



**NOVATOP ACOUSTIC**  
Technical documentation  
Instructions for installation



**NOVATOP** 

## NOVATOP ACOUSTIC

### Acoustic panels

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#### CERTIFICATES, ATTESTS AND REPORTS

Individual certificates, the certificates and reports can be downloaded at [novatop-system.cz](http://novatop-system.cz)






Version: 06/2019

# NOVATOP ACOUSTIC DATASHEET

## 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




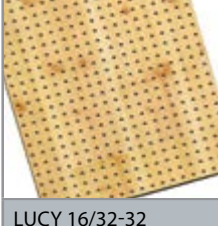
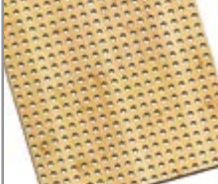
SUZANNA				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	15/33	15 x 300	18	7,6
GIULIA				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	8/33	8 x 600	10	8,2
MARILYNE 8/25				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	8/25	8 x 420	20	7,5
MARILYNE 4/12				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	4/12	4 x 420	20	7,5
MARILYNE SPECIAL				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	4/16-21-16-12-16-24-12	4 x 420	16	11,3

## WOOD SPECIES



Quality specifications see pg. 19–20

## PROFILES

TINA				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	170 x 580	580 x 580	36	5,6
BEATA				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	8/ 25	8 x ℓ not through	reflective element	13,2
LUCY 8/16-16				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	8/16-16	8	20	7,5
LUCY 10/32-32				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	10/32-32	10	8	8,6
LUCY 16/32-32				
	raster [mm]	groove dimension [mm]	perforation [%]	surface weight [kg/m <sup>2</sup> ]
	16/32-32	16	21	7,3



MARILYNE – detail with fibertex 75 g/m<sup>2</sup> + Steico Flex thickness of 50 mm from the reverse side of the panel



MARILYNE 8/25– detail with fibertex 75 g/m<sup>2</sup> + Steico Flex thickness of 50 mm



MARILYNE 4/12 – detail from the obverse side of the panel

# NOVATOP ACOUSTIC SPECIFICATION OF MATERIALS IN THE PANELS

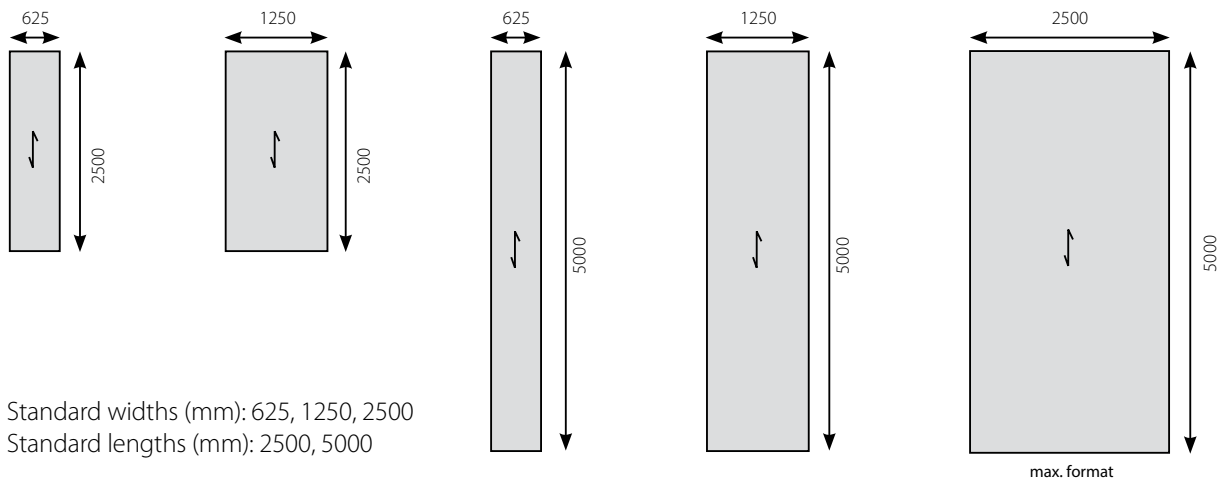
<b>THREE-LAYER SOLID PANEL</b>		
TECHNICAL PARAMETERS AGROP SWP		
Requirements	EN 13353, EN 13986	
Operation classes	SWP/1, SWP/2, according to EN 13353	
Gluing	D4 according to EN 204	
Glue	PVAc according to EN 204	
Types of trees	spruce, fir	
Surface quality	Visual interior (corresponding to B). Quality 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 (only fir), 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	
<b>FIBREBOARD INSULATION</b>		
TECHNICAL PARAMETERS STEICO	Flex	Therm SD
Requirements	EN 13171	
Density [kg /m <sup>3</sup> ]	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	
<b>UNWOVEN FABRIC</b>		
TECHNICAL PARAMETERS Fibertex Acoustic	FR PET 451	FR PET 75
Surface weight [g/m <sup>2</sup> ]	450	75
Material	100% polyester (black colour)	
Breaking strength [N]	425/800	25/35
Acoustic resistance [Ns/m <sup>3</sup> ]	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
<b>CASSETTES OF MINERAL WOOL</b>		
	TECHNICAL PARAMETERS Eurocoustic TONGA	TECHNICAL PARAMETERS Ursa Aku:
Density [kg/m <sup>3</sup> ]	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

The minimum amount of panels of one colour is charged per package (1 package: 24 pcs/ 600 x 600 mm/ altogether 8.64 m<sup>2</sup>).

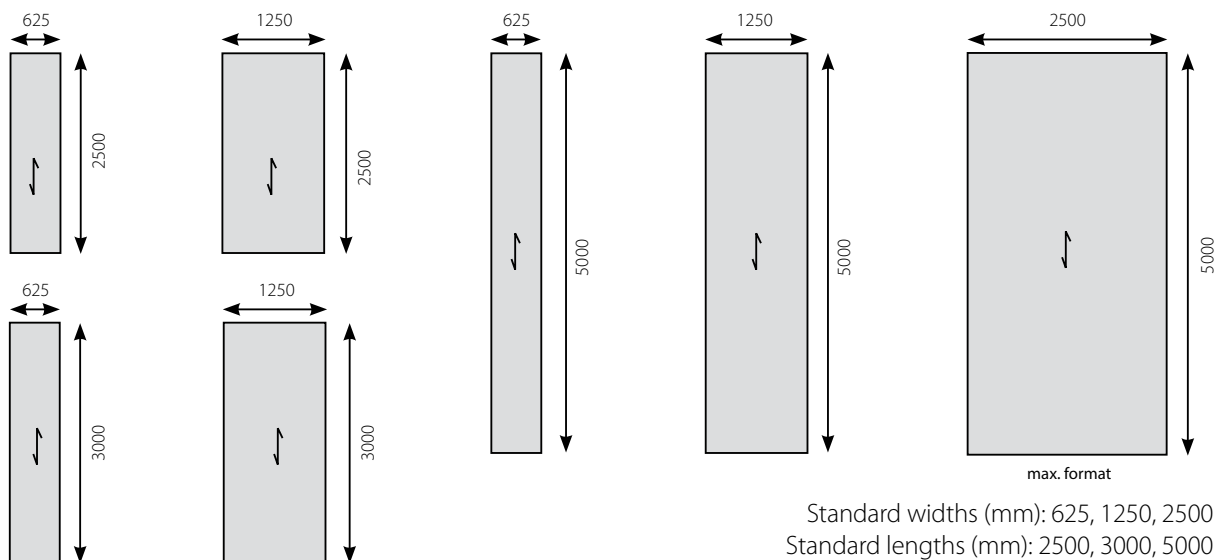
Colours of the cassettes of mineral wool, see p. 23

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. We offer standard lengths of 3000 mm and 5000 mm with Giulia profile.

## STANDARD FORMATS – SPRUCE



## STANDARD FORMATS – FIR



## PRECISE FORMATS OF LUCY PROFILE

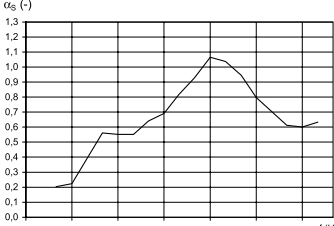
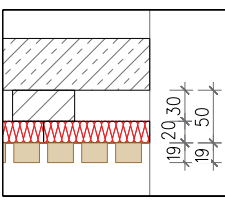
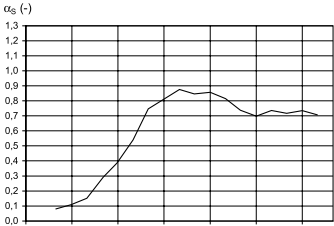
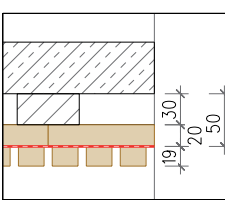
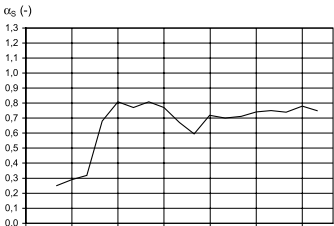
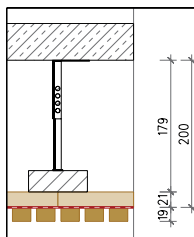
Drilling diameter	Dimension	Spruce	Fir
8/16-16	624 x 2496	✓	✓
	624 x 2992	☒	✓
	624 x 4992	✓	✓
	1248 x 2496	✓	✓
	1248 x 2992	☒	✓
	1248 x 4992	✓	✓

Drilling diameter	Dimension	Spruce	Fir
10/32-32 16/32-32	608 x 2496	✓	✓
	608 x 2976	☒	✓
	608 x 4992	✓	✓
	1248 x 2496	✓	✓
	1248 x 2976	☒	✓
	1248 x 4992	✓	✓

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

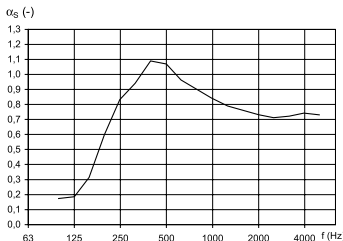
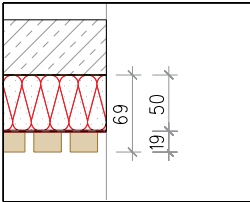
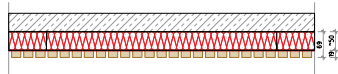
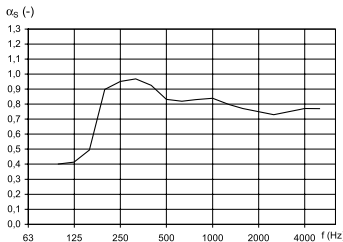
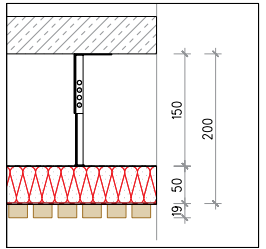
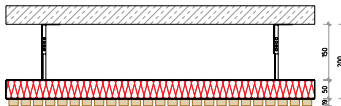
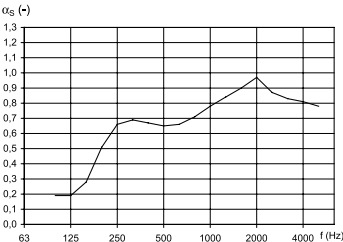
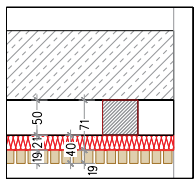
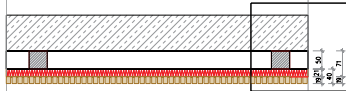
Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
<b>1.1 PROFIL SUZANNA</b>	Air gap [30 mm]	39	50	12,3		
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [a <sub>w</sub> ]	0,55				
	Absorption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

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

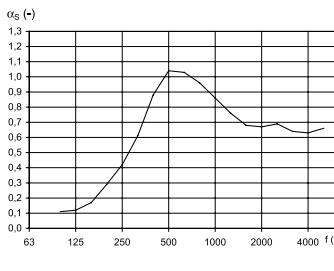
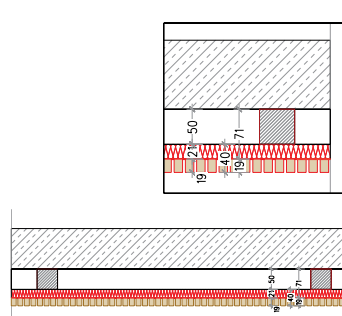
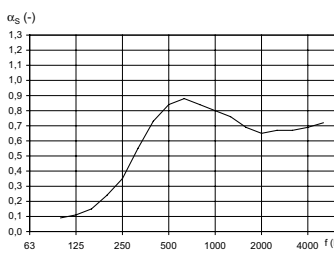
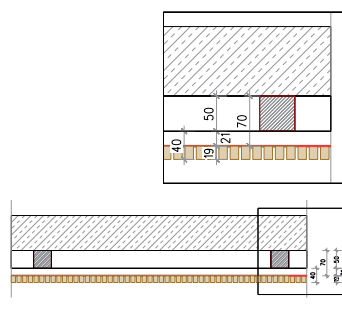
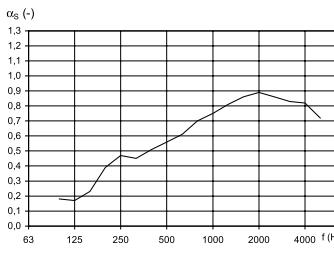
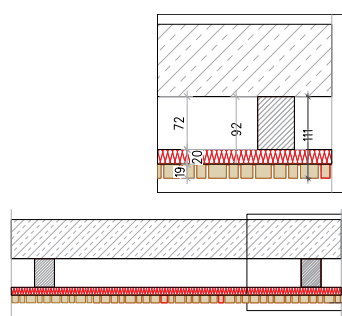
Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
<b>3.1 PROFIL MARILYNE 8/25</b>	Air gap [30 mm]	40	50	12,8		
	SWP Transverse prism [21 mm]					
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]	0,75				
Absorption class	C	Number of report 311/12				
<b>3.2 PROFIL MARILYNE 8/25</b>	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 <sub>w</sub> ]	0,7				
Absorption class	C	Number of report 312/12				
<b>3.3 PROFIL MARILYNE 8/25</b>	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 <sub>w</sub> ]	0,75				
Absorption class	C	Number of report 313/12				



# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
3.4 PROFIL 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 [a <sub>w</sub> ]	0,85	Number of report 315/12			
	Absorption class	B				
3.5 PROFIL 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 [a <sub>w</sub> ]	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 [a <sub>w</sub> ]	0,75	Number of report 056/16			
	Absorption class	C				

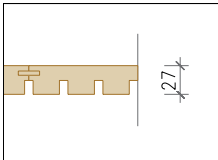

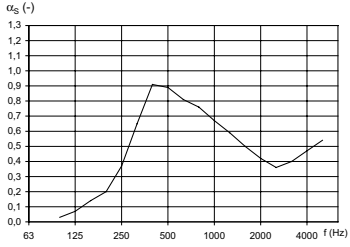
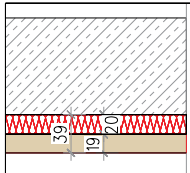
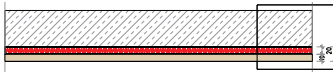
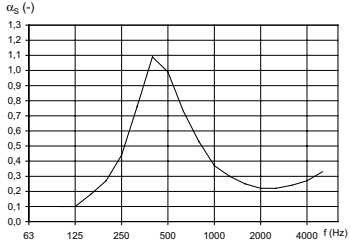
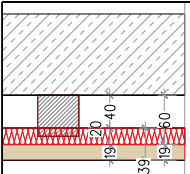
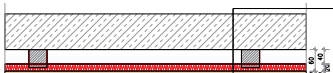
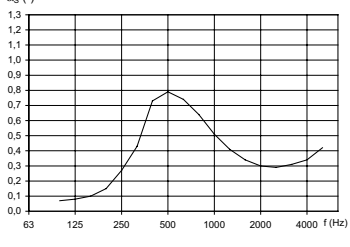
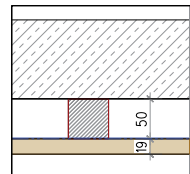

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
<b>3.7 MARILYNE 4/12</b>	Air gap [50 mm]	40	70	10		
	Ursa Aku [20 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [ $\alpha_w$ ]		0,70			
	Absorption class		C	Number of report 056/16		
<b>3.8 MARILYNE 4/12</b>	Air gap [70 mm]	40	90	10		
	Fibertex 450 g/m <sup>2</sup> [3 mm]					
	Transverse beam [21 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [ $\alpha_w$ ]		0,65			
	Absorption class		C	Number of report 056/16		
<b>3.9 MARILYNE SPECIAL</b>	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 [ $\alpha_w$ ]		0,65			
	Absorption class		C	Number of report 335/17		

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
3.10 MARILYNE SPECIAL	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 <sub>w</sub> ]	0,65				
	Absorption class	C	Number of report 335/17			
3.11 MARILYNE SPECIAL	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 <sub>w</sub> ]	0,65				
	Absorption class	C	Number of report 335/17			
4.1 PROFIL TINA	Air gap [0-50 mm]	46	50	10		
	Tonga [40 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]	0,55				
	Absorption class	D	Number of report 309/12			

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
<b>5.1 PROFIL BEATA</b>	SWP panel with openings [27 mm]	27		11,4		
	Dispersing element					
<b>6.1 LUCY ø10/32-32</b>	Air gap [0 mm]	39	20	10		 
	Steico Therm SD [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]			0,55		
	Absorption class			D		
<b>6.2 LUCY ø10/32-32</b>	Air gap [40 mm]	39	60	10		 
	Ursa Aku 20 mm [20 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]			0,35		
	Absorption class			D		
<b>6.3 LUCY ø10/32-32</b>	Air gap [50 mm]	19	50	10		 
	Fibertex 450 g/m <sup>2</sup> [3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]			0,40		
	Absorption class			D		

# NOVATOP ACOUSTIC TECHNICAL DATA SHEET

Nr. /profile	Composition	Total thickness [mm]	Hollow space	Surface weight [kg/m <sup>2</sup> ]	Diagram	Section
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 <sub>w</sub> ]	0,85				
	Absorption class	B	Number of report 055/16			
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 <sub>w</sub> ]	0,60				
	Absorption class	C	Number of report 055/16			
6.6 LUCY ø8/16-16	Air gap [50 mm]	19	50	10		
	Fibertex 450 g/m <sup>2</sup> [3 mm]					
	SWP with perforation [19 mm]					
	Weighted sound absorption coefficient [α <sub>w</sub> ]	0,55				
	Absorption class	D	Number of report 055/16			
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 <sub>w</sub> ]	0,60				
	Absorption class	C	Number of report 282/17			

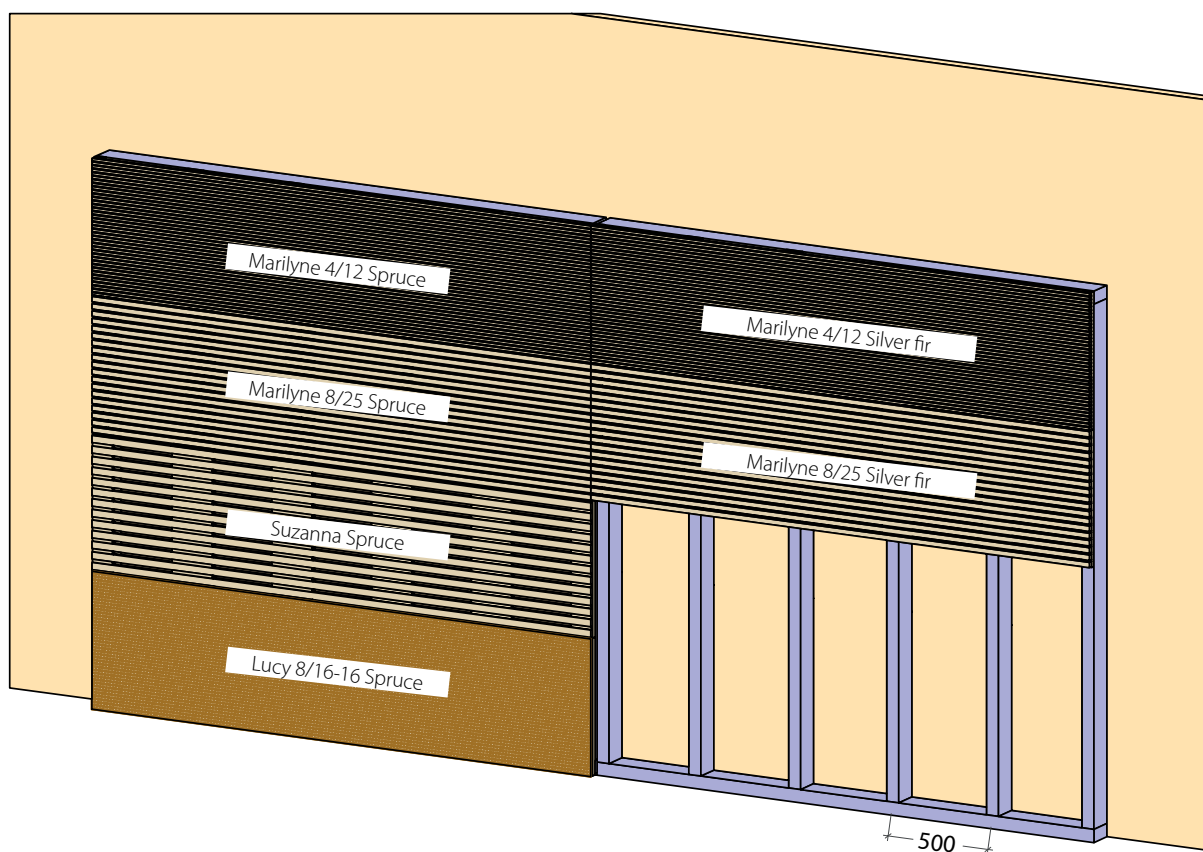
## AN IMPACT TEST PERFORMED WITH A HANDBALL

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/m<sup>2</sup> 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.



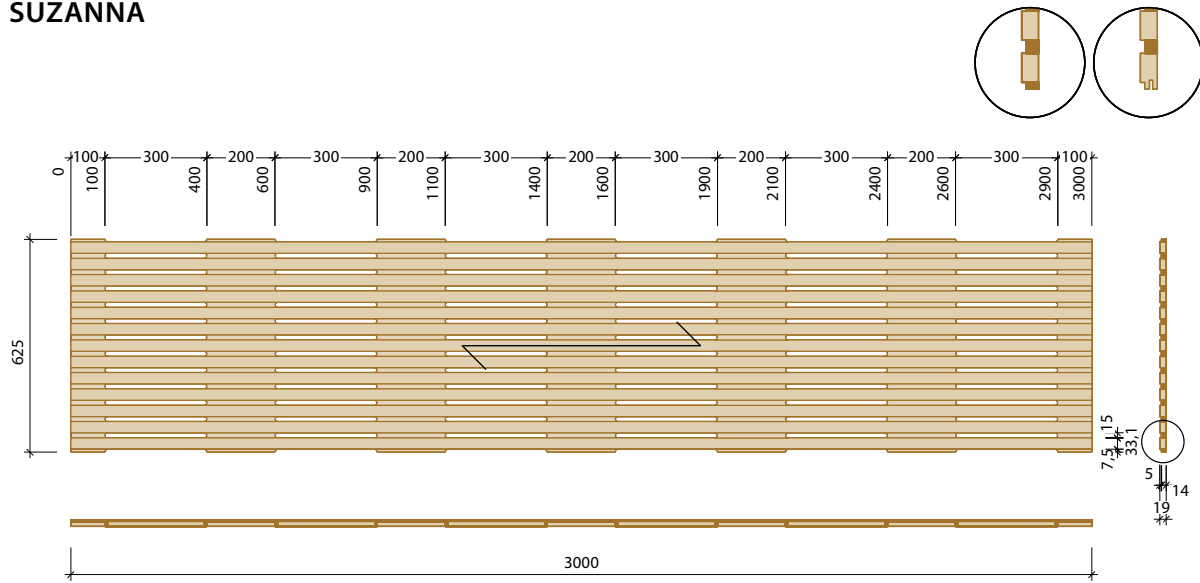
The samples tested

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

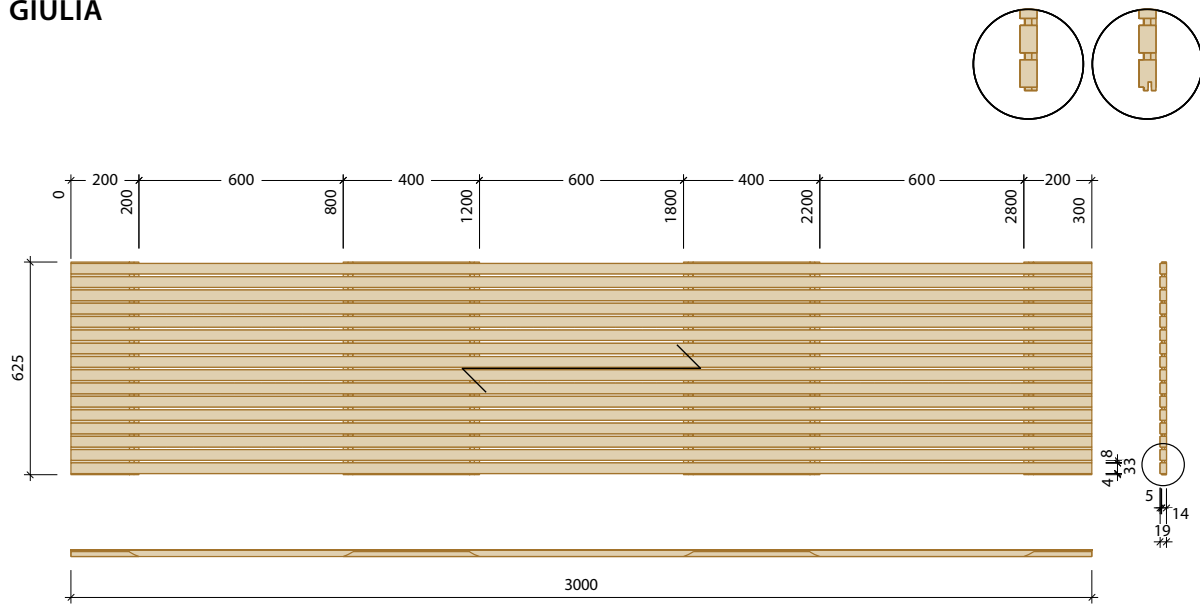


# NOVATOP ACOUSTIC DRAWINGS

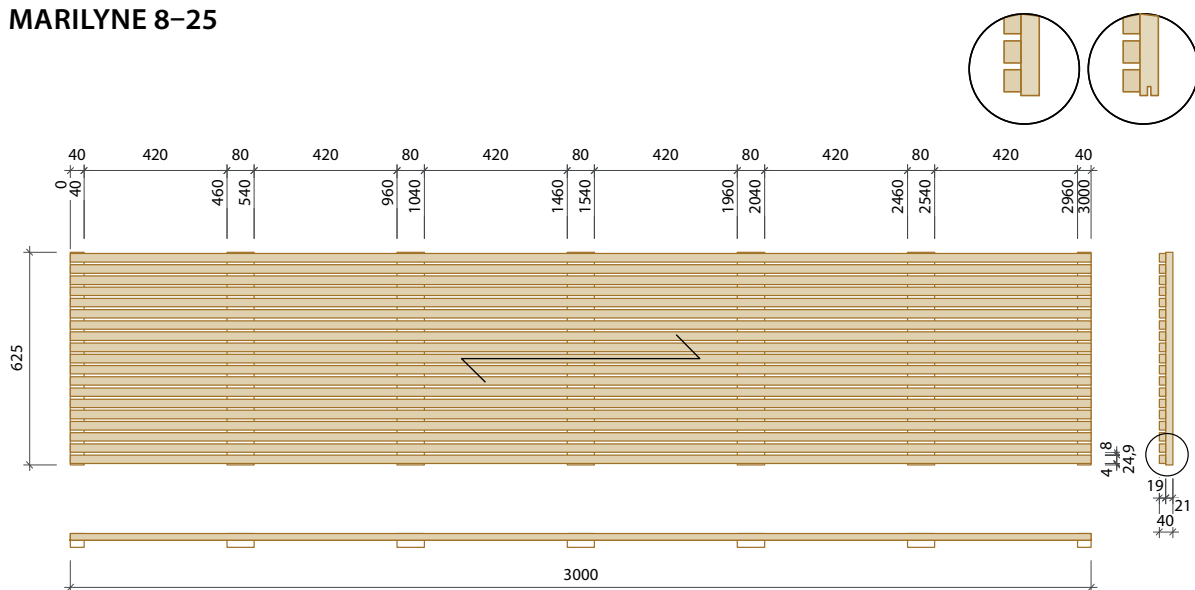
## SUZANNA



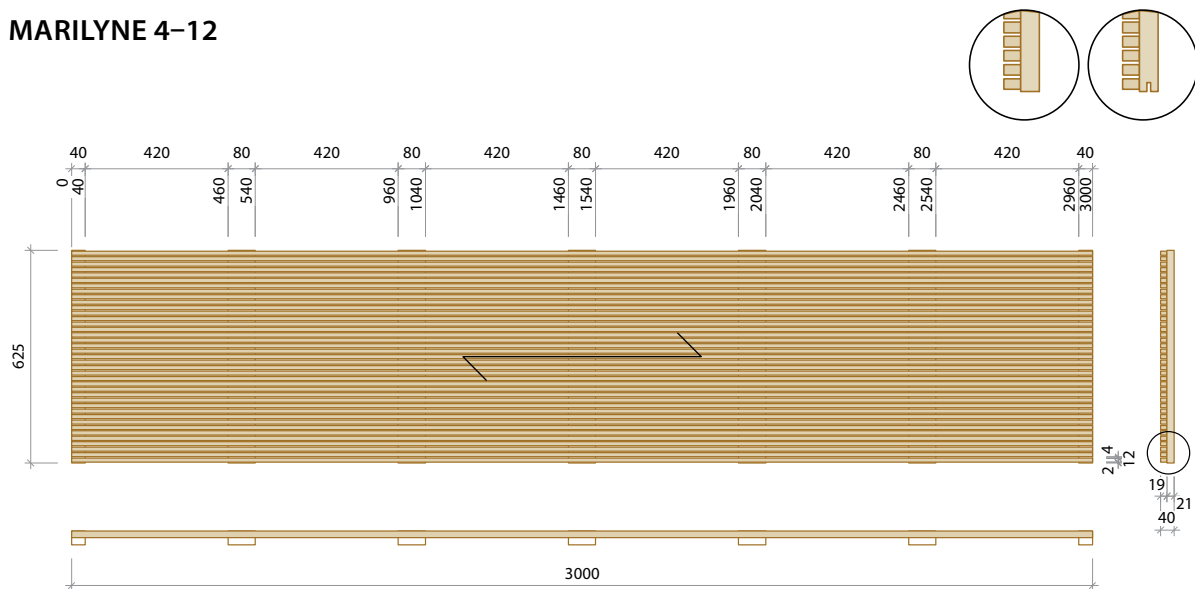
## GIULIA



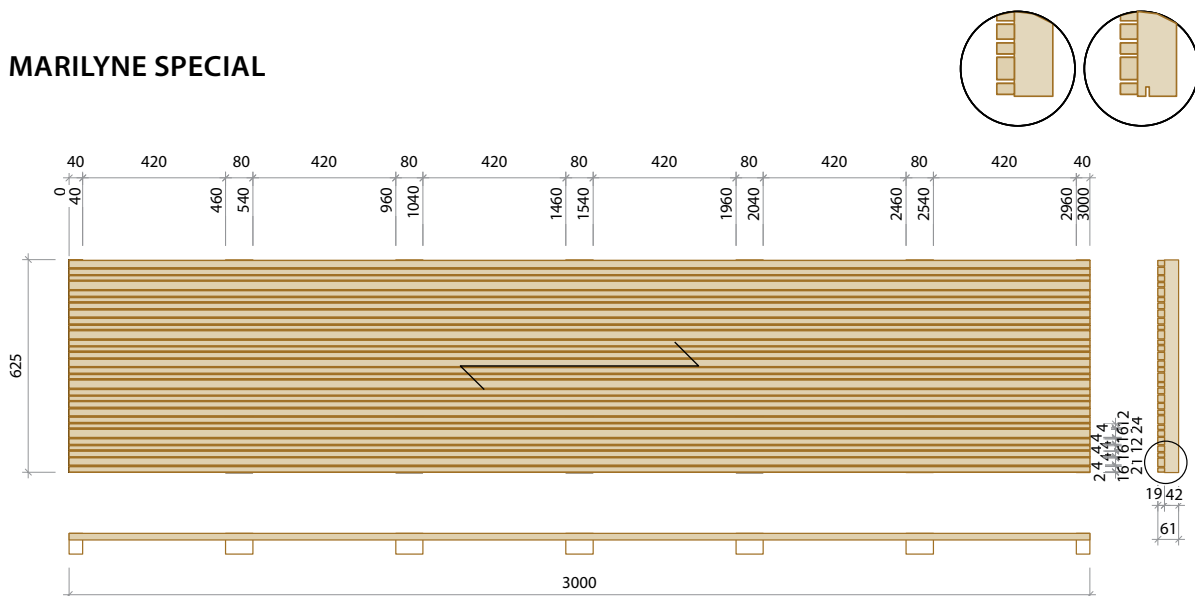
## MARILYNE 8-25



## MARILYNE 4-12



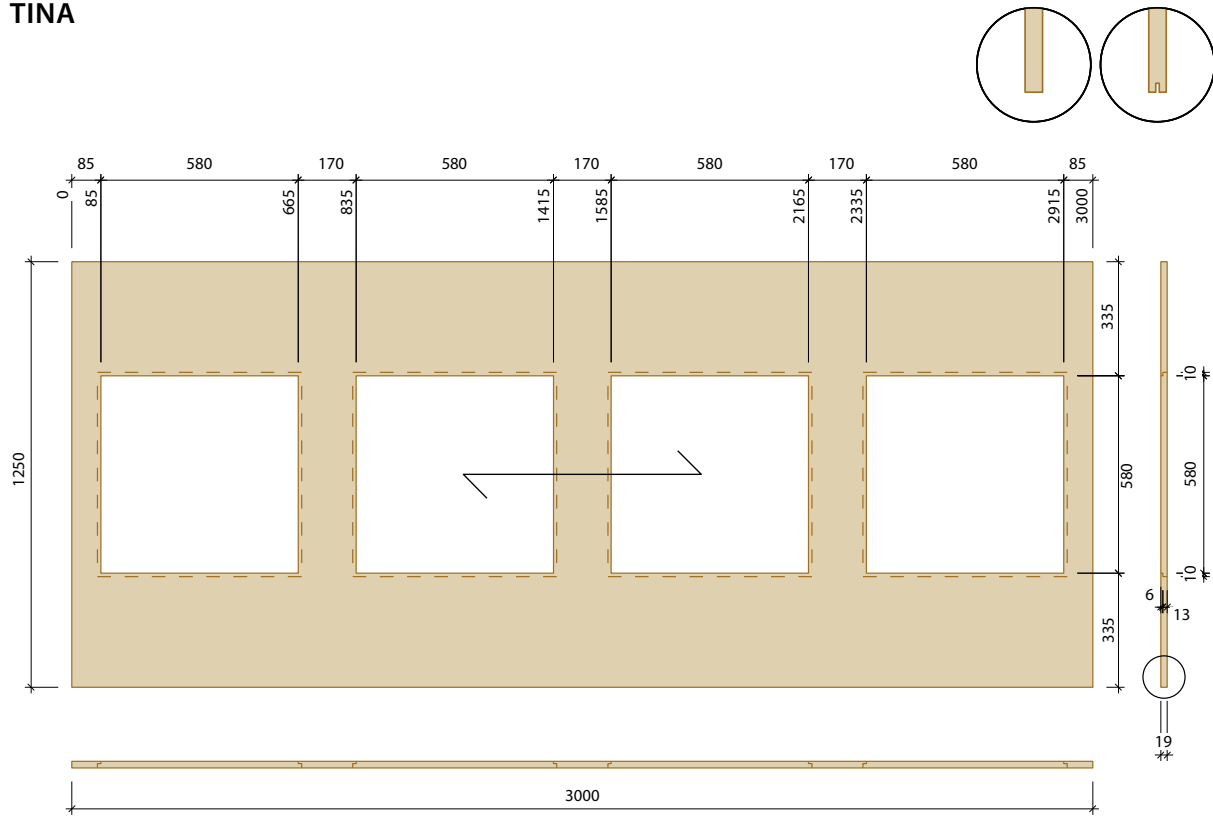
## MARILYNE SPECIAL



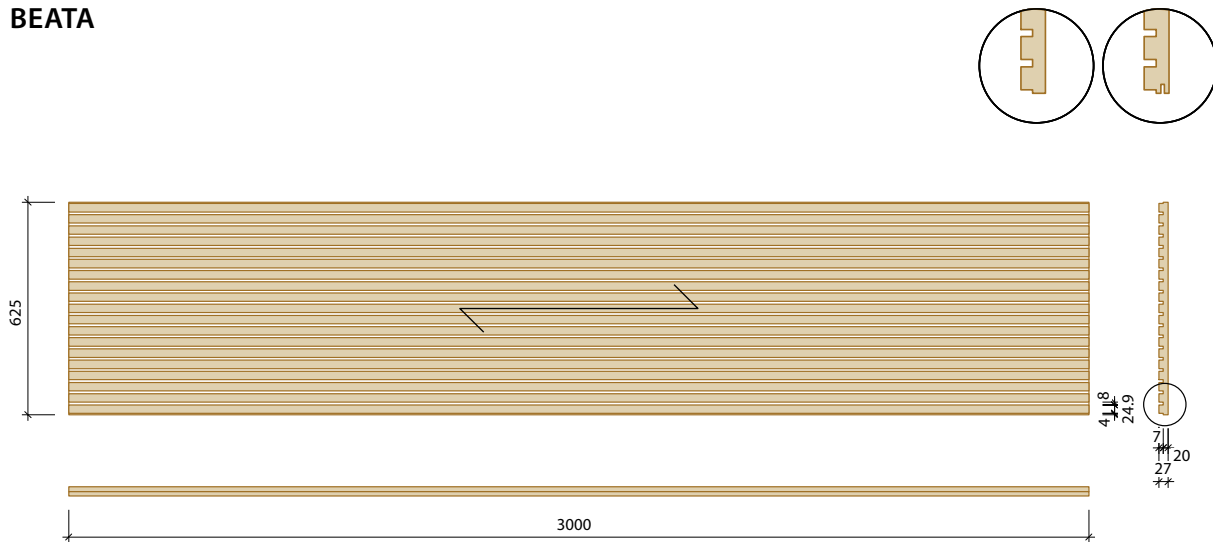


# NOVATOP ACOUSTIC DRAWINGS

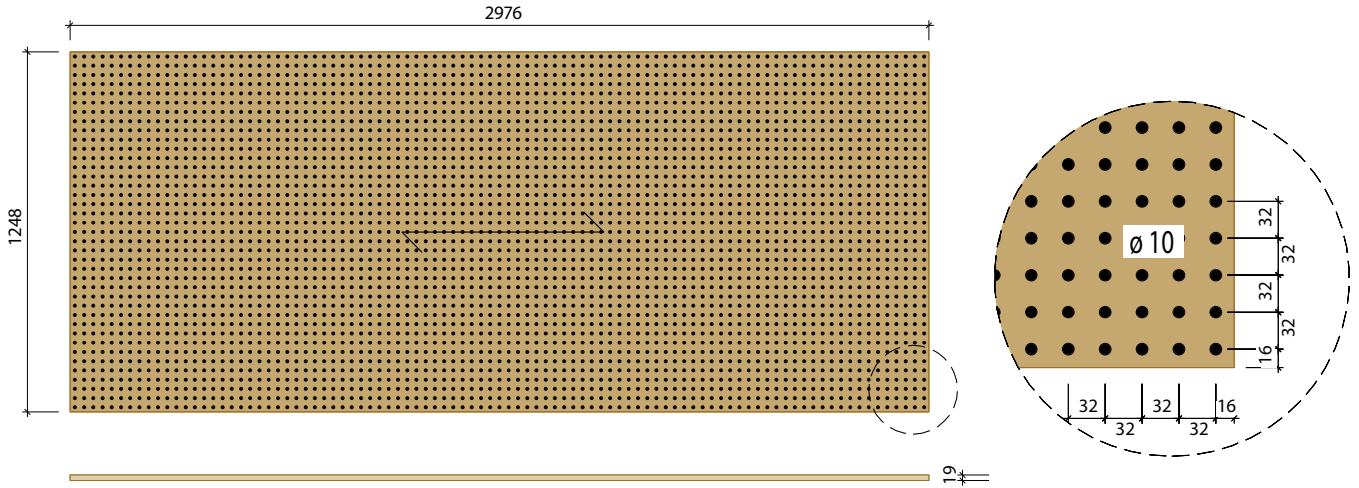
## TINA



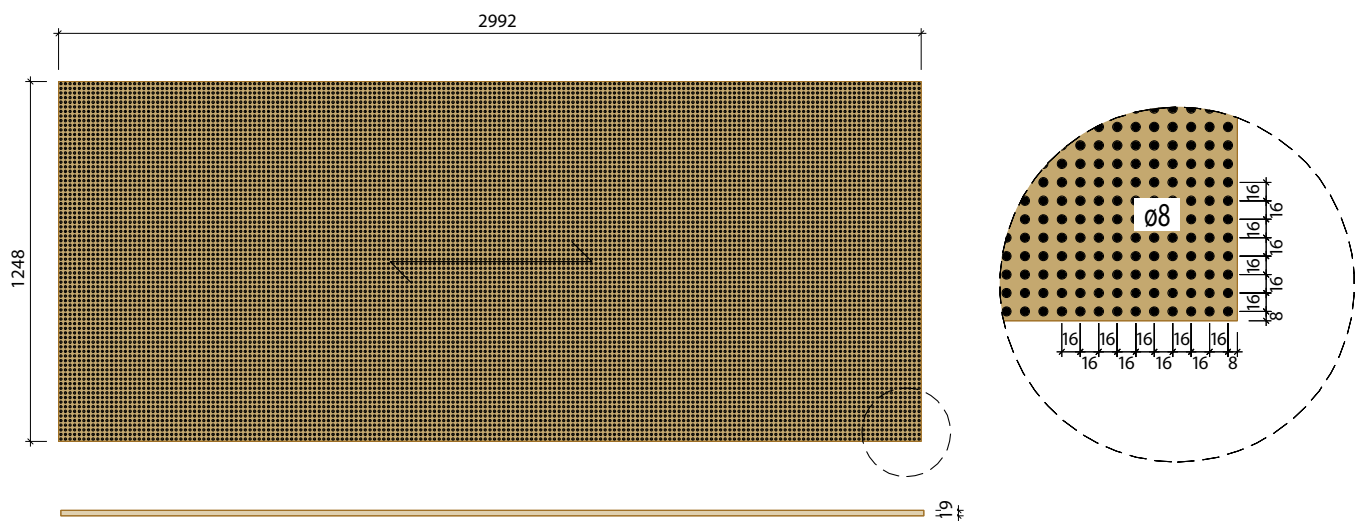
## BEATA



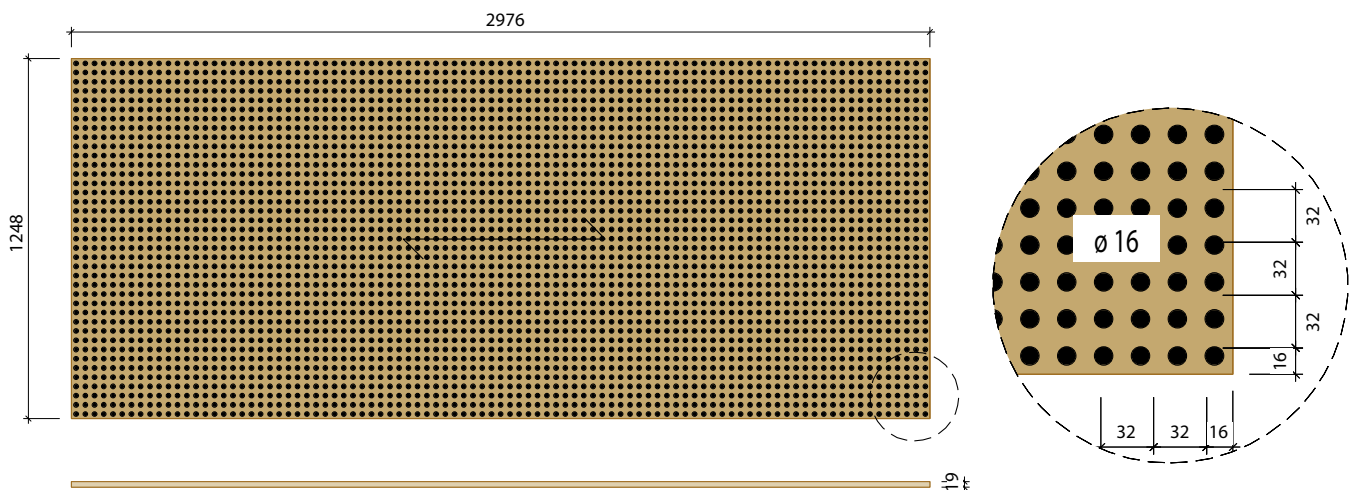
**LUCY  $\phi 10/32-32$**



**LUCY  $\phi 8/16-16$**



**LUCY  $\phi 16/32-32$**



# NOVATOP ACOUSTIC QUALITY SPECIFICATIONS

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## SPRUCE: VISIBLE – LIVING SPACE QUALITY

Structural elements can be used for the final solution of interiors. The surface strips are made of higher quality timber. The surface is ground with repaired knots of various sizes which have been closed with colourless putty. The minimum amount of putty is used. Minor abrasions and bruises up to a depth of 1 mm and area of 10 mm<sup>2</sup> are acceptable. When packed, the panels are interposed with cardboard sheets.



# NOVATOP ACOUSTIC QUALITY SPECIFICATIONS

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## SILVER FIR: VISIBLE – LIVING SPACE QUALITY

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. It is particularly suitable for interiors and has similar mechanical properties as spruce.



# NOVATOP ACOUSTIC SURFACE FINISH

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Acoustic panels are supplied without surface treatment as standard. The surface can be treated with conventional wood coatings for interior use.

## RECOMMENDED SURFACE FINISH

### **Adler Lingovit Interior UV 100**

- an Adler product; a brand that prides itself on quality and sustainability
- very low VOC values
- a water-based paint for interior use
- new triple UV protection (UV absorber, physical UV protection mainly with colourless pigments, lignin stabilizer)
- For detailed information see the manufacturer's Technical Data Sheet (link in PDF) or the manufacturer's website.

## SURFACE FINISH TYPE

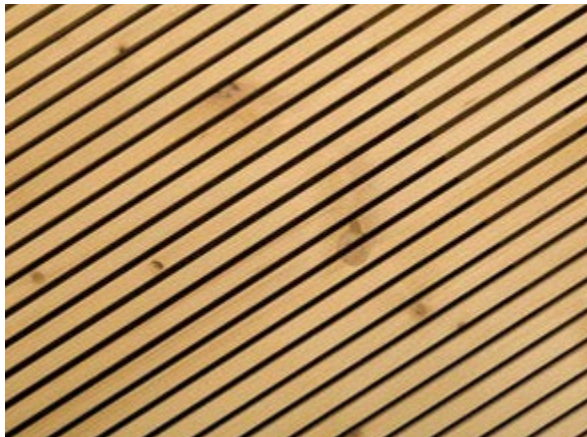
**Primer** – applied by roller – designed to be completed on site  
**Final surface** – two sprayed layers with intermediate sanding

## SHADES

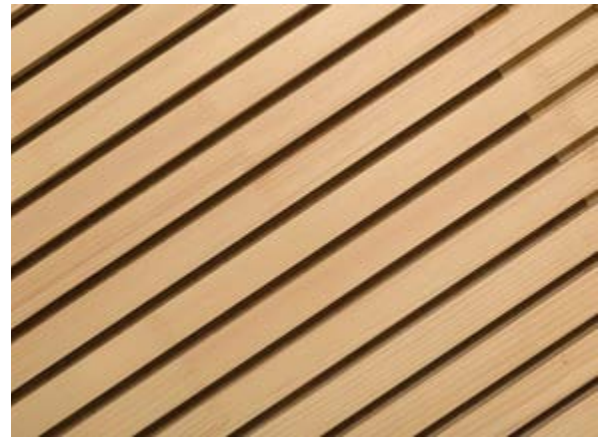
**Natur** – transparent without colour pigments  
**Zugspitz and Mont Blanc** – with white pigments

# NOVATOP ACOUSTIC SURFACE FINISH

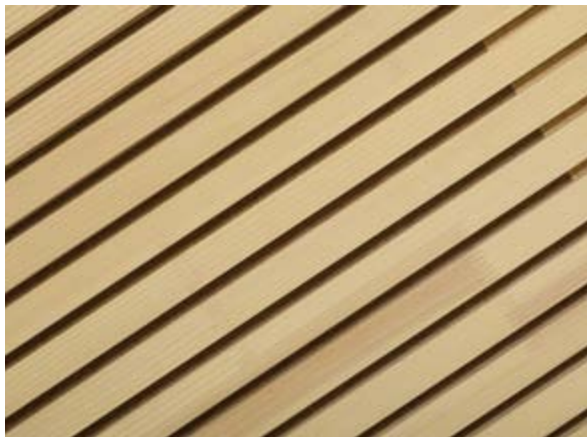
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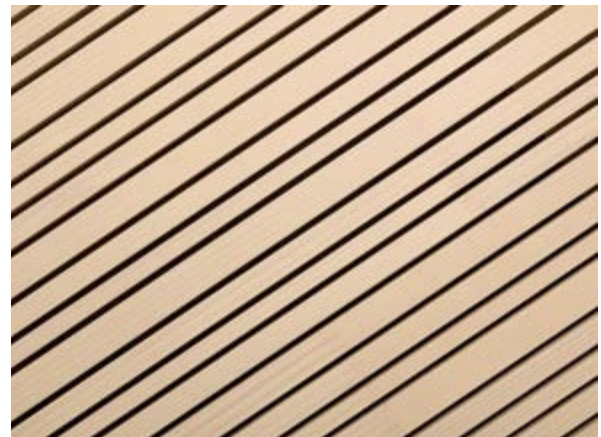
Primer finish – Adler Natur



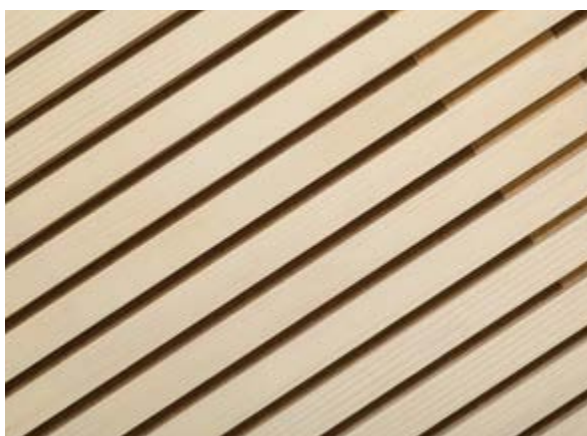
Final surface finish – Adler Natur



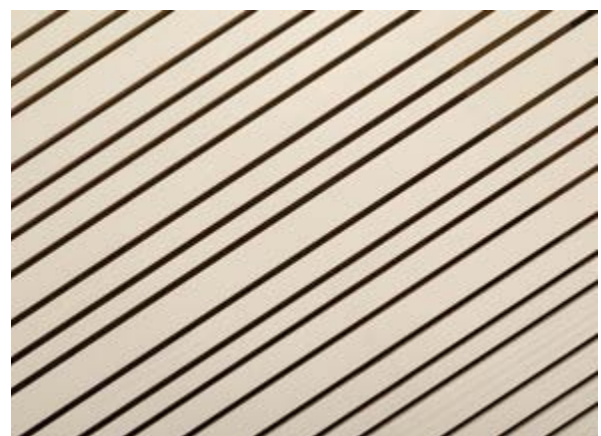
Primer finish – Adler Zugspitze



Final surface finish – Adler Zugspitze



Primer finish – Adler Mont Blanc



Final surface finish – Adler Mont Blanc

# NOVATOP ACOUSTIC COLOURS OF THE MINERAL WOOL 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 m<sup>2</sup>).

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:

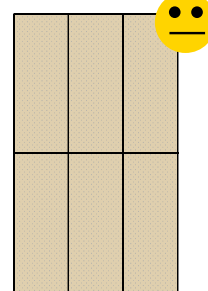
- Observe all safety precautions.
- Use appropriate personal protective equipment.
- Extreme care must be exercised when working at heights and on lifting platforms.
- Secure the panels against falling.

## 4 TYPES OF APPLICATIONS

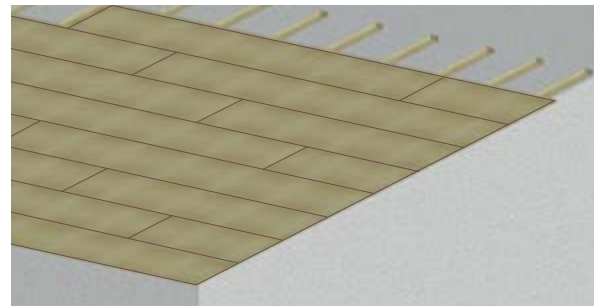
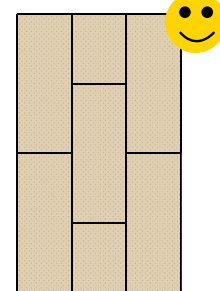
### Horizontal and vertical structures

- 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.

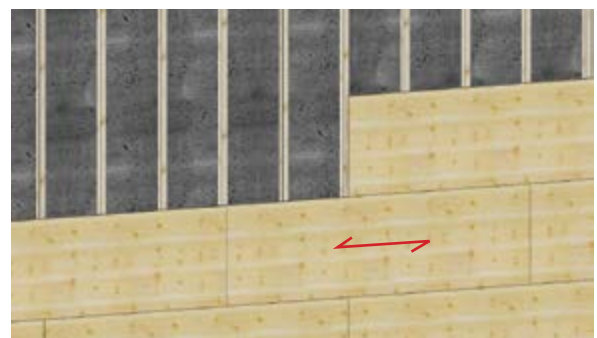
Not recommended



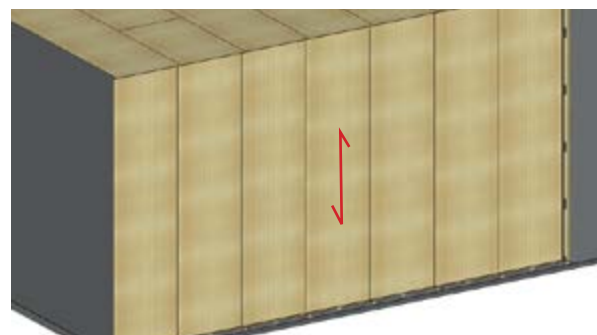
Recommended



A horizontal structure (ceiling) - set-over connections



Vertical structure (wall) - horizontal placement



Vertical structure (wall) - vertical placement

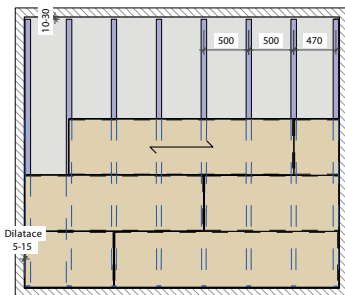


# NOVATOP ACOUSTIC ASSEMBLY

## 5 RECOMMENDATIONS FOR ASSEMBLY

### Preparation of the base grill

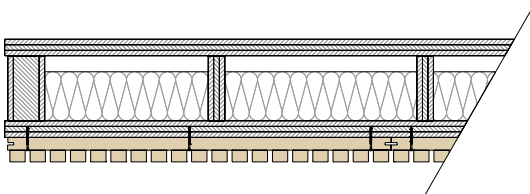
- When preparing the grill, it is necessary to take into account unevenness of the base and to decrease the span of the first batten, so that it was possible to adjust the width of the first acoustic panel.
- On the base designed for the lining, we will prepare a balancing grill in a screen which we 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.



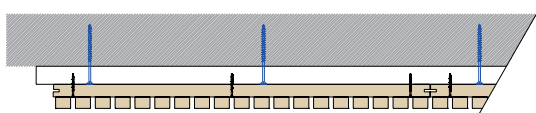
Screen of a balancing grill - transverse (for Giulia -1,000 mm)

## 6 TYPES OF APPLICATIONS

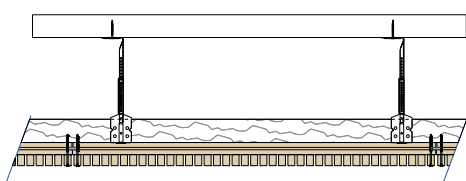
### 6.1 No grill (e.g. with NOVATOP, OSB, SDK)



### 6.2 Wooden grill (bottom view)

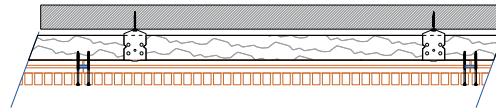


Contact wooden grill

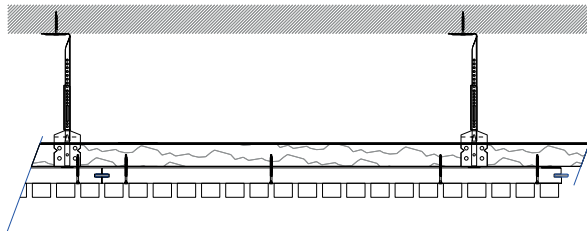


Suspended wooden grill

### Metal-sheet grill



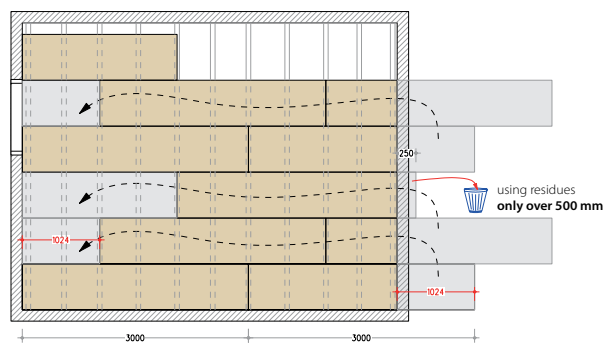
Contact metal-sheet grill



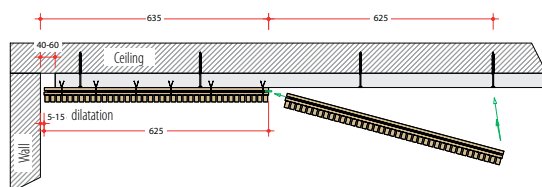
Suspended metal-sheet grill

## 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

# NOVATOP ACOUSTIC ASSEMBLY

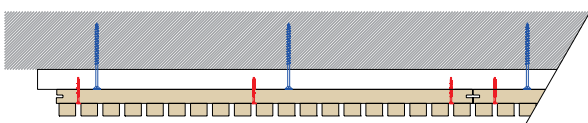
## 8 ANCHORING

- 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

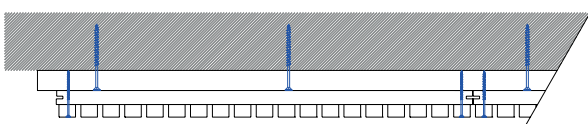
#### Anchoring with screws

- 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/m<sup>2</sup>.** (A general rule applies: each accouplement of the panel must be screwed in such a way so that the panel will not bend.)

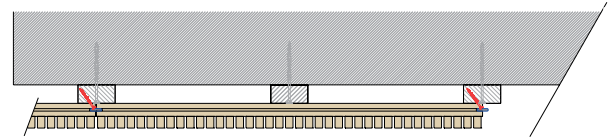


Screws in the groove

- 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/m<sup>2</sup>.**



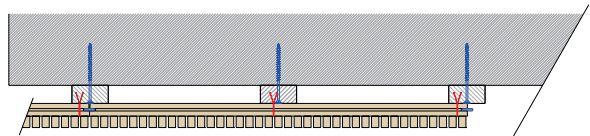
Screws in the area of the panel



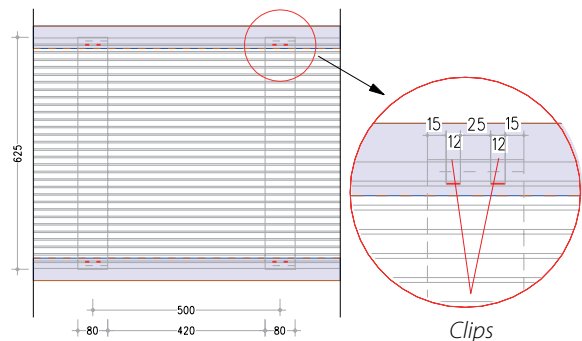
Screws into a side groove with a base grill

#### 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/m<sup>2</sup>** (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)



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

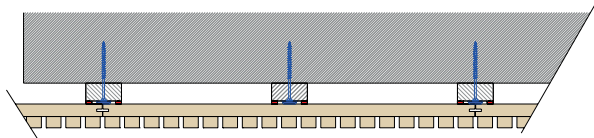


An air pistol with a narrow end (Reich).

# NOVATOP ACOUSTIC ASSEMBLY

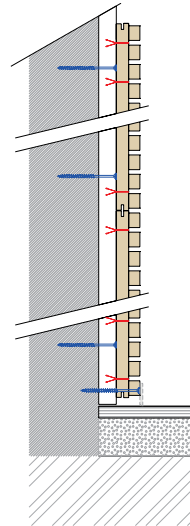
## Gluing

- Glue acoustic panels using a special gluing system with a base grill (e.g. SIKA TACK). 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 / m<sup>2</sup>.**

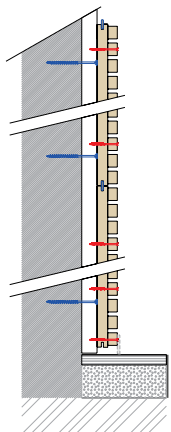


*Clips into a groove with a base grill*

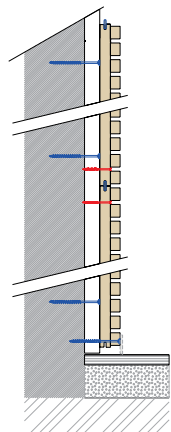
## 8.2 VERTICAL STRUCTURES

### Anchoring with screws

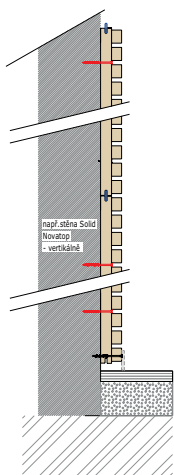
- As with the horizontal structures, it is important to align the underlying battens of the vertical structures as well. It is necessary to take into account the movement of joints of both the floor and the ceiling structures.
- Anchoring vertical structures can be achieved with screws, clips and gluing.
- **The minimum number of screws is 8 pcs / m<sup>2</sup>.**



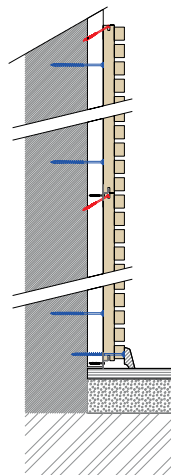
*Screws in the area of the panel*



*Screws in the groove*



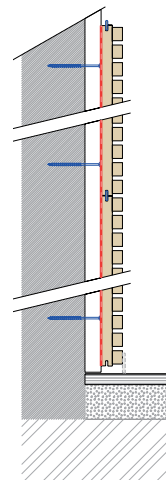
*Screws in a groove on a SOLID*



*Screws into a side groove*

### Gluing

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



*Gluing*

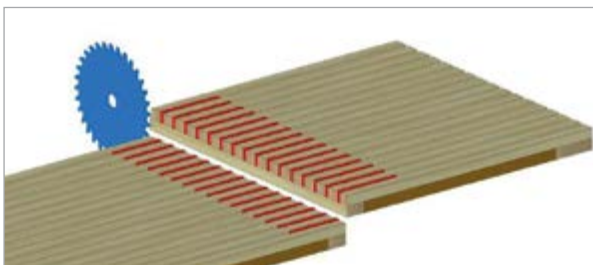
## 9 MANUAL MACHINING OF PANELS

### General information

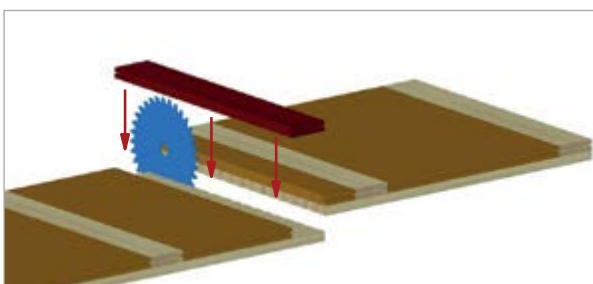
- The panels can be machined by conventional methods and/or with standard hand tools.
- The panels can be cut, drilled, sanded, etc., the same as solid wood.
- When machining (drilling, cutting - transverse and oblique) visual quality surfaces, a protective lamella can be used in the grooves of the panel, 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.



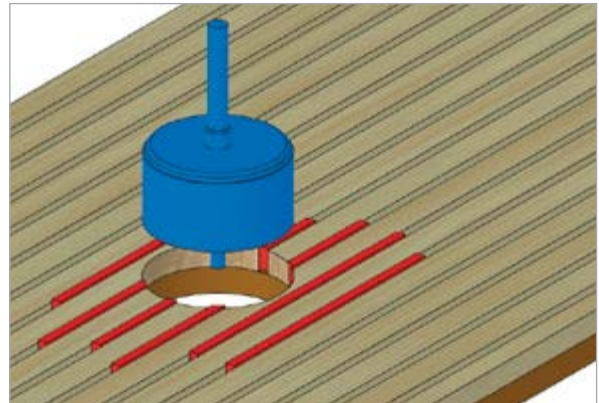
Cutting with protective lamellas



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.

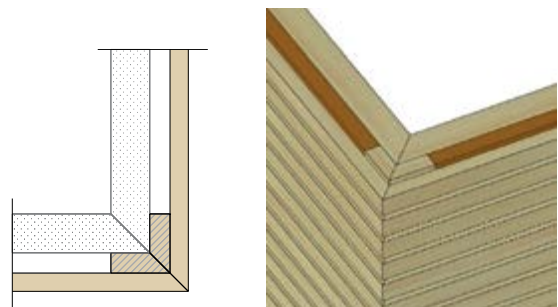


Jigsawing with protective lamellas

## 10 Details of various executions

### Sharp outer corner

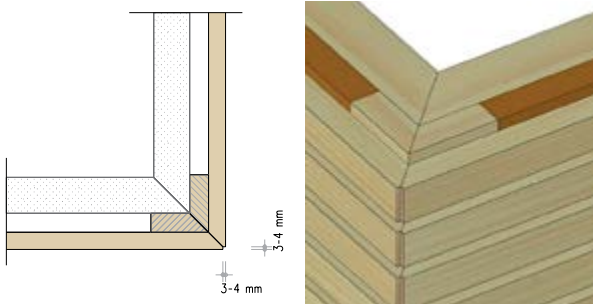
- The corners should be cut at an angle of 45°.
- The connection must be executed as accurately as possible; minimum deviations from the flatness of the base are permitted.
- When cutting at an angle, it is necessary to use a new, sharp cutting disc and cut the panel from the back so as not to fray the 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

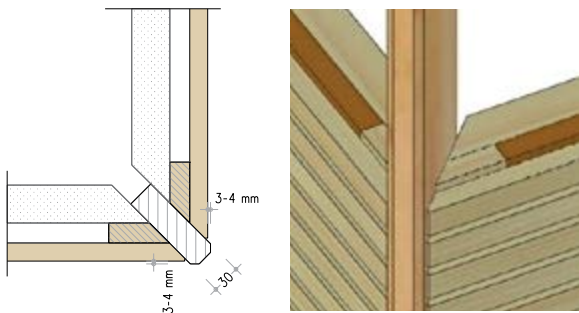
## Outer corner with a partly flat front

- 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.



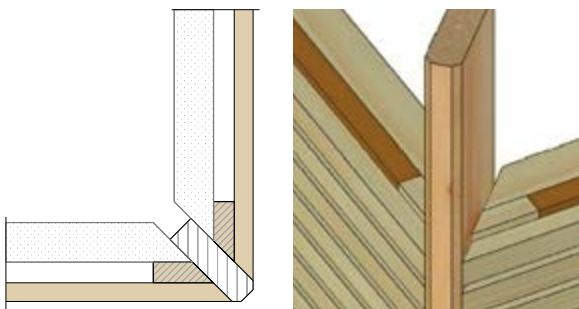
## Outer corner with a partly flat front and a slat on the face side

- 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.



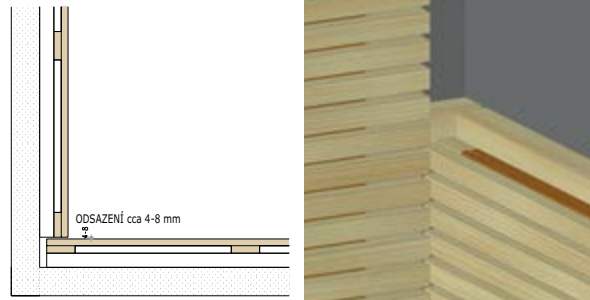
## Outer corner with a slat on the face side

- 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.



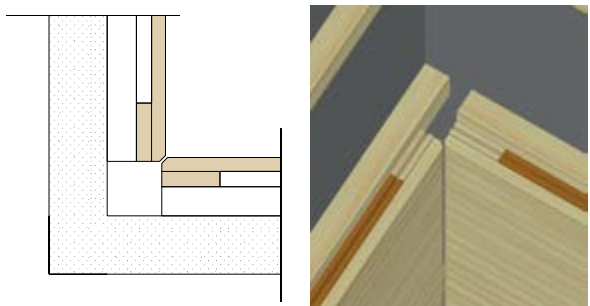
## Inner corner with a visual joint

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



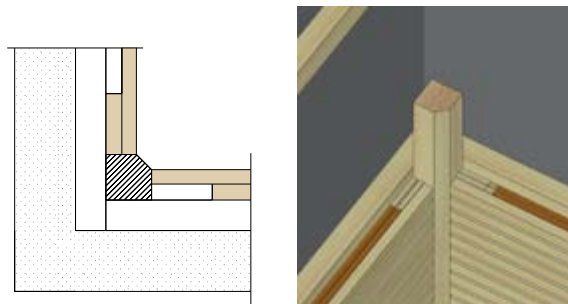
## Inner corner with a partial bevel

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

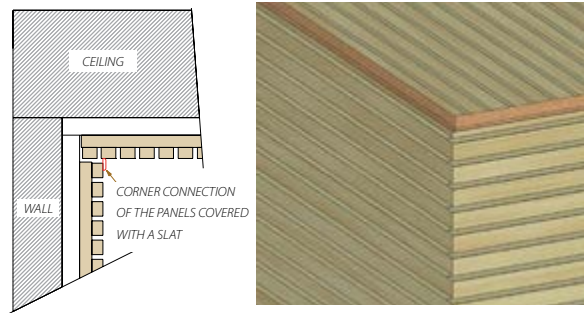


## Inner corner with a corner pole

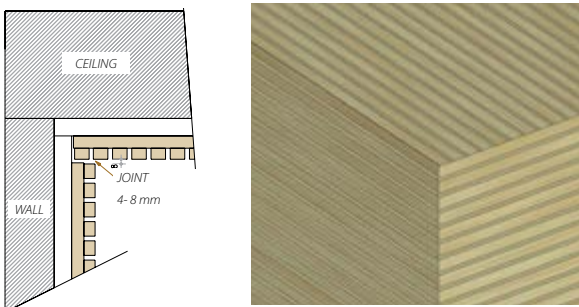
- This connection is conducted the following way: a pole with a bevelled edge is put in the corner prior to the assembly of the acoustic panels and the acoustic panels are finished close to the pole, or it is possible to leave a visual joint between the pole and the panel 3-4 mm.



## 11 Continuity of ceiling and wall panels



Detail of finishing with a slat

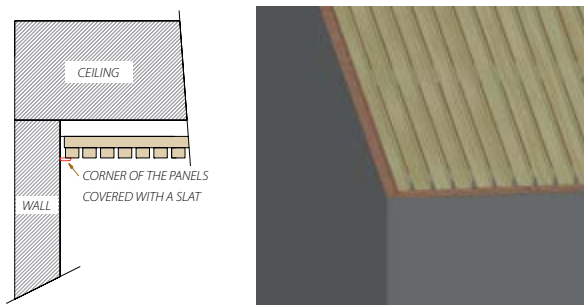


Detail of finishing with a visual joint

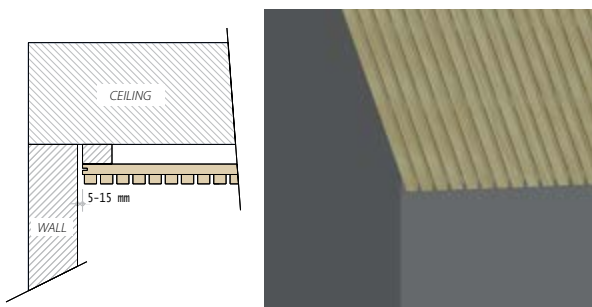
## 12 FINISHING OF ACOUSTIC PANELS

### 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

# PROCESSING, PACKAGING, STORAGE, TRANSPORT, MANIPULATION

## 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/>		
Pcs.:	Date:	
Weight:	Proportion:	Control:
<small>Manufacturer: ASPOP NOVÁ a.s., Panský Dvůr 168 Písek, 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

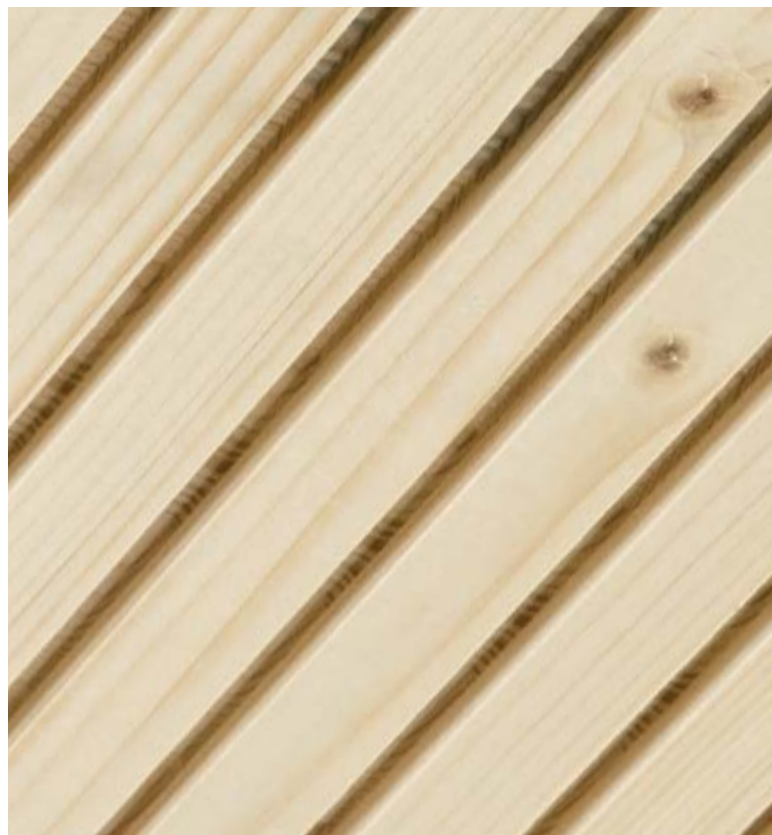
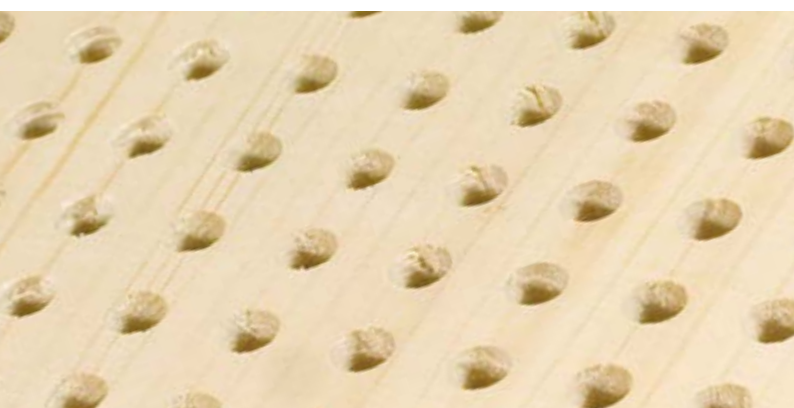
As a standard, the panels are transported in lorries (covered semi-trailers), possibly in containers.

**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

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

**Warning:** 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.



[www.novatop-system.com](http://www.novatop-system.com)

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novatop-system.com



Manufacturer certificates:



EUROPEAN UNION EUROPEAN FUND  
FOR REGIONAL DEVELOPMENT  
INVESTMENT IN YOUR FUTURE

The technical documentation and the certificates can be downloaded at [www.novatop-system.com](http://www.novatop-system.com)