LIGNO® Acoustic light

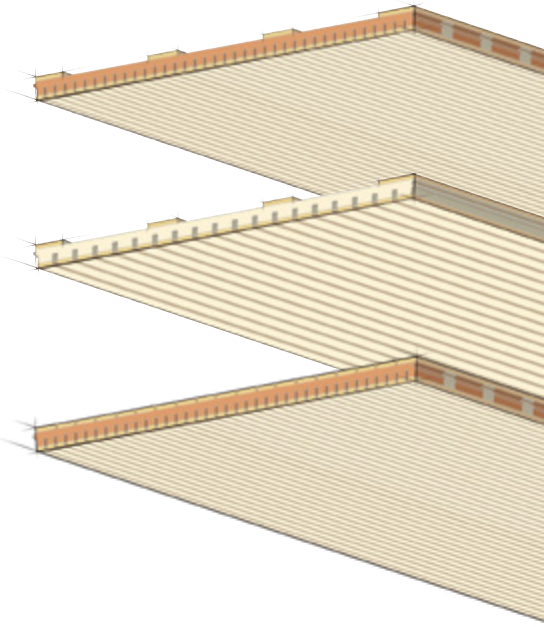
Technical Data

Applications

Last revision on 28/07/2025,
subject to modifications.

LIGNO® Acoustic light timber acoustic elements **for acoustically effective panelling** are used in industrial buildings (e.g. offices, indoor swimming pools, sports halls) as well as in residential buildings.

- suspended ceilings – for example under wood and concrete structures.
- wall coverings – also in front of masonry or concrete
- acoustic canopies – with edge profiles and light fixtures as acoustic sails freely suspended in the room.
- grid ceiling – as cut-to-size panels for insertion into standard system ceilings.



Structure / technical data

The acoustically optimized cross-laminated timber panels consist of three layers: Factory slitting of the first layer brings about a batten look on the visible face. The panelling is **ball-impact proof**, appropriate assembly provided. The middle ply (transverse layer) is oriented at right angles to the top layer thus providing for a high degree of dimensional stability. The backside layer in turn is formed by at least four longitudinally arranged slats.

Acoustic absorbers are integrated in the transverse layer.

- Coverage width: 625 mm
- Type of wood: Spruce / fir (wood moisture content: 9 ± 2 %)
- Gluing: PUR adhesive (formaldehyde free), adhesive by weight approx. 1.1 % (triple layer)
- B2 according to DIN 4102 or D-s2, d0 according to EN / special versions available in other fire protection classes.
- Places of installation: **Structures closed on all sides and heated**, as well as **covered, open structures**, elements **not exposed to the weather** (use class 0 according to DIN 68800 / service classes 1 and 2 according to Eurocode 5 for wood moisture ‹ 20 %, diagram for equilibrium wood moisture see page 24).

Contents

CE

Information and references online:
www.lignotrend.com/acoustic-light

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LIGNO TREND®
For sustainable building in timber.

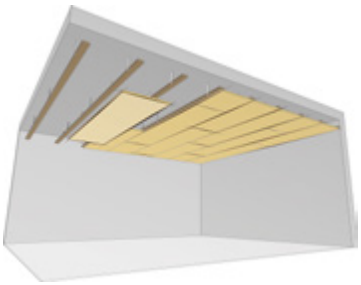
Application range and suitable element types

Ceiling panelling / element installation in the stretching bond

Use of elements
in standard length 2940 mm

Notes:

- Frontal butts are identifiable on the surface.
- Little offcut: The section of the last element is being used as the first element in the next row each time.



Element selection:

- **Standard (flammability)** 3S_33, 3S_39, 3C_ ▶ from page 6
- **Fire retardant** special configuration with
  _C-s2-d0 3S_33
  _B-s2-d0 3G_33
  to DIN EN 13501-1 ▶ page 10

Ceiling canopy

LIGNO® Acoustic light can be used as ready assembled, free-hanging ceiling canopy with circumferential wood or metal frame and with integrated work-place luminaire as an option.

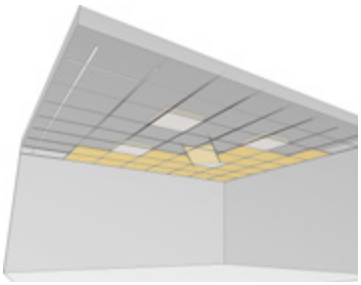
The canopy is suspended on wire ropes or in groups, hence free circulation of air (important in thermal activation of concrete ceilings)

Element selection:

- **Standard (flammability)** 3S_33, 3S_39 ▶ page 6
  Note: Canopies are delivered fully configured

Grid ceiling

Readily cut pieces of LIGNO® Acoustic light panels can be fit into existing grid ceiling structures.



Element selection:

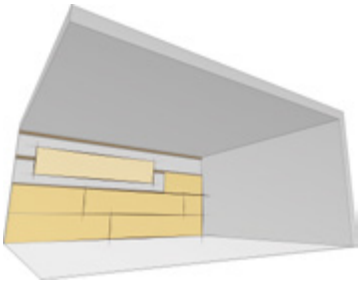
- **LIGNO® Acoustic light** 3S_33 ▶ page 6
- **LIGNO® Acoustic light** 3S_33 / 3G_33
  Further areas of application ▶ page 31

Wall panelling / element installation in the stretching bond

Use of elements
in standard length 2940 mm

Notes:

- Frontal butts are identifiable on the surface.
- Installation with vertical or horizontal gap pattern.
- Little offcut: The section of the last element is being used as the first element in the next row each time.



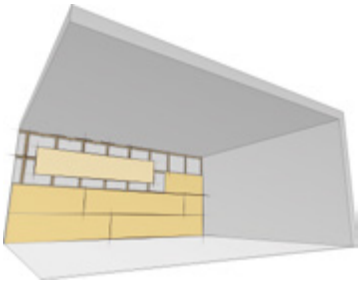
Element selection:

- **Standard (flammability)** 3S_33, 3C_33 ▶ from page 6
- **Fire retardant** special configuration with
  _C-s2-d0 3S_33
  _B-s2-d0 3G_33
  to DIN EN 13501-1 ▶ page 10

Impact protection wall, acoustically effective

Fitting of elements on special, force-reducing substructure (elastic brace and counterbrace configuration, force reduction checked).

Installation with horizontal or vertical joint pattern.



Element selection:

- **LIGNO® Acoustic Sport 3G_33**

▶ Technical data sheet LIGNO® Acoustic Sport

Green building

natureplus

LIGNO® Acoustic is natureplus® certified. This means that the product fulfils the highest requirements for healthy indoor climate, sustainability and climate protection. Extensive tests provide a comprehensive basis for the certification of buildings (characteristic values on request).

- Compliance with stringent emission limit values
- Functional and quality criteria
- Origin of the wood (FSC/PEFC sources), sustainable production of the elements
- Life cycle analysis

The certificate according to guideline RL0201 covers the untreated basic element in fir/spruce.
The standard absorber _a70g, made from soft wood fiber, is included in the certification.

IBR

The Rosenheim Institute for Building Biology has subjected surface-finished variants of the acoustic panelling LIGNO® acoustic panelling underwent intensive testing for potentially harmful substances.
The lacquered (**_bl**), oiled (**_bh**) and light-protected (**_buv**) versions of the panels with a white surface panels with a silver fir surface have also passed the laboratory tests - e.g. for VOCs, and are recommended by the IBR as being free from building biology issues.

At the same time, the elements were classified for the French VOC guidelines - Émissions dans l'air intérieur - were categorised. The test in accordance with ISO 16000 standards is required in France for interior finishing materials and furniture. LIGNO® Acoustic fulfils class A here.

DGNB

When assessing the sustainability of buildings, construction products need to be very transparent with regard to their eco-performance is required. As this is a key lever for future-oriented construction, Lignotrend provides extensive data. The recommendation for sustainable construction is derived from the listing of LIGNO® products in the DGNB Navigator, the comparison and selection tool of the German Sustainable Building Council. Information on the environmental impact, calculation of life cycle costs, energy requirements or emission behaviour of all products is freely accessible to those involved in planning and implementation teams.

DGNB-Navigator-Registrierungscodes:

- LIGNO® Acoustic without surface treatment: 0Z5NI5
- LIGNO® Acoustic with surface treatment: D06GD

PEFC

When using wood as a raw material, the origin is the most important criterion. Lignotrend mainly uses wood from forests in the region for which sustainable management would be a matter of course even without certification (e.g. silver fir). Nevertheless, we make sure that the wood has a PEFC declaration and thus also cover the special wood surfaces of trees that do not grow in the vicinity of our production facilities.

Lignotrend itself is also certified in accordance with the PEFC Chain of Custody standard. It makes the flow of wood transparent and traceable right through to our own production.

Element designation and configuration overview

Sample configuration: LIGNO® Acoustic light 3S_33_a70g_625-12-4_WTL_gb_buv

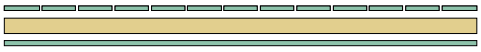
1. Form of base element ▶ page 6

LIGNO® Acoustic light **3S_33**_a70g_625-12-4_WTL_gb_buv

3S_33

Rear layer open

3G_33



Rear layer largely closed

3S_39

Rear layer open. Visible layer thicker

3C_33 (curved)

Visible side and reverse side slit alternately

2. Absorber layer ▶ from page 12

LIGNO® Acoustic light 3S_33**_a70g**_625-12-4_WTL_gb_buv

_a70g

_a50l (customised version)

_a10g

3. Acoustic profile ▶ page 12

LIGNO® Acoustic light 3S_33_a70g**_625-12-4**_WTL_gb_buv

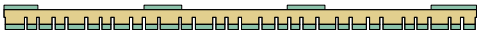
_625-12-4

Ledge width: 12 mm
Gap width: 4 mm

_625-20-4 / _625-20-4-F

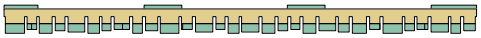
Ledge width: 20 mm (optionally with chamfered edges)
Gap width: 4 mm

_625-12n25-4



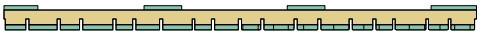
Slat width: 12-25 mm
Gap width: 4 mm

_625-12n25-4:3D



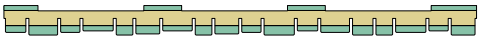
Slat width: 12-25 mm, Strip height offset
Gap width: 4 mm

_625-22n40-4 / _625-22n40-4-F



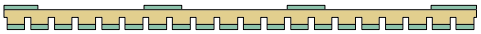
Slat width: 22-40 mm (optionally with chamfered edges)
Gap width: 4 mm

_625-22n40-4-F:3D



Slat width: 22-40 mm, Strip height offset
Gap width: 4mm

_625-23-8

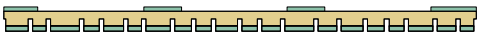


Slat width: 23 mm
Gap width: 8 mm

_625-18-6

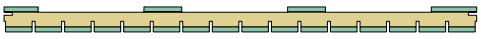
Slat width: 18 mm
Gap width: 6 mm

_625-18n38-6



Slat width: 18-38 mm
Gap width: 6 mm

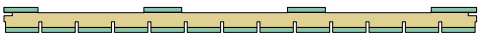
_625-35-4-F



Slat width: 35 mm with chamfered edges
Gap width: 4 mm

new

_625-44-4-F



Slat width: 44 mm with chamfered edges
Gap width: 4 mm

new

! The specified slat widths are rounded to whole millimeters and may vary by up to 0.5 mm.

4. Wood surfaces ▶ page 9

LIGNO® Acoustic light 3S_33_a70g_625-12-4**_WTL**_gb_buv

_WTL
Silver fir, patterned

_WTL-i
Silver fir, impregnated

_WTL-d
Silver fir knotless without junction

_WTS
Silver fir, plain

_WT-ä
Silver fir with knots

_WTE
Silver fir, economy

_FIS
Spruce knotless, plain

_FIS-i
Spruce knotless, impregnated

_FI-ä
Spruce with knots (A-quality)

_KI
Pine knotless

_LÄE
Larch knotless, european

_ZI-ä
Stone pine with knots

_AHK
Maple knotless, canadian

_BI
Birch knotless

_BU
Beech knotless

_EI
Oak knotless

_EIF
Oak knotless, veneer

_EIF-i
Oak knotless, impregnated

_ES
Ash knotless, plain

5. Surface finish

LIGNO® Acoustic light 3S_33_a70g_625-12-4_WTL**_gb**_buv

_gb
brushed

_gs
evenly sanded brushed

_gr
rough sawn

_gh
planed

6. Surface treatment ▶ page 11

LIGNO® Acoustic light 3S_33_a70g_625-12-4_WTL_gb**_buv**

_b0
untreated

_buv
with UV-protection

_bh-t
oil transparent

_bh-w10
oil translucent, whitish

_bh-w20
oil nearly opaque

_bl-t
lacquer transparent

_bl-w10
lacquer translucent, whitish

_bl-w20
lacquer nearly opaque

_bl-xy
Treatment according to individualised samples

_bl-w10k
chalked-up, lacquer transparent

_bd-a
old wood decor (print)

_bd
photo print

ONLINE-CONFIGURATOR

*The degree of whiteness of the final treatments **_bh-...** and **_bl-...** can be seen in the configurator*

▶ *www.lignotrend.com/akustik-konfigurator*

Type 3S_33 (open rear layer) Geometry

Application ▶ from page 2

Availability

- Standard length 2940 mm

Flame retardancy ▶ page 10

View

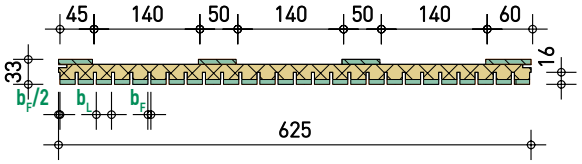
Timber slat profile

Wood types and profile alternatives ▶ from page 9

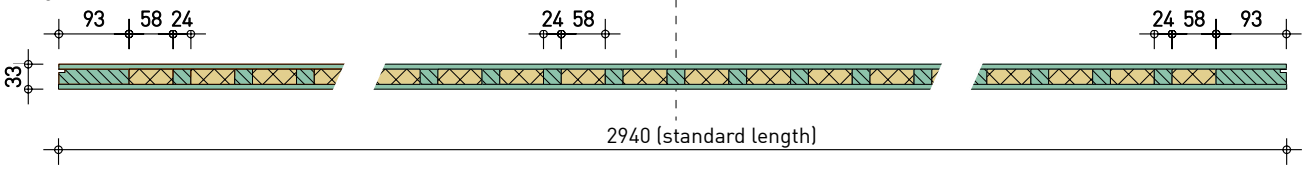
Absorber type _a70g

Approx. 70 % absorber portion in the transverse layer, absorber: Wood fibre

Lateral section:



Longitudinal section:

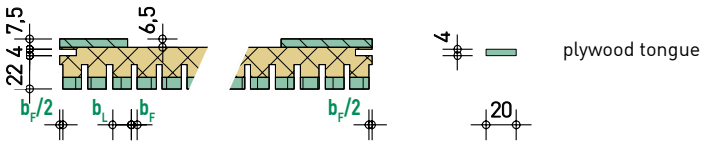


! Information on tolerance regarding elements' internal structure:

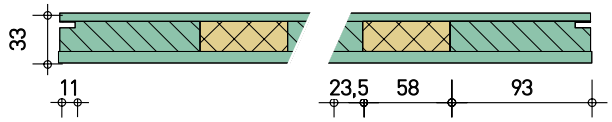
Internal element structure: With constant total thickness of the element, the thickness of the visible and the rear layer can vary by approx. ± 0,5 mm. Also, the position of absorber strips and timber transversal layer can vary in the range of millimetres for production-related reasons. Depths of acoustic gaps can vary from 14 to 16 mm.

Edging **_nnu** (standard):
Circumferential groove, matching plywood tongue is included

Side



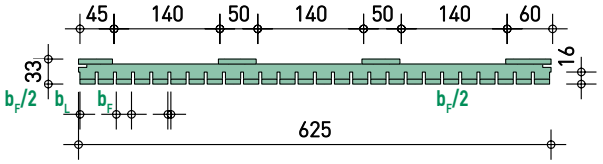
Front



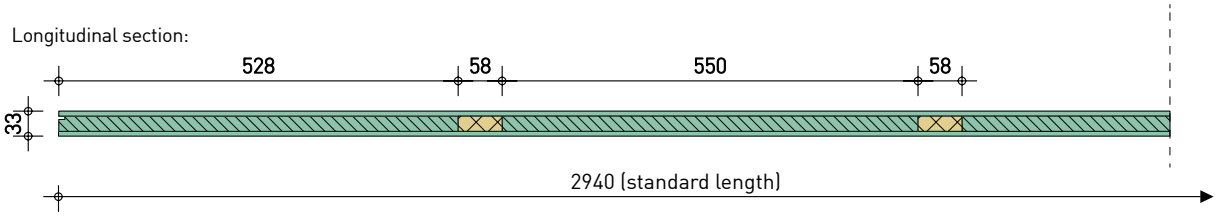
Variant _a10g (low absorption)

Approx. 10 % absorber portion in the transverse layer
Rigid transverse layer with relieving strip (wood fibre)

Lateral section:



Longitudinal section:



Note: Higher weight! ▶ see page 38

Type 3G_33 (closed rear layer) Geometry

Application ▶ from page 2

Availability

- Standard length 2940 mm

Flame retardancy ▶ page 10

View

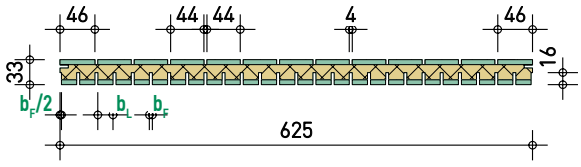
Timber slat profile

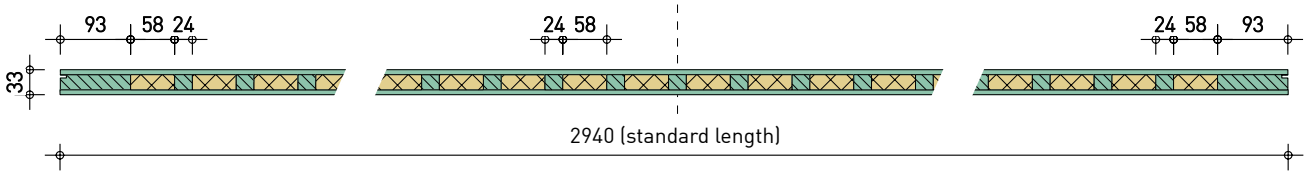
Wood types and profile alternatives ▶ from page 9

Absorber type _a70g

Approx. 70 % absorber portion in the transverse layer, absorber: Wood fibre

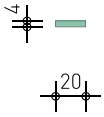
Lateral section:





Edging _nnu

Circumferential groove, matching plywood tongue is included



! Information on tolerance regarding elements' internal structure:

Internal element structure: With constant total thickness of the element, the thickness of the visible and the rear layer can vary by approx. ± 0,5 mm. Also, the position of absorber strips and timber transversal layer can vary in the range of millimetres for production-related reasons. Depths of acoustic gaps can vary from 14 to 16 mm.

Variant _a10g (low absorption)

Rigid transverse layer with relieving strip (wood fibre): See Type 3S-33, Note: higher weight! ▶ see page 38

Type 3C_33 (curved) Geometry

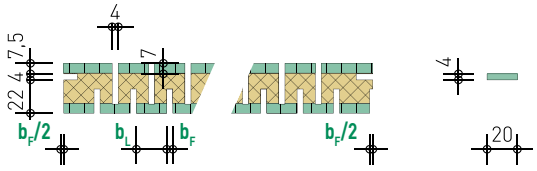
new

Modification of type 3G_33 for installation as a curved, sound-absorbing surface (minimum bending radius 1,000 mm). Type 3C_33 can be combined with type 3S_33. The constant joint widths remain precise even with concave and convex bends.

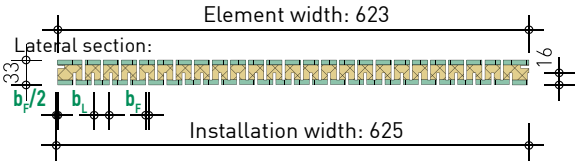
Edging _nug

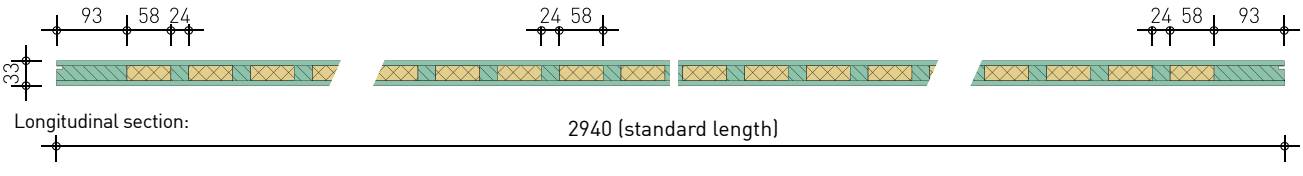
Circumferential groove, one longitudinal side straight (without rebate)

Side:



Front: like Typ 3S_33





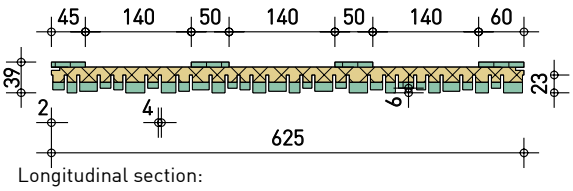
Note:

- Typ 3C_33 is limited to specific wood species/profiles. ▶ page 9

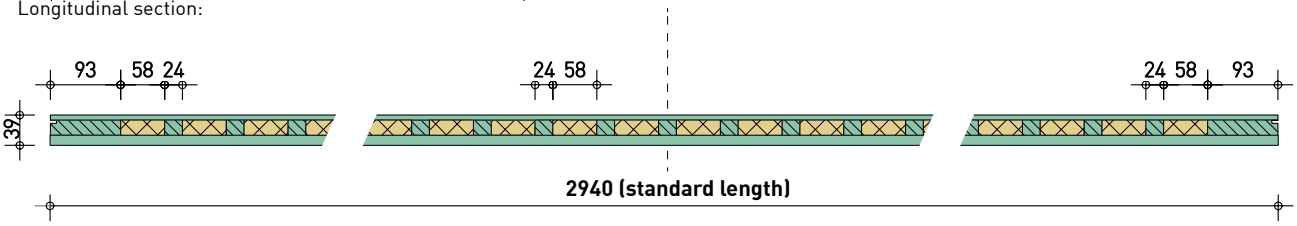
Typ 3S_39 (for 3D-Profile) Geometry

Thicker type for the height-graduated nature profile **_625-12n25-4:3D** and **_625-22n40-4:3D**. The strips are graduated in height in an irregular sequence of 0, 2, 4 and 6 mm. Absorber/rear layer and groove position relative to the rear side are identical to type 3S_33.

Lateral section:



Longitudinal section:



! Information on tolerance regarding elements' internal structure:

Internal element structure: With constant total thickness of the element, the thickness of the visible and the rear layer can vary by approx.± 0,5 mm. Also, the position of absorber strips and timber transversal layer can vary in the range of millimetres for production-related reasons.

Notes:

- a threedimensional profiling is **only possible in the wood species Silver fir _WTL, Oak _EI and Ash _ES** and the surface treatment **„planed" _gh**, likewise ex works only without structural brushing ▶ page 9
- any **surface treatment only by customer**
- absorptive effect is comparable to elements with flat nature-profile of type **_625-12n25-4** without 3D-profiling

Surface
Available wood species

The surfaces are manufactured from one-ply-panels consisting of narrow lamellas. In the case of knotless sorting, the individual lamellas consist of pieces being largely free of knots, connected through finger joints in length. Most surfaces of the acoustic panels usually have received structural brushing.

For exact details and large pictures refer to the data sheet ▶ TD LIGNO® Surfaces and to ▶ www.lignotrend.com/surfaces

		3S_33 / 3G_33									3S_39		3C_33	
Profil		_625-12-4	_625-12n25-4	_625-20-4	_625-22n40-4	new _625-35-4-F	new _625-44-4-F	_625-18-6	_625-18n38-6	_625-23-8	_625-12n25-4:3D	_625-22n40-4-F:3D	_625-20-4	_625-22n40-4
Silver fir knotless, patterned	**_WTL**	■	■	■	■	■	■	■	■	■	■	■	■	■
Silver fir knotless, impregnated	**_WTL-i**	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×
Silver fir knotless, economy	**_WTE**	■	★	★	■	■	■	■	■	■	×	×	■	■
Silver fir knotless without junction	**_WTL-d**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Silver fir knotless, plain	**_WTS**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	◘	◘
Wilver fir with knots	**_WT-ä**	×	×	■	■	■	■	■	■	■	×	×	×	×
Spruce knotless, plain	**_FIS**	■	■	■	■	■	■	■	■	■	×	×	■	■
Spruce knotless, impregnated	**_FIS-i**	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×
Spruce with knots (A-qual.)	**_FI-ä**	×	×	★	■	■	■	■	■	■	×	×	×	×
Pine knotless	**_KI**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Larch knotless, european	**_LÄE**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Stone pine with knots	**_ZI-ä**	×	×	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Maple knotless, canadian	**_AHK**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Birch knotless	**_BI**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Beech knotless	**_BU**	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×
Oak knotless	**_EI**	■	■	★	■	■	■	■	■	■	■	■	■	×
Oak knotless, veneer	**_EIF**	■	■	■	■	■	■	■	■	×	×	×	■	×
Oak knotless, veneer	**_EIF-i**	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×
Ash knotless, plain	**_ES**	■	★	■	■	■	■	■	■	■	×	×	■	■

★ Topseller ■ possible ◘ possible extended delivery time × not available

Surface
Flame retardancy

By using an appropriately impregnated surface layer, acoustic panels LIGNO® Acoustic light or LIGNO® Acoustic Sports are produced with flame-retardant surface. Classification in accordance with DIN EN 13501-1. **Available only for selected alternatives according to the table below.** Flame-retardant surfaces **cannot be UV-protected.** Surfaces that have been treated with varnish or oil the reaction to fire class deteriorates

Profile	**Without treatment** Standard flammability **_D-s2-d0**	**Without treatment** fire retardant **_C-s2-d0** with **3S_33** gemäß ETA-21/0360			**_B-s2-d0** with **3G_33** acc. to ETA-21/0360		**With treatment.** fire retardant **_C-s2-d0** with **3G_33** acc. to ETA-21/0360		**With fire-retardant coating** fire retardant **_C-s2-d0** with **3G_33** acc. to KB-Hoch-240913			
		_EIF-i	**_FIS-i**	**_WTL-i**	**_FIS-i**	**_WTL-i**	**_FIS-i**	**_WTL-i**	**_FIS**	**_WTL**	**_WTE**	**_WTS**
_625-20-4	**All standard LIGNO® Acoustic light elements are at least D-s2-d0 according to ETA-21/0360**	■	■	■	■	■	■	■	■	■	■	■
_625-20-4-F		×	×	×	◘	■	◘	■	■	■	■	■
_625-22n40-4		×	×	×	×	×	×	×	■	■	■	■
_625-22n40-4-F		×	×	×	×	×	×	×	■	■	■	■
_625-12n25-4		■	■	■	■	■	■	■	■	■	■	■
_625-18-6		■	■	■	■	■	■	■	■	■	■	■
_625-18n38-6		■	■	■	■	■	■	■	■	■	■	■

■ LIGNO® Acoustic light ◘ LIGNO® Acoustic light und LIGNO® Acoustic Sport × nicht lieferbar

ONLINE-CONFIGURATOR

▶ *www.lignotrend.com/akustik-konfigurator*

Important note concerning the reaction of flame-retardant surfaces to potentially increased humidity

Timber impregnated with fire retardants tends to absorb moisture from the indoor air and concentrate it. To prevent moistening of the visible surface the **elements with impregnated surfaces may only be installed in closed rooms with temperatures › 15 ° C relative humidities ‹ 75 % under normal use.** If these boundary conditions are met, the elements can also be installed in air-conditioned and ventilated indoor aquatic centres.

In case of unfavorable climatic conditions during installation, moisture may cause optical changes (stains) to the visible surface. However, after normalization of the indoor climate, the stains disappear without residue. If unpredictable and unfavorable parameters lead to such moistening of the surfaces, appropriate measures must be taken to dry the room air until a normal climate of approx. 20 ° C and humidity of ‹ 50 %.

Surface
Primer / finish / light reflectance

According to the table below, panels can be provided ex works with a primer or final treatment applied on their surface. Because of the variety of options, normally we only provide elements with final treatment after approval of an original sample.

		Without treatment **_gb** brushed surface	**UV protecti-ve primer** **_gb** brushed surface	**Oiled finish** **_gb** brushed surface [3]				**Painted finish** **_gs** evenly sanded surface				
		No treatment [1] **_b0**	Transparent UV-protective primer against darkening [2] **_buv**	Transparent **_bh-t**	Whitish, grain shining through **_bh-w10**	white **_bh-w20**	Coloured grain shining through **_bh-xy**	Transparent **_bl-t**	whitish, grain shining through **_bl-w10**	White **_bl-w20**	Coloured grain shining through according to RAL/NCS **_bl-xy**	Chalked-up and with transparent lacquer **_bl-w10k**
Silver fir knotless patterned	**_WTL**	■	■	■	■	■	■	■	■	■	■	×
Silver fir knotl. pat-terned, impregnated	**_WTL-i**	■	◘	■	■	■	×	■	■	■	×	×
Silver fir knotless plain	**_WTS**	■	■	■	■	×	×	■	■	×	×	×
Silver fir knotless economy	**_WTE**	■	■	■	×	×	×	■	×	×	×	×
Silver fir knotty	**_WT-ä**	■	■	■	×	×	×	■	×	×	×	×
Spruce, knotty (A-quality)	**_FI-ä**	■	■	■	×	×	×	■	×	×	×	×
Spruce knotless, plain	**_FIS**	■	■	■	■	■	■	■	■	■	■	×
Spruce knotless, plain, impregnated	**_FIS-i**	■	◘	■	■	■	×	■	■	■	×	×
Larch knotless, european	**_LÄE**	■	×	■	×	×	×	×	×	×	×	×
Oak knotless	**_EI**	■	×	■	×	×	×	■	×	×	×	■
Ash knotless	**_ES**	■	■	■	■	■	■	■	■	■	■	×
Beech knotless	**_BU**	■	×	■	×	×	×	■	×	×	×	×
Stone pine with knots	**_ZI-ä**	■	×	■	×	×	×	■	×	×	×	×

[1] Surface can be treated on site with paints / glazes appropriate for the type of wood. ■ possible ◘ is applied externally × not possible

[2] Suitable for indoor use (not classified toxic). Based on water-soluble photoprotective agents, must be treated on site against water with a glaze, when washing-out cannot be excluded. Finish for example with transparent lacquer.
Caution: Sanding of surfaces treated with UV/light protection must be strictly avoided, as this may result in irregular darkening of the finish. Elements with oiled or coated/lacquered surfaces must likewise be handled with particular care.

[3] For reasons of brushing, it may happen that some slats appear matt in sided light because of varying fibre orientation.

Light reflection properties of surfaces

Reflectance measurement according to DIN 5036 part 3	Finish with oil **_bh-w10**	Finish with oil **_bh-w20**	Finish with oil **_bl-w10**	Finish with oil **_bl-w20**	Transparent UV-protective primer **_buv**
_625-12-4	50	60	55	60	50
_625-20-4	55	60	60	60	55
_625-12n25-4	55	60	60	65	50

Absorber layer and acoustic profile

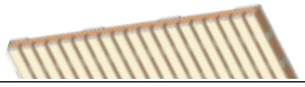
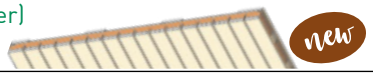
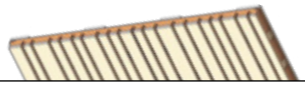
Acoustic absorber

In the elements' intermediate layer, timber and acoustic strips in different arrangements are placed in right angle to the visible ledge profile:

Type	Explanation
_a70g	Standard absorber (approx. 70% of the intermediate layer) Absorber material: Wood fibre
_a10g	Absorber layer for low-absorbing element variant: Here, the central layer is made of solid wood with only isolated relaxation strips made of soft wood fibre. **Slightly increased element weight.**

Acoustic profile

The surface layer will be furnished with a fine slat profile. Behind the gaps, an absorber material acoustically effective is already integrated in the elemts' production (standard: wood fibre).

Profile type	Gap width b_F	Slat width b_L	No of slats per element
regular profile **_625-12-4** 	4 mm	approx. 12,5 mm	38
regular profile **_625-18-6** 	6 mm	approx. 18 mm	26
regular profile **_625-23-8** 	8 mm	approx. 23,3 mm	20
regular profile (:Chamfer) **_625-35-4:F** 	4 mm	approx. 20 mm	26
regular profile (:Chamfer) **_625-44-4:F** 	4 mm	approx. 12-25 mm	
regular profile (:Chamfer) **_625-20-4** **_625-20-4:F** 	4 mm	approx. 12-25 mm (graduated ledge heights of 0 to 6 mm)	
nature profile **_625-12n25-4** 	4 mm	approx. 22-40 mm	
nature profile 3D **_625-12n25-4:3D** 	6 mm	approx. 18-38 mm	
nature profile (:Chamfer) **_625-22n40-4** **_625-22n40-4:F** 	4 mm	approx. 22-40 mm	
nature profile 3D **_625-22n40-4:3D** 	4 mm	approx. 22-40 mm (graduated ledge heights of 0 to 6 mm)	
nature profile **_625-18n38-6** 	6 mm	approx. 18-38 mm	
Other profiles on request			

Characteristics for flame retardancy and ball-impact resistance of acoustic profiles ▶ from page 10

Important note on selecting the acoustic profile

The profile with **_625-12-4** should be avoided on large continuous wall surfaces in rather small rooms because this may result in optical irritations. Remedy: Pictures, darkly-treated partial areas, interruption through areas without relief pattern, choice of profile **_625-20-4** or **_nature-profile**. The slat profile with 8 mm gap can be disadvantageous for the wall because the joints become transparent depending on light conditions and any staggered transverse layers would be seen.

Overview of ceiling substructures

Depending on the application and requirements, various substructures are defined, whose mass and spacing are tailored to the panel construction (particularly to the position of the cross members in the middle layer).

For various mounting options on walls and ceilings, robustness (ball impact safety) has been tested according to DIN 18032-3:2023-12 (indicated by the specified PZ number). Full test reports are available at ▶ www.lignotrend.com/downloads

Substructures	Panel arrangement	Grid dimension [mm]		Suspension height [mm]	Type			Inflammability acc. to DIN 13501-1			Ball-impact resistance acc. to DIN 18032-3:2023-12		Further details
		Structural profile	Base profile		3S_33	3G_33	3C_33 (curved)	Standard _D-s2-d0	fire-retardant _C-s2-d0	fire-retardant _B-s2-d0	D1 (handball 65km/h)	D2 (3G_33) (handball 85km/h)	
Single battens wood Structural profile: Multi-layered board strips 95x27 mm	parallel to the structural profile	625	×	30 to 1000	■	■	×	■	×	×	■ test report: L9429-000	■ test report: L9429-000	
Cross grid wood Structural profile: Multi-layered board strips 95x27 mm Base profile: KVH 50x30mm - horizontal			1000		■	■	×	■	×	×	■ L9430-000	■ L9430-000	
Combined substructure Structural profile: Multi-layered board strips 95x27 mm Base profile: CD-profile 60/27/06			735		■	■	×	■	×	×	■ L9431-000	■ L9431-000	
Single battens wood Structural profile: Multi-layered board strips 95x27 mm	perpendicular to the structural profile	735	×		■	■	×	■	×	×	■ L9429-000	■ L9429-000	
Cross grid wood Structural profile: Multi-layered board strips 95x27 mm Base profile: KVH 50x30mm - horizontal			1000		■	■	×	■	×	×	■ L9430-000	■ L9430-000	
Combined substructure Structural profile: Multi-layered board strips 95x27 mm Base profile: CD-profile 60/27/06			735		■	■	×	■	×	×	■ L9431-000	■ L9431-000	
Cross grid metal Structural and base profile: CD-profile 60/27/06	perpendicular to the structural profile	735	1000	30 to 1000	■	■	×	■	×	×	■ L9432-000	■ L9432-000	
		572	800		■	■	×	■	×	×	■ L9432-000	■ L9432-000	
					■ [1]	■ [1]	×	■	■	×	■ L9432-000	■ L9432-000	
					×	■ [1]	×	■	■	■	■ L9432-000	■ L9432-000	
Single battens Structural profile: Substructure of wood or metal, formed to the required curvature, width ≥ 50mm	perpendicular to the structural profile	735	×	adjustable	×	×	■ [2]	without testing			Curved ceiling, robustness not yet tested		
Cross grid Structural and base profile: CD-profile 60/27/06	perpendicular to the structural profile	490	800		◘	◘	×	without testing					
		572	800		×	■ [2]	×	■	■	■	without testing		

■ Requirement met for all profile types and wood species (excluding 3D profiles) ■ [1] restricted wood species ▶ page 10
■ [2] restricted profile types and wood species ▶ page 9 and 10 ◘ with lacquered finish; wood species ▶ page 11 × requirement not met

Also approved for use in indoor swimming pools – Identifies versions that have been tested in accordance with DIN 18032-3:2023-12, category D1 (handball, 65 km/h) and approved for use in indoor swimming pools. (No approval for category D2)

Approved for use with LIGNO® Acoustic light curved.

Overview of wall substructures

Substructure	Panel arrangement	Grid dimension (in mm)		Spacing to partition lining		Type			Inflammability acc. to DIN 13501-1			Ball-impact resistance acc. to DIN 18032-3:2023-12 >2m OKFF without reduction in load-bearing capacity		Further details
									Standard	fire-retardant				
		Structural profile	Base profile	min.	max.	3S_33	3G_33	3C_33 (curved)	_D-s2-d0	_C-s2-d0	_B-s2-d0	W1 (handball 85km/h)	W2 (3G_33) (handball 85km/h & hockey ball 65km/h)	
Single battens wood Structural profile: Multi-layered board strips fire-retardant 95x27mm	parallel to the structural profile	625	×	adjustable		◘	◘	×	■	■	■	robustness not tested		
Single battens wood Base profile: Multi-layered board strips fire-retardant 95x27mm	perpendicular to the structural profile	735	×	adjustable		◘	◘	×	■	■	■	robustness not tested		
Single battens wood Base profile: KVH or LIGNO® U*psi, width ~ 60mm		490	×	40		×	■	×	without testing			■ test report: L9426-000 L9427-000	×	
Single battens metal Structural profile: metal hollow section, width ~60mm Test report: L9426-000 / L9427-000	perpendicular to the structural profile	490	×	40		×	■ [2]	×	■	■	■	■ L9426-000 L9427-000	×	
Single battens metal Structural profile: KVH or LIGNO® U*psi, width ~60mm	perpendicular to the structural profile	490	×	40		×	■ [1]	×	without testing			■ L9426-000 L9427-000	■ L9426-000 L9427-000	
Single battens metal Structural profile: metal hollow section, width ~60mm			×			×	■ [1]	×	■	×	×	■ L9426-000 L9427-000	■ L9426-000 L9427-000	
Single battens wood/metal Structural profile: Wood or metal substructure in desired curvature, width ≥ 50mm		735	×	adjustable		×	×	◘	without testing			robustness not tested		

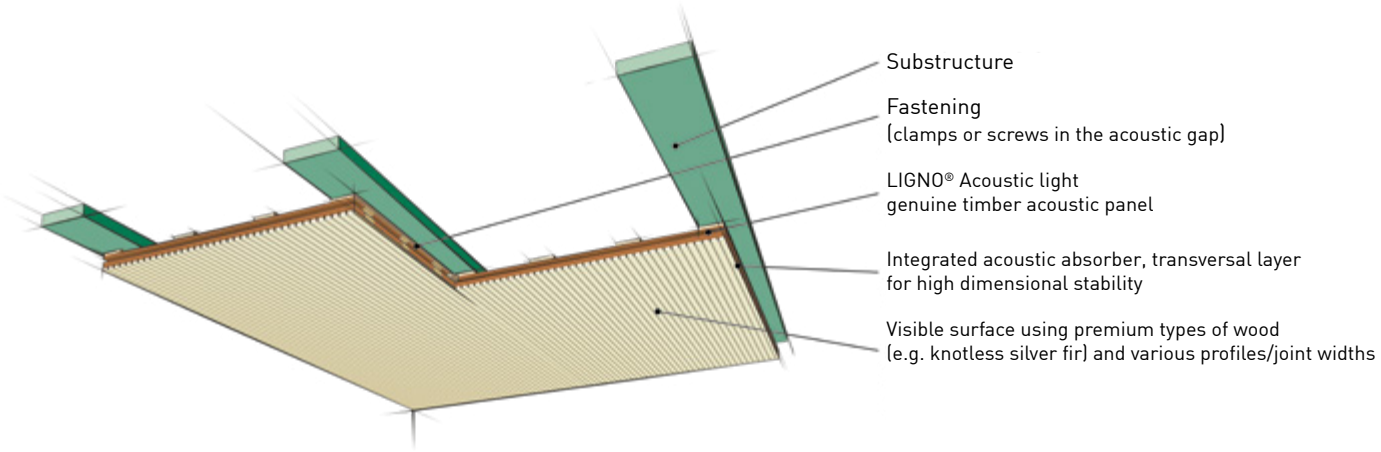
* Panels can be arranged in either horizontal or vertical orientation.

■ Requirement met for wood species _BU / _EI / _ES / _FIS-i for profile types _625-20-4-F / _625-22n40-4-F
■ [1] Requirement met for wood species _BU / _EI / _ES for profile types _625-20-4-F / _625-22n40-4-F
■ [2] Requirement met for wood species FIS-i with profile types _625-20-4-F / _625-22n40-4-F
◘ limited profile types and wood species ▶ page 10 × Requirement not met

Also approved for use in indoor swimming pools

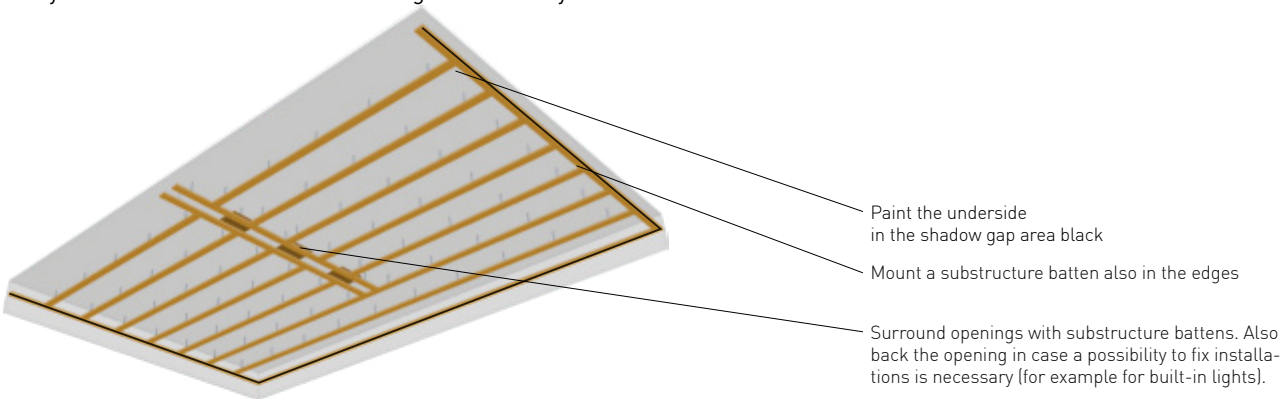
Approved for use with LIGNO® Acoustic light curved.

Installation example: ceiling paneling on wood substructure (single battens)

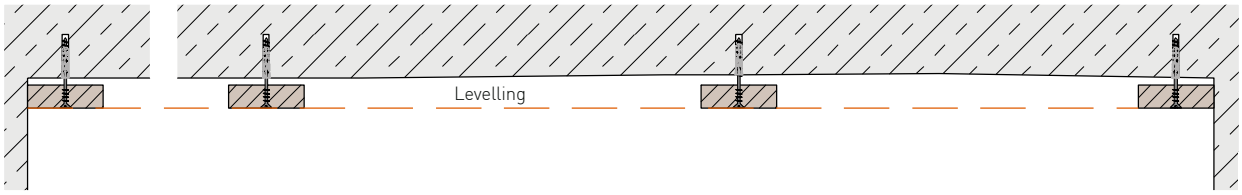


1. Substructure

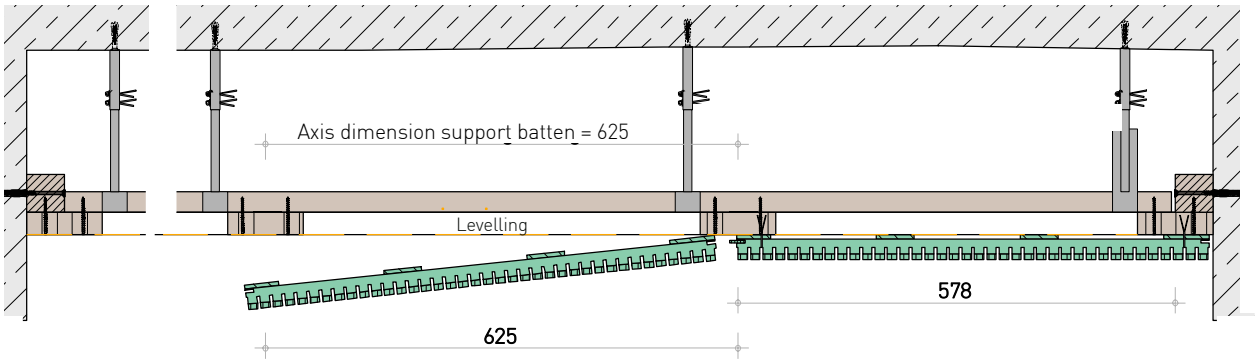
- Elements LIGNO® Acoustic light of type **3S_33, 3S_39** and **3G_33** are in standard installed on a **substructure running parallel to the elements' length.**
- Material for substructure:
  Wooden batten (rectangular section): min. 27/95 mm, pitch 625 mm, stripes of 3-ply-panels recommended. ▶ see page 13
- Also place substructure around openings and alongside the edges of the wall/ceiling.
- Only use connectors approved for the building structure's material!
- Exactly level the substructure's lower edge horizontally.



- Installation substructure directly to the building structure, Line if necessary (e.g. for reason of structure's unevenness).

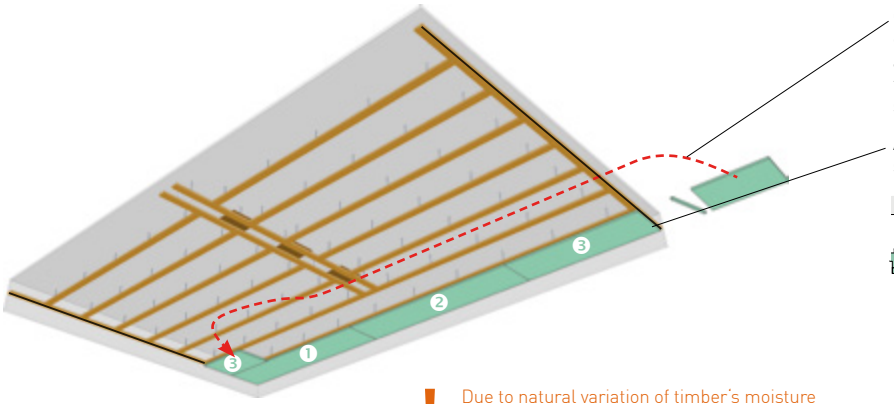


- Alternative: Installation of substructure with suspension system suitable for wooden battens, e.g. two-piece „Nonius" type metal suspending brackets with bottom part designed for screw-on fixing on wood. Mind the manufacturer's specifications!



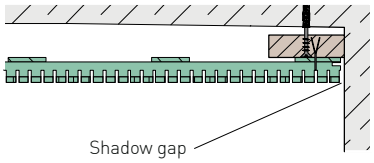
2. Element installation, first rows

- Prepare all cuttings on the ground, also openings for components to build in.

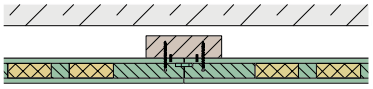


Offcut of last element in a row ist used as first element of the following row. For an attractive appearance of the transversal layer, another first cut must be applied to this starter element, see ▶ page 17

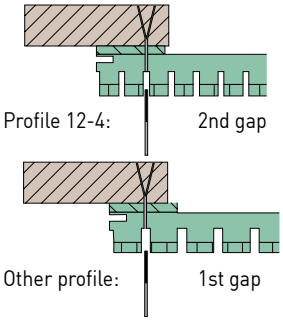
A shadow gap at the ceiling's edge will compensate for tolerances of the neighbouring wall:



Due to natural variation of timber's moisture content, under certain circumstances, gaps more or less clearly visible can occur at the frontal joints. To avoid this, it is highly recommended to back the panels at this joint with an additional board which is being set with screws and glue.

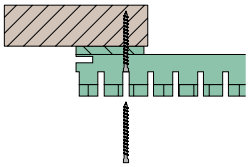


- **All connection material must be applied in line with the elements' intermediate transversal layers' axis which is visible through the acoustic gaps, application of any fasteners through the wood fibre absorber is not allowed!**
- Standard fastening with clamps (concealed, in the acoustic gaps)



- Appropriate compressed-air staple gun: Air-stapler K.M. Reich, type 3428 with foot for Lignotrend-acoustic panels, available from Lignotrend (also to be leased).
- clamps, min. 10 pcs. per panel (dependent on load, in doubt provide proof) **at the outermost joints, with at least 5 pcs. per side in the specified grid.**
- Observe the edge distance on the element: **Clamp in the second edge gap when using profiles with 12 mm ledges!**

- Alternative fastening with special screws (concealed, in the acoustic gaps)



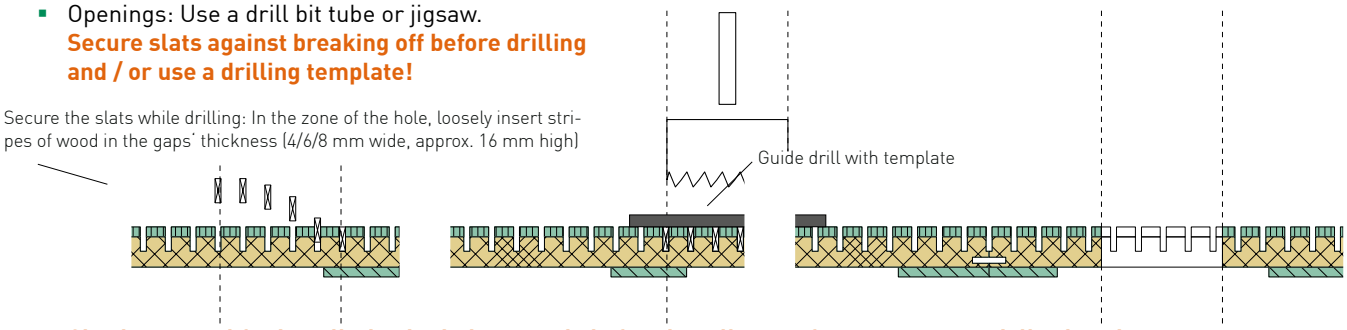
- Use a **self-drilling fully-thread screw 3.5 x 40 (V4A)** at the outermost joints, with at least 5 pcs. per side in the specified grid. Special screws and suitable inserts (bits) with prolonged tip are available from Lignotrend).
- Using screws in the gap lets them almost completely disappear from view.

In order for the panel to be in full contact with the substructure, it must be pressed on when screwing, e.g. by means of a clamp.

If a gap is created, the full-thread screw must be unscrewed a little and then screwed in again after pressing on.

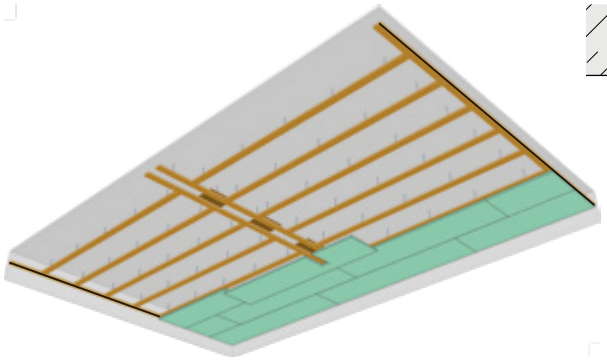
3. Cuttings

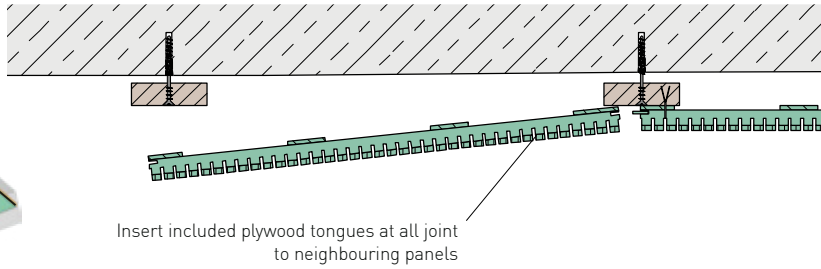
- **Look out for sharp tools!**
- Straight sections: Use circular saw and rail
- Openings: Use a drill bit tube or jigsaw.
  Secure slats against breaking off before drilling and / or use a drilling template!



- **Check approval for installation in timber panels before installation of any parts, especially electric components as lamps. Always refer to manufacturer's specifications!**

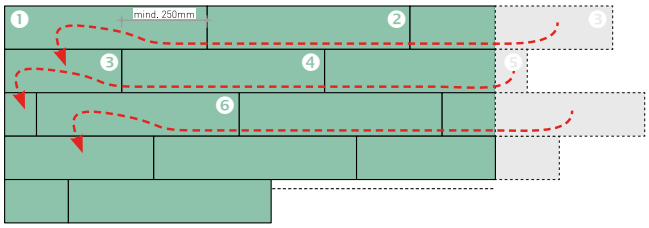
4. Element installation, further rows

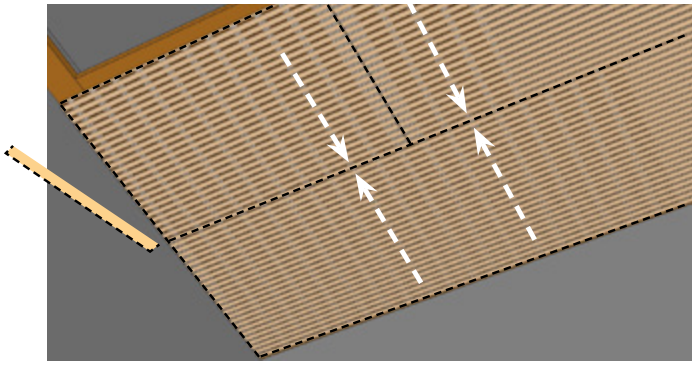




- Normally, the elements are installed in the stretching bond: The last offcut piece of a row is being used as starting piece of the following row.
- An offset of minimum 250 mm is recommended.
- Note for wall panellings and other panellings with acoustic gaps of more than 4 mm width: In case of unfavourable lighting conditions, the transversal layers behind the gaps can be recognisable. To accomplish a good appearance of the lateral joint, you should mind to have the transversal layers of adjoining elements aligned.

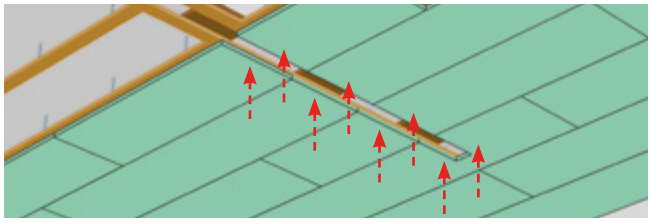
During installation of the next row of elements, a short piece is cut off in length at the first element. This ensures that the cross layers align with those of the previous row (a residual positioning tolerance of the cross layers within the millimetre range cannot be excluded).



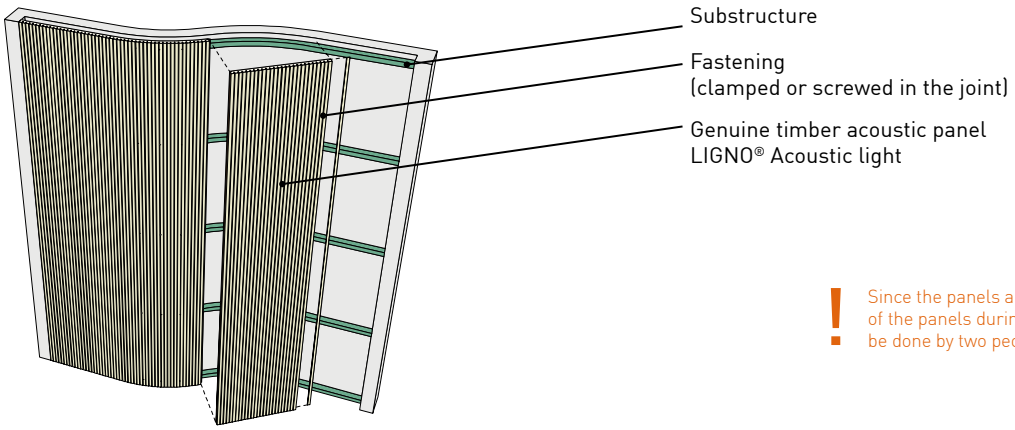


5. Element fastening alongside edges and around openings

- Also fasten elements in the middle of the element width alongside openings (use clamps or screws in the gaps), because minimal deformations of the elements might disturb the overall visual impression.



Installation example: curved wall surface 3C_33 on wood substructure

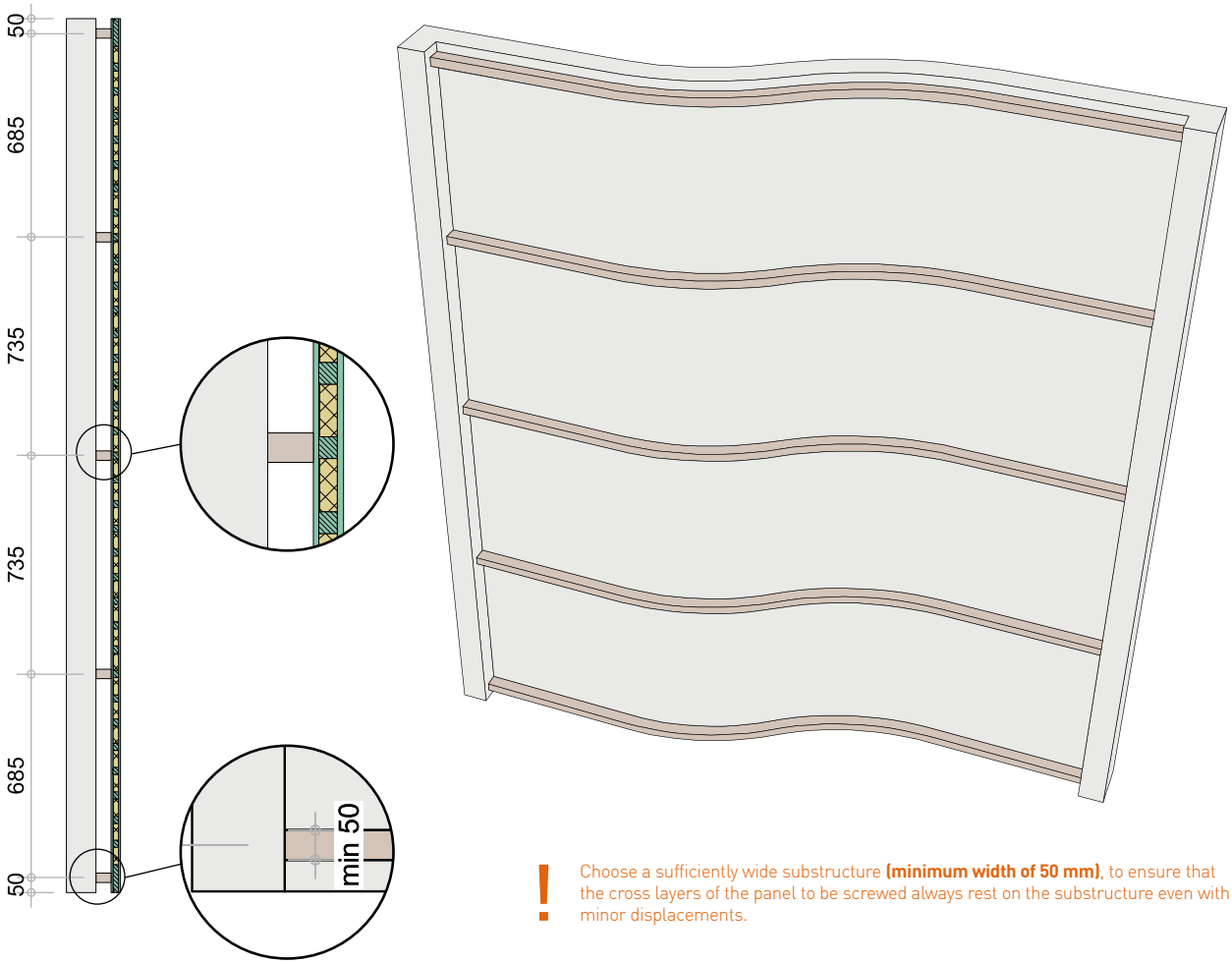


! Since the panels are bendable, the handling of the panels during installation must always be done by two people

1. Substructure

- LIGNO® Acoustic light elements of type **3C_33** are mounted on a **substructure perpendicular to the element**, which specifies the curvature.
- Material of substructure:
  Wood, min. 50 mm width, grid 735 mm ▶ see page 14
  additionally along openings and edges
- For secure screwing, the correct positioning of the substructure must be ensured according to the graphics shown below.
- Align the substructure precisely perpendicular to the longitudinal axis of the panels (e.g., level horizontally).
- Use fasteners suitable exclusively for the substrate.

! Minimum bending radius ≥ 1 000 mm, the panels must not be bent tighter.

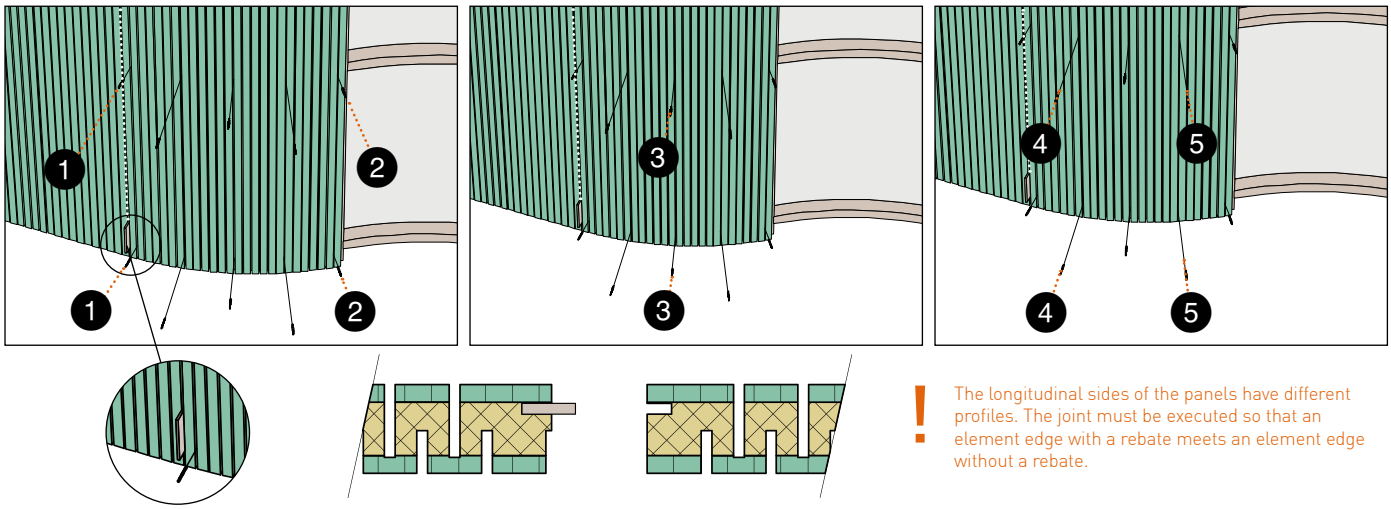


! Choose a sufficiently wide substructure **(minimum width of 50 mm)**, to ensure that the cross layers of the panel to be screwed always rest on the substructure even with minor displacements.

2a. Panel installation (for outwardly curved surface)

! When screwing, it is essential to follow the specified sequence and ensure panel installation without distortion.

- Provide a tongue-and-groove joint at the connection gap to the preceding element.
- Arrange the elements so that each longitudinal side meets one with and one without a rebate (see below.
- To achieve a uniform gap width, use spacers the width of the acoustic joints.
- Screwing on five substructure ribs per element length
  with **full-thread screw 3.5x40 (special screw for LIGNO® Acoustic)**
- First screw on both sides across the entire length of the element into the outer acoustic joints ❶ and ❷
- Afterward, screw in the middle of the element width ❸
- Finally, complete screwing between the middle and outer joints ❹ and ❺

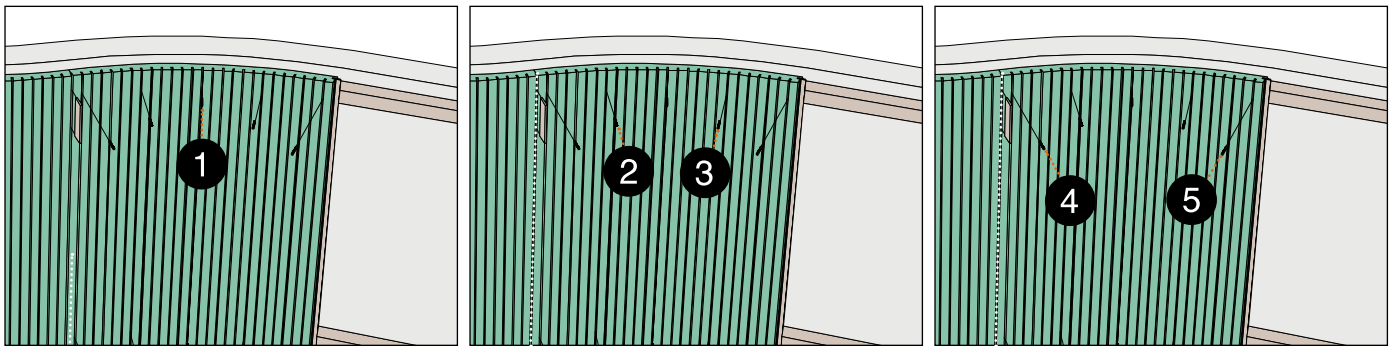


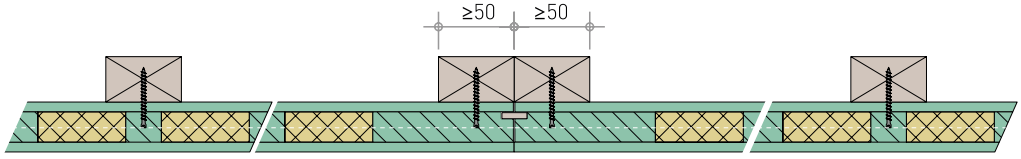
! The longitudinal sides of the panels have different profiles. The joint must be executed so that an element edge with a rebate meets an element edge without a rebate.

2b. Panel installation (for inwardly curved surface)

- Arrangement of the panel as in Variant 2a
- Deviate from 2a by first screwing across the entire length of the panel in the middle of the panel ❶
- Then screw between the middle and outer joints ❷ and ❸
- Finally, complete screwing in the outer acoustic joints ❹ and ❺

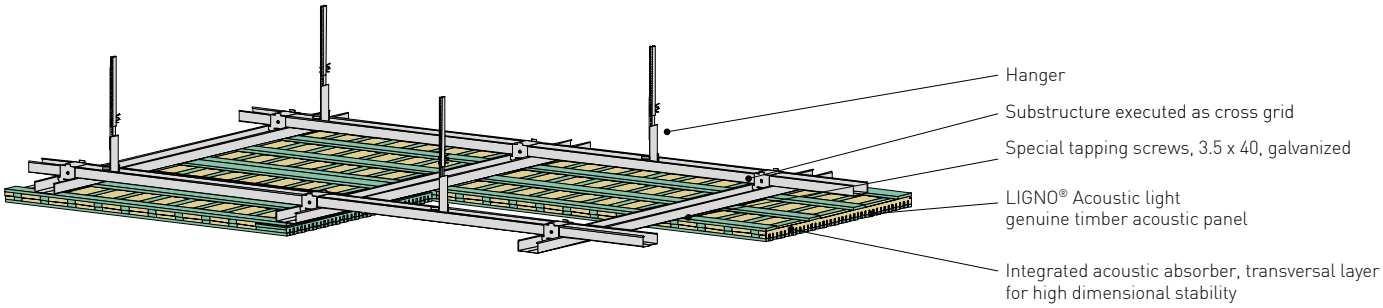
! When screwing, it is essential to follow the specified sequence and ensure panel installation without distortion.





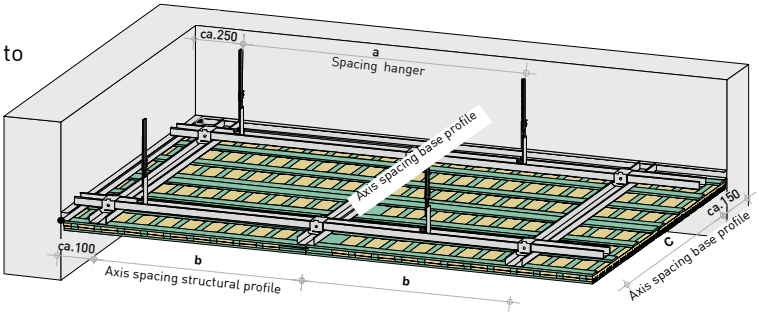
! At the longitudinal joint of two elements, the substructure should be doubled. Recommended: 2 × 50 mm width to provide secure support for both element edges.

Installation example: suspended ceiling on metal subsctructure (cross grid)

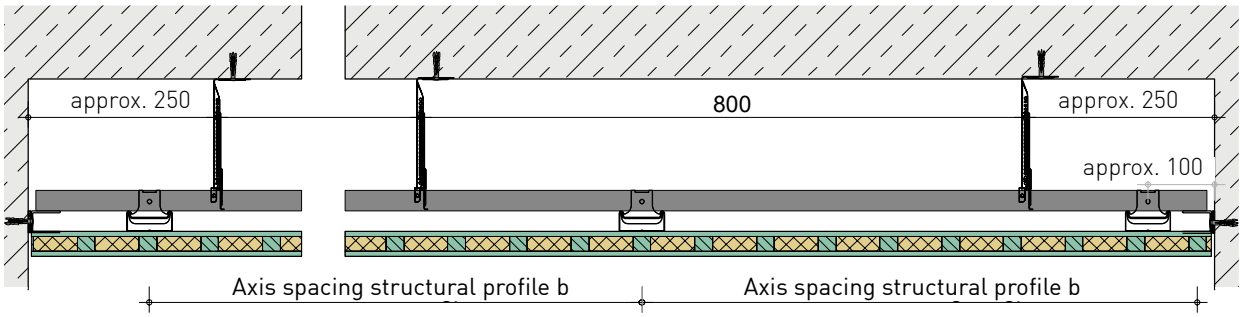


1. Substructure

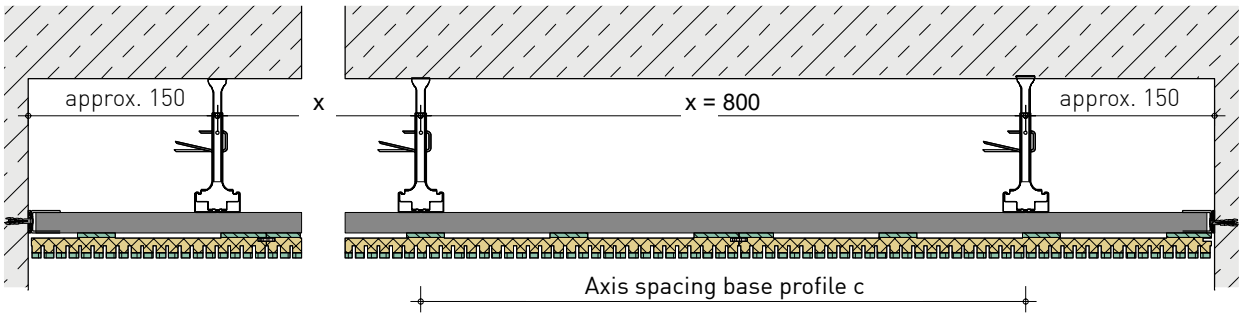
- LIGNO® Acoustic light elements type **3S_33** and **3G_33** are mounted as standard on a **substructure running transversely to the element**.
- Material for substructure:
  - CD profile (dimensions 60 / 27 / 06) according to DIN 18182 for support and assembly profile
  - Matching cross connector for CD profile
  - Matching multi-connector and universal connector for CD profile
  - Drywall screws TN fine thread for optimal securing of the connectors
  - Nonius or direct hangers with a load capacity of 0.4 kN
- Arrange substructure along openings.
- Wall connection with profile UD 28 / 27, fastening distance ‹ 625 mm
- Use only fasteners that are suitable for the substrate
- Level the substructure exactly horizontally



Continuous UD-profile for wall area connection

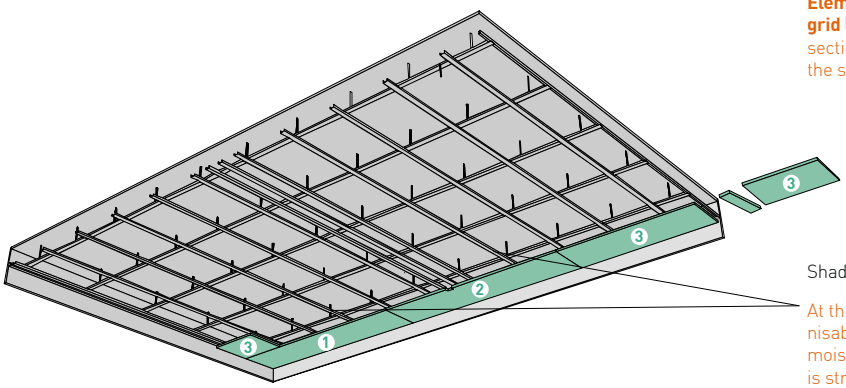


- Alternatively, the suspension can be done with direct hangers of the same load capacity in the grid shown.
- **The use of quick hangers in combination with LIGNO® acoustic panels is not recommended due to insufficient load capacity!**

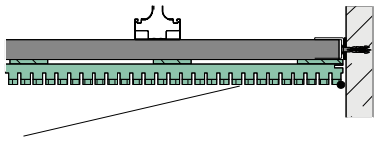


2. Element installation, first row

- Cuttings and openings for components to build in ▶ page 17
- Make openings on the base.



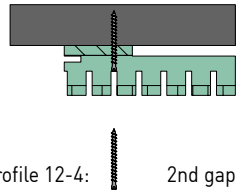
Section of the last element of a series is used as the first element in the following series. **Element length must correspond to at least one grid length!** For a regular cross-layer pattern, the section must be trimmed once again, analogous to the substructure.



Shadow gap

At the facing joints, more or less clearly recognisable joints can form due to the natural wood moisture fluctuation. Should this be excluded, it is strongly recommended to connect the panels there rigidly with a board placed behind, which is fixed by screwing and gluing.

- **Fasteners may only be placed in the axis of the transverse layer recognisable in the acoustic gaps; fastening through the absorber is not permitted!**
- Standard fastening with special sheet metal screws (not visible in acoustic gaps)



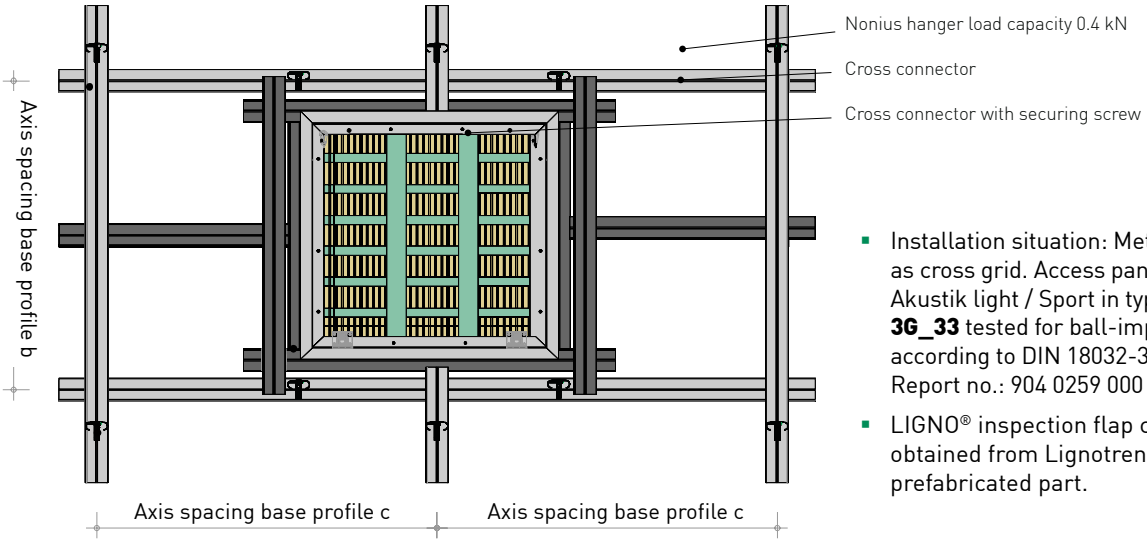
- Non-combustible substructure made of galvanized steel sheet profile
- CD profile according to DIN 18182, dimensions 60 / 27 / 06 in the cross grid transverse to the element grid structural profile adapted to the element transverse layer ▶ page 13
- Fix the element for installation with a clamp.
- Fastening: **Galvanized sheet metal screw 3.5 x 40 (special screw for LIGNO® Acoustic)**

3. Cuttings

- See chapter „Installation on wood substructure“ ▶ from page 17

4. Ceiling openings for fittings such as inspection openings

- Execute substructure as double profile grid at openings such as inspection flaps

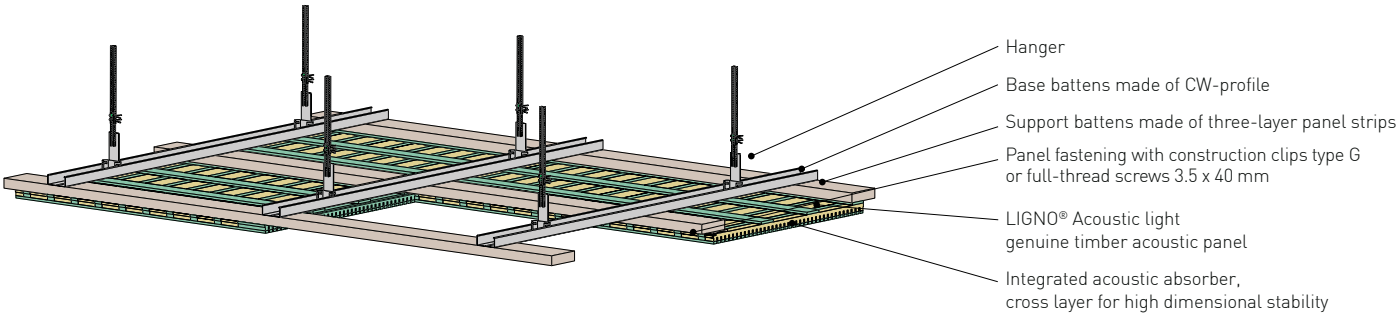


- Installation situation: Metal substructure as cross grid. Access panel for LIGNO® Akustik light / Sport in types **3S_33** and **3G_33** tested for ball-impact resistance according to DIN 18032-3:2023-12. Report no.: 904 0259 000 - 2 Kd
- LIGNO® inspection flap can be obtained from Lignotrend as a standard prefabricated part.
- Extensive installation instructions for inspection flap installation ▶ Inspection flap installation instructions

5. Element installation of further rows, Element fixing along edges and openings

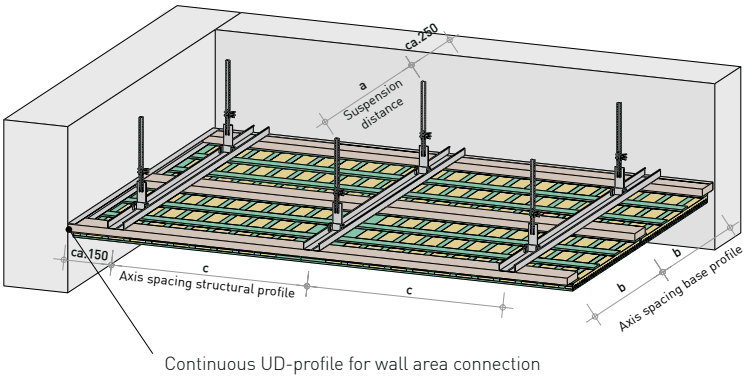
- See chapter „Installation on wood substructure“ ▶ from page 17

Installation example: suspended ceiling on wood-metal substructure (combined cross grid)

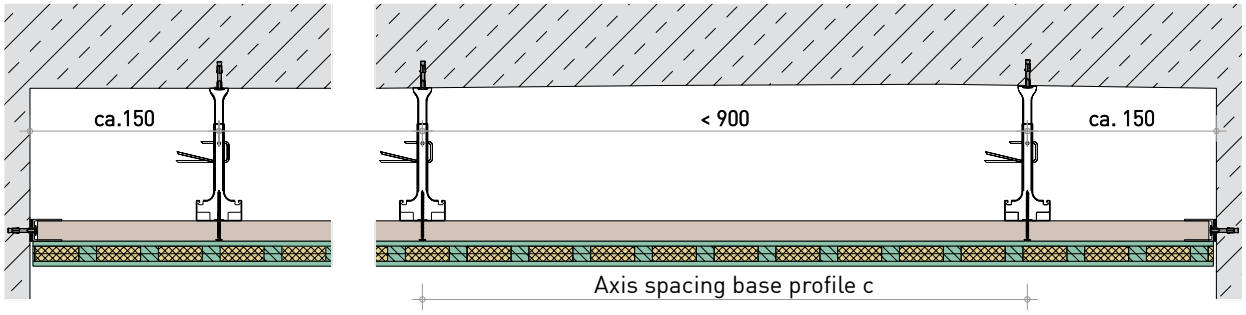


1. Substructure

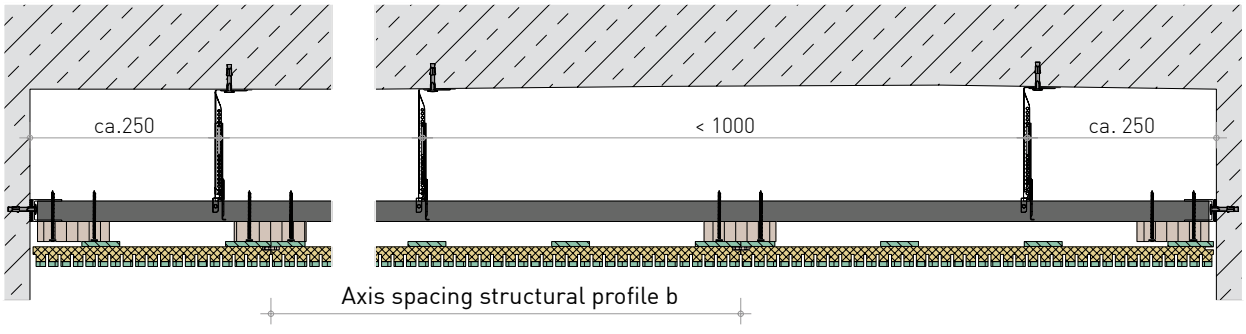
- LIGNO® Acoustic light elements Type **3G_33**, **3S_33** and **3S_39/40** are mounted as standard on a **substructure running longitudinally to the element.**
- Material for substructure:
  - CD-Profil (dimensions 60/27/06) according to DIN 18182 for base profile.
  - Three-layer panel strips with dimensions 27/95 mm for structural profile.
  - **2 x Knauf universal screws FN 4.3 x 65** for fastening the structural profile at each intersection point.
  - Nonius or direct hanger with a load capacity of 0.4 kN.
- Arrange substructure along openings.
- Wall connection with profile UD 28/27, fastening spacing ‹ 625 mm.
- Use only fasteners suitable for the substrate.
- Level the substructure precisely horizontally.



Base and structural profile	
Hanger a	‹ 1000 mm
Base profile c	‹ 900 mm
Structural profile b	= 625 mm

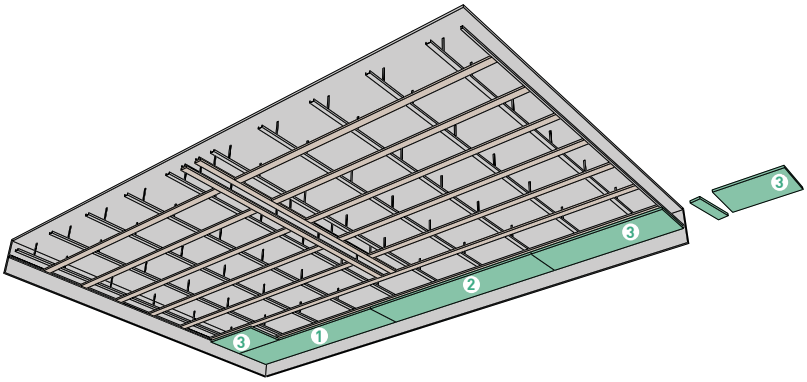


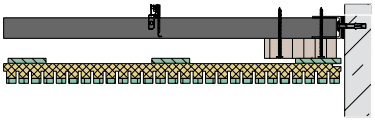
- Alternatively, the suspension can be done with direct hangers of the same load-bearing capacity in the illustrated grid.
- **It is advisable to refrain from using quick hangers in conjunction with LIGNO® Acoustic panels due to insufficient load capacity!**



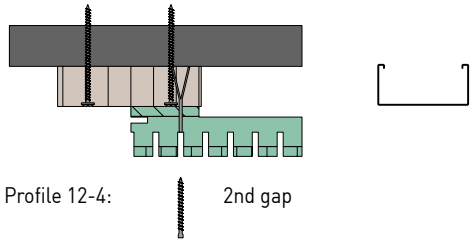
2. Panel installation, first rows of panels

- Cut-outs and recesses for fixtures ▶ page 17
- Install openings at the bottom.





- **Fasteners must only be placed in the axis of the wood cross layer visible in the acoustic joints; attachment through the absorber is not permitted!**
- Standard fastening cramped or using special screws (not visible in the acoustic joints)



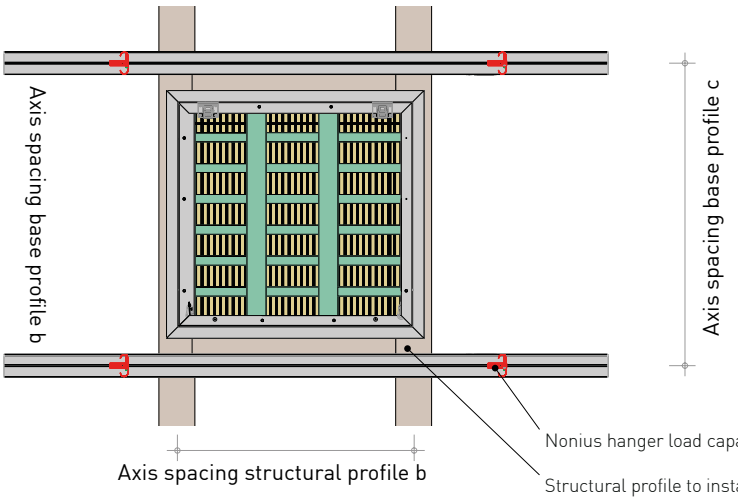
- Substructure made of galvanized non-combustible steel sheet profile and three-layer panel strips
- CD-profile according to DIN 18182, dimensions 60/27/06 across the element, and three-layer panel strips along the element
- Grid dimension ▶ see page 13
- Fix the element for assembly with a clamp.
- Fastening of support battens: **Knauf universal screws FN 4.3 x 65, 2 pieces per connection**
- Panel fastening: **Full-thread screw 3.5 x 40 (Special screw for LIGNO® Acoustic) or Knoll clips type G**

3. Cuttings

- Analogous to the chapter "Installation on wood substructure" ▶ from page 17

4. Ceiling openings for fittings such as inspection openings

- Execute substructure as double profile grid at openings such as inspection flaps



- Installation situation: wood-metal sub-structure as cross grid. Inspection flap for LIGNO® Acoustic light/Sport in the types **3S_33** and **3G_33** tested in accorcance with DIN 18032-3:2023-12 for ball-impact resistance. Report no.: L 9434-000
- LIGNO® inspection flap can be obtained from Lignotrend as a standard prefabricated part.
- Extensive installation instructions for inspection flap installation

  ▶ Inspection flap installation instructions

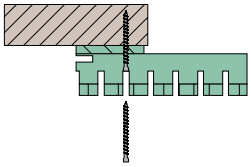
5. Element installation of further rows, Element fixing along edges and openings

- See chapter „Installation on wood substructure“ ▶ from page 17

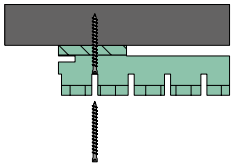
Installation in extraordinary locations

Special execution of substructure in case of demands for low flammability

- **Flame retardant substructure**
  Use impregnated battens (available from Lignotrend).
  Installation parallel to the elements' length, pitch 625 mm.
  Deviant fastening in impregnated battens with
  full-thread wood screw 3.5 x 40 stainless steel (special screw for LIGNO® Acoustic) or **Knoll clips type G, material no. 1.4301**
  (Insert screw or clamp into gap.)



- **Noncombustible substructure**
  Use zinc coated steel sheet profile, e.g. CD 60/27 (DIN 18182),
  Deviant installation at right angle to elements' length,
  Pitch adjusted to distance of element's transversal layers ▶ page 13
  Fix the element for assembly with a clamp.
  Fastening: **Sheet metal screw 3.5 x 40 galvanized (special screw for LIGNO® Acoustic)**



In order for the panel to be in full contact with the substructure, it must be pressed on when screwing, e.g. by means of a clamp.

If a gap is created, the full-thread screw must be unscrewed a little and then screwed in again after pressing on.

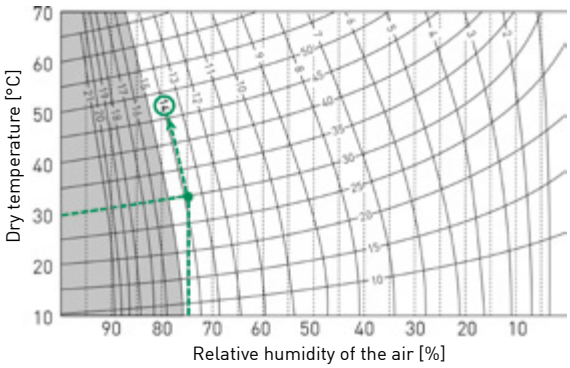
Application in indoor aquatic centres

- Lignotrend cross laminated timber panels are approved for the use in the service classes 1 and 2, where wood moisture content does not exceed 20%. **Application in indoor aquatic centres**, for example on the ceiling, typically is completely unproblematic.
- For safety reasons, a maximum moisture content could be defined at 15%, for example. The air's humidity dependent on temperature is limited to reach this goal by adjusting the ventilation system's humidity-control. Wood moisture content resulting as a function of the ambient atmosphere can be retrieved from the diagram below according to Keylwerth.

Fastening in the area of indoor aquatic centres

- Attention must be paid to corrosion-resistant fastener e.g. in case of chlorine-containing air.
- Screwing as shown on page 16. Use screws made of highly corrosion-resistant material that are suitable for the indoor climate (e.g. chlorine-containing air: **Screws 3.5 x 43, material no. 1.4539 (special screw for LIGNO® Acoustic)** – corrosion resistance class IV, is available from Lignotrend)

Note: not suitable for brine baths!

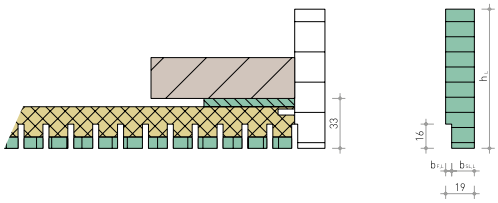


Accessories
Termination

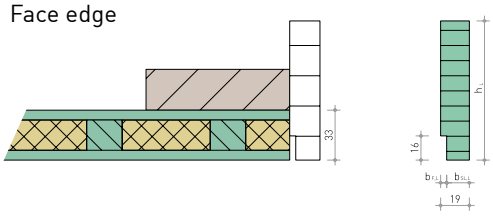
To create a visually appealing finish at free ceiling edges (e.g. openings, column penetrations), **end trims in the same wood species as the visible surface of the LIGNO® Akustik light elements** can be supplied by Lignotrend. On request, ready-made edge trims with identical surface treatment are also available. Alternatively, commercially available metal profiles can be used as edge termination.

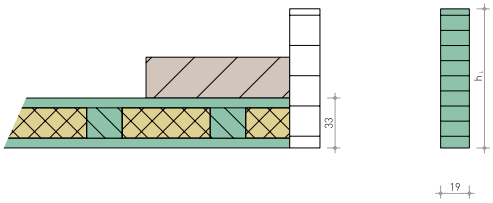
Proposal 1: Rebated terminal batten

Longitudinal edge



Face edge





In this example, the terminal batten is laterally butt-joined. It is fastened e.g. using nails or small clamps.

- Observe the different batten rebate geometry on longitudinal and face edge!
- One will need battens with half and full gap width as rebate width.

Standard terminal battens (Batten length 2970mm)

Type	Batten height h_{RL}	Batten width b_{RL}	Rebate width $b_{F,RL}$	Visible batten width $b_{L,RL}$	Chamfer on visible side
63-19_2-17	63 mm	19 mm	2 mm	17 mm	■
63-19_3-16			3 mm	16 mm	×
63-19_4-15			4 mm	15 mm	■
92-19_2-17	92 mm	19 mm	2 mm	17 mm	■
92-19_3-16			3 mm	16 mm	×
92-19_4-15			4 mm	15 mm	■
110-19_2-17	110 mm	19 mm	2 mm	17 mm	■
110-19_3-16			3 mm	16 mm	×
110-19_4-15			4 mm	15 mm	■
200-19_2-17	200 mm	19mm	2mm	17mm	■
200-19_3-16			3mm	16mm	×
200-19_4-15			4mm	15mm	■

Edging battens are available in _WTL and _WTL-i wood type. Other wood types as well as other dimensions up to 19 mm thickness on request. Thicker battens are pecial formats and are produced by laminating two or more battens.

Proposal 2: Metal profile

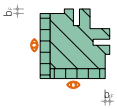
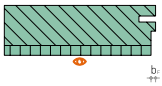
Longitudinal and face edge

An L-profile is mounted as termination.
Notes:

- The joint visible will become smaller at the frame.
- Only feasible if fixing from above is possible (e.g. with pre-assembled sail).

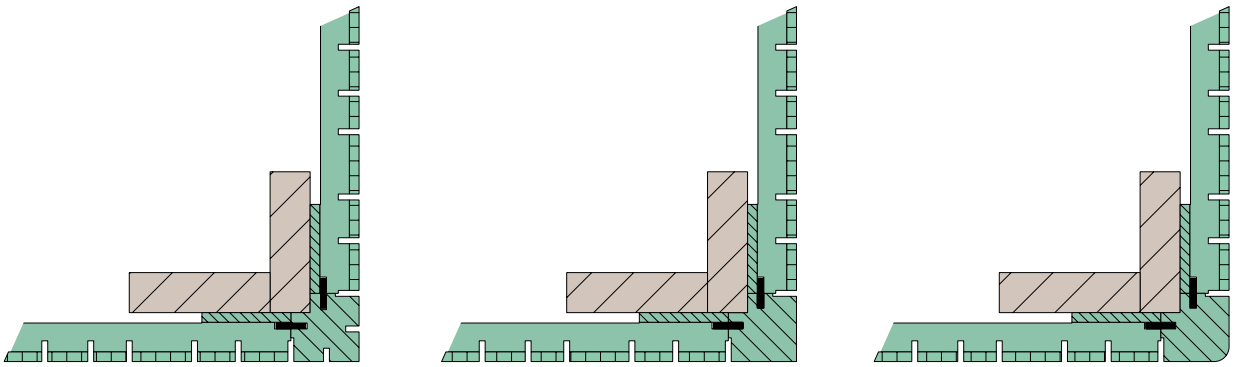
Accessories
Wall termination / corner termination

Standard batten (batten length ≙ 2 970mm)

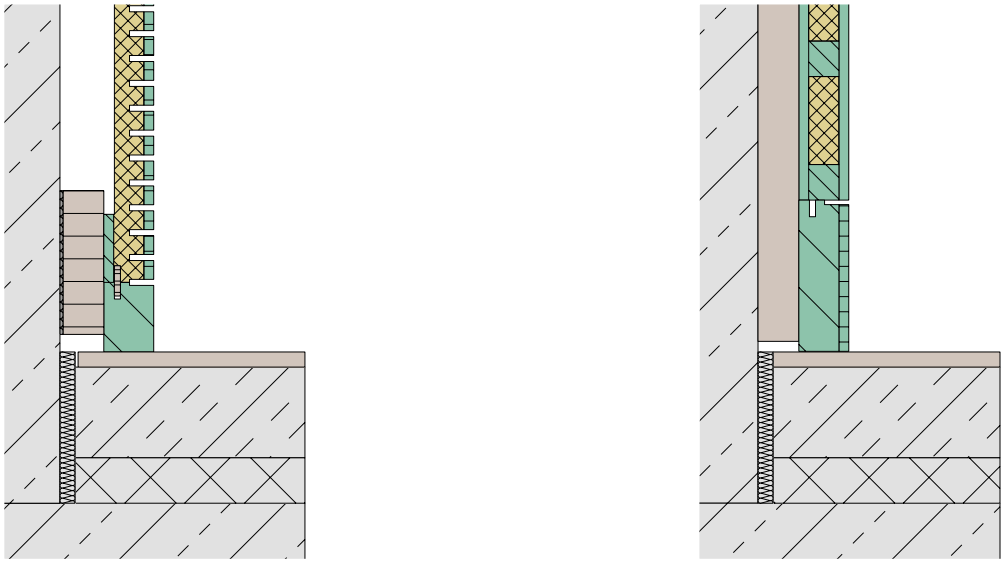
	Example type	Width	Height	Rebate width bF	Groove possible	R10 possible	Chamfer possible
corner batten		46 mm	46 mm	2mm	■	■	■
				3 mm	■	■	×
				4 mm	■	■	■
solid wood batten		46 mm	33 mm	2 mm	■	×	■
				3 mm	■	×	×
				4 mm	■	×	■
		100 mm	33 mm	2 mm	■	×	■
				3 mm	■	×	×
				4 mm	■	×	■

Available from stock in _WTL and _WTL-i. Other wood species on request. Further moulding variants can be found in the accessory mouldings catalogue.

Corner termination variants



Skirting variants



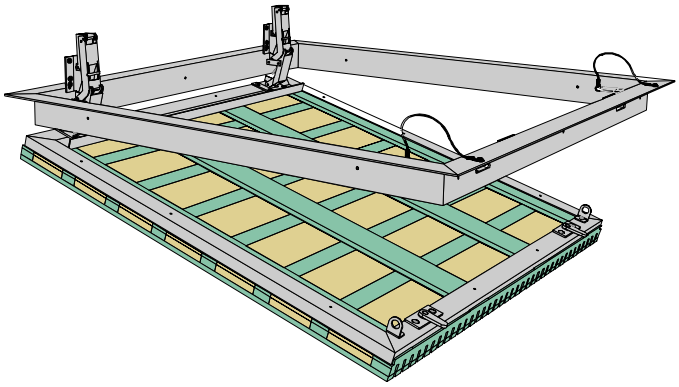
Accessories
Inspection openings

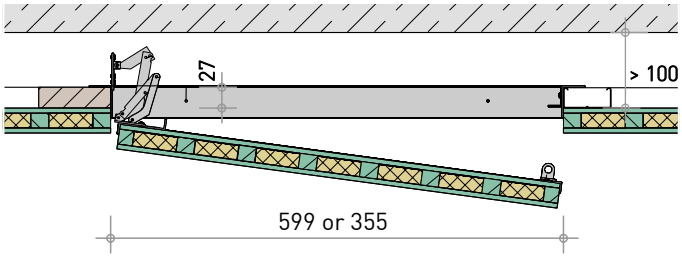
Frame inspection flap for frequent opening - ball-impact resistant

Pre-assembled, flush inspection flap with hinge and square lock
Suitable only for types 3S_33 and 3G_33! Minimum suspension height: 100 mm!

- Sturdy aluminum frame for filling with panel piece (not included), on request pre-assembly ex factory
- To rest on standard wood substructure in 27 mm thickness
- Installation dimension (great model) 625 mm x 599 mm
- Installation dimension (small model) 625 mm x 355 mm

▶ **Data sheet installation instructions for inspection openings**

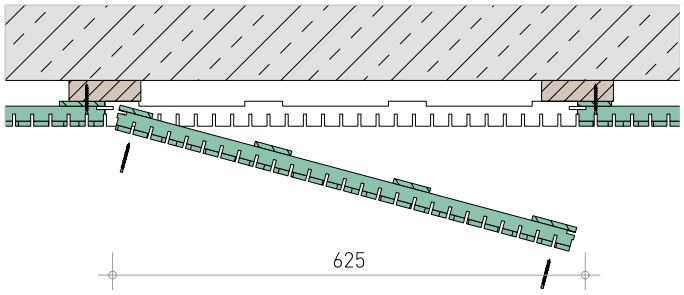




Inspection flap, screwed on, for rare opening

Simple inspection flap, made from standard elements:

- Opening width = element width, opening length arbitrary
- Fit in the inspection flap, consider gap width
- No tongue to be installed in the area of the access panel.
- Provide protection against falling down
- Screw to edge joint

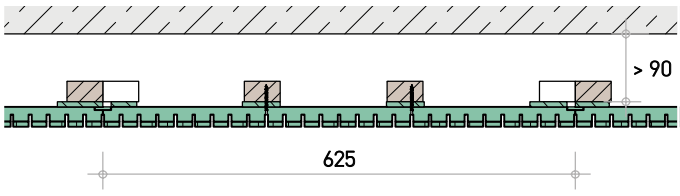


Inspection flap, loosely inserted

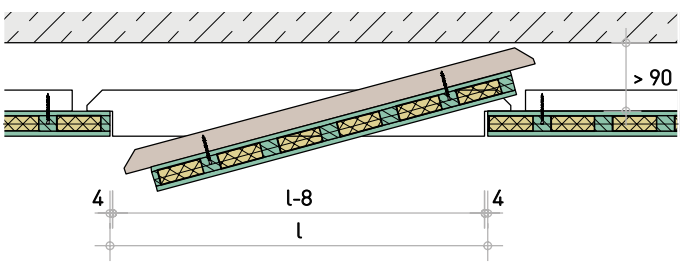
Simple inspection flap over element width 625 mm Length l as desired, max. 1 000 mm
Observe minimum suspension height!

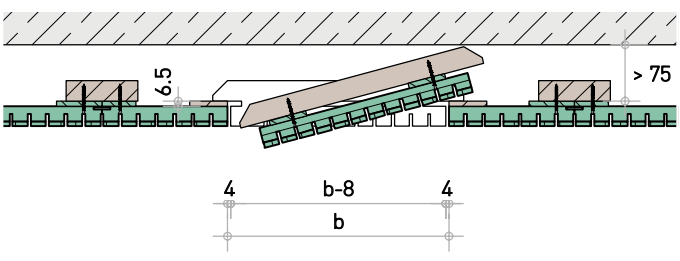
- Cut out desired opening to the desired opening size
- Fit in the inspection flap taking into account the gap width intended. Attach two battens to the slats on the panel's back.
- Provide protection against falling down
- If desired, secure with screws in the acoustic gaps.

Cross-section



Longitudinal section





Accessoires
Supplementary panels

Solid wood panels made of silver fir and oak

White fir knotless, patterned - continuous slats
3-layer panels made of knotless silver fir with continuous slats.
The slats feature continuous grain throughout the entire length of the panel and are not finger-jointed. The color variations inherent in the silver fir wood emphasize the naturalness of this visible surface with a lively appearance. The surface is sanded with Grit 80. Occasional localized touch-ups on the visible surface are possible and should be planned for on-site.

Raw format 3-layer panel: 2960 x 1290 x 20 mm

Knotless silver fir, patterned - slats finger-jointed

1-layer or 3-layer panels made of knotless silver fir with finger-jointed slats.

The practically knot-free slats are joined in irregular lengths. The blank panel is industry trimmed. The color variations inherent in the silver fir wood emphasize the naturalness of this visible surface with a patterned appearance. The surface is sanded with grit 80. Occasional localized touch-ups on the visible surface are possible and should be planned for on-site.

Raw format 1-layer panel: 2960 x 640 x 7.5 mm
2960 x 640 x 20 mm

Raw format 3-layer panel: 2960 x 1290 x 20 mm

Oak, nearly knottless

The nearly knotless slats are joined irregularly in length (carpenter›s joint). The color variations inherent in oak underscore the naturalness of this wood species. Slats length approximately 180 to 500 mm, slats width approximately 40-65 mm. Raw panels with industrial sanding.

Raw format 1-layer panel: 2960 x 640 x 7.5 mm
2960 x 640 x 20 mm

! Single-layer boards are also available in thicknesses of 13 mm and 15 mm, as well as in other wood species such as ash, spruce and larch.

Accessoires
Substruction, Fastening, Treatment

Substruction

Precise installation due to even and straight substructures. No warping due to dimensionally accurate and ground surfaces.

- Dimensions: 2500 mm x 95 mm x 27 mm
- Multi-layered board strips C/C quality
- Guiding value for installation approx. 20 min/m²

▶ Assembly instructions substrucktion from page 15

Special screws for LIGNO® Acoustic

Screws for concealed mounting of acoustic claddings on wood substructures, head diameter of 4 mm, ideal for invisible attachment through 4 mm acoustic joint.

Requirement: minimum 10 pcs. per panel

- Full-thread screw with cylinder head; stainless steel, rustproof
  Dimensions: 3.5 x 40 mm
- Sheet metal screw as before, galvanized
  Dimensions: 3.5 x 40 mm
- As before, but with highly corrosion-resistant steel material 1.4539, e.g., for swimming pools
  Dimensions: 3.5 x 43 mm

▶ www.lignotrend.com/accessoires

Compressed air staple gun

Staple gun for the almost invisible attachment of spreader staples.
Due to the narrow foot, the base of the groove is easily reached.

- Staple gun type 3428 for acoustic panels of type 3S-33 and 3G-33
- Suitable for groove widths from 4 mm

▶ Installation with air staple gun page 16

UV-protection stain “Lignovit UV 100”

Light protection agent for absorption of UV radiation

- Water-based, thin-layer glaze for indoor use based on an acrylate emulsion
- Absorption of UV radiation and stabilisation of the wood component lignin
- Transparent and matt adjustment ensures a natural appearance for softwoods
- High breathability – healthy indoor climate
- Free of chemical wood preservatives

Application:

- Brush, roller, spray, Vacumat (Do not use below +10 °C)
- Yield: approx. 10 - 12 m²/l
- High air humidity and/or low temperatures delay drying

Further treatment options ▶ page 5

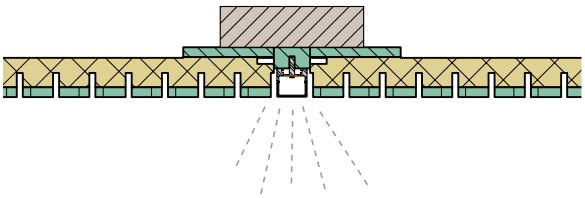
Accessories
LED light strip

LED light strips for **subsequent and on-site installation on LIGNO® Acoustic light panels**.

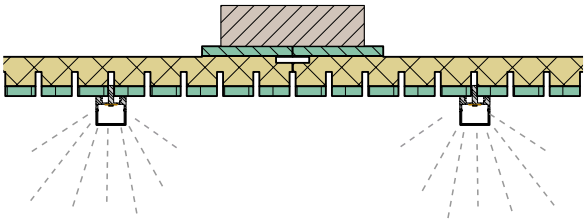
Flush installation at the element joint; alternatively, light strips can be subsequently installed as clip-on fitting into 4 mm joints

▶ **Data sheet installation instructions for LED light strip**

Flush installation:



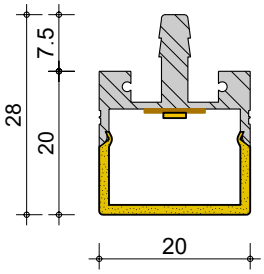
Clip-on installation:



Light strip 20 mm width

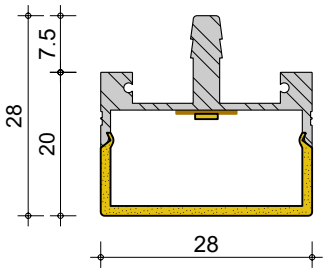
Compatible with profile variants **_625-20-4** and **_625-12n25-4**

- High-quality surface-mounted lamp made of aluminium extrusion profile, coated similar to RAL 9010 incl. end caps, harpoon form 4.2 mm
- L x W x H: approx. **(n x 50 + 15)** x 20 x 27 mm, L_{max} 2915 mm per element
- Diffusers made of white translucent PMMA, flush with profile
- Light source LED, energy efficiency class A+ / A++, degradation L80/b10 connected voltage 24 V; flexible supply cable with 2 x 0.75 mm and Wieland plug up to 2.8 m protection class III; IP 20
- Prepared for on-site connection to converter



Light strip 28 mm width

- Compatible with profile variants **_625-12-4, _625-12n25-4** and **_625-22n40-4**
- L x W x H: approx. **(n x 50 + 15)** x 28 x 27 mm, L_{max} 2915 mm per element



LED light strip for LIGNO® Acoustic light

20 mm width

Light colour in Kelvin	Installation / Luminous flux in lm/m	Surface-mounted Luminous flux in lm/m	Connected load in W/m	Luminaire efficacy in lm/W	Colour Rendering Index (CRI)	Dimmability
3000	770	930	7,6	101	›90	DALI possible
3000	1200	1460	11,8	102	›90	DALI possible
3000	1770	2190	17,1	104	›90	DALI possible
4000	780	950	8,0	103	›90	DALI possible
4000	1230	1510	11,9	104	›90	DALI possible
4000	1770	2190	18,0	104	›90	DALI possible

All values may be subject to tolerances of ±10%.

*Additional light colours available upon request, with restrictions in terms of output and cost.

28 mm width

Light colour in Kelvin	Installation / Luminous flux in lm/m	Surface-mounted Luminous flux in lm/m	Connected load in W/m	Luminaire efficacy in lm/W	Colour Rendering Index (CRI)	Dimmability
3000	860	990	7,6	113	›90	DALI possible
3000	1340	1540	11,8	114	›90	DALI possible
3000	2010	2310	17,1	118	›90	DALI possible
4000	870	1000	7,6	115	›90	DALI possible
4000	1390	1590	11,8	118	›90	DALI possible
4000	2010	2190	17,1	118	›90	DALI possible

All values may be subject to tolerances of ±10%.

Accessories

Connecting cable with socket and plug (GST08i275T)

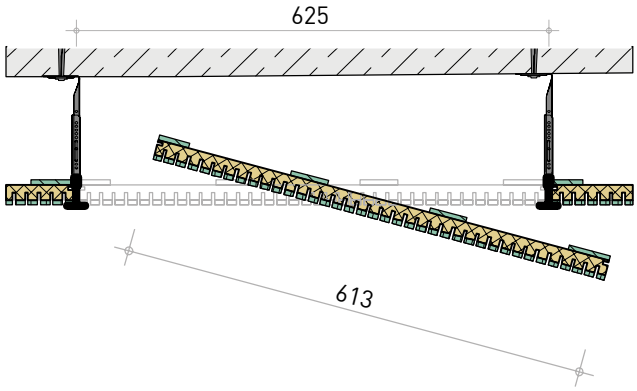
Term	Definition	Unit	Abbreviation
Luminous flux	Measure of the total light power output by a light source in all directions.	Lumen	lm
Luminous intensity	Ratio of luminous flux that strikes a certain area to the size of that area (lm / m² = lx). The luminous intensity is not bound to an object surface and is not a product property because it is a receiver variable. Illuminance meters are used for measurement.	Lux	lx
Light colour	The colour of a self-illuminating light source. The lower the value, the redder, the higher the value the bluer the light colour. Assignment of the light colour to the colour temperature ranges according to EN 12464-1 warm white (ww) 2700 - 3300 K | neutral white (nw) 3300 - 5300 K | daylight white (tw) › 5.300 K	Kelvin	K
Connected load	Necessary watts/ metre of light strip. The total length in metres of light strip x and the connected load W/m produce the total output of the light strips and is required for the design of the converter/transformer.	Watt/ metre	W/m
Degree of reflection	The degree of reflection depends on the colour of the surface and describes what percentage of the incident light is reflected back.		
Light yield	Ratio of the emitted luminous flux [lm] to the consumed electrical power P [W].	Lumen/ Watt	lm/W
Useful level	Distance to the useful level = clearance room height - area of the visual task		
Degradation	(e.g. L80 / B10) according to the specified lifetime of the LED, the specified luminous flux output drops to less than 80% in 10% of the diodes that had been intact until then. **Therefore, 15 % more light output should be taken into account when planning new systems in order to compensate for the decrease in luminous flux.**		
DALI	Digital Addressable Lighting Interface: is a protocol for the control of lighting devices in building automation		

Types 3S_33 / 3G_33
Special applications

Cuttings for grid ceilings

The LIGNO® Acoustic light 3S-33 panels are available pre-cut for the purpose of inserting them into grid ceilings (e.g. from Donn profiles DX 24).

Width	613 mm			
Length	613 mm			
Weight	3S-33		3G-33	
	softwood	hardwood	softwood	hardwood
	9,1 kg/m² approx. 3.5 kg/ panel	10,2 kg/m² approx. 3,8 kg/ panel	11,4 kg/m² approx. 4,3 kg/ panel	13,2 kg/m² approx. 5,0 kg/ panel
Other cuttings up to 625 mm in width on request				

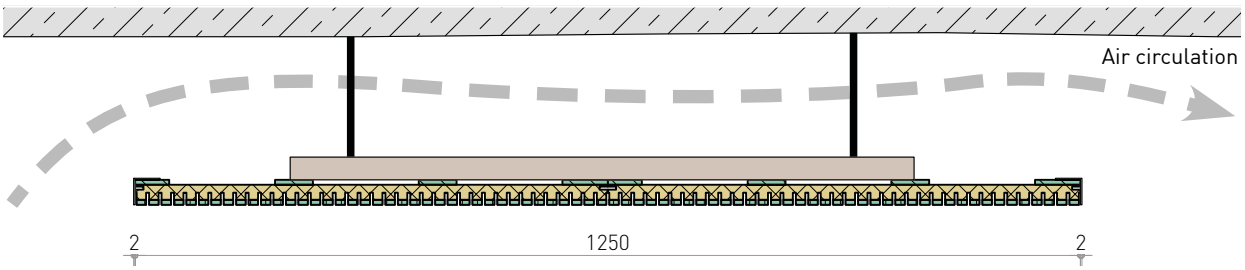


Freely suspended acoustic canopies

Customised canopies on request for targeted, selective interruption of sound reflection. The load-bearing ceiling will not be thermally decoupled (e.g. in the case of **concrete core activation**).

The canopy consists of LIGNO® Acoustic light elements, optionally one light fixture, aluminium edges and appropriate suspension cables and connection material

Canopy width	on request
Canopy length	
Fastening	Cables (state required length when ordering), upper and lower brackets, hooks included



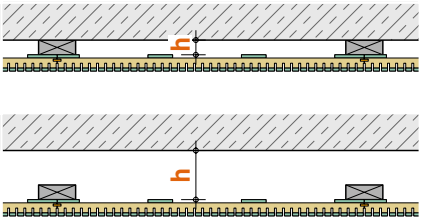
Impact protection wall

Instead of LIGNO® Acoustic light, the **optimized element type LIGNO® Acoustic Sport** is used for acoustically effective cladding of force-reducing impact walls in sports halls.

See technical details of surface, flammability and tested substructures made of wood and metal in the separate

▶ **Technical data sheet LIGNO® Acoustic Sport**

Acoustic absorption Type 3S_33 without cavity

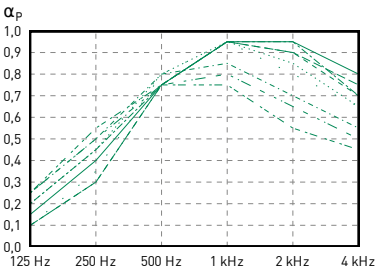


LIGNO® Acoustic light 3S_33_a70g

installed in front of 30 mm cavity without cavity

h = 30 mm
d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.70**	0.80	0.76	C	MH	0.15	0.40	0.75	0.95	0.95	0.80
_625-18-6	**0.60**	0.75	0.73	C	MH	0.10	0.30	0.75	0.95	0.90	0.70
_625-23-8	**0.60**	0.75	0.73	C	MH	0.10	0.30	0.75	0.95	0.90	0.75
_625-20-4	**0.75**	0.80	0.76	C		0.20	0.45	0.80	0.95	0.85	0.65
_625-35-4	**0.65**	0.75	0.67	C		0.25	0.50	0.75	0.80	0.65	0.50
_625-44-4	**0.60**	0.65	0.64	C		0.25	0.55	0.75	0.75	0.55	0.45
_625-12n25-4	**0.75**	0.75	0.77	C		0.20	0.45	0.75	0.95	0.95	0.70
_625-18n38-6	**0.65**	0.75	0.73	C	M	0.10	0.35	0.80	0.95	0.80	0.65
_625-22n40-4	**0.70**	0.75	0.71	C		0.25	0.50	0.80	0.85	0.70	0.55

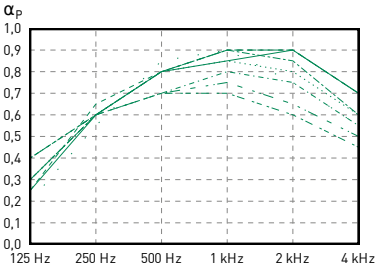


LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity without cavity

h = 100 mm
d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.80**	0.80	0.81	B		0.25	0.60	0.80	0.85	0.90	0.70
_625-18-6	**0.85**	0.80	0.80	B		0.25	0.65	0.80	0.90	0.90	0.70
_625-23-8	**0.80**	0.80	0.79	B		0.30	0.60	0.80	0.90	0.90	0.70
_625-20-4	**0.80**	0.75	0.77	B		0.30	0.60	0.80	0.85	0.80	0.60
_625-35-4	**0.65**	0.70	0.68	C		0.40	0.60	0.70	0.75	0.65	0.50
_625-44-4	**0.60**	0.65	0.64	C		0.40	0.60	0.70	0.70	0.60	0.45
_625-12n25-4	**0.80**	0.80	0.80	B		0.30	0.60	0.80	0.90	0.85	0.60
_625-18n38-6	**0.75**	0.75	0.75	C		0.20	0.55	0.85	0.90	0.75	0.55
_625-22n40-4	**0.70**	0.75	0.73	C		0.40	0.60	0.70	0.80	0.75	0.55

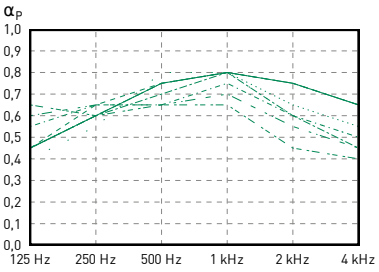


LIGNO® Acoustic light 3S_33_a70g

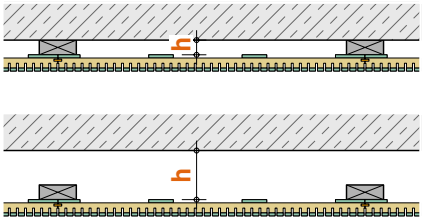
installed in front of 150 mm cavity without cavity

h = 150 mm
d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.75**	0.70	0.72	C		0.45	0.60	0.75	0.80	0.75	0.65
_625-18-6	**0.75**	0.75	0.74	C		0.45	0.65	0.75	0.80	0.75	0.65
_625-23-8	**0.75**	0.75	0.73	C		0.45	0.60	0.75	0.80	0.75	0.65
_625-20-4	**0.70**	0.70	0.71	C		0.45	0.60	0.75	0.80	0.65	0.55
_625-35-4	**0.60**	0.65	0.63	C	L	0.60	0.65	0.65	0.70	0.55	0.45
_625-44-4	**0.50**	0.60	0.60	D	L	0.65	0.60	0.65	0.65	0.45	0.40
_625-12n25-4	**0.60**	0.70	0.68	C		0.45	0.60	0.70	0.80	0.60	0.45
_625-18n38-6	**0.65**	0.70	0.69	C		0.40	0.55	0.80	0.80	0.60	0.50
_625-22n40-4	**0.65**	0.65	0.66	C		0.55	0.65	0.65	0.75	0.60	0.50



Acoustic absorption Type 3S_33 without cavity



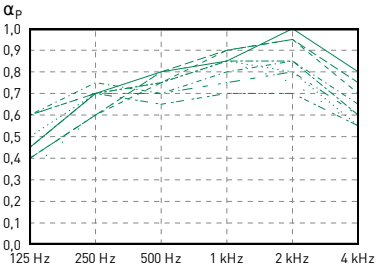
LIGNO® Acoustic light 3S_33_a70g

installed in front of 200 mm cavity without cavity

h = 200 mm

d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.85**	0.85	0.84	B		0.45	0.70	0.80	0.85	1.00	0.80
_625-18-6	**0.80**	0.80	0.81	B		0.40	0.60	0.75	0.90	0.95	0.70
_625-23-8	**0.85**	0.80	0.80	B		0.40	0.60	0.80	0.90	0.95	0.75
_625-20-4	**0.75**	0.80	0.78			0.50	0.70	0.75	0.85	0.80	0.55
_625-35-4	**0.75**	0.75	0.73	C		0.60	0.70	0.70	0.75	0.80	0.60
_625-44-4	**0.70**	0.70	0.69	C		0.60	0.70	0.65	0.70	0.70	0.55
_625-12n25-4	**0.75**	0.80	0.80	C		0.45	0.70	0.75	0.85	0.85	0.60
_625-18n38-6	**0.75**	0.75	0.75	C		0.35	0.60	0.80	0.85	0.75	0.55
_625-22n40-4	**0.75**	0.80	0.78	C		0.60	0.75	0.70	0.80	0.85	0.65



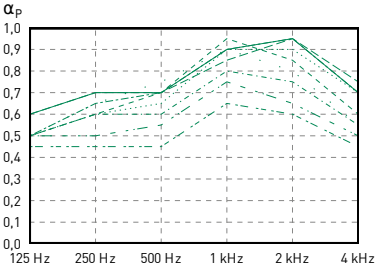
LIGNO® Acoustic light 3S_33_a70g

installed in front of 400 mm cavity without cavity

h = 400 mm

d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.80**	0.80	0.81	B		0.60	0.70	0.70	0.90	0.95	0.70
_625-18-6	**0.75**	0.80	0.77	C		0.50	0.60	0.70	0.95	0.85	0.60
_625-23-8	**0.80**	0.80	0.81	B		0.60	0.70	0.70	0.85	0.95	0.75
_625-20-4	**0.75**	0.80	0.77	C		0.50	0.60	0.65	0.90	0.90	0.70
_625-35-4	**0.60**	0.60	0.62	C		0.50	0.50	0.55	0.75	0.65	0.50
_625-44-4	**0.55**	0.55	0.54	D		0.45	0.45	0.45	0.65	0.60	0.45
_625-12n25-4	**0.80**	0.80	0.79	B		0.50	0.65	0.70	0.90	0.95	0.70
_625-18n38-6	**0.75**	0.80	0.78	C		0.50	0.65	0.75	0.90	0.80	0.55
_625-22n40-4	**0.65**	0.70	0.70	C		0.50	0.60	0.60	0.80	0.75	0.55

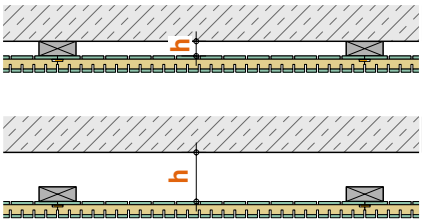


ONLINE-CALCULATION

Predict the effect on acoustic quality for various room usages:

▶ *www.lignotrend.com/acoustic-calculator*

Acoustic absorption Type 3G_33 without cavity

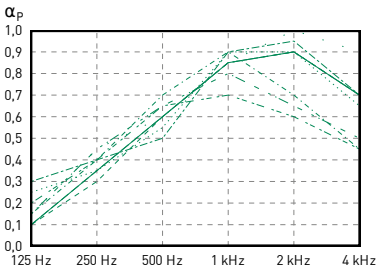


LIGNO® Acoustic light 3G_33_a70g

installed in front of 30 mm cavity without cavity

h = 30 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	———	**0.60**	0.70	0.68	C		0.10	0.35	0.60	0.85	0.90	0.70
_625-18-6	- - - - - - - -	**0.60**	0.65	0.66	C	MH	0.10	0.30	0.60	0.85	0.90	0.70
_625-23-8	—— —— —— –	**0.60**	0.70	0.68	C	MH	0.10	0.35	0.60	0.85	0.90	0.70
_625-20-4	.....	**0.60**	0.70	0.67	C		0.25	0.35	0.55	0.90	0.90	0.65
_625-35-4	—— . ———	**0.65**	0.65	0.63	C		0.15	0.45	0.65	0.80	0.65	0.50
_625-44-4	—— . —— . ——	**0.60**	0.60	0.59	C		0.20	0.40	0.65	0.70	0.60	0.45
_625-12n25-4	-- -- -- -- -- --	**0.60**	0.70	0.68	C		0.30	0.40	0.50	0.90	0.95	0.70
_625-18n38-6	. . . . .	**0.60**	0.70	0.69	C	MH	0.15	0.45	0.60	0.85	1.00	0.90
_625-22n40-4	— . — . — . —	**0.60**	0.70	0.67	C		0.15	0.40	0.70	0.90	0.70	0.45

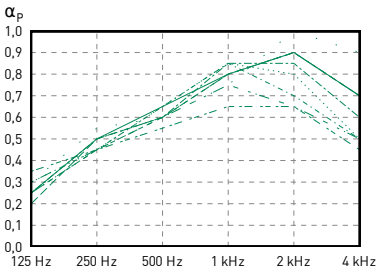


LIGNO® Acoustic light 3G_33_a70g

installed in front of 100 mm cavity without cavity

h = 100 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	———	**0.70**	0.70	0.70	C		0.25	0.50	0.65	0.80	0.90	0.70
_625-18-6	- - - - - - - -	**0.65**	0.70	0.68	C	H	0.25	0.45	0.60	0.80	0.90	0.70
_625-23-8	—— —— —— –	**0.70**	0.70	0.69	C		0.20	0.50	0.60	0.80	0.90	0.70
_625-20-4	.....	**0.65**	0.70	0.69	C		0.30	0.45	0.65	0.85	0.80	0.50
_625-35-4	—— . ———	**0.65**	0.60	0.62	C		0.30	0.45	0.60	0.75	0.65	0.50
_625-44-4	—— . —— . ——	**0.60**	0.60	0.58	C		0.35	0.45	0.55	0.65	0.65	0.45
_625-12n25-4	-- -- -- -- -- --	**0.70**	0.70	0.70	C		0.25	0.50	0.60	0.85	0.85	0.60
_625-18n38-6	. . . . .	**0.65**	0.70	0.69	C	H	0.30	0.55	0.60	0.75	1.00	0.90
_625-22n40-4	— . — . — . —	**0.65**	0.70	0.67	C		0.25	0.45	0.65	0.85	0.70	0.50

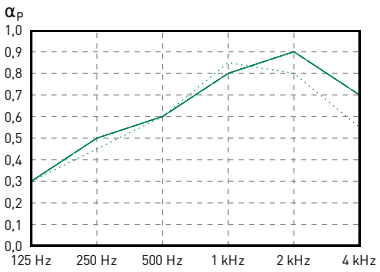


LIGNO® Acoustic light 3G_33_a70g

installed in front of 150 mm cavity without cavity

h = 150 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	———	**0.70**	0.70	0.70	C		0.30	0.50	0.60	0.80	0.90	0.70
_625-18-6	- - - - - - - -	**0.70**	0.70	0.70	C		0.30	0.50	0.60	0.80	0.90	0.70
_625-23-8	—— —— —— –	**0.70**	0.70	0.70	C		0.30	0.50	0.60	0.80	0.90	0.70
_625-20-4	.....	**0.70**	0.70	0.70	C		0.30	0.45	0.60	0.85	0.80	0.55
_625-12n25-4	-- -- -- -- -- --	**0.70**	0.70	0.70	C		0.30	0.50	0.60	0.80	0.90	0.70
_625-18n38-6	. . . . .	**0.70**	0.70	0.70	C		0.30	0.50	0.60	0.80	0.90	0.70

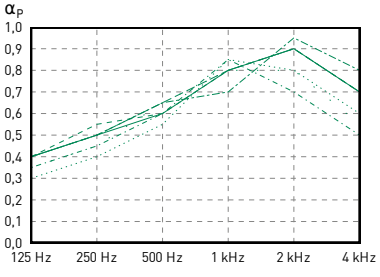


LIGNO® Acoustic light 3G_33_a70g

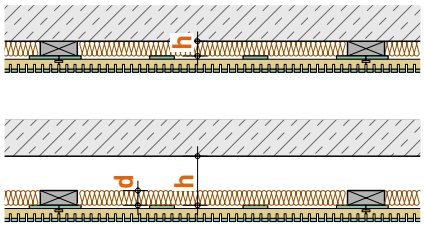
installed in front of 200 mm cavity without cavity

h = 200 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	———	**0.70**	0.70	0.70	C		0.40	0.50	0.60	0.80	0.90	0.70
_625-18-6	- - - - - - - -	**0.70**	0.70	0.71	C		0.40	0.55	0.60	0.80	0.90	0.70
_625-23-8	—— —— —— –	**0.70**	0.70	0.70	C		0.40	0.50	0.65	0.80	0.90	0.70
_625-20-4	.....	**0.60**	0.65	0.66	C		0.30	0.40	0.55	0.85	0.80	0.60
_625-12n25-4	-- -- -- -- -- --	**0.70**	0.70	0.70	C	H	0.40	0.50	0.65	0.70	0.95	0.80
_625-18n38-6	. . . . .	**0.70**	0.70	0.70	C		0.35	0.45	0.65	0.80	0.80	0.55
_625-22n40-4	— . — . — . —	**0.65**	0.65	0.67	C		0.35	0.45	0.60	0.85	0.70	0.50



Acoustic absorption Type 3S_33 with extra absorber (wood fiber)

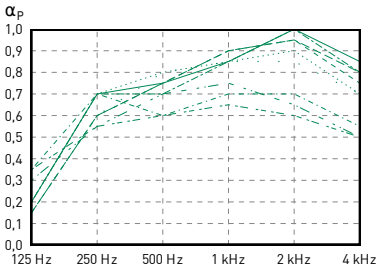


LIGNO® Acoustic light 3S_33_a70g

installed in front of 30 mm cavity, backed with 30 mm wood fiber

h = 30 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.85**	0.85	0.82	B		0.20	0.70	0.75	0.85	1.00	0.85
_625-18-6	**0.80**	0.80	0.79	B		0.15	0.60	0.75	0.90	0.95	0.75
_625-23-8	**0.80**	0.80	0.79	B		0.15	0.60	0.75	0.90	0.95	0.80
_625-20-4	**0.85**	0.80	0.82	B		0.20	0.70	0.80	0.85	0.90	0.70
_625-35-4	**0.65**	0.65	0.67	C		0.30	0.55	0.70	0.75	0.65	0.50
_625-44-4	**0.60**	0.60	0.60	C		0.35	0.55	0.60	0.65	0.60	0.50
_625-12n25-4	**0.80**	0.80	0.81	B		0.20	0.70	0.70	0.85	1.00	0.80
_625-18n38-6	**0.80**	0.80	0.79	B		0.15	0.60	0.80	0.85	0.85	0.70
_625-22n40-4	**0.65**	0.70	0.68	C		0.35	0.70	0.60	0.70	0.70	0.55

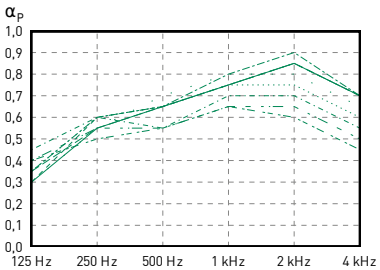


LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity, backed with 30 mm wood fiber

h = 100 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.75**	0.70	0.70	C		0.30	0.55	0.65	0.75	0.85	0.70
_625-18-6	**0.75**	0.70	0.71	C		0.30	0.60	0.65	0.75	0.85	0.70
_625-23-8	**0.75**	0.70	0.70	C		0.35	0.55	0.65	0.75	0.85	0.70
_625-20-4	**0.70**	0.70	0.69	C		0.35	0.60	0.65	0.75	0.75	0.60
_625-35-4	**0.60**	0.60	0.61	C		0.40	0.55	0.55	0.65	0.65	0.50
_625-44-4	**0.60**	0.60	0.58	C		0.40	0.50	0.55	0.65	0.60	0.45
_625-12n25-4	**0.75**	0.75	0.75	C		0.35	0.60	0.65	0.80	0.90	0.70
_625-18n38-6	**0.75**	0.85	0.83	C	M	0.30	0.55	0.70	0.80	0.80	0.65
_625-22n40-4	**0.65**	0.65	0.64	C		0.45	0.60	0.55	0.70	0.70	0.55

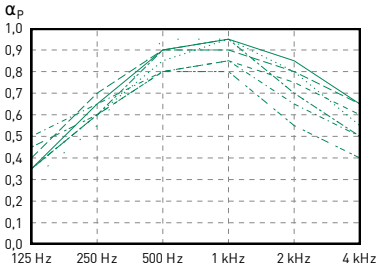


LIGNO® Acoustic light 3S_33_a70g

installed in front of 150 mm cavity, backed with 30 mm wood fiber

h = 150 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.85**	0.85	0.83	B		0.35	0.65	0.90	0.95	0.85	0.65
_625-18-6	**0.75**	0.75	0.75	C		0.35	0.60	0.80	0.85	0.75	0.60
_625-23-8	**0.80**	0.85	0.83	B		0.40	0.70	0.90	0.90	0.80	0.65
_625-20-4	**0.75**	0.80	0.80	C		0.35	0.60	0.85	0.95	0.80	0.55
_625-44-4	**0.55**	0.70	0.69	D	LMM	0.45	0.60	0.80	0.80	0.55	0.40
_625-12n25-4	**0.70**	0.80	0.79	C	M	0.35	0.60	0.90	0.95	0.70	0.50
_625-18n38-6	**0.70**	0.80	0.80	C	MM	0.30	0.55	0.95	0.95	0.70	0.50
_625-22n40-4	**0.65**	0.75	0.75	C		0.50	0.65	0.80	0.85	0.65	0.50

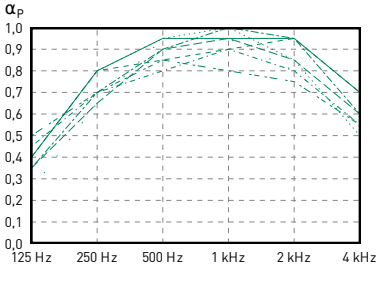


LIGNO® Acoustic light 3S_33_a70g

installed in front of 200 mm cavity, backed with 30 mm wood fiber

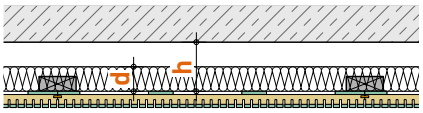
h = 200 mm
d = 30 mm

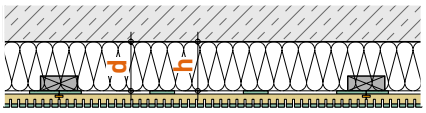
Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.90**	0.90	0.91	A		0.40	0.80	0.95	0.95	0.95	0.70
_625-18-6	**0.85**	0.90	0.87	B		0.40	0.80	0.85	0.90	0.95	0.70
_625-23-8	**0.80**	0.85	0.84	B		0.35	0.65	0.90	0.95	0.85	0.60
_625-20-4	**0.70**	0.90	0.90	C	LMM	0.40	0.80	0.95	1.00	0.85	0.50
_625-44-4	**0.75**	0.80	0.78	C		0.50	0.70	0.85	0.80	0.75	0.55
_625-12n25-4	**0.80**	0.90	0.89	B		0.35	0.70	0.90	1.00	0.95	0.60
_625-18n38-6	**0.75**	0.85	0.84	C		0.25	0.65	0.95	0.95	0.80	0.55
_625-22n40-4	**0.75**	0.80	0.81	C		0.45	0.70	0.80	0.90	0.80	0.55



To improve the acoustic properties, a flexible insulation mat made of Combijute/Thermoflex is installed (brand Thermo Hanf® Combi Jute, Gutex or equivalent).

Acoustic absorption Type 3S_33 with fleece





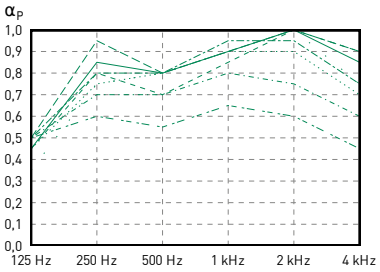
LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity, backed with 40 mm Polyesterfiber Bluefiber

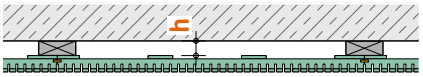
h = 100 mm

d = 40 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.90**	0.90	0.90	A		0.45	0.85	0.80	0.90	1.00	0.85
_625-18-6	**0.80**	0.85	0.84	B		0.45	0.80	0.70	0.85	1.00	0.90
_625-23-8	**0.90**	0.95	0.91	A	L	0.50	0.95	0.80	0.90	1.00	0.90
_625-20-4	**0.85**	0.85	0.85	B		0.45	0.75	0.80	0.90	0.90	0.70
_625-44-4	**0.60**	0.60	0.59	C		0.50	0.60	0.55	0.65	0.60	0.45
_625-12n25-4	**0.85**	0.85	0.87	B		0.50	0.80	0.80	0.95	0.95	0.75
_625-18n38-6	**0.85**	0.85	0.87	B		0.35	0.75	0.80	0.90	1.00	0.75
_625-22n40-4	**0.75**	0.75	0.75	C		0.50	0.70	0.70	0.80	0.75	0.60



Low absorbing



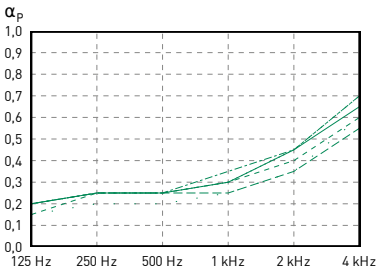
LIGNO® Acoustic light 3S_33_a10g

installed in front of 30 mm cavity without cavity

h = 30 mm

d = 0 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.30**	0.30	0.31	D	H	0.20	0.25	0.25	0.30	0.45	0.65
_625-18-6	**0.30**	0.30	0.30	D	H	0.15	0.25	0.25	0.30	0.40	0.60
_625-23-8	**0.30**	0.25	0.27	D	H	0.20	0.25	0.25	0.25	0.35	0.55
_625-20-4	**0.30**	0.30	0.31	D	H	0.20	0.25	0.25	0.30	0.45	0.70
_625-12n25-4	**0.35**	0.30	0.33	D	H	0.20	0.25	0.25	0.35	0.45	0.70
_625-18n38-6	**0.25**	0.25	0.26	E	H	0.15	0.20	0.20	0.25	0.35	0.60



Directly installed

LIGNO® Acoustic light 3S_33_a70g

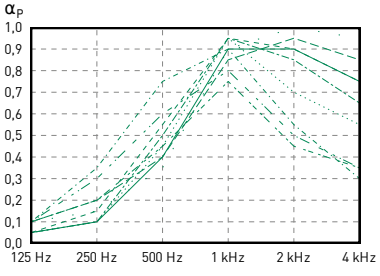
installed without cavity without cavity

h = 0 mm

d = 0 mm

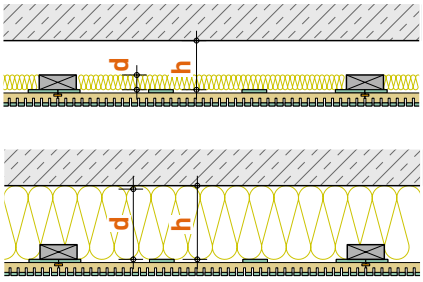
(approx. 7 mm cavity in the element)

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.40**	0.55	0.57	D	MH	0.05	0.10	0.40	0.90	0.90	0.75
_625-18-6	**0.45**	0.65	0.64	D	MH	0.05	0.15	0.55	0.95	0.90	0.75
_625-23-8	**0.45**	0.60	0.61	D	MH	0.10	0.20	0.40	0.85	0.95	0.85
_625-20-4	**0.40**	0.55	0.56	D	MH	0.05	0.10	0.45	0.95	0.70	0.55
_625-35-4	**0.50**	0.55	0.55	D	M	0.10	0.30	0.60	0.80	0.50	0.35
_625-44-4	**0.45**	0.45	0.46	D	M	0.10	0.20	0.45	0.75	0.45	0.35
_625-12n25-4	**0.40**	0.60	0.59	D	MH	0.05	0.10	0.50	0.95	0.85	0.65
_625-18n38-6	**0.40**	0.60	0.61	D	MH	0.10	0.15	0.35	0.90	1.00	0.95
_625-22n40-4	**0.50**	0.65	0.64	D	M	0.10	0.35	0.75	0.90	0.55	0.30



To improve the acoustic properties, a sound-absorbing acoustic mat made of thermally bonded polyester, without chemical binders (brand sandler bluefiber wool 40), is installed here.

Acoustic absorption Type 3S_33 with extra absorber (mineral wool)



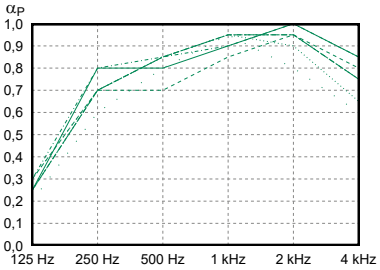
LIGNO® Acoustic light 3S_33_a70g

installed in front of 30 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 30 mm

d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.90**	0.90	0.88	A		0.25	0.80	0.80	0.90	1.00	0.85
_625-18-6	**0.80**	0.80	0.80	B		0.30	0.70	0.70	0.85	0.95	0.80
_625-23-8	**0.90**	0.90	0.88	A		0.25	0.70	0.85	0.95	0.95	0.75
_625-20-4	**0.85**	0.85	0.85	B		0.30	0.70	0.85	0.95	0.90	0.65
_625-35-4	**0.70**	0.70	0.71	C		0.35	0.70	0.70	0.75	0.70	0.50
_625-44-4	**0.60**	0.65	0.65	C	L	0.40	0.65	0.65	0.65	0.60	0.45
_625-12n25-4	**0.90**	0.85	0.86	A		0.25	0.70	0.85	0.95	0.95	0.75
_625-18n38-6	**0.80**	0.80	0.79	B		0.20	0.60	0.80	0.95	0.80	0.60
_625-22n40-4	**0.75**	0.80	0.77	C		0.30	0.80	0.85	0.90	1.00	0.85



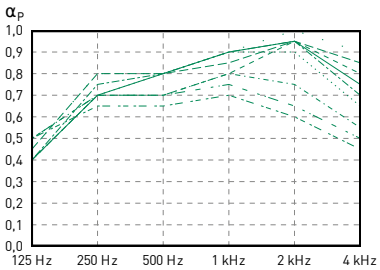
LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 100 mm

d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.85**	0.85	0.83	B		0.40	0.70	0.80	0.90	0.95	0.75
_625-18-6	**0.80**	0.80	0.78	B		0.40	0.70	0.70	0.80	0.95	0.80
_625-23-8	**0.85**	0.85	0.86	B		0.45	0.80	0.80	0.85	0.95	0.85
_625-20-4	**0.80**	0.80	0.82	B		0.40	0.70	0.80	0.90	0.90	0.65
_625-35-4	**0.65**	0.70	0.70	C	L	0.50	0.70	0.70	0.75	0.65	0.50
_625-44-4	**0.60**	0.65	0.65	C		0.50	0.65	0.65	0.70	0.60	0.45
_625-12n25-4	**0.85**	0.85	0.85	B		0.40	0.75	0.80	0.90	0.95	0.70
_625-18n38-6	**0.90**	0.90	0.87	A		0.45	0.80	0.80	0.90	1.00	0.90
_625-22n40-4	**0.70**	0.75	0.74	C		0.50	0.70	0.70	0.80	0.75	0.55



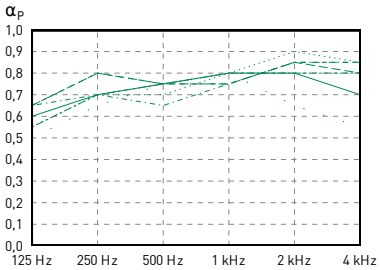
LIGNO® Acoustic light 3S_33_a70g

installed in front of 150 mm cavity, backed with 140 mm mineral wool Sonorock

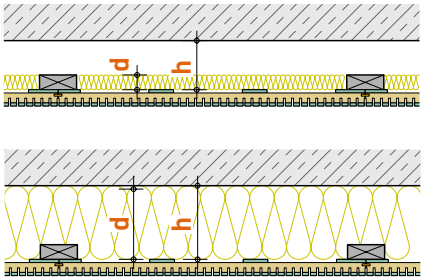
h = 150 mm

d = 140 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**0.85**	0.85	0.85	B		0.70	0.75	0.80	0.90	0.95	0.75
_625-18-6	**0.75**	0.80	0.80	C		0.75	0.75	0.65	0.85	0.95	0.75
_625-23-8	**0.90**	0.90	0.88	A		0.70	0.75	0.80	0.95	0.95	0.70
_625-20-4	**0.75**	0.85	0.83	B	L	0.70	0.75	0.80	0.95	0.85	0.55
_625-12n25-4	**0.80**	0.85	0.84	B		0.70	0.75	0.75	0.95	0.95	0.65
_625-18n38-6	**0.75**	0.80	0.80	C		0.65	0.65	0.75	0.95	0.80	0.55
_625-22n40-4	**0.75**	0.75	0.74	C		0.65	0.60	0.70	0.85	0.75	0.60



Acoustic absorption Type 3S_33 with extra absorber (mineral wool)



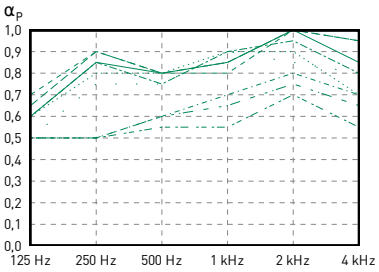
LIGNO® Acoustic light 3S_33_a70g

installed in front of 200 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 200 mm

d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.85	0.90	0.87	B		0.60	0.85	0.80	0.85	1.00	0.85
_625-18-6	0.85	0.90	0.89	B	L	0.70	0.90	0.80	0.80	1.00	0.95
_625-23-8	0.85	0.90	0.89	B	L	0.65	0.90	0.80	0.85	1.00	0.95
_625-20-4	0.85	0.85	0.85	B		0.60	0.80	0.80	0.90	0.90	0.70
_625-35-4	0.65	0.65	0.62	C		0.50	0.50	0.60	0.65	0.75	0.65
_625-44-4	0.60	0.60	0.57	C		0.50	0.50	0.55	0.55	0.70	0.55
_625-12n25-4	0.85	0.85	0.86	B		0.60	0.85	0.75	0.90	0.95	0.80
_625-18n38-6	0.85	0.80	0.81	B		0.50	0.75	0.75	0.90	0.85	0.80
_625-22n40-4	0.70	0.65	0.66	C		0.50	0.50	0.60	0.70	0.80	0.70



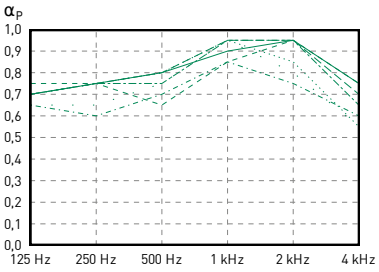
LIGNO® Acoustic light 3S_33_a70g

installed in front of 150 mm cavity, backed with 140 mm mineral wool Sonorock

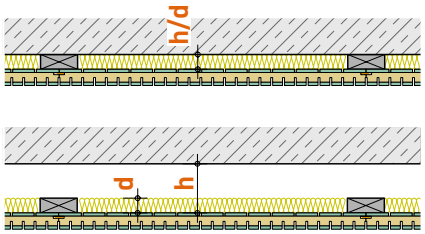
h = 150 mm

d = 140 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.85	0.85	0.85	B		0.70	0.75	0.80	0.90	0.95	0.75
_625-18-6	0.75	0.80	0.80	C		0.75	0.75	0.65	0.85	0.95	0.75
_625-23-8	0.90	0.90	0.88	A		0.70	0.75	0.80	0.95	0.95	0.70
_625-20-4	0.75	0.85	0.83	B	L	0.70	0.75	0.80	0.95	0.85	0.55
_625-12n25-4	0.80	0.85	0.84	B		0.70	0.75	0.75	0.95	0.95	0.65
_625-18n38-6	0.75	0.80	0.80	C		0.65	0.65	0.75	0.95	0.80	0.55
_625-22n40-4	0.75	0.75	0.74	C		0.65	0.60	0.70	0.85	0.75	0.60



Acoustic absorption Type 3G_33 with extra absorber (mineral wool)

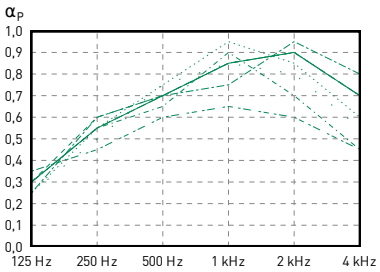


LIGNO® Acoustic light 3G_33_a70g

installed in front of 30 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 30 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.75	0.75	0.74	C		0.30	0.55	0.70	0.85	0.90	0.70
_625-18-6	0.80	0.75	0.76	B		0.30	0.60	0.70	0.85	0.90	0.70
_625-23-8	0.75	0.75	0.75	C		0.30	0.55	0.70	0.85	0.90	0.70
_625-20-4	0.75	0.80	0.78	C		0.25	0.55	0.75	0.95	0.85	0.60
_625-44-4	0.60	0.60	0.58	C		0.35	0.45	0.60	0.65	0.60	0.45
_625-12n25-4	0.75	0.75	0.74	C		0.25	0.60	0.70	0.75	0.95	0.80
_625-18n38-6	0.75	0.75	0.75	C		0.25	0.50	0.75	0.85	0.80	0.55
_625-22n40-4	0.65	0.70	0.70	C		0.30	0.55	0.65	0.90	0.70	0.45

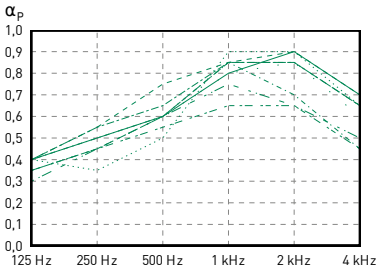


LIGNO® Acoustic light 3G_33_a70g

installed in front of 100 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 100 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.70	0.70	0.71	C		0.40	0.50	0.60	0.80	0.90	0.70
_625-18-6	0.80	0.75	0.76	B		0.40	0.55	0.75	0.85	0.90	0.70
_625-23-8	0.70	0.70	0.70	C		0.35	0.45	0.60	0.85	0.85	0.65
_625-20-4	0.55	0.65	0.67	D		0.40	0.35	0.50	0.90	0.90	0.65
_625-35-4	0.65	0.60	0.62	C		0.30	0.45	0.60	0.75	0.65	0.50
_625-44-4	0.60	0.60	0.57	C		0.35	0.45	0.55	0.65	0.65	0.45
_625-12n25-4	0.75	0.75	0.73	C		0.40	0.55	0.65	0.85	0.85	0.65
_625-18n38-6	0.70	0.70	0.69	C		0.35	0.45	0.60	0.80	0.85	0.60
_625-22n40-4	0.60	0.70	0.67	C		0.40	0.50	0.60	0.85	0.70	0.45

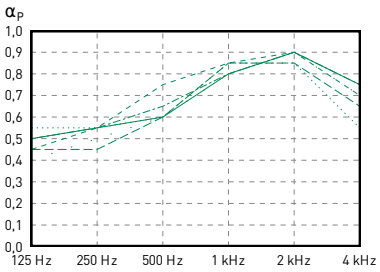


LIGNO® Acoustic light 3G_33_a70g

installed in front of 150 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 150 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.70	0.70	0.71	C		0.50	0.55	0.60	0.80	0.90	0.75
_625-18-6	0.80	0.80	0.78	B		0.45	0.55	0.75	0.85	0.90	0.70
_625-23-8	0.70	0.70	0.71	C		0.45	0.45	0.60	0.85	0.85	0.65
_625-20-4	0.70	0.70	0.70	C		0.55	0.55	0.60	0.85	0.85	0.55
_625-12n25-4	0.75	0.75	0.73	C		0.50	0.55	0.65	0.80	0.90	0.75
_625-18n38-6	0.70	0.70	0.69	C		0.40	0.50	0.60	0.80	0.90	0.70

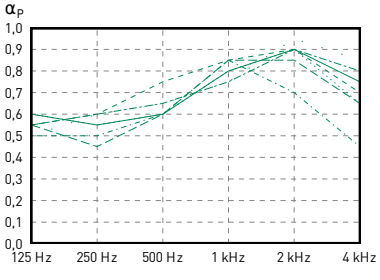


LIGNO® Acoustic light 3G_33_a70g

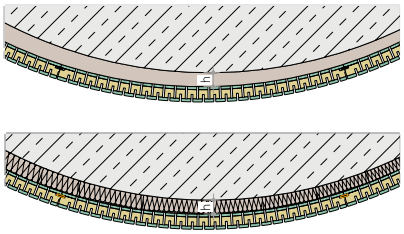
installed in front of 200 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 200 mm
d = 30 mm

Profile	α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	0.70	0.70	0.71	C		0.60	0.55	0.60	0.80	0.90	0.75
_625-18-6	0.80	0.80	0.78	B		0.55	0.60	0.75	0.85	0.90	0.70
_625-23-8	0.70	0.70	0.70	C		0.55	0.45	0.60	0.85	0.85	0.65
_625-20-4	0.70	0.70	0.71	C		0.60	0.55	0.60	0.80	0.90	0.65
_625-12n25-4	0.75	0.75	0.73	C		0.55	0.60	0.65	0.75	0.90	0.80
_625-18n38-6	0.70	0.70	0.72	C		0.50	0.60	0.65	0.75	0.95	0.85
_625-22n40-4	0.60	0.65	0.67	C	M	0.50	0.50	0.60	0.85	0.70	0.45



Acoustic absorption Type 3C_33 on curved surface

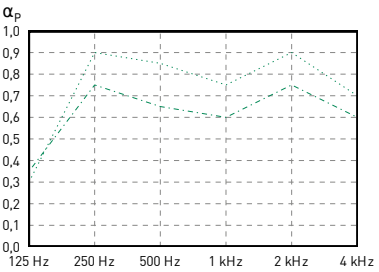


LIGNO® Acoustic light 3C_33_a70g

installed in front of 95 mm cavity, backed with 30 mm wood fiber

h = 95 mm
d = 30 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-20-4	.....	**0.80**	0.85	0.85	B		0.30	0.90	0.85	0.75	0.90	0.70
_625-22n40-4	—.—.—.—	**0.65**	0.70	0.69	C		0.35	0.75	0.65	0.60	0.75	0.60

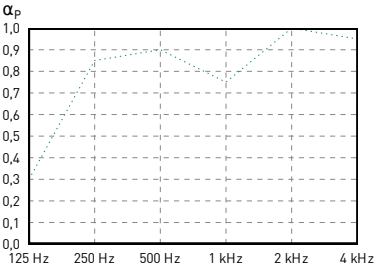


LIGNO® Acoustic light 3C_33_a70g

installed in front of 95 mm cavity, backed with 30 mm mineral wool Isover SSP 1

h = 95 mm
d = 30 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-20-4	.....	**0.85**	0.90	0.87	B		0.30	0.85	0.90	0.75	1.00	0.95

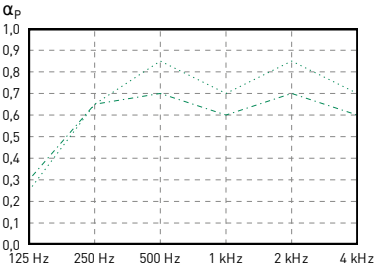


LIGNO® Acoustic light 3C_33_a70g

installed in front of 95 mm cavity without cavity

h = 95 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-20-4	.....	**0.80**	0.80	0.77	B		0.25	0.65	0.85	0.70	0.85	0.70
_625-22n40-4	—.—.—.—	**0.70**	0.65	0.66	C		0.30	0.65	0.70	0.60	0.70	0.60

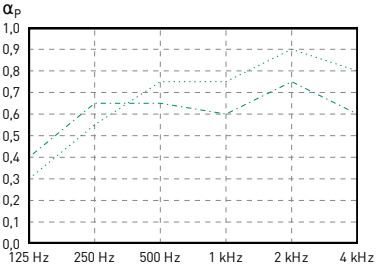


LIGNO® Acoustic light 3C_33_a70g

installed in front of 200 mm cavity without cavity

h = 200 mm
d = 0 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-20-4	.....	**0.75**	0.75	0.75	C		0.30	0.55	0.75	0.75	0.90	0.80
_625-22n40-4	—.—.—.—	**0.65**	0.65	0.66	C		0.40	0.65	0.65	0.60	0.75	0.60

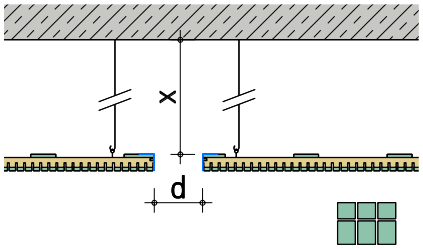


Acoustic absorption Canopies

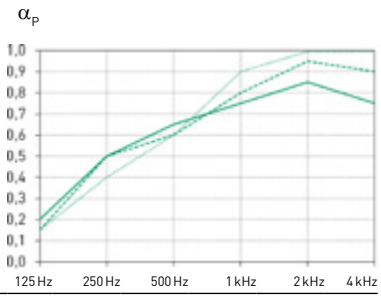
Full essays of the laboratory tests ▶ www.lignotrend.com
on demand also available printed.

LIGNO® Acoustic canopy

several suspension heights, measured as a group of 6 sails with a 100 mm gap

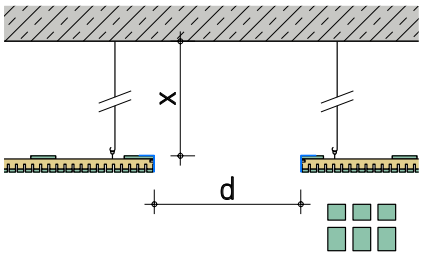


Profile	Suspension	α_w	NRC	SAK	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**x = 200**	**0,70**	0,70	C	0,20	0,50	0,65	0,75	0,85	0,75
	x = 400	**0,60**	0,65	C	0,15	0,50	0,60	0,80	0,95	0,90
	x = 800	**0,70**	0,70	C	0,15	0,40	0,60	0,90	1,00	1,00

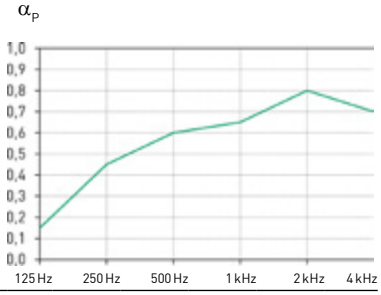


LIGNO® Acoustic canopy

measured as a group of 6 sails with a 300 mm gap



Profile	Suspension	α_w	NRC	SAK	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-18-6	**x = 200**	**0,60**	0,70	C	0,15	0,45	0,60	0,65	0,80	0,70



Overview element weights

	Type	3S_33 / 3C_33	3G_33	3S_39	
Width covered		625	625	625	mm
Length covered	Standard	2940	2940	2940	mm
Weight	Softwood surface, all profiles except **_625-20-4 & _625-22n40-4**	9,2 (16,8)	11,6 (21,3)	11,1 (20,4)	kg/m² (kg/element)
Additional weight	Surface hardwoods	+1,1 (+2,0)	+1,1 (+2,0)	+1,1 (+2,0)	kg/m² (kg/element)
	Profile **_625-20-4**	+0,5 (+0,9)	+0,5 (+0,9)	-	kg/m² (kg/element)
	Profile **_625-22n40-4**	+0,7 (+1,3)	+0,7 (+1,3)	+0,2 (+0,5)	kg/m² (kg/element)
	Absorber **_a10g** instead of **a70g**	+2,7 (+4,9)	+2,7 (+4,9)	+2,8 (+5,1)	kg/m² (kg/element)
	Surface **fire-retardant**	+0,4 (+0,8)	+0,4 (+0,8)	-	kg/m² (kg/element)

(Values in brackets indicate the weight per element in standard length

Check list

Material for panelling	
LIGNO® Acoustic light acoustic panels	Allow for a reserve in quantity for offcuts.
Insulating mats	If required, for backing (e.g. wood fibre (softboard), **supplier: Lignotrend**)
UV protection	If required, for curing spots that were ground on the building site, **supplier: Lignotrend.**
Material for simple batten substructure	
Battens	Type 3S-33: for the best result: stripes of laminated veneer lumber 27/95/2500 (**supplier: Lignotrend**), e= 625 mm, alternative: timber battens, for example 30/100 Typ 3S-62: timber battens, for example 40/60, e= 800 mm
Dowels and fasteners	Select according to base
Clamps	For fastening the elements in the acoustic joints ▶ page 16 For fire retardant substructure: Knoll clamps type A, material no. 1.4301
Screws see also ▶ page 16 - 23	Instead of clamps, for fastening the elements in the acoustic joints (**supplier: Lignotrend**) - special fully-thread drilling screws 3,5 x 40 - special fully-thread drilling screws 3,5 x 43, material no. 1.4539 - special tapping screws, self-tapping 3.5 x 40, galvanized
Battens for lining	For fastening the first elements and end elements or in case a lateral section should follow between the rear webs, see cross-section drawings for thickness
Material for metal substructure	
CD Profile	Dimensions 60/27/06 according to DIN 18182 - Matching cross connectors, multi-connectors and universal connectors
Screws	Drywall screws with TN fine thread
Suspension system	Standard systems, e.g. Nonius suspension or direct suspension with load capacity of 0.4 kN
Material for higher suspension, e.g. with U*psi	
U*psi F-160-profile	As precisely straight, light timber substructure (**supplier: Lignotrend**)
Suspension system	Commercially available systems, e.g. Nonius suspension or Würth ceiling quick-fixing anchor W-DS.
Material for termination	
Edge battens with rebate	As per detail selected, available from Lignotrend on request
Battens, planed	For fastening onto the element rear side as a stop for the edge batten
Tools	
Immersion saw with rail (circular saw)	For cutting the elements to size.
Jigsaw	For internal corners, round cut-outs.
Hammer drill / rotary hammer	For installation on concrete / masonry.
Cordless screwdriver	With bit holder
Special bit with extended tip	If screwing is done in the joints (**supplier: Lignotrend**). In case of LIGNO® screws, each screw pack contains a special bit.
Staple gun with special foot	▶ page 16 loan device available from Lignotrend.
Drill bit tube / Forstner drill, incl. battens in 4, 6 or 8 mm width	For downlights or similar, battens are inserted into the joint for large holes in order to prevent the battens from breaking away.
One-handed ceiling prop(s), Clamp	To temporarily hold the elements while fastening. for firmly pressing on the element when installing the screws.
Chalk line / spirit level / line laser	E.g. for precisely flat installation, for the properly aligned marking of the position of the starting elements on the substructure.
Sanding paper / brush	For touching up fouling and re-application of sanded off UV protection glaze.
Gloves / dust mask	**We recommend wearing gloves during installation to avoid contamination.**

Tender templates

Detailed texts for invitation to tender on all Lignotrend elements with templates for planning and statics, delivery and installation, trimming and subassembly are available in digital form (in GAEB, RTF or PDF format) from the Internet under ▶ www.lignotrend.com .

Your Lignotrend consultant will provide you with performance specification texts for your individual configuration as needed.

Processing guidelines

The explanations given below must be adhered to without fail.
Please convey the helpful hints also to your customers, developer or follow-up trades!

Incoming goods

Receiving controls		
Package undamaged?		Please check it immediately upon receipt and contact Lignotrend in case of any discrepancies. Phone +49 (0) 7755-9200-0.
Delivery scope (panels, accessories) correct?		
Wood moisture content 9 ± 2 %?		

Date / name / signature

Unloading and displacing the packages with a forklift or lifting cart, do not suspend with straps!
Use a crane fork when unloading with a crane.

General information

Lignotrend products, particularly the acoustic panels come with a top-quality visible surface Hence, it is essential to pay particular attention to having **clean hands** or rather wear **gloves** and do not step on visible surfaces.

Minor longitudinal curvatures of the elements are possible due to minimal differences in wood moisture in the layers and do not represent any deficiency. These curvatures can be compensated by warping against the substructure during installation.

Timber is a natural product and its natural properties, deviations and characteristics therefore always have to be taken into account. In particular, when buying and using it, the purchaser must take into consideration its biologic, physical and chemical properties. The spectrum of natural differences in colour, structure and other qualities within one type of wood is a part of the properties of wood as natural product and does not warrant any complaint or liability claim.

Storage

Carefully **protect** the elements using suitable covering material against: **Moisture** of any kind (rain, fog, splash water, snow), wind as well as sun (UV radiation). Store pallets levelled and on clean squared timber. Because of the risk of the formation of condensate beneath the packaging foil: **Storage in dry, closed buildings only!**

Processing

Acclimatisation: It is recommended to store the elements in the prevailing room climate for several days prior to processing. Failure to comply may, for example, cause gaps to form on the frontal element butt. It is recommended to install elements **not before plastering and floor screed are dried** Deviant, in case of installation of elements with flame-retardant surface, drying process of plastering and floor screed must have terminated!

Please orient yourself by the details described in this documentation during installation. Your Lignotrend technical advisor will be at your disposal for checking an individual, detailed solution in cases where you should have deviating basic conditions in your project.

Appropriate measures to **protect wood surfaces** from marks, stains or damage must always be taken. An important point is the soft padding of the installation props at their top, for example, through a clean piece of carpet. Wearing thin gloves is recommended.

Industrial safety has top priority. Therefore, meet the standard safety precautions with regard to working!

Disposal

Waste released during processing of Lignotrend elements can be disposed of like other waste wood, packaging material (foils/wood) must be disposed of by the processing party according to the local law governing waste .

Cleaning and maintenance

Simple vacuum-cleaning of the visible surface using a brush attachment is absolutely sufficient. If that should prove insufficient, wiping with a damp cloth is possible but **without any detergents**! One should brush and not sand if there is a high dirt accumulation. Take care in case of surfaces that have been treated with a UV protection: Colour differences must be anticipated in this case – contact us.

Expert advice

Do you have any questions about planning, invitation to tender or processing? Do you require a sample piece? Do you need an individual quote? Contact the nearby technical advisor: **www.lignotrend.com/consultants**