Genuine Timber Surfaces

Surface qualities for LIGNO® CLT und LIGNO Acoustic®

Surfaces for supporting elements

The Lignotrend manufacturing process is focused in producing cross-laminated timber elements with **high quality surfaces in genuine timber**.

Nearly all load-bearing Lignotrend elements can be supplied with a ready-finished surface. **No further interior completion** is then necessary on the timber component.

1-ply-panels are used for the visible layer of the elements, for which it is possible to choose between different timber qualities. Their visual appearance is described in this data sheet.

The surfaces contours and profiles can also be inciviually chosen. **Closed timber surfaces** and **acoustic profiles with gaps** are possible here. Directly behind the surface is a transversal layer, which is crucial for the crack resistance of the closed surface alternatives.

The surface of the acoustic profiles can be designed either very delicately as a slat profile or with wider strips in the form of a board profile. Behind the surface layer, efficient **acoustic absorbers are integrated** at the factory, which are made of natural wood fibres.

If partial areas of a component need to be made without absorbers to obtain a better noise direction, it is possible to produce an unobtrusive surface that has a minor absorption effect, but whose visual appearance matches the absorbing profiles.

Surfaces for acoustic panels

The slat profiles shown are also available as a surface for the LIGNO Acoustic light acoustic panels for creating a corresponding interior design by adding panels below or in front of the building's basic construction. Board profiles and closed surfaces, however, are not available on the panels.

Contents

Summary of profile types 2

Timber species and profiles available for each

★ Standard surfaces 4
("Customer favourites", for which we usually have good quantities of raw material in stock and therefore have short delivery times.)

K Commission surfaces 21
(Wood species for which the raw material is ordered individually for the order, for which we also carry out a special internal release of incoming batches. Under certain circumstances, this can affect the final delivery time of a order).

Surface treatment 28

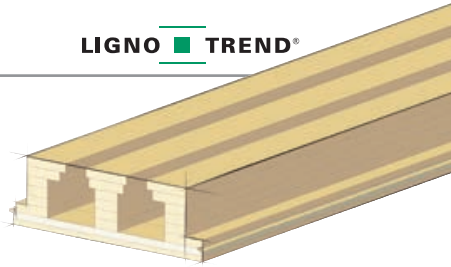
Flame retardancy 29

Instructions for use 30

Last revision on 28.07.2025
subject to modifications and amendments.

LIGNOTREND Produktions GmbH
Steinbachstrasse 41 D-79809 Weilheim
Tel.: +49 (0)7755 9200-0
info@lignotrend.com www.lignotrend.com

LIGNO TREND®
For sustainable building in timber.



Profile versions for load-bearing cross-laminated timber elements

Closed surface

Profile type	butt joint	edge finish
_625-618-7	7 mm	V-shaped
_625-621-4	4 mm	sharp edges
_625-51-1 (ca. 1mm gap in surface)	4 mm	sharp edges

Narrow slats

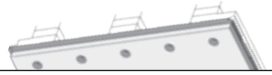
Profile type	Gap width b_F	Slat width b_L	No of slats per element
regular profile **_625-12-4**	4 mm	ca. 12 mm	38
regular profile **_625-20-4**	4 mm	ca. 20 mm	26
regular profile **_625-18-6**	6 mm	ca. 18 mm	26
regular profile **_625-23-8**	8 mm	ca. 23,3 mm	20
regular profile **_625-35-4** new	4 mm	ca. 35 mm	16
regular profile **_625-44-4** new	4 mm	ca. 44 mm	13
regular profile **_625-54-8**	8 mm	ca. 54 mm	10
nature profile **_625-12n25-4**	4 mm	ca. 12-25 mm	
nature profile **_625-18n38-6**	6 mm	ca. 18-38 mm	
nature profile 3D **_625-12n25-4:3D**	4 mm	ca. 12-25 mm (graduated ledge heights of 0 to 6 mm)	
Partial surface slotting as specified **_T-625-12-4**	4 mm	ca. 12 mm	

Board profiles

Profile type	Gap width b_F	Slat width b_L	No of slats per element
_625-105-20	20 mm	ca. 105 mm	5
_625-95-30	30 mm	ca. 95 mm	5
_625-54-8	8 mm	ca. 54 mm	10

Individual acoustic profile / perforation

Deviating design (subject to technical feasibility) upon request



Profile versions for acoustic panels

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	ca. 12,5 mm	38
regular profile **_625-18-6**	6 mm	ca. 18 mm	26
regular profile **_625-23-8**	8 mm	ca. 23,3 mm	20
regular profile (chamfer) **_625-35-4-F** new	4 mm	ca. 35 mm	16
regular profile (chamfer) **_625-44-4-F** new	4 mm	ca. 44 mm	13
regular profile (chamfer) **_625-20-4** **_625-20-4-F**	4 mm	ca. 20 mm	26
nature profile **_625-12n25-4**	4 mm	ca. 12-25 mm	
nature profile 3D **_625-12n25-4:3D**	4 mm	ca. 12-25 mm (graduated ledge heights of 0 to 6 mm)	
nature profile (chamfer) **_625-22n40-4** **_625-22n40-4-F**	4 mm	ca. 22-40 mm	
nature profile 3D **_625-22n40-4-F:3D**	4 mm	ca. 22-40 mm (graduated ledge heights of 0 to 6 mm)	
nature profile **_625-18n38-6**	6 mm	ca. 18-38 mm	

Other profiles on request

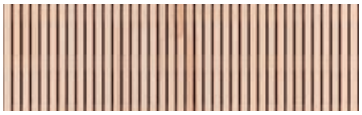
Exact description of the technical properties

- **Technical data sheet for LIGNO Rippe, LIGNO Block, LIGNO Acoustic classic**
- **Technical data sheet for LIGNO Acoustic light**
- **Technical data sheet for LIGNO Acoustic Sport**

Silver Fir knotless, patterned _WTL, also impregnated as _WTL-i

Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements



_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-12n25-4:3D
(nature:3D)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

_625-22n40-4-F:3D

_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

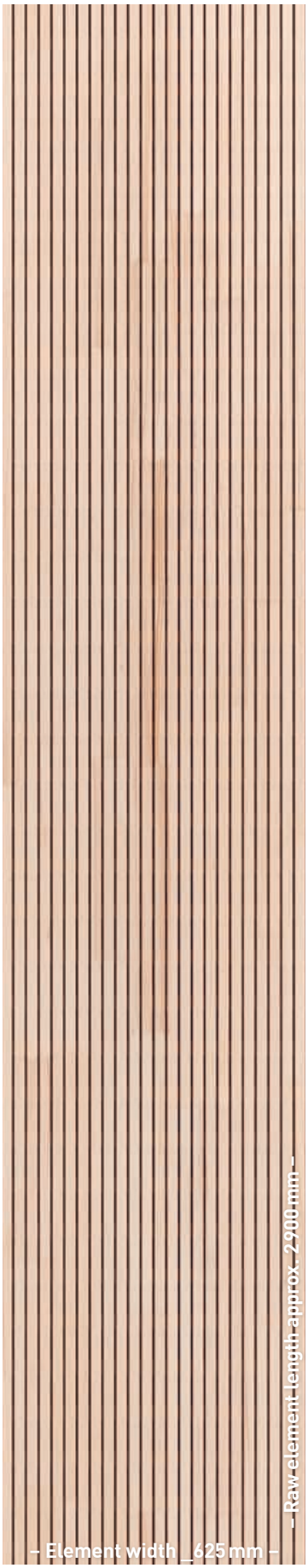
_625-44-4-F

Predestined for understated architectural design: The light timber of the Black Forest Silver Fir. It is processed in knotless quality: knots are cut out during production; the knotless sections are put together to make the high quality visible surfaces. The timber is cut in the so-called rift/ semi-rift.

Because the Silver Fir does not contain any resin, its timber is ideally suited for interior surfaces. It comes from the Black Forest, from PEFC-certified sources.

The 1-ply panels used for the WTL surface are made of knotless timber pieces, which vary considerably in terms of lightness. This creates a **patterned visual appearance**, which underlines the natural quality of the material.

Lightness variation	slight							strong
Grain	fine							coarse, wavy or curly



Closed surfaces

available on load-bearing CLT elements

_625-618-7

_625-621-4

_625-51-1

The currently most popular knotless grade combines natural vibrancy with design-oriented understatement.

OPTIMAL

Acoustic board profiles

available on load-bearing CLT elements

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Options / information

▶ from page 28

Options: Textured brushing (standard), sanded, acoustic panels also rough sawn

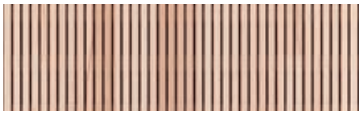
Options: UV protective wood finish against darkening, for acoustic panels also final treatment with varnish/oil

Option: Flame retardant surface (only on acoustic panels and in selected configurations)

Silver fir knotless, economy _WTE

Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements



_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

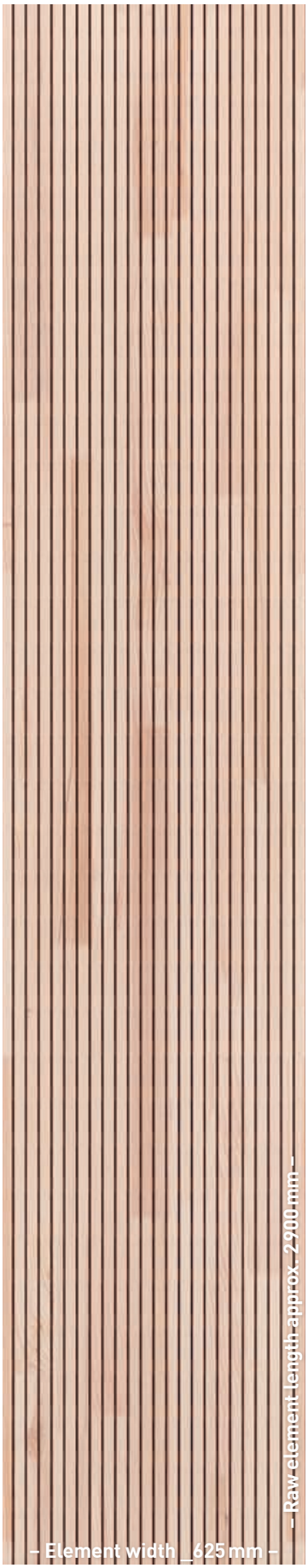
_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F



Silver Fir economy **_WTE** is an affordable, almost **knotless quality with irregularities**, which are by many people are not recognised as obtrusive (e.g. with also somewhat larger lengthways cracks, knots, break-outs). Appropriate for surfaces with lower quality requirements, for example in side rooms or for ceilings at a great height.

Available for acoustic slat profiles, as a closed surface only in the profile **_625-51-1**.

The manufacturing principle with finger joint lamellae basically corresponds to the **_WTL** surface.

Ligthness variation	slight		strong
Grain	fine		coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-51-1

More patterned? For many applications, this grade with irregularities is adequate.

ECONOMY

Acoustic board profiles

available on supporting CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Options / information

▶ from page 28

Options: Textured brushing (standard), sanded, acoustic panels also rough sawn

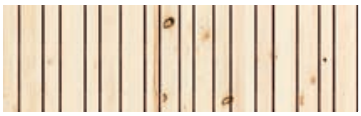
Options: UV protective wood finish against darkening, for acoustic panels also transparent final treatment. **Coloured final treatment of _WTE not provided**.

Silver Fir knotty _WT-ä

Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements

_625-20-4
as a panel also with bevel
_625-20-4-F



_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

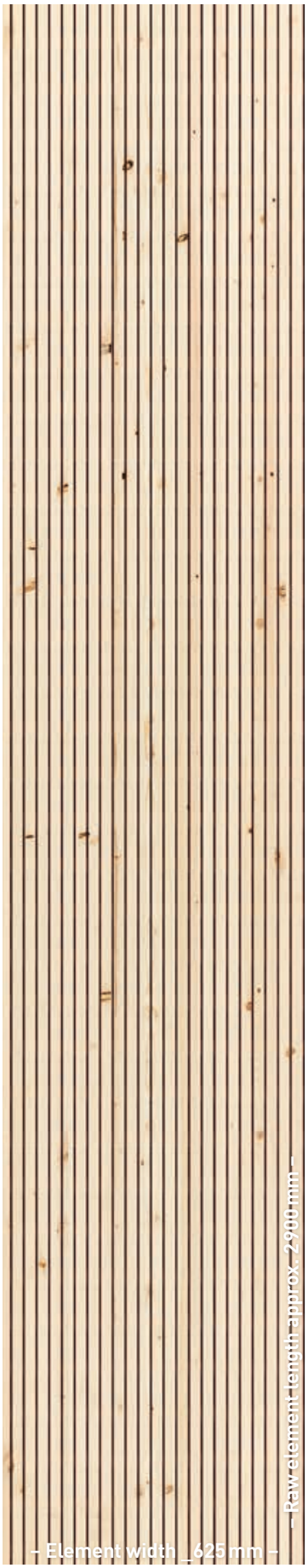
_625-18n38-6
(nature)

_625-18-6

_625-23-8

_625-35-4-F

_625-44-4-F



The cheapest real wood quality **_WT-ä** is intended for applications where acoustics are important but large irregularities are not a problem. Grain and knot pattern, break-outs, wing knots etc. can occur. The very narrow lamellas have a continuous grain over the raw element length of approx. 3 m, i.e. the lamellas are not finger-jointed.

Ligthness variation	slight		strong
Grain	fine		coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-618-7

_625-621-4

Acoustic board profiles

available on load-bearing CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-95-30

_625-54-8

Options / information

▶ from page 28

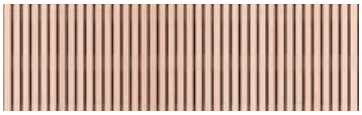
Options: Textured brushing (standard), sanded, acoustic panels also rough sawn

Options: UV protective wood finish against darkening, for acoustic panels also transparent final treatment.
Coloured final treatment of _WT-ä not provided.

Silver Fir knotless, continuous lamella _WTD

Acoustic slat profiles

available on acoustic panels

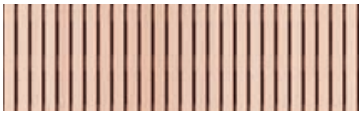


_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F



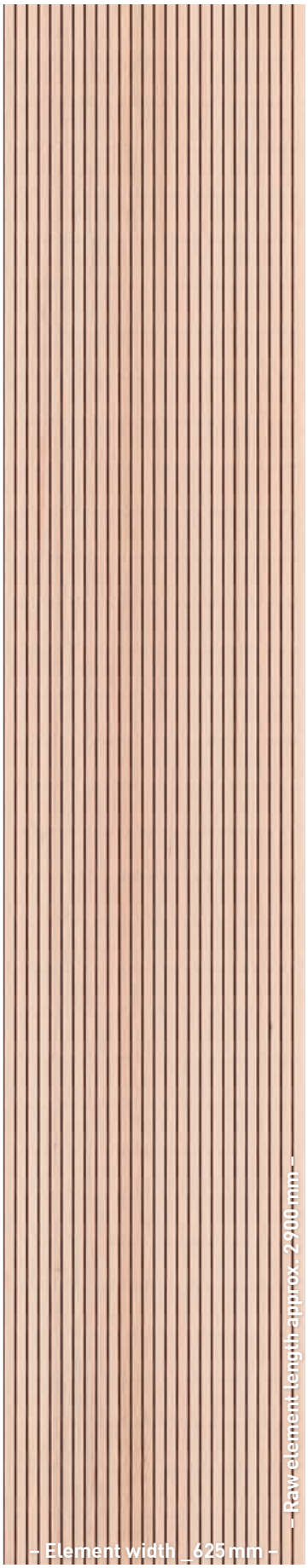
_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F



On the **_WTD** grade, the lamellae have a **continuous grain** along the raw element length of approx. 3 m, i.e. the lamellae are not finger joint. It has a similarly **patterned visual appearance** as **_WTL**.

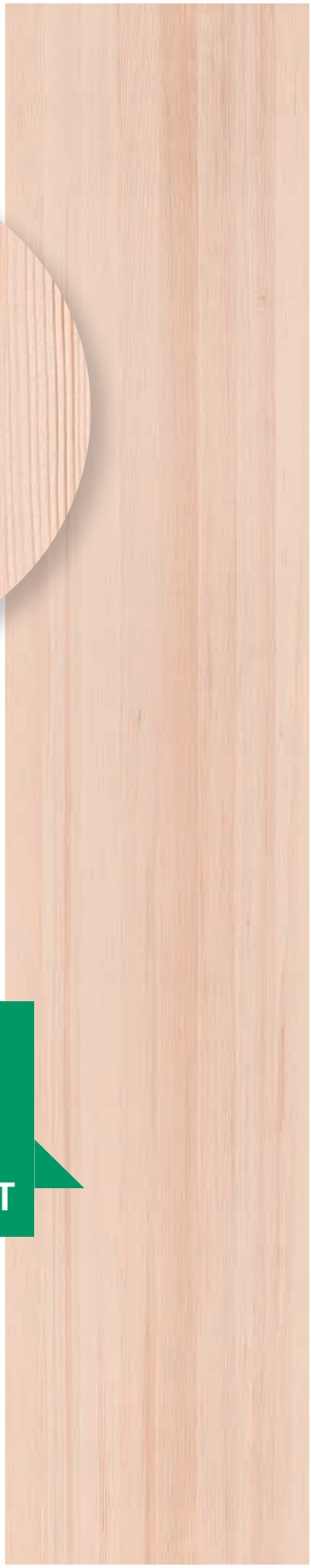
Availability is limited, therefore **extended delivery times** are possible.

Lightness variation	slight							strong
Grain	fine							coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-51-1



Acoustic board profiles

available on load-bearing CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Unlike on the other Silver Fir grades, the growth rings run across the length of nearly 3 m without a joint.

ELEGANT

Options / information

▶ from page 28

Attractive alternative
for wall claddings with acoustic panels

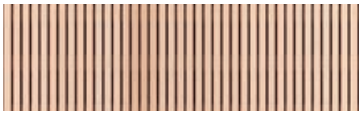
Options: Textured brushing (standard),
sanded, acoustic panels also rough sawn

Options: UV protective wood finish against darkening,
for acoustic panels also final treatment.

Silver Fir knotless, plain _WTS

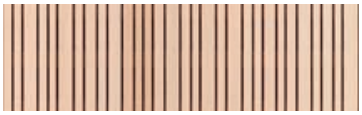
Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements



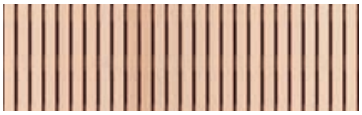
_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F



_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F



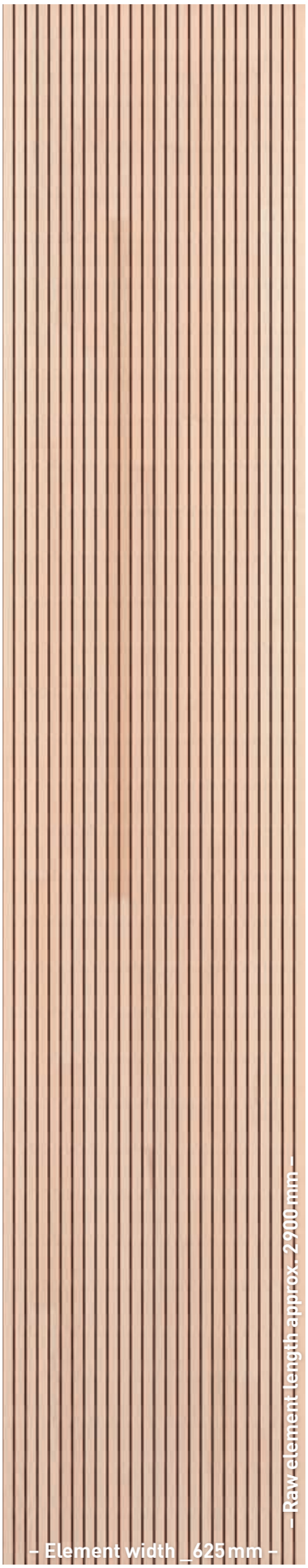
_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F



The Silver Fir knotless, plain surface quality is something special: A small amount of particularly evenly coloured and fine grained timber can be obtained from the fir tree trunks, from which this refined grade is produced.

The 1-ply panels used for the **_WTS** visible surface are made of knotless timber sections, which vary less markedly in terms of lightness and are finer grained than is the case with **_WTL** grade. This therefore creates a **more serene visual appearance**.

Availability is limited, therefore **extended delivery times** are possible.

Lightness variation	slight		■	■				strong
Grain	fine	■	■	■				coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-51-1

Acoustic board profiles

available on load-bearing CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Options / information

▶ from page 28

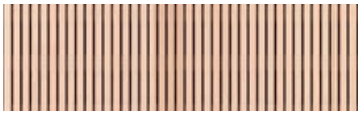
Options: Textured brushing (standard),
sanded, acoustic panels also rough sawn

Options: UV protective wood finish against darkening,
for acoustic panels also final treatment.
More affordable alternative for all-over final treatment: Poplar.

Spruce knotless, plain _FIS, also impregnated as _FIS-i

Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements



_625-12-4

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

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

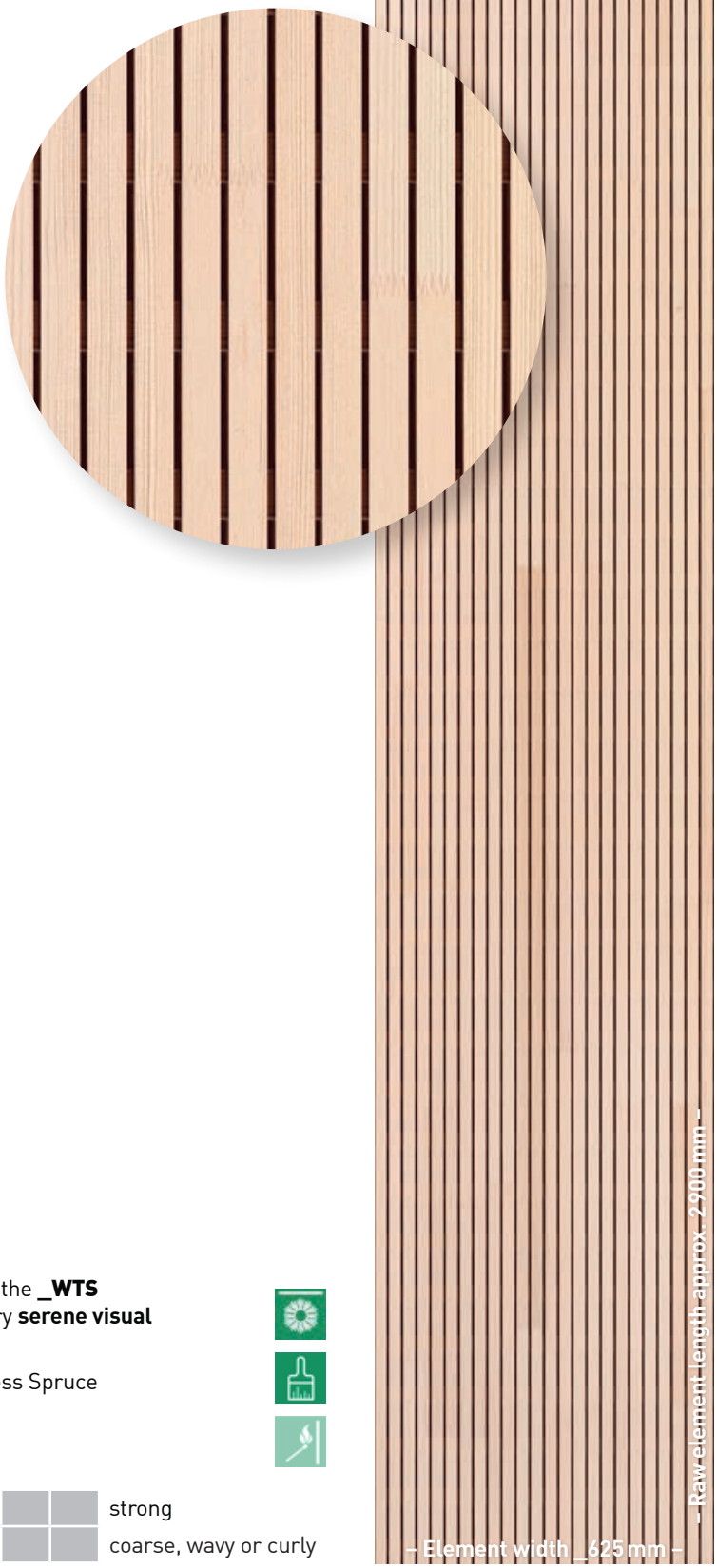
_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F



The surface quality Spruce knotless, plain is comparable with the **_WTS** grade, but has even less variation. This therefore creates a very **serene visual appearance.**

The 1-ply panels used for the **_FIS** surface are made of knotless Spruce timber sections.

Lightness variation	slight	■■□□□□□	strong
Grain	fine	■■■□□□□	coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-51-1

Acoustic board profiles

available on load-bearing CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Options / information

▶ from page 28

Options: Textured brushing (standard),
sanded, acoustic panels also rough sawn

Options: UV protective wood finish against darkening,
for acoustic panels also final treatment.
More affordable alternative for all-over final treatment: Poplar.

Spruce knotty (quality A) _FI-ä

Acoustic slat profiles

available on acoustic panels, on load-bearing CLT elements only not steamed version

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

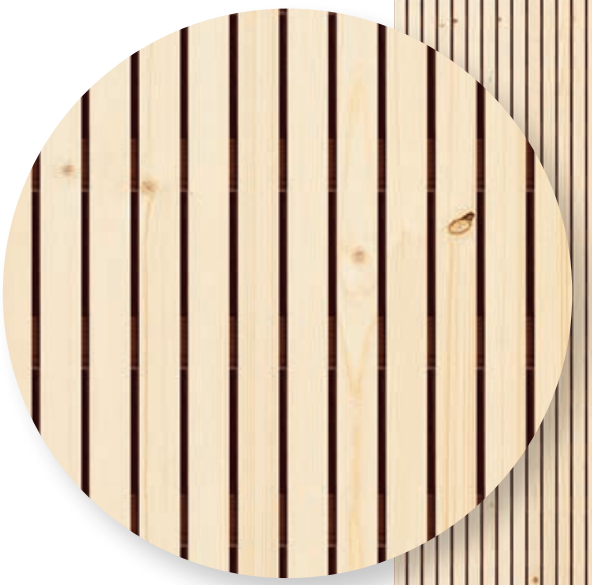
_625-18-6

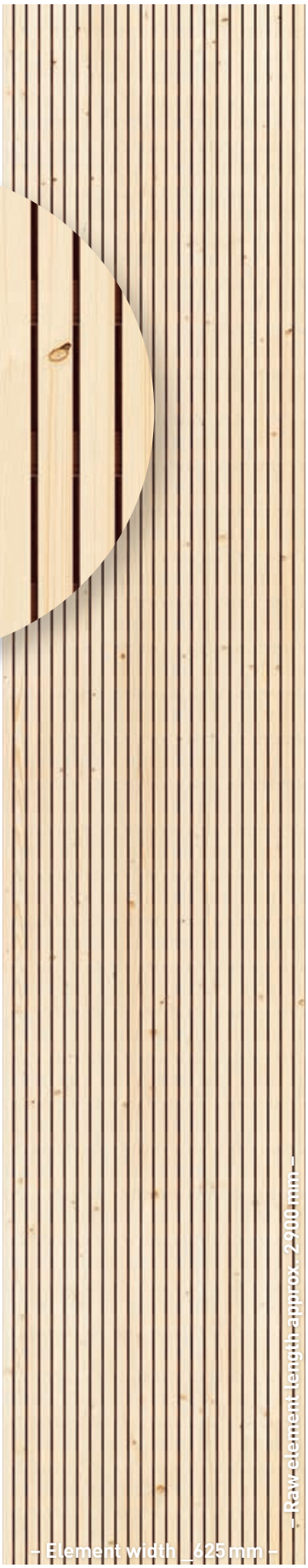
_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F





Spruce is the classic among timber surfaces, used as it has grown.

The **even knot pattern** screates a homogeneous overall appearance for the structural element surface. On grade FI-ä, the lamellae have a **continuous grain** along the raw element length of approx. 3 m, i.e. the lamellae are not finger joint.

Lightness variation	slight	■ ■ □ □ □ □ □	strong
Grain	fine	□ □ ■ ■ ■ □ □	coarse, wavy or curly

Closed surfaces

available on load-bearing CLT elements

_625-51-1

Acoustic board profiles

available on load-bearing CLT elements

_625-105-20

_625-95-30

_625-54-8

_625-35-4

_625-44-4

Options / information

▶ from page 28

Options: Textured brushing (standard),
sanded, acoustic panels also rough sawn

Options: UV protective wood finish against darkening,
for acoustic panels also final treatment.
More affordable alternative for all-over final treatment: Poplar.

Beech knotless
_BU

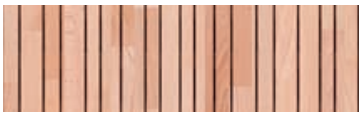
Acoustic slat profiles

available on acoustic panels

_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

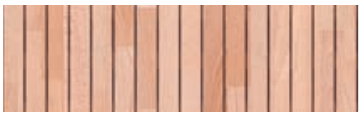


_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

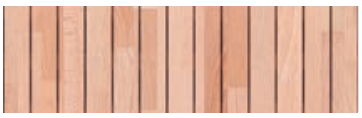
_625-18-6

_625-18n38-6
(nature)

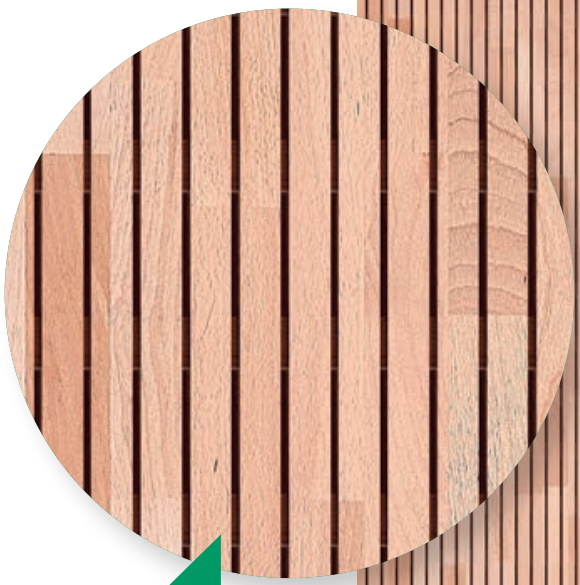
_625-23-8



_625-35-4-F

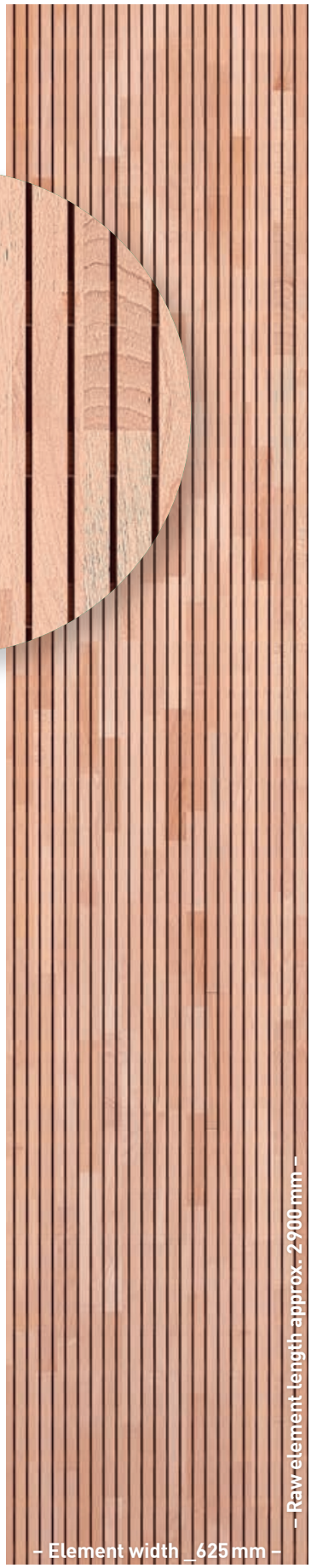


_625-44-4-F



Beech wood is hard yet exudes warmth, is very robust, why is why it is also used to clad impact walls.

ROBUST



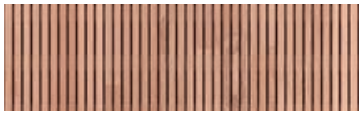
Surface made of knotless beech wood pieces with grain characteristic of this hard timber species. Visual appearance with lightness of varying distribution.

Lightness variation	slight		■	■	■	■			strong
Grain	fine			■	■	■			coarse, wavy or curly

Oak knotless
_EI

Acoustic slat profiles

available on acoustic panels
and on load-bearing CLT elements

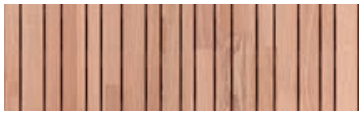


_625-12-4

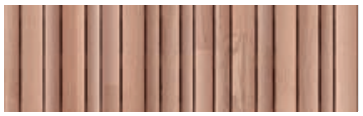
_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-12n25-4:3D
(nature:3D)



_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

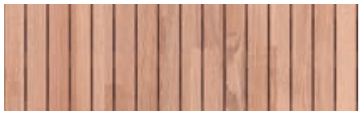


_625-22n40-4:3D-F
(nature:3D with bevel)

_625-18-6

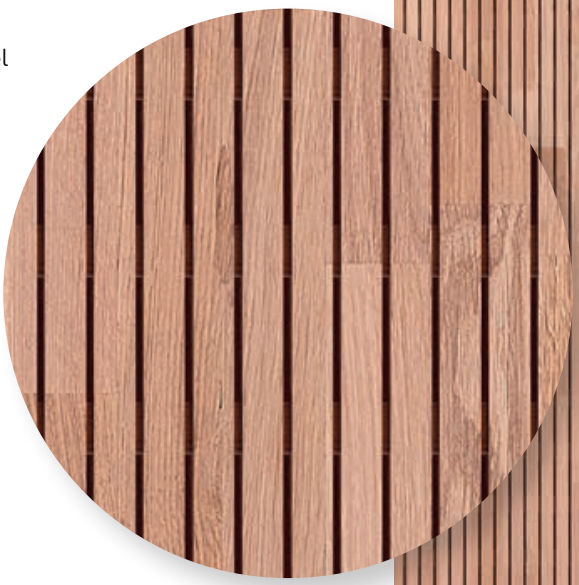
_625-18n38-6
(nature)

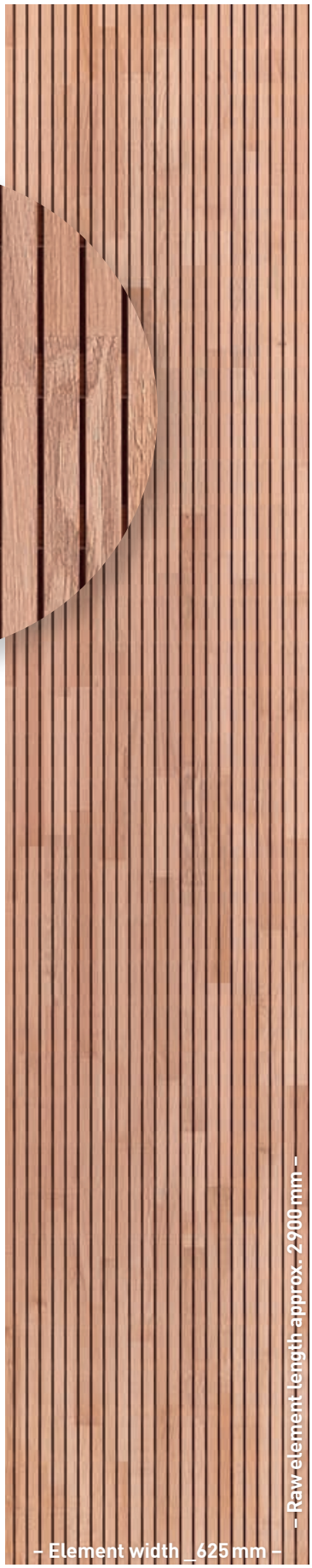
_625-23-8



_625-35-4-F

_625-44-4-F





In no way old-fashioned – oak is in vogue! This robust, refined element surface is also made out of knotless pieces of timber, which are connected, however, with a horizontal finger joint in such a way that the **lamella joints are recognisable as a fine, straight line**, not by the zigzag line of vertical finger joints.

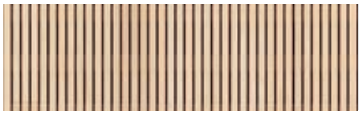
This creates surfaces with a very high quality impression.

Lightness variation	slight		strong
Grain	fine		coarse, wavy or curly

Ash knotless
_ES

Acoustic slat profiles

available on acoustic panels



_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
also with bevel
_625-22n40-4-F

_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F

This surface is a robust alternative to silver fir and is similar to light-coloured fir.

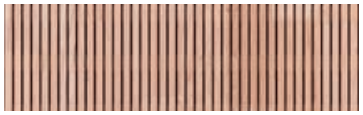
ROBUST

For this visible surface, single-layer boards are used in which the light-coloured trunk areas of the ash are predominantly lined up to create a **calm appearance**. The lamella sections are finger-jointed.

Lightness variation	slight			■	■	■			strong
Grain	fine					■	■		coarse, wavy or curly

Maple knotless, Canadian _AHK

Acoustic slat profiles



_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

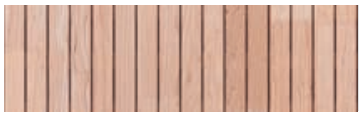
_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

_625-18-6

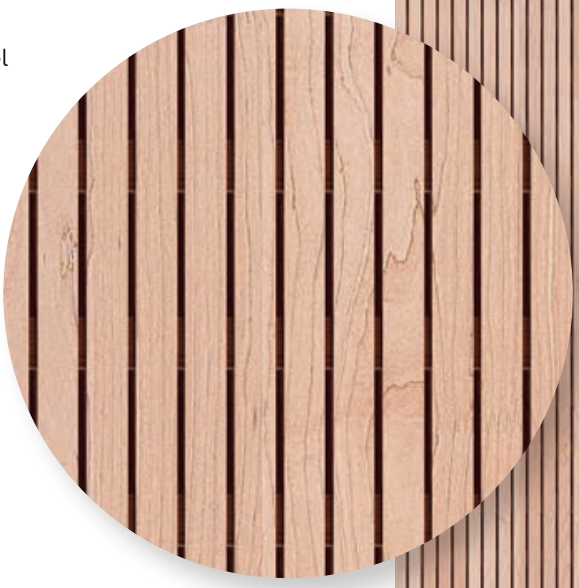
_625-18n38-6
(nature)

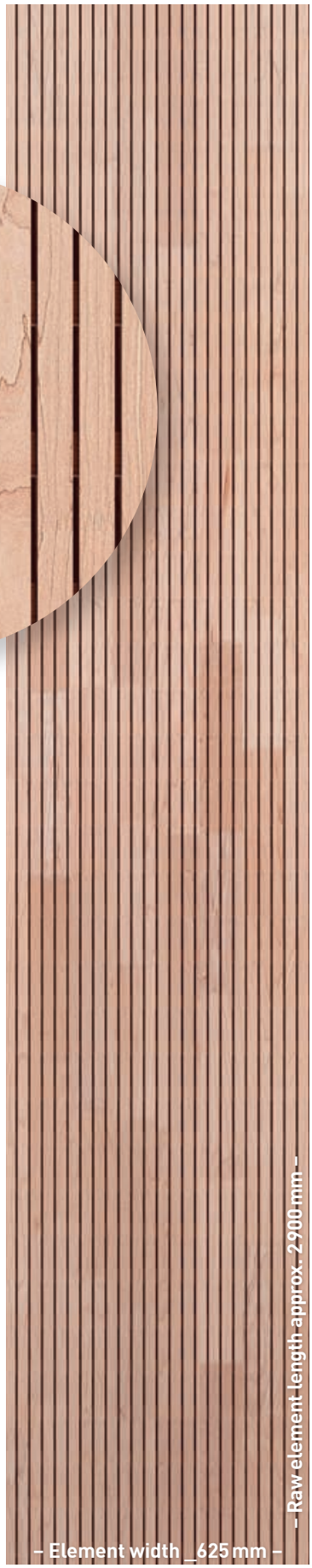
_625-23-8



_625-35-4-F

_625-44-4-F





Compared to **_AHE**, **_AHK** features less distribution in terms of lightness and looks more homogeneous overall.

_AHK

Lightness variation	slight		■	■				strong
Grain	fine				■	■	■	coarse, wavy or curly

Birch knotless
_BI

Acoustic slat profiles

available on acoustic panels

_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

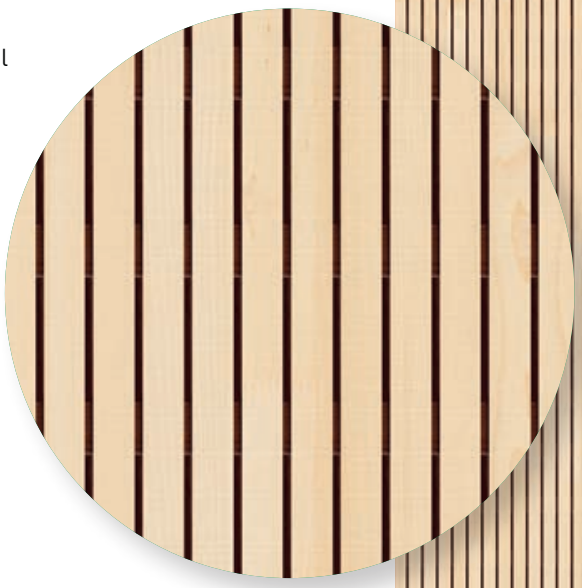
_625-18-6

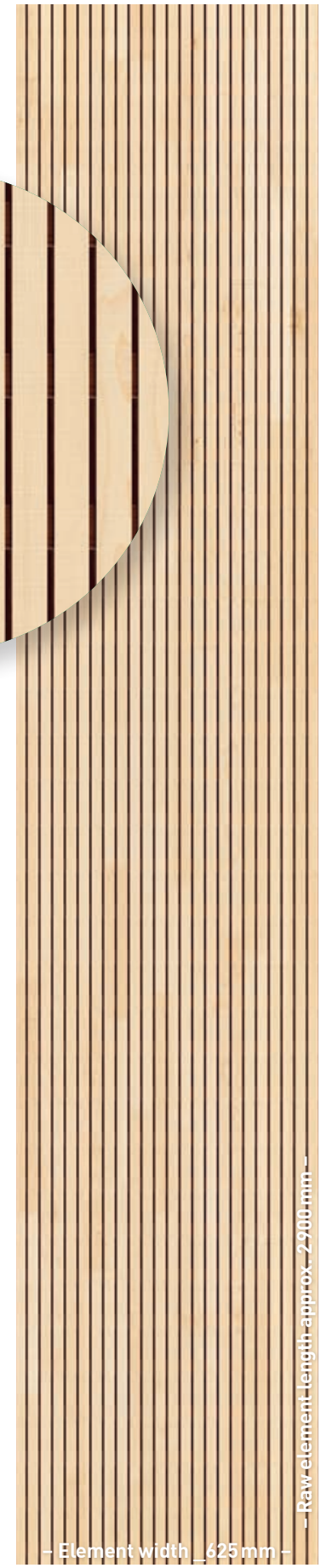
_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F





The **_BI** surface consists of almost knotless pieces, which vary considerably, especially in the grain pattern. Despite not too variation in brightness, the uneven grain creates a patterned character for the surface.

Lightness variation	slight		■	■	■			strong
Grain	fine			■	■	■	■	coarse, wavy or curly

Oak knotless, veneer (carrier impregnated) _EIF-i

Acoustic slat profiles

available on acoustic panels

_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

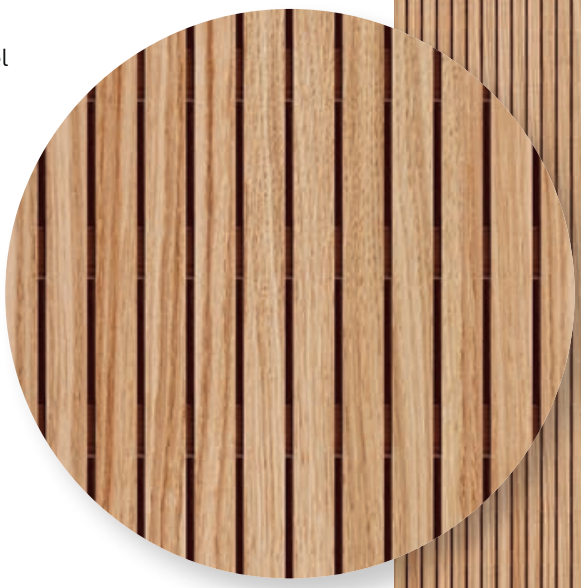
_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

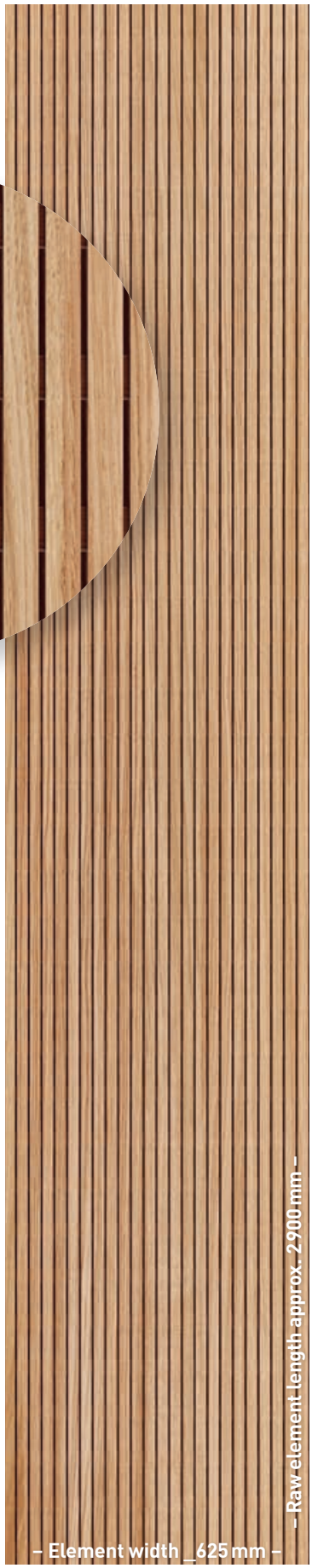
_625-18-6

_625-18n38-6
(nature)

_625-35-4-F

_625-44-4-F





In order to obtain a flame retardant surface, a sliced veneer of oak is applied to a suitably impregnated carrier plate.

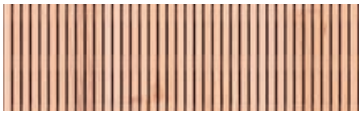
The veneer is very homogeneous across the element width, although differences in lightness may occur on the surface to adjacent elements.

Lightness variation	slight	■	■	■	□	□	□	□	strong
Grain	fine	□	■	■	□	□	□	□	coarse, wavy or curly

Pine knotless
_KI

Acoustic slat profiles

available on acoustic panels



_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

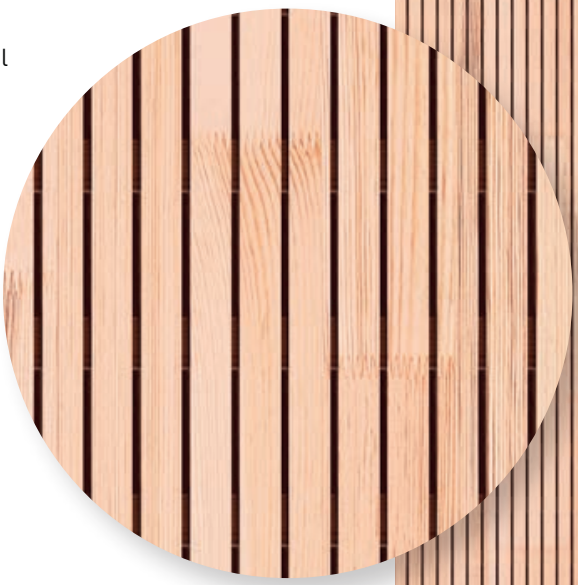
_625-18-6

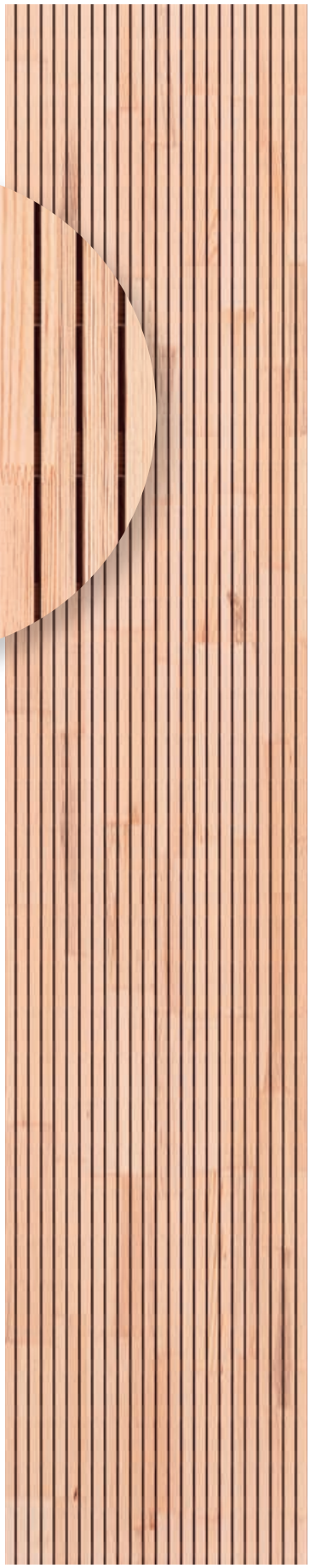
_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F





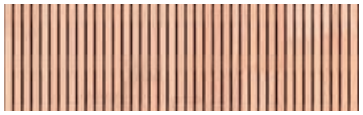
The 1-ply panels used for the **_KI** surface are made of knotless sections, which vary in terms of lightness. Typical of Pine are lamella areas with dark spotty changes. The grain varies.

Lightness variation	slight			■	■	■			strong
Grain	fine			■	■	■	■		coarse, wavy or curly

Larch knotless, European
_LÄE

Acoustic slat profiles

available on acoustic panels,
on façade elements and
on load-bearing CLT elements



_625-12-4

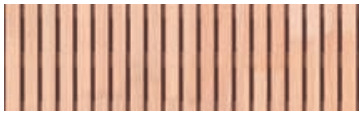
_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

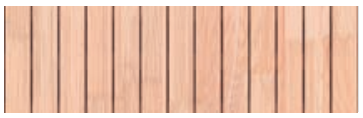
_625-18-6

_625-18n38-6
(nature)

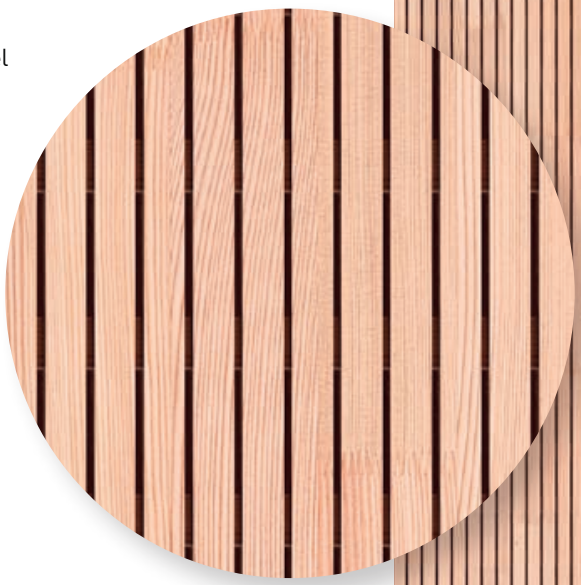


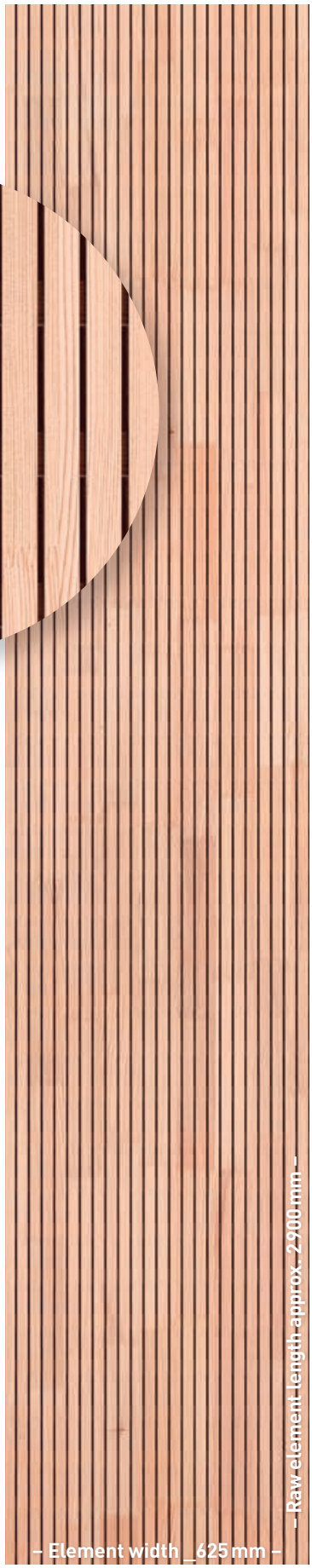
_625-23-8

_625-35-4-F



_625-44-4-F





_LÄE

Lightness variation	slight		■	■	■			strong
Grain	fine			■	■	■		coarse, wavy or curly

Walnut knotless, elegant (on request) _NAE

Acoustic slat profiles

available on acoustic panels

_625-12-4

_625-20-4
as a panel also with bevel
_625-20-4-F

_625-12n25-4
(nature)

_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

_625-18-6

_625-18n38-6
(nature)

_625-23-8

_625-35-4-F

_625-44-4-F

The visible surface of (American) walnut, patterned, consists of almost knotless sections of timber, which vary highly in terms of lightness. This therefore creates a **very patterned visual appearance**.

_NAE

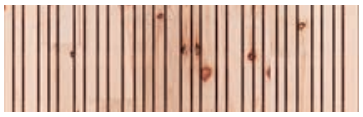
Lightness variation	slight			■	■	■			strong
Grain	fine					■	■	■	coarse, wavy or curly

Arolla Pine knotty
_ZI-ä

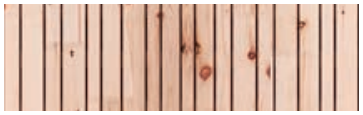
Acoustic slat profile

available on acoustic panels
and on load-bearing CLT elements

_625-20-4
as a panel also with bevel
_625-20-4-F

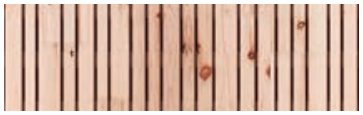


_625-12n25-4
(nature)

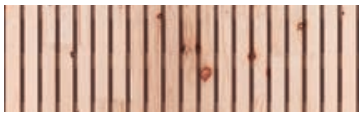


_625-22n40-4 (nature)
only as panel,
also with bevel
_625-22n40-4-F

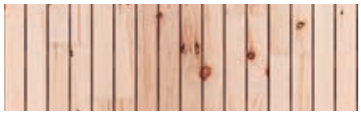
_625-18-6



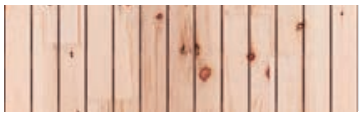
_625-18n38-6
(nature)



_625-23-8



_625-35-4-F



_625-44-4-F

Balance and good sleep thanks to Arolla Pine in the bedroom: scientific research suggests a positive effect from Arolla Pine.

HEALTHY

! The profile **_625-12-4** in a knotty Arolla Pine surface is not a standard version and is only produced when expressly requested, as it is not possible to rule out knots from breaking out in narrow acoustic slats.

The Arolla Pine (also: Swiss Pine) is indigenous to the Alps. A positive physiological effect is attributed to its wood – it is supposed to ensure a healthy night's sleep, for example.

The 1-ply panels used for this surface are made of knotless Arolla Pine wood pieces, which vary in terms lightness and knottiness. This creates a very striking visual appearance, which underlines the natural quality of the material.

Arolla pine is also available with continuous slats as an option.

Typical of Arolla Pine wood are **dark knots** as well as the change between areas with predominantly large knots and those with medium-sized and smaller knots.

Lightness variation	slight			■	■	■			strong
Grain	fine			■	■	■			coarse, wavy or curly

Surface treatment

Texture

As standard, LIGNO genuine wood surfaces are slightly brushed. Brushing out soft growth ring parts makes them more resistant to scratches. The character of the texture depends on the type of wood.

A smooth, sanded finish is also available on request.

Acoustic panels are also available with a saw cut appearance.

Key:

Brushing makes an clearly noticeable texturing possible on the types of softwood marked with this symbol

Brushing is possible on these harder types of wood, yet the effect is weaker

Brushing is not possible on these surfaces

Primer for protection against light

Available for load-bearing cross-laminated timber elements and for acoustic panels.

A transparent UV protection primer **_buv** can be applied at the factory to prevent the wood surface from darkening. The glaze used is suitable for indoor use (non-toxic).

A final treatment – e.g. with a suitable varnish – should then be carried out if washing out cannot be ruled out. On ceiling or roof undersides, there is usually no need for this.

Final treatment

Only available for acoustic panels.

The LIGNO Akustik light acoustic panels can be supplied from the factory oiled or varnished in different ways. Note: The surface of oiled elements is textured as standard, when varnished it is not textured but sanded smooth (CH: slightly textured).

Detailed information about final treatment options:
▶ **Technical data sheet for LIGNO Acoustic light**

Examples:

- Oil or varnish transparent (matt)
- Oil or varnish pigmented white, e.g. **_bh-w10**, **_bh-w20** or **_bl -w10**
- Oil or varnish white, e.g. almost opaque **_bl-w20** and coloured **_bl-xy** (choice of colors according to RAL system)
- Chalked **_bl-w10k** (especially on oak)

Key:

Treatment is almost unlimited with these types of wood, details in the element data sheet or from the Lignotrend specialist adviser.

Treatment is possible or useful with restrictions with these types of wood. For example, possible breakouts rule out an opaque coat of paint.

For types of wood not marked with a symbol, the final treatment is usually not useful or possible due to other configuration options.

Flame retardancy

Available only for selected versions of the acoustic panels.

By using a suitably impregnated surface layer, LIGNO Acoustic light and Acoustic Sport panels can be produced with a flame retardant visible surface. Classification concerning reaction to fire according to DIN EN 13 501-1.

Classified panel version according to profile, element type and wood type

Classification / Standard flammability	_625-12-4_	_625-20-4_	_625-20-4-F_	_625-12n25-4_	_625-12n25-4:3D_	_625-22n40-4_	_625-22n40-4-F_	_625-22n40-4:3D-F_	_625-18-6_	_625-18n38-6_	_625-23-8_
Standard _D-s2-d0	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■	□ ■

fire retardant	_625-12-4_	_625-20-4_	_625-20-4-F_	_625-12n25-4_	_625-18-6_	_625-18n38-6_	_625-23-8_
_C-s2-d0	□ LIGNO® Acoustic light 3S-33_WTL-i 3S-33_FIS-i 3S-33_EIF-i	□ LIGNO® Acoustic light 3S-33_WTL-i 3S-33_FIS-i 3S-33_EIF-i	□	□ LIGNO® Acoustic light 3S-33_WTL-i 3S-33_FIS-i 3S-33_EIF-i	□ LIGNO® Acoustic light 3S-33_WTL-i 3S-33_FIS-i 3S-33_EIF-i	□ LIGNO® Acoustic light 3S-33_WTL-i 3S-33_FIS-i 3S-33_EIF-i	not possible
	■ LIGNO® Acoustic light 3G-33_WTL-i 3G-33_FIS-i	■ LIGNO® Acoustic light 3G-33_WTL-i 3G-33_FIS-i	■ LIGNO® Acoustic light Akustik Sport 3G-33_WTL-i 3G-33_FIS-i	■ LIGNO® Acoustic light Acoustic Sport 3G-33_WTL-i 3G-33_FIS-i	■ LIGNO® Acoustic light Acoustic Sport 3G-33_WTL-i 3G-33_FIS-i	■ LIGNO® Acoustic light Acoustic Sport 3G-33_WTL-i 3G-33_FIS-i	not possible
_B-s2-d0	□ LIGNO® Acoustic light 3G-33_WTL-i	□ LIGNO® Acoustic light 3G-33_WTL-i 3G-33_FIS-i	□ LIGNO® Acoustic light Acoustic Sport 3G-33_WTL-i 3G-33_FIS-i	□ LIGNO® Acoustic light 3G-33_WTL-i	□ LIGNO® Acoustic light 3G-33_WTL-i	□ LIGNO® Acoustic light 3G-33_WTL-i	not possible

□ without further surface treatment

■ with painted and oiled surface
HD-Lux spray paint / Biofa oil, (UV-protetion stain only with normal flammable)

Notes:

- **Flame retardant surfaces cannot be coated with UV protective glaze.**
- **Elements with flame retardant surface may only be used in spaces where temperatures ›15°C and relative humidity ‹ 75 % are found during typical use.**

Instructions for use
Details

Important instructions for use

Fluctuations in indoor humidity levels can affect closed real-wood surfaces. The design reference value for LIGNO® products is generally 35% or higher, which also corresponds to a healthy and comfortable indoor climate for occupants. If humidity falls below this threshold, surface cracks may occur. Therefore, in order to preserve the surface quality over the long term, this minimum should not be undershot. It is advisable to set ventilation systems accordingly and to maintain sufficient distance from heat sources such as lighting fixtures.

The historical indoor humidity can be inferred from the wood's moisture content (based on the Keylwerth / Loughborough diagram). If the wood moisture is too low, it is recommended to take suitable measures to raise the humidity level in the room.

Notes:

- Setting ventilation systems to too high an air exchange rate can also lead to disadvantageous drying of the indoor air, especially if the system is not equipped with humidity recovery.
- LED lights are ideal for use as recessed luminaires, as their heat generation is relatively low. This helps reduce the risk of drying-related cracks around openings in elements with closed surfaces. Installation instructions provided by the luminaire manufacturers as well as fire protection requirements (e.g., fire boxes, etc.) must always be observed.

Surface qualities in detail

☒ not present or not occurring
☐ allowed at a very limited level
◘ permitted occasionally or to a small extent
■ present

		Lamellae finger joint	Rift / Semi-rift cut	Curly / wavy spots	Shimmery wood rays	Growth flaws	Knots	Loose knots	knotholes	Ingrown bark or bark pockets	Resin pockets	Beetle holes (diam. <approx. 1,5mm)	Blue stain / red stripe	Sapwood	Pith	Discolouration	Small cracks	Finger joint breakout	knotholes max. 1x20mm (w x l)	Comments
K	Maple knotless, Canadian	_AHK	■	☐	■	■	◘	☐ < 6 mm	☒	☒	< 50 x 1 mm	☒	☒	■	☐	☐	☒	☐	☐	
K	Birch knotless	_BI	■	☐	■	☐	■	◘ < 10 mm	☒	☒	< 50 x 2 mm	☒	☐	☐	☐	◘	☐	☐	☐	
★	Beech knotless	_BU	■	■	☐	■	☐	☐ < 3 mm	☒	☒	< 50 x 1 mm	☒	☐	☒	☐	☐	☐	☐	☐	
★	**Oak knotless**	_EI	■	■	☐	■	☐	☐ < 6 mm	☒	☒	< 50 x 1 mm	☒	☐	☒	☐	☐	☐	☐	☒	☐	horizontal lamella joint
K	Oak knotless, veneer	_EIF	☒	■	☐	■	☐	☐ < 3mm	☒	☒	☒	☒	☐	☒	☐	☐	☐	☐	☒	☐	
K	Oak knotl., veneer, impregnated	_EIF-i	☒	■	☐	■	☐	☐ < 3mm	☒	☒	☒	☒	☐	☒	☐	☐	☐	☐	☒	☐	impregnated carrier
★	Ash knotless	_ES	■	■	■	☒	☒	☐ < 3 mm	☒	☒	< 50 x 1 mm	☒	☒	☒	☐	☒	☒	☒	☒	☐	
★	**Spruce knotless, plain**	_FIS	■	■	☒	☒	☒	☐ < 3 mm	☒	☒	< 50 x 1 mm	☐ < 30 x 3 mm	☒	☒	☐	☒	☒	☒	☐	☐	
★	**Spruce knotl., pl., impregnated**	_FIS-i	■	■	☒	☒	☒	☐ < 3 mm	☒	☒	< 50 x 1 mm	☐ < 30 x 3 mm	☒	☒	☐	☒	☒	☒	☐	☐	
★	**Spruce knotty**	_FI-ä	☒	◘	■	☒	☐	■ < 25 mm	■	■	< 50 x 1 mm	☐ < 30 x 3 mm	☐	☐	☐	◘	☐	☐	☒	☐	
K	Pine knotless	_KI	■	■	☐	☒	☐	☐ < 6 mm	☒	☒	< 50 x 1 mm	☐ < 30 x 3 mm	☐	☐	■	☒	☐	☐	☐	☐	
K	Larch knotless, european	_LÄE	■	■	☒	☒	☐	☐ < 6 mm	☒	☒	< 50 x 1 mm	☐ < 30 x 3 mm	☐	☐	☐	☒	☐	☐	☐	☐	
K	Walnut knotless, elegant	_NAE	■	☐	■	☒	☐	☐ < 6 mm	☒	☒	< 50 x 3 mm	☒	☒	☒	☐	☐	☐	☒	☐	☐	
★	**Silver Fir knotless, patterned**	_WTL	■	■	☐	☒	☐	☐ < 4 mm	☒	☒	< 100 x 4 mm	☒	☐	☐	☐	☒	☐	☐	☐	☐	
★	**Silver Fir knotless, impregnated**	_WTL-i	■	■	☐	☒	☐	☐ < 4 mm	☒	☒	< 100 x 4 mm	☒	☐	☐	☐	☒	☐	☐	☐	☐	
★	**Silver Fir knotless, economy**	_WTE	■	◘	■	☒	■	◘ < 30 mm	☒	☒	< 100 x 5 mm	☒	☐	☐	☐	☒	☐	☐	◘	■	more defects tolerated
★	**Silver Fir knotty**	_WT-ä	☒	◘	■	☒	☐	■ < 25 mm	■	■	< 100 x 5 mm	☒	☐	☐	☒	☒	■	☐	☒	■	more defects tolerated
★	**Silver Fir knotless without joint**	_WTD	☒	■	☒	☒	☐	☐ < 4 mm	☒	☒	< 100 x 4 mm	☒	☐	☐	☐	☒	☐	☐	☒	☐	
★	**Silver Fir knotless, plain**	_WTS	■	■	☒	☒	☒	☐ < 4 mm	☒	☒	< 50 x 1 mm	☒	☒	☒	☐	☒	☒	☒	☒	☐	limited availability
K	Arolla pine (Swiss pine) knotty	_ZI-ä	■	◘	■	☒	☐	■ < 25 mm	☒	■	< 50 x 1 mm	☐ < 30 x 10 mm	☐	☐	■	◘	☐	☐	☐	☐	opt.: continuous slats
	Industrial quality NSi	_Ind	■	☐	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

The surfaces can feature repairs of timber defects performed at the factory, e.g. with patches for knots or resin pocket or with a wood filler.

Building Biology Sustainability

When making cross-laminated timber products, it's important to ensure that the raw material is used sustainably and processed in ways that avoid creating health hazards. The finished products must also be highly durable. LIGNO® cross-laminated timber has held the natureplus® ecolabel since 2006 for complying with that organisation's very strict ceilings on contaminants, and ranks amongst Europe's most environmentally friendly and health-conducive building materials.

The natureplus ceilings undercut the legal requirements by a wide margin. They apply in particular to emissions of formaldehyde and volatile organic compounds (VOCs).

Lignotrend uses a high proportion of renewable energy for production and is proud of its products' excellent ecological footprint throughout their lifecycles. The polyurethane (PUR)-based adhesives used to make cross-laminated timber must also meet stringent requirements in respect of their effects on health; for instance, they must be completely free of isocyanates. By the time the products have cured, these have been completely removed by chemical reactions.

The raw material is used very efficiently for producing LIGNO® cross-laminated timber. As a result of leaving gaps within the layers, each cubic metre of raw timber yields more square metres of product without sacrificing any of the strength which is needed for robust timber constructions. By optimising the cross-sections of its products in this way, Lignotrend is bucking the trend towards very thick, completely dense building components.

This cross-sectional optimisation with hollow cavities also delivers various technical benefits. One is that material is only placed where it is required for loadbearing purposes. In addition, it lets installations run inside the cross-laminated timber components and leaves space for fillings and absorbers to improve building and room acoustics.

Industrial qualities

Industrial quality NSi _Ind

Surface for the non-visible area, destined for cladding. Degraded panels from other qualities may be mixed in a consignment, e.g. knotty Spruce, Silver Fir or Larch. Larger longitudinal cracks, loose knots and breakouts are also possible. Instead of 1-ply panels, the surface may also consist of tightly laid individual boards.

(No illustration)