



The CEWOOD factory is located in Latvia in Jaunlaicene, the scenic region is rich in forests and high-quality timber, which is the main raw material used in the making of CEWOOD panels and one of main reasons of the choice of the factory's location. The factories facilities are built especially for wood wool production to meet high quality requirements and achieve the best end-product in order to meet sales markets expectations. The company devotes particular attention to ensuring that the panels only consist of 100% natural, high quality ingredients that are produced in an environmentally friendly way. One of the company main goals is to be one of leading producers of wood wool panels in the world thus we put all our efforts in the growth and development of the company, including – expansion of our factory.

CEWOOD constantly works on its main targets and values:

- · factory and its development;
- employee satisfaction level and trainings;
- cooperation with clients and a continuous increase of their satisfaction level;
- product quality and providing top customer service for partners;
- educating the market about wood wool panels and benefits provided by this material.

CEWOOD operates on a global scale, providing panels all over the world, starting from Scandinavian countries to America and the Middle East.

As a company we provide high quality cooperation and customer service to our partners in any market in order to increase the level of recognition and sales of wood wool panels. CEWOOD panels are main choice for ceiling and wall finishes in various projects, starting from educational facilities, to sports and Olympic buildings, public buildings, private homes, offices, and culture centers etc.

We believe in the positive properties of CEWOOD panels and the advantages of the material, therefore we will continue an environmentally friendly production, material testing, certification and expand the use of the panels. We are happy and proud of what we have achieved, our projects and products and we set high targets for the future.

CEWOOD Board Member, Ingars Ūdris

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## **About us**



CEWOOD factory in Jaunlaicene, Latvia

CEWOOD produces top-quality standard and also custom-made wood wool products with excellent acoustic, aesthetic and thermal inertia properties.

All building and finishing materials are produced with special care for nature and are rooted in more than 55 years' experience of wood wool production. Due to the competitive, fireproof, durable and ecological properties of the products, they are the perfect choice for a wide range of insulation, construction and design purposes.







## **CEWOOD Acoustic panels**

CEWOOD Acoustic panels are a durable and nature friendly material made of top-quality wood wool and cement.

CEWOOD panels are made of wood wool, using grey or white cement as the binder.

By combining a low fire reaction class with good acoustic and heat inertia properties, the product offers the widest variety of design solutions.

Acoustic panels are widely used in public and residential building interior design, it is eco-friendly and harmless to health. The panels are highly suitable for suspended ceiling constructions and wall finishing. Owing to its natural composition and outstanding properties, they are widely used in premises with increased acoustic load, where sound reverberation (reflection) time and noise absorption are of essence. The panels do not change their properties in premises with an increased level of humidity, they absorb excess humidity and ensure a pleasant microclimate, typical in premises with wood decoration.

Panels with thickness of 15, 25, 35 and 50 mm made of 0.5, 1.0 and 1.5 mm thick wood wool are used for ceiling decoration.

The quality of all CEWOOD materials meets the requirements of EN 13168 and EN 13964.





## **Benefits**



**ACOUSTICS** – excellent sound absorbing properties



**ECOLOGY** – the material is produced in a nature-friendly way



**AESTHETICS** – a wide range of colours, textures and finishes



**HEALTH** – provides a good indoor and acoustic comfort



**DURABILITY** – easy handling, does not lose its properties over time



FIRE SAFETY - high fire safety indicators (A2-s1, d0; B-s1, d0)



**CONVENIENT USE** – easy to transport, process, cut, assemble and paint

#### **100% Natural ingredients**







Wood Wool

**Portland Cement** 

## **Types of CEWOOD panels**







Acoustic panels

Design tiles

Construction panels



## **Application samples**

Acoustic panels are widely used in both interiors of public and residential buildings. They are highly suitable for suspended ceiling constructions and wall decoration. Owing to their natural composition and outstanding features, they are widely used in premises with increased acoustic load, where sound reverberation (reflection) time and noise absorption play an important role.

#### Offices, public spaces



In open floor offices, meeting rooms and public spaces, CEWOOD panels provide sound absorption, noise reduction and improve the working environment.

#### Music and sports halls, theaters, cinemas

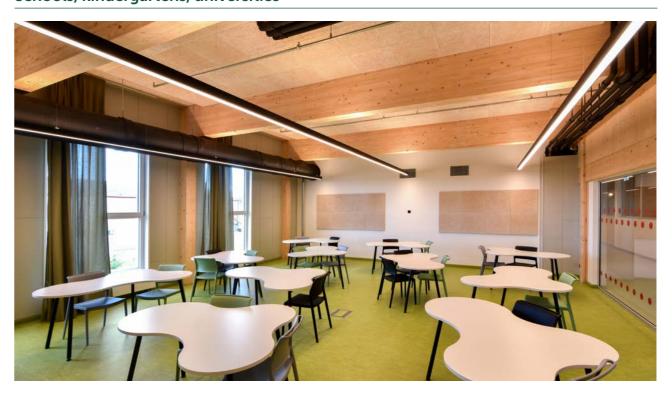




In the public entertainment rooms, the acoustic panels finishing provides a significant increase in the acoustic microclimate to meet the highest industry standards.

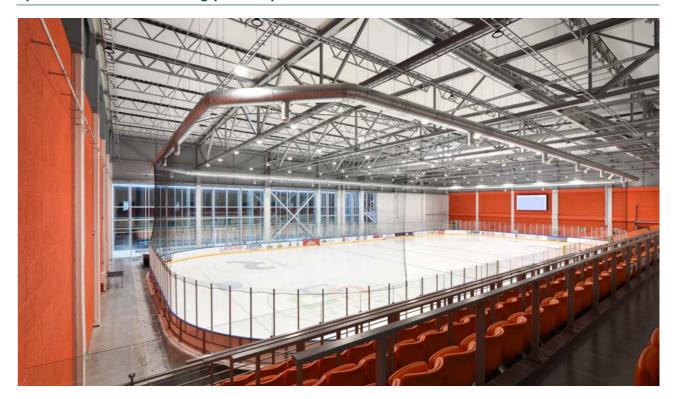


#### Schools, kindergartens, universities



Thanks to the acoustic properties, CEWOOD panels are widely used in educational institutions. They improve the acoustic comfort of the premises and provide a favorable microclimate.

#### Sport facilities, swimming pools, spa



The acoustic panels not only provide sound absorption but also absorb excess moisture in premises and do not change their properties in high humidity rooms. Panels are durable, and the most popular are tested in ball impact tests.

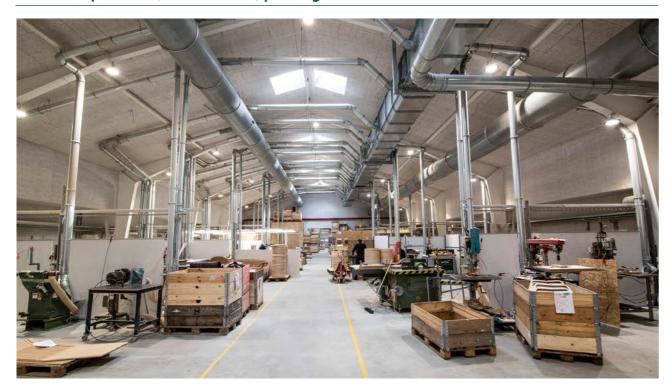


#### Recording studios, TV and radio stations



Acoustic panels offer professional-grade soundproofing to effectively absorb noise and minimize sound reflection.

#### Industrial premises, warehouses, parking lots



Acoustic panels are a great noise reduction solution for production facilities and parking lots, as they absorb sound thus allowing to reduce the noise volume and increasing the noise comfort level.





## **Technical specifications**

CEWOOD Acoustic panels are a durable and nature friendly material made of top-quality wood wool and cement. By combining low fire reaction with good acoustic and heat inertia properties, the product offers the widest variety of design solutions.

#### **Application**

Acoustic panels are widely used in public and residential building interior design, it is eco-friendly and harmless to health. Owing to its natural composition and outstanding properties they are widely used in premises with increased acoustic load, where sound reverberation (reflection) and noise absorption are of essence:

- Offices, public spaces and private homes
- Schools, kindergartens, universities
- Sport facilities, swimming pools, spa
- Music halls, theaters, cinemas
- Recording studios, TV and radio stations
- Industrial premises, warehouses, parking lots etc.

#### **CEWOOD Acoustic panels**











#### Available panel thickness depending on wood wool width

Wood wool width, mm	0,5	1,0	1,5	3,0*
Available panel thickness, mm	25	15; 25; 35; 50	15; 25; 35; 50	25; 35; 50

\* produced upon request



#### CEWOOD Acoustic panels - 1,0 mm wood wool



#### Main properties of available panel thicknesses

Thickness	mm	15	25	35	50			
Size (standard panel)	mm	mm 2400x600; 1200x600; 600x600						
Size (for suspended ceilings)	mm	1195x595; 595x595						
Dimensional tolerance (EN 13168)			L4; W2; T	2; S2; P2				
Weight	kg/m²	7,0	10,5	14,5	19,5			
Density	kg/m³		420	410	390			

Thermal resistance (Ro)	m²·K/W	0,20	0,35	0,50	0,75				
Thermal conductivity (λD)	W/m·K	0,066							
Bend (EN 12089)	kPa	≥ 1700	≥ 1300	≥ 1000	≥ 700				
Compression (EN 826)	kPa	≥ 300	≥ 300	≥ 200	≥ 200				
Chloride content (EN 13168)	%	≤ 0,06 class Cl3							
Reaction to fire (EN 13501-1:2007)	B-s1, d0								

#### CEWOOD A2 Acoustic panels - 1,0 mm wood wool





#### Main properties of available panel thicknesses

Thickness	mm	15	25				
Size (standard panel)	mm	2400x600; 1200x600; 600x600					
Size (for suspended ceilings)	mm	1195x595; 595x595					
Dimensional tolerance (EN 13168)		L4	1; W2; T2; S2; P2				
Weight	kg/m²	12,5	14,5				
Density	kg/m³	830	580				

Thermal resistance (Ro)	m²·K/W	N/A	0,35				
Thermal conductivity (λD)	W/m·K	0,07	0,074				
Bend (EN 12089)	kPa	≥ 1700	≥ 1300				
Compression (EN 826)	kPa	≥ 500	≥ 500				
Chloride content (EN 13168)	%	≤ 0,06 class Cl3					
Reaction to fire (EN 13501-1:2007)		A2-s1, d0					



## **CEWOOD panels colour variations**

CEWOOD wood wool panels are available:

- non painted,
- in standard colours,
- in any other colour upon client's request according to RAL or NCS paint catalogues.

The standard colour range for CEWOOD wood wool panels include: non painted – natural, natural painted, white painted, grey painted, black painted.

#### Natural



#### Natural painted



White painted



**Grey painted** 



**Black painted** 



Colour from RAL or NCS paint catalogues





## **Colour tone warning for nonpainted CEWOOD** panels

CEWOOD Acoustic panels and Design tiles are manufactured using top-quality timber from Latvian forests. Wood is a natural material, and its colour tone can differ due to various factors unrelated to quality.

The main factors affecting the colour tone are:

- Wood tonality;
- Tree growing conditions;
- Harvesting period;
- Drying rate;
- Water content in wood;
- Panel manufacturing process;
- Hardening, drying of panels.
- (!) When choosing unpainted panels, bear in mind that the tone can differ, and it will allow enjoying natural colour variations of wood, however, if homogeneous tone is important in design, then CEWOOD recommends choosing panels painted in natural colour. The quality of CEWOOD panels in either case is excellent and meets all requirements.

#### Sample with CEWOOD nonpainted Acoustic panels





Sample with CEWOOD natural painted Acoustic panels







# Precautions and guidelines for panels in dark colours

CEWOOD produces all panels with special care, however, panels that are painted in dark tones must be handled with extra caution. When choosing dark colour tone panels, you must bear in mind that post-treatment will be required to achieve excellent results due to the high contrast with the natural colour of wood wool.

Be aware that the varying thickness of each wood wool fibre gives unique characteristics and depth to the panel. As a natural product, each panel can differ slightly. After coating the panels with the dark tone, from some angles natural wood wool shades might still remain visible.

Keep in mind that panels which are painted in contrasting colours are almost impossible to transport and mount without minor damage caused by dust or saw. Dark-coloured panels must always be mounted last, after all the rest of the construction works have been completed. Be prepared to do some minor repainting with a brush; in larger areas with a roll. We recommend to order same color tones from CEWOOD factory, to avoid colour tone mismatch.

During the packaging stage, CEWOOD will place panels with the exposed surfaces together and separated by a covering foil to protect the wood wool fibre during transportation and storage. Always handle panels in pairs with the exposed surfaces together. Leave the cover foil between panels as long as possible to prevent surface damage to panels.





#### ! Precautions:

- Before starting work, get acquainted with CEWOOD guidelines of handling before and after installation;
- Always allow the panels to adapt to ambient conditions for 1-2 weeks:
- Mount the panels last, after all the construction works are finished;
- Do not move panels unnecessarily. CEWOOD recommends moving panels only for acclimatization or installation purposes;
- · Lift panels with both hands avoiding any squeezing;
- Handle the panels in pairs keeping the exposed surfaces together and with a covering foil between them;
- Leave the covering foil between panels as long as possible;
- Use clean and dry gloves and equipment while working. Dirt will leave stains;
- Do not expose panels to water;
- Local repainting will be required after mounting. Use brush for small areas or roll for larger areas;
- It is recommended to use original CEWOOD paints for brush up painting on panels, this will allow you to get an identical color tone on the panel;
- After panels are installed, small dust particles may be present, due to the mounting process. To get rid of the dust, use a vacuum cleaner with a soft brush attachment.



# Visual effect of higher density edges of CEWOOD panels

CEWOOD Panels are available with different edge bevels, which allows to choose the most suitable solution for each object. In order to provide high quality, expressive bevels, all panels are produced with increased density on the two long side edges. This technological solution also ensures safer fastening of the material with screws. If PO profiles are selected and panels are fastened with screws, then the final visual effect will have added aesthetic value – increased density edges on the two longe sides of the panels.

#### Visual effect of higher density edges of CEWOOD Panels

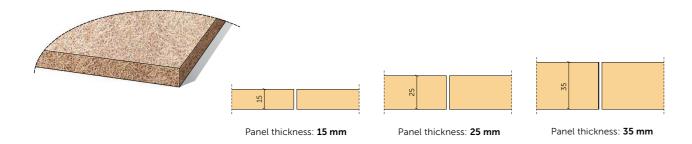




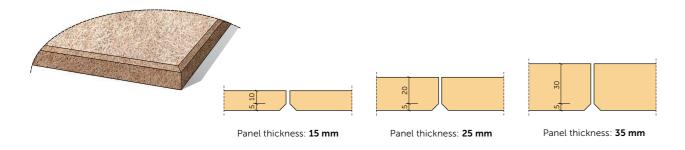
## **CEWOOD**

## **Profile specifications**

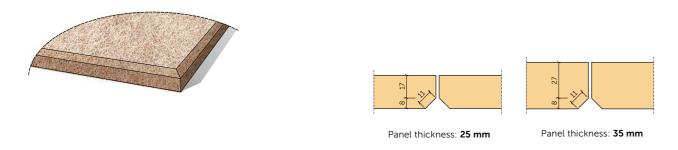
#### PO - Panel without chamfer



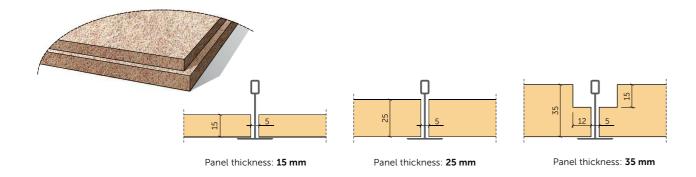
#### P5 - Panel with 5 mm chamfer



#### P11 - Panel with 11 mm chamfer

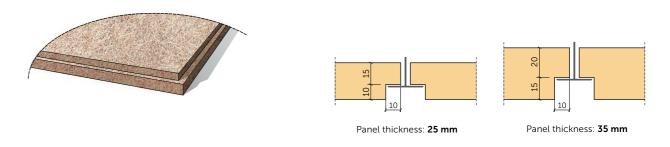


#### **P0-T24** - Standard T24 ceiling profile

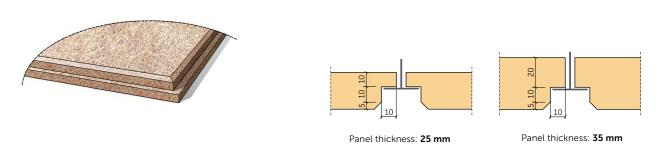




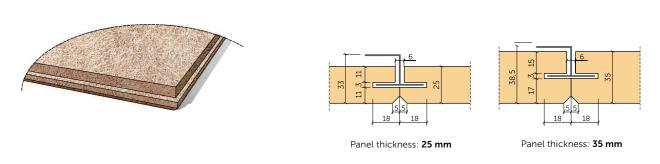
#### **P0G-T24** - Immersed T24 ceiling profile



**P5G-T24** - Immersed T24 ceiling profile with 5 mm chamfer



**P5H** - Hidden suspended ceiling profile with 5 mm chamfer



P5S - Hidden suspended ceiling profile with overhang and 5 mm chamfer\*



Panel thickness: **35 mm** 

Technical specifications cewood.com cewood.com Technical specifications 17

<sup>\*</sup>Only for size 600x600 mm



## **Profiles of panel edges**

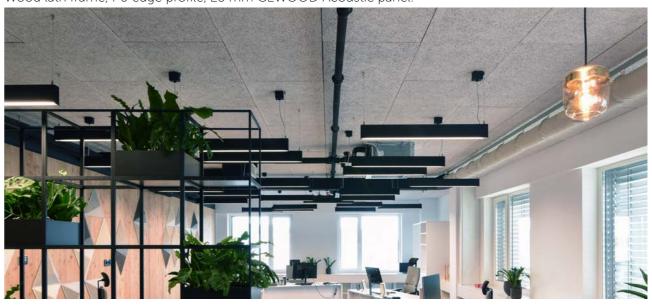
#### Permissible CEWOOD panel edge profiles and thickness depending on the mounting frame structure type

		Pane	thickness,	mm	Fr	ame structu	re
Code	Profile	15	25	35	Wood laths	CD profiles	T profiles
РО		+	+	+	+	+	+
P5		+	+	+	+	+	
P11			+	+	+	+	
POG			+	+			+
P5G			+	+			+
P5H			+	+	+*	+*	
P5S				+			+

<sup>\*</sup> Applicable only with CEWOOD clips.



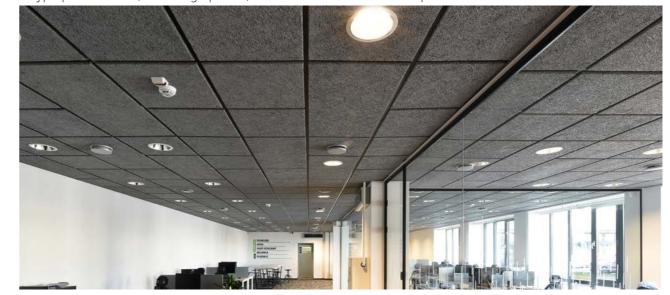
Wood lath frame, P0 edge profile, 25 mm CEWOOD Acoustic panel.



Metal CD profile frame, P5 edge profile, 25 mm CEWOOD Acoustic panel.



T-type profile frame, POG edge profile, 25 mm CEWOOD Acoustic panel.





## **Before installing**

Instructions for storage and preparation of CEWOOD panels before installing. For more detailed information see **cewood.com** or contact our technical department.

#### **Primary inspection**

Upon delivery, check that the panels match the order and inspect for any visible defects. If you find any deficiencies, immediately contact the producer or vendor as no claims made after installation will be accepted under the warranty.

#### **Storage conditions**

CEWOOD Decorative / Acoustic panels for indoor use are made from high-quality wood wool and cement. The fireproof material has great acoustic and thermal inertia 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 adapt to the ambient conditions. The optimal period for acclimatization is one to two weeks. (1) (2)

Panels must adopt to the intended indoor climate of the premises. That includes the effects of heating/ventilation/air conditioning systems.

If stored outdoors, the panels must be protected with a waterproof cover. The material should not be kept outdoors for long periods of time. Do not store CEWOOD panels directly on the ground. ③

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

Before installing the panels should be stored horizontally, on a flat and stable foundation, such as palettes or a platform. 4

Best conditions for acclimatization are achieved if the material is kept in layers, seperated 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 turning on the heating system. (5.)

The panels have undergone a full drying cycle during the production process. If the above mentioned instructions for storing and acclimatization are properly followed, it will prevent any dimensional changes of the panels.





## After installing

Instructions for care and maintenance of CEWOOD panels after installing. For more detailed information see **cewood.com** or contact our technical department.

A few weeks after finishing installation of 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. (1)

If the panels are dirty or abraded during the installation, clean the surface with a damp cloth. If the mounting works have caused surface defects, process the panel with a fine sandpaper. (2)(3)

If necessary, the colouring of the decorative/acoustic panels can be restored with a brush or a long-haired paint roller. It is recommended to use a water-based paint for painting the panels. 4.)

(!) 1) Substantial filling of the panel structure with paint can reduce the sound-absorbing properties.
2) When repainting, use the exact color tone; if in doubt, contact the manufacturer or distributor.



#### **Operation and maintenance**

Once installed, the CEWOOD panels do not require any additional maintenance. Surface cleaning can be done at the same time as 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. (5) (6)

The colouring can be refreshed using a brush or a long-haired paint roller. It is recommended to use a water-based paint for painting the panels. (7)

(!) 1) Substantial filling of the panel structure with paint can reduce the sound-absorbing properties.
2) When repainting, use the exact color tone; if necessary contact the manufacturer or distributor.

CEWOOD 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 CEWOOD panels have a long lifetime, up to 50 years. The robust and durable material does not change when exposed to humidity, the panels are mold-safe and pest-free.





## **Reaction to fire class of CEWOOD Acoustic panels**

The ability or inability of building materials to burn is tested and then defined by determining the reaction to fire class. It is mandatory to test and declare for the CE mark in EU. The classification gives an opportunity to assess the level of danger that the building material can pose in the event of fire.

Building materials including CEWOOD panels are tested and classified for reaction to fire in accordance with standard EN 13501-1. The classification is based on 3 main material performance factors:

- Combustibility and fire development (A1; A2, B, C, D, E, F class)
- Smoke development (s1, s2, s3 class)
- Formation of flaming droplets (d0, d1, d2 class)

Note that ceiling and wall finishing materials can significantly affect the development of fire indoors, as well as the amount of time and safety level of evacuation in the event of fire.

CEWOOD Acoustic panels in reaction to fire tests achieve very high results. CEWOOD Acoustic panels are classified as A2 - s1, d0 and B1 - s1, d0.



A2 - s1, d0

B1 - s1, d0

The main indicator is whether the material is able to stop the fire or spread it further. CEWOOD Acoustic panels achieve A2 and B classes which indicates that the material does not contribute to the occurrence of flashover in a compartment during fire.

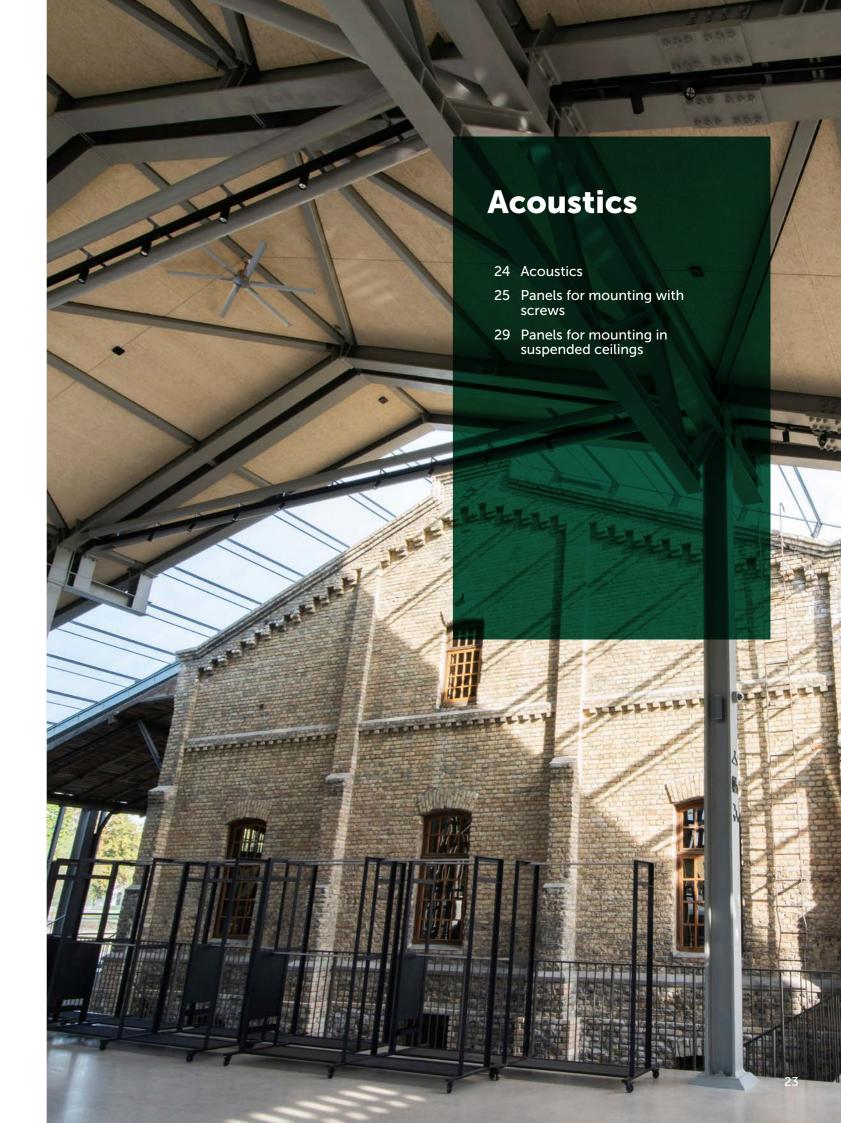
The second indicator is smoke development. CEWOOD Acoustic panels achieve the highest results, thus being rated as class **s1** – materials that do not emit smoke or emit it in a small amount.

In terms of the third indicator — formation of flaming particles and droplets — CEWOOD panels also achieve the highest class d0 - droplets and particles are not formed.

Although, CEWOOD panels are made of thin wood wool, each of the wooden fibres is fully covered and protected by a non-combustible cement layer. All of the above-mentioned indicators prove the high fire safety level of CEWOOD materials, which is why these panels are often chosen for industrial and public buildings, as well as educational institutions.









## **Acoustics**

By combining just three natural materials – wood, cement, and water – wood wool panels offer a unique solution for noise reduction in buildings. The most effective absorption can be achieved by adding a layer of mineral wool behind CEWOOD panels. They can be mounted with screws or used in suspended ceiling constructions.

In such multi-layer applications, CEWOOD panels will significantly lower sound reverberation time, increase acoustic comfort and improve speaker clarity in private and public spaces, such as apartments, private houses, educational institutions, offices, and conference halls. Also employees in technical use premises will benefit highly from reduced sound pressure of production machinery.

#### **Natural and simple**

For the creators of modern interiors CEWOOD wood wool panels provide a variety of benefits:

- 1. A comfortable acoustic environment can be achieved by using materials with a high level of sustainability and natural feel. The wide range of colours, wood wool widths and surface finishes inspire with all the possibilities. Furthermore, it is possible to achieve the necessary acoustic effect with less coverage thus leading to higher flexibility in ceiling and wall finishing.
- 2. Determine the best CEWOOD constructive solution and sound reflection time in the room, even before the start of construction work.
- 3. Significantly improve speech intelligibility and the duration of echo propagation in rooms, that way creating an acoustically pleasant and soothing indoor conditions.

#### **Certified constructions**

More than 20 different constructions with CEWOOD panels have proved their effectiveness in reverberation chamber tests and reached the highest absorption class A. It means that these constructions absorb 90-100% of sound waves on the surface.

In continuation, information is provided about all certified CEWOOD acoustic ceiling constructions so you can choose what fits your design vision, preferable ceiling height, technical requirements, and available budget.



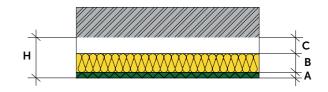




## Panels for mounting with screws

#### Mounting with screws onto the ceiling structure with an air gap





(E					ınel,	ol,				Frequency			
Panel thickness (mm)	Description	a <sub>w</sub>	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
	CEWOOD Panel 25 mm, mineral wool 40 mm, air gap 135 mm	1,00	A	200	25	40	135	0,55	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, mineral wool 50 mm, air gap 125 mm	1,00	Α	200	25	50	125	0,50	1,00	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, mineral wool 40 mm, air gap 85 mm	1,00	Α	150	25	40	85	0,45	0,95	1,00	1,00	0,95	1,00
	CEWOOD A2 Panel 25 mm, mineral wool 40 mm, air gap 85 mm	1,00	Α	150	25	40	85	0,45	0,95	1,00	1,00	0,90	1,00
25	CEWOOD Panel 25 mm, mineral wool 20 mm, air gap 180 mm	0,95	Α	225	25	20	180	0,60	0,95	0,95	0,95	0,95	0,90
23	CEWOOD Panel 25 mm, mineral wool 100 mm, air gap 75 mm	0,95	Α	200	25	100	75	0,70	1,00	1,00	0,95	0,90	1,00
	CEWOOD A2 Panel 25 mm, mineral wool 100 mm, air gap 75 mm	0,95	Α	200	25	100	75	0,70	1,00	1,00	0,90	0,90	1,00
	CEWOOD Panel 25 mm, mineral wool 30 mm, air gap 70 mm	0,90	Α	125	25	30	70	0,35	0,70	1,00	0,90	0,80	0,90
	CEWOOD A2 Panel 25 mm, mineral wool 30 mm, air gap 70 mm	0,90	Α	125	25	30	70	0,35	0,70	1,00	0,90	0,80	0,90
	CEWOOD Panel 25 mm, mineral wool 50 mm, air gap 10 mm	0,75	С	85	25	50	10	0,40	0,75	0,75	0,70	0,70	0,70

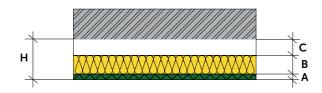
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## Mounting with screws onto the ceiling structure with an air gap



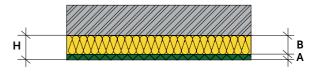


(mi					nel,	oľ,				Frequ	iency		
Panel thickness (mm)	Description	a <sub>w</sub>	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
	CEWOOD Panel 25 mm, mineral wool 20 mm, ● air gap 5 mm	0,75	С	50	25	20	5	0,15	0,45	0,90	1,00	0,90	0,95
	CEWOOD Panel 25 mm, mineral wool 100 mm, air gap 100 mm	0,70	С	225	25	100	100	0,80	0,70	0,65	0,70	0,75	0,70
	CEWOOD Panel 25 mm, mineral wool 50 mm, ● air gap 150 mm	0,65	С	225	25	50	150	0,50	0,65	0,55	0,70	0,75	0,70
25	CEWOOD A2 Panel 25 mm, mineral wool 0 mm, air gap 100 mm	0,60	С	125	25	0	100	0,15	0,35	0,65	0,60	0,65	0,80
23	CEWOOD Panel 25 mm, mineral wool 0 mm, air gap 100 mm	0,60	С	125	25	0	100	0,15	0,35	0,65	0,60	0,65	0,80
	CEWOOD Panel 25 mm, mineral wool 0 mm, air gap 60 mm	0,55	D	85	25	0	60	0,10	0,30	0,55	0,60	0,50	0,60
	CEWOOD Panel 25 mm, mineral wool 0 mm, air gap 25 mm	0,50	D	50	25	0	25	0,10	0,25	0,45	0,85	0,70	0,80
	CEWOOD Panel 25 mm, mineral wool 0 mm, air gap 50 mm	0,50	D	75	25	0	50	0,10	0,25	0,55	0,65	0,55	0,65
35	CEWOOD Panel 35 mm, mineral wool 30 mm, ● air gap 70 mm	0,90	A	135	35	30	70	0,35	0,70	1,00	0,90	0,85	0,90
33	CEWOOD Panel 35 mm, mineral wool 0 mm, air gap 100 mm	0,65	С	135	35	0	100	0,15	0,35	0,70	0,70	0,70	0,85



#### Mounting with screws onto the ceiling structure without an air gap





m.					anel,	ol,				Frequ	iency		
Panel thickness (mm)	Description	$\alpha_{w}$	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
	CEWOOD Panel 25 mm, mineral wool 50 mm	1,00	Α	75	25	50	0	0,30	0,85	1,00	0,95	0,95	1,00
	CEWOOD Panel 25 mm, mineral wool 100 mm	1,00	Α	125	25	100	0	0,60	1,00	1,00	1,00	0,90	1,00
	CEWOOD Panel 25 mm, mineral wool 40 mm	0,95	Α	65	25	40	0	0,25	0,75	1,00	1,00	0,90	1,00
25	CEWOOD A2 Panel 25 mm, mineral wool 40 mm	0,95	0,95 A 0,95 A	65	25	40	0	0,25	0,80	1,00	0,95	0,85	1,00
23	CEWOOD A2 Panel 25 mm, mineral wool 100 mm	0,95		125	25	100	0	0,65	1,00	1,00	0,95	0,90	1,00
	CEWOOD Panel 25 mm, mineral wool 50 mm	0,90	Α	75	25	50	0	0,35	0,70	1,00	0,95	0,85	0,95
	CEWOOD Panel 25 mm, mineral wool 30 mm	0,85	В	55	25	30	0	0,25	0,55	1,00	0,95	0,85	0,85
	CEWOOD Panel 25 mm, mineral wool 20 mm	0,75	С	45	25	20	0	0,15	0,45	0,95	1,00	0,90	0,95
35	CEWOOD Panel 35 mm, mineral wool 40 mm	0,95	Α	75	35	40	0	0,30	0,80	1,00	0,95	0,90	1,00
33	CEWOOD BARCODE 35 mm, mineral wool 40 mm	0,85	В	75	35	40	0	0,25	0,55	1,00	0,95	0,85	0,85

WOOD WOOL PANELS



## **Direct mounting**





(E					ınel,	ool,		Frequency							
Panel thickness (mm)	Description	$\alpha_{w}$	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
15	CEWOOD Panel 15 mm	0,30	D	15	15	0	0	0,05	0,10	0,20	0,35	0,60	0,85		
15	CEWOOD A2 Panel 15 mm	0,30	D	15	15	0	0	0,05	0,10	0,20	0,35	0,65	0,90		
	CEWOOD Panel 25 mm	0,40		25	25	0	0	0,05	0,20	0,35	0,55	0,90	0,75		
25	CEWOOD A2 Panel 25 mm	0,35		25	25	0	0	0,05	0,15	0,30	0,55	0,90	0,75		
	CEWOOD BARCODE 25 mm	0,35	D	25	25	0	0	0,10	0,15	0,30	0,55	0,90	0,80		
35	CEWOOD Panel 35 mm	0,50	D	35	35	0	0	0,15	0,25	0,45	0,80	0,90	0,85		
35	CEWOOD BARCODE 35 mm	0,45	D	35	35	0	0	0,10	0,20	0,40	0,70	0,80	0,85		



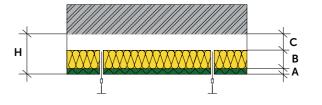




## Panels for mounting in suspended ceilings

## Mounting in suspended ceiling structures with an air gap





(mr					nel,	ol,				Frequency			
Panel thickness (mm)	Description	a <sub>w</sub>	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
	CEWOOD Panel 15 mm, mineral wool 20 mm, air gap 180 mm	0,90	Α	215	15	20	180	0,35	0,70	0,90	0,90	0,85	0,90
15	CEWOOD Panel 15 mm, mineral wool 50 mm, air gap 150 mm	0,90	A	215	15	50	150	0,50	0,80	0,95	0,90	0,85	0,90
	CEWOOD Panel 15 mm, mineral wool 0 mm, air gap 200 mm	0,60	С	215	15	0	200	0,20	0,45	0,55	0,55	0,65	0,80
	CEWOOD Panel 25 mm, mineral wool 50 mm, air gap 125 mm	1,00	Α	200	25	50	125	0,50	1,00	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, mineral wool 40 mm, air gap 135 mm	1,00	Α	200	25	40	135	0,55	0,95	1,00	1,00	0,95	1,00
	CEWOOD Panel 25 mm, mineral wool 40 mm, air gap 85 mm	1,00	Α	150	25	40	85	0,45	0,95	1,00	1,00	0,95	1,00
25	CEWOOD A2 Panel 25 mm, mineral wool 40 mm, air gap 85 mm	1,00	A	150	25	40	85	0,45	0,95	1,00	1,00	0,90	1,00
	CEWOOD Panel 25 mm, mineral wool 100 mm, air gap 75 mm	0,95	A	200	25	100	75	0,70	1,00	1,00	0,95	0,90	1,00
	CEWOOD A2 Panel 25 mm, mineral wool 100 mm, air gap 75 mm	0,95	Α	200	25	100	75	0,70	1,00	1,00	0,90	0,90	1,00
	CEWOOD Panel 25 mm, mineral wool 20 mm, air gap 180 mm	0,90	Α	225	25	20	180	0,35	0,70	0,90	0,90	0,85	0,90

Continue on next page ▶

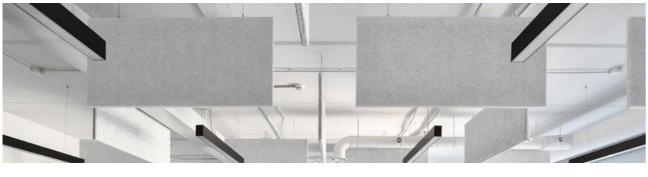
28 Acoustics cewood.com cewood.com Acoustics 29

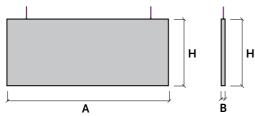


(mm)					nel,	ol,				Frequ	iency		
Panel thickness (m	Description	$\alpha_{w}$	Class	Height, H (mm)	CEWOOD panel, A (mm)	Mineral wool, B (mm)	Air gap, C (mm)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
25	CEWOOD Panel 25 mm, mineral wool 50 mm, air gap 150 mm	0,90	Α	225	25	50	150	0,55	0,80	0,95	0,90	0,85	0,95
25	CEWOOD Panel 25 mm, mineral wool 0 mm, air gap 200 mm	0,60	0,60 C	225	25	0	200	0,25	0,45	0,55	0,55	0,70	0,85
	CEWOOD Panel 35 mm, mineral wool 20 mm, air gap 180 mm	0,90	Α	235	35	20	180	0,45	0,70	0,90	0,85	0,85	1,00
35	CEWOOD Panel 35 mm, mineral wool 50 mm, air gap 150 mm	0,90	Α	235	35	50	150	0,55	0,85	0,95	0,85	0,85	0,95
	CEWOOD Panel 35 mm, mineral wool 0 mm, air gap 200 mm	0,65	С	235	35	0	200	0,30	0,50	0,60	0,60	0,75	0,90

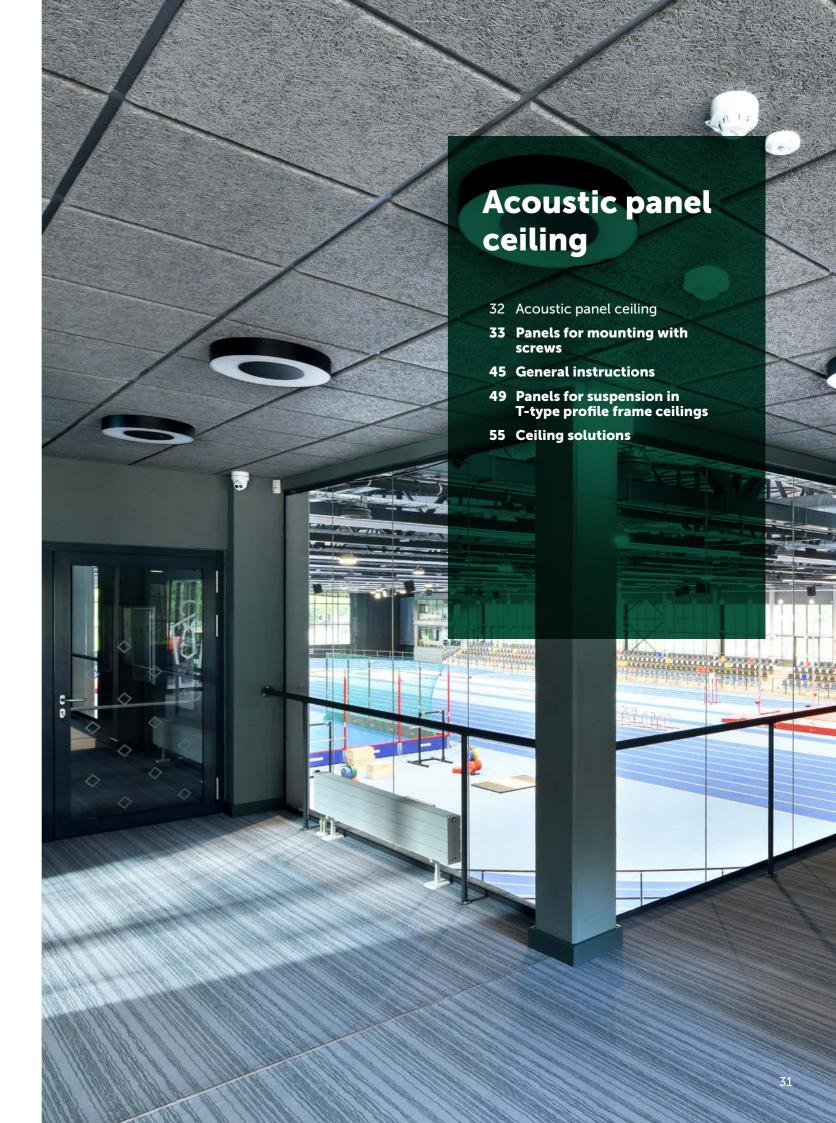
#### ■ – mineral wool ~70 kg/m³ ■ – mineral wool ~30 kg/m³

## **BAFFLE** panels





E (E		net,				Frequency							
BAFFLE thickness (mm)	Description	$a_{w}$	Class Height, H (mm)	CEWOOD panel, A (mm)	Thickness, B (mm)	Area (m²)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
30	CEWOOD BAFFLE 1200x600x30 mm	-	-	600	1200	30	1,44	0,16	0,26	0,37	0,49	0,70	1,10
30	CEWOOD BAFFLE 1200x300x30 mm	-	-	300	1200	30	0,72	0,08	0,13	0,19	0,27	0,38	0,61
50	CEWOOD BAFFLE 1200x600x50 mm	-	-	600	1200	50	1,44	0,21	0,35	0,50	0,74	1,10	1,20
50	CEWOOD BAFFLE 1200x300x50 mm	-	-	300	1200	50	0,72	0,10	0,14	0,20	0,30	0,49	0,64





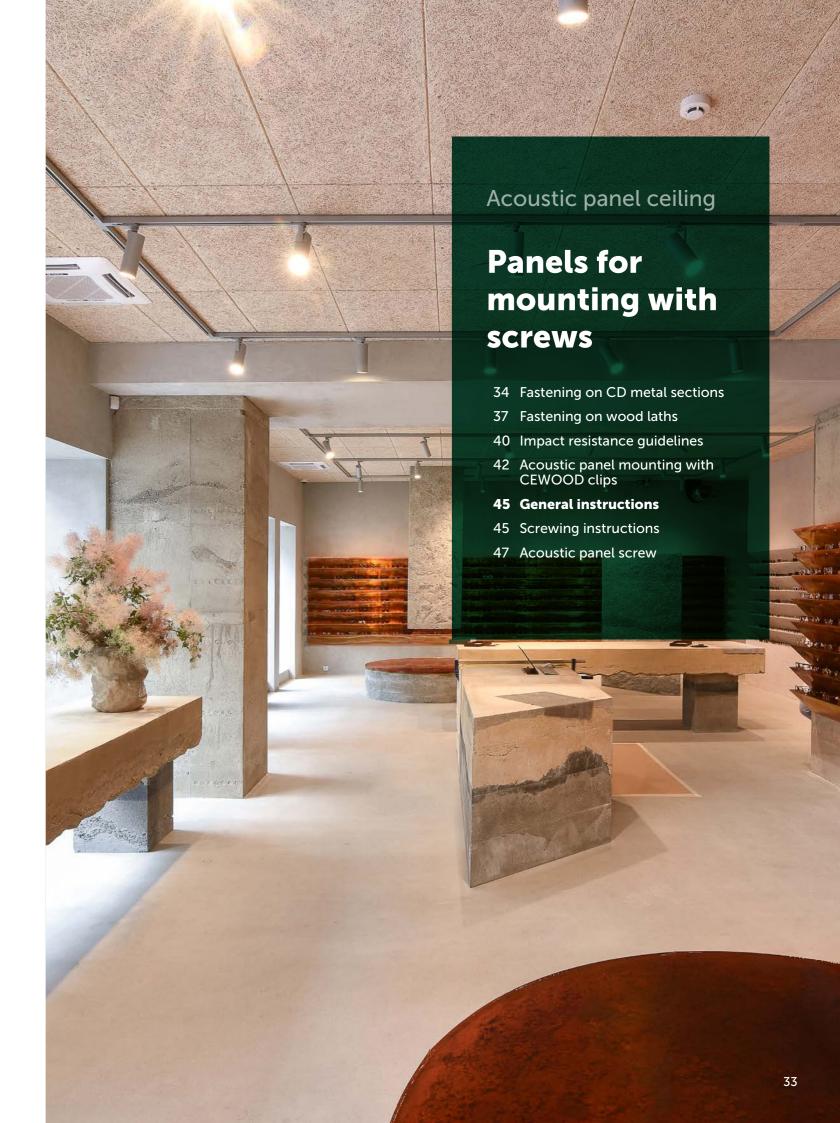
## **Acoustic panel ceiling**

The acoustic panels are a convenient and functional material offering numerous applications for ceiling and wall finishing. Various types of panel fastening are possible: CD profiles, lathing as well as T profiles or fastening onto a wall with glue.

The use of acoustic panels in the decoration of ceilings and walls improves acoustic microclimate of rooms, ensures noise absorption, thereby creating a comfortable working and living environment. Owing to the excellent acoustic, aesthetic and mechanical properties, the panels are particularly well-suited for public buildings — offices, educational establishments, as well as premises with higher humidity — spas, fitness gyms, swimming pools, production and residential premises. They are widely used for finishing in professional sound processing studios, cinemas, concert halls and recreation centres, where limiting sound distribution and permeability is particularly important.

The ceiling structure is formed of a steel tin profile frame or wooden lath, T-type profile grid elements elements, which are fastened with special suspension elements to the load-bearing structures. The type of suspension elements depends on the load-bearing ceiling structure, as well as on the mineral wool used for increasing sound absorption.

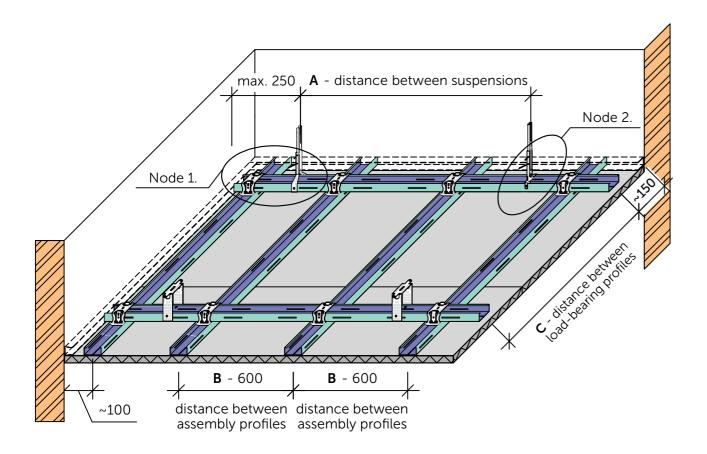






## **Fastening on CD metal sections**

The frame is made of perpendicularly arranged CD type metal profiles 60/27/0,6 mm. CD profile placement, fastening onto load-bearing structures and connections between elements are implemented according to CD type profile manufacturer guidelines. Placements of suspension elements and frame bearing capacities are stated in the table below.



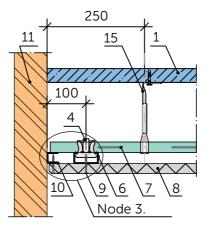
#### Maximum mounting distances of frame elements

Load-bearing profile CD 60/27/0,6 mm	Assembly profile CD 60/27/0,6 mm	A - distand eler	Double ceilings					
Distance <b>C</b> - mm	Distance <b>B</b> - mm	Up to 0,15	Up to 0,30	Up to 0,50	Up to 0,65			
600	600	1150	900	750	700			
900	600	1000	800					
1000	600	950	750					
1200	600	900						
Must use suspensions with load-bearing capacity ≥ 0.40 kN								

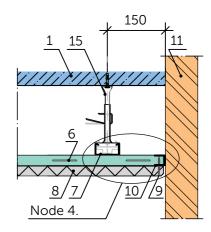
## **EWOOD**

#### CD profile frame perimeter fastening sections and explanation

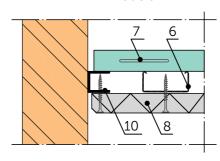
**Node 1.**Joint between short edges



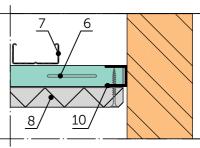
**Node 2.**Joint between longitudinal edges



Node 3.







<sup>\*</sup>In drawings used nonius suspension with bearing capacity 0,40 kN

- 1. Load-bearing structure
- 2. Quick suspension with anchor fixation
- 3. U-type clamp
- 4. Cross connector for CD profile
- 5. Conical anchor ≥ M6
- 6. CD assembly profile 60x27x0,6 mm
- 7. CD load-bearing profile 60x27x0,6 mm
- 8. CEWOOD Acoustic panels
- 9. CEWOOD screws 4,65x45 mm or galvanized woodscrews with head  $\emptyset \ge 9$  mm
- 10. UD perimeter profile 28x27
- 11. Existing wall structure
- 15. Nonius suspension with bearing capacity 0,40 kN

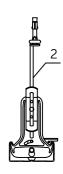


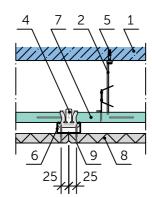
#### Fastening types of CD profiles on to load-bearing structure

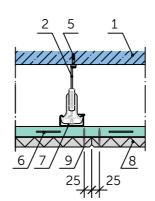
Assembly profile is attached to a load-bearing profile using corss conector for CD profiles. A CD profile frame is fastened onto load-bearing sturcture using quick suspension, U-type clamp or nonius type fastening. See detailed explanations below.

#### Quick suspension with anchor fastening element

Load-bearing capacity 0,15 kN





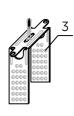


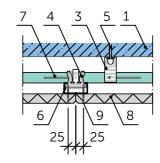
Joint between longitudinal edges

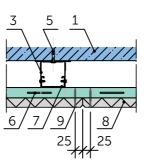
Joint between short edges

#### U-type clamp for direct fastening

Load-bearing capacity 0,4 kN





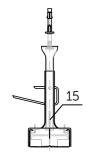


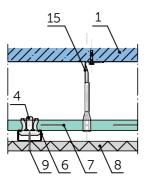
Joint between longitudinal edges

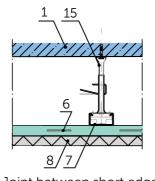
Joint between short edges

#### Nonius type suspension with adjustable height

Load-bearing capacity 0,4 kN







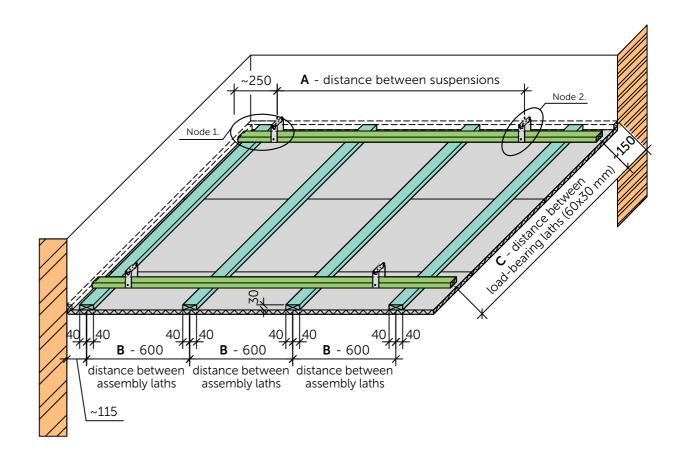
Joint between longitudinal edges

Joint between short edges



## Fastening on wood laths

The frame is made of perpendicularly arranged wooden laths. Placements of suspension elements and frame-bearing capacities are stated in the table below.



#### Maximum mounting distances of frame elements

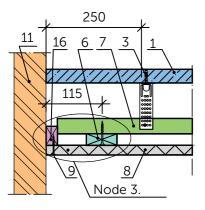
Load-bearing lath, min. cross section 60/30 mm	Assembly lath, min. cross section 80/30 mm	A - distance between suspension elements/fastenings Load class kN/m <sup>2</sup>		ngs
Distance <b>C</b> - mm	Distance <b>B</b> - mm	up to 0.15	up to 0.30	up to 0.50
600	600	1150	900	750
900	600	1000	800	
1000	600	950		
1200	600	900		

Must use suspensions with load resistance of 0.40 kN Assume minimal load-bearing lath cross section of 60x30 mm

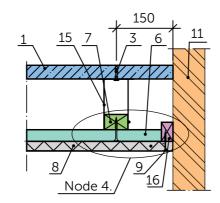
## **CEWOOD**

#### Wooden lath frame fastening sections and explanation

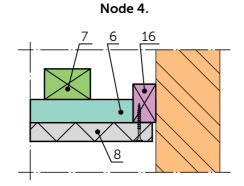
Node 1. Joint between short edges



Node 2. Joint between longitudinal edges



Node 3.



\*The drawings show U-type clamp suspension with bearing capacity 0,40 kN

#### **Explanation of numbering**

- 1. Load-bearing structure
- 3. U-type clamp
- 5. Conical anchor ≥ M6
- 6. Assembly lath min. 80x30(h) mm
- 7. Load-bearing lath min 60x30(h) mm
- 8. CEWOOD Acoustic panels
- 9. CEWOOD screws 4,65x45 mm or galvanized woodscrews with head  $\emptyset \ge 9$  mm
- 11. Existing wall structure
- 16. Perimeter wooden lath 30x50(h) mm

## **CEWOOD**

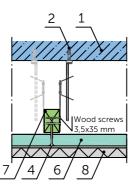
#### Fastening types of wooden laths onto a load-bearing structure

Assembly laths are attached to a load-bearing laths using wood screws. A wooden lath frame is fastened on to load-bearing sturcture using quick suspension, U-type clamp or with anchors directly to load-bearing structure. Detalized explanations see below.

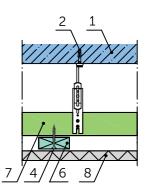
#### Quick suspension with anchor fastening element

Load-bearing capacity 0,15 kN





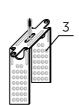
Joint between longitudinal edges (alternating fastening)

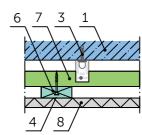


Joint between short edges, load-bearing lath min. 60x30(h) mm

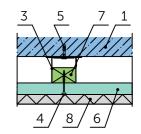
#### U-type clamp for direct fastening

Load-bearing capacity 0,4 kN





Joint between longitudinal edges

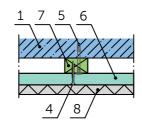


Joint between short edges

#### Double-layer frame direct fastening with anchor

Anchor type must be applied onto a load-bearing structure type

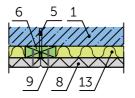




#### Single-layer frame direct fastening with anchor

(!) Assebly laths are fixed directly onto a load-bearning structure Fastening type usable if ceiling leveling is not required



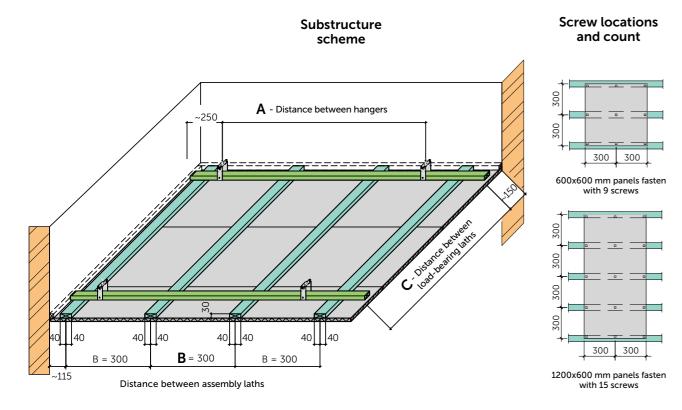




## Impact resistance guidelines

CEWOOD ceiling structures have passed the ball impact tests, so they can be safely installed in various sports facilities. All provided ceiling types have been tested and can be used only with a maximum substructure step of a **300 mm** between profiles/laths.



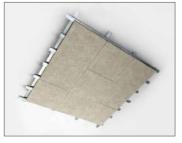




#### **Descriptions of constructions**

Construction	Description	Description Substructure type		Distance <b>B</b>	Distance <b>C</b>	Screws	Impact resistance class	
According DIN18032-PART3 and EN 13694/ANNEX D								
	CEWOOD A2 25 mm panel 1200x600 mm, 600x600 mm	Metal profile frame	≤900 mm	≤300 mm	≤900 mm	15 pcs/panel	1A	
	Α	according DIN18	3032-PART	3				
	CEWOOD 35 mm panel 1200x600 mm, 600x600 mm	Metal profile frame	≤900 mm	≤300 mm	≤600 mm	15 pcs/panel	1A	
	CEWOOD 35 mm panel 1200x600 mm, 600x600 mm	Wooden lath frame	≤900 mm	≤300 mm	≤600 mm	15 pcs/panel	1A	
According EN 13694/ANNEX D								
	CEWOOD 25 mm panel 1200x600 mm, 600x600 mm	Metal profile frame	≤900 mm	≤300 mm	≤900 mm	15 pcs/panel	2A	

#### Visualisation





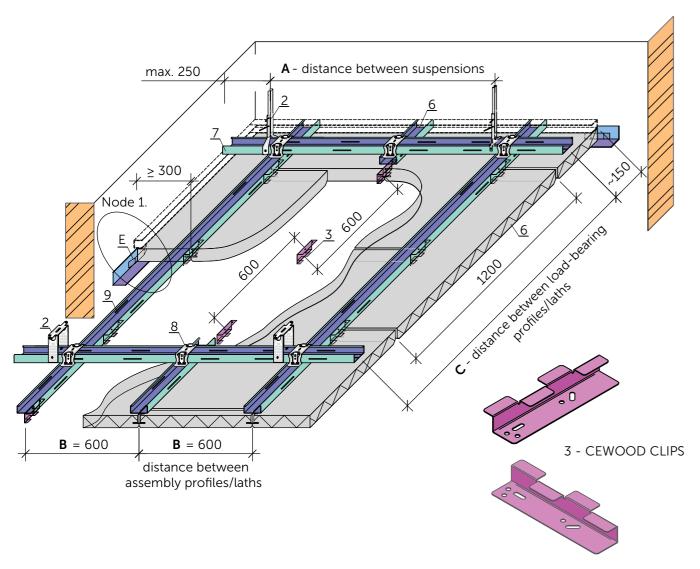
Metal profile frame

Wooden lath frame



## **CEWOOD Acoustic panel mounting** with CEWOOD clips

The substructure frame can be made of CD type metal profiles or wooden laths. The frame can be attached to load-bearing structures with a U-type suspension, wire or quick suspension, as well as a nonius type clamp. For more detailed information about frame assembly see pages 34-39.



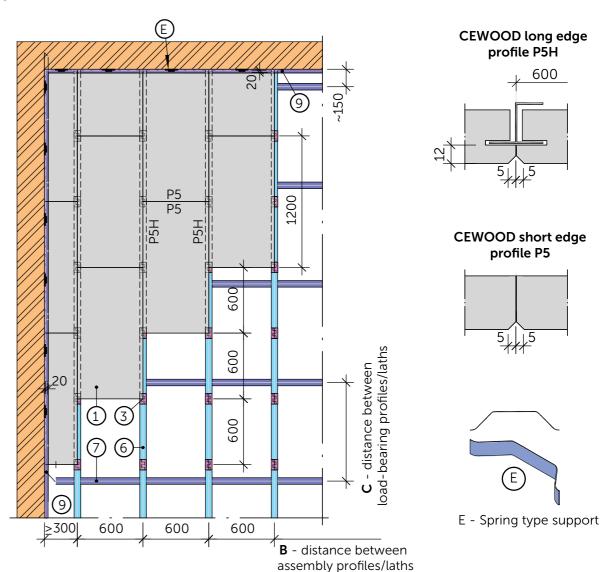
#### Maximum mounting distances of frame elements

Load-bearing	Assembly		ween suspension fastenings
profiles/laths	profiles/laths		ss kN/m²
Distance <b>C</b> - mm	Distance <b>B</b> - mm	Up to 0,15	Up to 0,30
600	600	1150	900
900	600	1000	800
1000	600	950	750
1200	600	900	
Must use suspensions v	vith load-bearing capacity	≥ 0.40 kN	



#### CEWOOD clip assembly guidelines on metal CD and wooden lath frame

Each CEWOOD panel 25 mm or 35 mm with dimensions 1200x600 mm is supported with 6 clips, 600x600 mm panels are supported with 4 clips. CEWOOD panels on long edge has profile P5H, but short edge - P5.



#### **Explanation of numbering**

- 1. CEWOOD Acoustic panels
- 2. Suspension element
- 3. CEWOOD clip
- 4. Fastening screw 4,0x25 mm
- 5. Conical anchor > M6
- 6. Metal CD or wooden lath assembly profile
- 7. Metal CD or wooden lath load-bearing profile
- 8. Cross connector for CD profiles
- 9. Wall L profile L35/35 mm
- E Spring type support

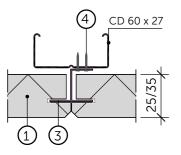
Acoustic panel ceiling cewood.com cewood.com Acoustic panel ceiling

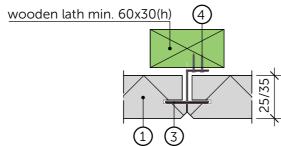


#### **CEWOOD clip fastening on different substructure**

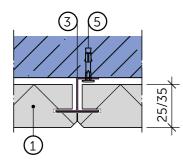
#### CEWOOD clip fastening on CD profile

## CEWOOD clip fastening on wooden lath





#### CEWOOD clip direct fastening to load-bearing structure

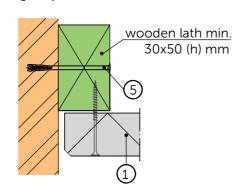


#### Ceiling perimeter fastening when ceilings fastened with CEWOOD clips

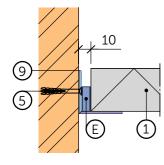
#### Fastening on perimeter metal profile

# 5 UD 28 x 27 SE/SZ

#### Fastening on perimeter wooden lath



#### Supporting perimeter with wall L profile L35x35 mm



## **General instructions**

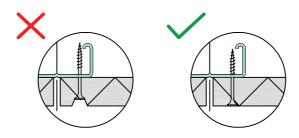
## **Screwing instructions**

The frame assembly element step must be 600 mm or less, which has to correspond to the width of the CEWOOD panels. Start mounting the panels from the middle of the room, gradually moving to the edges. Screw fastening step must be less than 600 mm. The distance from the edge of the panel to the the screw must not exceed 25 mm. A standard 1200x600 mm panel requires 6 screws, a 600x600 mm panel requires 4 screws.

Special CEWOOD screws with a larger head are recommended for fastening the panels.

Self-drilling for metal constructions or wood screws for wooden constructions are recomended, if CEWOOD screws are not used. The screw head should be with head diameter D>9 mm.

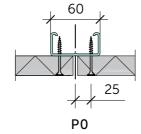
① Do not submerge the screws into the CEWOOD panels! The head of the screw must be left the same level as the visible surface of the board.

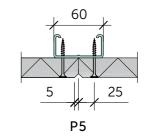


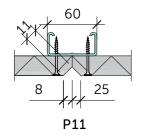
#### Minimal screw dimensions depending on frame structure and panel thickness

Minimal screw dimensions		
Frame structure/CEWOOD panel thickness	25 mm	35 mm
CD metal profile frame – self-drilling screws	4.5x45 mm	4.5x50 mm
Wooden lath frame – wood screws	4.5x50 mm	4.5x60 mm

#### **CEWOOD** panel edge profile types







#### Aproximate screw consumption

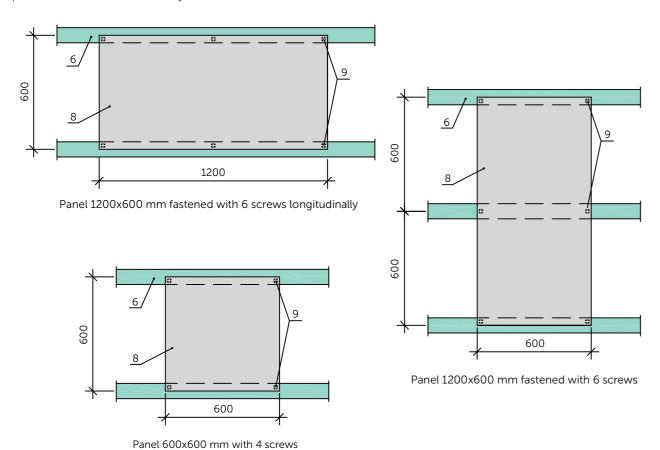
Panel pattern/dimensions	Screw consumption, pcs/m²			
	600/600 mm	600/1200 mm		
Standard screw pattern scheme. Panel thickness 25 mm, 35 mm.	12	9		

4 Acoustic panel ceiling cewood.com cewood.com Acoustic panel ceiling



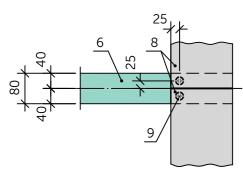
#### **Standard screw pattern for CEWOOD Acoustic panels**

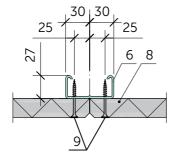
Fastening of 25 mm and 35 mm thick CEWOOD Acoustic panels with screws onto metal CD assembly profiles or wooden assembly laths.



#### **Screw locations**

The connection seam between panels must always be formed under the frame assembly element.





#### **Explanation of numbering**

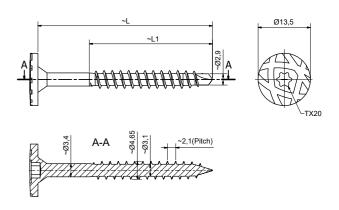
- 1. Load-bearing structure
- 6. Frame assembly element (CD profile or wooden lath)
- 8. CEWOOD Acoustic panels
- 9. CEWOOD screws 4,65x45 mm or galvanized woodscrews with head  $\emptyset \ge 9$  mm



## **Acoustic panel screw**

#### **Product data**

Technical data	
Head:	Ø13.8 mm flat head with TX20 recess
Diameter:	Ø4.65 mm
Shaft:	12 mm
Drill point:	#1S
Drill capacity:	0.5 - 1.5 mm (Steel S280GD)
Material:	Hardened steel
Surface treatment:	ZYTECTM GX
Corrosivity category:	C3 (high) according to EN ISO 12944-2







#### **Product range**

Art.no.	Item name	Thread [mm]	Length L [mm]	Shaft [mm]	Drill point	Drill cap. [mm]	Head [mm]	Unit
17770	TRABO FH 4.65 X 45 #1S TX20	Ø4.65	45/64	12	#1S	0.5 - 1.5	Ø13.5 TX20	250

#### **Advantages**

cewood.com

- Suitable for fastening of acoustic panels to steel or wood
- Large head for better load distribution
- Specially designed pattern on the head for better concealing
- Surface treated with ZYTEC™ GX for optimal corrosion protection
- Available in more than 500 colours (Qualicoat certified facade quality powder)



#### **Design resistance**

The design resistance of the screw is determined in accordance with EN 1993-1-3:2006 + AC:2009 and EN 1995-1-1:2004 + AC:2006 + A1:2008 + A2:2014.

The resistance when loaded in tension,  $N_{Rd}$ , appears from the table on the right and is the minimum value of the pull-out resistance of the supporting object and the tension resistance of the screw. Thus, the pull-through resistance of the fixed object is not taken into account.

The theoretical values must be considered indicatively since the conditions of the construction site may vary. Practical tests of the specific application are recommended for verification of the listed values.

#### Assumptions:

Fixed object: Steel S280GD - EN 10346

Supporting object: Steel S280GD - EN 10346

Supporting object: Structural wood, C24

Density,  $\rho_{\nu} = 350 \text{ kg/m}^3$ 

Withdrawal parameter,  $f_{axk} = 11 \text{ N/mm}^2$ 

L = Length of the screw [mm]

t<sub>1</sub> = Thickness of the fixed object [mm]

 $t_{\parallel}$  = Thickness of the supporting object [mm]

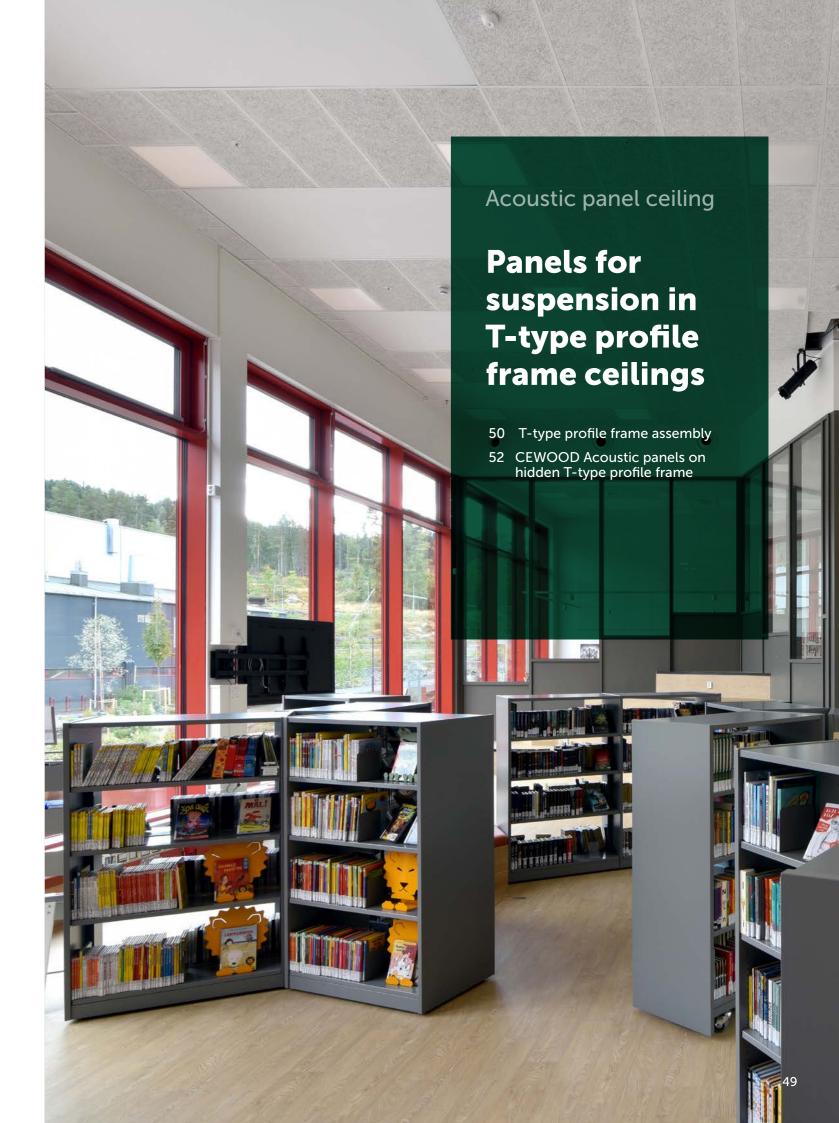
All resistances are stated in kN (1 kN ≈ 100 kg)

Safety factor:  $\gamma_M = 1.35$ ,  $k_{mod} = 0.90$ 

Design resistance when loaded in tension, N <sub>Rd</sub> [kN] - Steel support				
t <sub>II</sub> L	45			
0.50	0.28			
0.63	0.35			
0.75	0.42			
0.88	0.49			
1.00	0.56			
1.25	0.70			
1.50	0.84			

Design resistance when loaded in tension, N <sub>Rd</sub> [kN] - Wooden support					
t, L	45				
5	1.00				
10	1.00				
15	0.91				
20	0.74				
25	0.57				

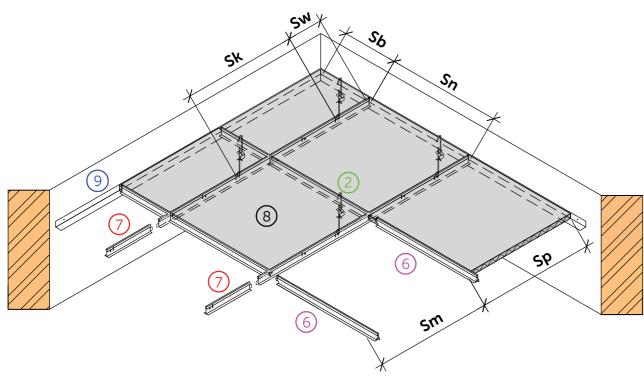






## T-type profile frame assembly

The procedure and methods of assembling the ceiling frame are determined by the manufacturer of structures. This informative material shows some examples of mounting solutions to create safe structures for CEWOOD panel suspension. The T-type profile step is defined depending on the structural load provided the permissible flexure of 1/500 length. The step between the load-bearing profiles for CEWOOD Acoustic panel ceilings – 1200 or 600 mm, distance between mounting profiles – 600 mm. Permissible distances for suspension elements are provided in the table below.



#### T-type ceiling frame elements:

2 - Suspensions; 6 - Cross profile; 7 - Load-bearing profile; 8 - CEWOOD Acoustic panels; 9 - Perimeter profile

#### Maximum mounting distances between frame elements

Frame load capacity kN/m²	0.12	0.	15	0.2	20	0.25
Step between load-bearing profiles <b>Sn</b> , mm	1200	1200	600	600	600	600
Step between suspensions <b>Sk</b> , mm	≤ 1000	≤ 900	≤1100	≤1000	≤1000	≤1000
Distance from suspension to wall <b>Sw</b> , mm	≤ 250	≤ 250	≤250	≤200	≤200	≤200
Step between cross profiles <b>Sm</b> , mm	600	600	600	600	1200	600

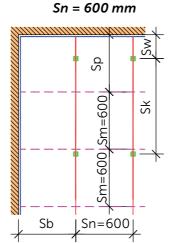
The dimensions of **Sb** and **Sp** shall be determined depending on the room size. Max. distance from wall must not exceed 600 mm. With higher loads, the step between suspensions must be accordingly reduced.



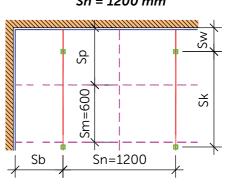
#### T-type profile frame elements and placement options

#### Profile placement for 595x595 mm panel assembly

a) Distance between load-bearing profiles

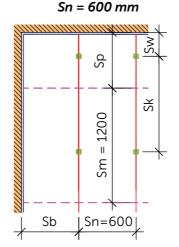


#### b) Distance between load-bearing profiles **Sn = 1200 mm**



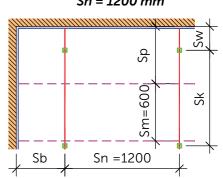
#### Profile placement for 1195x595 mm panel assembly

a) Distance between load-bearing profiles



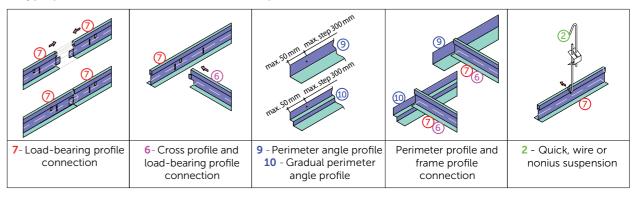
b) Distance between load-bearing profiles

Sn = 1200 mm



2 - Suspensions; 6 - Cross profile; 7 - load-bearing profile; 9 - Perimeter profile

#### T-type profile element connection and explanation



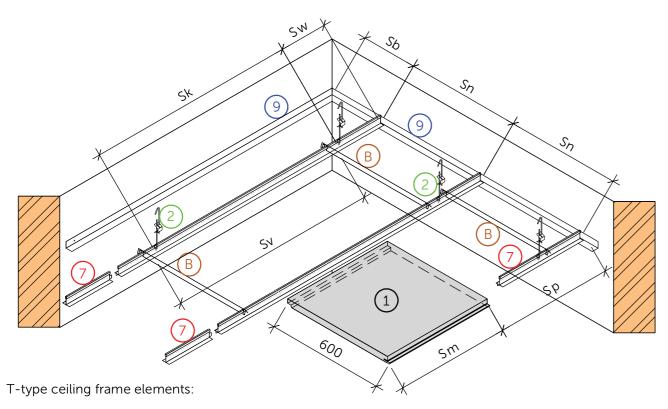
(I) Gradual perimeter angle profile is applicable to POG; P5G edge profiles, see profile guidelines on pages 16-18.

Acoustic panel ceiling cewood.com cewood.com cewood.com Acoustic panel ceiling 51

# **CEWOOD Acoustic panels on hidden T-type profile frame**

CEWOOD panels on hidden T-type profile frame allows creating a continuous ceiling plane without visible panel fastening elements. To assemble these ceilings, P5S edge profile panels must be used. The ceiling construction is easy to open and dismantle. The ceiling panels rests on T-type T35/38 mm profiles. Similar profiles of other manufacturers with appropriate load-bearing capacity can also be used. To access the interceiling space, the liftable end of the panel must be found and lifted. In order to create larger access openings, separate distance profiles B must also be dismantled.

(!) Maximal panel size available 600x600 mm. Minimal panel thickness 35 mm.



2 - Suspensions; 6 - Cross profile; 7 - Load-bearing profile T35/38; 9 - Perimeter profile; B - Distance profile

#### Maximum mounting distances between frame elements

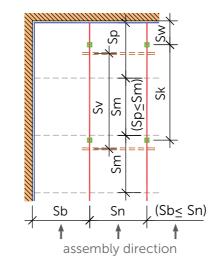
Frame load capacity kN/m²	0.15	0.2	0.25	0.3
Step between load-bearing profiles <b>Sn</b> , mm	600	600	600	600
Step between suspensions <b>Sk</b> , mm	≤1100	≤1000	≤1000	≤800
Distance from suspension to wall <b>Sw</b> , mm	≤ 250	≤200	≤200	≤200
CEWOOD panel maximum size <b>Sm</b> , mm	600	600	600	600
CEWOOD panel minimum thickness, mm	35	35	35	35

The dimensions of **Sb** and **Sp** are determined depending on the room size. Max. distance from wall must not exceed 600 mm. With higher loads, the step between suspensions must be accordingly reduced.

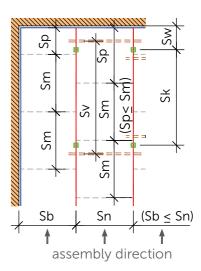
## **CEWOOD**

#### Hidden T-type profile frame elements and placement options

# Profile placement for 595x595 mm panels a) Distance between load-bearing profiles Sn = 600 mm.

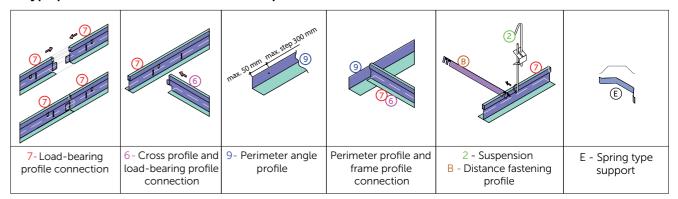


# Profile placement for 1195x595 mm panels a) Distance between load-bearing profiles Sn = 600 mm.

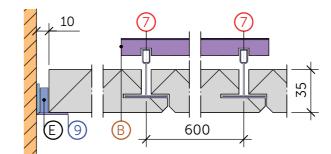


2 - Suspensions; 6 - Cross profile; 7 - Load-bearing profile T35/38; 9 - Perimeter profile; B - Distance profile; E - Spring type support

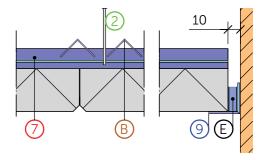
#### T-type profile element connection and explanation



#### T-type profile frame fastening sections



Direction with panel edge profiles P5S



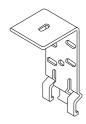
Direction with panel edge profiles P5

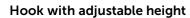
Acoustic panel ceiling cewood.com cewood.com Acoustic panel ceiling 53



#### Fastening types of T-type profiles onto a load-bearing structure

#### Hook with non-adjustable height

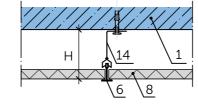




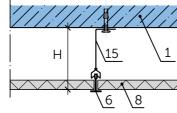


Quick suspension with adjustable height

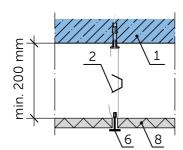




Joint between the edges



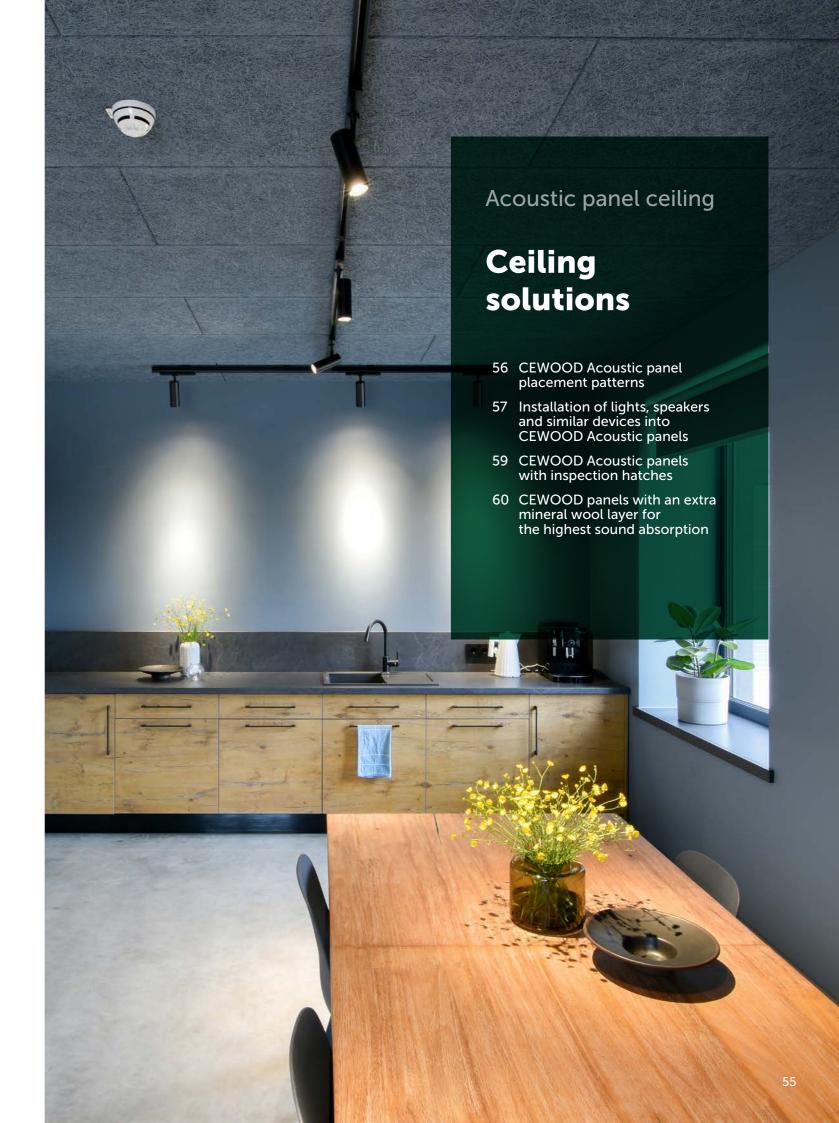
Joint between the edges



Joint between the edges

#### Suspension type parameters

Suspension type	CEWOOD panel thickness, mm	Suspension height H, mm	Suspension load-bearing capacity, kN
	15	180	
Quick suspension	25	200	0.15
	35	220	
Nonius type suspension	15, 25, 35	200	0.15
Hook with non-adjustable height	15, 25, 35	50, 80, 100	0.45
Hook with adjustable height	15, 25, 35	82- 113	0.15

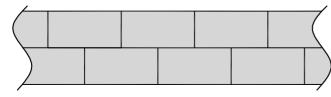


## **CEWOOD**

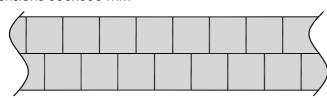
## **CEWOOD Acoustic panel placement patterns**

#### Panels staggered by half of panel length

CEWOOD Acoustic panel dimensions 1200x600 mm

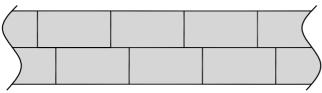


CEWOOD Acoustic panel dimensions 600x600 mm

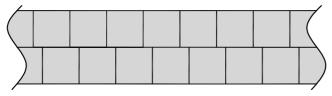


#### Panels staggered by third of panel length

CEWOOD Acoustic panel dimensions 1200x600 mm

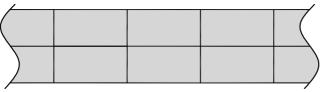


CEWOOD Acoustic panel dimensions 600x600 mm

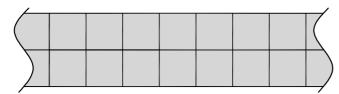


#### Panels aligned

CEWOOD Acoustic panel dimensions 1200x600 mm



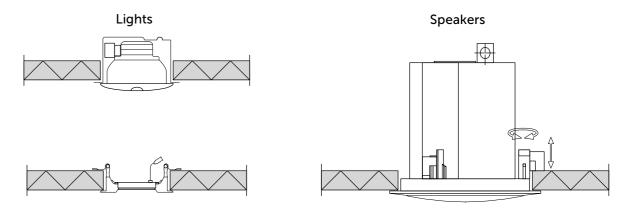
CEWOOD Acoustic panel dimensions 600x600 mm





# Installation of lights, speakers and similar devices into CEWOOD Acoustic panels

The placement and type of ceiling lights, speakers and similar devices in CEWOOD panels are determined by the construction project. Devices which are intended for installation in the suspended ceiling must be used. The device must be assembled according to the device manufacturer's assembly instructions. The assembly instructions must indicate the device's dimensions, weight and dimensions of the required mounting openings and they must not exceed the limits stated below.



Ceiling frames are designed for a total calculated load of up to 0.1 kN (~10kg) per frame element running meter.

#### Permissible openings made into CEWOOD Acoustic panels and load-bearing capacity of fasteners

CEWOOD Permissible weight of the		Permissible of an o	dimensions pening	Fastener load-bearing capacity, N (~KG)		
	Acoustic panel thickness, mm	built-in device, kg	Diameter, mm	Edge length, mm	Self-drilling dowel with wood screw Ø 4.5 mm	Wood screw Ø 4.5 mm
	15	1.2	150	120	10 (~ 1.0)	10 (~ 1.0)
	25	3.5	200	175	30 (~ 3.0)	20 (~ 2.0)
	35	6	300	275	40 (~ 4.0)	25 (~ 2.5)

Heavier devices can be attached directly to the load-bearing structure or an additional support structure can be created. An opening for inserting the device can be cut with a jigsaw or circular hole saw. The edges of an opening must be smoothed and painted. Holes or cut-outs should be placed in the center of the panel.



Self drilling dowel



56 Acoustic panel ceiling cewood.com cewood.com Acoustic panel ceiling 57



#### Recessed lights installed into the ceiling









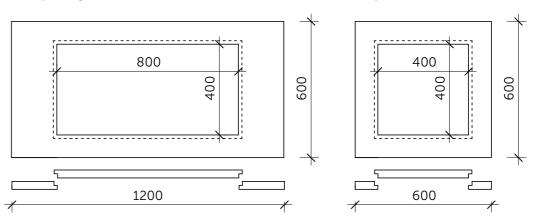
## **CEWOOD Acoustic panels with inspection** hatches

CEWOOD manufactured inspection hatches are available in various sizes. They are built-in elements into the ceiling panels without any additional frame. Hatches are designed for access to any kind of comunications, that are located behind the ceilings. Panels with inspection hatches are mounted according to the same guidelines as the standard acoustic ceiling panels. A hatch door is fully removable and reinsertable as needed. Visually, the hatches merge with the ceilings and form a smooth ceiling surface.





#### Maximum opening dimensions for hatches in CEWOOD Acoustic panels



(!) Hatches can be made into 25 and 35 mm CEWOOD Acoustic or barcode panels and fastened with screws in metal, wood substructure or suspended in T-profile frame. Panels with hatches must be fastened with the standard screw pattern.

Light metal inspection hatches can also be made. CEWOOD Acoustic ceiling panels can be incorporated into the frame. These types of hatches should be used if very frequent use is expected or ceilings must fulfil requirements of impact resistance.





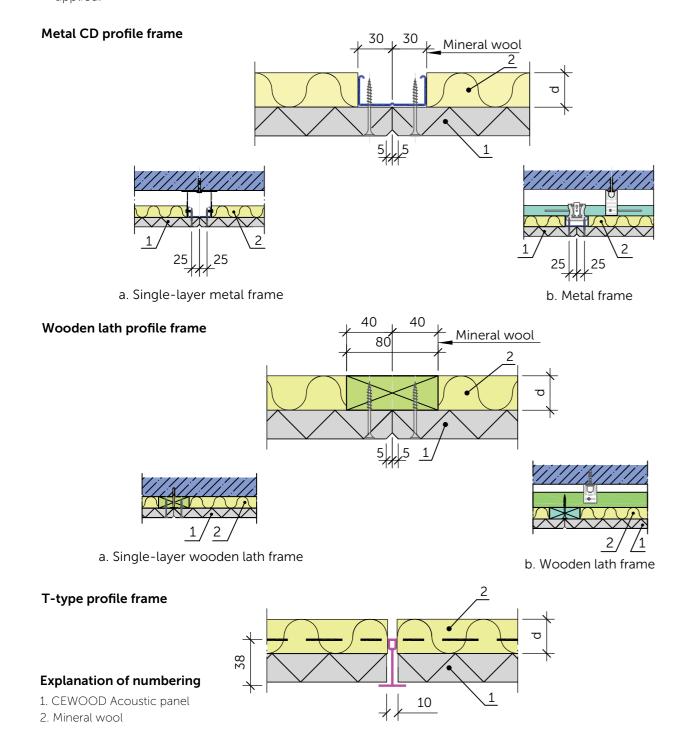




## **CEWOOD** panels with an extra mineral wool layer for the highest sound absorption

If CEWOOD Acoustic panels are fastened with extra mineral wool onto the outer building construction elements, a vapor barrier film must be laid under CEWOOD panels.

- Type and thickness of mineral wool shall be determined in the building project, in lie with the CEWOOD sound absorption test results. See pages 24-29.
- Ceiling frame element and suspension element distances must be reduced according to the ceiling load applied.







## **CEWOOD Design tiles**

CEWOOD Design tiles is a new direction and a proof of versatility and aesthetic features of wood wool. Each tile is custom made with a 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

Panel thickness: 25 mm, other available upon request.

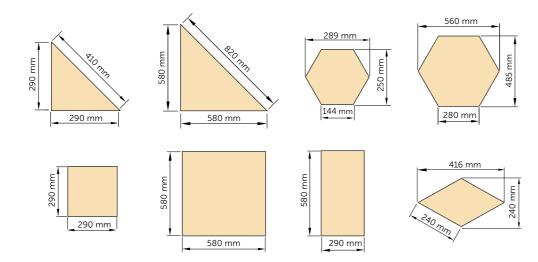
#### **Applications**

- 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**

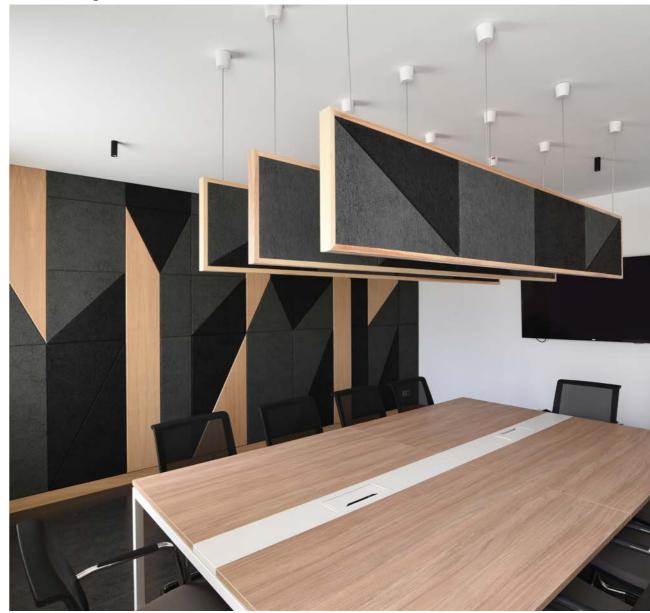


#### **Mounting of CEWOOD Design tiles**

CEWOOD Design tiles allow creating an eye-catching 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.



CEWOOD Design tiles







WOOD WOOL PANELS



## **CEWOOD Panels with milled lines**

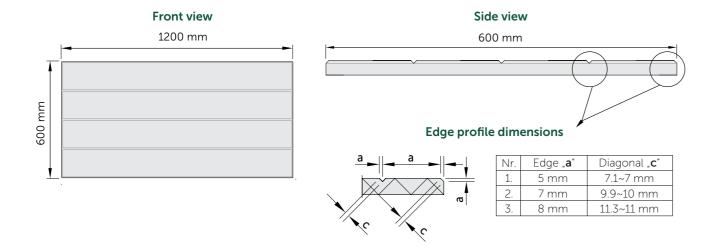
CEWOOD Panels with milled lines offer the same acoustic properties as regular CEWOOD Acoustic panels, but with the added aesthetic feature of decorative grooves on the surface. You can choose from a variety of pre-designed milled line patterns, or create your own design to suit your specific needs and preferences.

#### **Applications**

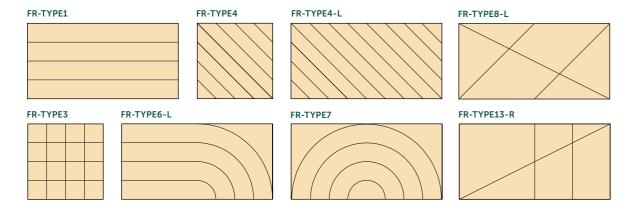
- Ceilings
- Walls
- Decorative elements

#### **Technical specifications**

Wood wool width, mm	1.0; other wood wool upon request
Panel thickness, mm	25; 35
Panel size, mm	2400x600; 1200x600; 600x600; other sizes upon request
Colour	Natural, natural painted, white, black, grey and any shade in RAL or NCS system upon request
Fire safety class	B-s1, d0



#### **Top-selling design samples**





CEWOOD Panels with milled lines







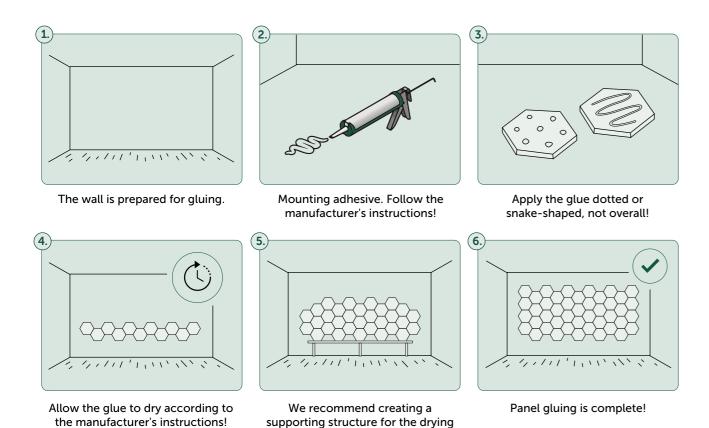


## Gluing CEWOOD Design tiles to the wall

CEWOOD Design panel tiles are handmade, each panel is manufactured with special care, according to the highest quality requirements. The panels can be used in finishing, design solutions, by gluing them to a preformed surface. The panels are aesthetically attractive, create a fantastic and modern design of the room, as well as improve the acoustics and indoor climate. The panels are produced exclusively from raw materials of natural origin: wood wool, cement and water.

#### Gluing

- The wall must be prepared for gluing, load-bearing, clean, dry and primed. (1)
- CEWOOD panels are glued to the wall using mounting glue. The type of glue is determined by the type
- It is easiest to apply the glue with a glue gun by applying the glue in a snake or dot pattern on the entire area of the decorative panel. Do not apply glue evenly across the panel!  $\overline{\textbf{3}}$
- The glue drying time is specified in the glue manufacturer's instructions. 4.
- It is recommended to create a supporting structure to fix the panels during drying, especially if there is a larger panel area. More detailed information at: www.cewood.com/video (5.)
- Dust the panels with a brush-tipped vacuum cleaner.
- · If the panels are rubbed or dirty after installation, the material can be cleaned with a damp cloth.
- If necessary, the colour of the panels can be restored by applying the appropriate colour tone to the panel



time if panel areas are large.



## **CEWOOD Baffle panels**

CEWOOD Baffles are acoustic elements ment for vertical suspension in the ceiling structure, thus delivering an increased sound absorption level and improved acoustic comfort in premises. This is an excellent solution for large premises or rooms with high ceilings, such as conference halls, education institutions, public buildings. Each panel is manufactured with great care in line with the highest quality standards. The Baffle panel design can be adapted to interior design requirements.

The Baffle consists of 2 CEWOOD Acoustic panels of 15 mm or 25 mm thickness with integrated 3 mm wires in the upper part, which are used to suspend the Baffle panel into the ceiling structure. The maximum length of the wire is 50 cm. The number of wires in the Baffle panel depends on its size.

#### **Technical properties:**

Wood wool width: 1.0 mm; other upon request

Panel thickness: 30 mm (2x15 mm); 50 mm (2x25 mm)

Baffle length: 600 mm (2 wires), 1200 mm (2 wires), 1800 mm (3 wires),

2400 mm (4 wires)

Baffle width: 100 mm, 200 mm, 300 mm, 400 mm, 500 mm, 600 mm

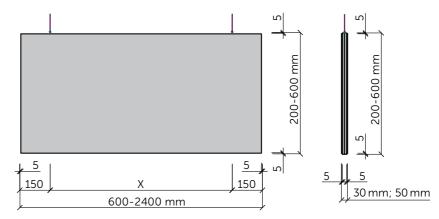
Colours: natural, white, black, grey and any shade in RAL or NCS

system upon request

Profiles: P5



#### **Baffle types**



Distance X, between hangers							
Length of board, mm	Number of hangers, pcs	From edge, mm	X Between hangers, mm				
600	2		300				
1200	2	150	900				
1800	3	150	750				
2400	4		700				

#### Suspension options

1. Eyebolt M5 with 3 mm wire up to 50 cm



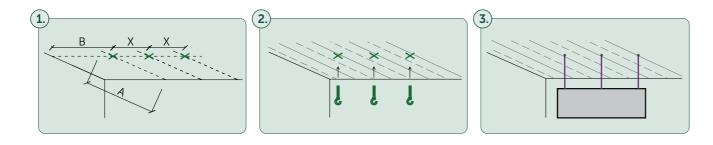
2. Eyebolt M5





#### **Installation instructions**

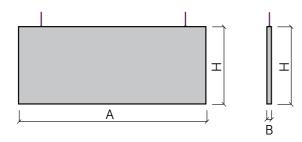
- 1. Take your time to determine the Baffle panel layout on the ceiling. Mark the locations of the hook screws the same distance apart as the hangers on the Baffle panels, so that the cables are vertical.
- 2. Install hook screws in the ceiling using the relevant ceiling type elements. For plasterboard ceilings, be sure to install hooks in a load-bearing capable structure.
- 3. Hang the Baffle panels in the hook screws.



#### Baffle panels need to be handled with care. Follow these guidelines to avoid damage:

- To ensure the best properties, baffle panels should be allowed to adapt to ambient conditions.
- Store baffle panels flat and never rest them on the corners as this can crush the edges.
- When lifting baffle panels into place, do not squeeze the panels as this can crush the edges.
- A few weeks after finishing installing the baffle 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.

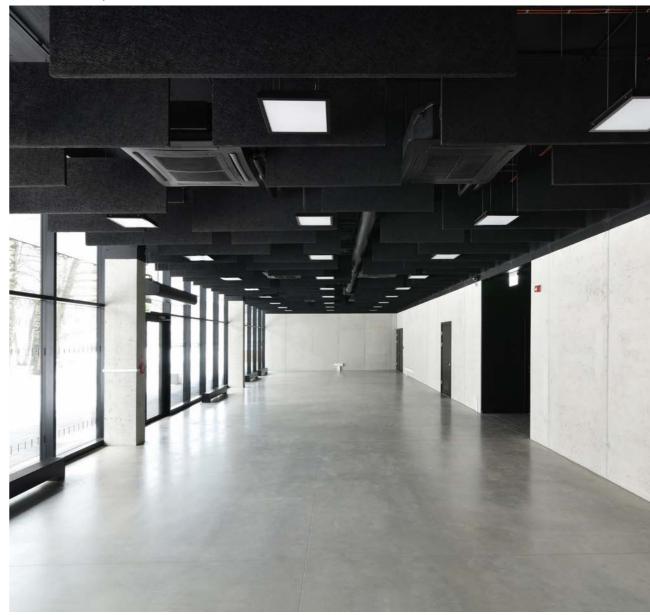
#### **Baffles sound absorption**



Description	$\alpha_{w}$	Class	Height, H (mm)	Width, A (mm)	Thick- ness, B (mm)	Abs. area, (m²)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
		Moun	ting in sus	pended ce	eiling struc	tures with	n an air	gap				
CEWOOD Baffle 1200x600x30 mm	-	-	600	1200	30	1,44	0,16	0,26	0,37	0,49	0,70	1,10
CEWOOD Baffle 1200x300x30 mm	-	-	300	1200	30	0,72	0,08	0,13	0,19	0,27	0,38	0,61
CEWOOD Baffle 1200x600x50 mm	-	-	600	1200	50	1,44	0,21	0,35	0,50	0,74	1,10	1,20
CEWOOD Baffle 1200x300x50 mm	-	-	300	1200	50	0,72	0,10	0,14	0,20	0,30	0,49	0,64



CEWOOD Baffle panels







WOOD WOOL PANELS



## **CEWOOD Barcode panels**

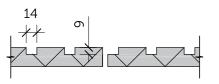
The main feature of CEWOOD Barcode panels are the recessed grooves in the CEWOOD standard acoustic panel. This kind of solution not only increases the level of sound absorption, but also makes the panel visually interesting and modern. Each panel is produced with special care to the highest quality. Upon special order, wooden slats can be ordered to fill the grooves. CEWOOD Barcode panel ceiling has an original design.



#### **Technical specifications**

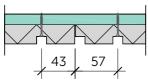
Wood wool width, mm	0.5; 1.0; 1,5 other upon request
Panel thickness, mm	25; 35
Panel size, mm	600x600; 1200x600; other sizes upon request
Colour	Natural, natural painted, white, black, grey or any other colour tone from RAL or NCS colour chart upon request
Available edge profile	P0 and other upon request
Location of the grooves	Shifted and other upon request

#### Location of the grooves in Barcode panels

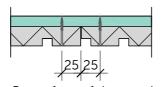


Shifted grooves

#### Placement of the fastening screws in Barcode panels



Embedded in the grooves



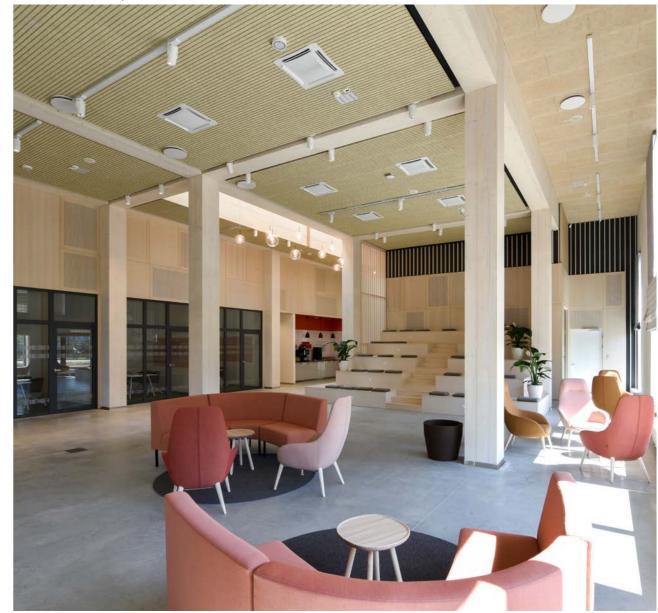
On surface of the panel

#### Minimum screw sizes depending on their location

Barcode panel	Screws on p	anel surface	Screws embedde	ded in the grooves		
thickness, mm	thickness, mm CD metal frame Wooden lath frame		CD metal frame	Wooden lath frame		
25	50x4.5 mm	50x4.5 mm	35x4.5 mm	40x4.5 mm		
35	50x4.5 mm	50x4.5 mm 60x4.5 mm		50x4.5 mm		



CEWOOD Barcode panels





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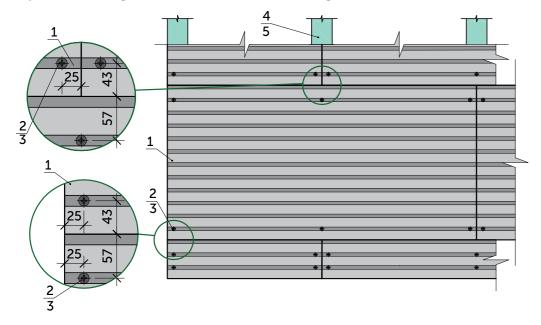


#### **CEWOOD Barcode panels assembly guidelines**

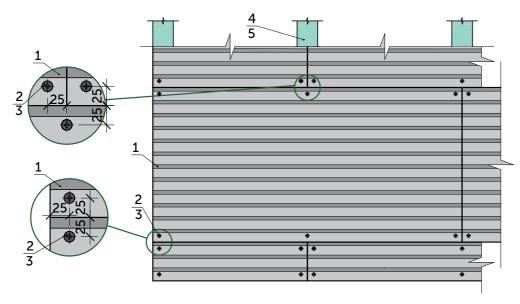
CEWOOD Barcode panels with appropriate edge profile, can be fastened to metal CD profiles and wooden lath frame using screws, as well as to create design ceilings in suspended T- type profile frame.

Perfore installing the Barcode panels, the desired direction of the panel grooves must be chosen. When mounting boards on a metal CD profile or a wooden lath frame, the direction of the assembly profiles/laths must always be perpendicular to the directions of the grooves in the CEWOOD Barcode panels. For T-type profile frame assembly, see pages 50-51.

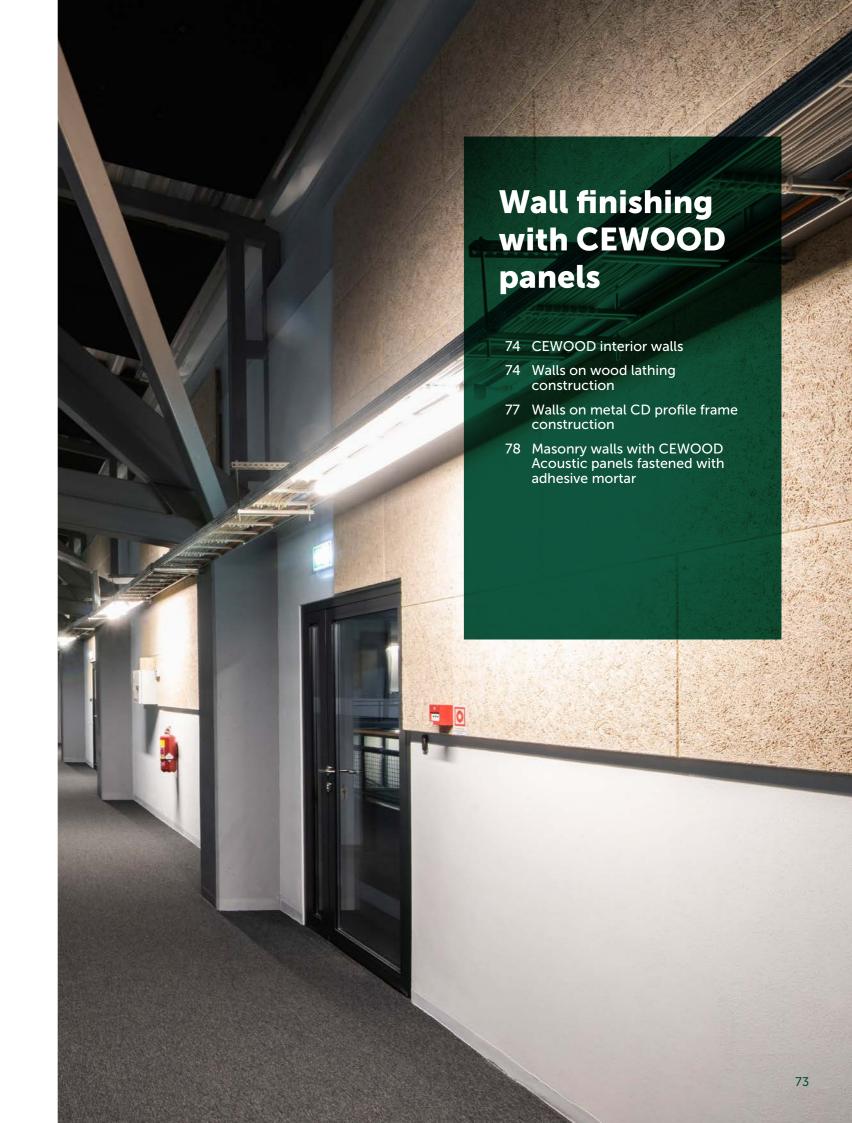
#### Barcode panel fastening with screws embedded in the grooves



#### Barcode panel fastening with screws places on visible surface



- 1. CEWOOD Barcode panel 25 or 35 mm
- 2. CEWOOD mounting screw
- 3. Wood screw
- 4. CD metal profile 60x27x0,6 mm
- 5. Wooden lath 80x30(h) mm





## **CEWOOD interior walls**

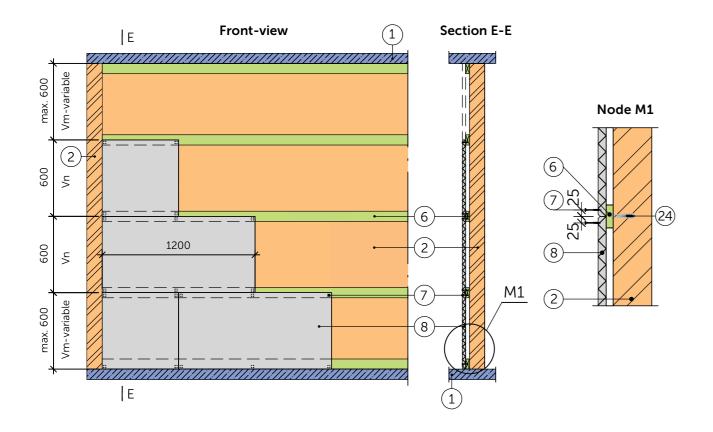
Usually, 25, 35 and 50 mm thick CEWOOD panels are used for walls finishing. CEWOOD panels can be fixed on a frame of wooden laths, steel profiles or can be mounted with mortar. There are several types of frame construction. The manufacturer of frame elements gives recommendations and defines the application. The type of frame structure and fastening onto the existing wall depends on:

- strength of the existing wall, material, deviations from the vertical and horizontal plane,
- desirable CEWOOD panel design solution,
- the required carrying capacity, as well as the type of load.

If CEWOOD Acoustic panels are fastened with extra mineral wool onto the outer building structure elements, a vapor barrier film must be laid under CEWOOD panels.

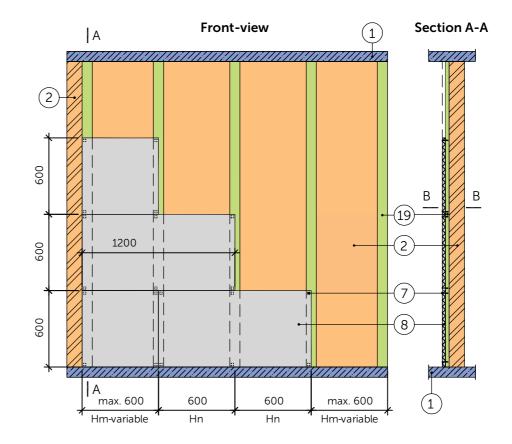
## Walls on wood lathing construction

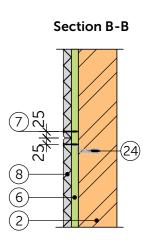
The frame construction consists of horizontally or vertically placed laths of 80x30 mm. This wooden structure can be used if it is not necessary to level the vertical or horizontal planes of the wall, or to achieve a significantly increased sound and heat insulation.





#### Vertical fastening of wooden laths to the load-bearing wall structure



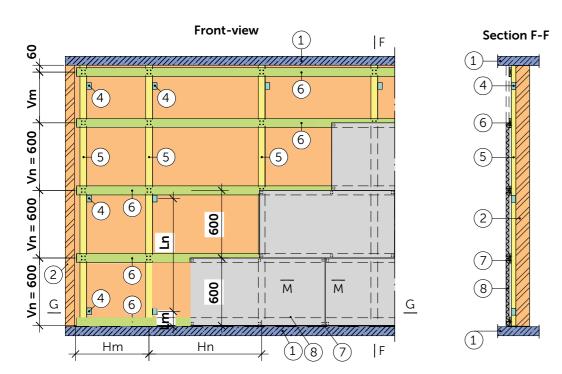


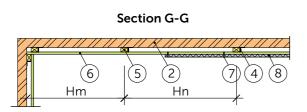
- 1. Load-bearing slab or foundation structure
- 2. Wall structure
- 4. Load-bearing lath fastening angle
- 5. Wooden lath 50x50 mm
- 6. Assembly lath 80x30 mm. Step C/C-600 mm
- 7. Wood screw
- 8. CEWOOD Acoustic panels
- 22. Impact sound insulation support
- 23. Mineral wool
- 24. Fastening anchor

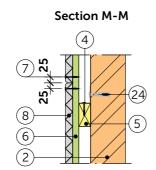


#### **Double wood lath construction**

The double frame can be chosen if it is necessary to straighten the wall plane deviations or to achieve a significant increase in wall sound or heat insulation level.







#### Maximum mounting distances between frame elements

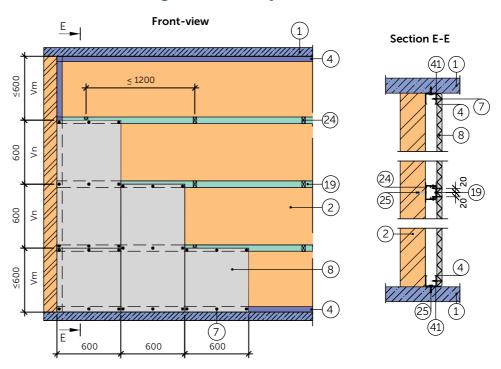
CEWOOD panel thickness	25 mm	35 mm	50 mm
Step between load-bearing laths <b>Hm</b> , mm	≤ 1000	≤ 1000	≤ 1000
Step between load-bearing laths <b>Hn</b> , mm	≤ 1000	≤ 1000	≤ 1000
Step between assembly laths <b>Vm</b> , mm	≤ 600	≤ 600	≤ 600
Step between assembly laths <b>Vn</b> , mm	600	600	600
Step between fastening elements <b>Lm</b> , mm	≤ 250	≤ 250	≤ 250
Step between fastening elements <b>Ln</b> , mm	≤ 1200	≤ 1000	≤ 800



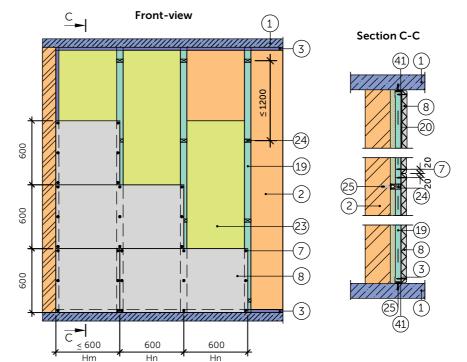
## Walls on metal CD profile frame construction

The frame construction consists of horizontally or vertically placed CD profiles. This metal frame structure can be used if it is not necessary to level the vertical or horizontal planes of the wall, or to achieve a significantly increased sound and heat insulation.

#### Horizontal fastening of metal CD profile frame to the load-bearing wall structure



#### Vertical fastening of metal CD profile frame to the load-bearing wall structure



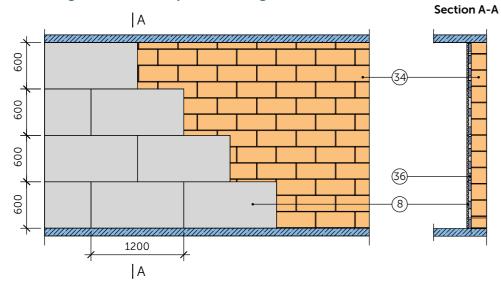
- 1. Load-bearing slab or foundation structure
- 2. Wall structure
- 4. Assembly profile UW
- 7. CEWOOD screw
- 8. CEWOOD Acoustic panels
- 19. Assembly metal CD profile
- 23. Mineral wool
- 24. U-type clamp
- 25. Fastening anchor
- 41. Damping tape



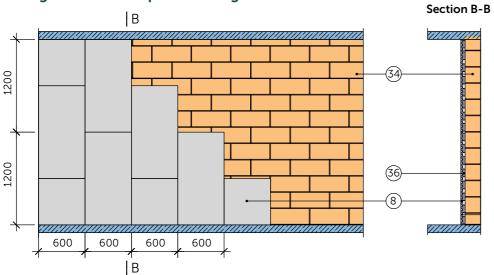
## Masonry walls with CEWOOD Acoustic panels fastened with adhesive mortar

In case of rough masonry walls, CEWOOD Acoustic panels can be fastened with adhesive mortar. The preparation and application of the base or mortar should be carried out according to the manufacturer's

#### Horizontal fastening of CEWOOD panels using adhesive mortar



#### Vertical fastening of CEWOOD panels using adhesive mortar



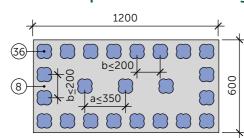
#### Placement of adhesive mortar on **CEWOOD** panel before fastening

#### **Explanation of numbering**

8. CEWOOD Acoustic panels

34. Wall structure

36. Adhesive mortar







## Recycling instructions for wood wool panels

#### Natural raw ingredients and NaturePlus certification



#### Wood wool

CEWOOD wood wool panels are made of 100% natural ingredients: wood wool, cement and water.



#### Wood

The wood used in production is spruce from local forests (harvested within 100 km from production facilities). CEWOOD is certified, and certification is our priority when purchasing timber to guarantee that the wood originates from responsibly managed forests.



#### Cement

In the production process, CEWOOD uses high quality Portland cement. In Acoustic panel and design tile production, mainly white Portland cement is used. In construction panels – grey Portland cement. Our suppliers extract raw materials with minimal environmental impact.



#### Water

Water used in the production process is from the local, 80 m deep artesian well.



#### Powered by Green™ certificate

CEWOOD acknowledges the importance of sustainability and protection of natural resources in today's world. In all production facilities, we use renewable energy, as evidenced by Powered by Green $^{TM}$  certificate.



#### NaturePlus certificate

CEWOOD's acoustic, design and constructive painted panels are NaturePlus certified. NaturePlus is an internationally renowned certification for the sustainability of building materials and the compliance of their quality to health, environmental protection and functionality requirements.

#### Recycling of construction and demolition waste

- Wood wool panels are very durable; it can be used in building sites for more than 50 years thus proper disposal of old wood wool panels and leftover panels from construction process is very important.
- Avoid discharge to drain or surface water or any other area that is not suitable for waste disposal. Contact the local authorities regarding proper waste disposal process.
- CEWOOD is cooperating with local universities to find the best solutions for a full recycling process or reuse of used panels or their ingredients.

## **Certificates**

#### **Declaration of Performance (DoP)**

The Declaration of performance (or DoP) is an official declaration of the product's performance in terms of its essential product characteristics with identifying information about who placed the product in the European market.

Certification according to standard EN 13168-2012+A1:2015.

## Emission classification of building materials (M1)

Emission classification of building materials refers to indoor air quality standards for materials used in regular working and residential facilities. The classification applies to individual companies and products, and applying for it is voluntary.

## Certificate of constancy of performance (Kiwa)

Kiwa NV is a European institution for testing, inspection and certification (TIC). Kiwa participates in the safety analysis of many new European and international technologies, as well as the drafting of safety standards for numerous devices and components.

Certificate of constancy of performance. No. 1325-CPR-3363A.

#### **POWERED BY GREEN**

POWERED BY GREEN certificate certifies that the company buys electricity generated from 100% renewable sources in Latvia and that by 1 April of the following year AS "Latvenergo" will deliver to the company a Guarantee of Origin for electricity actually consumed during the previous year in accordance with the Cabinet of Ministers regulations on receiving the guarantee of origin for electricity generated from renewable energy sources.

#### **NaturePlus Certificate**

NaturePlus is an internationally renowned certification for the sustainability of building materials and the compliance of their quality to health, environmental protection and functionality requirements. The NaturePlus quality sign confirms the compliance of CEWOOD panels to these high requirements, as well as the company's understanding of the health safety of the material, environmentally friendly production and protection of natural resources during all material production stages.

#### **Environmental Product Declaration (EPD)**

The Declaration is a document issued by third parties containing declared and available transparent information about the impact of product manufacturing cycle on environment. This document meets the goals set forth by CEWOOD regarding a sustainable products and manufacturing.

#### **CE marking**

CE marking is a certification mark that indicates conformity with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA). LVS EN 13168-2012+A1:2015.

#### PEFCTM/12-31-030

The Programme for the Endorsement of Forest Certification (PEFC $^{\text{TM}}$ ) is an international, non-profit, non-governmental organization which promotes sustainable forest management through independent third-party certification.

CEWOOD meets the requirements of standards Chain of Custody of Forest and Trees Based Products - Requirements PEFC ST 2002:2020 and PEFC Trademark Rules - Requirements PEFC ST 2001:2020.

#### FSC® (FSC-C170780)

FSC® (Forest Stewardship Council®) certification ensures that products come from responsibly managed forests that provide environmental, social and economic benefits.

#### FSC-C170780

This single certificate covers trading of roundwood as well as production and sale of wood wool panels using the credit system. It also covers the sale of FSC Controlled Wood.

The facility(s) are hereby Chain of Custody certified to sell products as: FSC Mix; FSC Controlled Wood.

Look for our FSC®-certified products, the FSC-certified products shall be clearly identified.

#### ISO

ISO 50001 is the international standard for Energy Management Systems, created by the International Organization for Standardization (ISO). The standard specifies the requirements for establishing, implementing, maintaining and improving an energy management system, whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy security, energy use and consumption. Standard: LVS EN ISO 50001:2012.

## Recommended by the Latvian Allergy and Asthma Association

The Latvian Allergy and Asthma Association recommends CEWOOD panels as a product that does not contain any harmful substances, is anti-allergic and safe to health.

## MATERIAL FOR COMFORT AND HEALTH

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