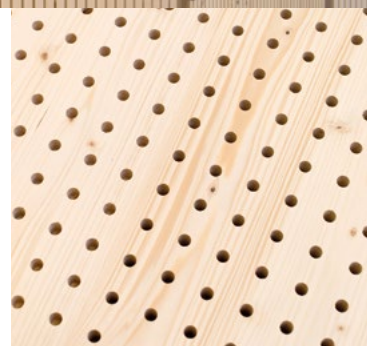


A close-up photograph of vertical wooden slats, likely part of an acoustic panel. The slats are light-colored wood with visible grain and knots. They are arranged in a slightly staggered pattern, with some slats being slightly offset from others, creating a textured, three-dimensional effect.

NOVATOP ACOUSTIC

Technical documentation
Instructions for installation



NOVATOP 

SUPPORT FOR YOU

SAMPLES



95 x 37 x 150 mm

211 x 53 x 526 mm

You can order samples at novatop@agrop.cz

ON-LINE



Product



Technical documentation



Certificates



Profiles sampler



Assembly instructions



Acoustic Software



3D LIBRARY

PBR standard / 8K



NOVATOP ACOUSTIC CONTENT

TECHNICAL DOCUMENTATION

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2 Drawings

Drawings, profiles specifications	14–21
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3 Tests

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4 General

Processing, packaging, storage, transport, handling	32
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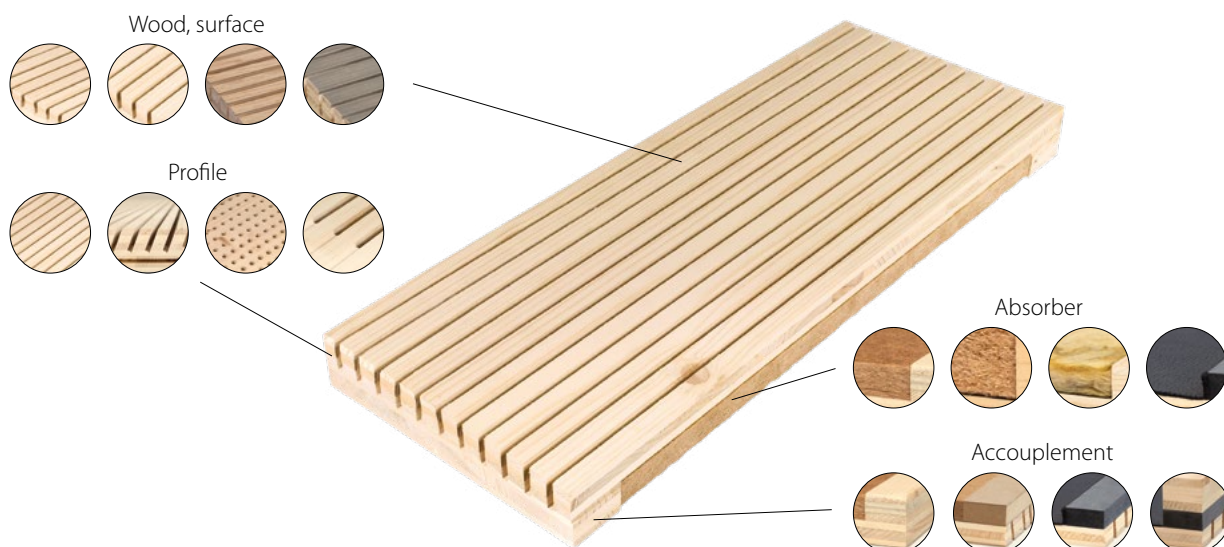
5 Assembly

INSTRUCTIONS FOR INSTALLATION

CONTENT

DESCRIPTION

NOVATOP ACOUSTIC are panels designed for interior cladding that optimize the acoustic properties of the given space. The panels are made of a solid three-layer board (SWP) perforated into various profiles. The profiles are drilled or milled. The proportion of the perforated area and the shape of the profile vary with different models. In the production, the panels can be complemented with an absorber; the overall composition of the panel is chosen according to the acoustic requirements of the project. The prefabricated panel is ready for direct assembly.



PROFILES

The profile is determined by the type of perforation – milling, drilling. Profile drawings and specifications from p. 14.



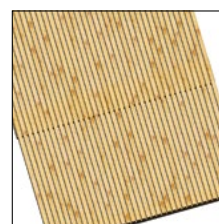
SUZANNA



GIULIA



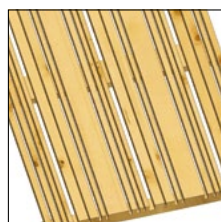
MARILYNE 8/25



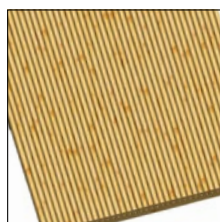
MARILYNE 4/12



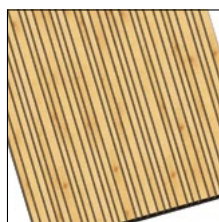
MARILYNE S1



MARILYNE S2



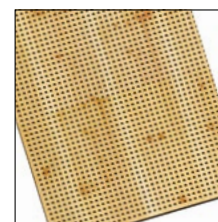
SONATA 4/10



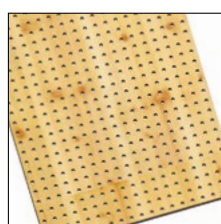
SONATA S1



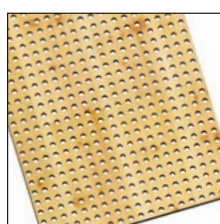
DOMINO



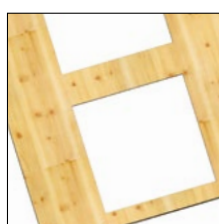
LUCY 8/16-16



LUCY 10/32-32



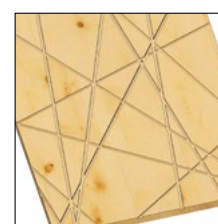
LUCY 16/32-32



TINA



BEATA



MIKADO

NOVATOP ACOUSTIC DATASHEET

CONTENT

WOOD

NOVATOP ACOUSTIC	REQUIREMENTS OF EN 13964:2014, EN 13986:2004 + A1:2015
TECHNICAL PARAMETERS	A THREE-LAYER SOLID WOOD PANEL (SWP)
Requirements	EN 13353, EN 13986
Operation classes	SWP/1, SWP/2, according to EN 13353
Gluing	D4 according to EN 204
Glue	PVAc according to EN 204
Types of trees	spruce, fir
Surface quality	Visual interior (corresponding to B). Quality classification according to the internal regulations of AGROP NOVA a.s.
Standard formats [mm]	Thickness: 19, 27
	Widths: 625, 1250, 2500
	Standard lengths: 2500, 3000, 5000
Ground surface	K 100
Moisture	10 ± 3%
Formaldehyde emission class	E1 according to EN 717-1
Reaction to fire	D-s2, d0 according to EN 13 501-1



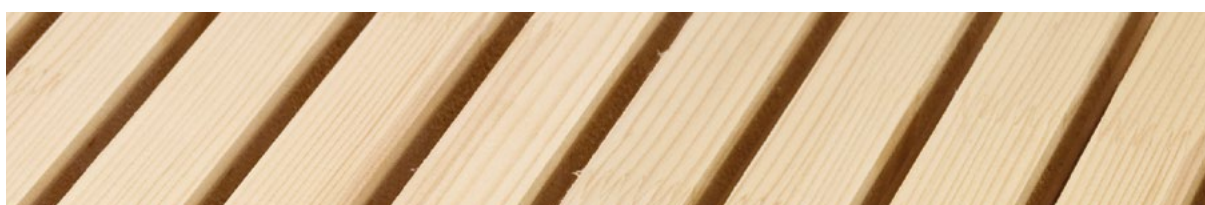
Spruce: visible – visual quality (B)

A construction element intended for the final interior design. The surface lamellas are of higher quality timber. The surface is sanded with repaired knots from branches of different sizes, closed, puttied, without colouring. Pulp is allowed to a lesser extent. Small abrasions and bumps to a depth of 1 mm and an area of 10 mm² are permitted. Defects on the edge of the panel are allowed up to 10 mm. The section surfaces and the milled surfaces always correspond to non-visual quality. Classification of quality according to the internal regulations of AGROP NOVA a.s.



Silver fir: visible – visual quality (B)

Fir panels are characterized by a delicate balanced structure without knots. Surface lamellas without natural wood defects (not containing resin, resin ducts, resin pockets) are connected with an inlay finger joint. The final surface of the profile is resanded. It is particularly suitable for interiors and has similar mechanical properties as spruce. Small abrasions and bumps to a depth of 1 mm and an area of 10 mm² are permitted. Defects on the edge of the board are allowed up to 10 mm. The section surfaces and the milled surfaces always correspond to non-visual quality. Classification of quality according to the internal regulations of AGROP NOVA a.s.



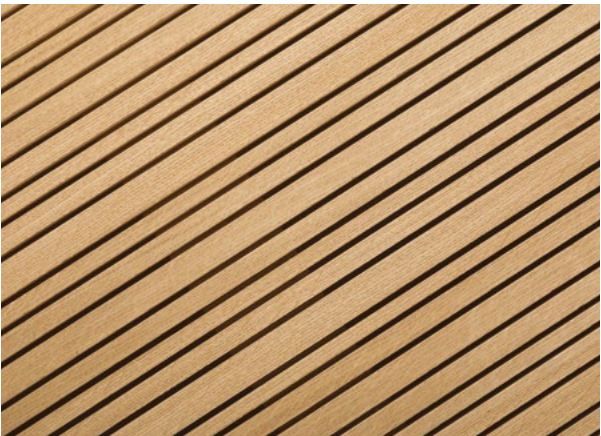
CONTENT

1 VENEERS

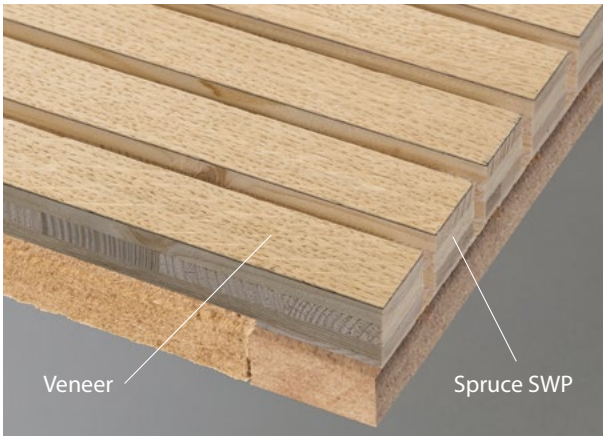
Acoustic panels with a veneer surface.



TECHNICAL PARAMETERS	
European oak – radial	Padded with VC300 + fleece, radial drawing, quality A, a thickness of 0.6 mm
European oak – tangential	Padded with VC300 + fleece, tangential drawing, quality A, a thickness of 0.6 mm
Profiles	Marilyne (8/25, 4/12, S1, S2), Sonata (4/10, S1), Lucy (Ø8/16-16, Ø10/32-32, Ø16/32-32)
Maximum format	625 x 3000 mm



European oak – radial



European oak – tangential



Other veneers made to order



Ash tree



Walnut



Cherry



Rustic oak



Beech

NOVATOP ACOUSTIC DATASHEET

CONTENT

ACCOUPLEMENTS

SWP		
Specification	3-layer panel, spruce	
Standard thickness (mm)	21, 42, 50	
COLORFUL	MDF FIBREBOARD KRONOSPAN	MDF FIBREBOARD UNILIN
Colour	brown	black
Class	MDF.HLS	MDF.HLS
Certification number	1488-CPR-0290/Z	1161-CPR-0141
Operating class	1	1
SELECTED PARAMETERS FROM MDF TECHNICAL DOCUMENTATION		
Thickness	22 mm	22 mm
Swelling (%)	≤ 7	≤ 7
Reaction to fire class	EN 13501-1 / D-s2d0	EN 13501-1 / D-s2d0
Formaldehyde emission class	E1	E1
Harmonized standard	EN 1391141:2004+A1:2015	EN13986:2004+A1:2015

ABSORBERS

WOOD FIBREBOARD INSULATION		
TECHNICAL PARAMETERS	STEICO FLEX	STEICO THERM SD
Requirements	EN 13171	
Density [kg/m³]	50	160
Declared heat transfer coefficient [W/mK]	0,038	0,040
Thickness [mm]	50	20
Reaction to fire	E according to EN 13501-1	

MINERAL WOOL		
TECHNICAL PARAMETERS	URSA AKU	EUROACOUSTIC TONGA
Density [kg/m³]	75	21
Material	mineral fibres, the facial surface coating of glass fibres	Glass wool, lined on one side with non-woven fabric
Absorption class	A according to ISO 11654	A according to ISO 11654
Formaldehyde emission class	E1 according to ISO 13964	E1 according to ISO 13964
Standard formats [mm]	Thickness: 22, 40	Thickness: 20/30/40/50
	Width: 600	Width: 600
	Length: 600, 1200	Length: 1250
Reaction to fire (white shades)	A1-s1, d0 according to EN 13501-1	A1-S1, D0 according to EN 13501-1
Reaction to fire (colour shades)	A2-s1, d0 according to EN 13501-1	A1-S1, D0 according to EN 13501-1

Warning: The minimum amount of panels of one colour is charged per package (1 package: 24 pcs/ 600 x 600 mm/ altogether 8.64 m²).

UNWOVEN FABRIC		
TECHNICAL PARAMETERS	FIBERTEX ACOUSTIC® 450	FIBERTEX ACOUSTIC® 75
Surface weight [g/m²]	450	75
Material	100% polyester (black colour)	
Breaking strength [N]	425/800	25/35
Acoustic resistance [Ns/m³]	600	250
Thickness [mm]	2,5	0,3
Reaction to fire	B-s1,d0 according to EN 13501-1	B-s1,d0 according to EN 13501-1

NOVATOP ACOUSTIC ACCOUPLEMENTS, ABSORBERS

CONTENT



Accouplement – SWP/ Absorber – Steico Therm SD



Accouplement – SWP/ Absorber – Fibertex, Steico Flex



Accouplement – SWP/ Absorber – Ursa Aku



Accouplement – Brown MDF/ Absorber – Steico Therm SD

NOVATOP ACOUSTIC ACCOUPLEMENTS, ABSORBERS

CONTENT



Accouplement – Black MDF/ Absorber – Fibertex



Accouplement – SWP + Black MDF/ Absorber – Fibertex, Steico Flex



COLOURS OF EUROACOUSTIC TONGA CASSETTES



Warning: The minimum amount of cassettes of one colour is charged per package (1 package: 24 pcs/ 600 x 600 mm/ total 8,64 m²).

CONTENT

Acoustic panels are supplied without surface treatment as standard. The surface can be treated with conventional wood coatings for interior use. We supply surface treatment MADE to order according to the specification below.

COATING TYPE

Adler Lingovit Interior UV 100

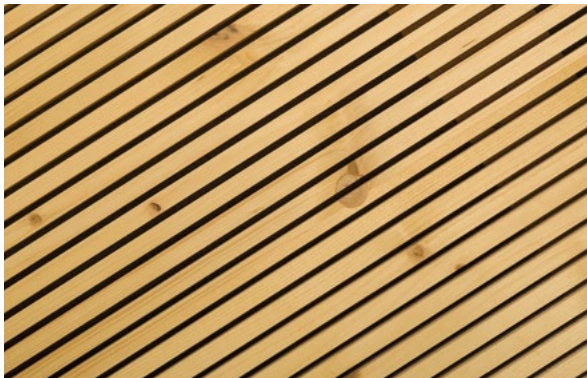
- Water-soluble, UV-stable glazing paint
- Very low VOC (volatile organic compounds) values
- Highly transparent effect, stabilizes the natural appearance of wood
- Triple UV protection (UV absorber, physical UV protection mainly with colourless pigments, lignin stabilizer)
- For more information, see the manufacturer's technical data sheets

GLAZING PAINT		
TECHNICAL PARAMETERS	ADLER LIGNOVIT INTERIOR UV 100	
Primer finish	1 layer applied manually with a roller	Amount 120–150 g/m ²
Final surface	2 sprayed layers, with intermediate grinding	Amount 80–90 g/m ² one layer
Shades	Natur – transparent without colour pigments Zugspitze – with white pigments Mont Blanc – with white pigments Silberrücken – grey (final coating only)	

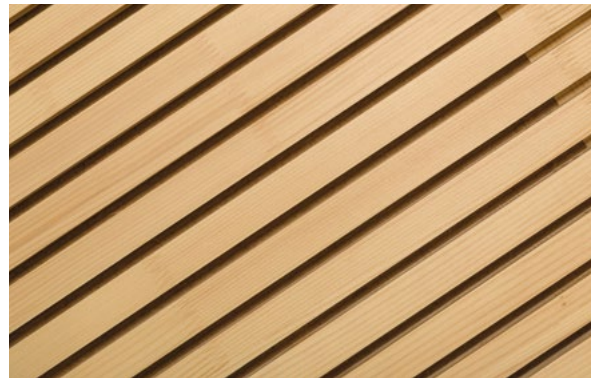


NOVATOP ACOUSTIC SURFACE FINISH

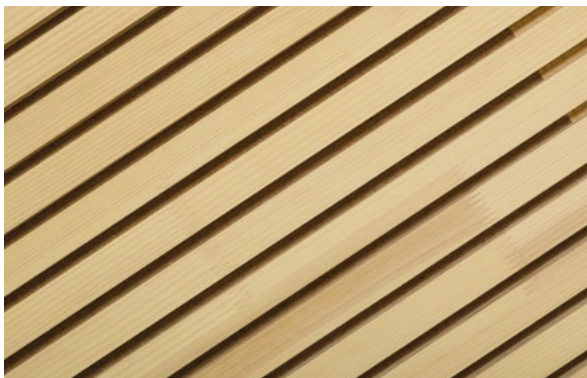
CONTENT



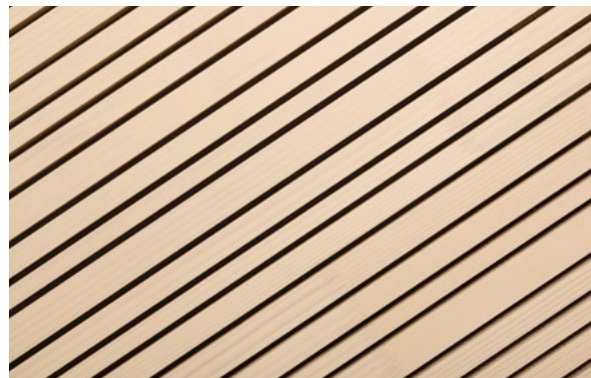
Primer finish – Natur



Final surface finish – Natur



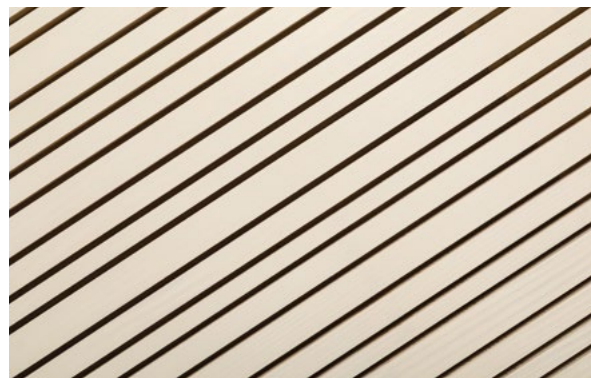
Primer finish – Zugspitze



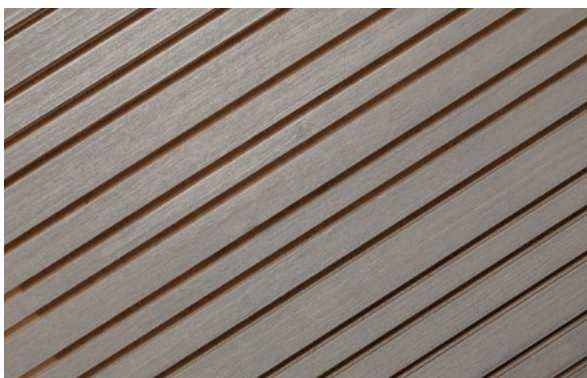
Final surface finish – Zugspitze



Primer finish – Mont Blanc



Final surface finish – Mont Blanc



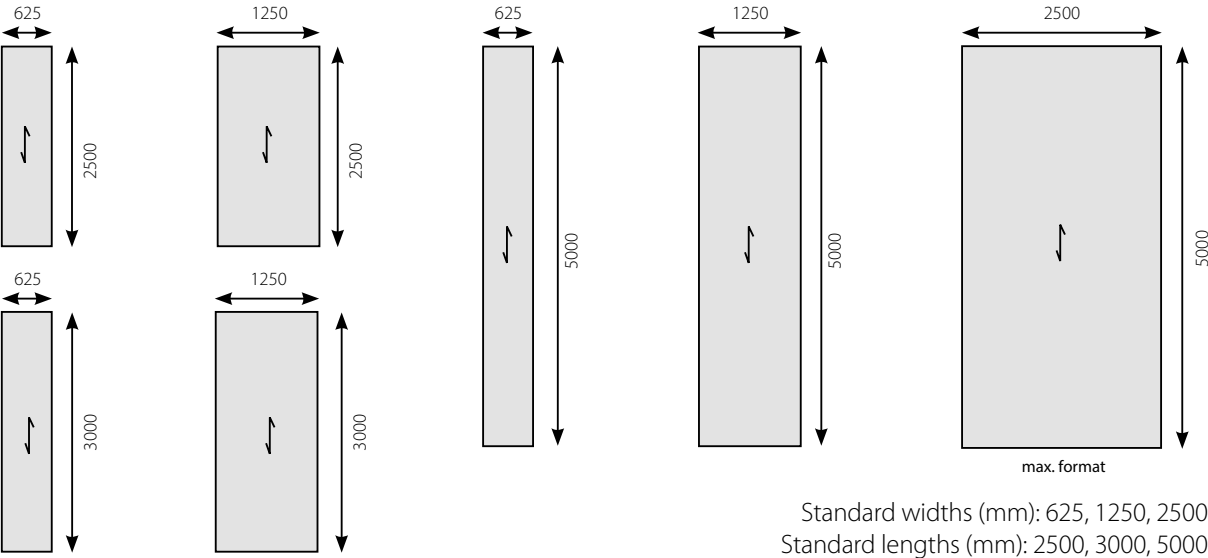
Final surface finish – Silberrücken



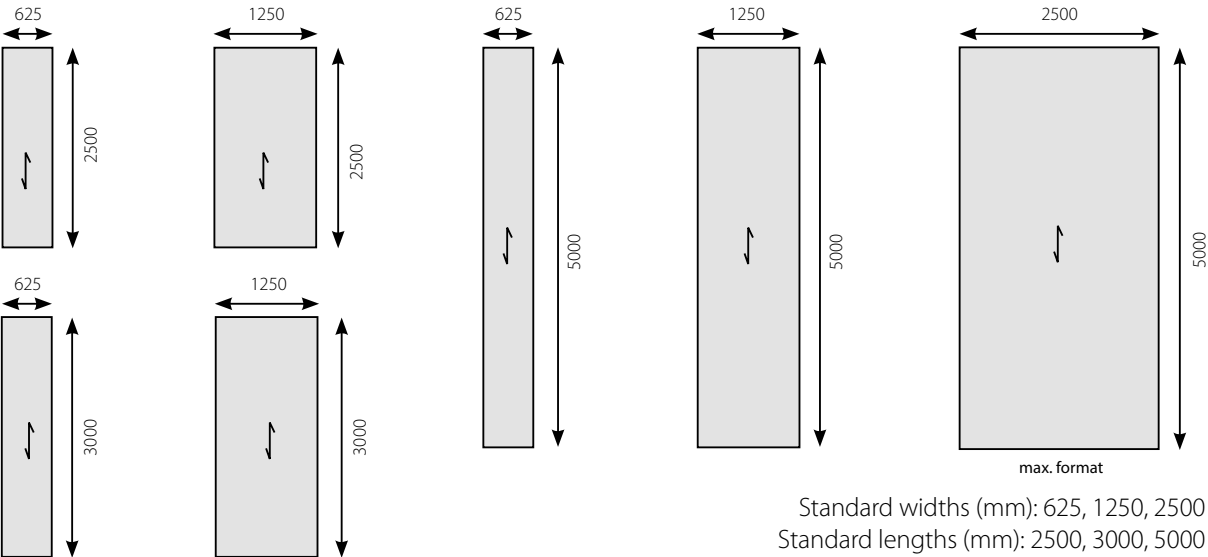
CONTENT

With all formats, it is necessary to take into account the shape of the profile when connecting. Minimum width for the profile Tina is 1250 mm.

SPRUCE



FIR



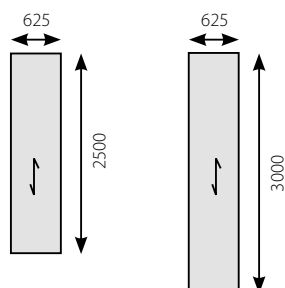
PROFILE LUCY

Drilling diameter	Dimension	Drilling diameter	Dimension
8/16-16	624 x 2496	10/32-32 16/32-32	608 x 2496
	624 x 2992		608 x 2976
	624 x 4992		608 x 4992
	1248 x 2496		1248 x 2496
	1248 x 2992		1248 x 2976
	1248 x 4992		1248 x 4992

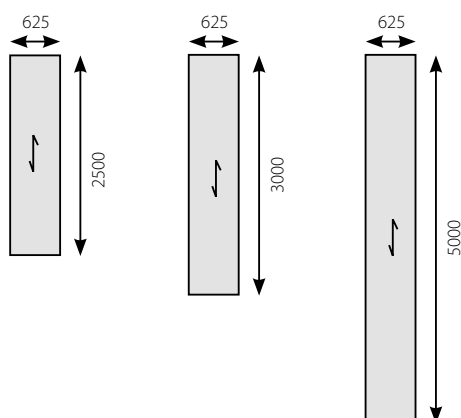
NOVATOP ACOUSTIC STANDARD FORMATS

[CONTENT](#)

1 VENEER

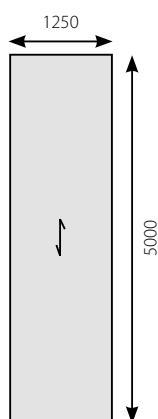


2 SURFACE FINISH – FINAL SURFACE



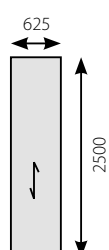
Format 625 x 5000 mm on individual request.

3 SURFACE FINISH – PRIMER FINISH



Max. format (mm): 1250 x 5000 mm.

4 MIKADO DESIGN PANEL

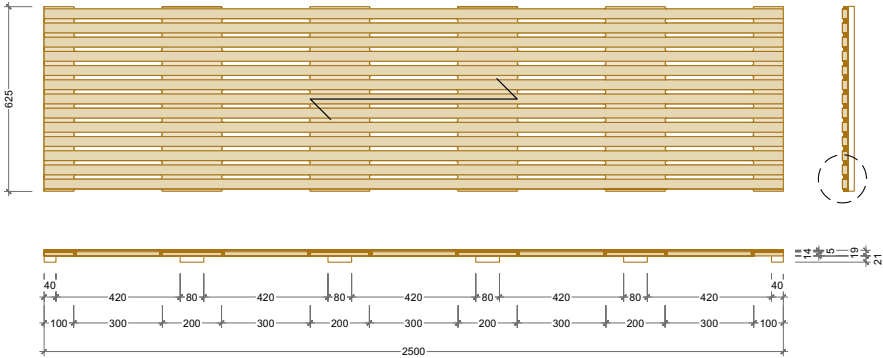
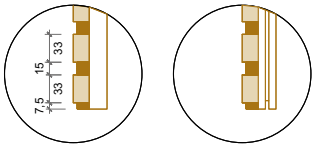


Max. format (mm): 625 x 2500 mm

CONTENT

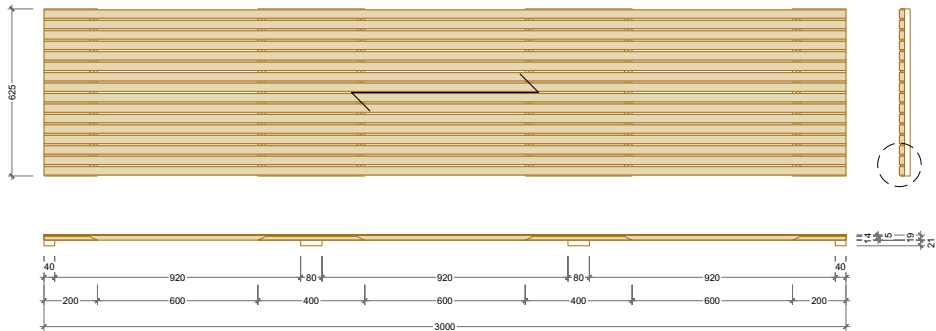
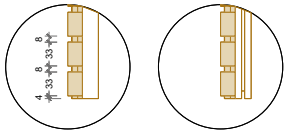
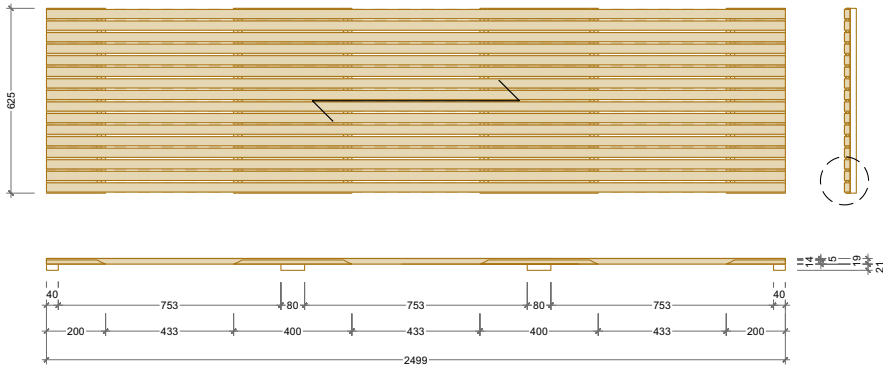
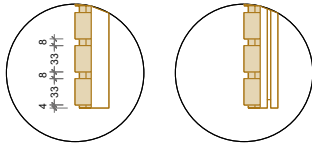
SUZANNA

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m²]
15/33	15 x 300	18	11,7



GIULIA

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m²]
8/33	8 x 600	12	11,4

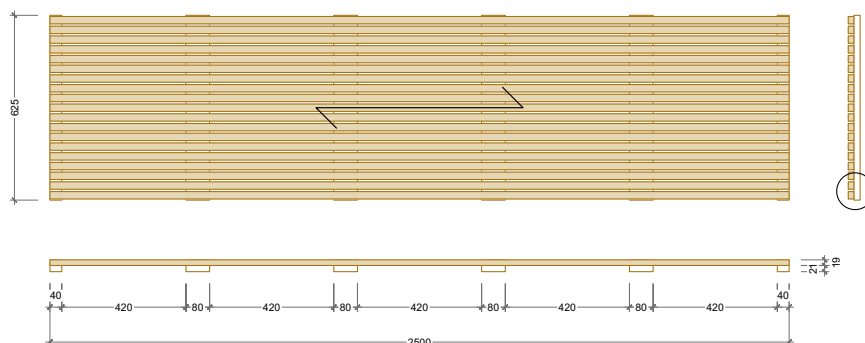


NOVATOP ACOUSTIC DRAWINGS

CONTENT

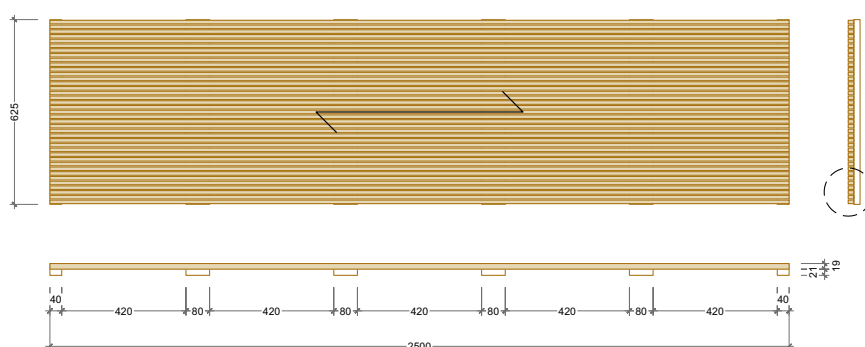
MARILYNE 8/25

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
8/25	8 x 420	20	8,6



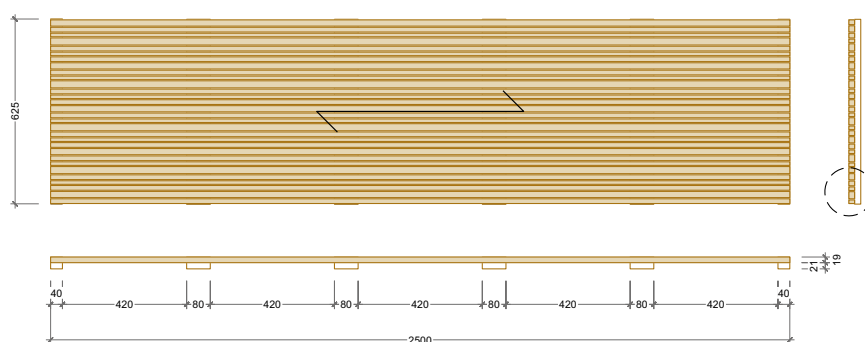
MARILYNE 4/12

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
4/12	4 x 420	21	8,6



MARILYNE S1

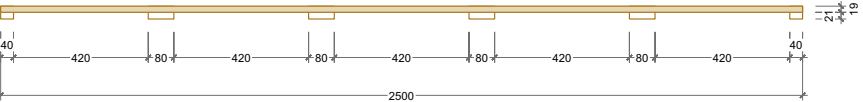
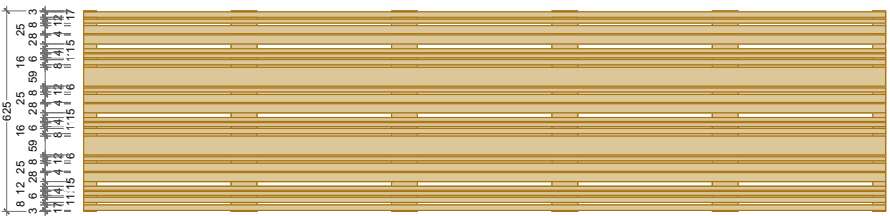
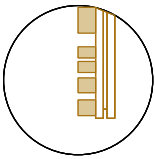
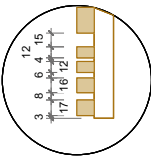
raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
4/16-21-16-12-16-24-12	4 x 420	16	9,2



CONTENT

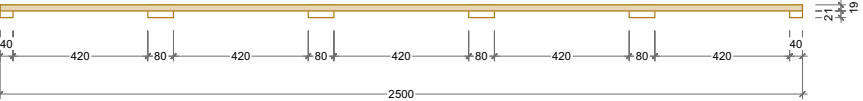
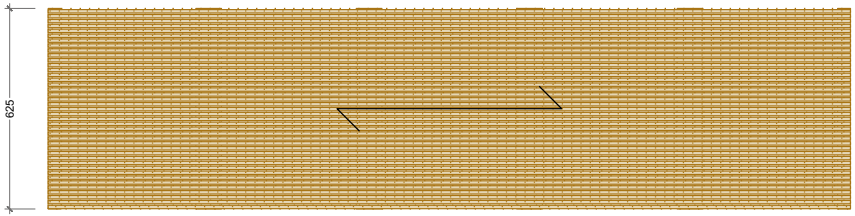
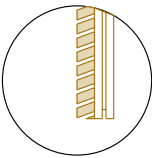
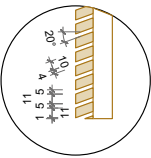
MARILYNE S2

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
15/8-25/4-28/15-12/4- 12/6-16/8-59/6	8-4-15-4-6-8-6	21	8,6



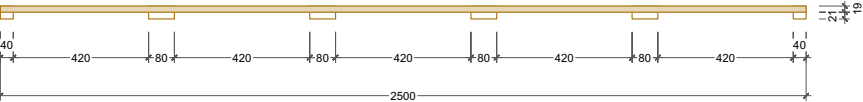
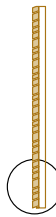
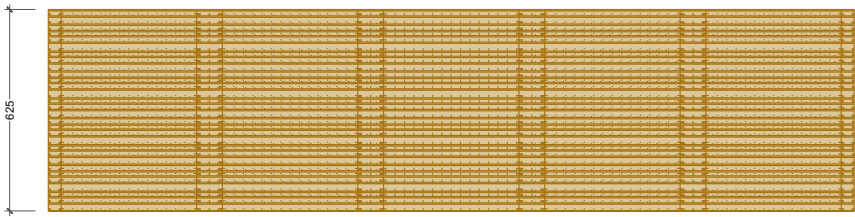
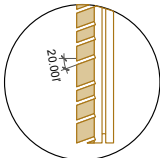
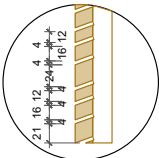
SONATA 4/10

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
4/10 cutting angle of 20°	4 x 420	20	8,6



SONATA S1

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
4/16-21-16-12-16- 24-12 cutting angle of 20°	4 x 420	16	9,2

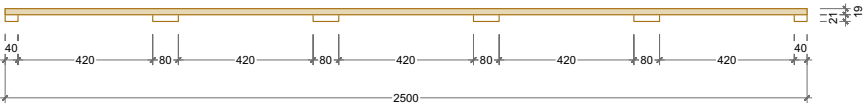
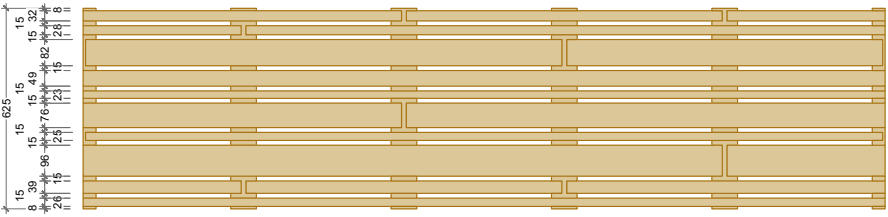
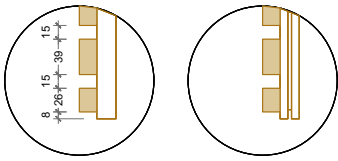


NOVATOP ACOUSTIC DRAWINGS

CONTENT

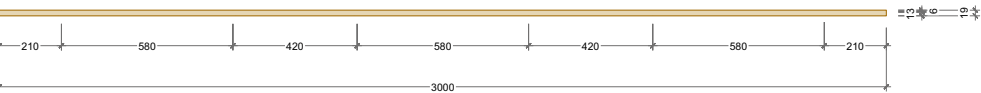
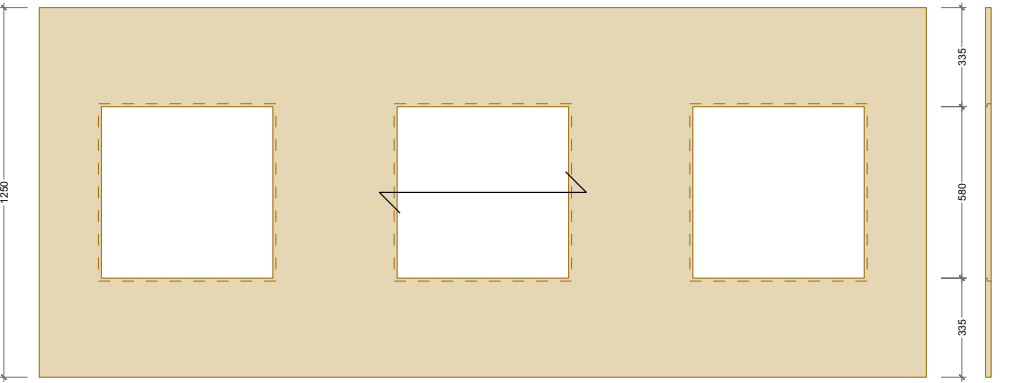
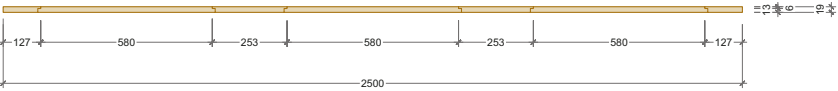
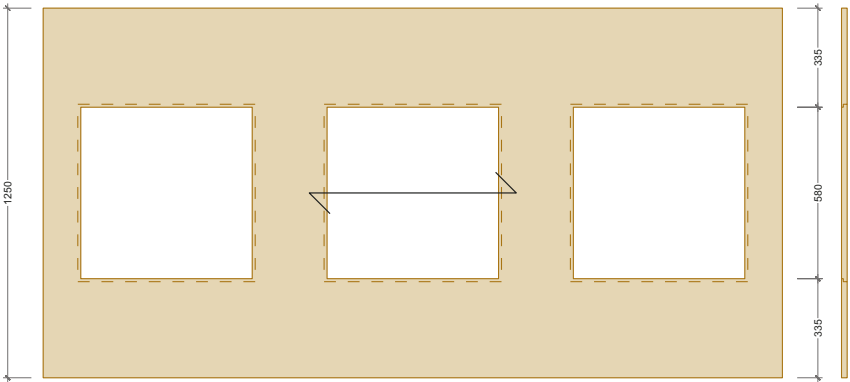
DOMINO

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
15/25,7-38,6-96,4-25,0- 76,2-23,0-48,7-81,6- 28,1-31,6	15	20	8,8



TINA

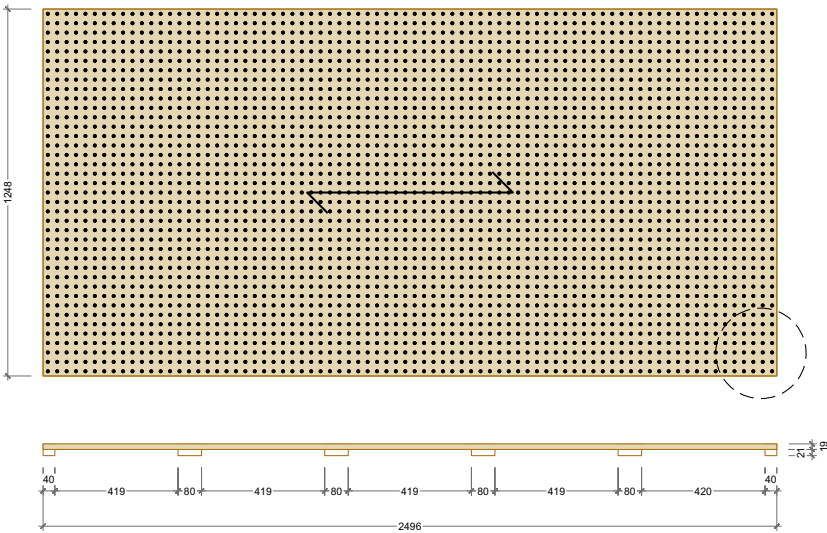
raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
170 x 580	580 x 580	32	6,3



CONTENT

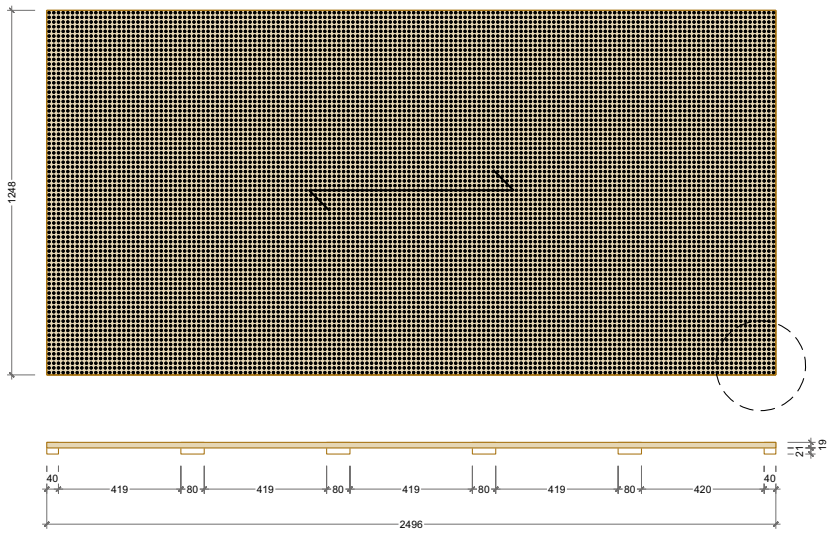
LUCY $\varnothing 10/32-32$

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
10/32-32	10	8	10,2



LUCY $\varnothing 8/16-16$

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
8/16-16	8	20	9,1

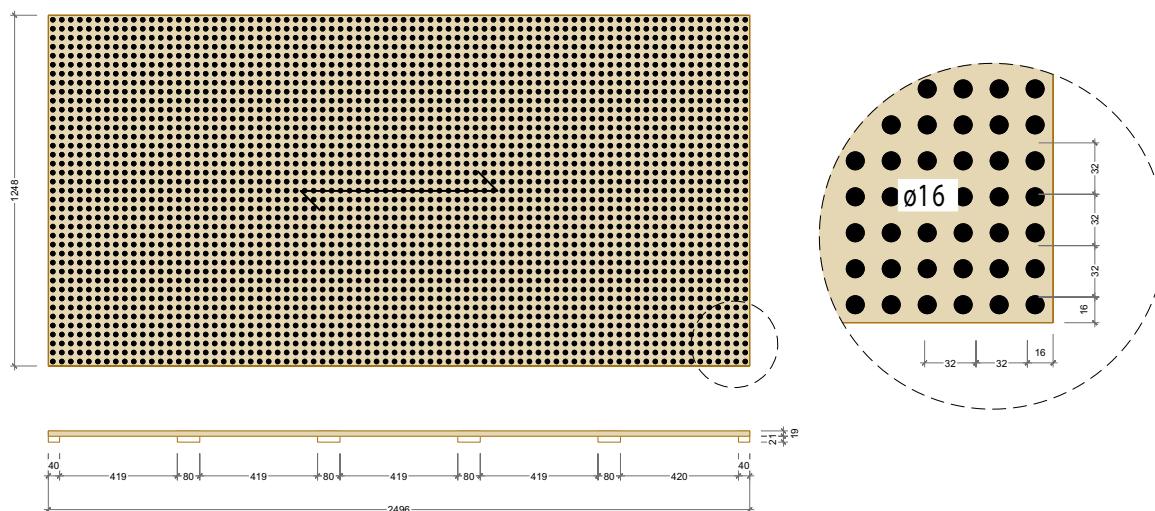


NOVATOP ACOUSTIC DRAWINGS

CONTENT

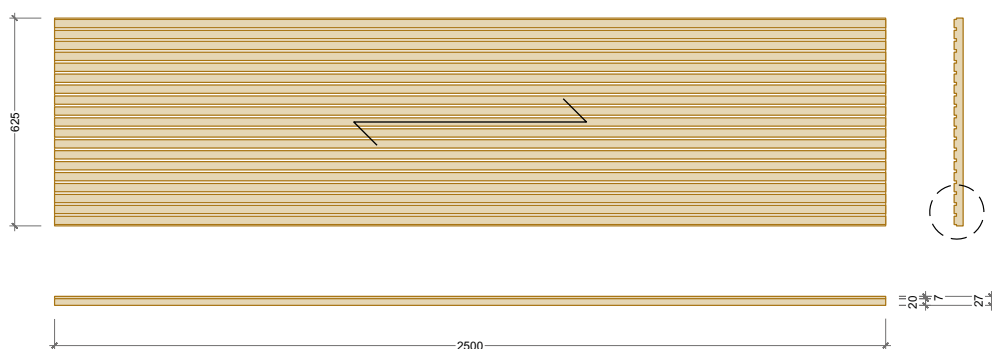
LUCY $\phi 16/32-32$

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
16/32-32	16	21	9,1



BEATA

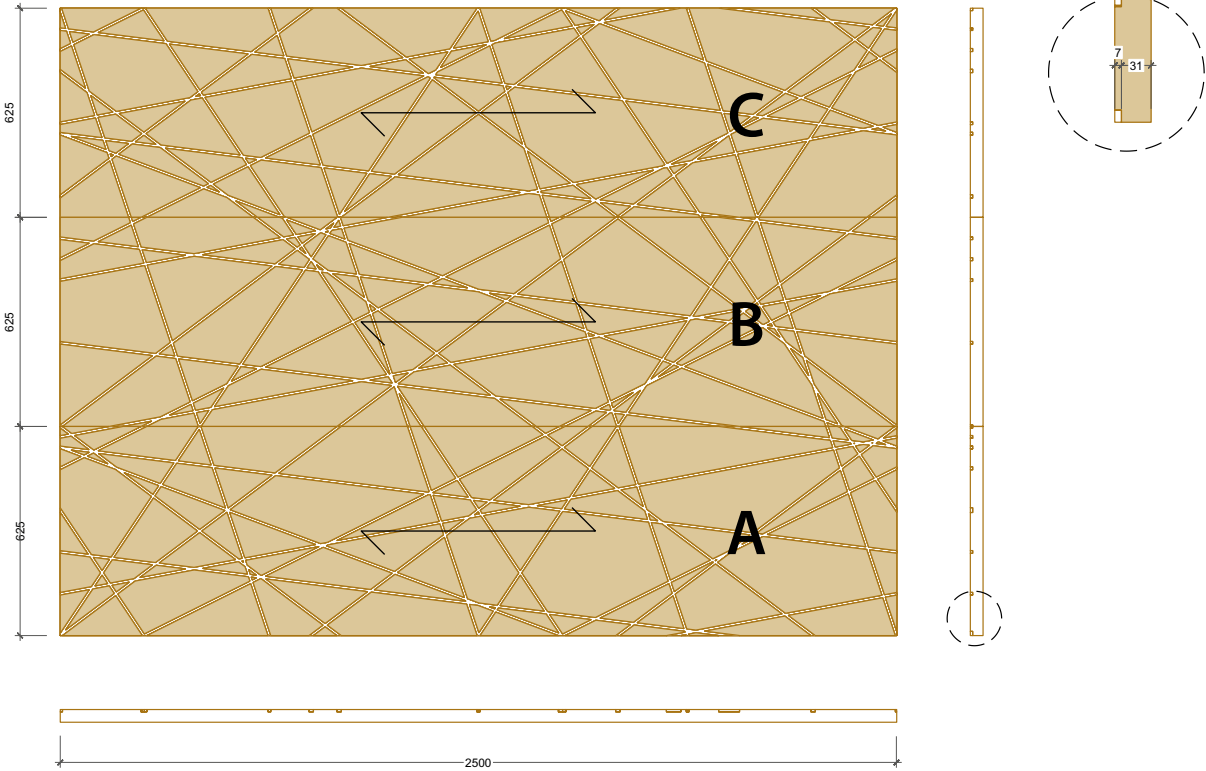
raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m ²]
8/ 25	8 x 8 není skrz	dispersing element	13,2



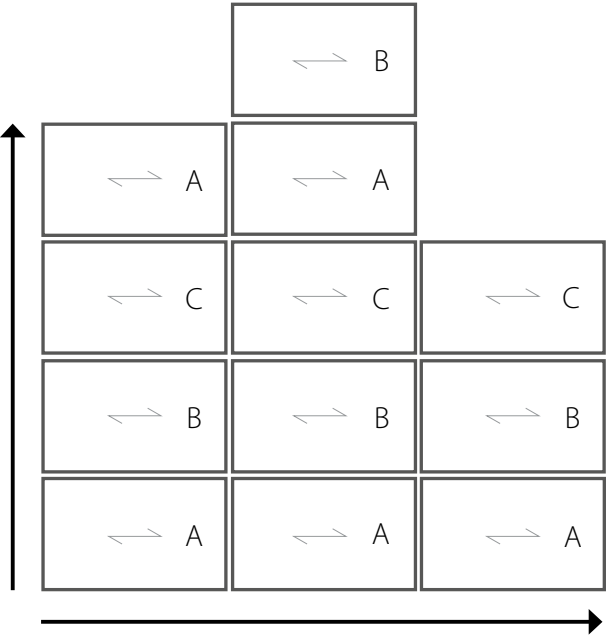
CONTENT

MIKADO

raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m²]
irregular, parts A, B, C	8	dispersing element	16



RECOMMENDED GRID FOR ASSEMBLY



NOTES

CONTENT

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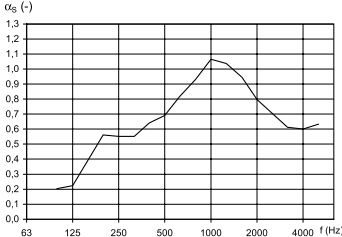
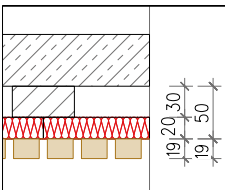
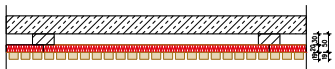
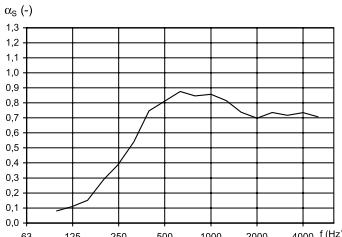
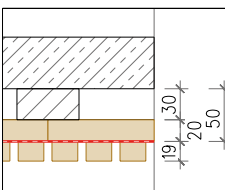
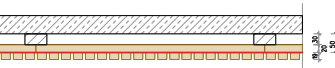
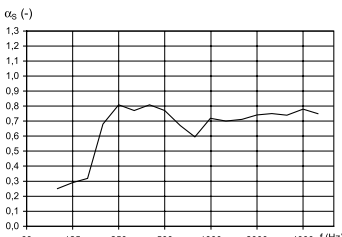
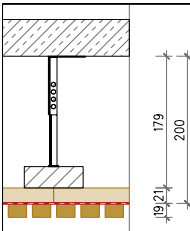
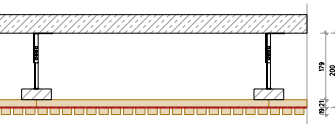
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CONTENT

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
1.1 SUZANNA	Air gap [30 mm]	39	50	12,3		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,55		
	Absorption class			D	Number of report 6708-10-1	
1.2 SUZANNA	Air gap [80 mm]	39	100	12,3		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,55		
	Absorption class			D	Number of report 6708-10-1	
2.1 GIULIA	Air gap [30 mm]	39	50	13,1		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,4		
	Absorption class			D	Number of report 6708-10-1	
2.2 GIULIA	Air gap [80 mm]	39	100	13,1		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,4		
	Absorption class			D	Number of report 6708-10-1	

NOVATOP ACOUSTIC TEST DIAGRAMS

CONTENT

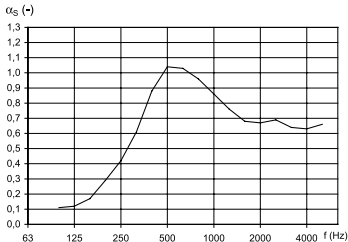
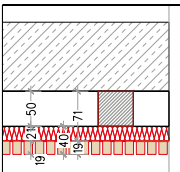
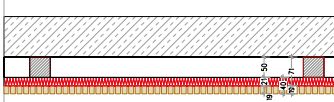
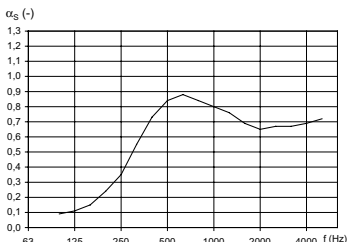
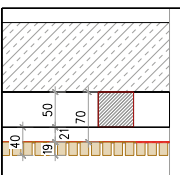
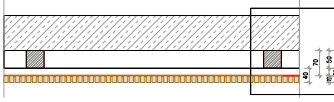
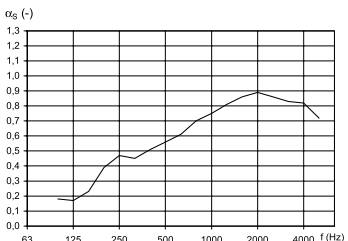
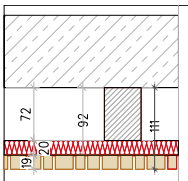
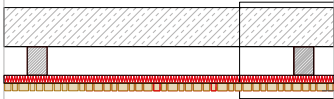
Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
3.1 MARILYNE 8/25	Air gap [30 mm]	40	50	12,8		
	SWP Transverse prism [21 mm]					
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,75		
	Absorption class			C	Number of report 311/12	
3.2 MARILYNE 8/25	Air gap [30 mm]	40	50	10		
	SWP Transverse prism [21 mm]					
	Fibertex fabric 450 g [2,5 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,7		
	Absorption class			C	Number of report 312/12	
3.3 MARILYNE 8/25	Air gap [179 mm]	40	200	10		
	SWP Transverse prism [21 mm]					
	Fibertex fabric 450 g [2,5 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,75		
	Absorption class			C	Number of report 313/12	

CONTENT

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
3.4 MARILYNE 8/25	Air gap [0 mm]	69	50	12,1		
	Transverse prism [50 mm]					
	Steico flex [50 mm]					
	Fibertex fabric 75 g [0,3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,85	Number of report 315/12	
	Absorption class			B		
3.5 MARILYNE 8/25	Air gap [150 mm]	69	200	12,1		
	Transverse prism [50 mm]					
	Steico flex [50 mm]					
	Fibertex fabric 75 g [0,3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,8	Number of report 314/12	
	Absorption class			B		
3.6 MARILYNE 4/12	Air gap [50 mm]	40	70	10		
	Steico Therm SD [20 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [alpha_w]			0,75	Number of report 056/16	
	Absorption class			C		

NOVATOP ACOUSTIC TEST DIAGRAMS

CONTENT

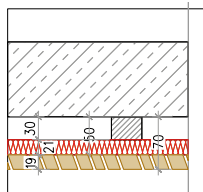
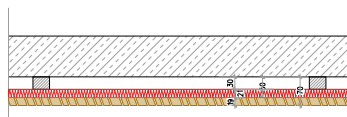
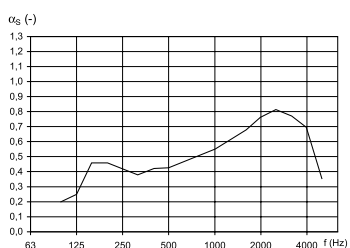
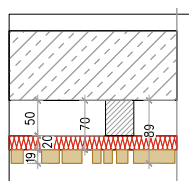
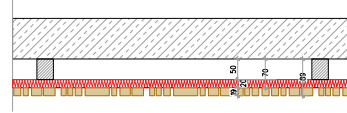
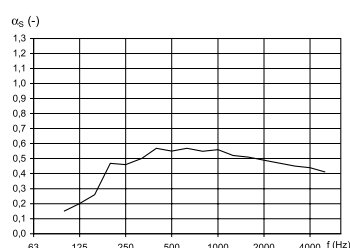
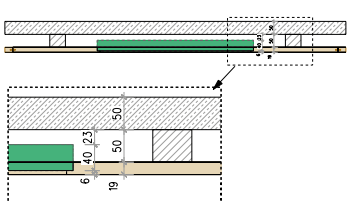
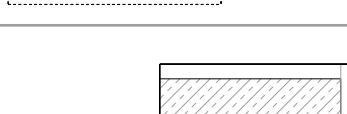
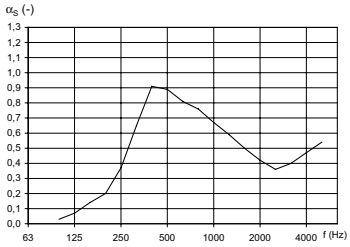
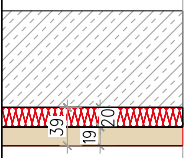
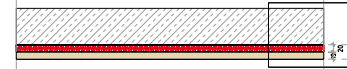
Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
3.7 MARILYNE 4/12	Air gap [50 mm]	40	70	10		 
	Ursa Aku [20 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,70		
	Absorption class			C		
3.8 MARILYNE 4/12	Air gap [70 mm]	40	90	10		 
	Fibertex 450 g/m ² [3 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class			C		
3.9 MARILYNE S1	Air gap [72 mm]	61	92	14		 
	Transverse beam [42 mm]					
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class			C		

CONTENT

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
3.10 MARILYNE S1	Air gap [22 mm]	61	42	14		
	Transverse beam [42 mm]					
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class			C	Number of report 335/17	
3.11 MARILYNE S1	Air gap [2 mm]	61	42	16,9		
	Transverse beam [42 mm]					
	Steico Therm SD [2 x 20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class			C	Number of report 335/17	
3.20 MARILYNE S2	Air gap [50 mm]	39	70	13,9		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class			C	Number of report 415600443-03	
7.1 SONATA 4/10	Air gap [50 mm]	40	70	11,1		
	Transverse beam [21 mm]					
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,70		
	Absorption class			C	Number of report 243/20	

NOVATOP ACOUSTIC TEST DIAGRAMS

CONTENT

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
7.10 SONATA S1	Air gap [50 mm]	40	30	12	Under development	
	Steico Therm SD [20 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]		0,65			
	Absorption class		C			
8.1 DOMINO	Air gap [50 mm]	39	70	13,9		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,65		
	Absorption class		C			
4.1 TINA	Air gap [0–50 mm]	46	50	10		
	Tonga [40 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,55		
	Absorption class		D			
6.1 LUCY ø10/32-32	Air gap [0 mm]	39	20	10		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,55		
	Absorption class		D			

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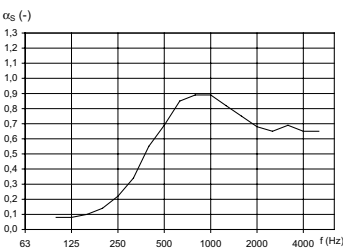
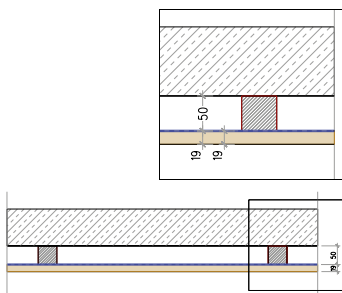
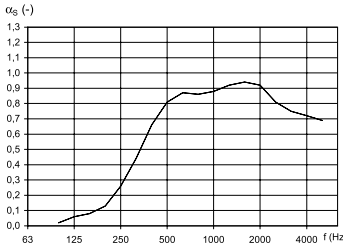
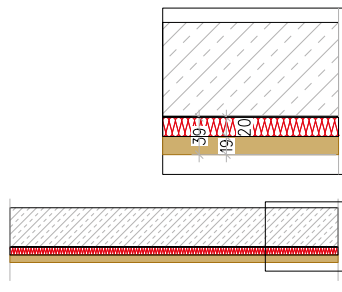
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CONTENT

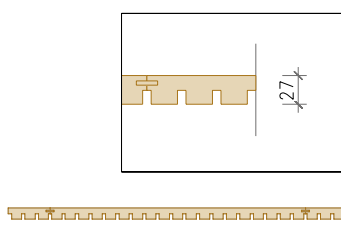
Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
6.2 LUCY Ø10/32-32	Air gap [40 mm]	39	60	10		
	Ursa Aku 20 mm [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,35		
	Absorption class			D		
6.3 LUCY Ø10/32-32	Air gap [50 mm]	19	50	10		
	Fibertex 450 g/m ² [3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,40		
	Absorption class			D		
6.4 LUCY Ø8/16-16	Air gap [50 mm]	39	70	10		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,85		
	Absorption class			B		
6.5 LUCY Ø8/16-16	Air gap [40 mm]	39	60	10		
	Ursa Aku [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,60		
	Absorption class			C		

NOVATOP ACOUSTIC TEST DIAGRAMS

CONTENT

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m ²]	Diagram	Section
6.6 LUCY Ø8/16-16	Air gap [50 mm]	19	50	10		
	Fibertex 450 g/m ² [3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,55		
	Absorption class			D		
6.7 LUCY Ø16/ 32-32	Air gap [0 mm]	19	39	10		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α _w]			0,60		
	Absorption class			C		

DISPERSING ELEMENT

5.1 BEATA	SWP panel with openings [27 mm]	27		11,4		
	Dispersing element					

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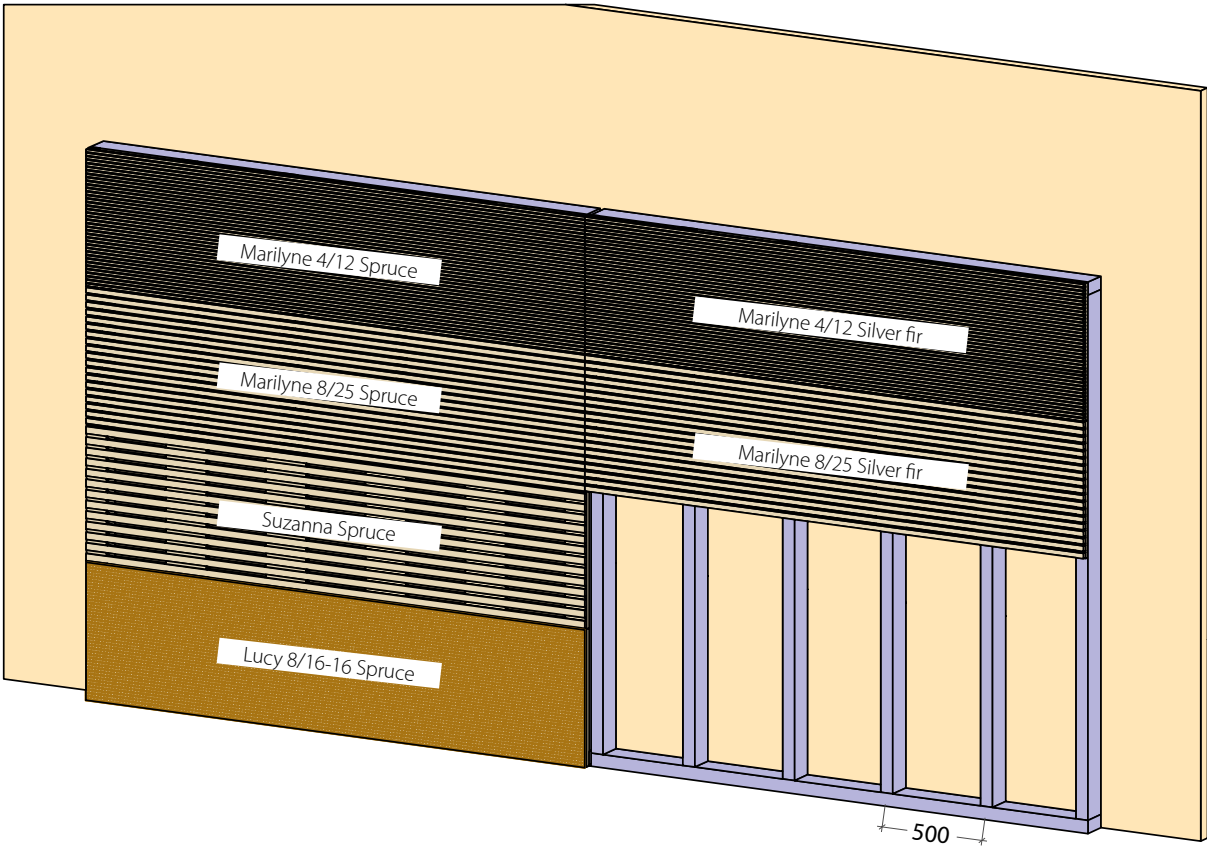
NOVATOP ACOUSTIC IMPACT TESTS

CONTENT

AN IMPACT TEST PERFORMED WITH A HANDBALL

An impact test performed with a handball for use in sports halls and gymnasiums from 2 m above the floor. Acoustic panels must be placed on a solid wooden structure, prisms 60 mm wide and with an axial distance of 500 mm. Anchoring of acoustic panels: at least 8 pcs/m² screws 3.2 x 50 mm.

The test was conducted according to DIN 18032-3 (ÖNORM B 2608: 2012 05 01).
All the samples tested complied with the requirements of ČSN EN 13964
Number of report: 1701750-1.



THE SAMPLES TESTED

Profile	Wood	The result of the impact test (a handball)
Marilyne 4/12	Spruce	Complied
Marilyne 4/12	Silver fir	Complied
Marilyne 8/25	Spruce	Complied
Marilyne 8/25	Silver fir	Complied
Suzanna	Spruce	Complied
Lucy 8/16 -16	Spruce	Complied

Tested panels with Steico Therm absorber.

PROCESSING



NOVATOP ACOUSTIC panels are processed from lamellas of massive solid wood (SWP). The lamellas in each layer are glued both in the longitudinal and the transverse direction and the layers are glued together. The quality of sanding corresponds to the grain size of 100. The moisture content at dispatch is $10\% \pm 3\%$. All machining is performed on CNC machines.

Warning: Wood properties of this product are maintained, so it responds to changes in temperature and humidity by shrinking or, possibly, by swelling. Improper storage and use in extreme conditions (extreme temperatures and humidity) can cause cracking and deformations.

PACKAGING

Following the final quality inspection, the panels are packed, wrapped in PE foil (protection against changes in humidity, contamination and partially against mechanical damage) and tightened on all sides with a tape. Each package is fitted with an identification label with a description. The labels are located on the bottom left longitudinal side of the package.

Label on the package

Package Nr.		
<hr/>		
Client:	<hr/>	
Object:	<hr/>	
Address:	<hr/>	
Description:	<hr/>	
Position Nr.:	<hr/>	
<hr/>		
<hr/>		
<hr/>		
<hr/>		
<hr/>		
<hr/>		
Pcs.:	Date:	
Weight:	Proportion:	Control:
<small>Manufacturer: AGROP NOVA a.s., Píseňský Dvůrek 99, Píseň, Czech Republic, www.novatop-system.com</small>		

STORAGE

Acoustic panels must be stored in an enclosed, dry space and positioned horizontally. After the removal of the protective casing, they must be carefully covered, preferably with a different sheet material. It is essential to avoid exposing of acoustic panels to rain and flowing water. For the protection against water, dirt and excessive solar radiation, we recommend using tarps. The visual areas of the panels must be kept clean; we do not recommend treading on the visual areas. No other materials or loads may be placed on the piles of acoustic panels.

TRANSPORT

As a standard, the panels are transported in lorries (covered semi-trailers), possibly in containers.

Warning: The panels must be at all times protected against adverse weather conditions. During longer transport under adverse climatic conditions, a change in the moisture of the panels may occur; that is why we recommend acclimatisation before processing it (gradual drying, gradual changes of temperature).

MANIPULATION

The prefabricated panel is ready for direct assembly.

Warning: During manipulation, it is necessary to ensure protection of the packaging material, surfaces and edges of the panels to avoid damage. The panels must be at all times protected against adverse weather conditions.

The recommended relative humidity of the environment in which NOVATOP panels are installed is 45–60% at 20°C. Wood cracks may occur due to low air humidity.

Warning: Wood properties of this product are maintained, so they respond to changes in temperature and humidity by shrinking or, possibly, by swelling. Improper storage and use in extreme conditions (extreme temperatures and humidity) can cause cracking and distortions. The producer assumes no liability for the damage of the product due to improper storage, processing, unsuitable use or nonobservance of work procedures during the assembly.

For more information, see [Instructions for installation](#).

USE, MAINTENANCE, WARRANTY

CONTENT

APPLICATION

1. NOVATOP acoustic panels are suitable for interior wall and ceiling cladding.
2. The recommended relative humidity of the environment in which the panels are installed is from 40 to 60% at 20°C.
3. The panels can be processed with suitable common woodworking tools and machines. More information in the assembly instructions.
4. If the panels are not coated from the factory, we recommend treating them with a suitable surface treatment intended for solid wood in the interior (glazing paints, oils, waxes), which significantly increases resistance to dirt and UV radiation. Untreated wood naturally darkens. The technological procedure is governed by the instructions of the manufacturer of the selected coating. We prefer water-based Adler glazing paints (p. 10–11); for veneered surfaces, we recommend a colourless finish.

MAINTENANCE

1. We recommend regularly removing dust and dirt off the surface of the acoustic panels, gently with a vacuum cleaner. When cleaning, be careful not to mechanically damage the wooden surface of the panel and the absorber.
2. In the case of moderate soiling of the wooden surface, we recommend using a soft dry or moistened cloth or sponge, or using cleaning agents intended for wooden surfaces. Do not use excessive amounts of water.
3. Wooden surface damage that cannot be cleaned (alcohol marker, scratches) can be solved by gently sanding the affected area and then treating it with the same type of coating. Warning: When placing decorations, pictures, shelves, etc., it is necessary to take into account that, after a certain time, the UV radiation will „burn“ their contours, and the treatment of this place may be more demanding.
4. The panels need to be protected from moisture (air conditioning condensate, running or dripping water, etc.).

WARNING

The producer assumes no liability for the damage of the product due to improper storage, processing, unsuitable use or non-observance of work procedures during the assembly.

WARRANTY

As part of the general conditions, we guarantee that the NOVATOP ACOUSTIC panels will have the properties and quality corresponding to the product data sheets at the time of delivery. The warranty is valid for a fixed period of 2 years.

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A person wearing a red t-shirt is shown from the back, reaching up to install a panel on a ceiling. The ceiling is covered with a grid of thin, parallel wooden slats. The person is holding a black power drill in their right hand and has their left hand pressed against the slats. A red semi-transparent banner is at the bottom of the image, containing the title text. In the bottom right corner, there is a small inset image showing a close-up of the wooden slats.

NOVATOP ACOUSTIC

Instructions for installation

NOVATOP 

INSTRUCTIONS FOR INSTALLATION

CONTENT

CONTENT

INSTRUCTIONS FOR INSTALLATION

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CONTENT

The assembly instructions contain basic information and recommendations. Responsibility for the correct execution is assumed by the implementing company that complies with the current technical standards.

1 TOOLS FOR ASSEMBLY

- Screws with a narrow head
- Cordless screwdriver
- Spirit level
- Ladders, lifting platforms, mobile scaffolding
- The recommended number of persons, minimum 2

2 GENERAL INFORMATION**It is recommended to:**

- Wear gloves during work due to possible contamination of the panels or getting a splinter.
- Perform installation of the panels after all „wet“ and „dirty“ processes have been finished.
- Wipe the dirty areas locally with a damp cloth or abrade them with sandpaper.
- Machine the panels with all standard woodworking tools and machines and to treat their surface by conventional procedures as solid wood.
- Relative humidity of indoor environment during assembly of up to 55 % at 20 °C.

It is not recommended to:

- Step on the visual surfaces of the panels or otherwise stain them.
- To expose the panels to direct sunlight, which prevents possible discolouration.

Storage:

- The panels must be stored in a dry place and must be protected against weather conditions.
- The panels must be stored on hard and flat surfaces with the possibility of secure access and manipulation.
- Disposal of packaging materials must be carried out in accordance with the local regulations and directives on waste management.

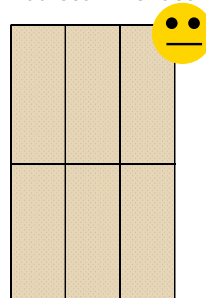
**3 SAFETY AT WORK****When handling the panels, it is necessary to:**

- Observe all safety precautions.
- Use appropriate personal protective equipment.
- Extreme care must be exercised when working at heights and on lifting platforms.
- Secure the panels against falling.

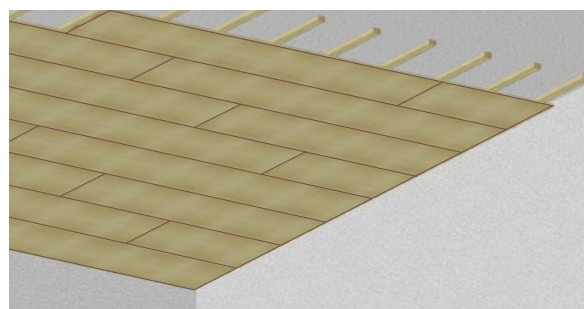
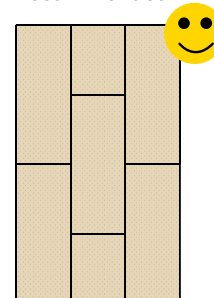
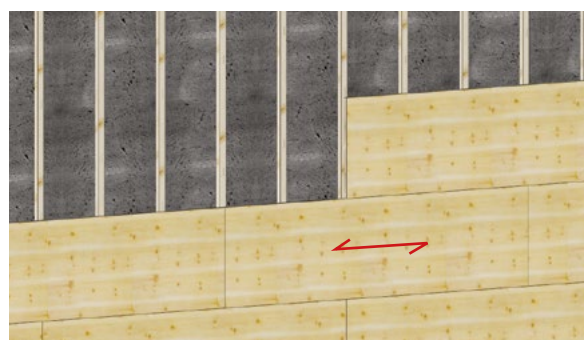
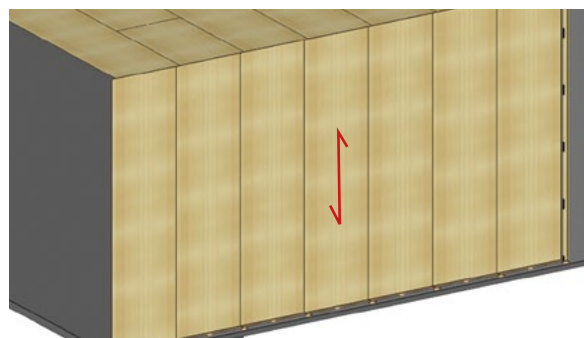
4 TYPES OF APPLICATIONS**Horizontal and vertical structures**

- In the case of using both horizontal and vertical structures, we expect some movement between the panel and the base.
- When using panels over large areas, emphasis must be placed on proper foundation and mutual fastening of individual panels.
- It is necessary to think about the position of wiring and prepare all entries and openings.
- Panel connections should be overlapping: see pictures. Connections that are not overlapping demand greater accuracy and execution.

Not recommended



Recommended

*A horizontal structure (ceiling) - set-over connections**Vertical structure (wall) - horizontal placement**Vertical structure (wall) - vertical placement*

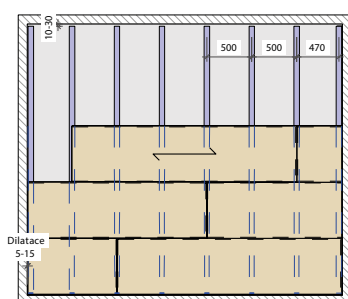
NOVATOP ACOUSTIC ASSEMBLY

CONTENT

5 RECOMMENDATIONS FOR ASSEMBLY

Preparation of the base grill

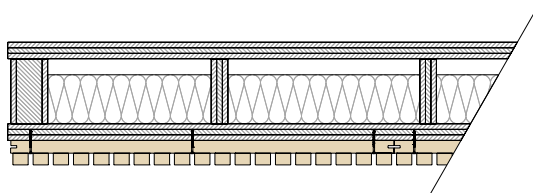
- When preparing the grill, it is necessary to take into account unevenness of the base and to decrease the span of the first batten, so that it was possible to adjust the width of the first acoustic panel.
- On the base designed for the lining, we will prepare a balancing grill in a screen which we will measure depending on the size of the acoustic panels and the area designed for the lining. The gap between the base and the acoustic panel can also accommodate wiring or other distributions.
- After installing the base grill, do not forget to mark the ribs on visible places, so that they are visible even after being covered with acoustic panels.



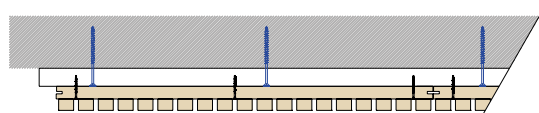
Screen of a balancing grill - transverse (for Giulia - 1,000 mm)

6 TYPES OF APPLICATIONS

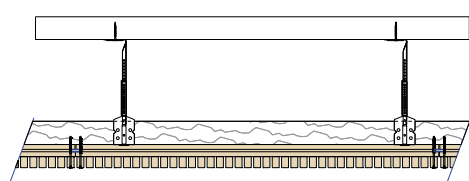
6.1 No grill (e.g. with NOVATOP, OSB, SDK)



6.2 Wooden grill (bottom view)

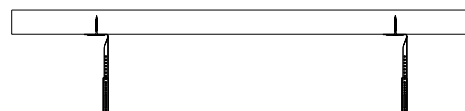


Contact wooden grill

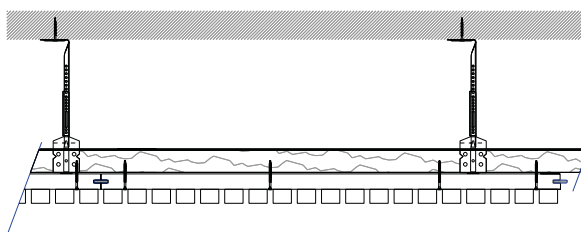


Suspended wooden grill

Metal-sheet grill



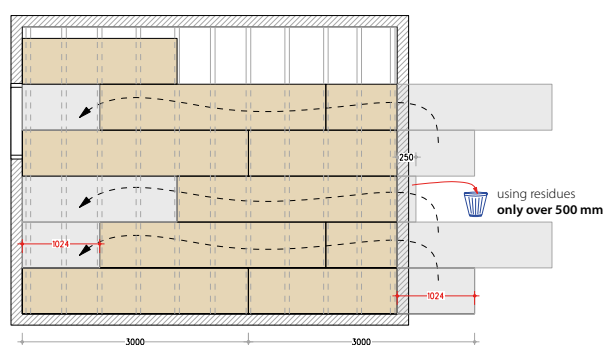
Contact metal-sheet grill



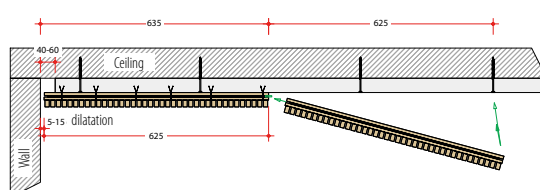
Suspended metal-sheet grill

7 ASSEMBLY

- When laying the panels, it is necessary to keep the flatness, preferably using a stretched string, in order to avoid gaps between the panels during further laying of panels.
- When assembling, it is necessary to follow the continuity of the grooves from one panel to the other.
- For the mutual connection of the panels, either inserted springs or special connecting elements of plywood in prepared local grooves that are supplied.
- It is necessary to take into account the position of the accouplements to eliminate loose ends.
- We recommend calculating the size of the trimming that will be made at the end of the area that is lined, so that only a small band is left.
- We recommend using residues only over 500 mm.



Laying diagram and work with panel trimmings



Linking of panels

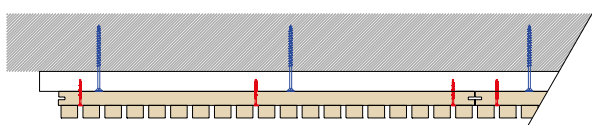
CONTENT

8 ANCHORING

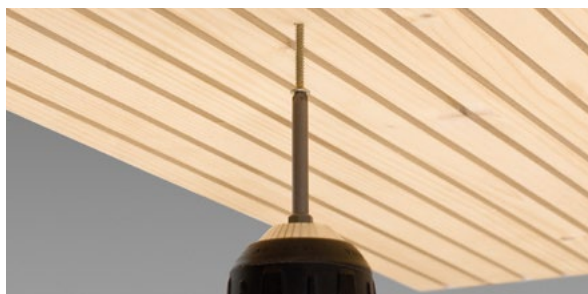
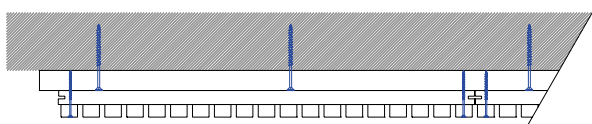
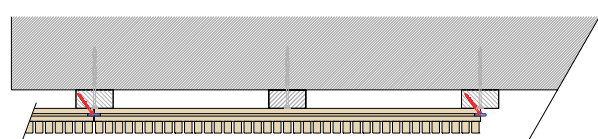
- Acoustic panels can be anchored on both horizontal and vertical structures using: anchoring screws, clips into grooves or by gluing according to the type of the structure. We have to make sure that the connecting elements are in one line and, if possible, without damaging the surface of the acoustic panel.
- **Warning:** loads (lights, fluorescent lamps etc.) cannot be suspended from a ceiling made of acoustic panels, all loads must be positioned on the bearing structure!

8.1 HORIZONTAL STRUCTURES**Anchoring with screws**

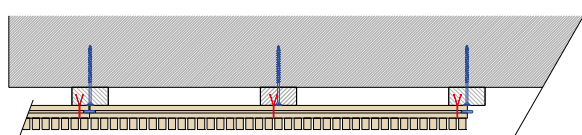
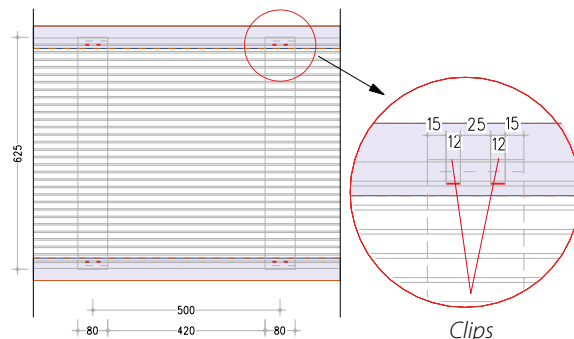
- If screws are applied into a groove, it is necessary to use screws with a smaller head size than the groove of the panel, so that the heads will not damage the groove (e.g. screws made by HPM-TEC Rothoblaas, Würth).
- **The minimum size of the screws is 3.2 x 50 mm.**
- **The minimum number of screws is 8 pcs/m².** (A general rule applies: each accouplement of the panel must be screwed in such a way so that the panel will not bend.)

*Screws in the groove*

- In the area of the panel, we recommend using screws at least 4 x 70 mm made of stainless steel or hot dip galvanized. **The minimum number of screws is 8 pcs/m².**

*Screws in the area of the panel**Screws into a side groove with a base grill***Anchoring with clips into grooves**

- **The minimum length of the clips is 38 mm** (clips made by e.g. the company Reich 1.8/38 mm).
- We recommend using anchoring with clips e.g. with the profile Marilyne where the thickness of the groove is only 4 mm and screws into a groove cannot be used. It is advisable to use an air pistol with a narrow end (e.g. made by the company Reich).
- **The minimum number of clips is 10 pcs/m²** (approximately 2 pcs of clips 1.8/38 per 1 accouplement of the width of 80 mm while the span of the base grill is 625 mm and the span of the accouplements is 500 mm from one another).

*Clips into a groove with a base grill (Marilyne 4-12)**Clips*

2 clips can be positioned on 1 accouplement. Their span must be at least 25 mm.

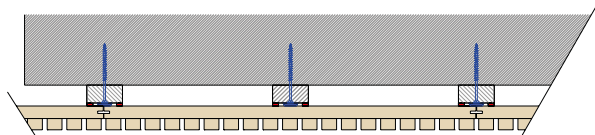
*An air pistol with a narrow end (Reich).*

NOVATOP ACOUSTIC ASSEMBLY

CONTENT

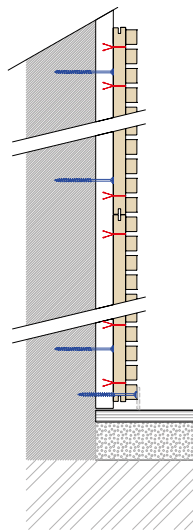
Gluing

- Glue acoustic panels using a special gluing system with a base grill (e.g. SIKATACK). Gluing must be performed in compliance with the instructions given by the gluing system manufacturer.



Anchoring with clips into grooves

- The minimum number of clips is 10 pcs / m².

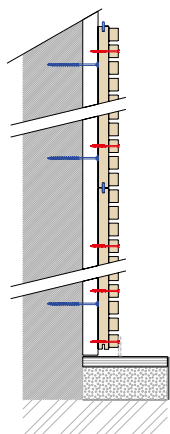


Clips into a groove with a base grill

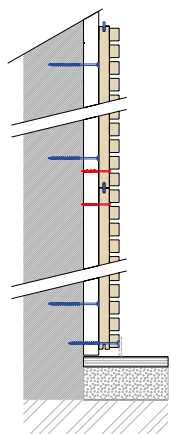
8.2 VERTICAL STRUCTURES

Anchoring with screws

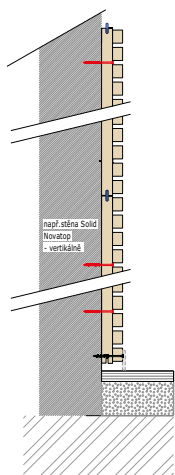
- As with the horizontal structures, it is important to align the underlying battens of the vertical structures as well. It is necessary to take into account the movement of joints of both the floor and the ceiling structures.
- Anchoring vertical structures can be achieved with screws, clips and gluing.
- The minimum number of screws is 8 pcs / m².



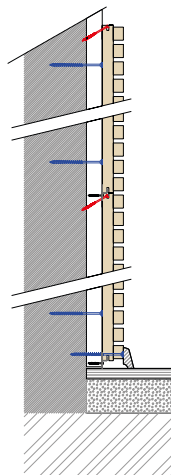
Screws in the area of the panel



Screws in the groove



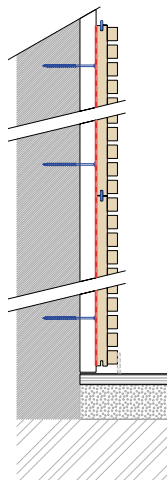
Screws in a groove on a SOLID



Screws into a side groove

Gluing

- Glue acoustic panels using a special gluing system with a base grill (e.g. SIKATACK). Gluing must be performed in compliance with the instructions given by the gluing system manufacturer.



Gluing

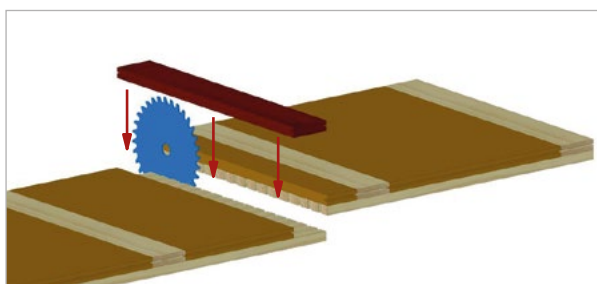
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9 MANUAL MACHINING OF PANELS**General information**

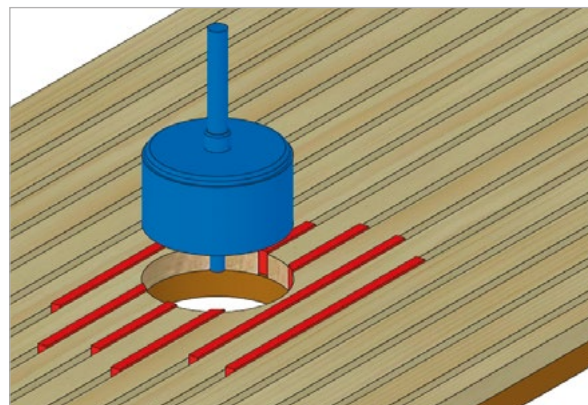
- The panels can be machined by conventional methods and/or with standard hand tools.
- The panels can be cut, drilled, sanded, etc., the same as solid wood.
- When machining (drilling, cutting - transverse and oblique) visual quality surfaces, a protective lamella can be used in the grooves of the panel, which prevents chipping and fraying of the cut.
- When drilling a hole for wiring or another opening, make sure that the hole is in the correct position and that other structures do not block these openings (suspension grills, hangers, etc.).

Transverse and oblique cutting

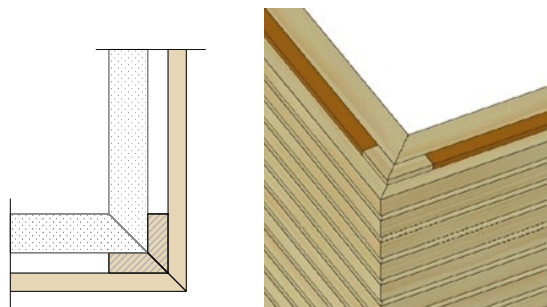
- It is ideal to make the cut at the location of the accouplement, with loose ends over 150 mm, we recommend adding additional accouplements to eliminate twisting the slats of the loose ends.
 - With transverse and oblique cuts, it is advisable to use a protective lamella in the grooves of the acoustic panels.
- Recommendation:** in order to prevent fraying of the visual surfaces, we cut the panel from the back side.
- When cutting, it is necessary to use a liner or a guide bar, which guarantees a straight cut.
 - A rectilinear vibrating saw can be used with curvilinear cuts. **Warning:** There is a risk of fraying.

*Cutting with protective lamellas**Cutting from the back side***Drill holes, jigsawing**

- Drill holes and openings of various diameters using drills, jigsaws, milling cutters, etc., can be made into acoustic panels.
- When machining, it is advisable to use a protective lamella in the grooves of the acoustic panels.

*Jigsawing with protective lamellas***10** Details of various executions**Sharp outer corner**

- The corners should be cut at an angle of 45°.
- The connection must be executed as accurately as possible; minimum deviations from the flatness of the base are permitted.
- When cutting at an angle, it is necessary to use a new, sharp cutting disc and cut the panel from the back so as not to fray the front visible edges of the panel.
- When cutting, we recommend using a guide bar or a ruler.
- The corners can also be prepared on a table sizing saw with scoring.
- We recommend cutting at the place of the accouplement.

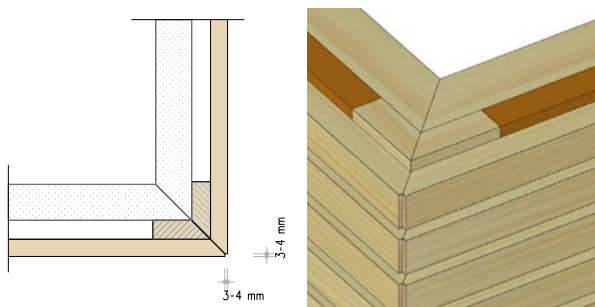


NOVATOP ACOUSTIC ASSEMBLY

CONTENT

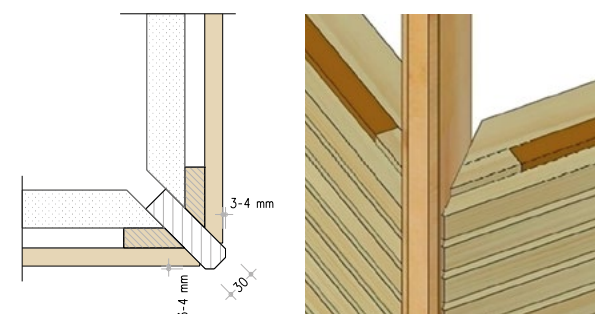
Outer corner with a partly flat front

- The corners are cut at an angle of 45°.
- The angle in the corner of the panel is cut in such a way so as to form a small (about 2 mm) flat front area.
- The advantage of the connection is that it is not so sharp and minor inaccuracies are much less visible.



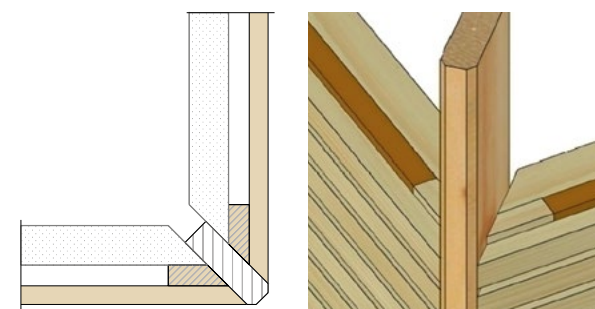
Outer corner with a partly flat front and a slat on the face side

- The corners are cut at an angle of 45°.
- There is a slat between individual panels that equalizes unevenness and creates a safe corner without sharp edges.



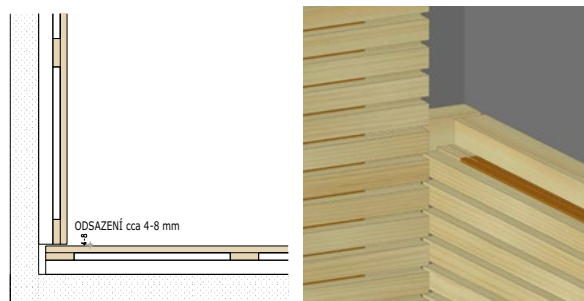
Outer corner with a slat on the face side

- The connection must be executed as accurately as possible; minimum deviations from the flatness of the base are permitted.
- With this connection, emphasis is placed on accuracy and precision of execution.



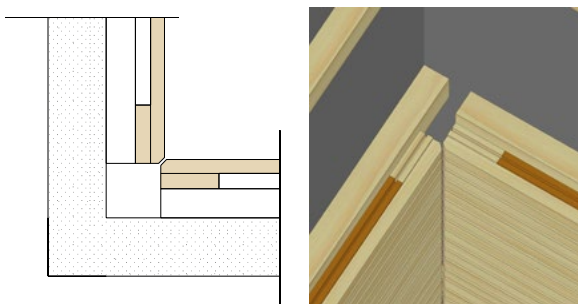
Inner corner with a visual joint

- The simplest execution of the inside connection, the optimum joint is 4-8 mm



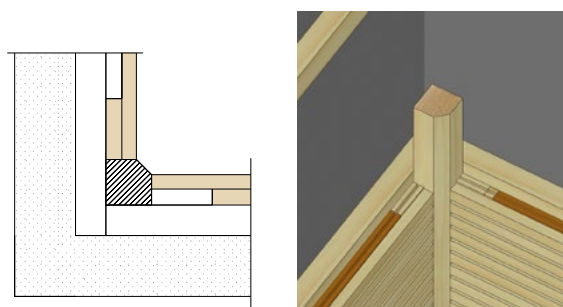
Inner corner with a partial bevel

- This connection is more demanding as for accuracy and execution and is effective.



Inner corner with a corner pole

- This connection is conducted the following way: a pole with a bevelled edge is put in the corner prior to the assembly of the acoustic panels and the acoustic panels are finished close to the pole, or it is possible to leave a visual joint between the pole and the panel 3-4 mm.



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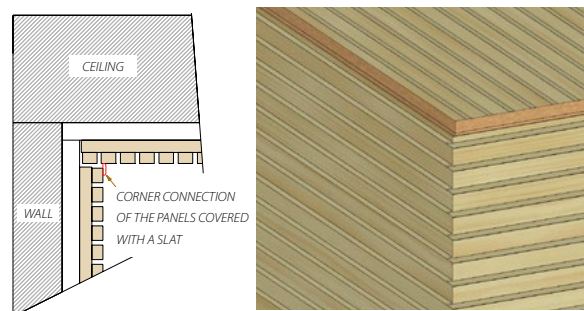
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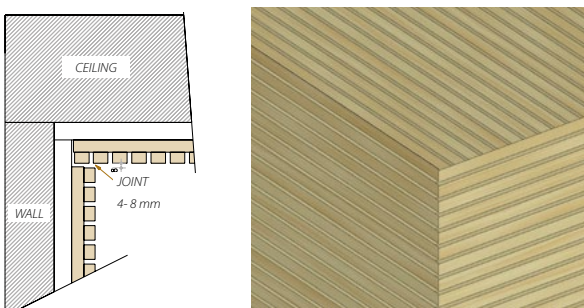
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CONTENT

11 Continuity of ceiling and wall panels



Detail of finishing with a slat

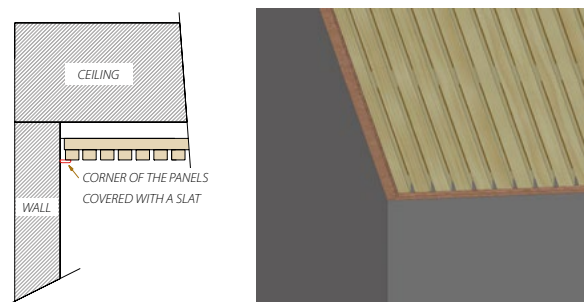


Detail of finishing with a visual joint

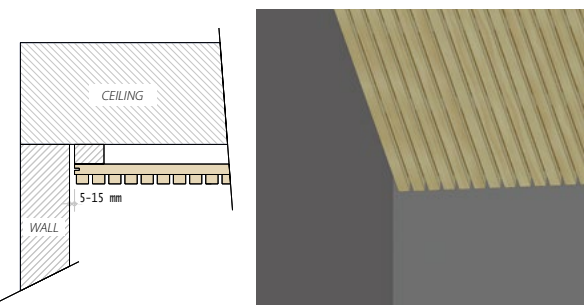
12 FINISHING OF ACOUSTIC PANELS

Horizontal structures

- We recommend finishing the acoustic panel with a visual joint a covering it with a slat.



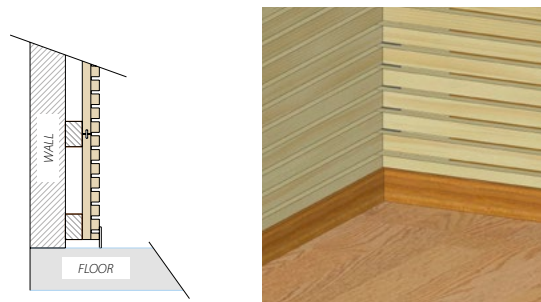
Detail of finishing with a slat



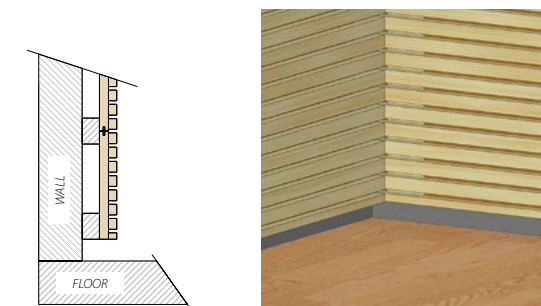
Detail of finishing with a visual joint

Vertical structures

- Due to possible unevenness of the floors, subsidence and other circumstances that affect the assembly, it is recommended finishing the acoustic panel just above the floor and create a detail with a visual joint or to cover the joint with a slat. See the pictures.



Detail of finishing with a slat



A detail of finishing the acoustic panel 50 mm above the floor

13 RECOMMENDED APPLICATION

Application on horizontal and vertical structures

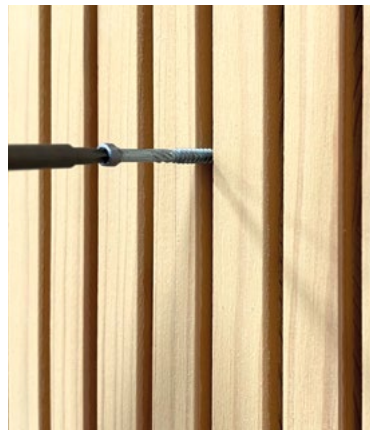
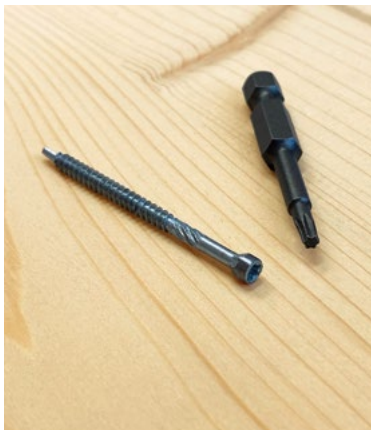
- Family homes, flats
- Auditoriums and lecture halls
- Offices
- Car showrooms
- Concert halls
- Educational facilities
- Sports halls and gymnasiums
- Sacral buildings

NOVATOP ACOUSTIC ASSEMBLY

CONTENT

14 Special screws for anchoring

- Special screws for easy anchoring directly into the groove of the panel with a 4 mm head
- Developed directly for the needs of the most requested profiles: Acoustic Marilyn 4/12 and Marilyn S1, S2
- Easy application without damaging the surface of the acoustic panel
- Possibility of anchoring to horizontal and vertical structures
- Recommended amount: 10 pcs/m²
- Can only be delivered as part of the order, 250 pcs packaging.



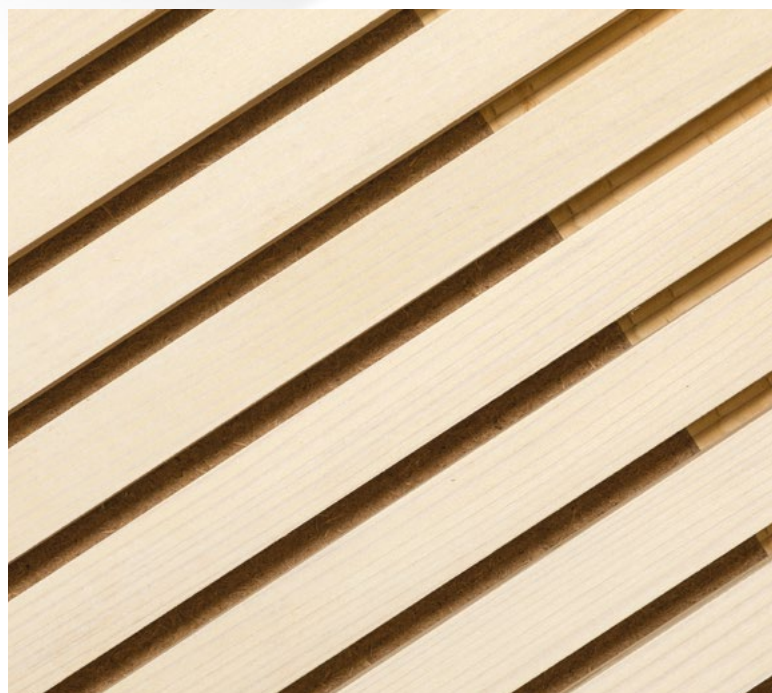
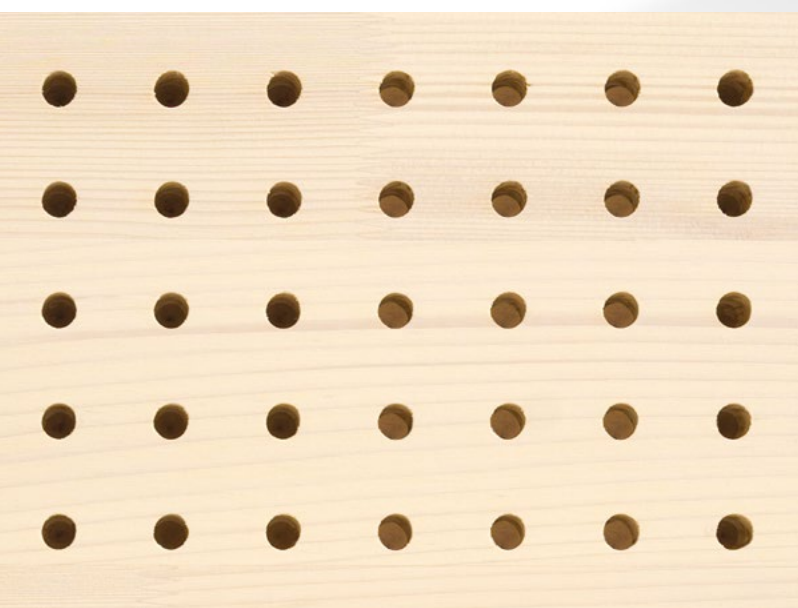
CONTENT

NOTES

CONTENT

EXAMPLES OF APPLICATIONS





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