



LIGNO[®]
Acoustic



DESIGN MEETS NATURE

GENUINE WOOD ACOUSTIC PANELS

These days, it's essential to plan construction projects so as to maximise the comfort and wellbeing of future users. A pleasant indoor climate, visual attractiveness, and of course outstanding acoustics all enhance a building's appeal.

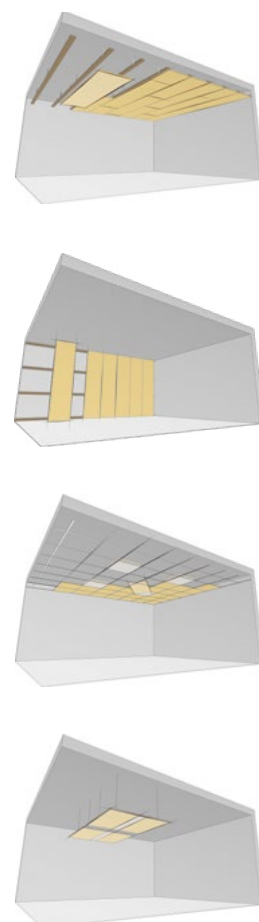
Wood, a natural and renewable material, goes a long way towards providing all of these things. And the acoustic panels of the LIGNO® Acoustic line optimally tap the potential of domestically grown and harvested wood. These technically mature, visually attractive, sound-absorbing products are used to cover walls and ceilings.

We produce our panels in our own plant in the Black Forest using natural wood and wood-fibre absorbers, which are ideal for creating near-natural, aesthetic interiors. Of the wide range of avail-

able wood surfaces, our knotless versions provide the greatest elegance and design latitude.

These large acoustic panels (measuring 2940 by 625 mm) come in a broad palette of versions and solutions for use in virtually all new construction and refurbishment projects: from nurseries to school buildings, from open-plan offices to indoor pools, and from sport and multiuse halls all the way to restaurants and hotels.

Real wood is what the LIGNO® Acoustic collection is all about: healthy buildings are part of Lignotrend's DNA. And these lightweight modules consist of natural wood.

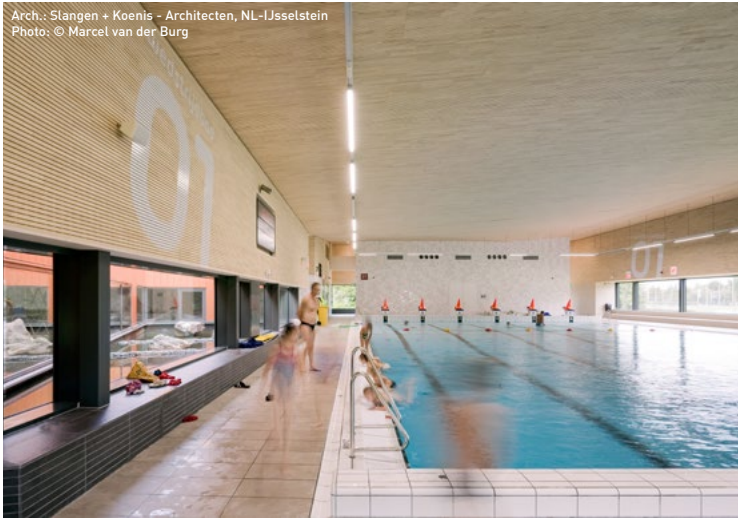


Arch.: Ludescher + Lutz Architekten, AT-Innsbruck
Photo: © Adolf Bereuter, AT-Dornbirn



Arch.: Rotterdam Dakowski GmbH, Leverkusen
Photo: © Andreas Wiese, Düsseldorf

Arch.: Slangen + Koenis - Architecten, NL-Usselstein
Photo: © Marcel van der Burg



Arch.: Arabelle Althaus, CH-Zürich
Photo: © Lignotrend

LIGNO® ACOUSTIC: MULTITALENTED WIDE RANGE OF APPLICATIONS

The ceilings of rooms are generally the preferred place to install acoustic panels – especially if you're planning to **completely encase** the loadbearing construction. Conveniently, the ceiling area also often matches the amount of absorber that is calculated for achieving good room acoustics.

It's also possible to strategically limit the insulation to **certain ceiling areas**, for example to prevent or reduce sound reflections.

When greater flexibility is required, like for solutions involving grid ceilings, cut-to-size LIGNO® acoustic panels are a good choice.

To allow air to circulate (for example, with thermally activated components), **ceiling sails** or vertical **baffles** can also be fashioned with LIGNO® Acoustic and suspended on cables from the raw ceiling.

Alternatively, the panels can be used as **wall coverings**. This can be a good idea in order to:

- avoid covering the ceiling for aesthetic reasons or to optimise the indoor climate,
- prevent flutter echoes,
- move the acoustic absorber closer to sound sources in high-ceilinged rooms or
- achieve effective sound baffling.

In all of these cases, LIGNO® Acoustic is a robust alternative which, when equipped with an appropriate backing structure, even resists balls being bounced off it.



FROM ELEGANTLY KNOTLESS TO LIVELY ORGANIC DESIGN VARIETY IN WOOD

LIGNO® Acoustic lets architects pick and combine a wide variety of design options:



Wood types

More than 20 different softwood and hardwood varieties are available, headed up by Lignotrend's specialty: knotless Black Forest silver fir.



Wood structures

Brushed, smoothly sanded and rough-sawn surfaces are available.



Flammability

You can take advantage of various versions with flame-retardant surfaces.



Profiles

Different slat and gap widths and heights can be combined; the possibilities include:

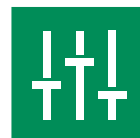
- uniform structures („regular“ profiles)
- irregular structures („nature“ profiles)
- structures with varying slat heights („nature:3D“ profiles)



Surface treatments

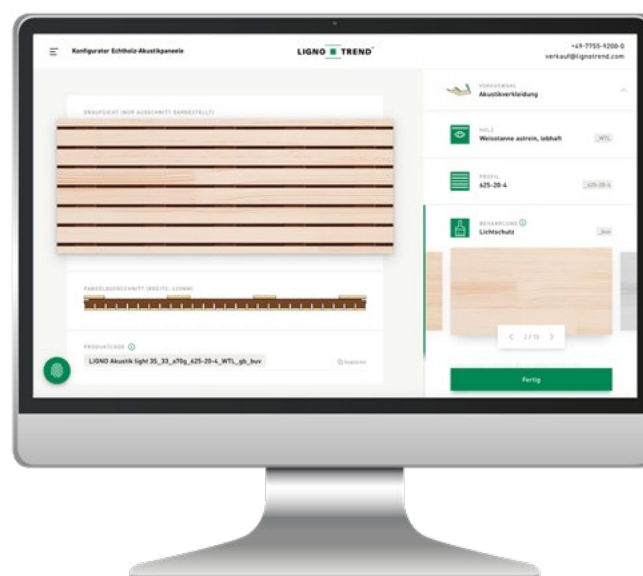
These range from original wood colours with or without a UV-protective primer, across clear, translucent or opaque lacquers all the way to oiling or chalking of oakwood. It's also possible to print designs onto panels.

EASILY FIND THE RIGHT VERSION ONLINE CONFIGURATOR

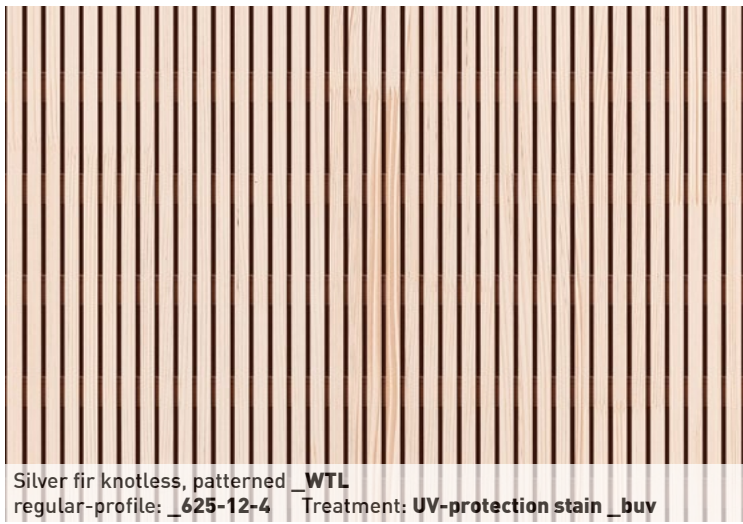


Our product configurator lets users and builders make the right design choices when using LIGNO® Acoustic panels in their projects.

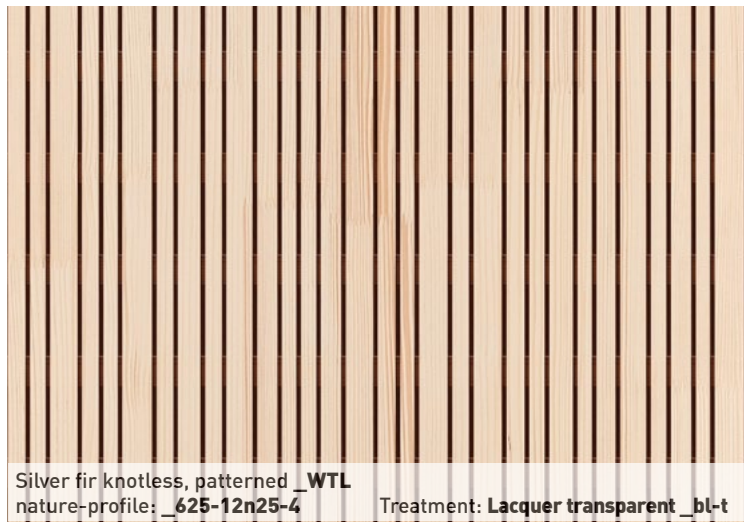
You can use it to select the right element type, wood variety, surface quality and treatment while taking material-related or technical constraints into account. For instance, you can narrow the choices to visually sensible combinations or flame-retardant surfaces with impregnated cover layers or a less permeable backing (type 3G_33 instead of 3S_33). The results are automatically translated into the corresponding product codes.



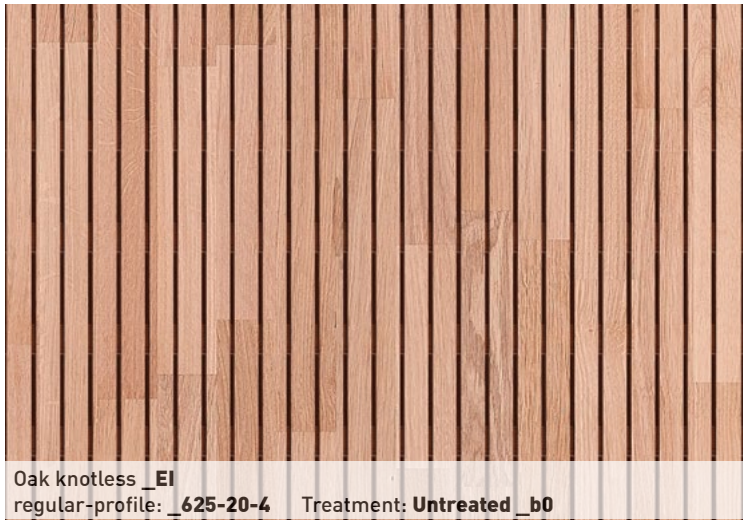
[www.lignotrend.com/
configurator-acoustic](http://www.lignotrend.com/configurator-acoustic)



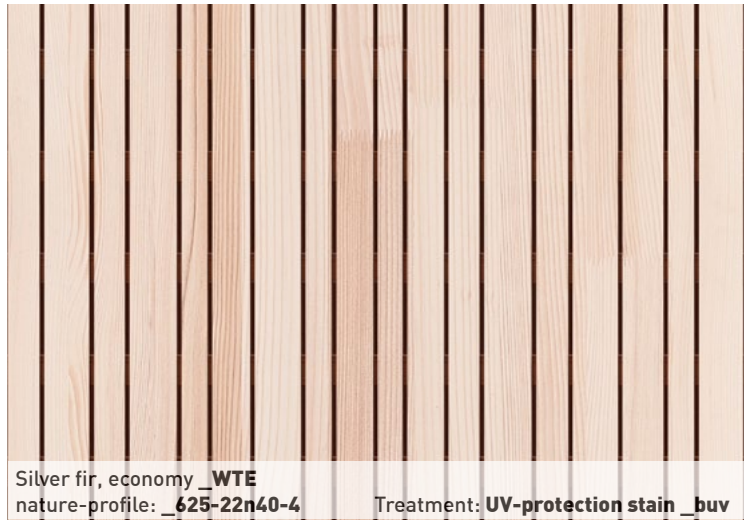
Silver fir knotless, patterned **_WTL**
regular-profile: **_625-12-4** Treatment: **UV-protection stain _buv**



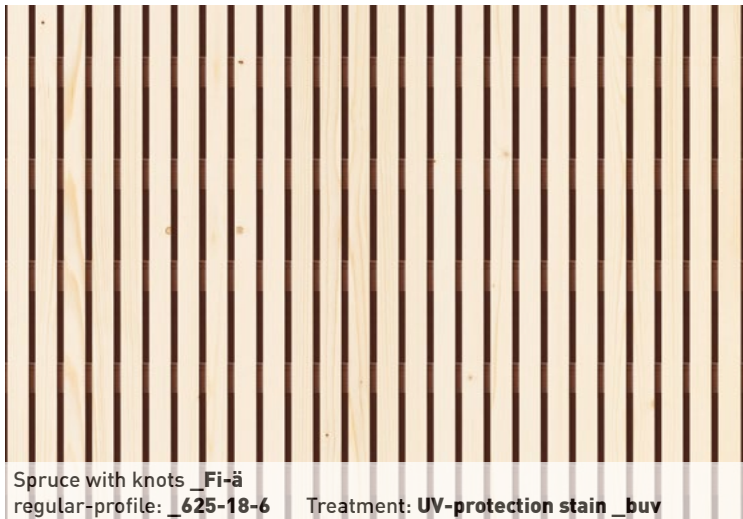
Silver fir knotless, patterned **_WTL**
nature-profile: **_625-12n25-4** Treatment: **Lacquer transparent _bl-t**



Oak knotless **_EI**
regular-profile: **_625-20-4** Treatment: **Untreated _b0**



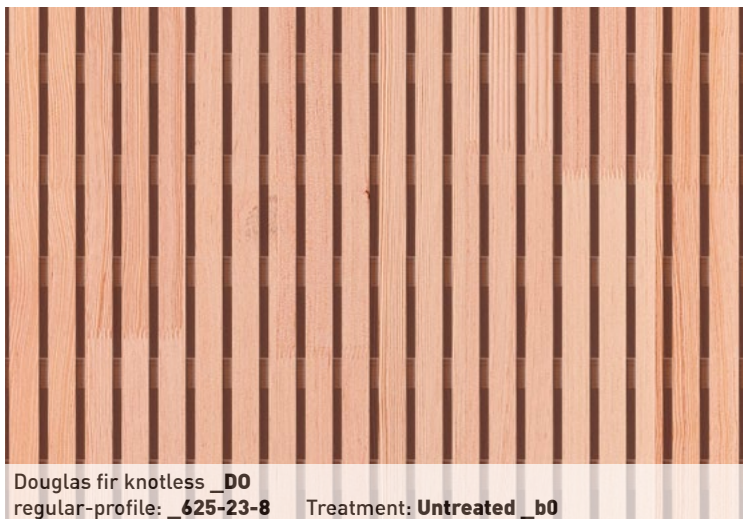
Silver fir, economy **_WTE**
nature-profile: **_625-22n40-4** Treatment: **UV-protection stain _buv**



Spruce with knots **_Fi-ä**
regular-profile: **_625-18-6** Treatment: **UV-protection stain _buv**



Silver fir knotless, patterned **_WTL**
nature-profile: **_625-18n38-6** Treatment: **Lacquer white _bl-w20**



Douglas fir knotless **_DO**
regular-profile: **_625-23-8** Treatment: **Untreated _b0**



Silver fir knotless, patterned **_WTL**
nature-profile: **_625-12n25-4:3D** Treatment: **Untreated _b0**





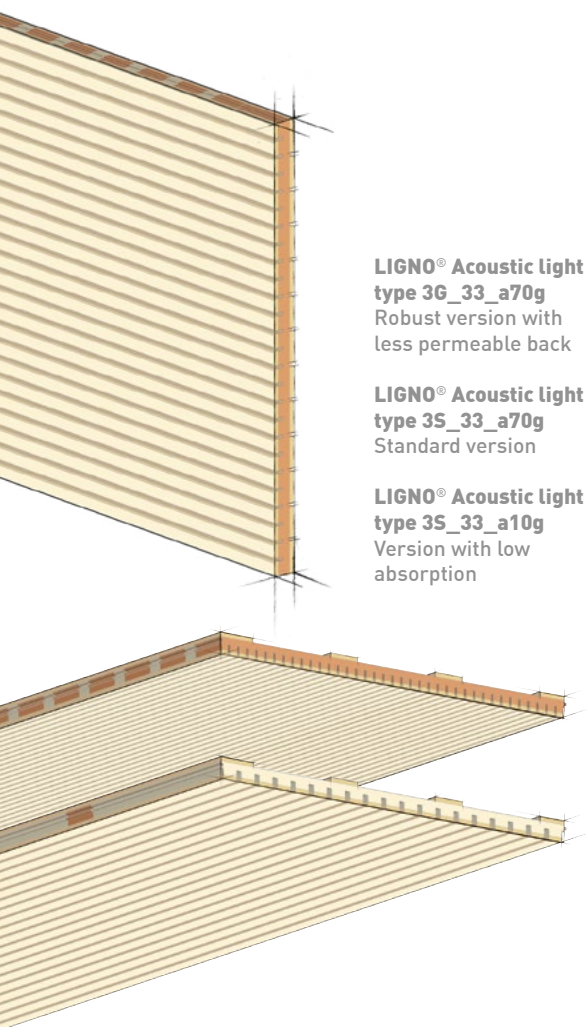
NATURALLY EFFICIENT EFFECTIVE ROOM ACOUSTICS

Absorber material is integrated in our LIGNO® Acoustic panels when they are produced the factory. As a result, as a rule there's no need to attach any additional materials. The absorber configuration **_a70g** contains wood fibres which are coarser than those of conventional absorbers and therefore not respirable.

But this absorber system's technical properties are in no way inferior to conventional systems. You can choose from a large catalogue of tested configura-

tions comprising a panel and suspension. They boast absorption coefficients (α_w) up to 0.80, and with an additional absorber up to 0.90. The effect is broadband, meaning that sound of lower frequencies is also absorbed.

The configuration **_a10g** with lower absorption is also available for preventing excessive attenuation. While it looks identical, its absorption is limited to an α_w value of no more than 0.30.



**LIGNO® Acoustic light
type 3G_33_a70g**
Robust version with
less permeable back

**LIGNO® Acoustic light
type 3S_33_a70g**
Standard version

**LIGNO® Acoustic light
type 3S_33_a10g**
Version with low
absorption

LISTEN TO THE EFFECT! ONLINE CALCULATOR

A very helpful aid for selecting measures to optimise room acoustics is our Lignotrend acoustic calculator, which lets you listen to the resulting acoustic effect in space to get a better idea. During the preliminary design phase, this practical tool lets you calculate and sensorially assess and compare alternatives.



www.lignotrend.com/acoustic-calculator



FLEXIBLY ADAPTED CONSTRUCTIONS

LIGNO® Acoustic panels are “invisibly” attached using special screws with narrow heads that disappear in the back of the acoustic slots. They also come in a highly corrosion-proof version and a version for metal substructures. Specially modified staplers are available for efficiently installing panels over large surfaces.

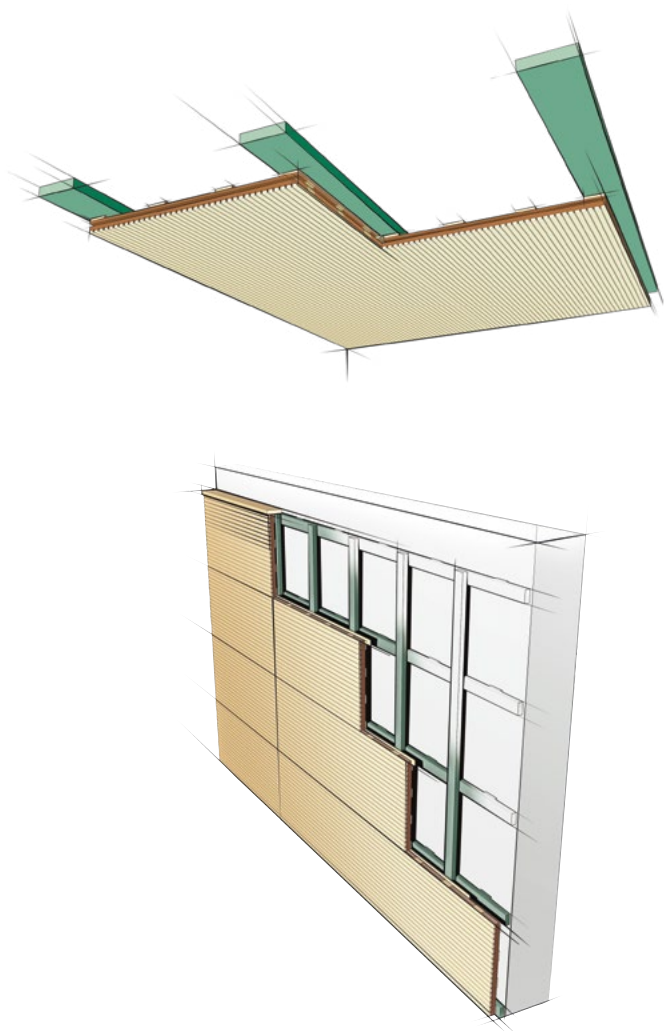
The way to achieve high-quality surfaces is with a flat, levelled support structure, which typically runs parallel to the panel. Its design and dimensions are precisely defined and tested for specific applications. The following types are used:

- Simple wood battens
- Suspended or cross battens
- Combined metal-grid and wood battens
- Bouncing walls to minimize injury to athletes that strike them



You'll find a comprehensive collection of relevant test certificates, catalogues, technical and CAD data and much more here:

www.lignotrend.com/downloads



SUSTAINABLE PERFORMANCE

LIGNO® ACOUSTIC FOR PUBLIC BUILDINGS

Schools and nurseries are typical examples of facilities in which room acoustics play an important role. In these environments, it's essential to manage noise levels and reverberation properties - keeping them both low enough to allow good voice communication - while also ensuring favourable building biology. Good acoustics are also vital in larger public structures such as halls, auditoriums and multipurpose halls.



LIGNO® Acoustic, thanks to the optionally available **highly flame-retardant** wood surfaces, is excellently suited for meeting relevant fire protection requirements in buildings where people come together.



Lignotrend acoustic panels are also a great choice for making robust, ball-proof constructions for sport centres and halls. LIGNO® Acoustic Sport in particular, in conjunction with a force-reducing substructure, is ideal for **bouncing walls** in basketball and handball courts etc.

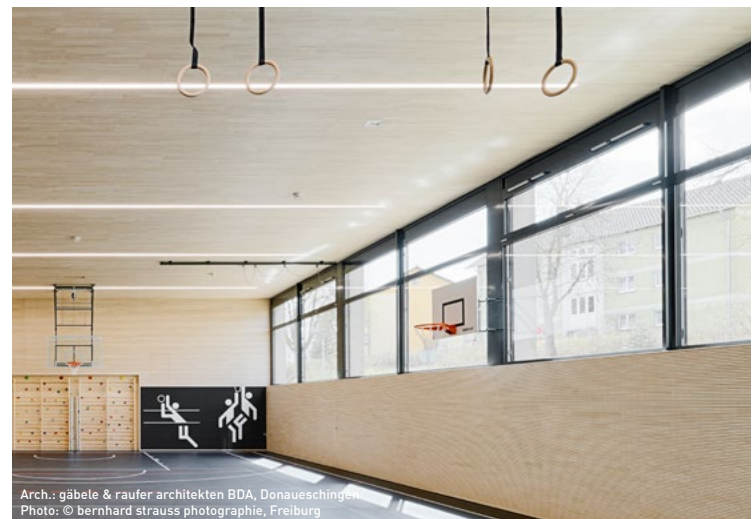


Real wood panels are also used around **indoor pools** as the humidity levels there don't harm the wood. The supporting structure must be built with special corrosion-proof components, however.



Arch.: Korteknie Stuhlmacher Architecten, NL-Rotterdam
Photo: © Luuk Krämer photography & film

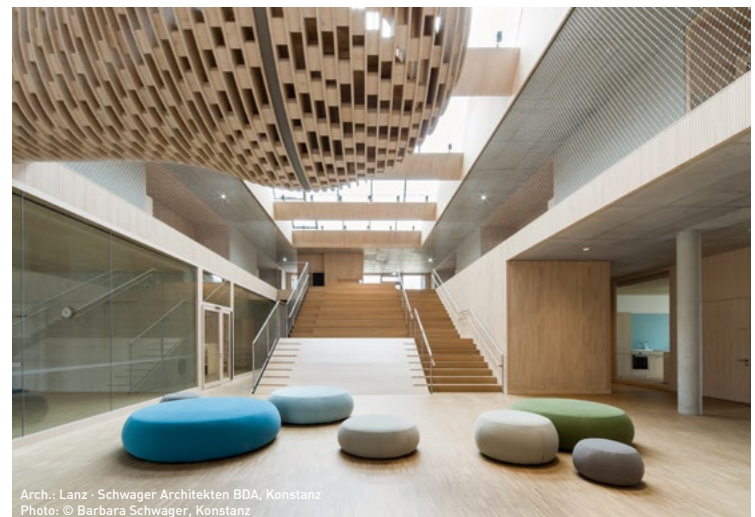
www.lignotrend.com/nursery
www.lignotrend.com/school
www.lignotrend.com/hall
www.lignotrend.com/indoor-pool



Arch.: gäbele & rauffer architekten BDA, Donaueschingen
Photo: © bernhard strauss fotografie, Freiburg



Arch.: HHF architects, CH-Basel
Photo: © Tom Blisig, CH-Basel



Arch.: Lanz · Schwager Architekten BDA, Konstanz
Photo: © Barbara Schwager, Konstanz



FEEL-GOOD ENVIRONMENTS

LIGNO® ACOUSTIC FOR COMMERCIAL BUILDINGS

In offices (and especially open-plan offices) and production facilities, employees perform better in consistently quiet conditions. The quality of their work and their overall satisfaction levels increase when acoustic stress is reduced.

Lobbies, restaurants and all kinds of exhibition spaces benefit from keeping noise and echoes to a minimum. A quiet ambience encourages guests and visitors to relax and stay longer.

www.lignotrend.com/office

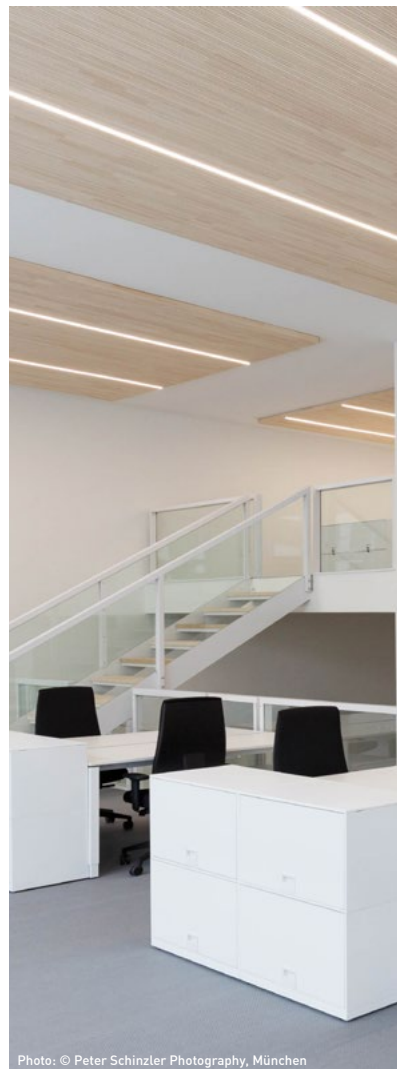


Photo: © Peter Schinzler Photography, München



Arch.: Cino Zucchi Architeti, IT-Milano & rgastudio, IT-Milano
Photo: © Michele Nastasi



Arch.: Ludescher + Lutz Architekten, AT-Bregenz
Photo: © Adolf Bereuter, AT-Dornbirn



Architekturbüro Ernesto Preiser, Waldshut-Tiengen
Photo: © Foto & Design, Waldshut-Tiengen



HOW DO YOU FEEL?

LIGNO® ACOUSTIC IN HOUSING AND RESTAURANT CONSTRUCTION

It isn't only large buildings that pose acoustic challenges. Even in small spaces, the ambience can suffer as a result of reverberation. If the furniture is unable to absorb sound and there aren't any other textiles present that could help attenuate it, a living space quickly becomes unpleasantly loud. In an environment where we ought to be able to relax, animated conversation or playing children then create a stressful racket.

This in itself is reason enough to pay attention to room acoustics, especially in private homes, restaurants and hotels.

www.lignotrend.com/living
www.lignotrend.com/gastronomy



HEALTHY, ECO-FRIENDLY AND VIABLE FOR THE FUTURE

BUILDING BIOLOGY AND SUSTAINABILITY



Environmentally friendly

The wood for LIGNO® Acoustic is harvested from forests in Germany's Black Forest region which are certified as sustainably managed. We mainly use silver fir to make our LIGNO® acoustic products. This tree species typically grows in natural mixed stands which very closely approximate today's ideal of future-proof forests.

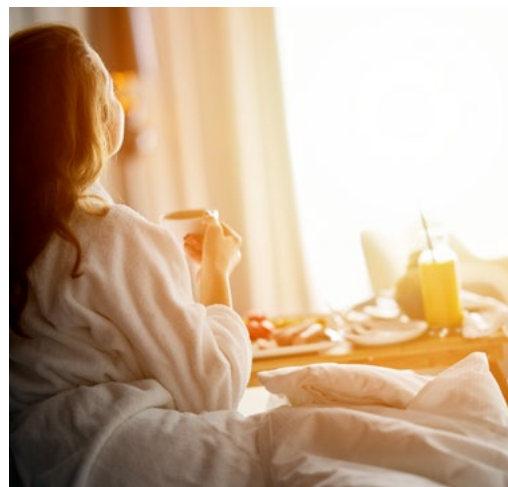
Short transport distances and the use of renewable energy in our Lignotrend plant are the basis for outstandingly eco-friendly production.



Healthy

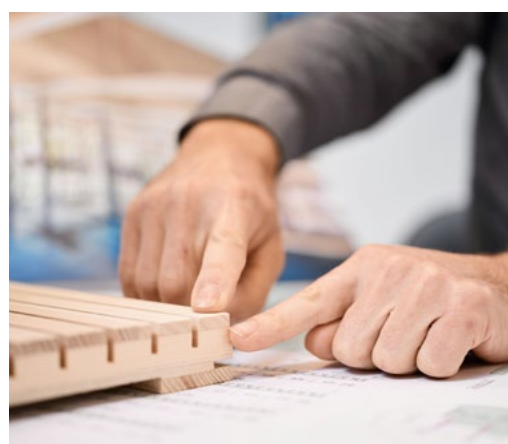
Wood products are widely regarded as beneficial for achieving a pleasant indoor climate and favourable building biology.

To make absolutely sure that this is true of our finished Lignotrend products, they are regularly checked by independent laboratories and institutes. Applying strict criteria, some of which considerably exceed the legal requirements, both the wood and the adhesive used to bind it are certified as not causing harmful emissions.



Functional

Building products are sustainable if they continuously and effectively perform their intended functions over an extended period of time. In addition to optimising their room acoustics, we develop technically mature, practical constructions and provide competent advice on the use of Lignotrend products.



COMPLETE

LIGNO® ACOUSTIC – THE SYSTEM AND ACCESSORIES

Acoustic panel **Type 3S_33**
for standard applications



Substructure



Acoustic panel **Type 3S_39**
for 3D profile



Special fastening screws



Acoustic panel **Typ 3G_33** with
enhanced robustness and reduced flammability



Compressed air staple gun
(also in rental)



Edge strips with rebate
for termination



Supplementary boards



UV-protection stain
to prevent darkening



LED light strips
for integration



Grid ceiling blanks



Inspection door frame
and cover for inspection flap



PROFESSIONAL SUPPORT

PROJECT-SPECIFIC SUPPORT FROM THE MANUFACTURER

If wished, Lignotrend will support you for implementing the best possible timber construction solution, right from the planning phase. If you're a planning office or wood-processing operation, you can tap into the competence of experienced consultants – either on site at your facility or by videoconferencing, which makes it easy to share screens in order to view and discuss things together. We'll support you for turning your creative ideas into high-quality timber construction projects!

Project-specific support for timber construction

- In the design stage with pre-dimensioning
- For getting answers to questions about construction details or ideas
- On aspects of building physics such as fire protection and acoustic insulation
- Complete advice on room acoustics
- With reference prices and initial cost estimates
- For drawing up a quotation
- For getting answers to questions on use

Are you already working on a specific project and would like to discuss the use of our modules in detail with an expert? Or would you like to make a date to familiarise yourself with the creative possibilities, construction-related aspects and building physics of our Lignotrend components with no further obligation on your part? Our timber construction experts serve all of central Europe. Get in touch for a talk between equals – from planner to planner!



www.lignotrend.com/consulting

