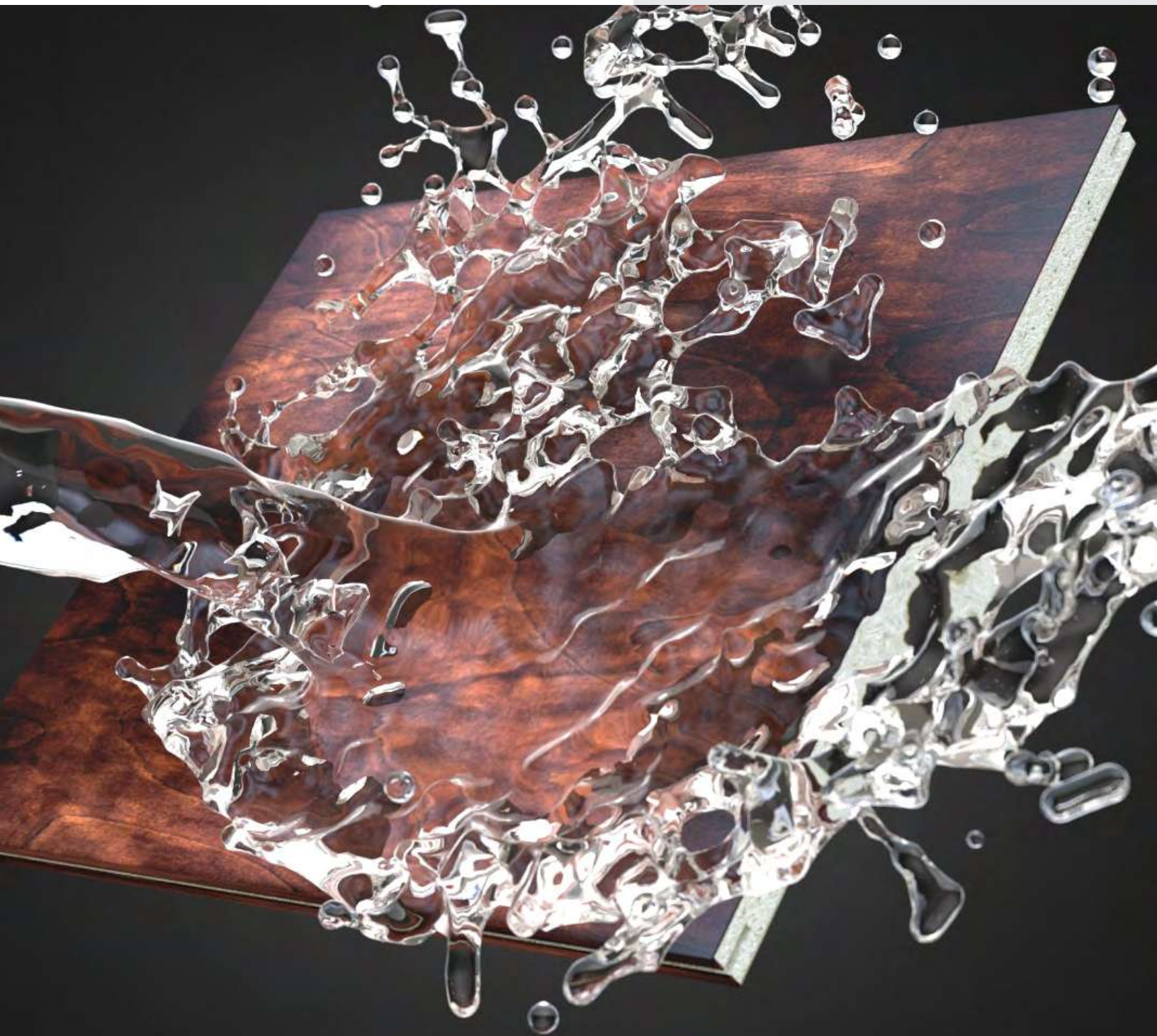
IMPACT RESISTANCE



PROPERTIES

Panels are moisture resistant. A special profile system simplifies installation, allowing for quick and firm mounting of the panels to the surface of walls and ceilings.

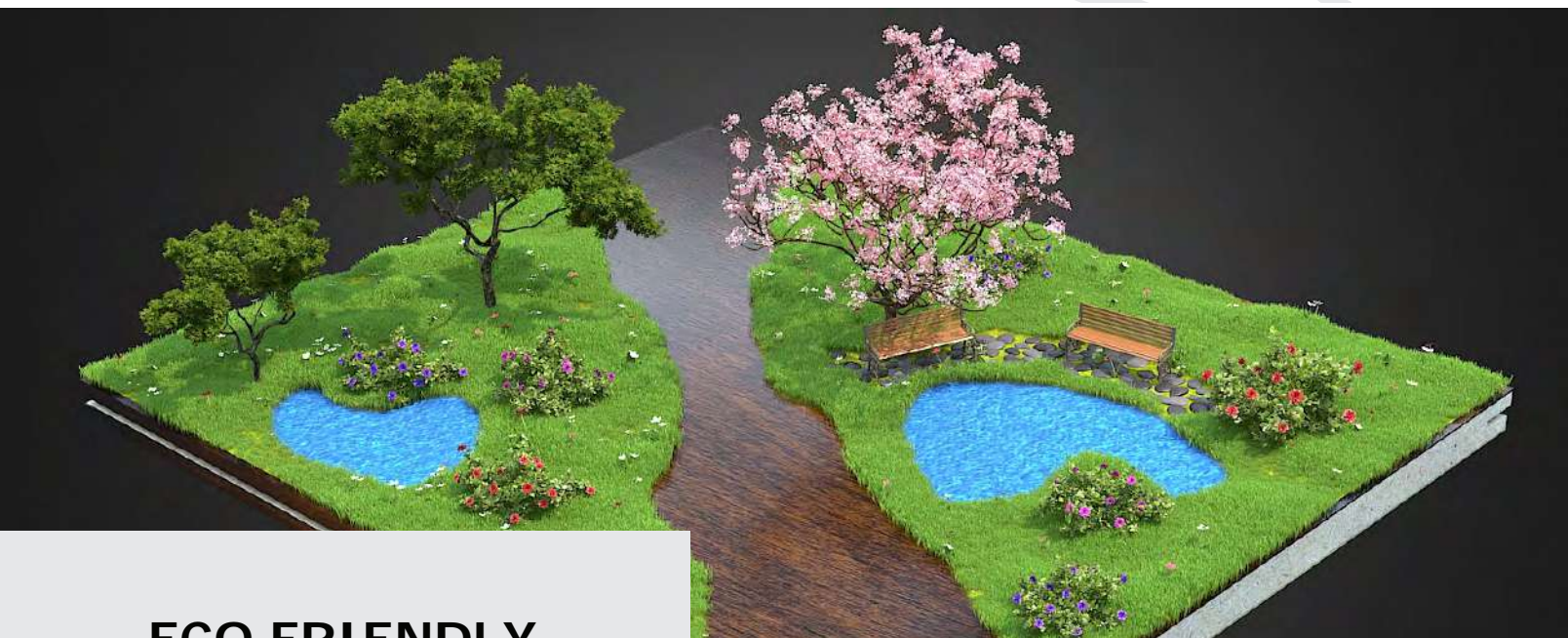
MOISTURE RESISTANCE





FIRE RESISTANCE

Belner decorative panels demonstrate high fire resistance; they prevent the spreading of fire and the formation of carbon monoxide. Fire classification KM1.



ECO FRIENDLY

Belner decorative panels are made from green materials and are environmentally friendly.

PROPERTIES



Fire safety

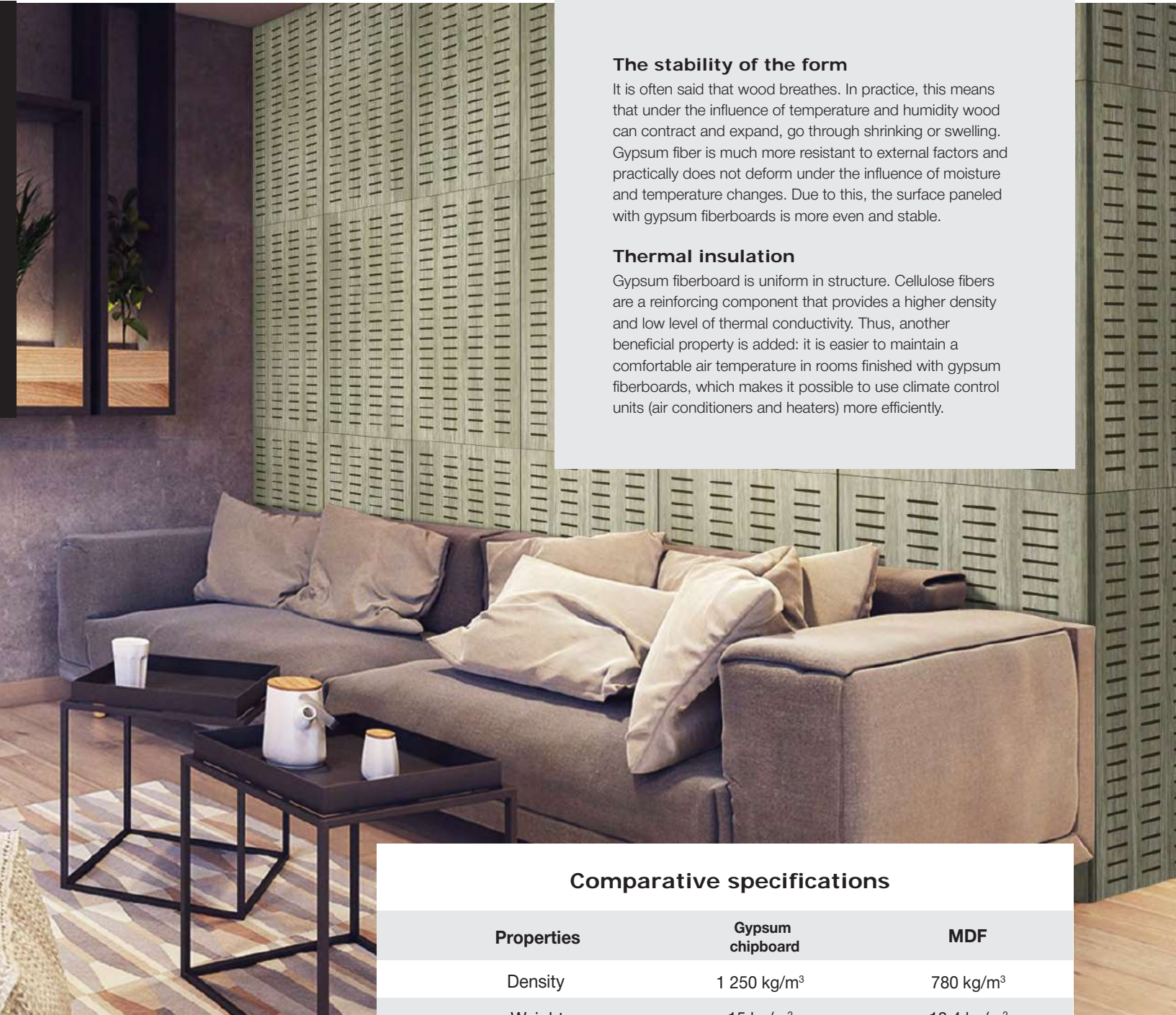
The inner part of the panel is made of non-combustible gypsum-based material. The tight adhesion of the decorative outer layer to the inner one prevents the spreading of flames over the surface of the panel. In addition, a gypsum fiber core with excellent flame resistant properties inhibits the penetration of flames.

Acoustic properties

The denser and heavier the obstacle, the more difficult it is for the sound to penetrate it. This property is widely used in sound insulation and acoustic processing of spaces. Belner panels use gypsum fiberboard as a base, which is twice the density (15 kg/m²) of ordinary wood. Therefore, while the surface resembles natural wood, the system has much higher acoustic characteristics.

Advantages of decorative acoustic panels with gypsum chipboard core

Декоративные панели Belner служат для финишной облицовки, поэтому они должны выглядеть идеально. В то же время их задача – улучшать акустику помещения, что подразумевает хорошие звукопоглощающие характеристики. Панели применяются не только в частных домах, но и в многолюдных общественных пространствах, что предполагает повышенные требования к пожарной безопасности.



The stability of the form

It is often said that wood breathes. In practice, this means that under the influence of temperature and humidity wood can contract and expand, go through shrinking or swelling. Gypsum fiber is much more resistant to external factors and practically does not deform under the influence of moisture and temperature changes. Due to this, the surface paneled with gypsum fiberboards is more even and stable.

Thermal insulation

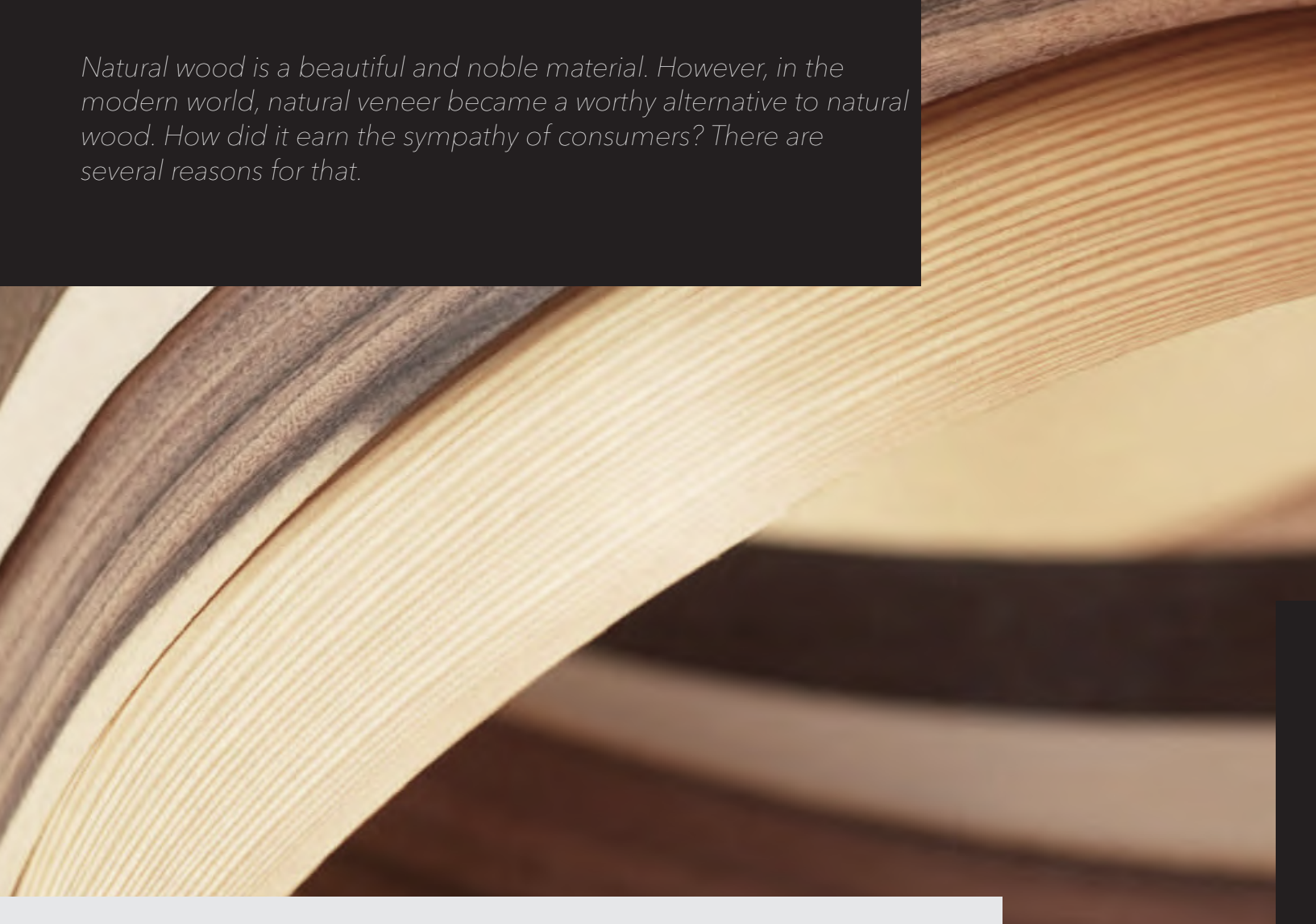
Gypsum fiberboard is uniform in structure. Cellulose fibers are a reinforcing component that provides a higher density and low level of thermal conductivity. Thus, another beneficial property is added: it is easier to maintain a comfortable air temperature in rooms finished with gypsum fiberboards, which makes it possible to use climate control units (air conditioners and heaters) more efficiently.

Comparative specifications

Properties	Gypsum chipboard	MDF
Density	1 250 kg/m ³	780 kg/m ³
Weight	15 kg/m ²	12,4 kg/m ²
Mass fraction of moisture upon delivery, at a relative humidity of 65% and temperature +20°C	2%	5-8%
Change in moisture content at relative humidity of 40- 65%	2%	5-7%
Linear expansion at 30-80% relative humidity	0,08%	0,4%
Thermal conductivity	0,24 W/km	0,14 W/km
Specific heat	1 320 J/kg °C	1 851 J/kg °C
Fire resistance class	KM1	KM5

In order for panels to meet the needs of designers, they must have impeccable geometry, be resistant to temperature and humidity fluctuations, do not warp and maintain an aesthetic appearance regardless of external conditions. A pressed gypsum mass with the addition of cellulose fiber holds its shape well, forming a perfectly flat surface. A thin layer of natural wood veneer applied to the top gives panels a classic charm; however, their structure remains resistant to climatic influences, which outperforms wood and MDF.

A denser, heavier compared with other materials structure prevents the sound from spreading, which is why the panel copes with complex acoustic tasks perfectly.

A close-up photograph showing several layers of wood veneer. The layers are curved and show different wood grain patterns and colors, ranging from light tan to dark brown. The texture is smooth and the grain is clearly visible.

Natural wood is a beautiful and noble material. However, in the modern world, natural veneer became a worthy alternative to natural wood. How did it earn the sympathy of consumers? There are several reasons for that.

Natural veneer - the beauty of nature, created by man

- The first of the reasons is undoubtedly related to cost. Veneer is a thin layer of wood, which is much more economical than solid wood. This allows designs with valuable wood species that otherwise would have been inaccessible to most consumers.
- Veneers can be applied to different types of base, including the ones that are more stable and more resistant to external influences than wood. This makes it possible to achieve a clear geometry and a flat surface.
- Nature does not tolerate repetition; therefore, wood always has its own color and pattern. Veneer is largely a man-made work. It allows the selection of patterns; it can be stained and processed in order to design large surfaces in a unified style.
- Let us not forget about the environmental friendliness. Veneer finishes save a great many trees.
- With all that, veneer retains the charm of natural wood and is not visually inferior to solid wood products.

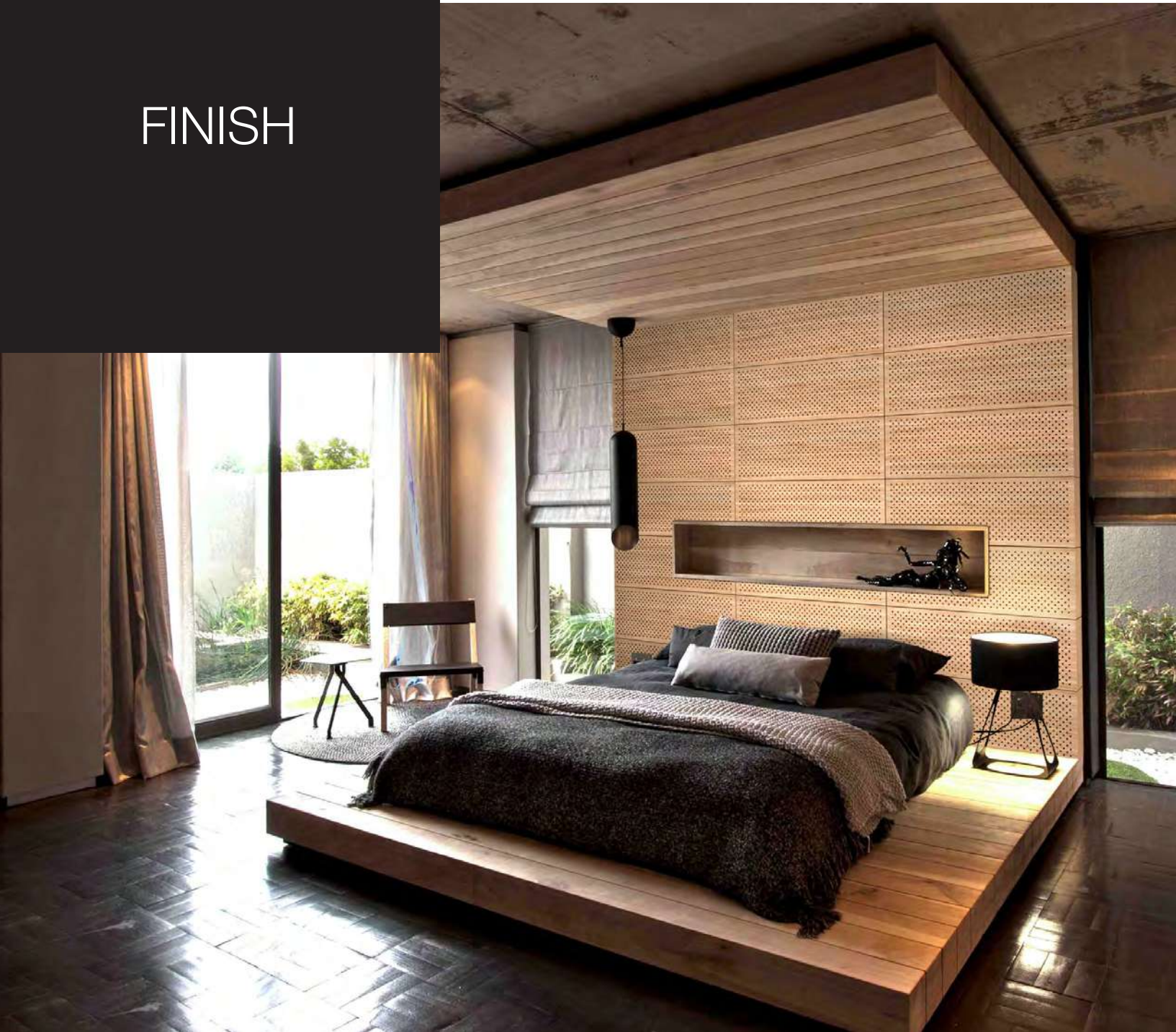
The manufacture of Belner panels uses veneer of different wood species, both in their unique natural form and processed. The surface covered with Belner decorative acoustic panels reveals all the beauty and variety of shades of wood.



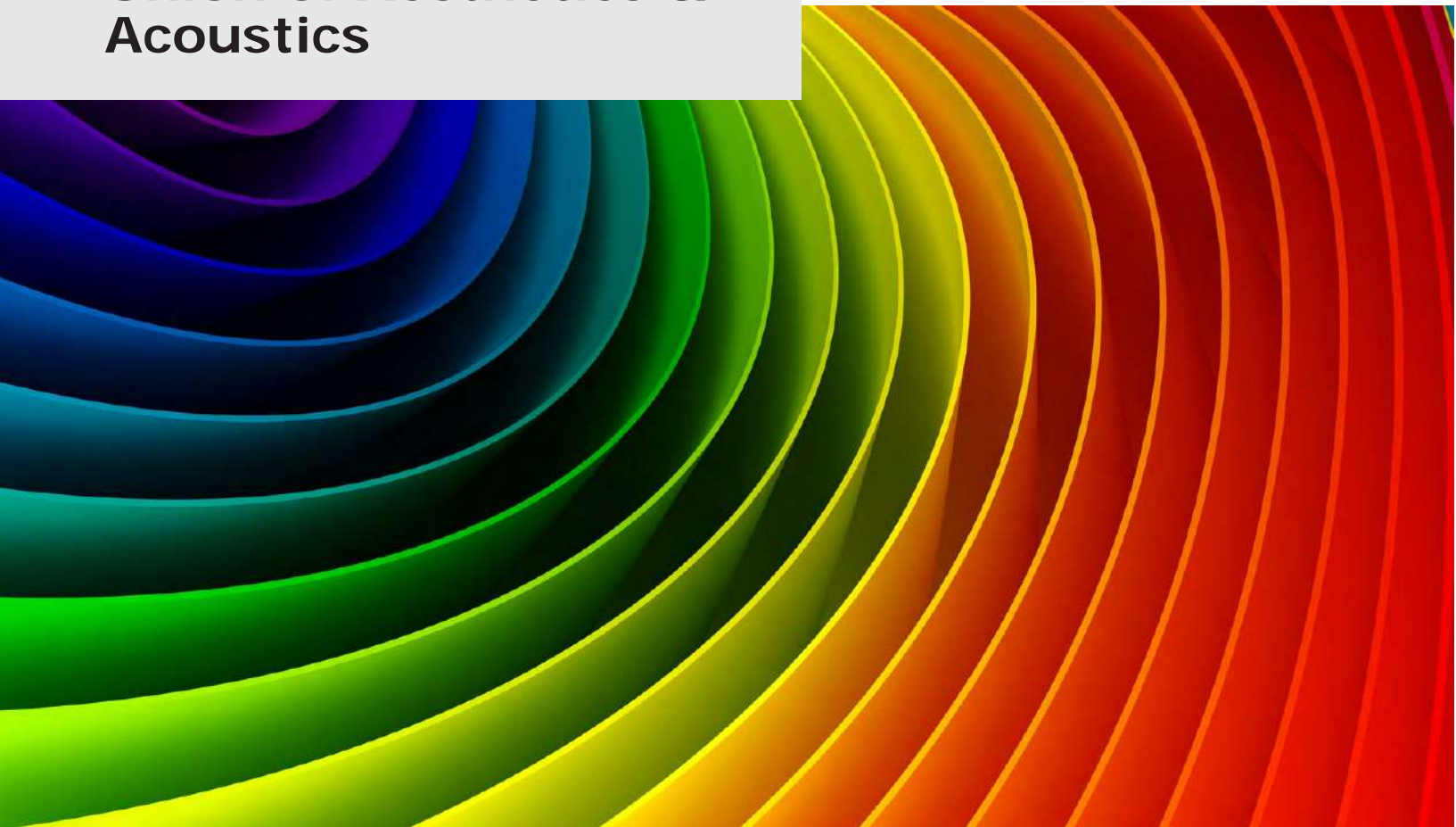
The appearance of decorative panels depends not only on the choice of a particular type of wood, but on the finish as well. For example, transparent lacquer coating, which does not hide pores and wood texture, is popular. In some cases, eco-friendly oil impregnation is used which preserves the natural properties of the color and texture of the material. If necessary, wood can be stained to make it look like the wood of more valuable species or to create various decorative effects. Moreover, in addition to aesthetics, processing of veneer has a protective function of preserving wood against moisture, pollution, sunlight and other adverse factors.

When choosing a veneer finish consult our specialists. They will advise you on the best option for the implementation of your design ideas.

FINISH



Union of Aesthetics & Acoustics



Production technology allows acrylic to be applied to a gypsum fiber base and create beautiful and reliable material for wall and ceiling coverings, which is presented in all the variety of shades of the RAL and NCS palette.



FINISH

Acrylic coated panels have a number of undeniable advantages. They are resistant to mechanical damage such as scratches, chipping, the effect of high and low temperatures, moisture and ultraviolet rays; they are also durable and have a wide range of color. Moreover, they can be finished in varying degrees of gloss, from a matte and velvety surface to an intense almost mirror-like sheen.



Design for every taste

The acoustic environment is an invisible but important element of our well-being. Loud sounds, the need to constantly strain your ears and voice, extraneous vibrations can lead to fatigue, irritation and even become the cause of various diseases. Therefore, the designer must take into consideration this aspect when developing a project. Firstly, we are talking about public buildings and spaces with sources of loud noise or where many people gather together, although a favorable atmosphere for learning, intellectual activities, sleep and rest is also necessary at home.

To achieve the required acoustic effect, a rich arsenal of products is offered, including perforated and slotted panels that can be supplemented with other soundproof materials such as mineral wool. Belner decorative acoustic panels have been tested and have all the necessary certificates.



Joint to joint

The method of joining panels is part of the design decision. When panels are placed joint to joint, a continuous surface is formed that is perceived as a whole. Flat, smooth surface does not distract attention, creating an excellent background for furnishings.

PANEL JOINTS

Seamless

Seamless joints are used with a number of modifications of Belner panels. Thanks to the special design of the panels, the junction point is completely invisible, even upon careful examination. Seamless joints are used with Belner panels PH10-L3-3232.



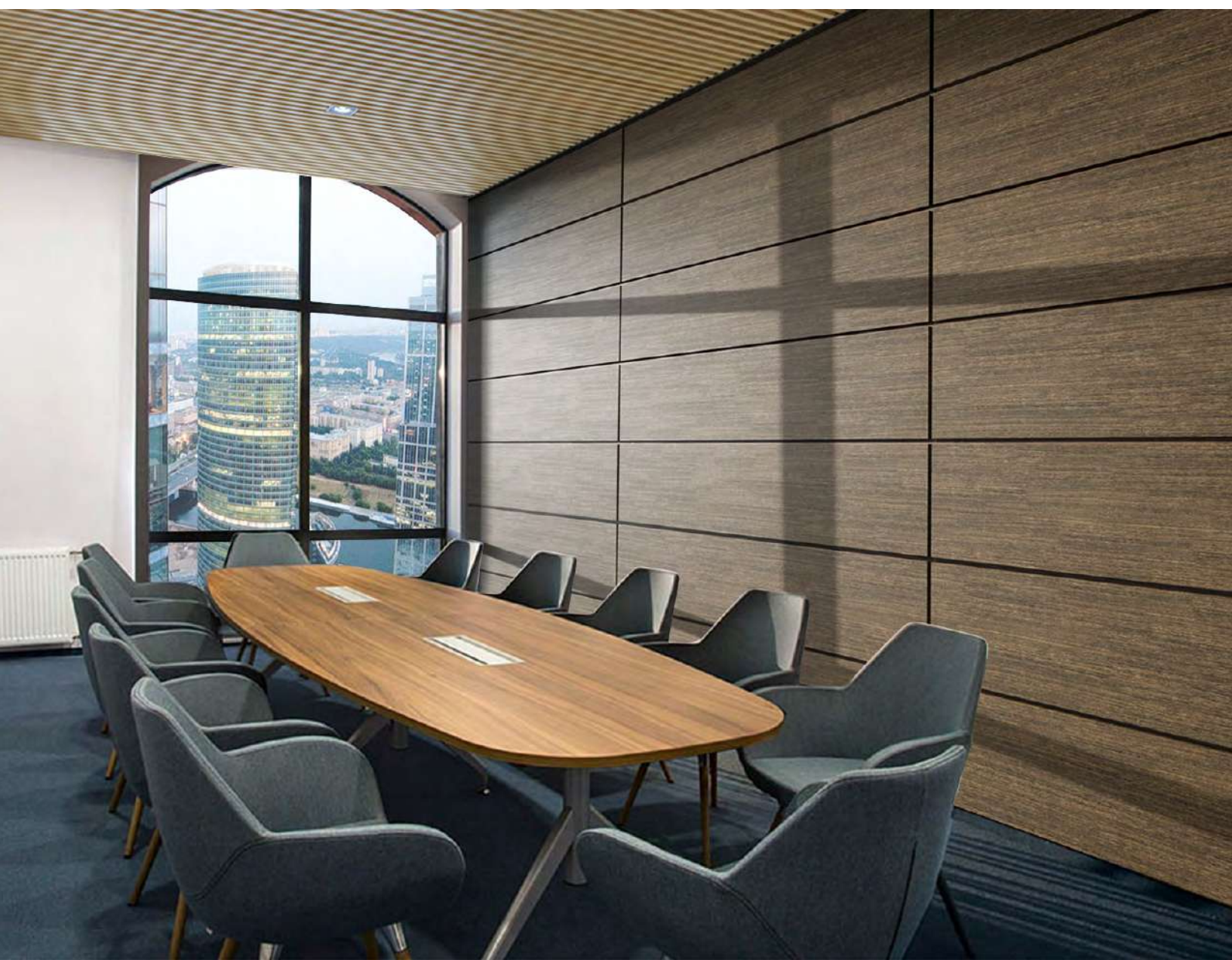


With Rustic

An effective way of panel assembly with a side ledge (rustic) around the perimeter.

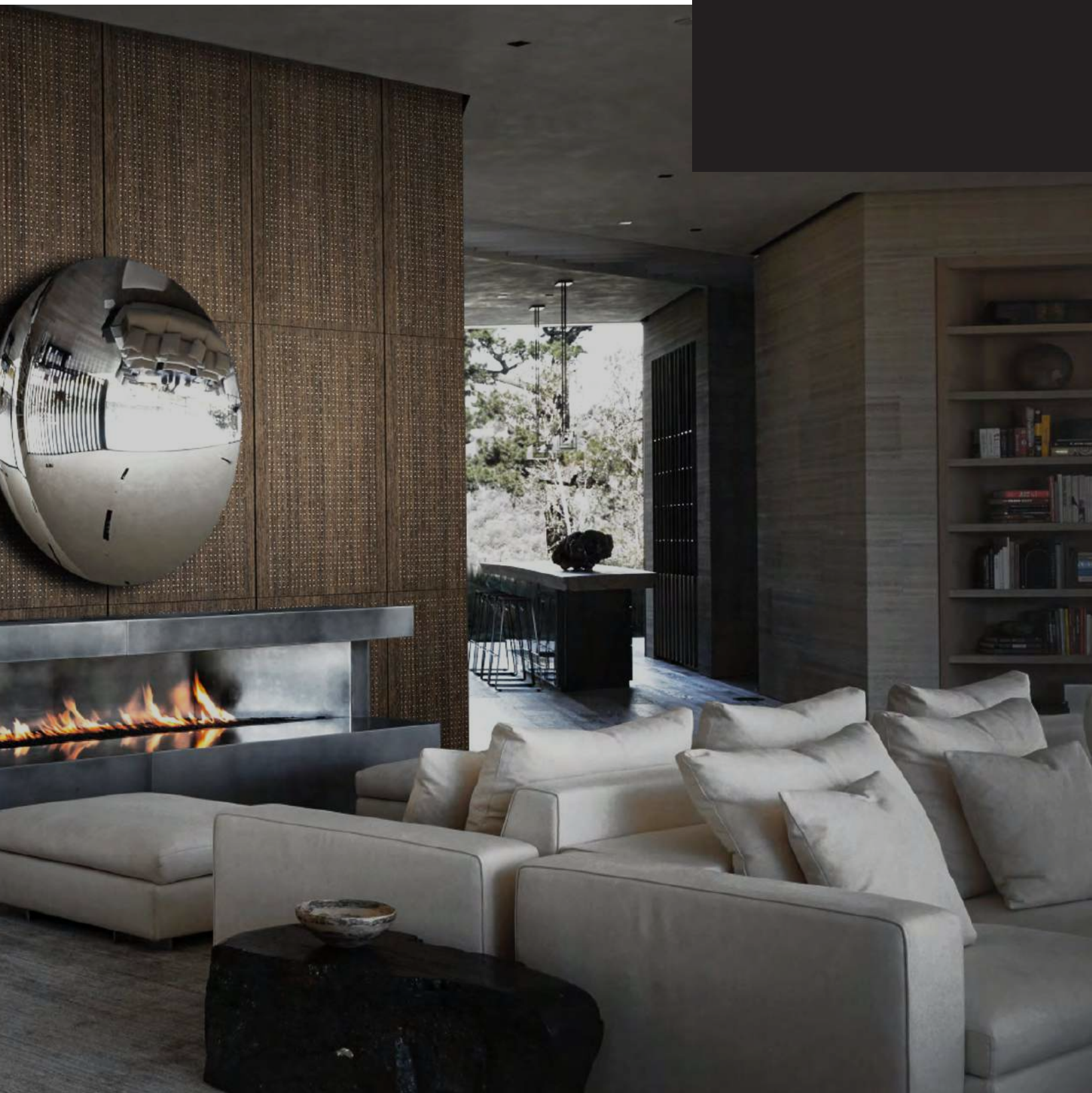
With this mounting method, the surface of the wall or ceiling is divided into equal rectangles.

This method can be used to visually resize the room.





PORTFOLIO

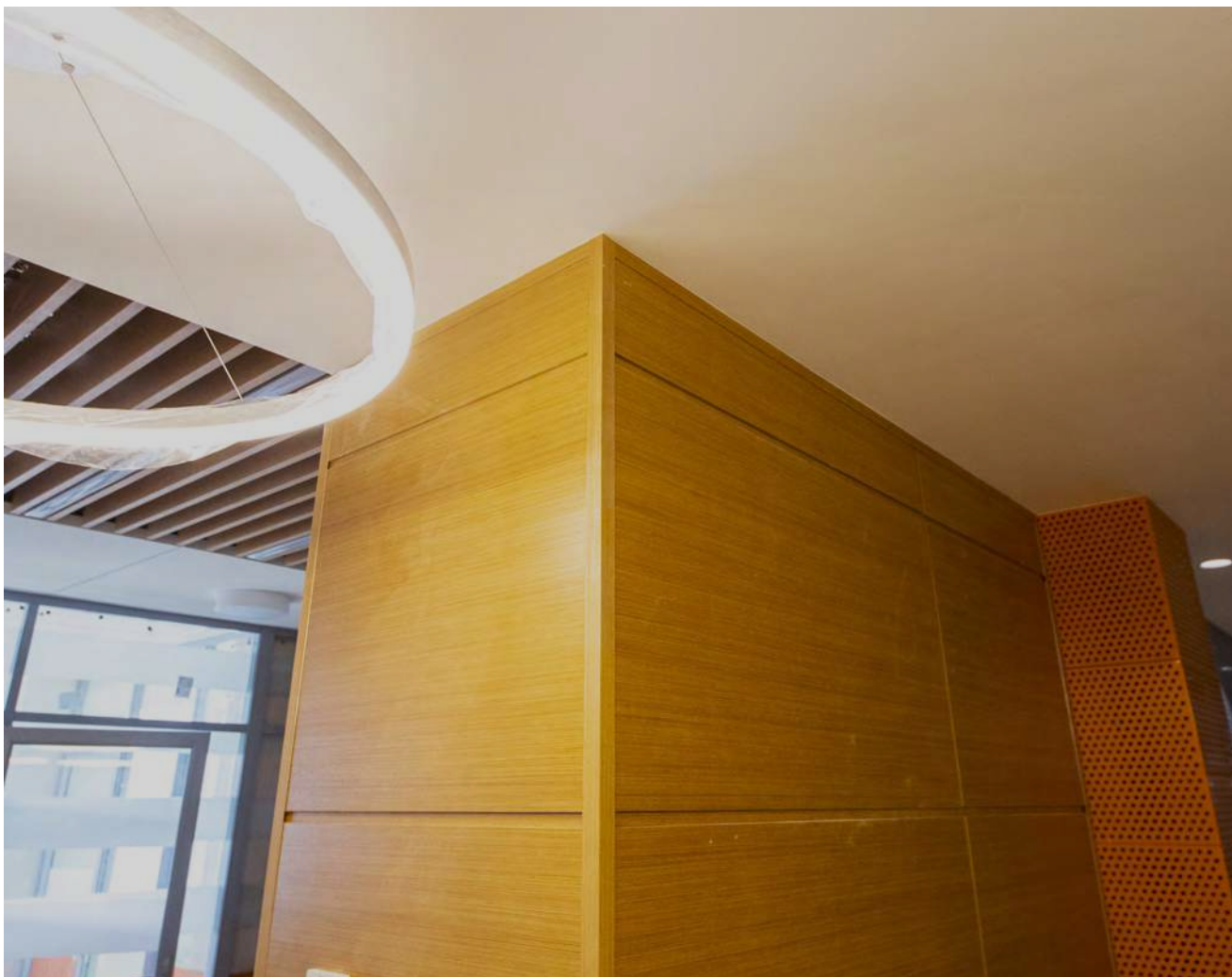




Arkhangelsk Puppet Theater
Belner panels and slats







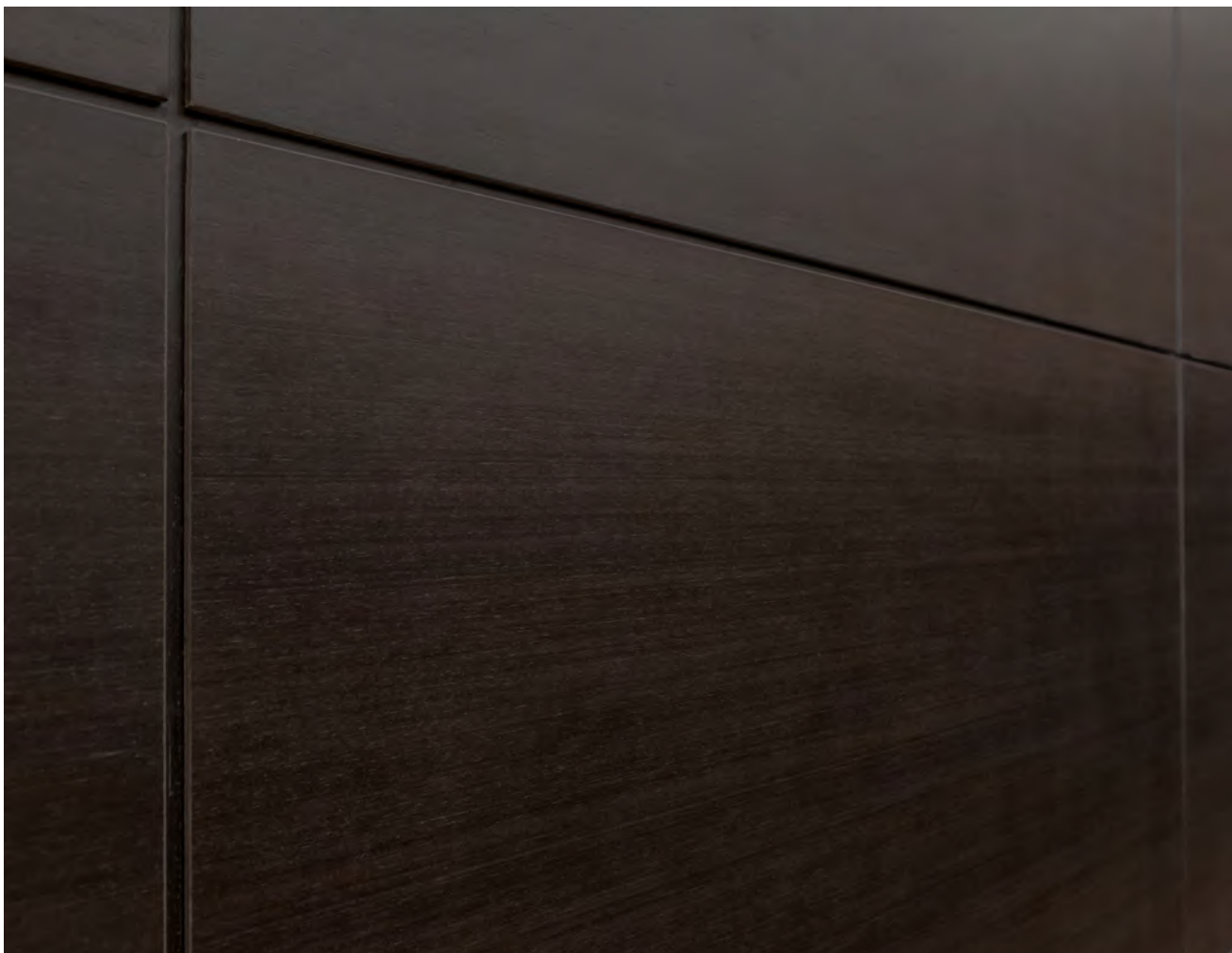
Office space
Novosibirsk

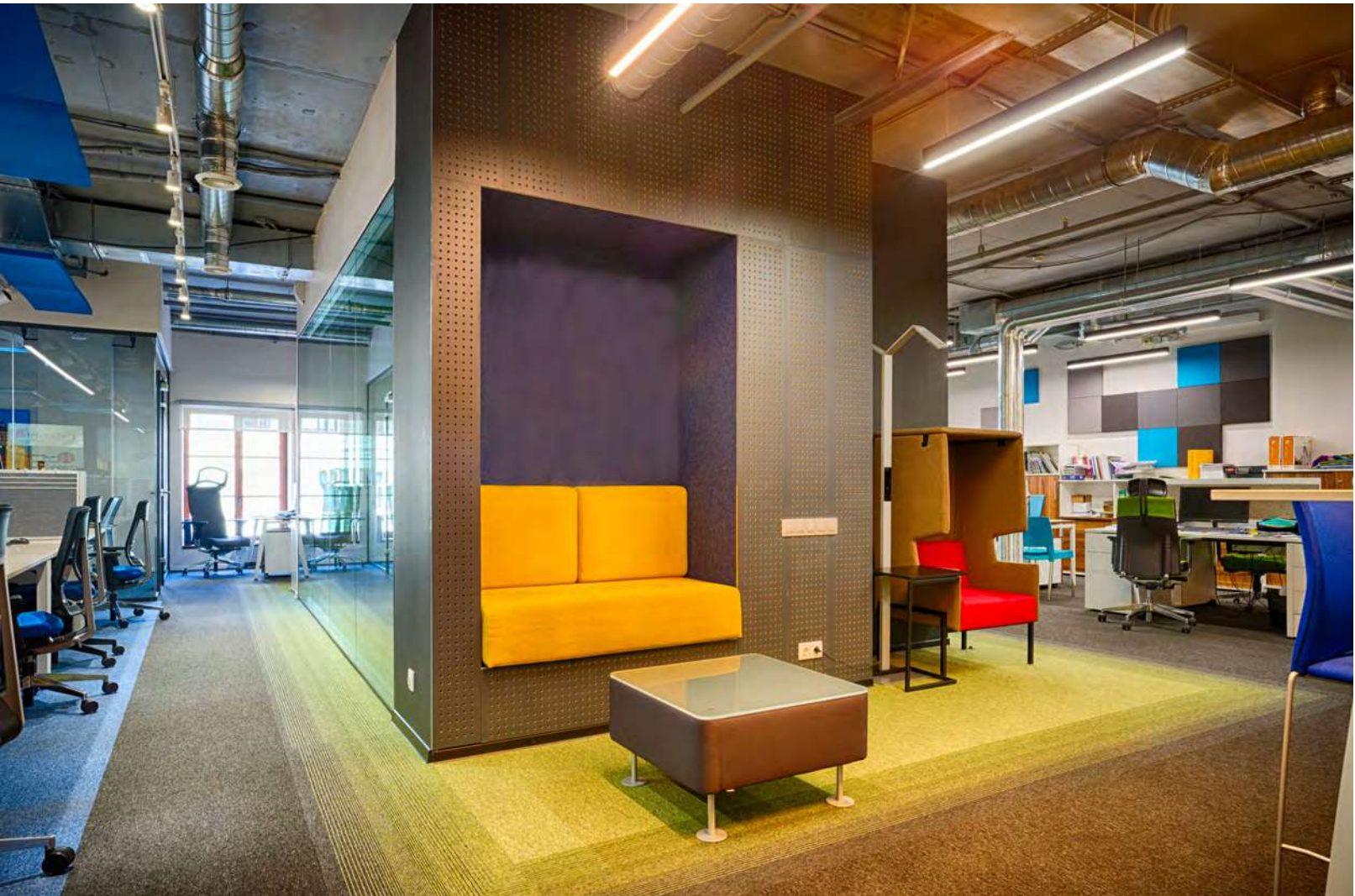




Yutazi village community center

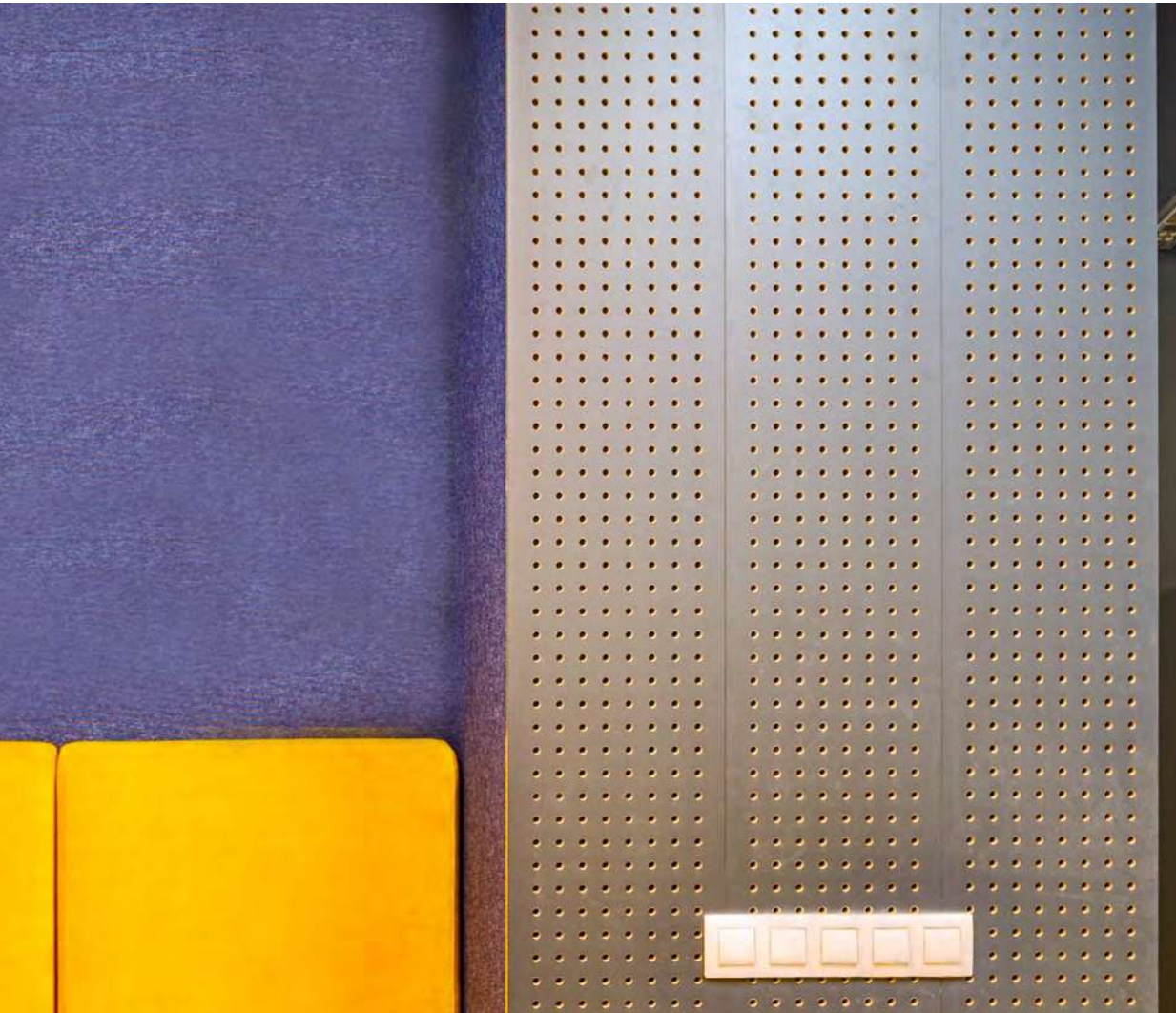






Business center
St. Petersburg



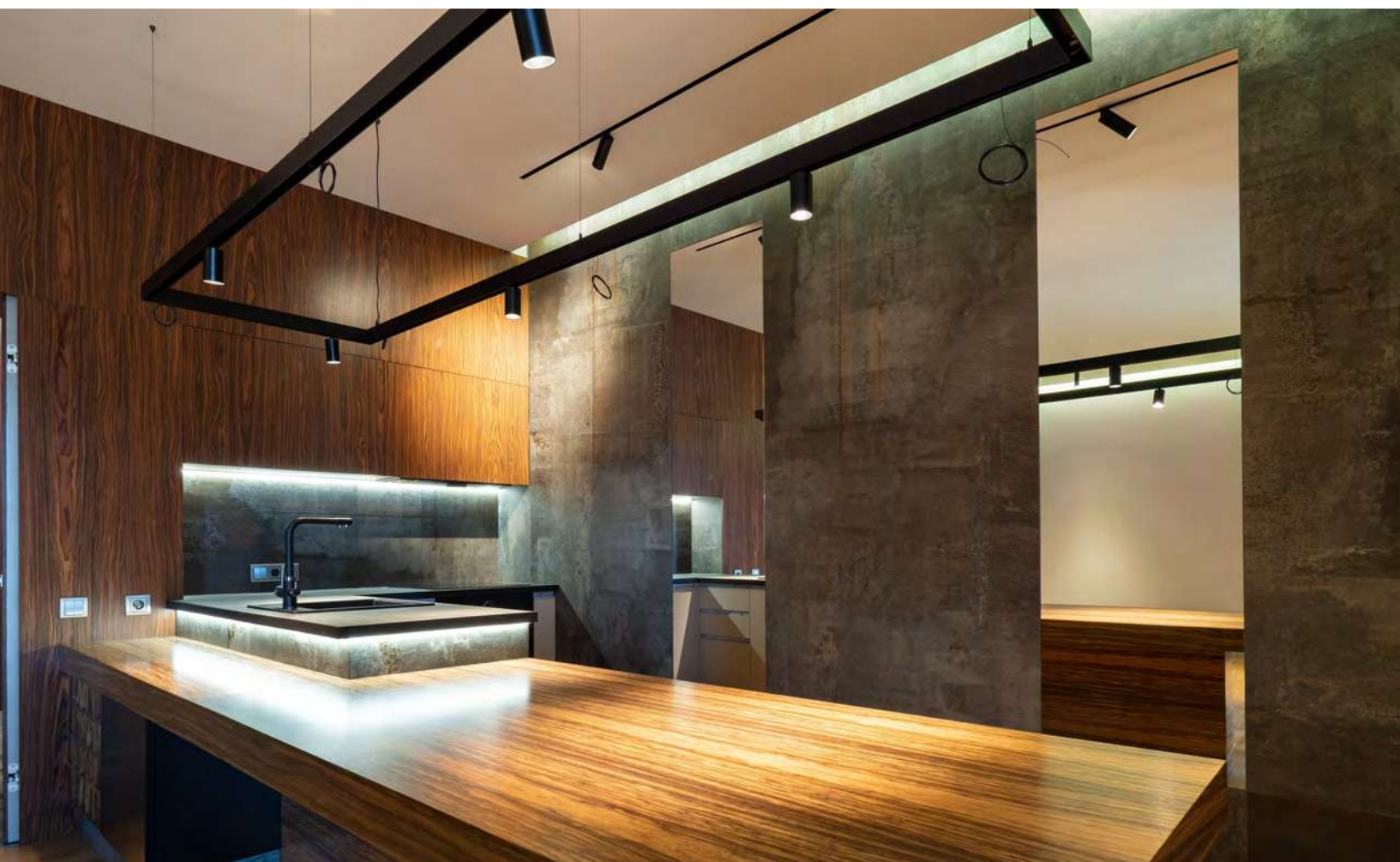






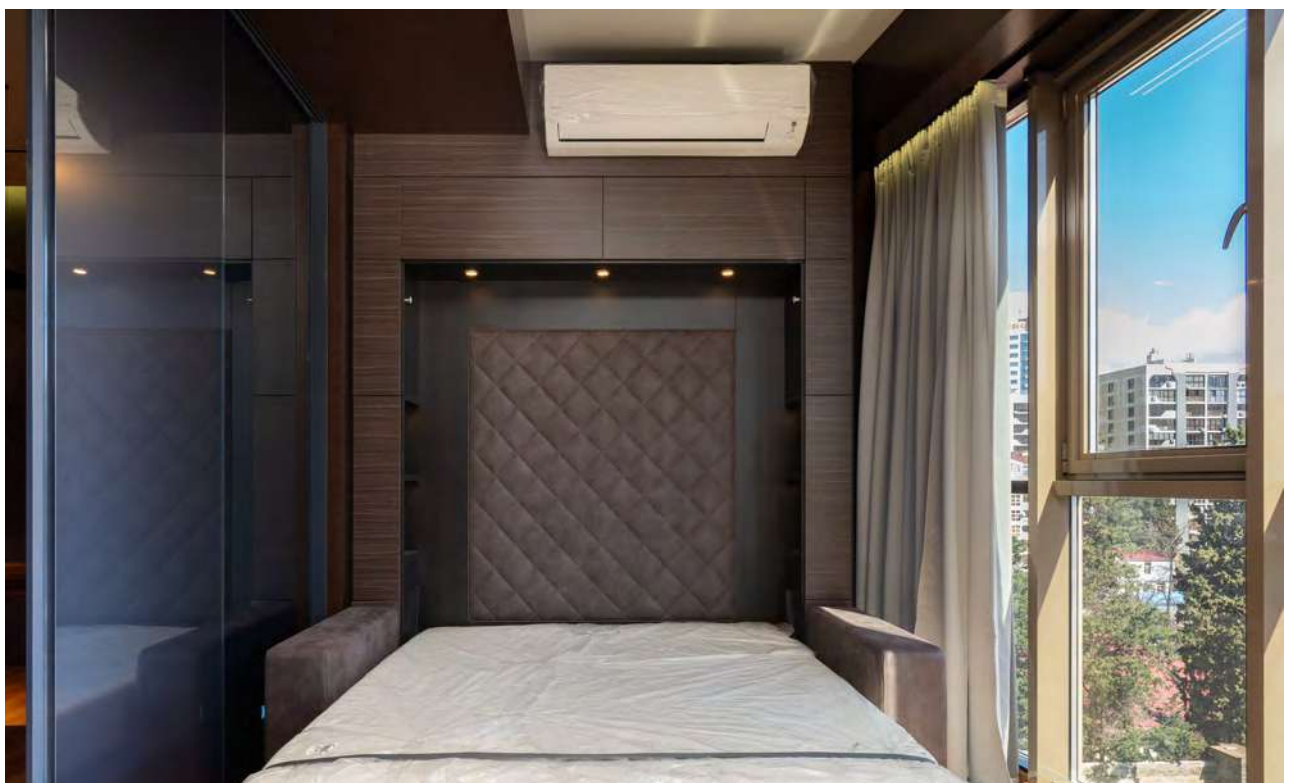
Apartment in the historical
center of Sochi



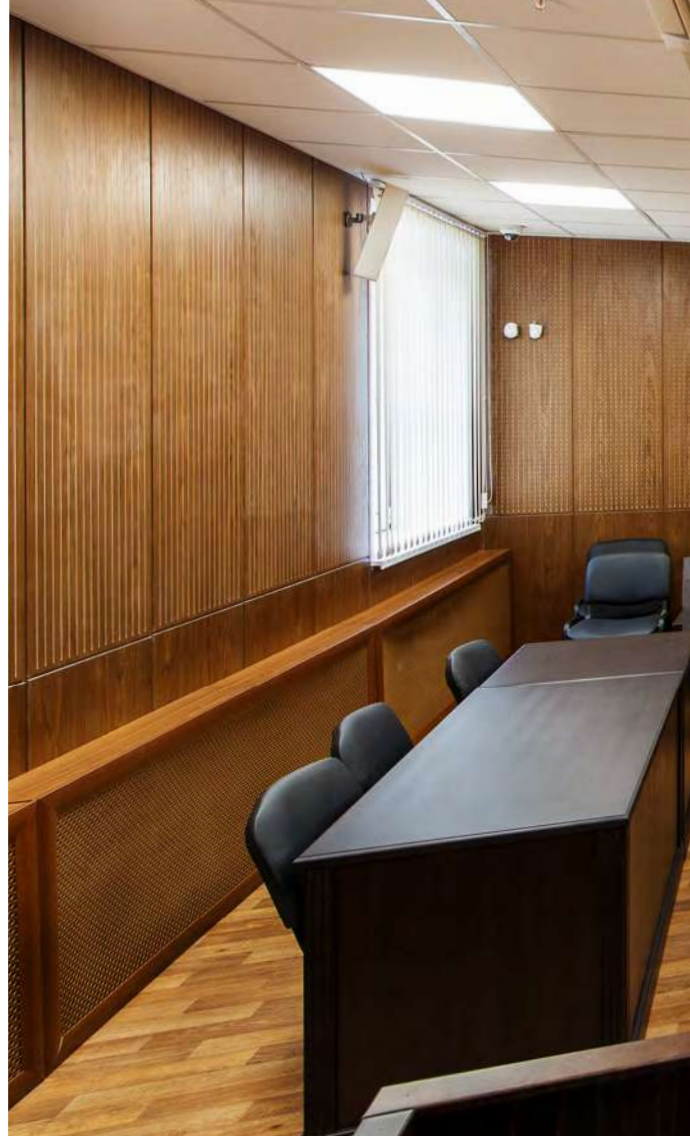




Apartment in the historical
center of Sochi



Tverskoy District Court of
the city of Moscow









The meeting room
Pro.Med.CS., Almaty city, Kazakhstan

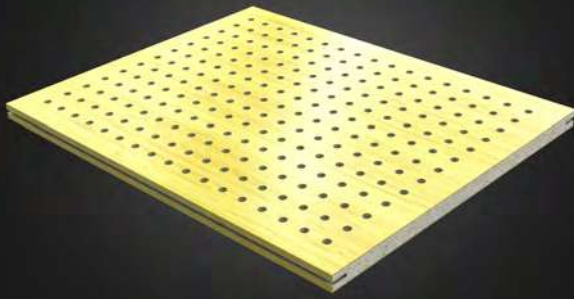




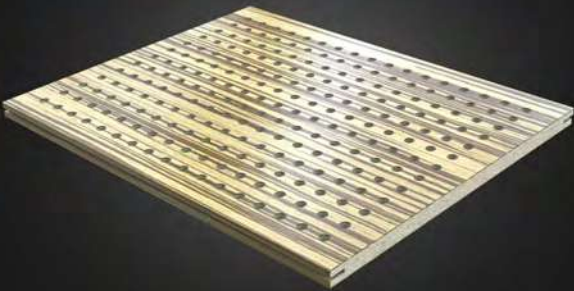
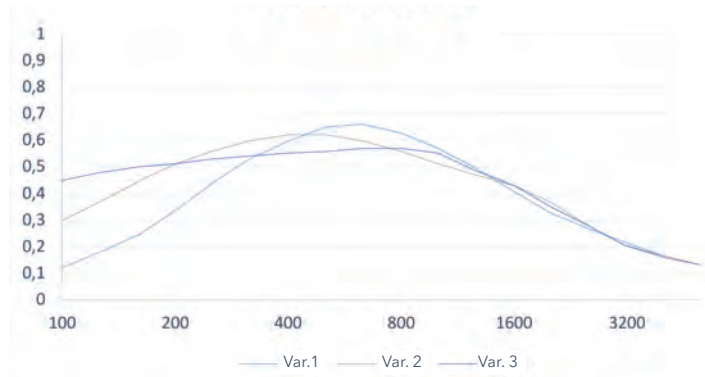
Movie Theater "Bekmambetov Cinema", Almaty city, Kazakhstan



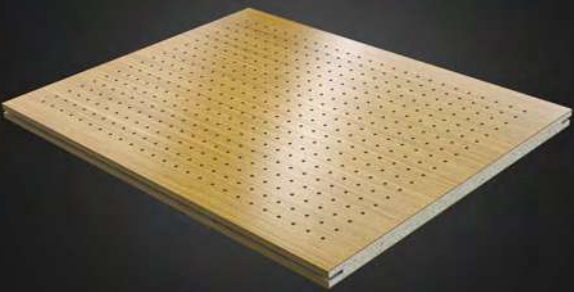
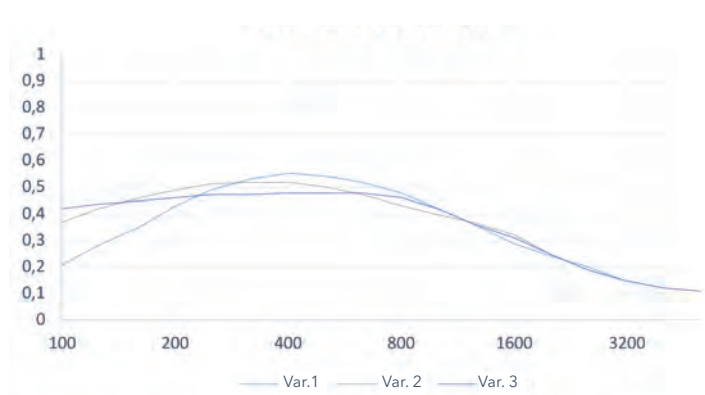




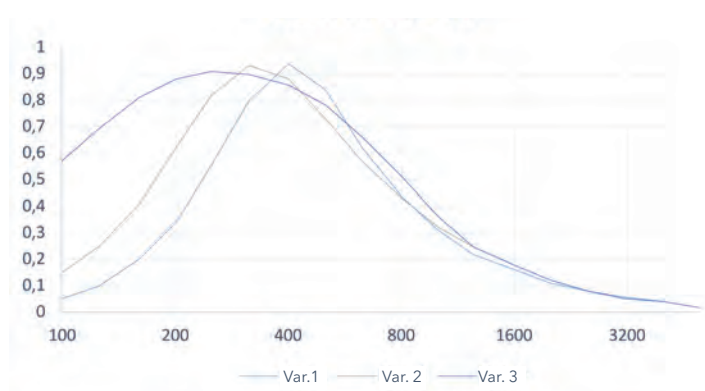
PH8



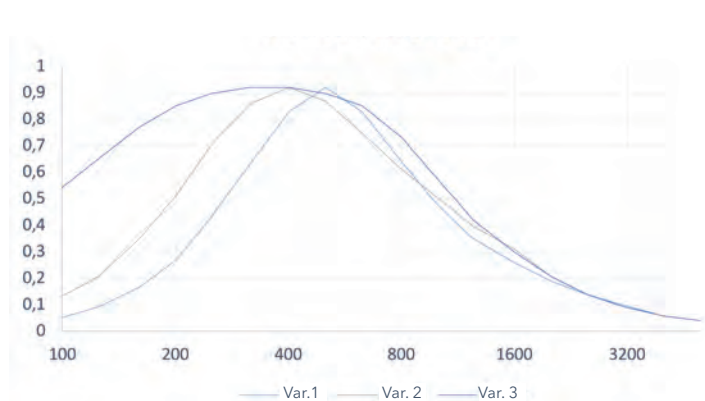
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PS2

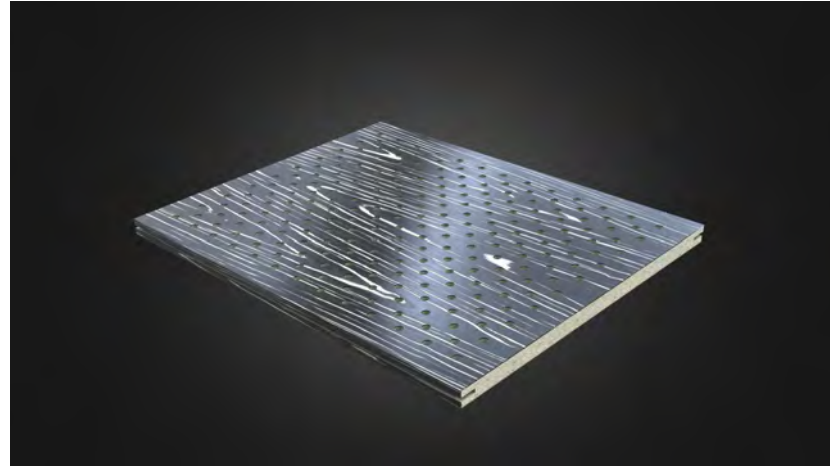
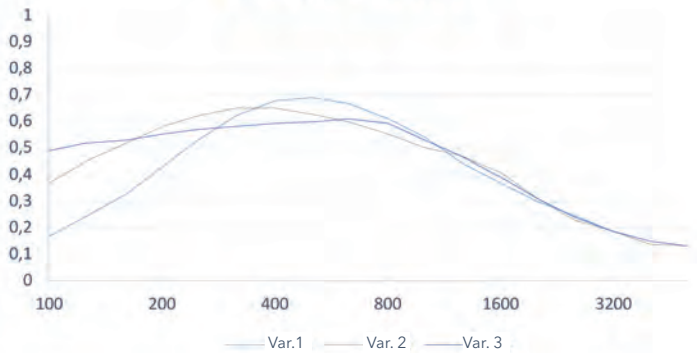


RS8-C40

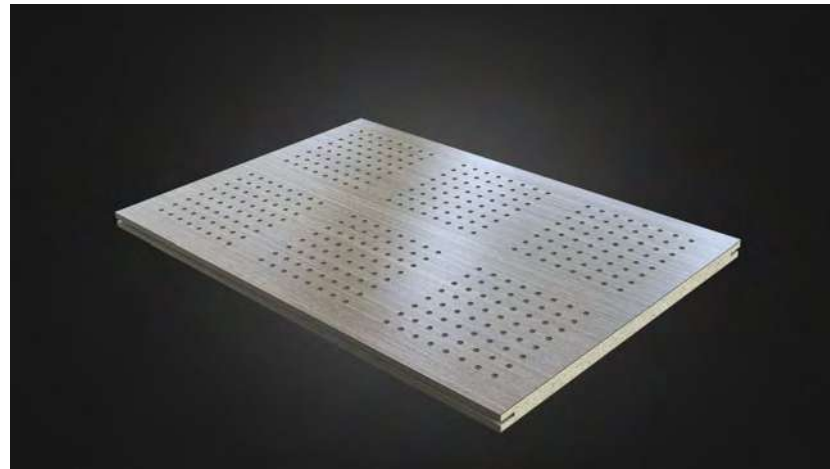
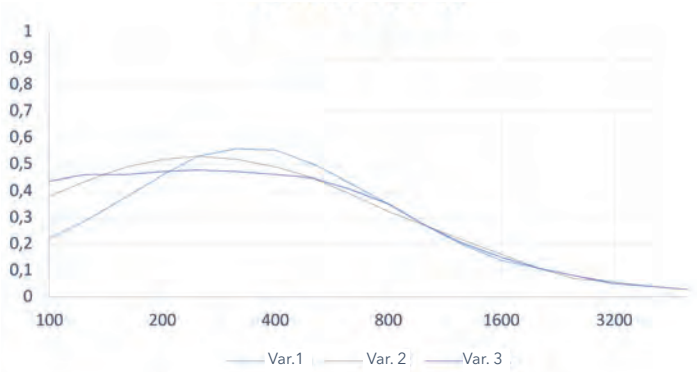


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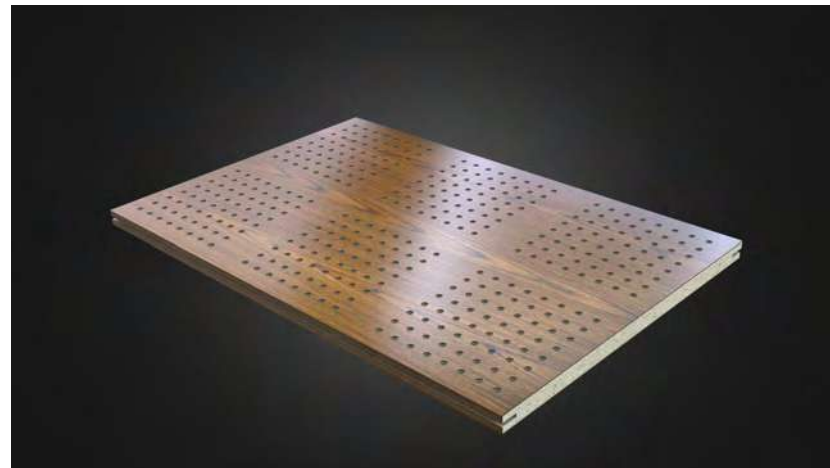
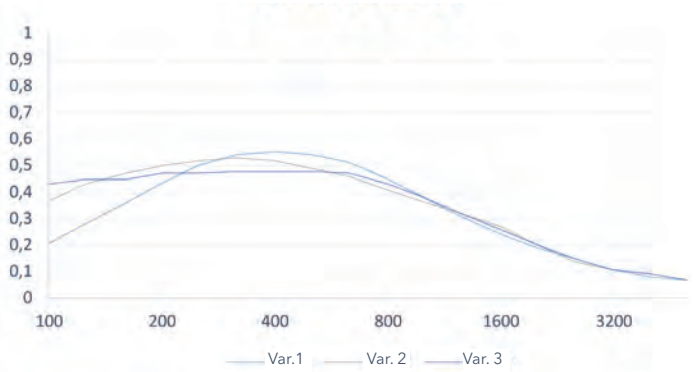
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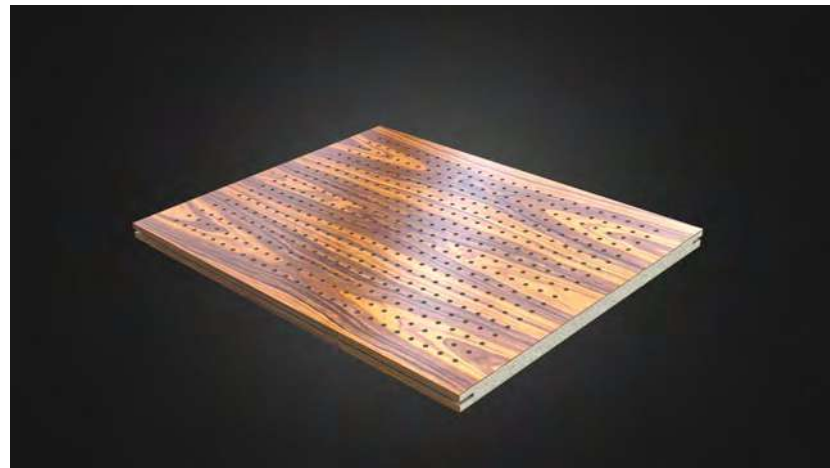
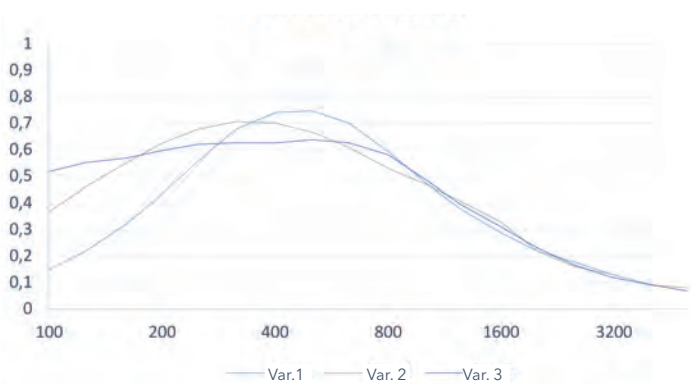
PG5

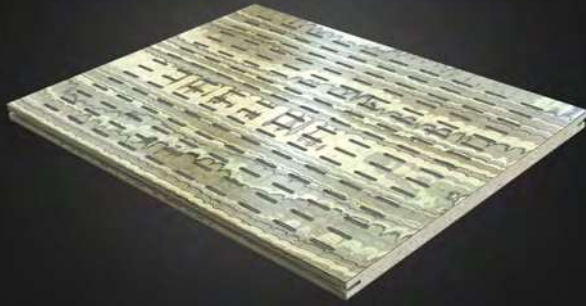


PG8

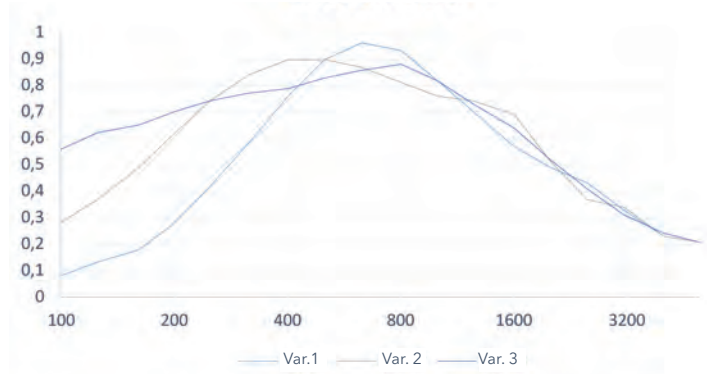


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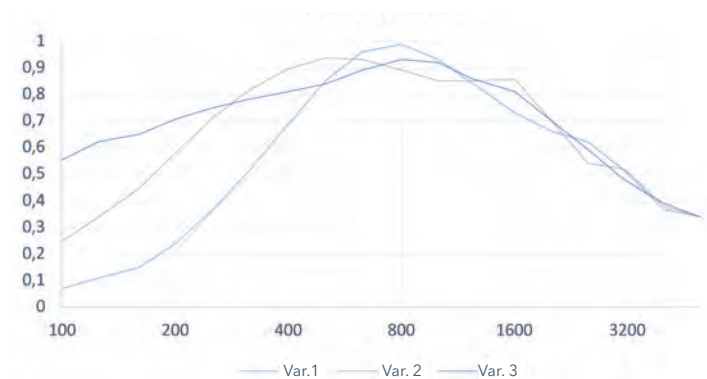




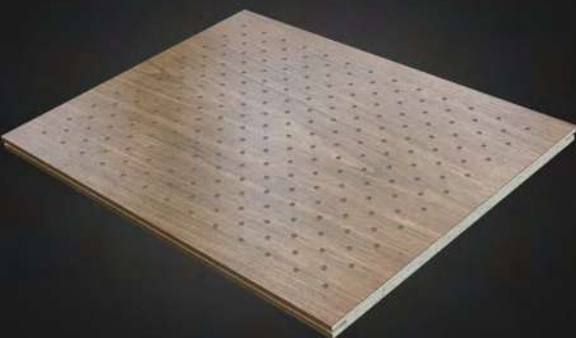
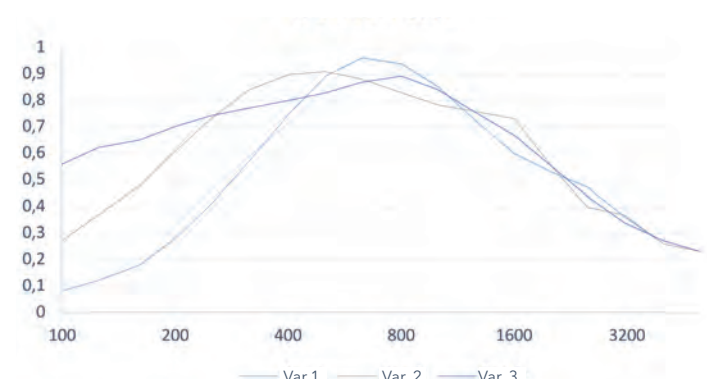
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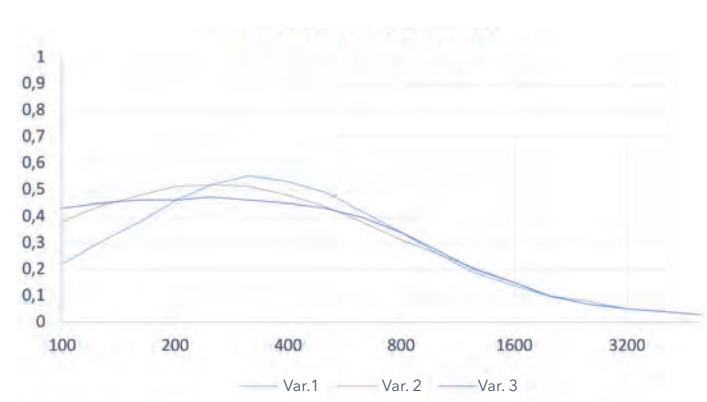
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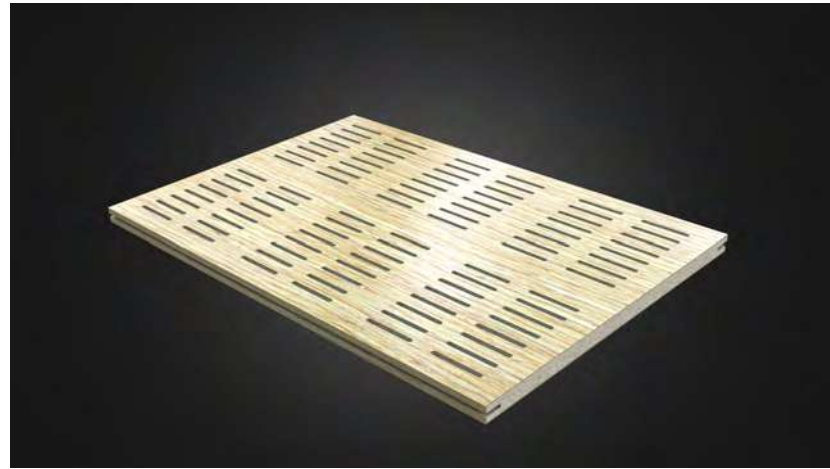
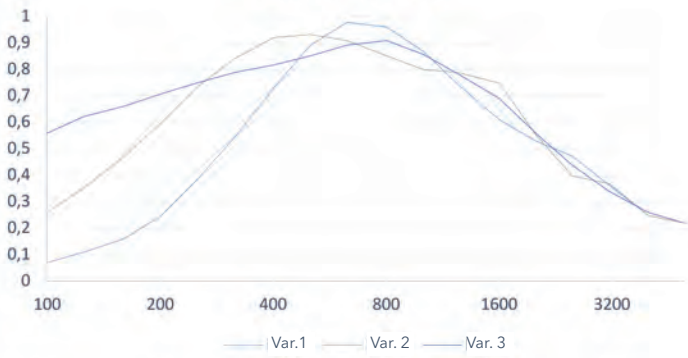


PD5 32-16

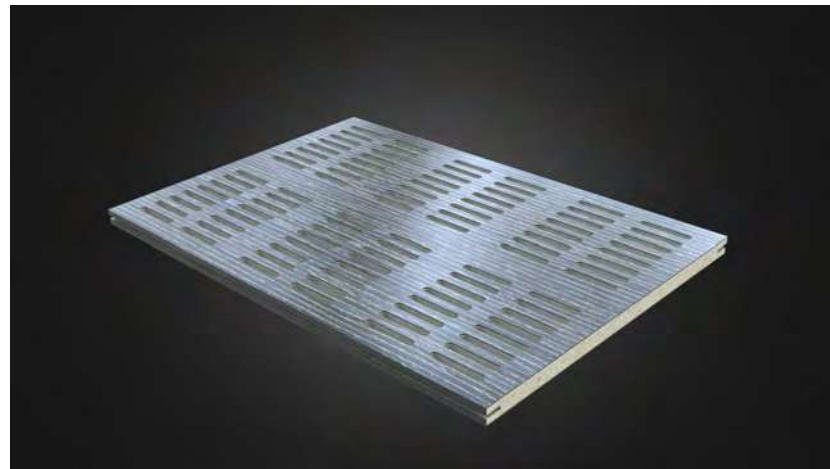
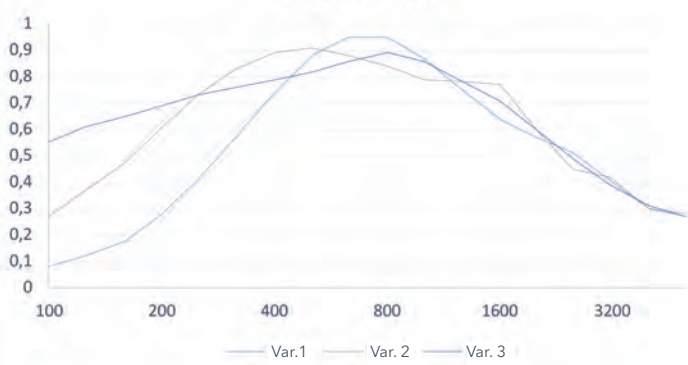


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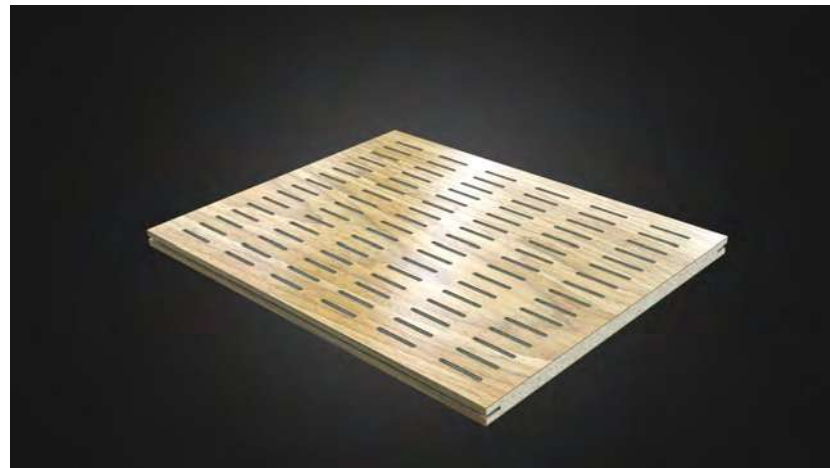
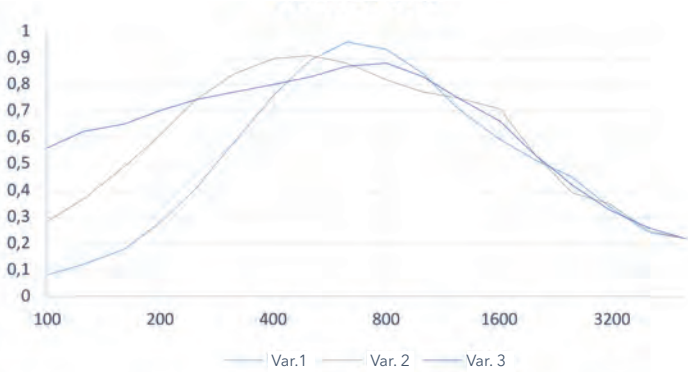
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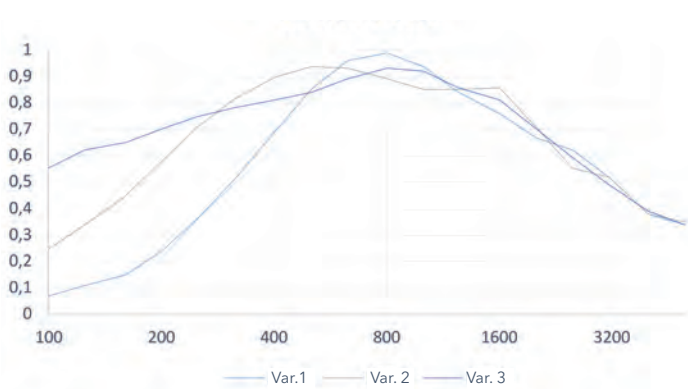
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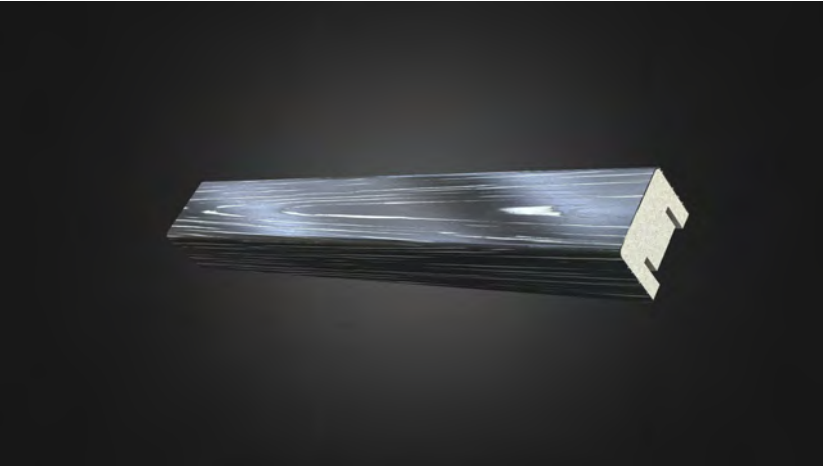
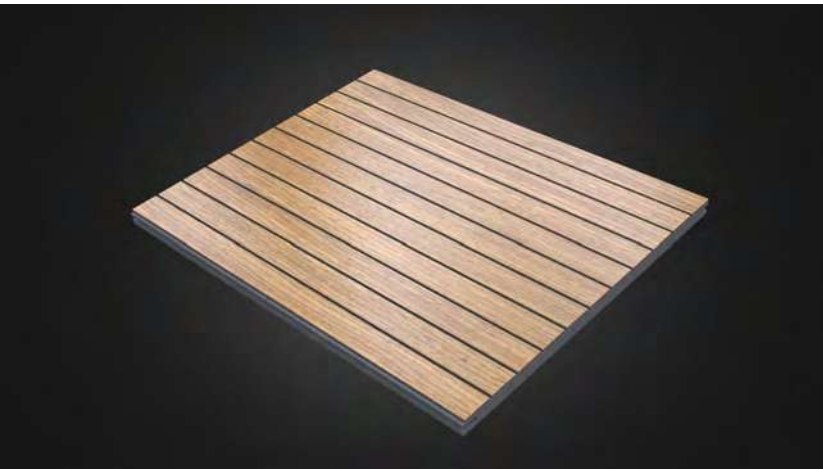
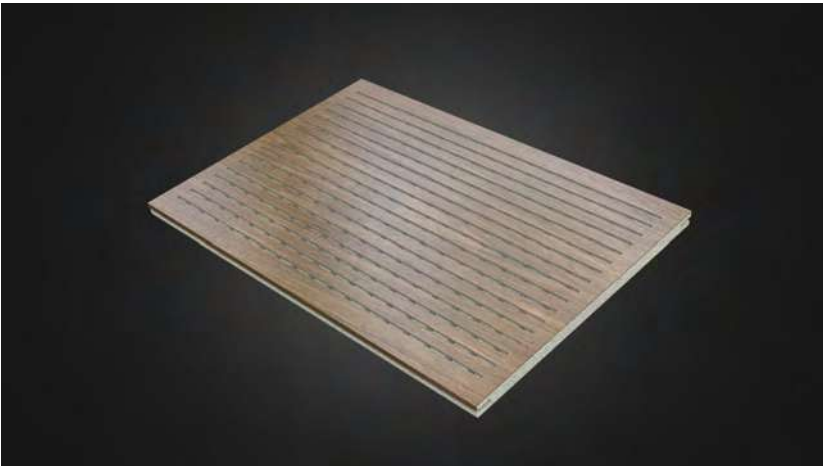


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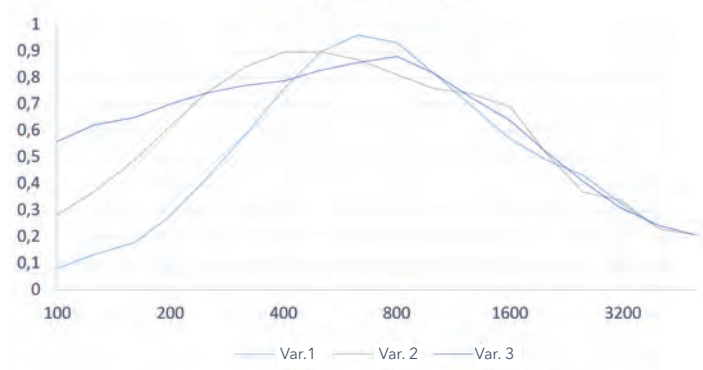


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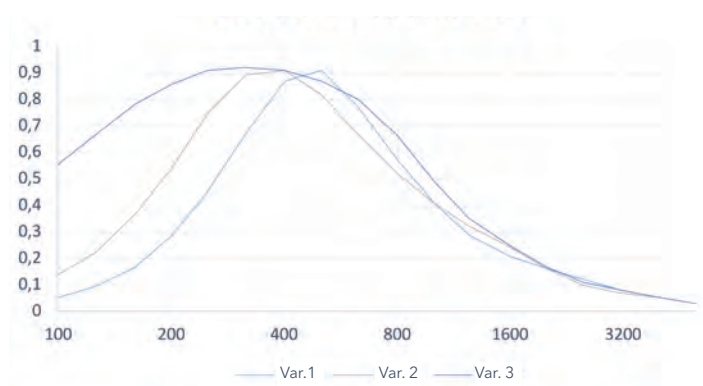




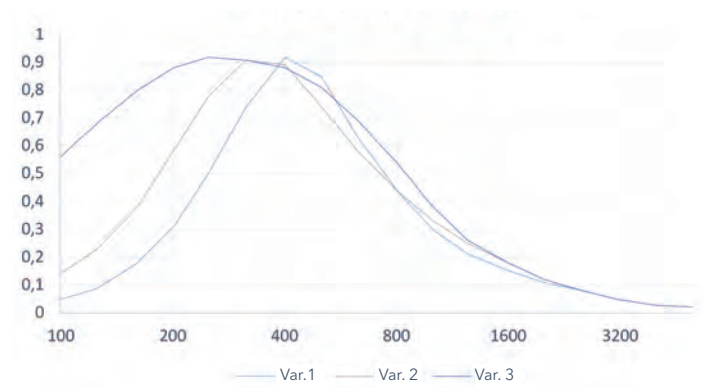
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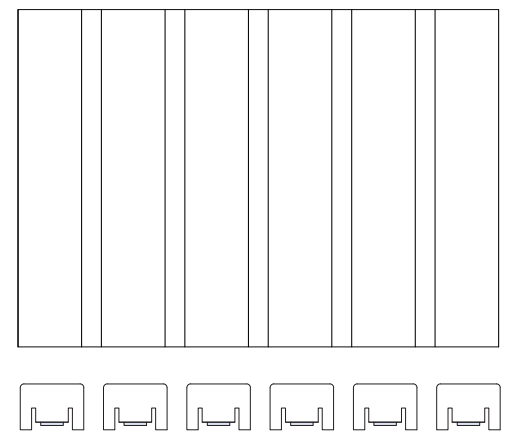
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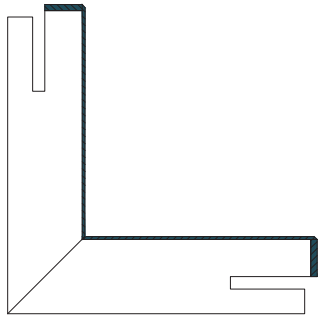
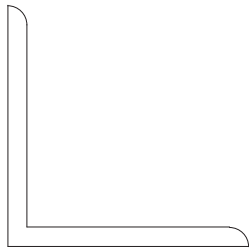
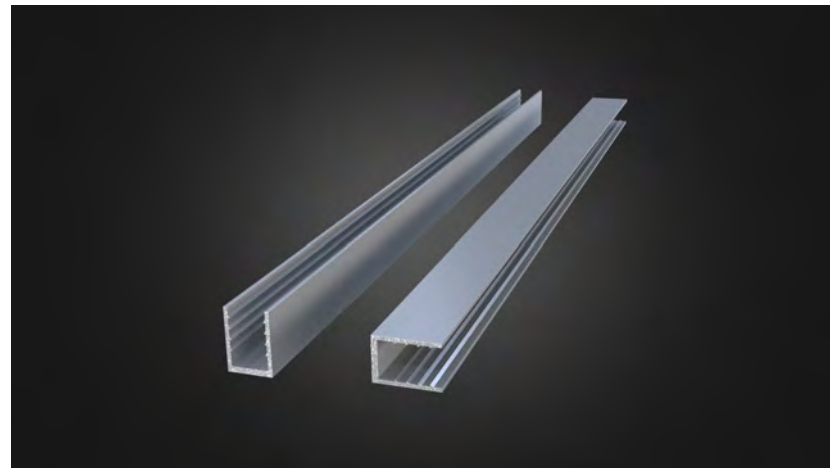
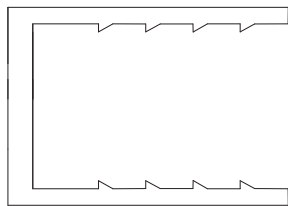
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Decorative Slat

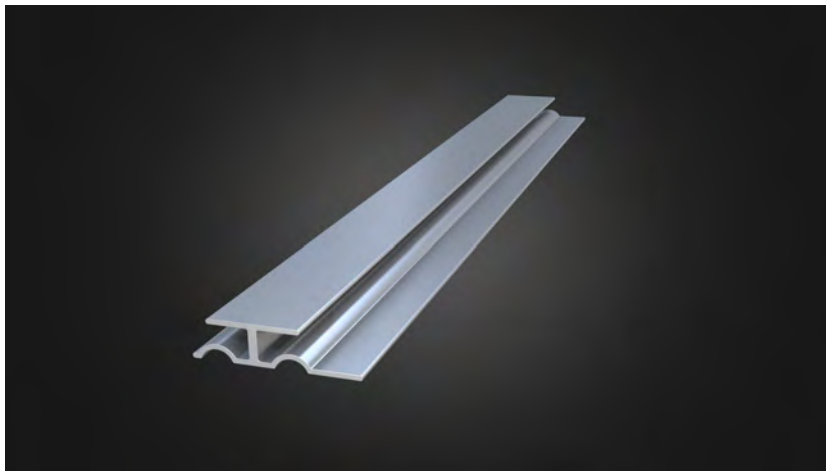
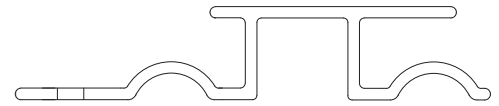


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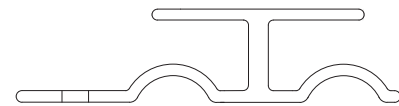
Decorative corner**Angular aluminum profile****Aluminum profile, unfinished****Veneered aluminum strip**



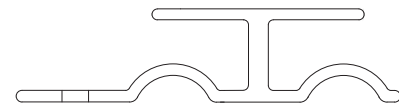
Veneered aluminum profile



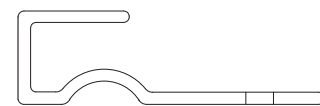
Aluminum profile



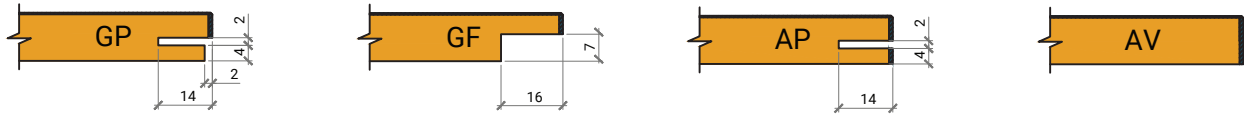
Painted aluminum profile



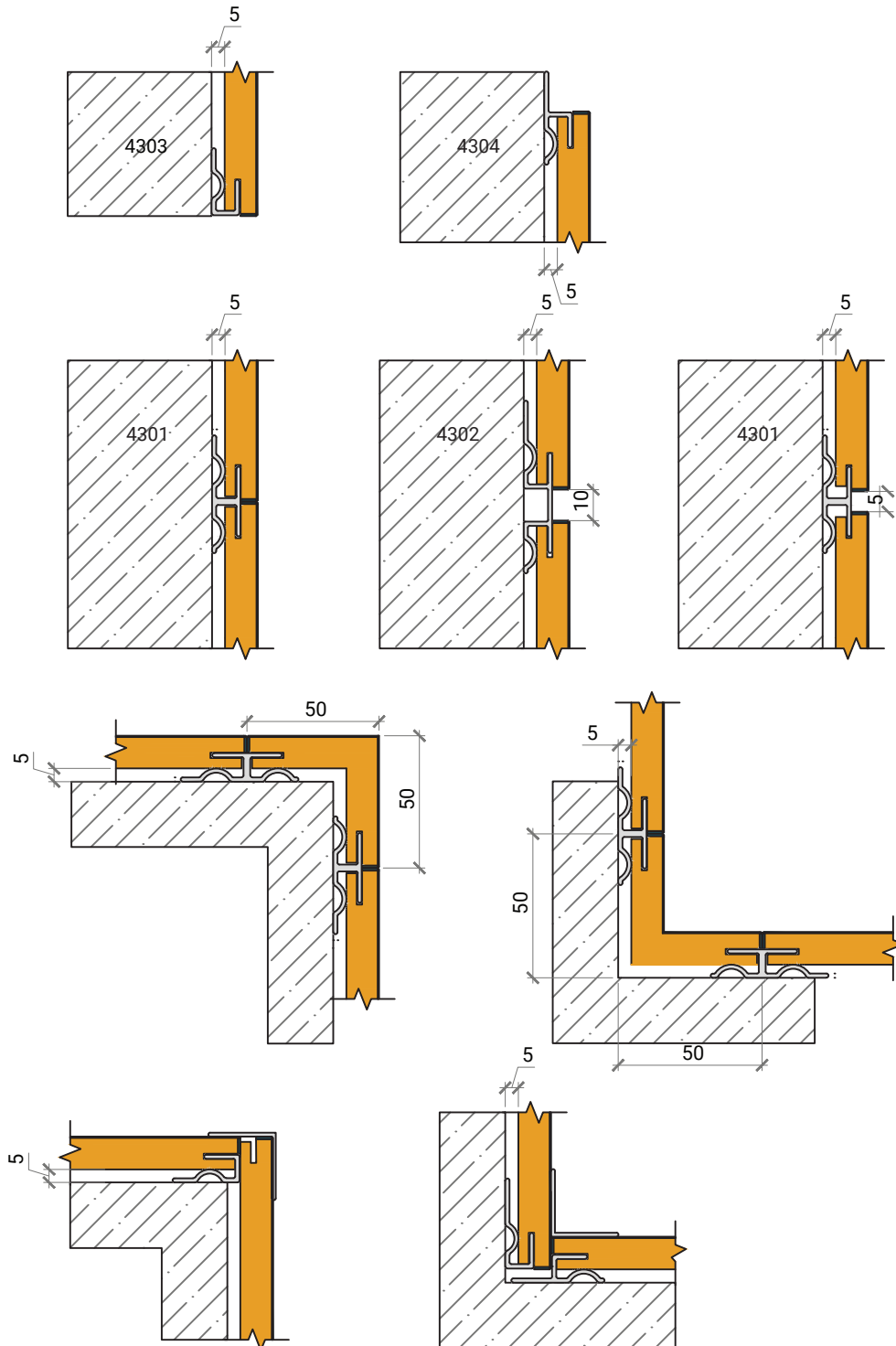
Veneered aluminum profile



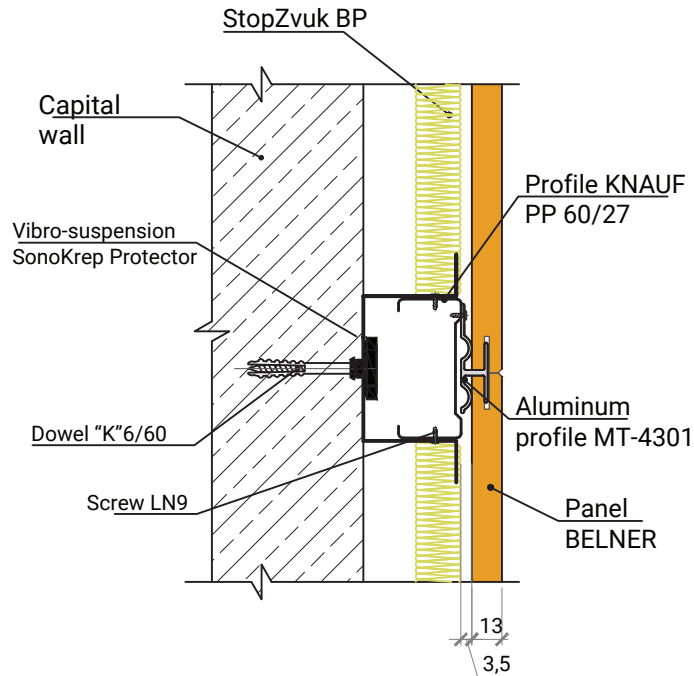
Types of panel edges



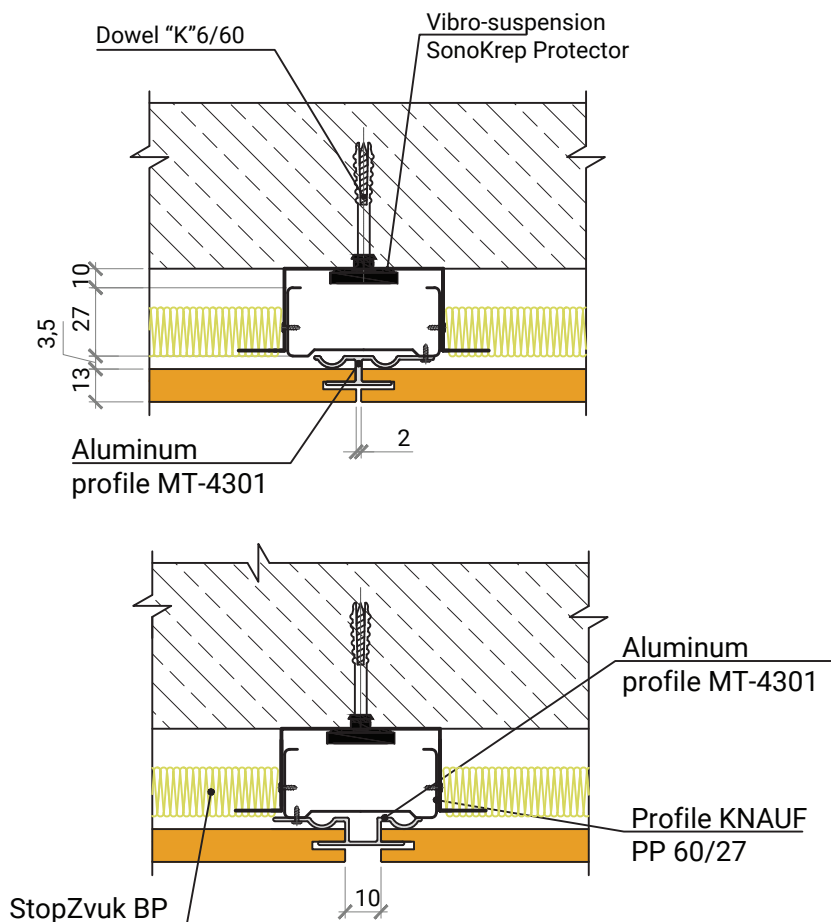
Panel junction units



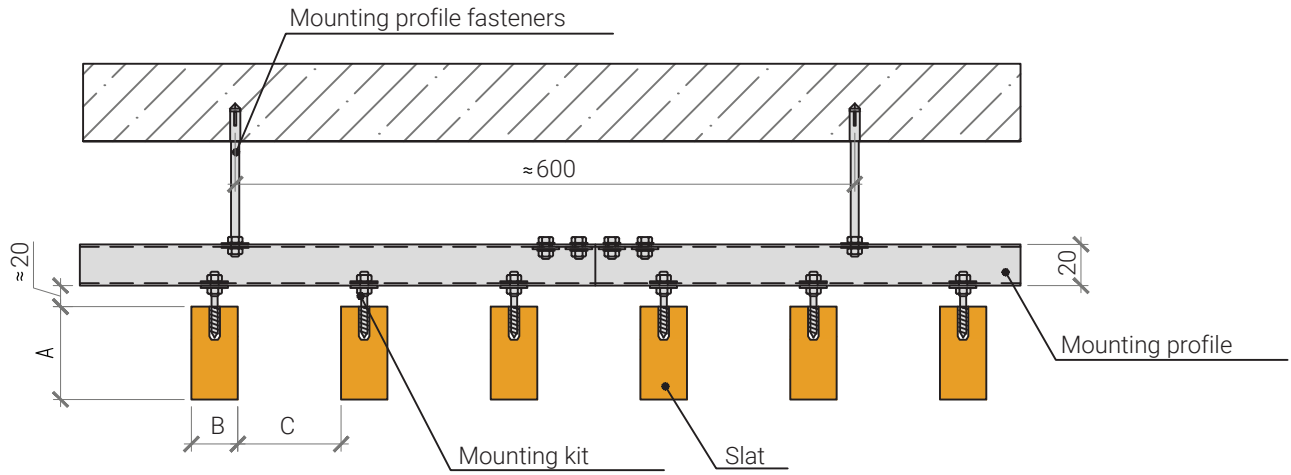
Installation of wall panels



Installation of ceiling panels

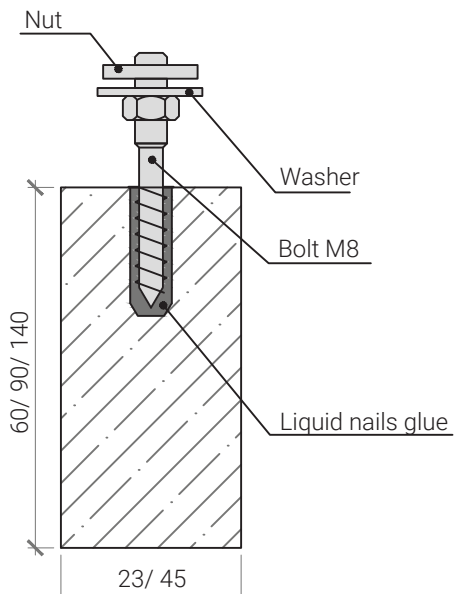
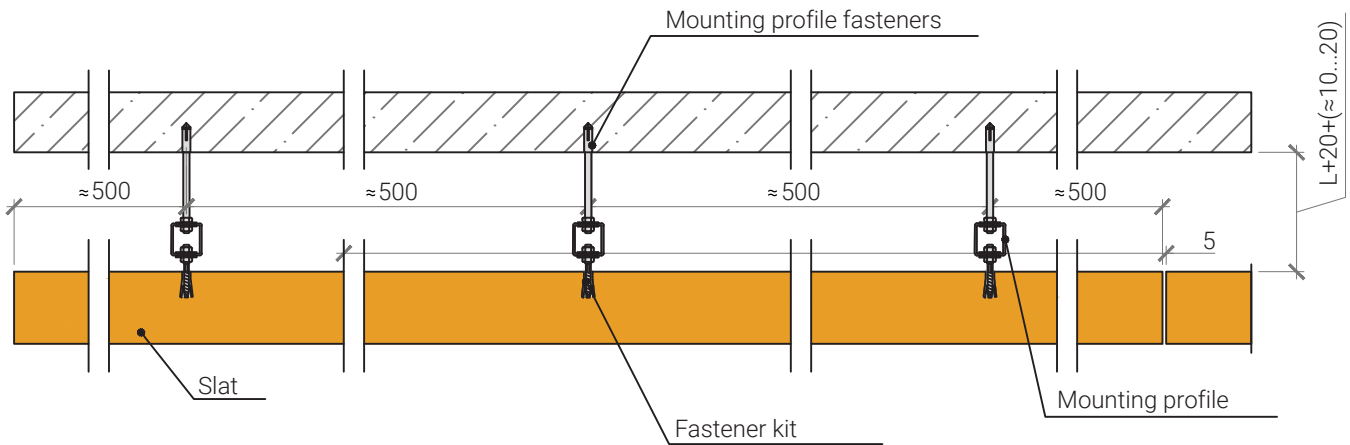


Installation of ceiling slats



Note

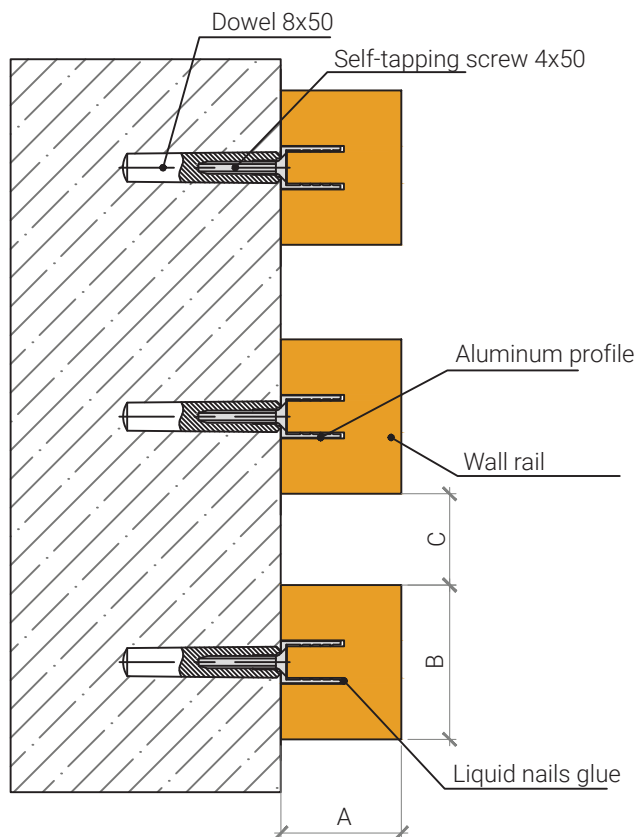
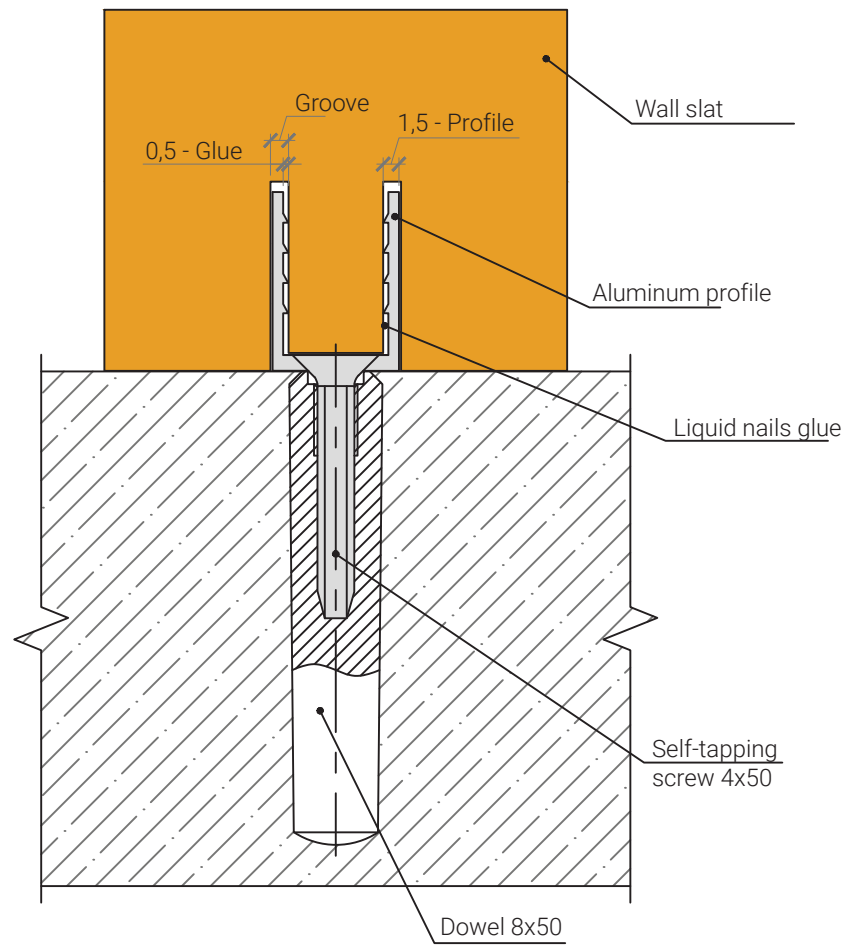
1. Drill the required number of holes in the ceiling for the dowels.
2. Fasten the profile with the bolts to the ceiling and insert strictly on the level.
3. Fasten bolts and slats.
4. Fasten the slats to the profile.



Dimensions of ceiling slats

A	60/ 90/ 140 mm
B	23/ 45 mm
C	B x 2
L	2450/ 2950 mm

Installation of wall slats



Dimensions of wall slats

A	60/ 90/ 140 mm
B	23/ 45 mm
C	B x 2
L	2450/ 2950 mm

Note:

1. Drill the required number of holes in the wall for the dowels.
2. Fasten the profile with the screws to the wall.
3. Apply liquid nails glue to the groove on the slat.
4. Place the slat on the profile and press to liquid nails glue according to the instructions.
5. Secure the slat with mounting tape to dry the glue.

SPECIFICATIONS



Thickness: 12,5 mm (+/-0,5 mm)

Standard lengths: 550, 1000, 1200, 1800, 2450 mm

Special lengths: 350 - 2950 mm

Standard width: 350, 550, 800, 1000 mm

Simple panel weight: 15,7 kg/m²



Embodied by nature itself

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