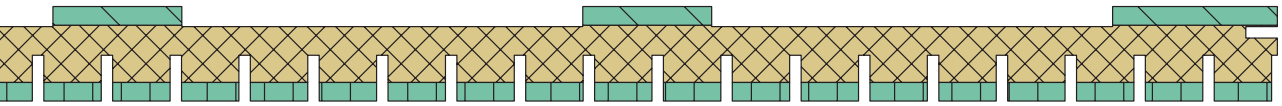
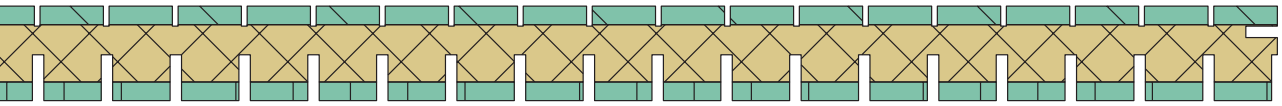
LIGNO® Acoustic Pro

Technical Data Type light/curved

LIGNO®
Akustik Pro



Configurable genuine wood acoustic element
for ceiling and wall cladding in interior finishing.



Bendable variant for concave and convex surfaces.

LIGNO TREND®

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Last revision on 02.11.2026,
subject to modifications.

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natureplus® 0211-0606-014-1

eco 1 ecobau Cert.
ecobau 202503.14312

Geprüft und empfohlen IBR Institut für Baubiologie Rosenheim GmbH
Produkt überprüft auf VOC, Biozide, Schwermetalle und Radioaktivität

A+ A B C

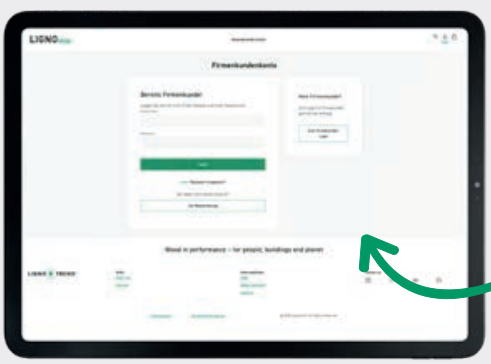
listed in DGNB Navigator

PEFC™ PEFC/04-31-2893

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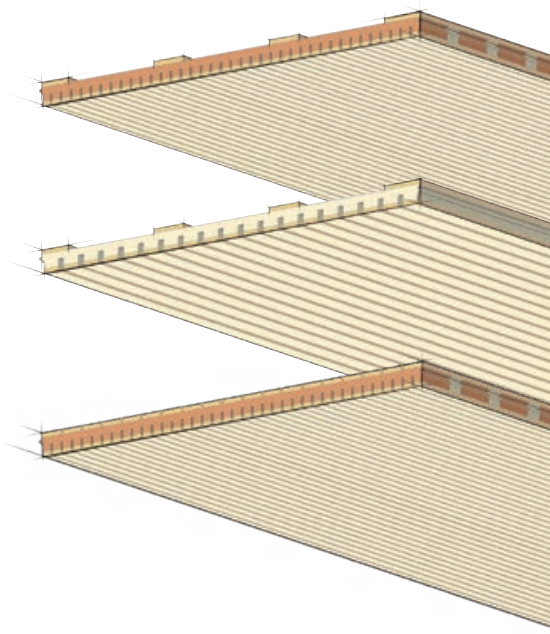
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LIGNO shop

Applications

LIGNO® Acoustic Pro genuine wood acoustic elements are used **for acoustically effective cladding** in commercial and public buildings (e.g. offices, indoor swimming pools, sports halls) as well as in residential construction.

- Suspended ceilings – e.g. beneath timber or concrete structures.
- Wall cladding – also in front of masonry or concrete.
- Acoustic sails – suspended freely in the room, with edge profiles and luminaires.
- Grid ceilings – as cut-to-size tiles for laying into standard suspended ceiling systems.



Structure / technical data

The acoustically optimised cross-laminated timber (CLT) panels consist of three layers. On the visible side, slotting of the first layer creates a slatted appearance; with appropriate installation, the cladding is **ball-impact resistant**. The middle layer (transverse layer) is oriented at right angles to the face layer, ensuring high dimensional stability. The rear layer is formed by at least four slats, again running lengthwise.

Acoustic absorbers are integrated in the transverse layer.

- Width covered: 625 mm
- Wood species: beech / oak / ash / spruce / silver fir (wood moisture content: 9 ± 2 %)
- Bonding: PUR adhesive (formaldehyde-free), adhesive content by mass approx. 1.1 % (three-layer)
- B2 according to DIN 4102 or D-s2-d0 according to EN / special versions available in reaction-to-fire classes up to B-s1-d0 according to EN.
- Installation locations: **Buildings enclosed on all sides and heated**, depending on element configuration **also roofed, open structures**, elements **not exposed to the weather** (use class 0 according to DIN 68800 / service classes 1 and 2 according to Eurocode 5 at wood moisture content ‹ 20 %, see page 24 for equilibrium moisture content diagram).

Product properties

Design variety
Wide range of configuration options

Reaction to fire
From normally flammable to fire retardant

Genuine wood surfaces
Natural raw material

Planning aid software
Room acoustics calculator to support planning

Systematic room acoustics
Effective sound absorption

Easy installation, short construction time
Acoustic ceilings installed efficiently

Outstanding indoor air quality
Certified healthy by natureplus®

Ideal panel size
For every application

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 8
- **Fire retardant** special configuration with
  _C-s2-d0 3S_33
  _B-s2-d0 3G_33
  to DIN EN 13501-1 ▶ page 12

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)

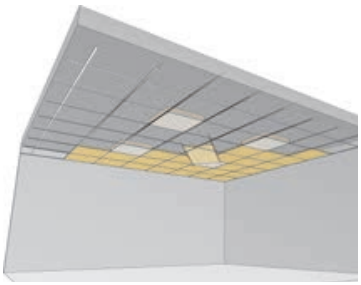


Element selection:

- **Standard (flammability)** 3S_33, 3S_39 ▶ page 8
  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:

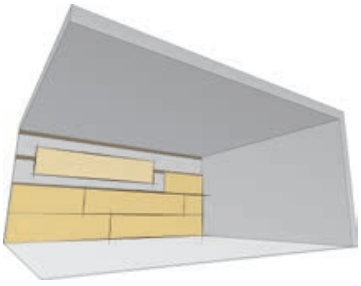
- **LIGNO® Acoustic light** 3S_33 ▶ page 8
- **LIGNO® Acoustic light** 3S_33 / 3G_33
  Further areas of application ▶ page 39

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.



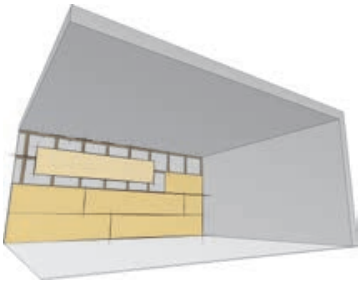
Element selection:

- **Standard (flammability)** 3S_33, 3C_33 ▶ from page 8
- **Fire retardant** special configuration with
  _C-s2-d0 3S_33
  _B-s2-d0 3G_33
  to DIN EN 13501-1 ▶ page 12

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

Environmental data transparency

natureplus

LIGNO® Acoustic is natureplus® certified. The product meets the requirements of guideline RL0211 regarding indoor climate, sustainability and climate protection. Based on the extensive testing, the Minergie-ECO criteria are also met in full.

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

The certificate according to guideline RL0211-0606-014-1 covers the untreated basic element in silver fir/spruce. The standard absorber **_a70g**, made from wood fibre, is included in the certification.

IBR

The Rosenheim Institute for Building Biology (IBR) has subjected surface-finished variants of the LIGNO® Acoustic panelling to intensive testing for potentially harmful substances. The lacquered (**_bl**), oiled (**_bh**) and light-protected (**_buva**) versions of the panels with a silver fir surface have also passed laboratory tests, e.g. for VOCs, and are recommended in accordance with the IBR guidelines for outstanding indoor air quality.

In parallel, the elements were classified under the French VOC regulation Émissions dans l'air intérieur. Testing according to the ISO 16000 standards is mandatory in France for interior finishing materials and furniture. LIGNO® Acoustic achieves class A.

DGNB

When assessing the sustainability of buildings, a high level of transparency regarding the eco-performance of building products is required. As this is a key lever for future-oriented construction, Lignotrend provides extensive data. The listing of LIGNO® products in the DGNB Navigator, the comparison and selection tool of the German Sustainable Building Council, confirms the high quality of this data. Information on environmental impacts, life cycle cost calculation, energy demand and emission behaviour of all products is freely accessible to everyone involved in planning and construction teams.

DGNB Navigator registration codes:

- LIGNO® Acoustic without surface treatment: 0Z5NI5
- LIGNO® Acoustic with surface treatment: D06GDK

PEFC

When using wood as a raw material, its origin is the most important criterion. Lignotrend mainly uses wood from regional forests where sustainable management would be a matter of course even without certification (e.g. silver fir). Nevertheless, we make sure that the wood comes with a PEFC declaration, which also covers a large proportion of the special wood surfaces from trees that do not grow in the vicinity of our production site.

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

EPD

Environmental Product Declarations (EPDs) based on the ecoinvent and MLC databases are available for **LIGNO® acoustic panels** and **LIGNO® cross-laminated timber**. Prepared in accordance with ISO 14025 and EN 15804+A2, the EPDs cover the relevant life cycle stages, from raw material extraction and manufacturing through transport and use to disposal and recycling, together with the associated environmental impacts and resource consumption.

Environmental Product Declarations (EPDs) for download ▶ lignotrend.com/epd

Element designation and configuration overview

Sample configuration: LIGNO® Acoustic light 3S_33_a70g_625-12-4_WT_gb_buva-w1

1. Form of base element ▶ page 8

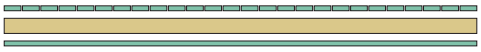
LIGNO® Acoustic light **3S_33**_a70g_625-12-4_WT_gb_buva-w1

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 16

LIGNO® Acoustic light 3S_33**_a70g**_625-12-4_WT_gb_buva-w1

_a70g



_a50l (customised version)



_a10g



3. Acoustic profile ▶ page 16

LIGNO® Acoustic light 3S_33_a70g**_625-12-4**_WT_gb_buva-w1

_625-12-4



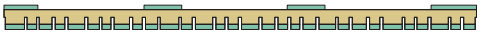
Ledge width: 12 mm
Gap width: 4 mm

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



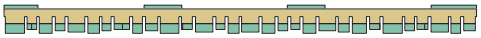
Ledge width: 20 mm (optionally with chamfered edges)
Gap width: 4 mm

_625-12n25-4



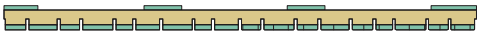
Slat width: 12-25 mm
Gap width: 4 mm

_625-12n25-4:3D



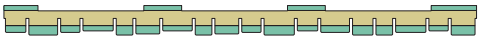
Slat width: 12-25 mm, Strip height offset
Gap width: 4 mm

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



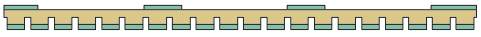
Slat width: 22-40 mm (optionally with chamfered edges)
Gap width: 4 mm

_625-22n40-4-F:3D



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

_625-23-8



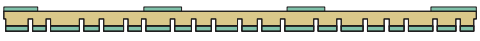
Slat width: 23 mm
Gap width: 8 mm

_625-18-6



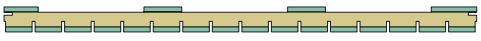
Slat width: 18 mm
Gap width: 6 mm

_625-18n38-6



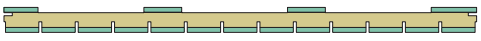
Slat width: 18-38 mm
Gap width: 6 mm

_625-35-4-F



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

_625-44-4-F



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

! The specified slat widths are rounded to the nearest 0.04" and may vary by up to ±0.02".

4. Wood species

▶ Page 11

LIGNO® Acoustic light 3S_33_a70g_625-12-4_**WT**_gb_buva-w1

new

	PURE knotless, refined-patterned	**PURE ONE** full-length slats	**NUANCE** characterful, natural	**PREMIUM** exceptionally plain	**AURA** natural, knotty
Silver fir ★	**_WT / _WT-i** (replaces _WTL / WTL-i) 	**_WTO** (replaces _WTL-d)	**_WTN** (replaces _WTE) 	**_WTP** (replaces _WTS)	**_WTA** (replaces _WT-ä)
Spruce ★	**_FI / _FI-i** (replaces _FIL / FIL-i)			**_FIP** (replaces _FIS)	**_FIA** (replaces _FI-ä) 
Oak ★	**_EI** 	**_EIF** (Veneer) 			
Collection Individual Ⓚ	**_AH** Maple PURE 	**_BI** Birch PURE	**_ES** Ash PURE 	**_ZIA** Arolla Pine AURA 	
	_BUN Beech NUANCE 	**_KIN** Pine NUANCE 	**_LÄN** Larch NUANCE 	**_NBN** Walnut NUANCE 	

ONLINE-CONFIGURATOR

*Combine wood species and final treatment in the configurator, including whiteness level **_bh-...** and **_bl-...***

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

★ Standard surfaces Ⓚ Made-to-order surfaces

5. Surface finish

LIGNO® Acoustic light 3S_33_a70g_625-12-4_WT**_gb**_buva-w1

_gb brushed	**_gs** evenly sanded brushed	**_gr** rough sawn	**_gh** planed

6. Final treatment

▶ Page 14

LIGNO® Acoustic light 3S_33_a70g_625-12-4_WT_gb**_buva-w1**

_b0 untreated	**_bh-t** oil transparent	**_bl-t** lacquer transparent	**_bl-w10k** chalked-up, lacquer transparent
_buva-w1 Exterior UV protection	**_bh-w10** oil translucent, whitish	**_bl -w10** lacquer translucent, whitish	**_bl-xy** Lacquer, tinted translucent
_buv-w2 Colourless UV-protection glaze	**_bh-w20** oil nearly opaque	**_bl-w20** lacquer nearly opaque	**_blf-w3 / -w8 / -w18** Fire-retardant lacquers, from transparent to almost opaque
_buv-w3 Colourless UV-protection glaze for impregnated wood species	**_bh-xy** Oil, tinted translucent	**_bl-xy / -xy100** Lacquer, tinted translucent / opaque colour-matched to individual samples	

Type 3S_33 (open rear layer) Geometry



Application ▶ from page 4

Availability

- Standard length 2940 mm

Flame retardancy ▶ page 12

View

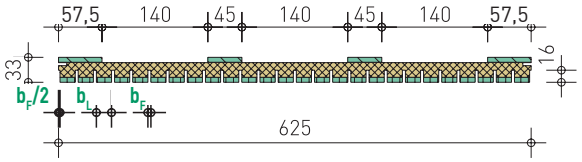
Timber slat profile

Wood types and profile alternatives ▶ from page 11

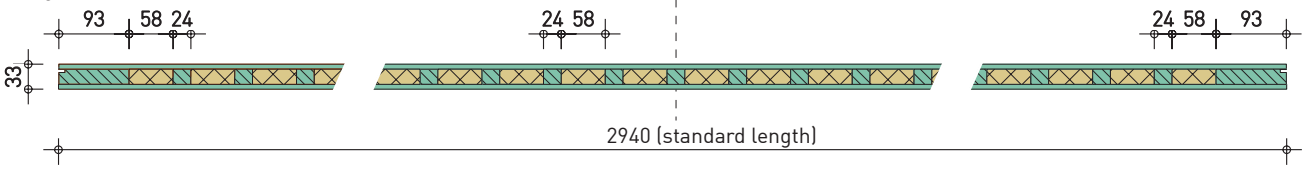
Absorber type _a70g

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

Lateral section:



Longitudinal section:

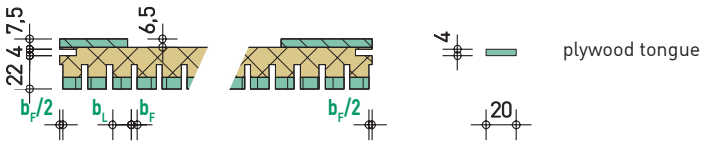


! Tolerance information regarding internal element structure:

With a constant overall element thickness, the thickness of the visible and rear layers may vary by approx. ±0,5 mm. Additionally, the position of absorber strips and the transverse timber layer may vary by several millimeters due to manufacturing processes.
The depth of acoustic gaps may range from 14 to 16 mm".

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

Side

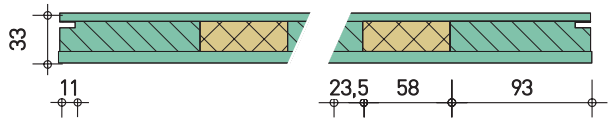


plywood tongue

b_L : Slat width

b_F : Gap width

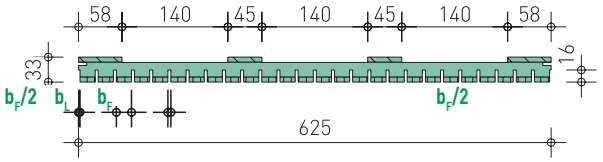
Front



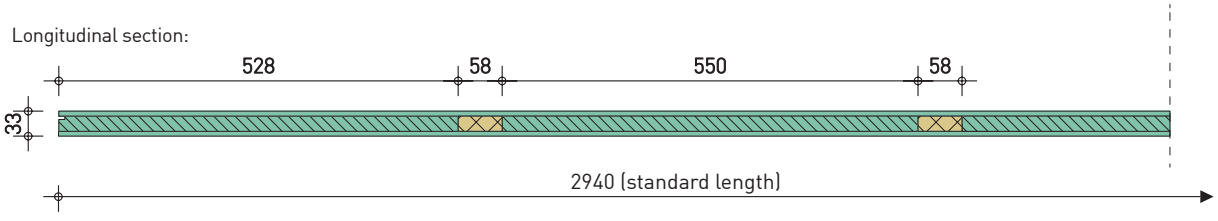
Variant _a10g (low absorption)

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 49

Type 3G_33 (closed rear layer) Geometry



Application ▶ from page 4

Availability

- Standard length 2940 mm

Flame retardancy ▶ page 12

View

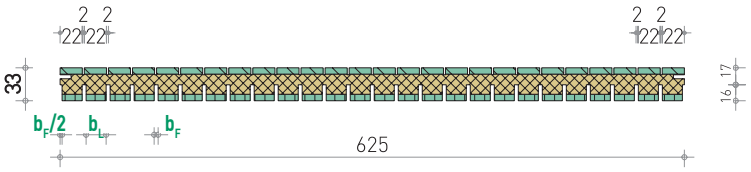
Timber slat profile

Wood types and profile alternatives ▶ from page 11

Absorber type _a70g

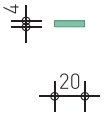
Approx. 70 % absorber portion in the transverse layer, absorber: Wood fibre

Lateral section:



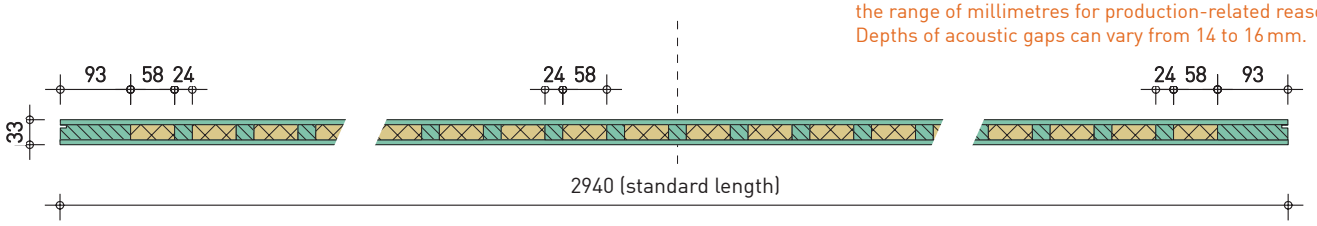
Edging **_nnu**

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

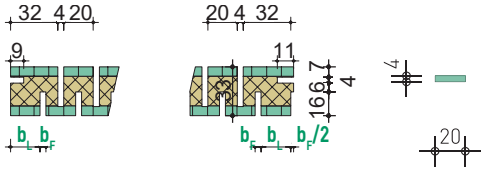


Modification of type 3G_33 for installation as a curved, sound-absorbing surface (minimum bending radius 1,000 mm). Type 3C_33 can be combined with type 3S_33.
The constant joint widths remain precise even with concave and convex bends.

Edging **_nug**

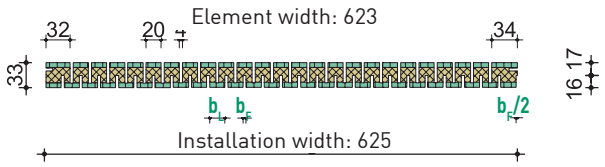
Circumferential groove, one longitudinal side straight (without rebate)

Side:

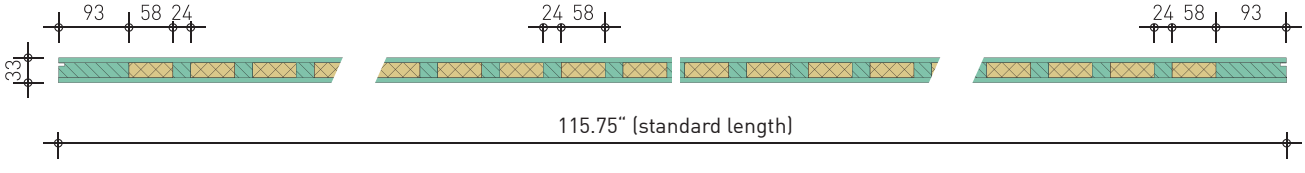


Front: like Typ 3S_33

Lateral section:



Longitudinal section:



Note:

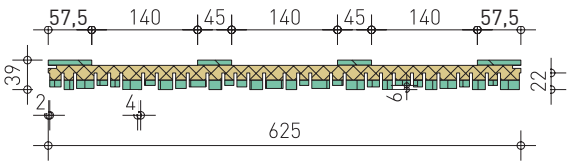
- Typ 3C_33 is limited to specific wood species/profiles. ▶ page 11

Typ 3S_39 (for 3D-Profile) Geometry

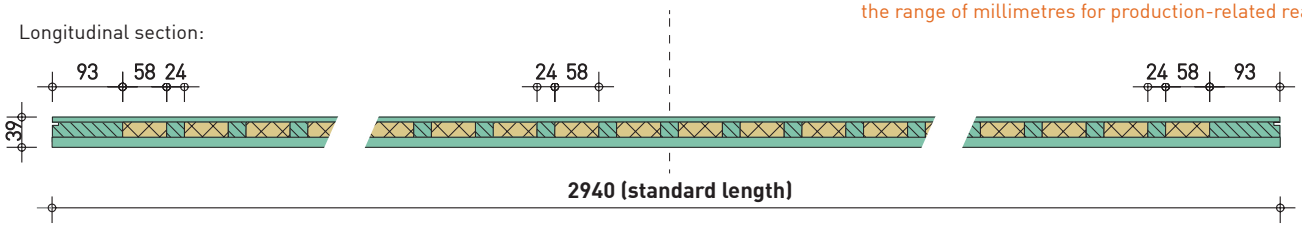


Thicker type for the height-graduated nature profile **_625-12n25-4:3D** and **_625-22n40-4:3D**. The strips are graduated in height in an irregular sequence of 0, 2, 4 and 6 mm. Absorber/rear layer and groove position relative to the rear side are identical to type 3S_33.

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.

Hinweise:

- a threedimensional profiling is **only possible in the wood species Silver fir PURE _WT and Oak PURE _EI** and the surface treatment **„planed" _gh**, likewise ex works only without structural brushing ▶ Page 11
- 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 profiles
Available selection

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 ▶ www.lignotrend.com/surfaces

		3S_33 / 3G_33											3S_39		3C_33			
	Profile	_625-12-4	_625-12n25-4	_625-20-4	_625-20-4-F	_625-22n40-4	_625-22n40-4-F	_625-35-4-F	_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	_625-20-4-F	_625-22n40-4	_625-22n40-4-F
Silver fir PURE	**_WT** (_WTL)	■	★	★	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Silver fir PURE, impregnated	**_WT-i** (_WTL-i)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×	×
Silver fir NUANCE	**_WTN** (_WTE)	■	★	★	■	■	■	■	■	■	■	■	×	×	■	■	■	■
Silver fir PURE ONE	**_WTO** (_WTD)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Silver fir PREMIUM	**_WTP** (_WTS)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	◘	◘	◘	◘
Silver fir AURA	**_WTA** (_WT-ä)	×	×	■	■	■	■	■	■	■	■	■	×	×	×	×	×	×
Spruce PURE	**_FI** (_FIL)	■	■	■	■	■	■	■	■	■	■	■	×	×	■	■	■	■
Spruce PURE, impregnated	**_FI-i** (_FIL-i)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×	×
Spruce PREMIUM	**_FIP** (_FIS)	■	■	■	■	■	■	■	■	■	■	■	×	×	■	■	■	■
Spruce AURA	**_FIA** (_FI-ä)	×	■	■	■	■	■	■	■	■	■	■	×	×	×	×	×	×
Oak PURE	**_EI**	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	×	×
Oak PURE ONE, veneer	**_EIF**	×	×	×	■	■	×	■	■	×	×	×	×	×	×	■	×	■
Maple PURE	**_AH**	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Birch PURE	**_BI**	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Beech NUANCE	**_BUN** (_BU)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Ash PURE	**_ES**	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	◘	◘	◘	◘
Pine NUANCE	**_KIN** (_KI)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Larch NUANCE	**_LÄN** (_LÄE)	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Walnut NUANCE	**_NBN**	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×
Arolla pine AURA	**_ZIA** (_ZI-ä)	×	×	◘	×	◘	◘	◘	◘	◘	◘	◘	×	×	×	×	×	×

★ Bestseller ■ available ◘ extended lead time × not available

Surface
Flame retardancy - normally flammable

All standard LIGNO® Acoustic Pro elements achieve at least reaction-to-fire class **D-s2-d0 according to DIN EN 13501-1 in accordance with ETA-21/0360**, without any additional treatment bzw. UV-Schutz. Depending on the profile and wood species, class D-s1-d0 is also possible, either untreated or with lacquer, oil or UV protection. For basic element type 3S_33, this requires mineral wool to be installed behind the element. The available versions and their respective classifications are shown in the table below.

	D-s2-d0 Standard flammability	**D-s1-d0** Standard flammability												
	Without treatment	**Without treatment**								**with lacquer / oil / UV protection** (transparent, w10, w20)				
Profile	**Softwood**	_EI	_FIP	_FI	_FIA	_WTP	_WT	_WTN	_WTA	_FIP	_FI	_WTP	_WT	_EI
_625-12-4	All standard LIGNO® Acoustic light elements are at least D-s2-d0 according to ETA-21/0360	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-12n25-4		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-18-6		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-18n38-6		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-20-4		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-20-4-F		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-22n40-4		×	×	×	×	×	×	×	×	×	×	×	×	×
_625-22n40-4-F		×	×	×	×	×	×	×	×	×	×	×	×	×
_625-23-8		■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*	■*
_625-35-4-F		×	×	×	×	×	×	×	×	×	×	×	×	×
_625-44-4-F		×	×	×	×	×	×	×	×	×	×	×	×	×

■ available with 3S_33 and 3G_33 ◘ only available with 3G_33 × not available

* 3S_33 backed with mineral wool
** Classification B-s1-d0 is achieved with absorber _a70p. All other classifications apply to the standard absorber _a70g.

Impregnated surfaces at elevated air humidity

Wood impregnated with fire retardant absorbs moisture from the indoor air. **Elements with an impregnated surface may therefore only be installed in enclosed rooms in which the relative humidity is ‹ 75 % under normal use and at temperatures › 15 °C**. Under these conditions, they may be installed in air-conditioned and ventilated indoor swimming pools.

Unfavourable climatic conditions during installation can cause stains on the wood surface. These disappear without leaving any residue as soon as the interior climate returns to normal. If moisture nevertheless builds up on the surface, the indoor air must be dried until a normal interior climate of approx. 20 °C and ‹ 50 % humidity is reached.

Surface
Flame retardancy - fire retardant

By using an appropriately impregnated face layer or a fire-retardant lacquer applied to the surface, LIGNO® Acoustic Pro and LIGNO® Acoustic Sport acoustic panels achieve reaction-to-fire classes from **C-s2-d0 to B-s1-d0 according to DIN EN 13501-1**, depending on the respective configuration.

	C-s2-d0 fire retardant							**B-s2-d0** fire retardant		**B-s1-d0** **fire-retardant special version only with absorber _a70p****			
	Without treatment (ETA-21/02360)		**mit Lack _bl-w10, _bl-w20** (ETA-21/02360) or **UV protection _buv**		**Fire-retardant lacquer _blf-w3 / -w8 / -w13** (KB-Hoch-240913)			**Without treatment** (ETA-21/02360)		**Without treatment** (KB-Hoch-250476-2)		**with UV protection _buv** (KB-Hoch-250476-2)	
Profile	_FI-i	_WT-i	_FI-i	_WT-i	_BU	_ES	_EI	_FI-i	_WT-i	_FI-i	_WT-i	_FI-i	_WT-i
_625-12-4	■	■	◘	◘	×	×	×	◘	◘	×	×	×	×
_625-12n25-4	■	■	◘	◘	×	×	×	◘	◘	◘	◘	◘	◘
_625-18-6	■	■	◘	◘	×	×	×	◘	◘	×	×	×	×
_625-18n38-6	■	■	◘	◘	×	×	×	◘	◘	×	×	×	×
_625-20-4	■	■	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘
_625-20-4-F	■	■	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘
_625-22n40-4	×	×	×	×	◘	◘	◘	×	×	◘	◘	◘	◘
_625-22n40-4-F	×	×	×	×	◘	◘	◘	×	×	◘	◘	◘	◘
_625-23-8	×	×	×	×	×	×	×	×	×	×	×	×	×
_625-35-4-F	×	×	×	×	◘	◘	◘	×	×	◘	◘	◘	◘
_625-44-4-F	×	×	×	×	◘	◘	◘	×	×	◘	◘	◘	◘

■ available with 3S_33 and 3G_33 ◘ only available with 3G_33 × not available

** Classification B-s1-d0 is achieved with absorber _a70p. All other classifications apply to the standard absorber _a70g.

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.

		Raw	Transparent						Medium		
		No treatment[1] **_b0**	Exterior UV protection **_buva-w1**	Colourless UV-protection glaze to prevent darkening[2] **_buv-w2**	Colourless UV-protection glaze to prevent darkening[2] **_buv-w3**	Oil, transparent[3] **_bh-t**	Lacquer, transparent **_bl-t**	Lacquer, transparent with fire-retardant lacquer **_blf-w3**	Oil, Lacquer, whitish translucent[3] **_bh-w10**	Lacquer, whitish translucent **_bl-w10**	Lacquer, transparent with fire-retardant lacquer **_blf-w8**
Silver fir											
PURE	**_WT**	■	■	■	×	■	■	■	■	■	■
PURE, impregnated	**_WT-i**	■	×	×	■	■	■	×	■	■	×
PURE ONE	**_WT0**	■	■	■	×	■	■	■	■	■	■
NUANCE	**_WTN**	■	■	■	×	■	■	×	×	×	×
PREMIUM	**_WTP**	■	■	■	×	■	■	■	■	■	■
AURA	**_WTA**	■	■	■	×	■	■	×	×	×	×
Spruce											
PURE	**_FI**	■	■	■	×	■	■	■	■	■	■
PURE, impregnated	**_FI-i**	■	×	×	■	■	■	×	■	■	×
PREMIUM	**_FIP**	■	■	■	×	■	■	■	■	■	■
AURA	**_FIA**	■	■	■	×	■	■	×	×	×	×
Oak											
PURE	**_EI**	■	×	×	×	■	■	■	×	×	×
PURE ONE (veneer)	**_EIF**	■	×	×	×	■	■	×	×	×	×
Individual											
Maple PURE	**_AH**	■	×	×	×	■	■	×	■	×	×
Birch PURE	**_BI**	■	×	×	×	■	■	×	×	×	×
Beech NUANCE	**_BUN**	■	×	×	×	■	■	■	×	×	■
Ash PURE	**_ES**	■	×	■	×	■	■	■	×	■	■
Pine NUANCE	**_KIN**	■	×	×	×	■	■	×	×	×	×
Larch NUANCE	**_LÄN**	■	×	×	×	×	×	×	×	×	×
Walnut NUANCE	**_NBN**	■	×	×	×	■	■	×	×	×	×
Arolla pine AURA	**_ZIA**	■	×	×	×	×	×	×	×	×	×
Other											
MDF		×	×	×	×	×	×	×	×	×	×

■ possible × not available

[1] The surface can be treated on site with paints/glazes suitable for the wood species.
[2] Suitable for interior use (not subject to toxicity classification). As it is based on water-soluble light-protection agents, it must be given a subsequent on-site treatment with a glaze or wax to protect it against exposure to water if washing out cannot be ruled out. Final treatment e.g. with a transparent matt lacquer. **Caution: Sanding surfaces treated with light protection must be avoided at all costs, as the surface will otherwise darken unevenly. Elements with an oiled/lacquered surface must also be handled with particular care.**
[3] Due to brushing, some slats may appear more matt in raking light because of differences in grain direction.

		Intense						Opaque
		Oil, whitish translucent[3] **_bh-w20**	Oil, tinted translucent[3] **_bh-xy**	Lacquer, whitish translucent **_bl-w20**	Lacquer, tinted translucent colour-matched to individual samples **_bl-xy**	Lacquer, whitish translucent with fire-retardant lacquert **_blf-w18**	Whitewashed with lacquer **_bl-w10k**	Lacquer, tinted opaque colour-matched to individual samples **_bl-xy100**
Silver fir								
PURE	**_WT**	■	■	■	■	■	×	×
PURE, impregnated	**_WT-i**	■	×	■	×	×	×	×
PURE ONE	**_WTO**	■	■	■	■	■	×	×
NUANCE	**_WTN**	×	×	×	×	×	×	×
PREMIUM	**_WTP**	×	×	×	×	×	×	×
AURA	**_WTA**	×	×	×	×	×	×	×
Spruce								
PURE	**_FI**	■	■	×	■	■	×	×
PURE, impregnated	**_FI-i**	■	×	■	×	×	×	×
PREMIUM	**_FIP**	×	×	×	×	×	×	×
AURA	**_FIA**	×	×	×	×	×	×	×
Oak								
PURE	**_EI**	×	■	×	■	×	■	×
PURE ONE (veneer)	**_EIF**	×	■	×	■	×	×	×
Individual								
Maple PURE	**_AH**	■	■	×	■	×	×	×
Birch PURE	**_BI**	×	■	×	■	×	×	×
Beech NUANCE	**_BUN**	×	■	×	■	■	×	×
Ash PURE	**_ES**	×	■	■	■	■	×	×
Pine NUANCE	**_KIN**	×	×	×	×	×	×	×
Larch NUANCE	**_LÄN**	×	×	×	×	×	×	×
Walnut NUANCE	**_NBN**	×	×	×	×	×	×	×
Arolla pine AURA	**_ZIA**	×	×	×	×	×	×	×
Other								
MDF		×	×	×	×	×	×	■*

* only 3S

Light reflectance properties of the surfaces

Measurement of reflectance according to DIN 5036 Part 3	Final treatment with oil **_bh-w10**	Final treatment with oil **_bh-w20**	Final treatment with lacquer **_bl-w10**	Final treatment with lacquer **_bl-w20**	Colourless UV-protection glaze **_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

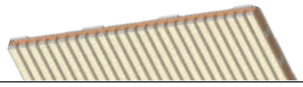
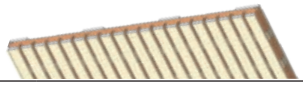
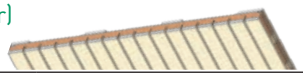
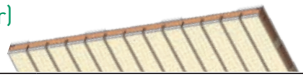
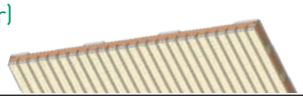
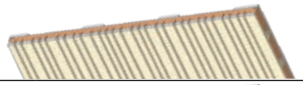
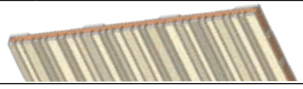
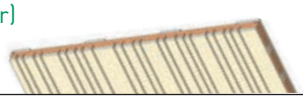
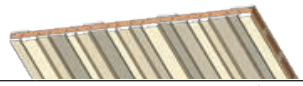
Acoustic absorber

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. 35 mm	16
regular profile (:Chamfer) **_625-44-4-F** 	4 mm	approx. 44 mm	13
regular profile (:Chamfer) **_625-20-4** **_625-20-4-F** 	4 mm	approx. 20 mm	26
nature profile **_625-12n25-4** 	4 mm	approx. 12-25 mm	
nature profile 3D **_625-12n25-4:3D** 	4 mm	approx. 12-25 mm (graduated ledge heights of 0 to 6 mm)	
nature profile (:Chamfer) **_625-22n40-4** **_625-22n40-4-F** 	4 mm	approx. 22-40 mm	
nature profile 3D **_625-22n40-4-F: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 ▶ frome Page 12

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	Anchors		3S_33	3G_33	3C_33 (curved)	normal _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	×	800	30 to 1000	■	■	×	×	×	×	■ Test report: L9429-000	■ [3] Test report: L9429-000	
Cross grid wood Structural profile: Multi-layered board strips 95x27 mm Base profile: KVH 50x30mm - horizontal			1000	625		■	■	×	×	×	×	■ L9430-000	■ [3] L9430-000	
Combined substructure Structural profile: Multi-layered board strips 95x27 mm Base profile: CD-profile 60/27/06			735	900		■	■	×	×	×	×	■ L9431-000	■ [3] L9431-000	
Single battens wood Structural profile: Multi-layered board strips 95x27 mm	at right angles to the structural profilel	735	×	800	30 to 1000	■	■	×	×	×	×	■ L9429-000	■ [3] L9429-000	
Cross grid wood Structural profile: Multi-layered board strips 95x27 mm Base profile: KVH 50x30mm - horizontal			1000	625		■	■	×	×	×	×	■ L9430-000	■ [3] L9430-000	
Combined substructure Structural profile: Multi-layered board strips 95x27 mm Base profile: CD-profile 60/27/06			735	900		■	■	×	×	×	×	■ L9431-000	■ [3] L9431-000	
Cross grid metal Structural and base profile: CD-profile 60/27/06		735	900	1000		■	■	×	×	×	×	■ L9432-000	■ [3] L9432-000	
		572	800	800		■	■	×	■	×	×	■ L9432-000	■ [3] L9432-000	
						■ [1]	■ [1]	×	■	■	×	■ L9432-000	■ [3] L9432-000	
						×	■ [1]	×	■	■	■	■ L9432-000	■ [3] L9432-000	
Single battens Structural profile: Substructure of wood or metal, formed to the required curvature, width ≥ 50mm	at right angles to the structural profilel	735	×		variable	×	×	■ [2]	not tested			Ceiling, curved, currently without robustness test		
Timber cross grid Furring channel: multi-ply board strips 95 x 27 mm Primary channel: KVH structural solid timber 50 x 30 mm - laid flat	at right angles to the structural profilel	490	900	1000		◘	◘	×	not tested					
Combined grid Furring channel: multi-ply board strips 95 x 27 mm - Primary channel: CD profile 60/27/06		490				◘	◘	×						
Metal cross grid Furring and primary channel: CD profile 60/27/06		572	800	800		×	■ [2]	×	■	■	■	not tested		

■ Requirement met for all profile types and wood species (excluding 3D profiles) ■ [1] restricted wood species ▶ page 11

■ [2] restricted profile types and wood species ▶ page 11 and 12 ■ [3] Requirement met for element type 3G_33

◘ with lacquered finish; wood species ▶ page 14 × requirement not met

Suitable for use in indoor swimming pools. The substructure, fixings and fasteners must be designed with a suitable level of corrosion protection for the corrosive ambient conditions.

Suitable for use with LIGNO® Acoustic Pro type curved.

Overview of wall substructures

Substructure	Panel arrangement*	Grid dimension [in mm]			Spacing to partition lining [mm]		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
		Structural profile	Base profile	Anchors	min.	max.	3S_33	3G_33	3C_33 (curved)	_D-s2-d0 normal	_C-s2-d0 fire-retardant	_B-s2-d0 fire-retardant	W1 (handball 85km/h)	W2 (3G_33) (handball 85km/h & hockey ball 65km/h)	
Single-layer timber battens Furring channel: solid timber batten classified B-s2-d0. 95 x 27 mm	parallel to the structural profile	625	×	735	variable		◘	◘	×	■	◘	◘	robustness not tested		
Single-layer timber battens Furring channel: solid timber batten classified B-s2-d0. 95 x 27 mm	at right angles to the structural profile	735	×	625	variable		◘	◘	×	■	◘	◘	robustness not tested		
Single-layer timber battens Furring channel: KVH structural solid timber or LIGNO® U*psi, width approx. 60 mm		490	×	800	40		×	■	×	not tested			■ Test report: L9426-000 L9427-000	×	
Single-layer metal profiles Furring channel: hollow metal section, width approx. 60 mm Test report: L9426-000 / L9427-000	at right angles to the structural profile	490	×	800	40		×	■ [2]	×	■	■ [2]	■ [2]	■ L9426-000 L9427-000	×	
Single-layer timber battens Furring channel: KVH structural solid timber or LIGNO® U*psi, width approx. 60 mm	at right angles to the structural profile	490	×	800	40		×	■ [1]	×	not tested			■ L9426-000 L9427-000	■ L9426-000 L9427-000	
Single-layer metal profiles Furring channel: hollow metal section, width approx. 60 mm			×				×	■ [1]	×	■	×	×	■ L9426-000 L9427-000	■ L9426-000 L9427-000	
Single-layer timber/metal substructure Furring channel: timber or metal construction with the required curvature, width ≥ 50mm		735	×	625	variable		×	×	◘	not tested			robustness not tested		

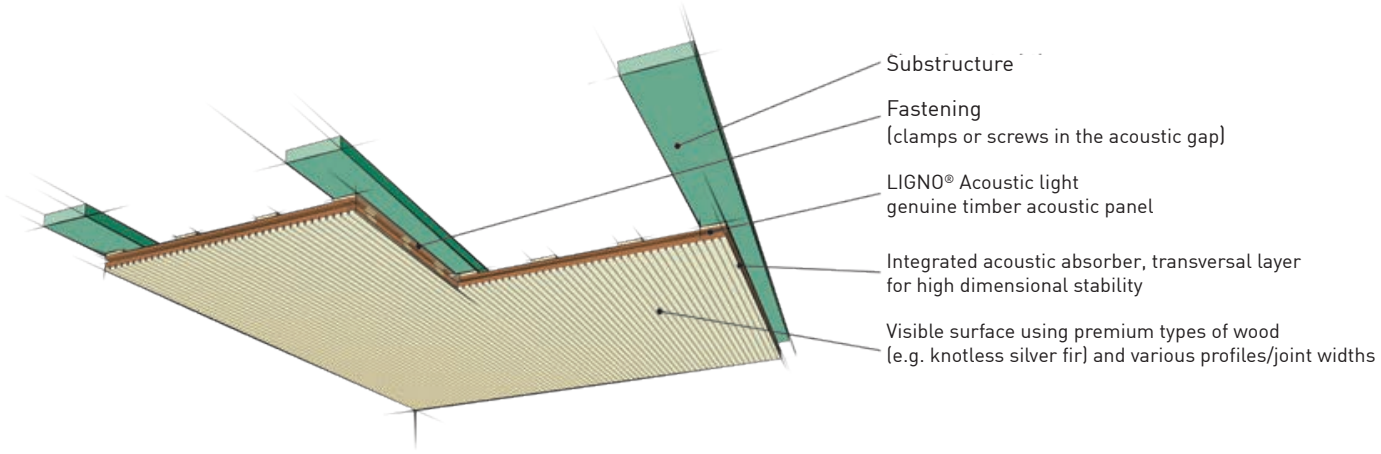
* Panels can be arranged in either horizontal or vertical orientation.

■ Requirement met for wood species _BU / _EI / _ES / _FI-i with profile variants _625-20-4-F / _625-22n40-4-F
■ [1] Requirement met for wood species _BU / _EI / _ES with profile variants _625-20-4-F / _625-22n40-4-F
■ [2] Requirement met for wood species _FI-i with profile variants _625-20-4-F / _625-22n40-4-F
◘ restricted profile variants and wood species ▶ page 12 × Requirement not met

Also suitable for use in indoor swimming pools

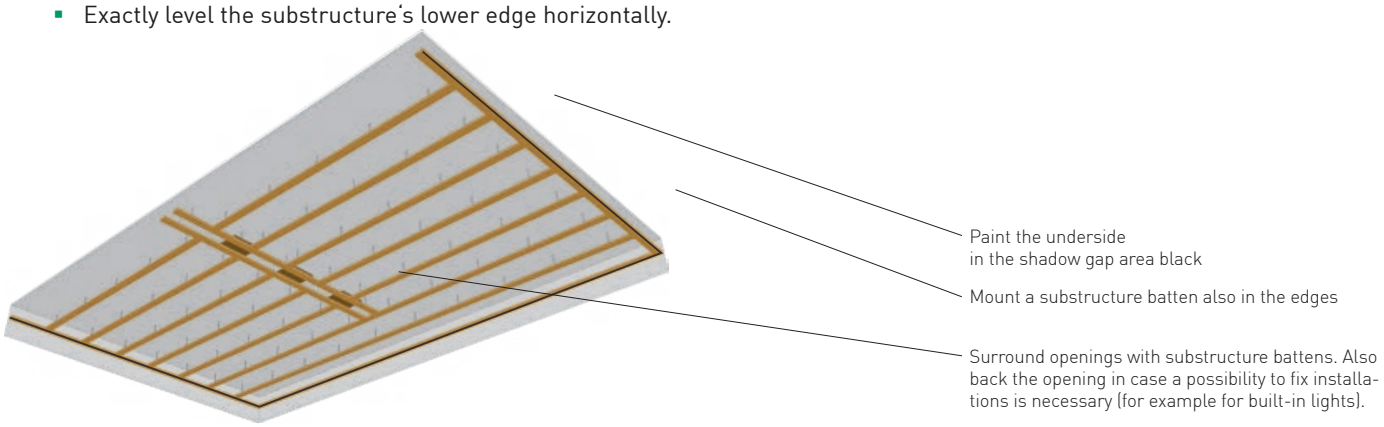
Suitable for use with LIGNO® Acoustic Pro type curved.

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

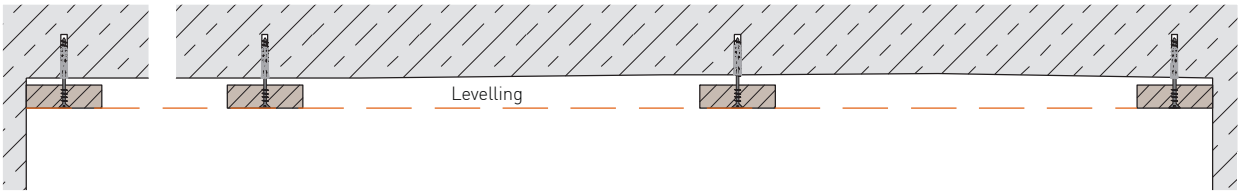


1. Substructure

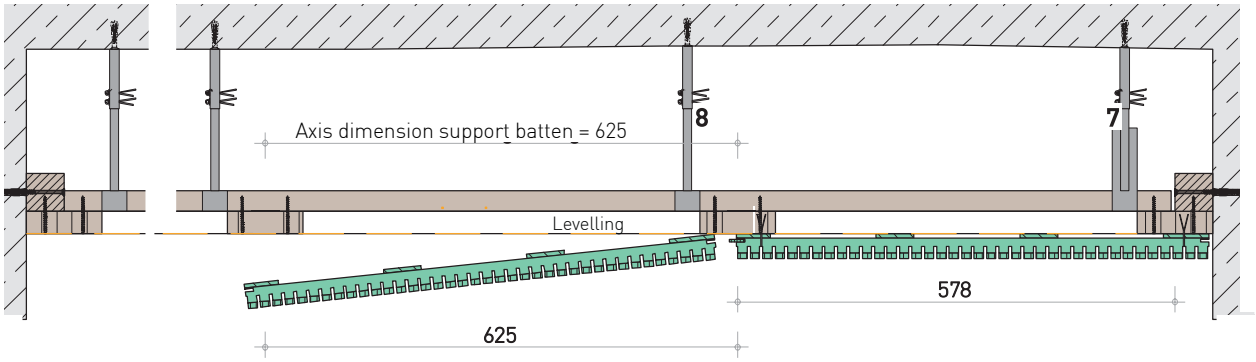
- Elements LIGNO® Acoustic light of type **3S_33, 3S_39** and **3G_33** are in standard installed on a **substructure running parallel to the elements' length.**
- Material for substructure:
  Wooden batten (rectangular section): min. 27/95 mm, pitch 625 mm, stripes of 3-ply-panels recommended. ▶ see page 17
- 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).

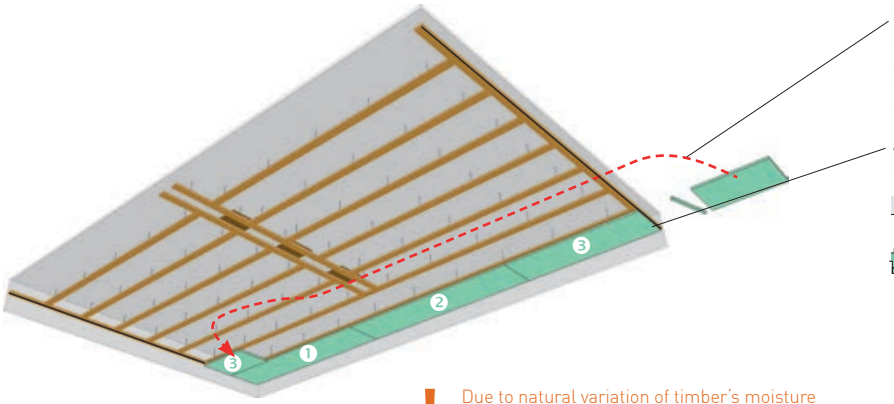


- Alternative: Installation of substructure with suspension system suitable for wooden battens, e.g. two-piece „Nonius" type metal suspending brackets with bottom part designed for screw-on fixing on wood. Mind the manufacturer's specifications!



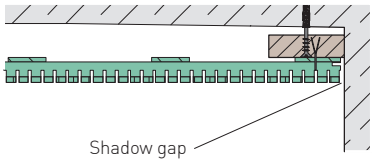
2. Element installation, first rows

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

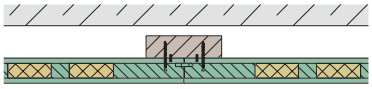


Offcut of last element in a row ist used as first element of the following row. For an attractive appearance of the transversal layer, another first cut must be applied to this starter element, see ▶ page 21

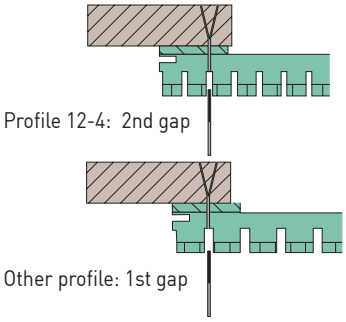
A shadow gap at the ceiling's edge will compensate for tolerances of the neighbouring wall:



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.



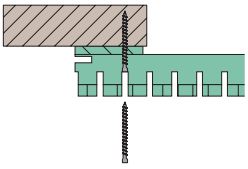
- **Fasteners may only be inserted in line with the timber transverse layer that is visible in the acoustic gaps. Fixing through the absorber is not permitted! This fixing method cannot be used with 3D profiles.**
- Standard fastening with clamps (concealed, in the acoustic gaps)



- 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) **in each case at the outermost gaps (for profile 12-4 at the second outermost gap) with at least 5 fasteners per side at the specified spacing**
- 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 (for profile 12-4 at the second outermost gap), 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.

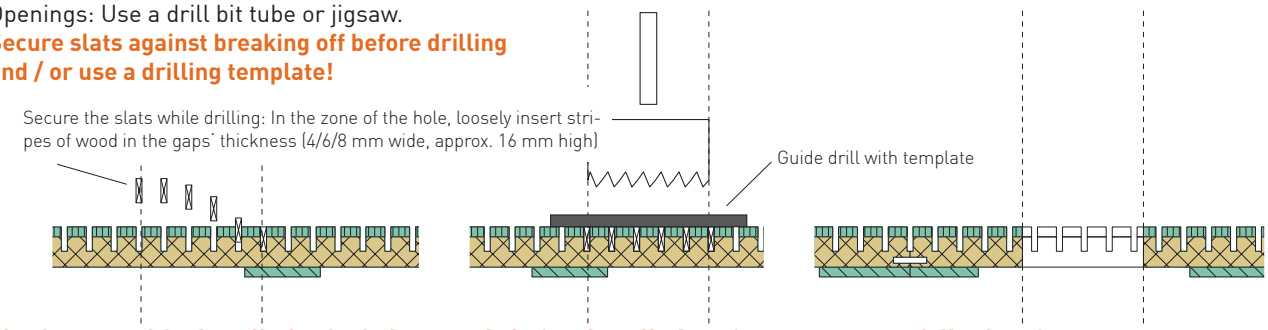


In order for the panel to be in full contact with the substructure, it must be pressed on when screwing, e.g. by means of a clamp.

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

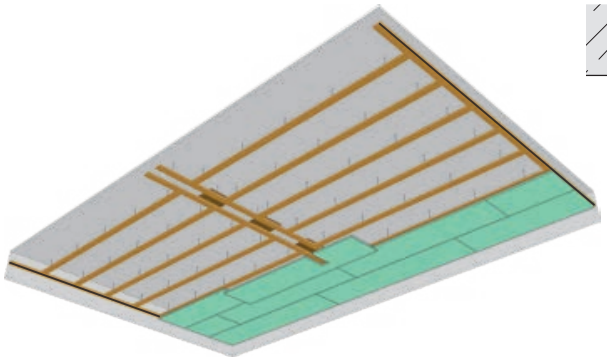
3. Cuttings

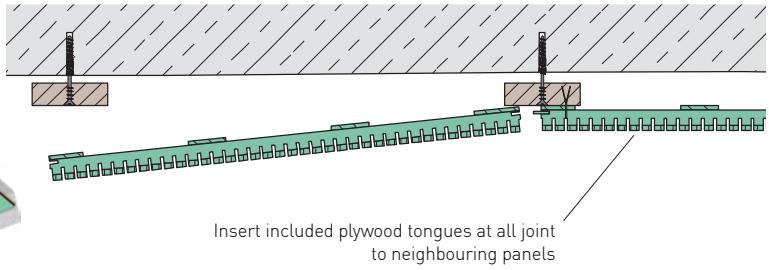
- **Look out for sharp tools!**
- Straight sections: Use circular saw and rail
- Openings: Use a drill bit tube or jigsaw.
  Secure slats against breaking off before drilling and / or use a drilling template!



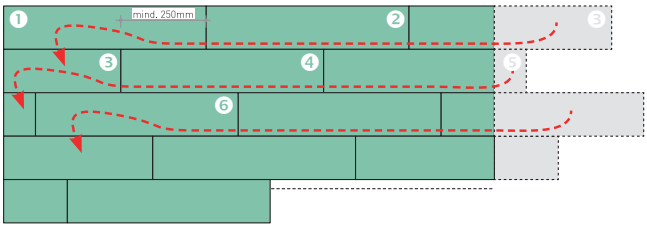
- **Check approval for installation in timber panels before installation of any parts, especially electric components as lamps. Always refer to manufacturer's specifications!**

4. Element installation, further rows

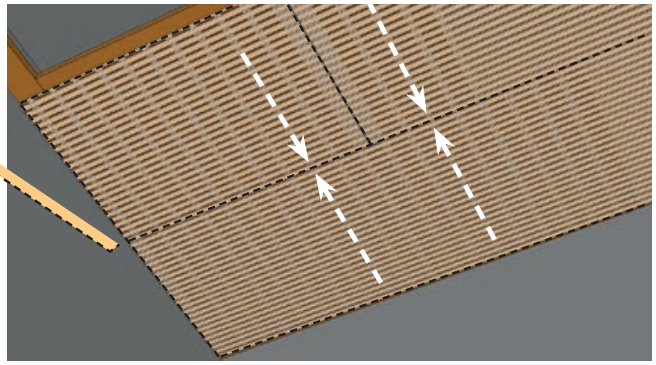




- Normally, the elements are installed in the stretching bond: The last offcut piece of a row is being used as starting piece of the following row.
- An offset of minimum 250 mm is recommended.
- Note for wall panellings and other panellings with acoustic gaps of more than 4 mm width: In case of unfavourable 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.

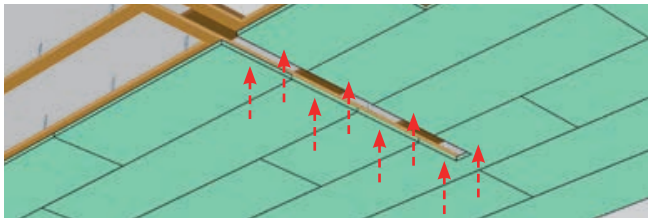


During installation of the next row of elements, a short piece is cut off in length at the first element. This ensures that the cross layers align with those of the previous row (a residual positioning tolerance of the cross layers within the millimetre range cannot be excluded).

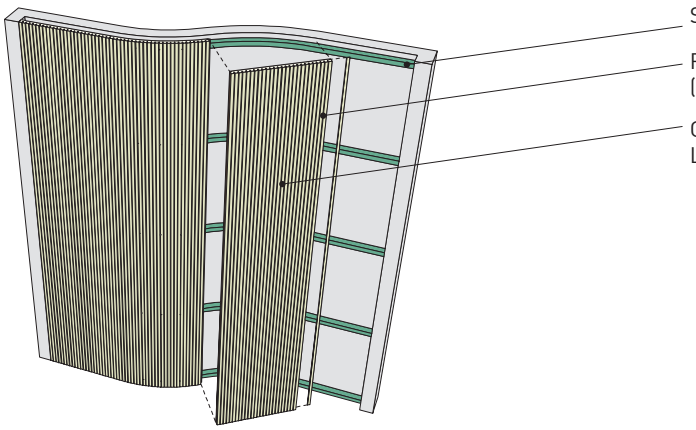


5. Element fastening alongside edges and around openings

- 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

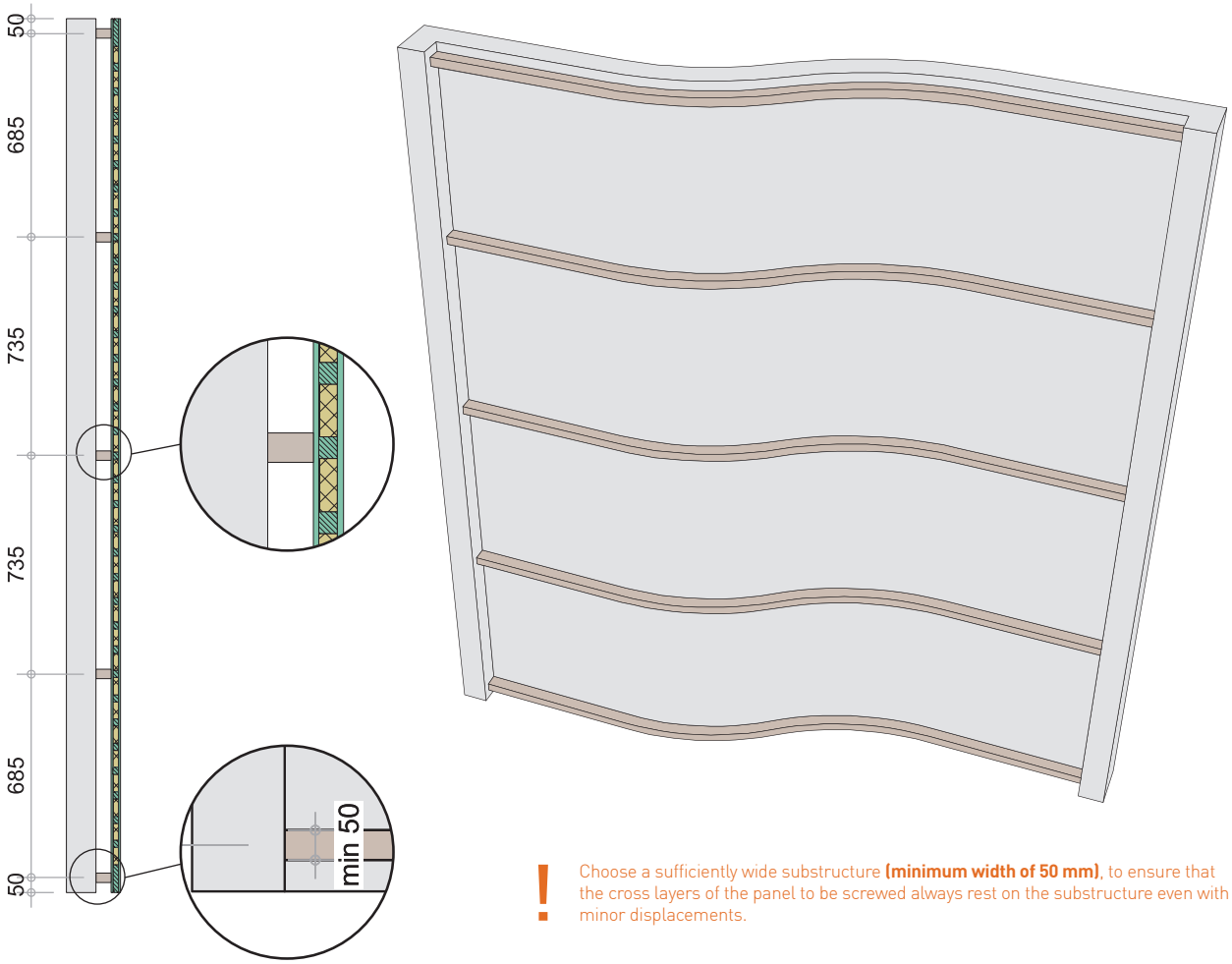


! Since the panels are bendable, the handling of the panels during installation must always be done by two people

1. Substructure

- LIGNO® Acoustic curved 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 18
  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.

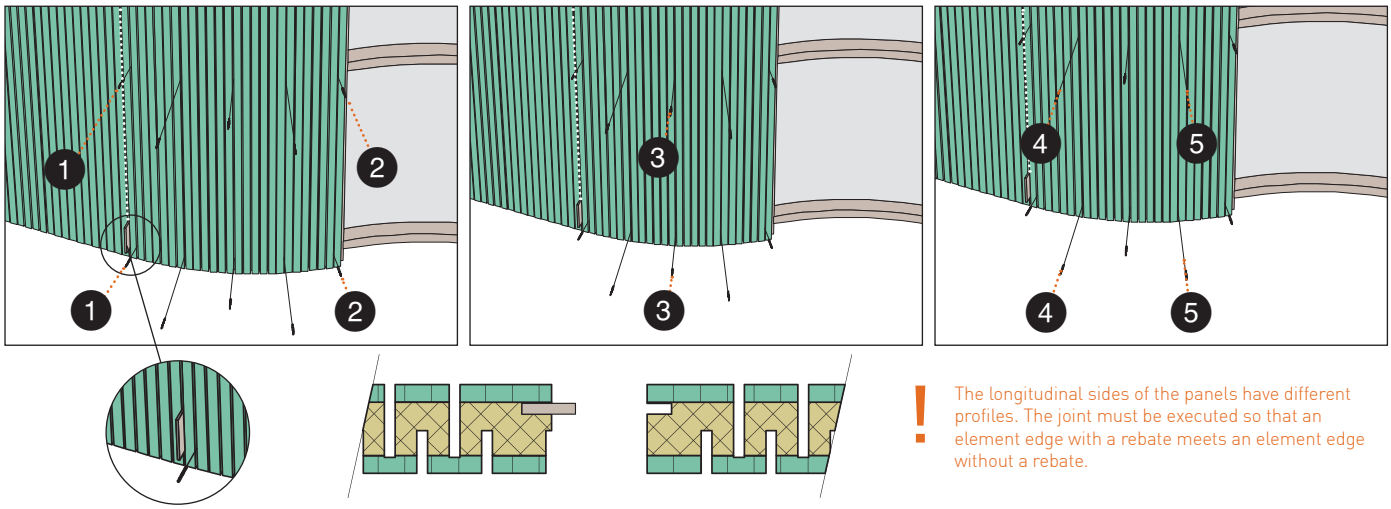


! Choose a sufficiently wide substructure **(minimum width of 50 mm)**, to ensure that the cross layers of the panel to be screwed always rest on the substructure even with minor displacements.

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

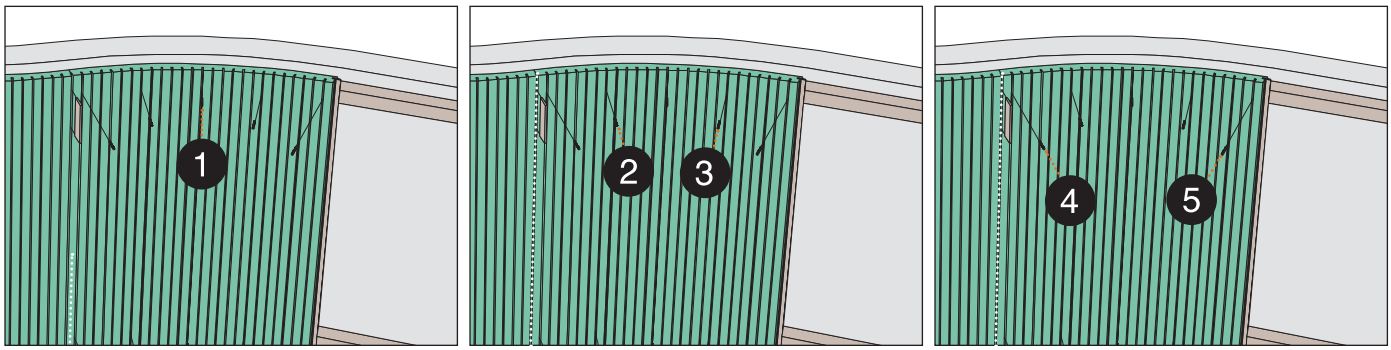


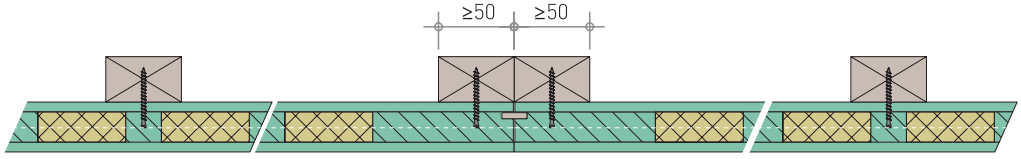
The longitudinal sides of the panels have different profiles. The joint must be executed so that an element edge with a rebate meets an element edge without a rebate.

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

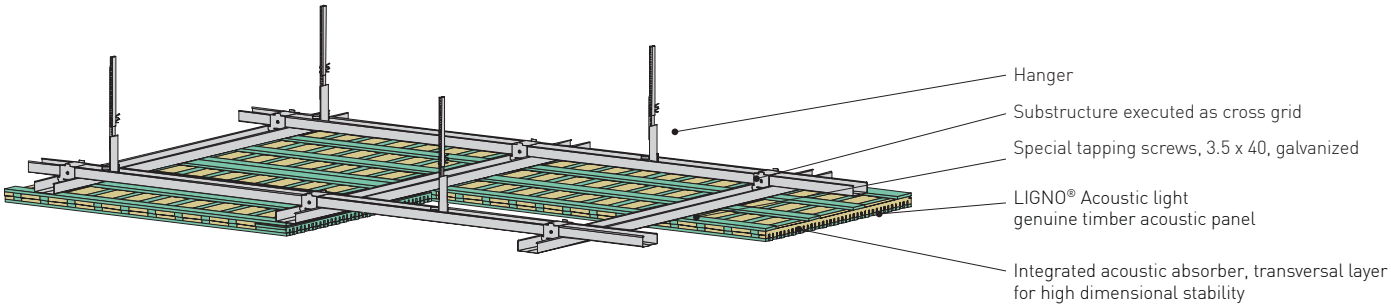
When screwing, it is essential to follow the specified sequence and ensure panel installation without distortion.





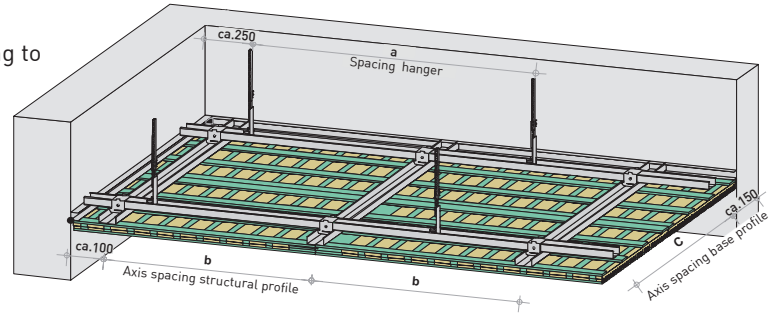
At the longitudinal joint of two elements, the substructure should be doubled. Recommended: 2 × 50 mm width to provide secure support for both element edges.

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



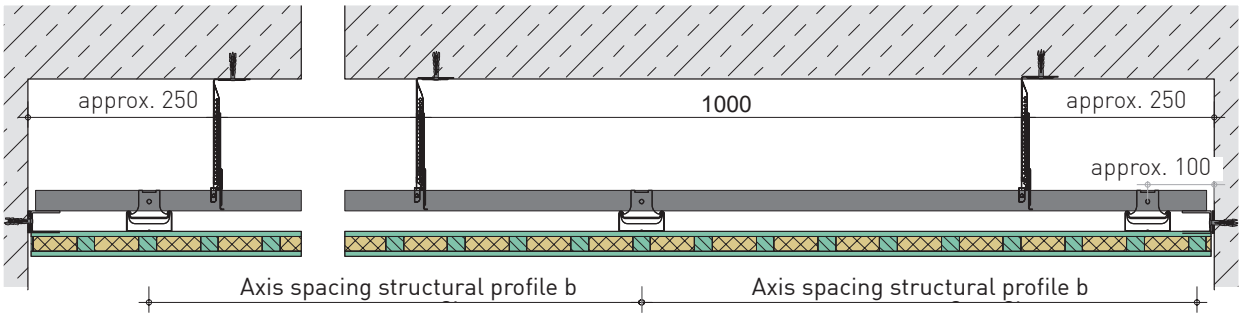
1. Substructure

- 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

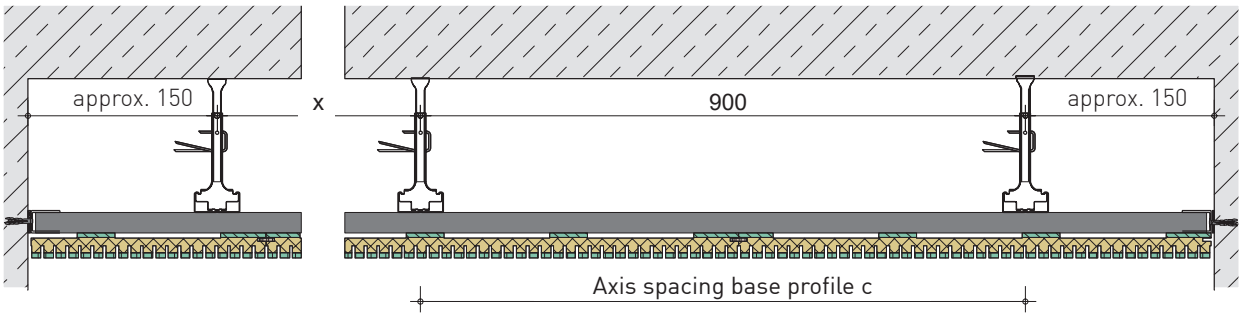


Continuous UD-profile for wall area connection

Primary and furring channel	
Hanger a	‹ 1000 mm
Primary channel c	‹ 900 mm
Furring channel b	‹ 735 mm

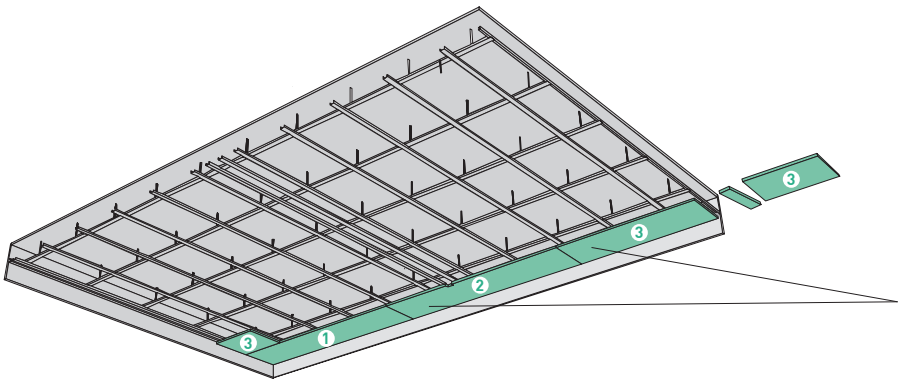


- Alternatively, the suspension can be done with direct hangers of the same load capacity in the grid shown.
- **The use of quick hangers in combination with LIGNO® acoustic panels is not recommended due to insufficient load capacity!**

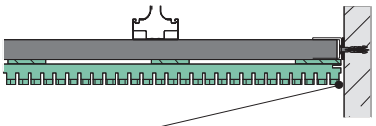


2. Element installation, first row

- Cuttings and openings for components to build in ▶ page 21
- Make openings on the base.

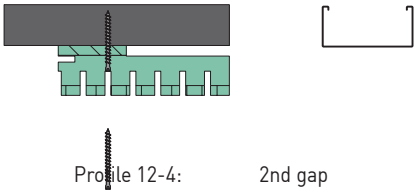


Section of the last element of a series is used as the first element in the following series. **Element length must correspond to at least one grid length!** For a regular cross-layer pattern, the section must be trimmed once again, analogous to the substructure.



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)



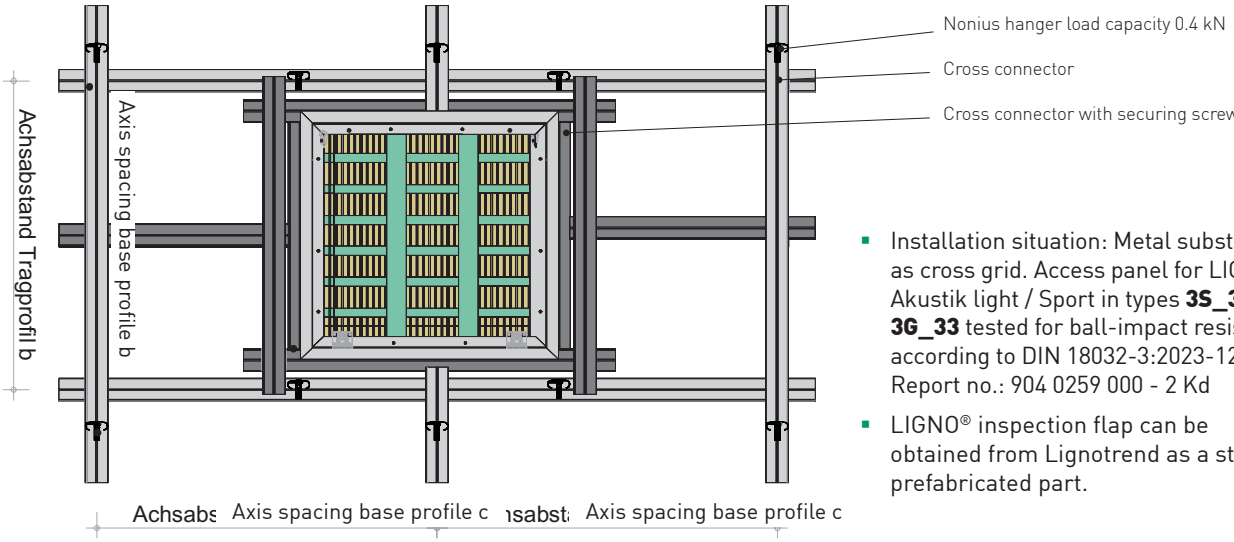
- Non-combustible substructure made of galvanized steel sheet profile
- CD profile according to DIN 18182, dimensions 60 / 27 / 06 in the cross grid transverse to the element grid structural profile adapted to the element transverse layer ▶ page 17
- Fix the element for installation with a clamp.
- Fastening: **Galvanized sheet metal screw 3.5 x 40 (special screw for LIGNO® Acoustic)**

3. Cuttings

- See chapter „Installation on wood substructure“ ▶ from page 21

4. Ceiling openings for fittings such as inspection openings

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

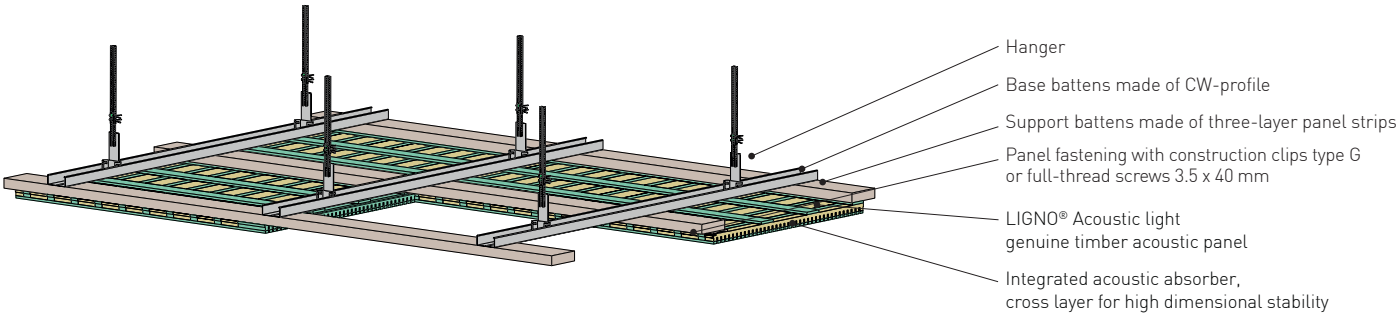


- Installation situation: Metal substructure as cross grid. Access panel for LIGNO® Akustik light / Sport in types **3S_33** and **3G_33** tested for ball-impact resistance according to DIN 18032-3:2023-12. Report no.: 904 0259 000 - 2 Kd
- LIGNO® inspection flap can be obtained from Lignotrend as a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

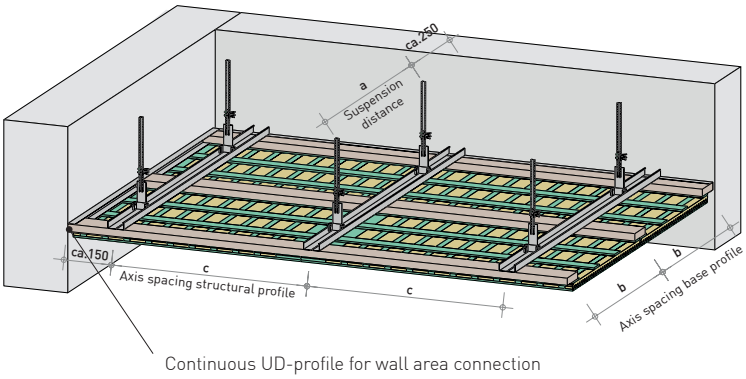
- See chapter „Installation on wood substructure“ ▶ from page 21

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

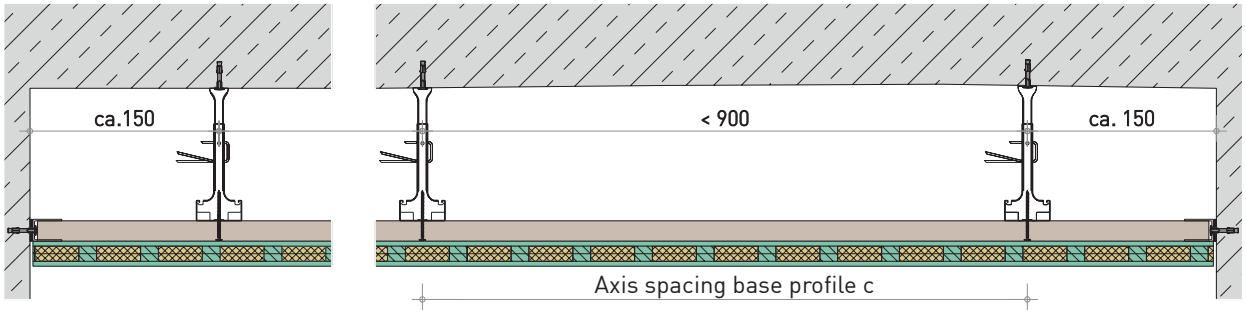


1. Substructure

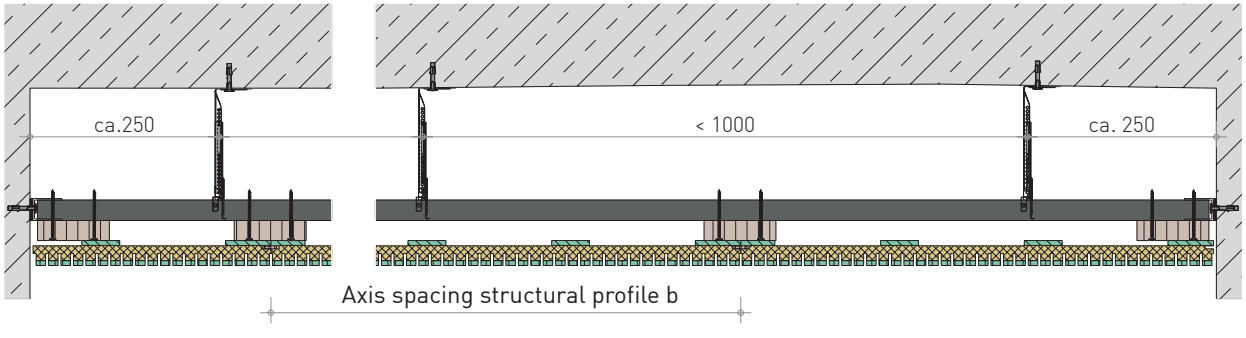
- LIGNO® Acoustic light elements Type **3G_33**, **3S_33** and **3S_39/40** are mounted as standard on a **substructure running longitudinally to the element.**
- Material for substructure:
  - CD-Profil (dimensions 60/27/06) according to DIN 18182 for base profile.
  - Three-layer panel strips with 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

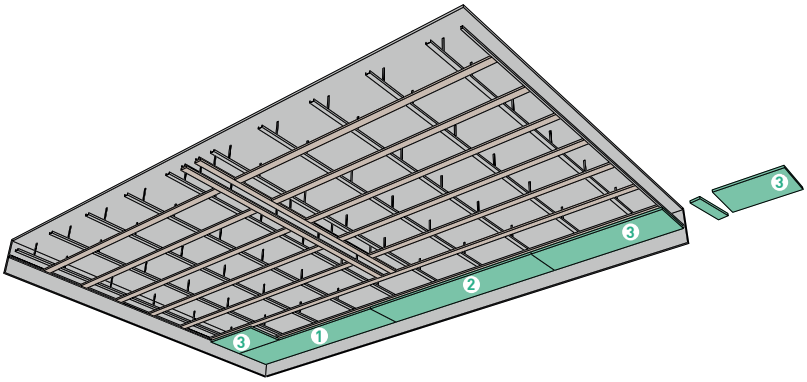


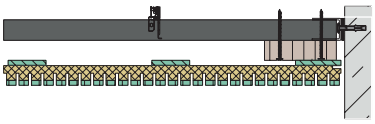
- Alternatively, the suspension can be done with direct hangers of the same load-bearing capacity in the illustrated grid.
- **It is advisable to refrain from using quick hangers in conjunction with LIGNO® Acoustic panels due to insufficient load capacity!**



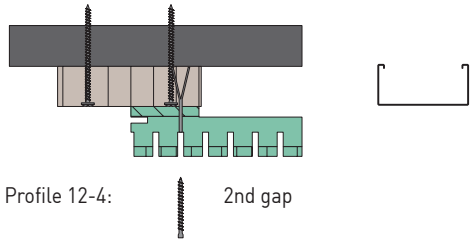
2. Panel installation, first rows of panels

- Cut-outs and recesses for fixtures ▶ page 21
- 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)



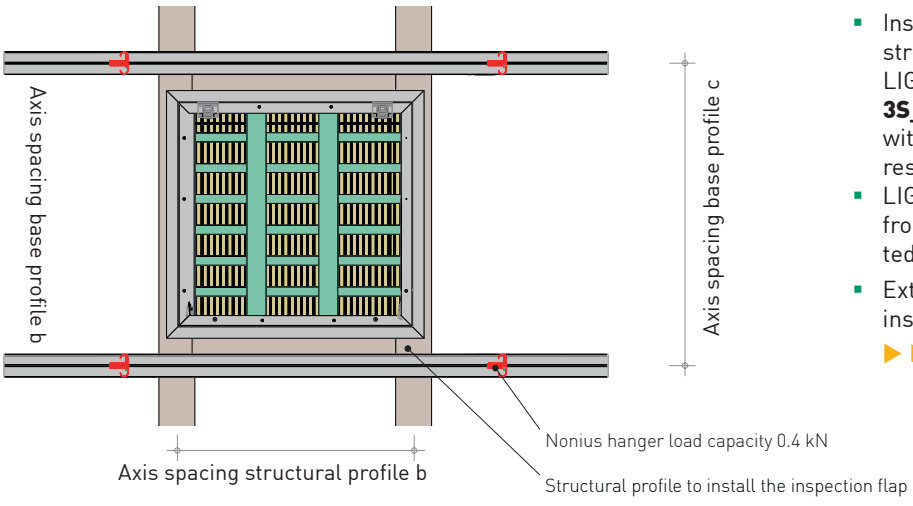
- Substructure made of galvanized non-combustible steel sheet profile and three-layer panel strips
- CD-profile according to DIN 18182, dimensions 60/27/06 across the element, and three-layer panel strips along the element
- Grid dimension ▶ see page 17
- Fix the element for assembly with a clamp.
- 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 21

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 substructure 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

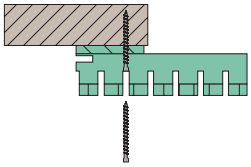
5. Element installation of further rows, Element fixing along edges and openings

- See chapter „Installation on wood substructure“ ▶ from page 21

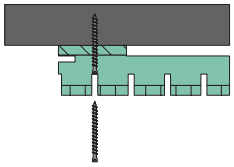
Installation in extraordinary locations

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 17
  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

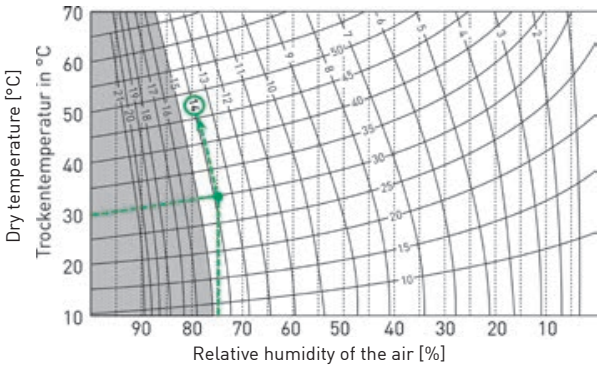


- Lignotrend cross laminated timber panels are approved for the use in the service classes 1 and 2, where wood moisture content does not exceed 20%. **Application in indoor aquatic centres**, for example on the ceiling, typically is completely unproblematic.
- For safety reasons, a maximum moisture content 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!

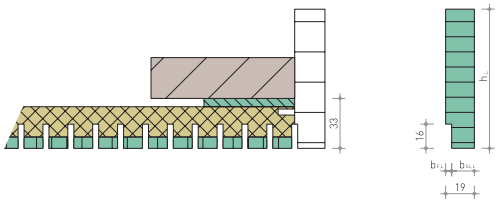


Accessories
Termination

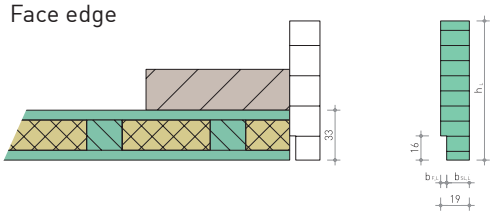
To create a visually appealing finish at free ceiling edges (e.g. openings, column penetrations), **end trims in the same wood species as the visible surface of the LIGNO® Akustik light elements** can be supplied by Lignotrend. On request, ready-made edge trims with identical surface treatment are also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

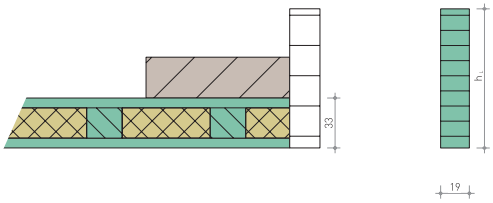
Proposal 1: Rebated terminal batten

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

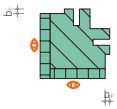
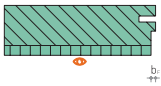


An L-profile is mounted as termination.
Notes:

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

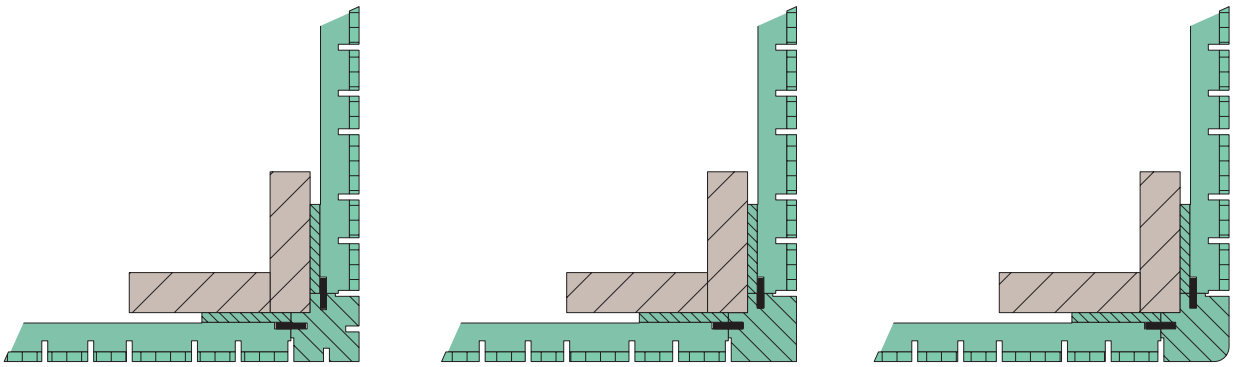
Accessories
Wall termination / corner termination

Standard batten (batten length ≙ 2 970 mm)

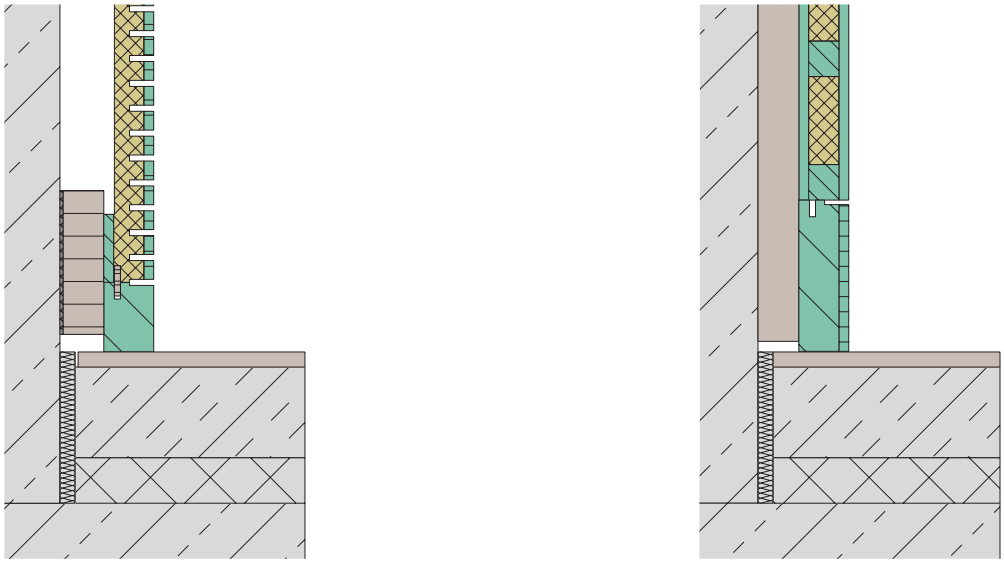
	Cross-section example	Width	Height	Rebate width bF	Groove possible	R10 possible	Chamfer possible
corner batten		46 mm	46 mm	2mm	■	■	■
				3 mm	■	■	×
				4 mm	■	■	■
solid wood batten		46 mm	33 mm	2 mm	■	×	■
				3 mm	■	×	×
				4 mm	■	×	■
		100 mm	33 mm	2 mm	■	×	■
				3 mm	■	×	×
				4 mm	■	×	■

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

Corner termination variants



Skirting variants



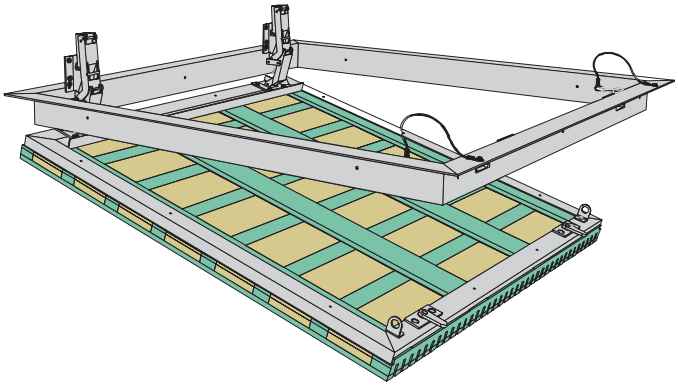
Accessories
Inspection openings

Frame inspection hatch for frequent opening - ball-impact resistant

Prefabricated, flush-mounted hatch with frieze frame, hinge and hex key locking

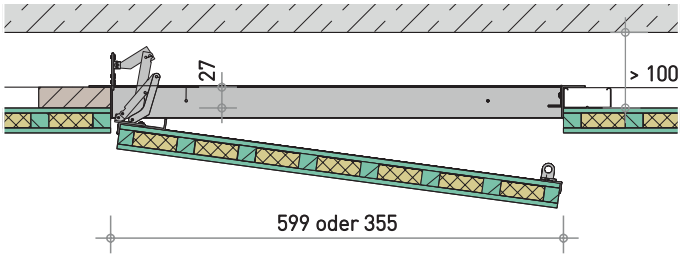
Only suitable for types 3S_33 and 3G_33. Minimum suspension height: 100 mm

Note: not suitable for indoor swimming pools or brine pools!



- Sturdy aluminium frame for infill with a panel piece (not included), pre-assembly ex works on request
- Standard timber or metal substructure, 27 mm thick.
- Installation dimensions (large model): 625 mm x 599 mm
- Installation dimensions (small model): 625 mm x 355 mm

▶ **Installation instructions for inspection hatches**



Frame inspection hatch with snap catch for frequent opening

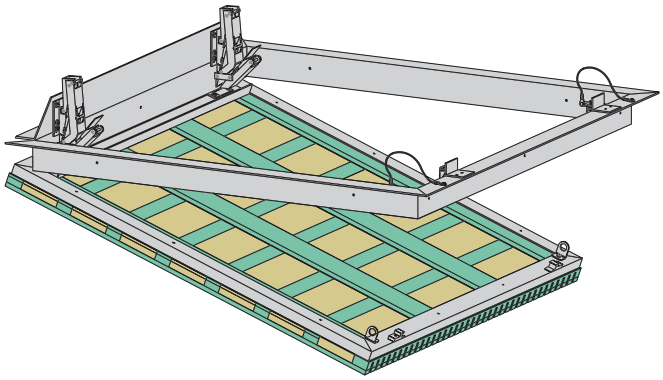
Prefabricated, flush-mounted hatch with frieze frame, hinge and snap catch (push-to-open)

Only suitable for types 3S_33 and 3G_33. Minimum suspension height: 100 mm

Note: not ball-impact resistant, not suitable for indoor swimming pools or brine pools.

- The snap catch makes installation easier and requires fewer drill holes. This gives the ceiling surface a calmer, cleaner appearance.
- Sturdy aluminium frame for infill with a panel piece (not included), pre-assembly ex works on request
- Standard timber or metal substructure, 27 mm thick.
- Installation dimensions (large model): 625 mm x 599 mm
- Installation dimensions (small model): 625 mm x 355 mm

▶ **Installation instructions for inspection hatches**

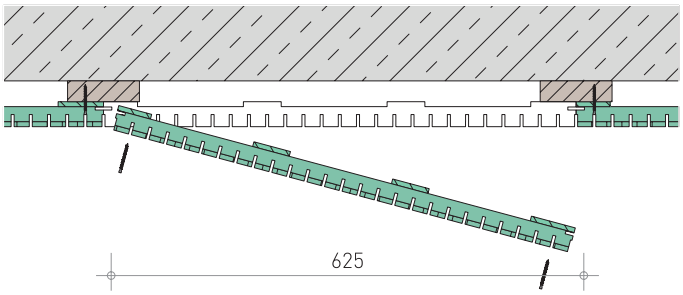


Accessories
Inspection openings

Inspection hatch, screwed, for infrequent opening

Simple inspection opening across element width 625 mm, length l as required

- Cut out the cladding to the size of the opening
- Fit the inspection hatch, allowing for the gap width
- Do not insert a tongue in the area of the inspection hatch
- Provide a safeguard against falling
- Screw to the edge gap

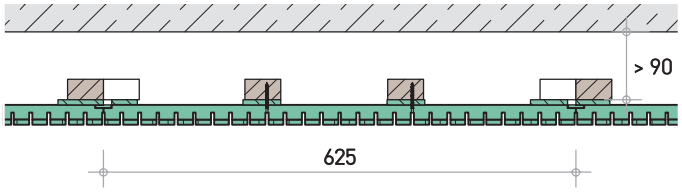


Inspection hatch, loosely laid in

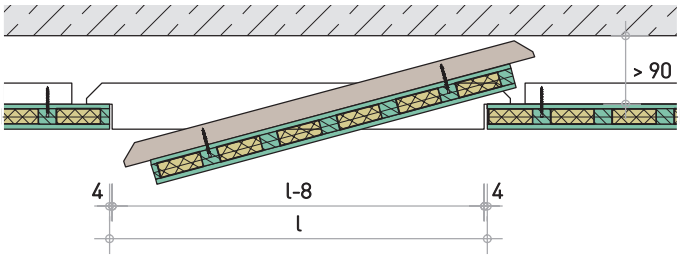
Simple inspection opening across element width 625 mm, length l as required, max. 1,000 mm
Observe the minimum suspension height!

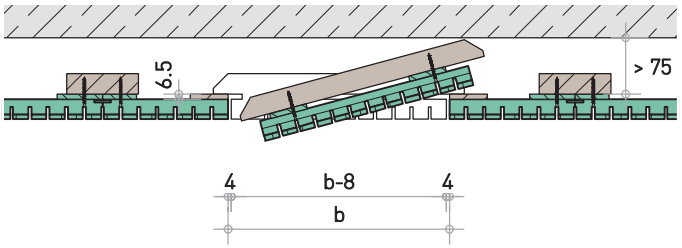
- Cut out the cladding to the required opening size
- Fit the inspection hatch. Allow for the required gap width, attach two protruding battens to the two middle slats on the back
- Provide a safeguard against falling
- If required, secure by screwing into the acoustic gaps

Cross-section



Longitudinal section





Accessoires
Supplementary panels

Solid wood panels made of silver fir and oak

Silver fir knotless PURE ONE _WTO
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



Silver fir knotless PURE _WT

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 knotless PURE _EI

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, dimensionally accurate and sanded 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 19



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 20



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 7

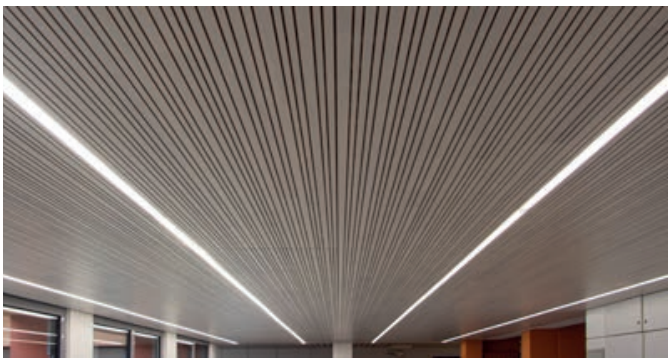


Accessories
LED light strip for LIGNO® Acoustic

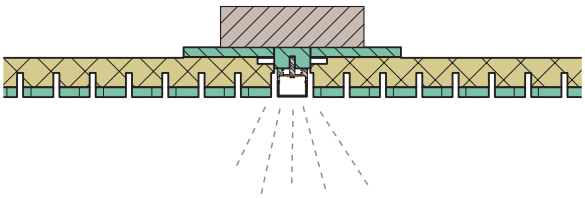
LED light strips for **subsequent and on-site installation on LIGNO® Acoustic light panels**.

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

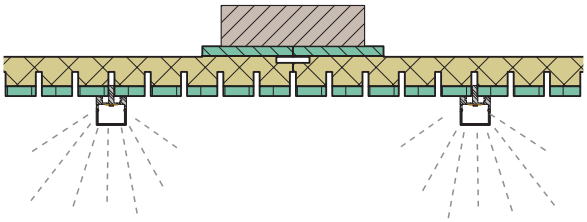
▶ **Data sheet installation instructions for LED light strip**



Flush installation:



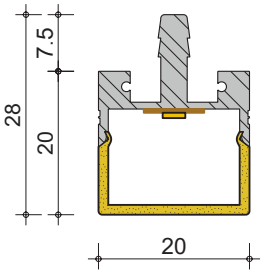
Clip-on installation:



Light strip 20 mm width

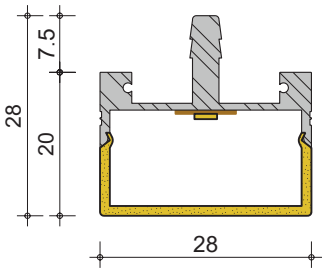
Compatible with profile variants **_625-20-4** and **_625-12n25-4**

- 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} 2965 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} 2965 mm per element



Ein- und Ausbauten

! Small built-in and surface-mounted components, such as smoke detectors, recessed luminaires or ceiling speakers, are permitted **up to a maximum point load of 1-2 kg per component, provided that a maximum total surface weight of 2 kg/m² is not exceeded**.

- Heavier components, or components exceeding these limits, must be **suspended directly from the structural ceiling** using suitable fixing material and must be **attached neither to the cladding panel nor to the substructure**.

Bonding built-in or surface-mounted components to acoustic panels is not permitted!

LED light strip for LIGNO® Acoustic

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 and Tunable White 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		

LED Light Strips for LIGNO® Acoustic light

Converter/Transformer: Standard LED Light Strip for LIGNO® Acoustic					
Type	DALI	Power	Voltage	Dimensions (L × W × H)	Channel
OSRAM OT SLIM	-	30 W	220...240/24 V	270 x 30 x 17,5 mm	-
OSRAM OT SLIM	-	60 W	220...240/24 V	338 x 30 x 17,5 mm	-
OSRAM OT SLIM	-	100 W	220...240/24 V	374 x 30 x 18,5 mm	-
OSRAM OT SLIM	-	160 W	220...240/24 V	404 x 30 x 21,5 mm	-
OSRAM DALI OTI	dimmable	50 W	220...240/24 V	346 x 32 x 22 mm	1
OSRAM DALI OTI	dimmable	80 W	220...240/24 V	346 x 32 x 22 mm	1
OSRAM DALI OTI	dimmable	160 W	220...240/24 V	300 x 50 x 35 mm	1

Notes:

Max. distance from luminaire to control gear: ‹10 m
All control gear units carry the MM test mark (furniture installation).
Observe the temperature values (Tc max).

Accessories			
Type	No.		
Connecting cable Socket Plug	GST08i275T	50V/6A, H03V2V2 x 0,75 m²	3 metres

Converter/Transformer: Tunable White*				
Type	DALI	Power	Voltage	Channel
OSRAM DALI OTI	dimmable	50 W	220...240/24 V	4 CH DT/6
OSRAM DALI OTI	dimmable	80 W	220...240/24 V	4 CH DT/6
OSRAM DALI OTI	dimmable	160 W	220...240/24 V	2 CH DT/6

* On request

Accessories	
OSRAM DALI MCU Tunable White	Rotary switch with DALI function for Tunable White colour change and manual dimming, for on-site connection. Optionally via Bluetooth.

Planning and installation

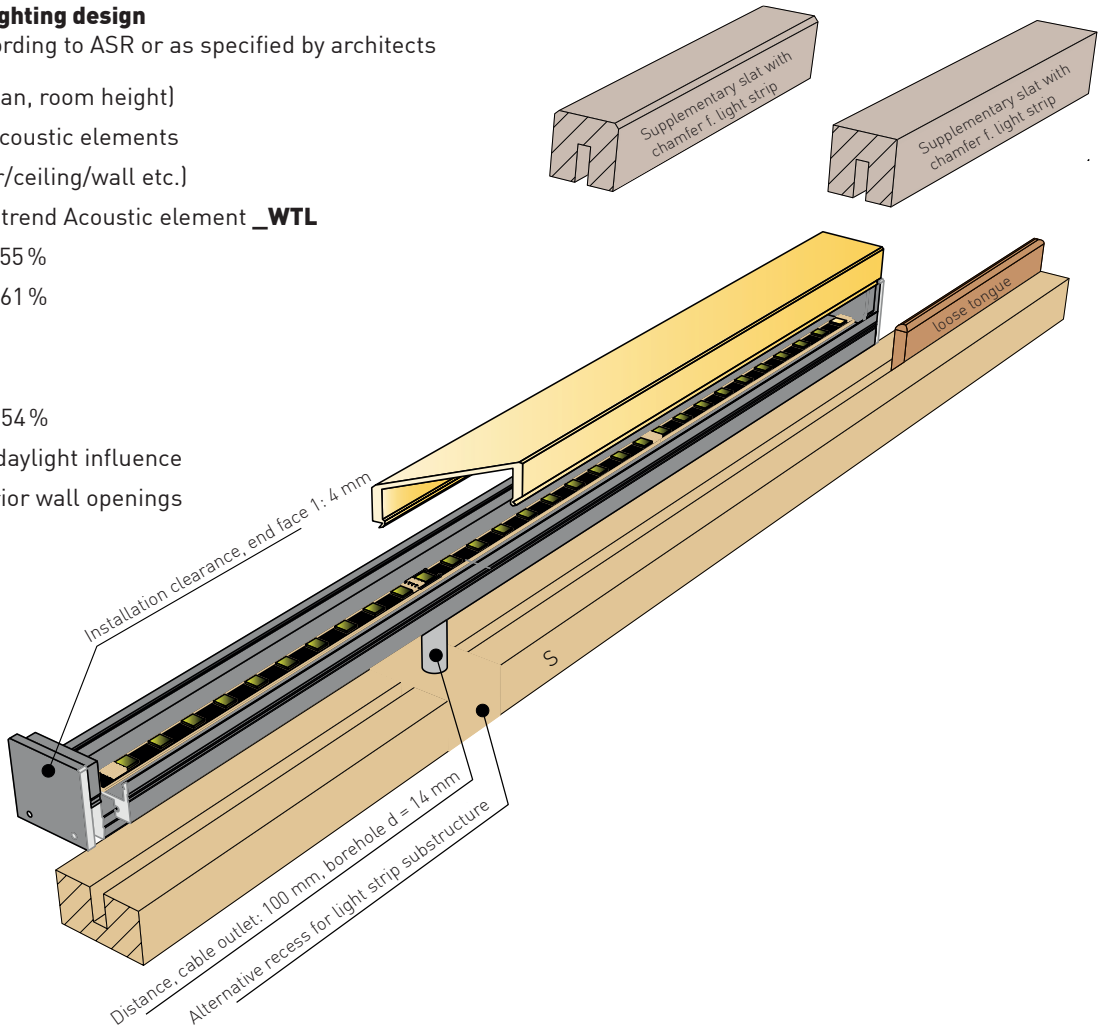
The LED drivers and design dimensions of the LED light strip are summarised on these pages. Basic lighting terms, lighting requirements according to ASR A3.4, the Tunable White variant, installation instructions parallel and transverse to the panel, as well as planning tips and installation details, can be found in the separate

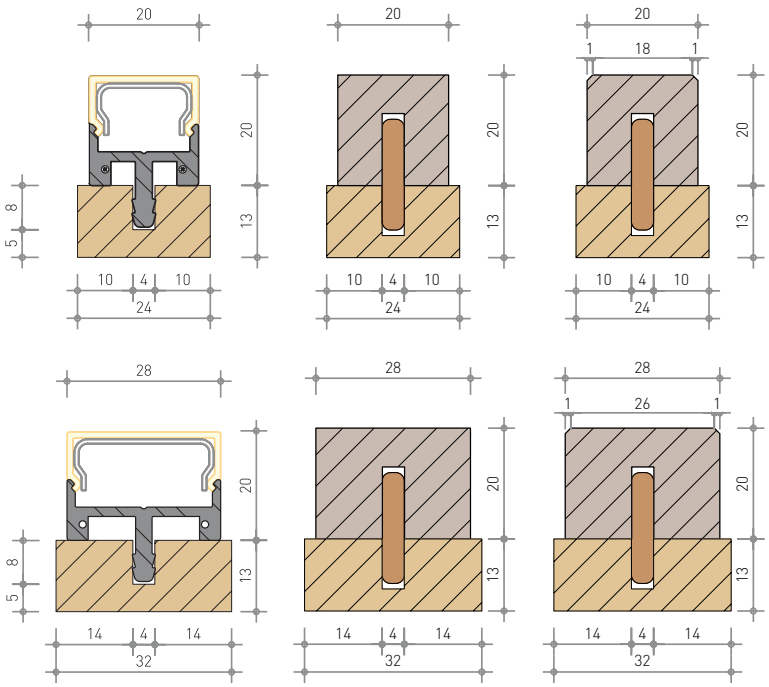
▶ **LED light strip handout for LIGNO® Acoustic**

Construction drawing
LED light strip for LIGNO® Acoustic

Information for detailed lighting design
Lighting requirements according to ASR or as specified by architects

- Room geometry (floor plan, room height)
  - Installation plan for acoustic elements
- Reflectance values (floor/ceiling/wall etc.)
- Reflectance value, Lignotrend Acoustic element **_WTL**
  - varnished **_bl-w10** = 55 %
  - varnished **_bl-w20** = 61 %
  - oiled **_bh-w10** = 52 %
  - oiled **_bh-w20** = 60 %
  - UV protection **_buv** = 54 %
- Building orientation for daylight influence
  - Arrangement of exterior wall openings





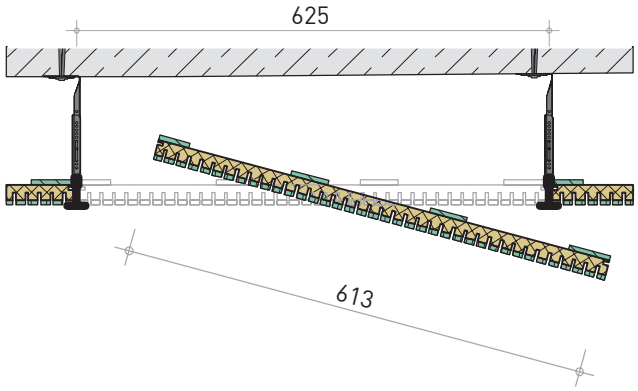
Types 3S_33 / 3G_33
Special applications

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				





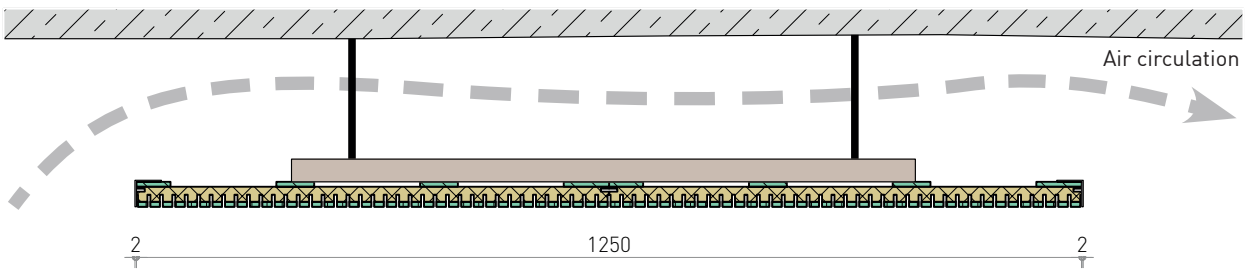
Freely suspended acoustic canopies

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

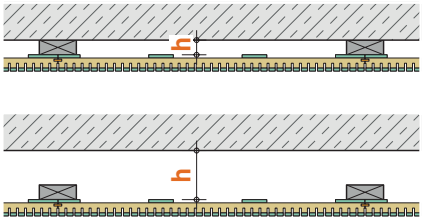
Instead of LIGNO® Acoustic light, the **optimized element type LIGNO® Acoustic Sport** is used for acoustically effective cladding of force-reducing impact walls in sports halls.

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 filling



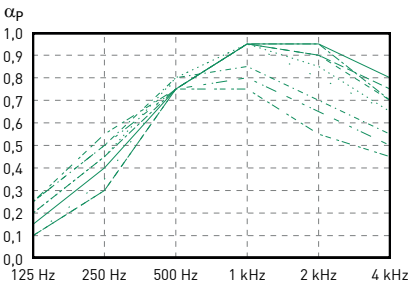
LIGNO® Acoustic light 3S_33_a70g

installed in front of 30 mm cavity without cavity filling

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



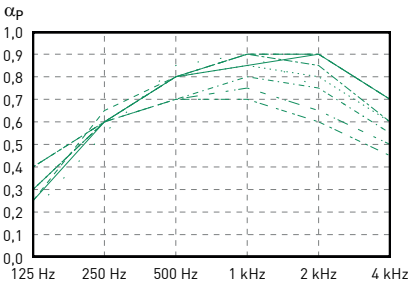
LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity without cavity filling

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



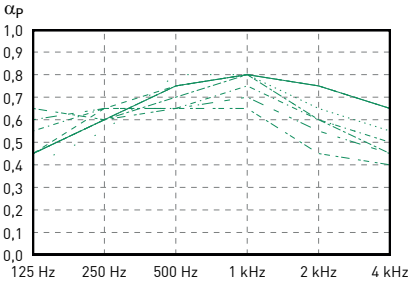
LIGNO® Acoustic light 3S_33_a70g

installed in front of 150 mm cavity without cavity filling

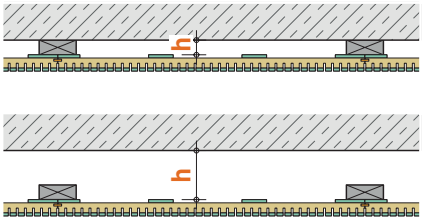
h = 150 mm

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 filling



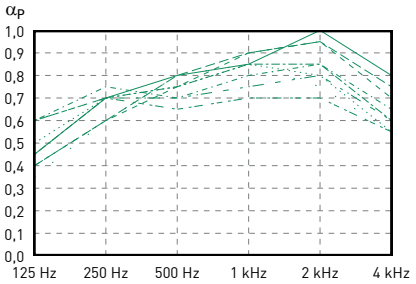
LIGNO® Acoustic light 3S_33_a70g

installed in front of 200 mm cavity without cavity filling

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



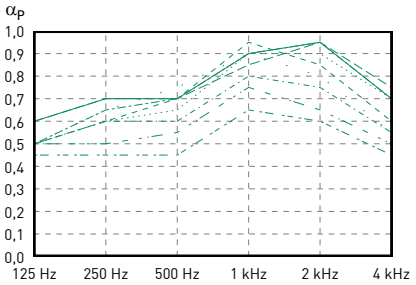
LIGNO® Acoustic light 3S_33_a70g

installed in front of 400 mm cavity without cavity filling

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

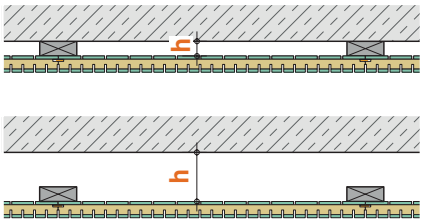


ONLINE CALCULATION

Predict the room acoustic effect for different uses:

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

Acoustic absorption Type 3G_33 without cavity



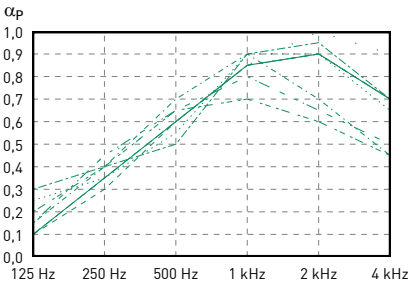
LIGNO® Acoustic light 3G_33_a70g

installed in front of 30 mm cavity without cavity filling

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



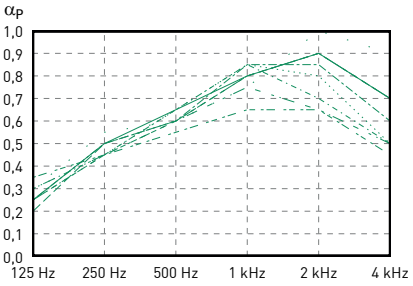
LIGNO® Acoustic light 3G_33_a70g

installed in front of 100 mm cavity without cavity filling

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



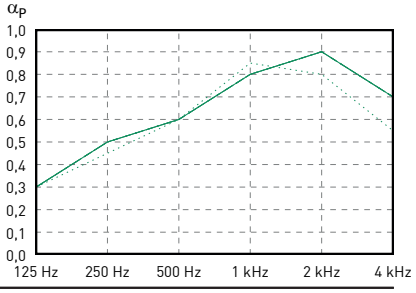
LIGNO® Acoustic light 3G_33_a70g

installed in front of 150 mm cavity without cavity filling

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



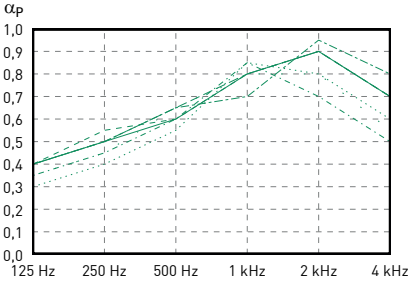
LIGNO® Acoustic light 3G_33_a70g

installed in front of 200 mm cavity without cavity filling

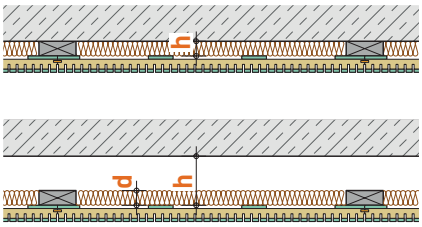
h = 200 mm

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



Sound absorption, type 3S_33 with additional absorber Combijute

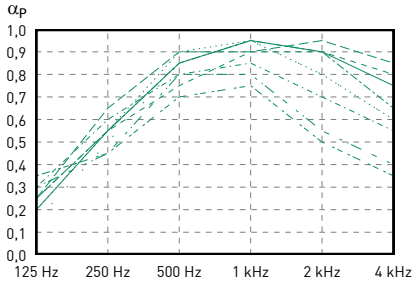


LIGNO® Acoustic light 3S_33_a70g

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

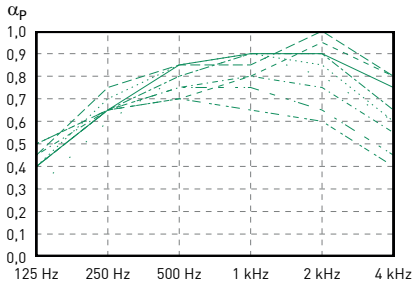


LIGNO® Acoustic light 3S_33_a70g

installed in front of 30 mm cavity, backed with 30 mm combijute

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	0.83	B		0.20	0.55	0.85	0.95	0.90	0.75
_625-18-6	----------	0.80	0.80	0.78	B		0.25	0.55	0.75	0.90	0.90	0.80
_625-23-8	— — —	0.90	0.85	0.86	A		0.25	0.65	0.90	0.90	0.95	0.85
_625-20-4	.....	0.75	0.80	0.80	C		0.20	0.55	0.90	0.95	0.80	0.60
_625-35-4	— . —	0.55	0.65	0.66	D	MM	0.30	0.45	0.80	0.80	0.55	0.40
_625-44-4	— . — . –	0.50	0.60	0.60	D	M	0.35	0.45	0.70	0.75	0.50	0.35
_625-12n25-4	– – – –	0.80	0.80	0.81	B		0.25	0.55	0.85	0.95	0.90	0.65
_625-18n38-6	. . . . .	0.75	0.80	0.77	C		0.15	0.50	0.85	0.95	0.80	0.60
_625-22n40-4	— . — . — . –	0.70	0.75	0.74	C		0.30	0.60	0.80	0.85	0.70	0.55

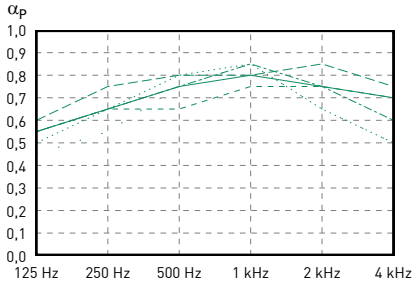


LIGNO® Acoustic light 3S_33_a70g

installed in front of 100 mm cavity, backed with 30 mm combijute

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	0.65	0.85	0.90	0.90	0.75
_625-18-6	----------	0.80	0.80	0.78	B		0.40	0.65	0.70	0.80	0.95	0.80
_625-23-8	— — —	0.90	0.85	0.86	A		0.45	0.75	0.85	0.85	1.00	0.80
_625-20-4	.....	0.80	0.85	0.81	B		0.40	0.70	0.85	0.90	0.85	0.60
_625-35-4	— . —	0.65	0.70	0.70	C		0.50	0.65	0.75	0.75	0.65	0.45
_625-44-4	— . — . –	0.60	0.65	0.65	C	L	0.50	0.65	0.70	0.65	0.60	0.40

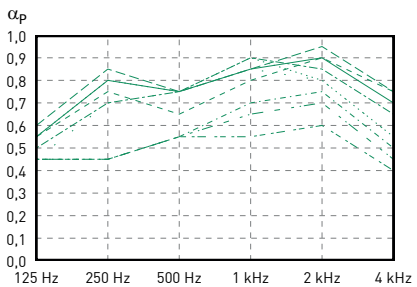


LIGNO® Acoustic light 3S_33_a70g

installed in front of 150 mm cavity, backed with 30 mm combijute

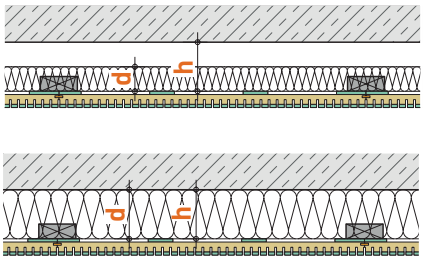
h = 150 mm
d = 30 mm

Profile		α_W	NRC	SAA	SAK	Form	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	————	0.80	0.75	0.75	B		0.55	0.65	0.75	0.80	0.75	0.70
_625-18-6	----------	0.75	0.70	0.70	C		0.55	0.65	0.65	0.75	0.75	0.70
_625-23-8	— — —	0.85	0.80	0.78	B		0.60	0.75	0.80	0.80	0.85	0.75
_625-20-4	.....	0.65	0.75	0.73	C		0.50	0.65	0.80	0.85	0.65	0.50
_625-12n25-4	– – – –	0.75	0.75	0.74	C		0.55	0.65	0.75	0.85	0.75	0.60
_625-18n38-6	. . . . .	0.65	0.70	0.70	C		0.45	0.55	0.75	0.85	0.65	0.50



To improve the acoustic properties, a flexible insulation mat made of hemp and jute fibres is placed behind it (product Thermo Hanf Combi Jute or equivalent).

Acoustic absorption Type 3S_33 with fleece



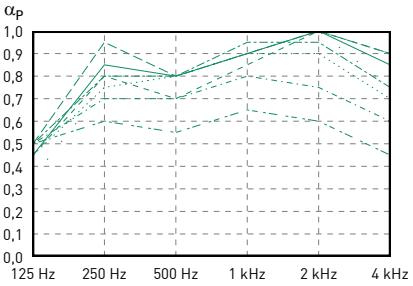
LIGNO® Acoustic light 3S_33_a70g

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

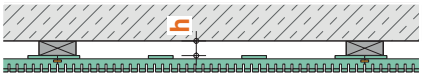
h = 200 mm

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



Low absorbing Type 3S_33



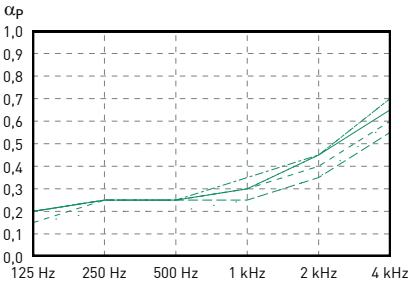
LIGNO® Acoustic light 3S_33_a10g

installed in front of 30 mm cavity without cavity filling

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

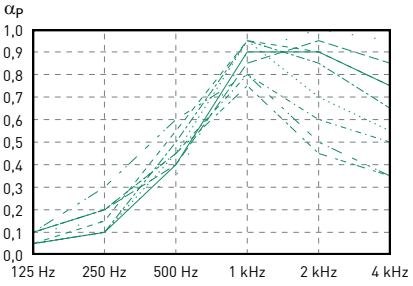
installed without cavity without cavity filling

h = 0 mm

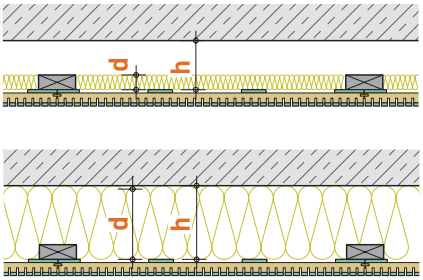
d = 0 mm

(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	— · — · — · –	**0.45**	0.50	0.52	D	M	0.10	0.20	0.45	0.80	0.60	0.50



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

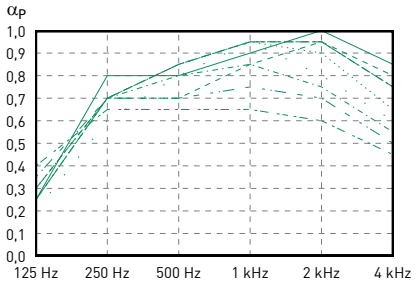


LIGNO® Acoustic light 3S_33_a70g

installed in front of 200 mm cavity, backed with 30 mm combijute

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	0.80	0.85	0.83	B		0.55	0.80	0.75	0.85	0.90	0.70
_625-18-6	0.75	0.80	0.78	C		0.55	0.75	0.65	0.80	0.90	0.75
_625-23-8	0.85	0.85	0.86	B		0.60	0.85	0.75	0.85	0.95	0.75
_625-20-4	0.75	0.80	0.80	C	L	0.55	0.80	0.75	0.90	0.80	0.55
_625-35-4	0.60	0.60	0.58	C		0.45	0.45	0.55	0.65	0.70	0.45
_625-44-4	0.55	0.55	0.53	D		0.45	0.45	0.55	0.55	0.60	0.40
_625-12n25-4	0.80	0.80	0.80	B		0.50	0.70	0.75	0.90	0.85	0.65
_625-18n38-6	0.75	0.80	0.77	C	L	0.45	0.70	0.75	0.85	0.80	0.55
_625-22n40-4	0.60	0.60	0.62	C		0.45	0.45	0.55	0.70	0.75	0.50

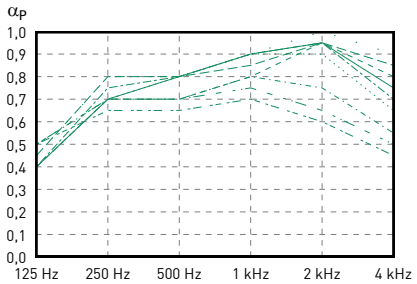


LIGNO® Acoustic light 3S_33_a70g

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	0.70	0.80	0.85	0.75	0.55

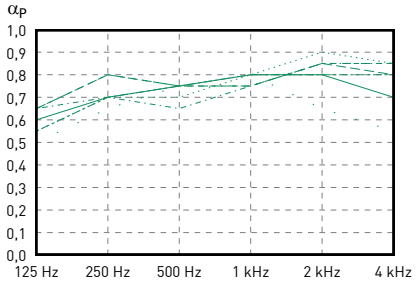


LIGNO® Acoustic light 3S_33_a70g

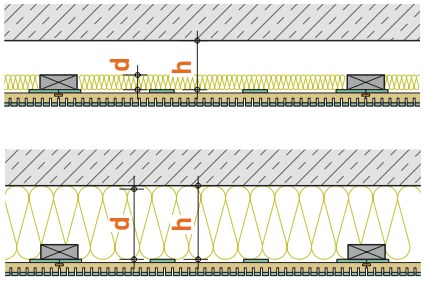
installed in front of 150 mm cavity, backed with 140 mm mineral wool Sonorock

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 additional absorber (mineral wool)



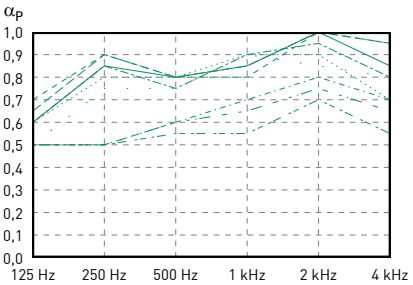
LIGNO® Acoustic light 3S_33_a70g

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	**0,85**	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



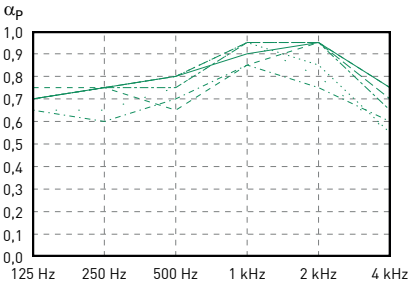
LIGNO® Acoustic light 3S_33_a70g

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

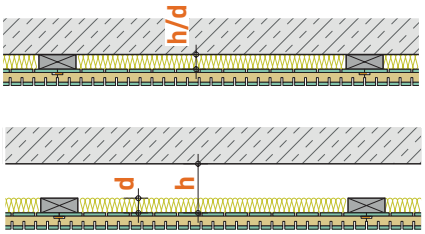
h = 100 mm

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



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

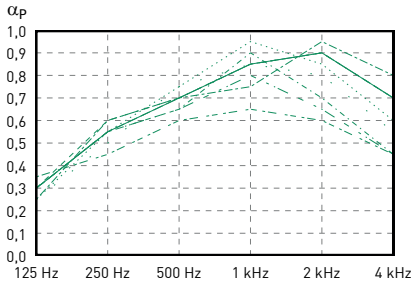


LIGNO® Acoustic light 3G_33_a70g

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
_625-35-4	0.65	0.65	0.66	C		0.30	0.55	0.65	0.80	0.65	0.45
_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

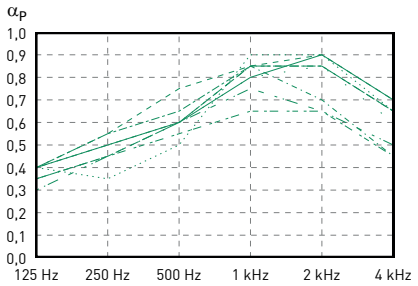


LIGNO® Acoustic light 3G_33_a70g

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

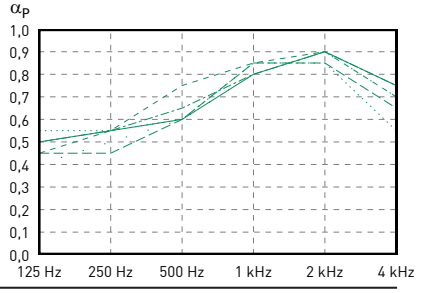


LIGNO® Acoustic light 3G_33_a70g

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

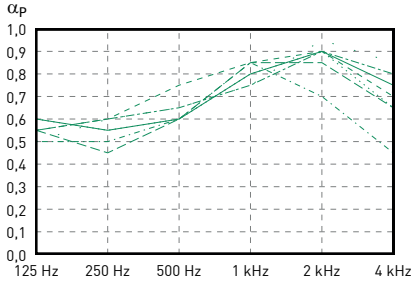


LIGNO® Acoustic light 3G_33_a70g

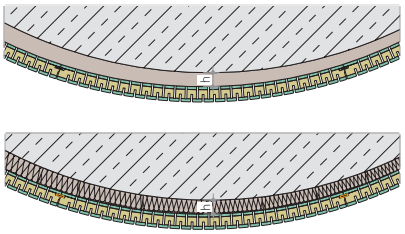
installed in front of 200 mm cavity, backed with 30 mm mineral wool Isover SSP 1

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

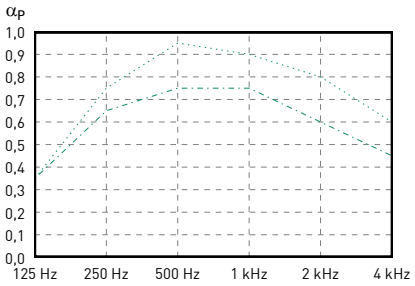


LIGNO® Acoustic light 3C_33_a70g

installed in front of 95 mm cavity, backed with 30 mm combijute

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		0.35	0.75	0.95	0.90	0.80	0.60
_625-22n40-4	—.—.—.–	**0.60**	0.70	0.69	C	L	0.35	0.65	0.75	0.75	0.60	0.45

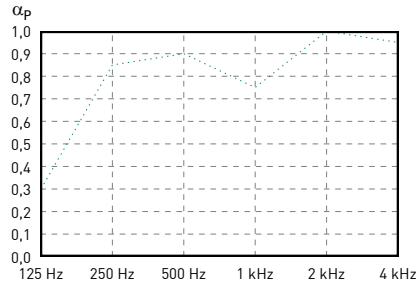


LIGNO® Acoustic light 3C_33_a70g

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

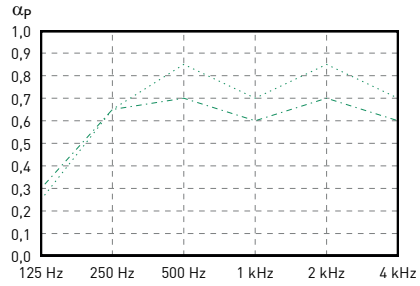


LIGNO® Acoustic light 3C_33_a70g

installed in front of 95 mm cavity without cavity filling

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

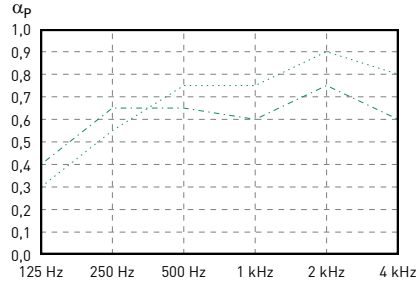


LIGNO® Acoustic light 3C_33_a70g

installed in front of 200 mm cavity without cavity filling

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

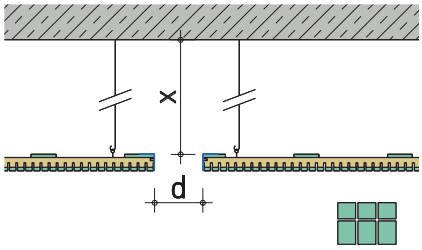


Acoustic absorption Canopies

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

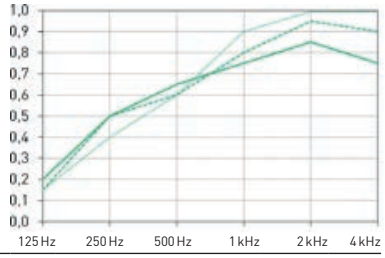
LIGNO® Acoustic canopy

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



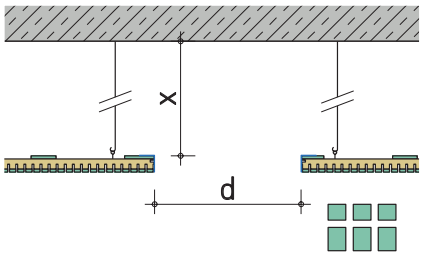
Profile	Suspension	α_w	NRC	SAK	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
_625-12-4	**x = 200**	**0,70**	0,70	C	0,20	0,50	0,65	0,75	0,85	0,75
	x = 400	**0,60**	0,65	C	0,15	0,50	0,60	0,80	0,95	0,90
	x = 800	**0,70**	0,70	C	0,15	0,40	0,60	0,90	1,00	1,00

α_p



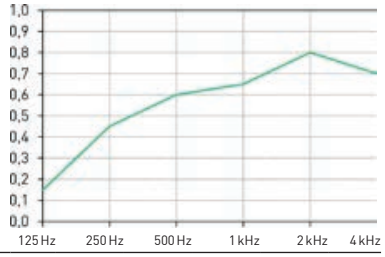
LIGNO® Acoustic canopy

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

α_p



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	Surface softwood, **_a70g**, all profiles	11 (19)	13 (23)	13 (23)	kg / m² (kg/element)
	Surface hardwood, **_a70g**, all profiles	12 (21)	15 (27)	15 (27)	kg / m² (kg/element)
Additional weight	Absorber **_a10g** instead of **a70g**	+ 3	+ 3	+ 3	kg / m² Surcharge

(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 29 For fire retardant substructure: Knoll clamps type A, material no. 1.4301
Screws see also ▶ page 20 - 27	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 20 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.**

Downloads and Tools

Further documentation, test certificates and online tools for LIGNO® Acoustic Pro are available for download on our website. For project-specific questions, please contact your regional Lignotrend technical consultant.

Downloads

Installation instructions LIGNO® Acoustic light	▶ www.lignotrend.com/montageanleitung-light
Test certificates	▶ www.lignotrend.com/en/downloads
Environmental Product Declarations (EPDs)	▶ www.lignotrend.com/epd
Technical data LIGNO® Surfaces	▶ www.lignotrend.com/surface
Technical data LIGNO® Acoustic Sport	▶ www.lignotrend.com/en/td-ligno-acoustic-sport
Installation instructions for inspection hatches	▶ www.lignotrend.com/en/installation-inspection-hatches
LED light strip handout for LIGNO® Acoustic light	▶ www.lignotrend.com/en/handout-led

Tools

LIGNO® Services & Tools	▶ www.lignotrend.com/en/services-tools
Online configurator	▶ www.lignotrend.com/acoustic-configurator
Room acoustics calculator	▶ www.lignotrend.com/acoustic-calculator
Accessories	▶ www.lignotrend.com/accessoires
Regional technical consultant near you	▶ www.lignotrend.com/consulting
LIGNOshop	▶ my.lignotrend.com/en-DE

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**