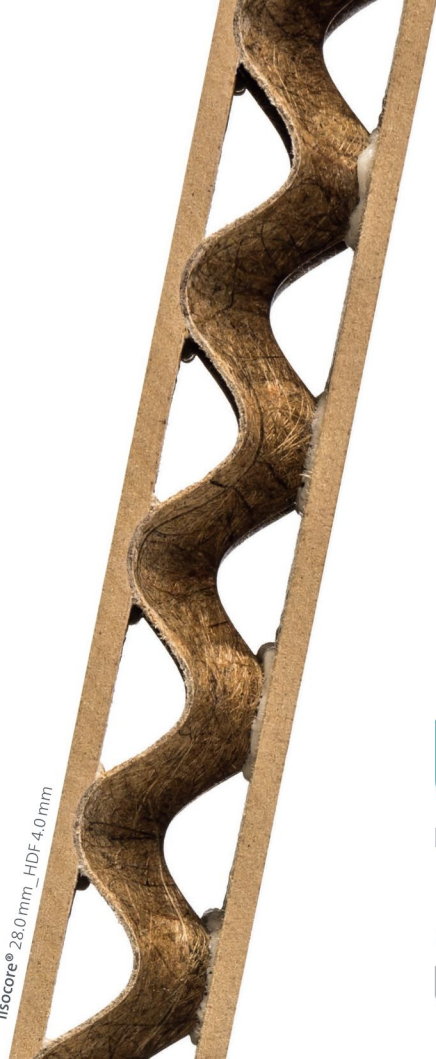




*lisocore® 38.0mm\_chipboard 8.0mm*



*lisocore® 28.0mm\_HDF 4.0mm*



lisocore®

LIGHTWEIGHT PERFORMANCE



# What is lisocore®

The highly developed material composite for unique applications

lisocore® is a material-efficient high performance construction material. This modern material achieves its excellent properties thanks to its unique structure, which consists of at least two thin cover layers that are bonded together by a three-dimensional pressed core structure. Selective milling of the cover layers creates recesses where the core

structure finds a positive fit for a form-closed bond. A high-strength adhesive also ensures an adhesive bond.

lisocore® therefore features both **form-closed and adhesive bonding**

This double bonding approach makes lisocore® unique from all other existing lightweight construction materials.

## Form-closed and adhesive-bonded composite:

Top cover layer with milled recesses

High-strength adhesive

Core structure (double-curved shell structure)

Bottom cover layer with milled recesses



## Patented basic structure with decisive effects

- Thanks to the unyielding form-closed and adhesive bonding, the individual structure layers cannot slide against each other when bending loads are applied.
- The shell structure absorbs intervening forces to particularly great benefit, so that an extremely high load-carrying action is achieved.
- Loads no longer have to be absorbed by the adhesive alone between the individual composite components. Every composite component can be utilized to its specific physical load limit.
- Thanks to the extremely thin shell structure design and the minimal use of adhesives, lisocore® is extremely material-efficient and resource-saving.

# More than light

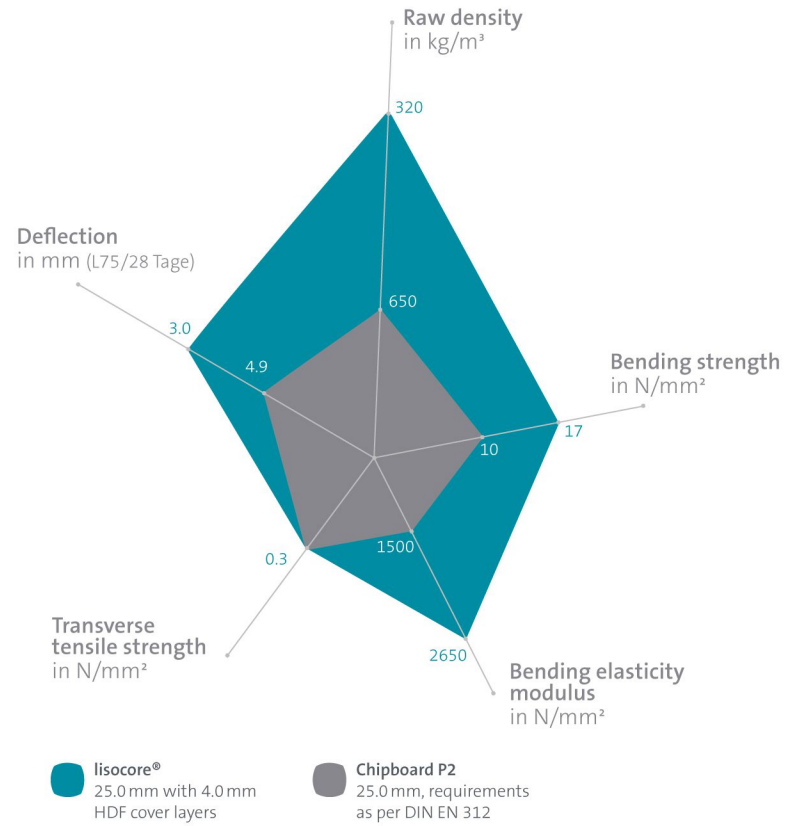
Unique through the sum of its benefits

## Holistic optimization of product performance

Thanks to its special structure and great adaptability, lisocore® has exceptional properties. Discover unprecedented possibilities for meeting the varied demands on modern lightweight construction materials. In addition to its unique properties, lisocore® also naturally offers the benefits that have come to be expected of lightweight construction.

## Facts that pay off

- Low self-weight
- Optimized load-carrying action
- High bonding strength
- High bending strength
- Low creep
- High dimensional stability
- Good flatness
- Low thickness tolerance
- High edge stability



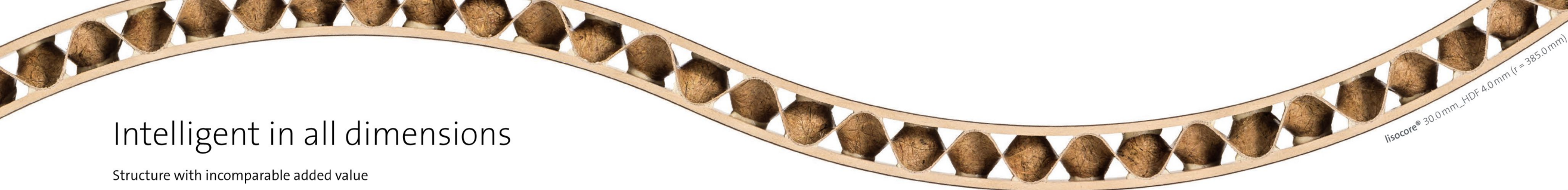
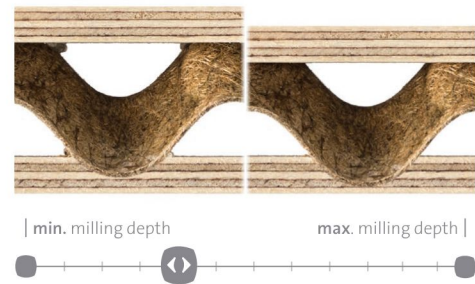
# Intelligent in all dimensions

Structure with incomparable added value

### Unique options

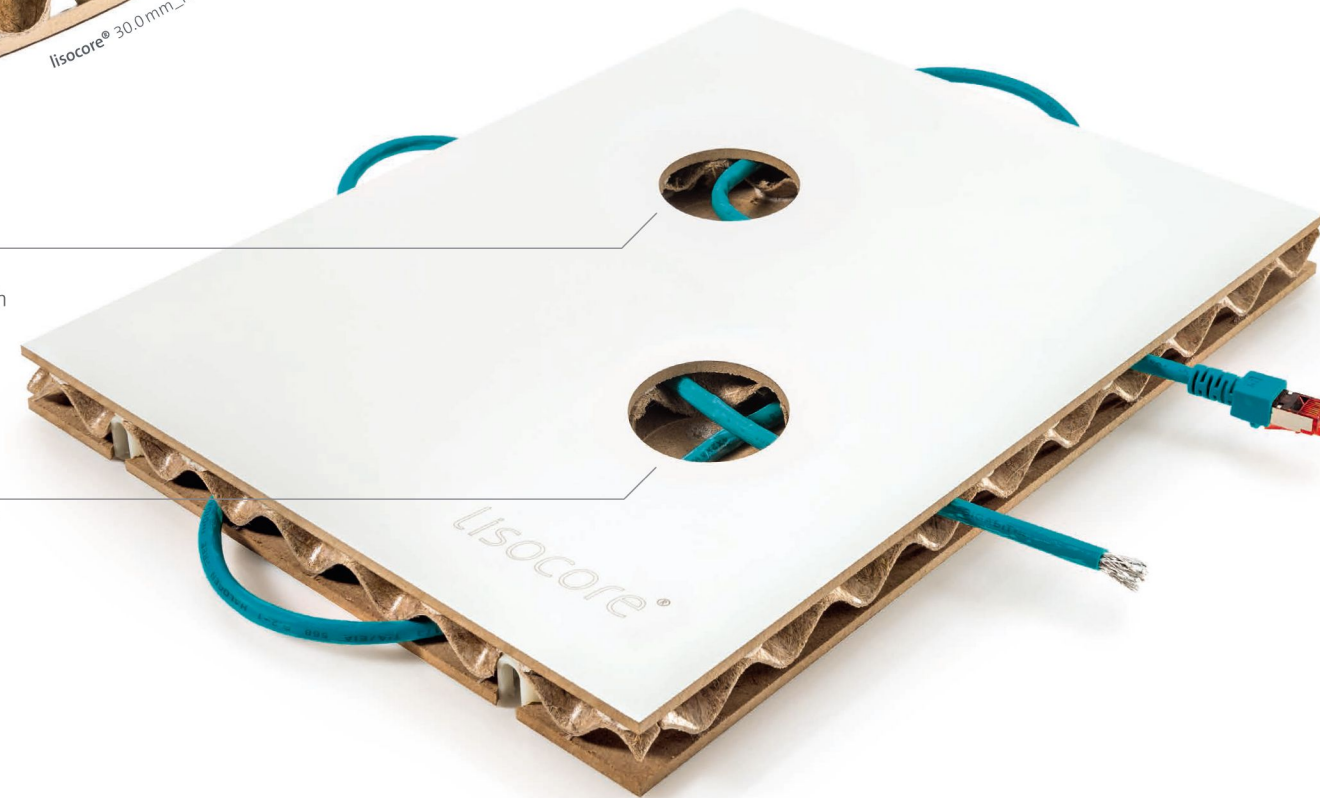
- Lengthwise and diagonal hollow spaces serve as installation levels (for electrical equipment, for example)
- Multilayered structures
- Can be pressed into two-dimensional forms
- Panel thickness can be flexibly adjusted to exact tenth of a millimeter dimensions

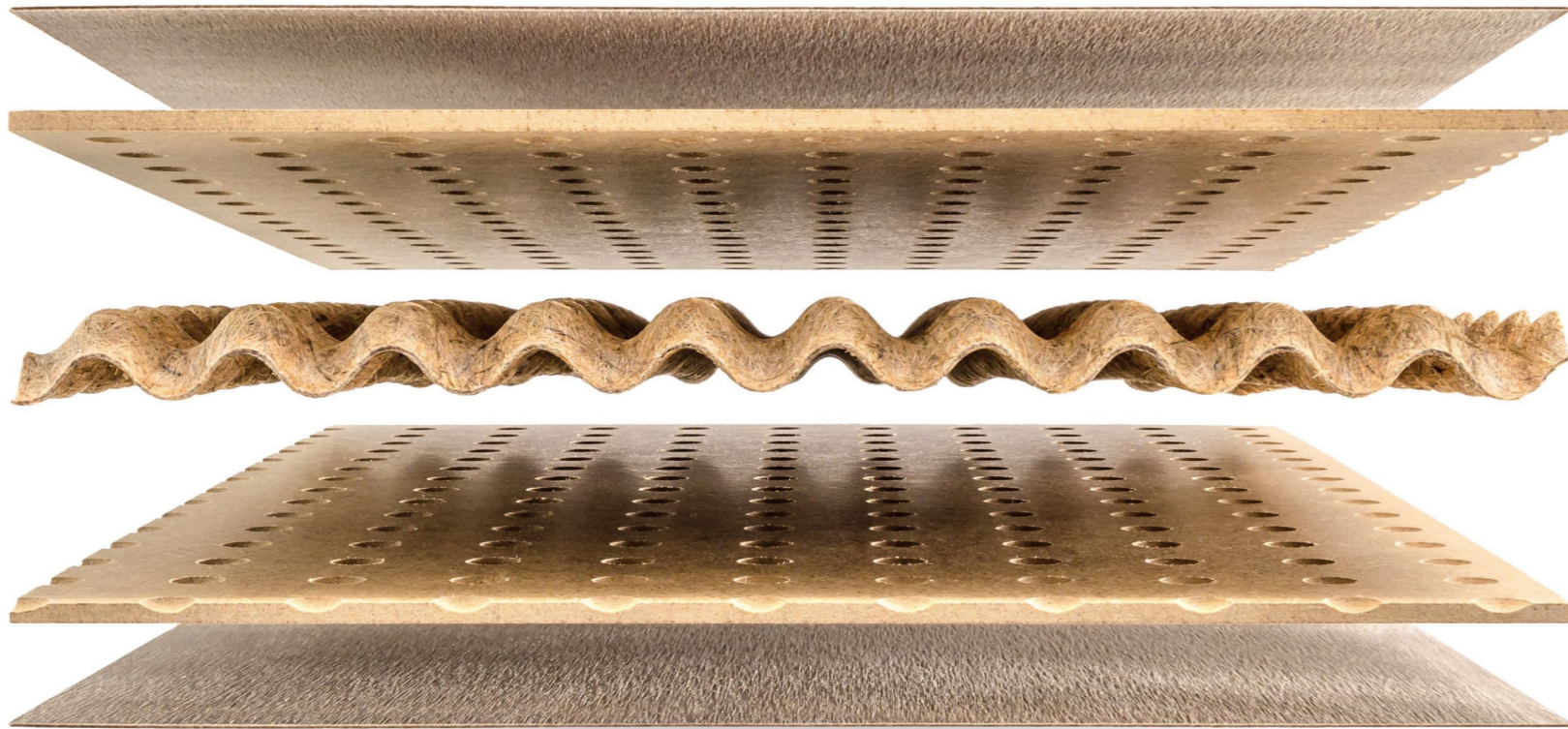
### Milling depth determines panel thickness



**90° cable entry points**  
can be implemented through  
installation openings

**Two installation levels** allow  
for crossover points





# Scalable versatility

The chameleon of structure, format and surface

The patented basic structure can be specially adapted

### Core structure

Variations in the composition of the core structure can be used to influence the technical properties of lisocore® in a targeted way.

There are currently thirteen different core heights available for the manufacture of all established panel thicknesses up to 120 mm.

### Cover layers

Enjoy great flexibility with different cover layer materials.

Low-distortion and inherently stable wood-based cover layers can be processed, with materials such as fiberboard, chipboard, and veneer plywood, both coated and uncoated.

### Finishes

Diverse coating materials such as HPL, CPL, film, lacquer, and veneer lend lisocore® its functional and decorative finishes.

### Panel formats

The format of the desired top layer determines the final panel format. All standard industry formats can be produced between the minimum format of 2000x1200 mm and the maximum format of 3100x2180 mm. Individual formats are available on request.



### Panel thicknesses

Beyond the standard measurements, panel thicknesses up to 120 mm can be achieved with the multilayered structure. Custom thicknesses within the system limits are available upon request.



### Cover layer thicknesses

Cover layer thicknesses from 2.5 to 19 mm are available.





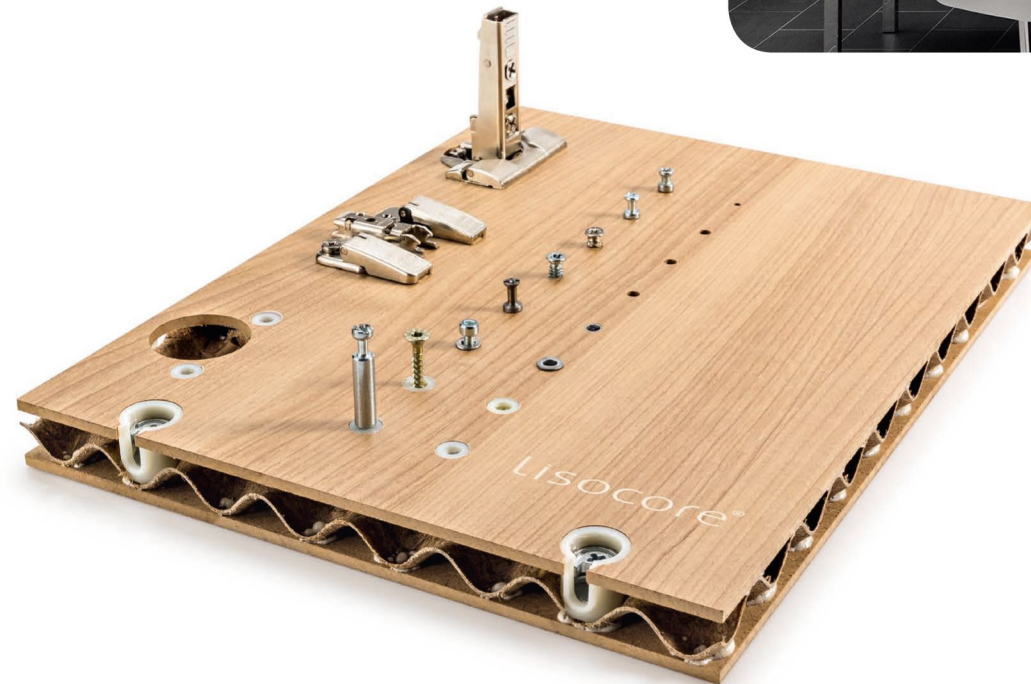
## lisocore® in practical applications

Extremely easy machining and processing with conventional tools and machines

lisocore® is already being successfully machined and processed in various industries as the lightweight material of choice.

### Application examples that speak for themselves

- Free-form machining
- Narrow surface coating without a support edge or frame
- Retrospective surface coating possible
- Fittings mounted with clamps and screws
- Quick and secure screw fixtures (direct or using cold-melt anchor screw or blind rivet technology)



### Imagination is considering all the possibilities

Thanks to the unique flexibility and versatility of its structure, the enormous design freedom, and its good mechanical properties, lisocore® has the potential to unlock unimagined application possibilities in the following fields, among others:

- Furniture and interiors
- Trade fair and store construction
- Caravans and motorhomes construction
- Office and property fit-out
- Ship and yacht construction
- Stage and scenery construction
- Packaging, transport, and logistics



## Award-winning design

yuno. The smart alternative to a folding table

Fitted with a lisocore® table top, the innovative stacking table yuno has been the recent winner of two international design awards — the Red Dot Award 2017 and the European Product Design Award 2017.

yuno's impressive features include slimmed-down styling plus a mature technical design.

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Table top – 19.0 mm lisocore®

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No folding necessary

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Design permits dense stacking

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Legs feature glides with integrated castors



concept  
wiesner hager

Case studies



reddot award 2017  
best of the best

2017 WINNER  
EUROPEAN  
PRODUCT  
DESIGN  
AWARD

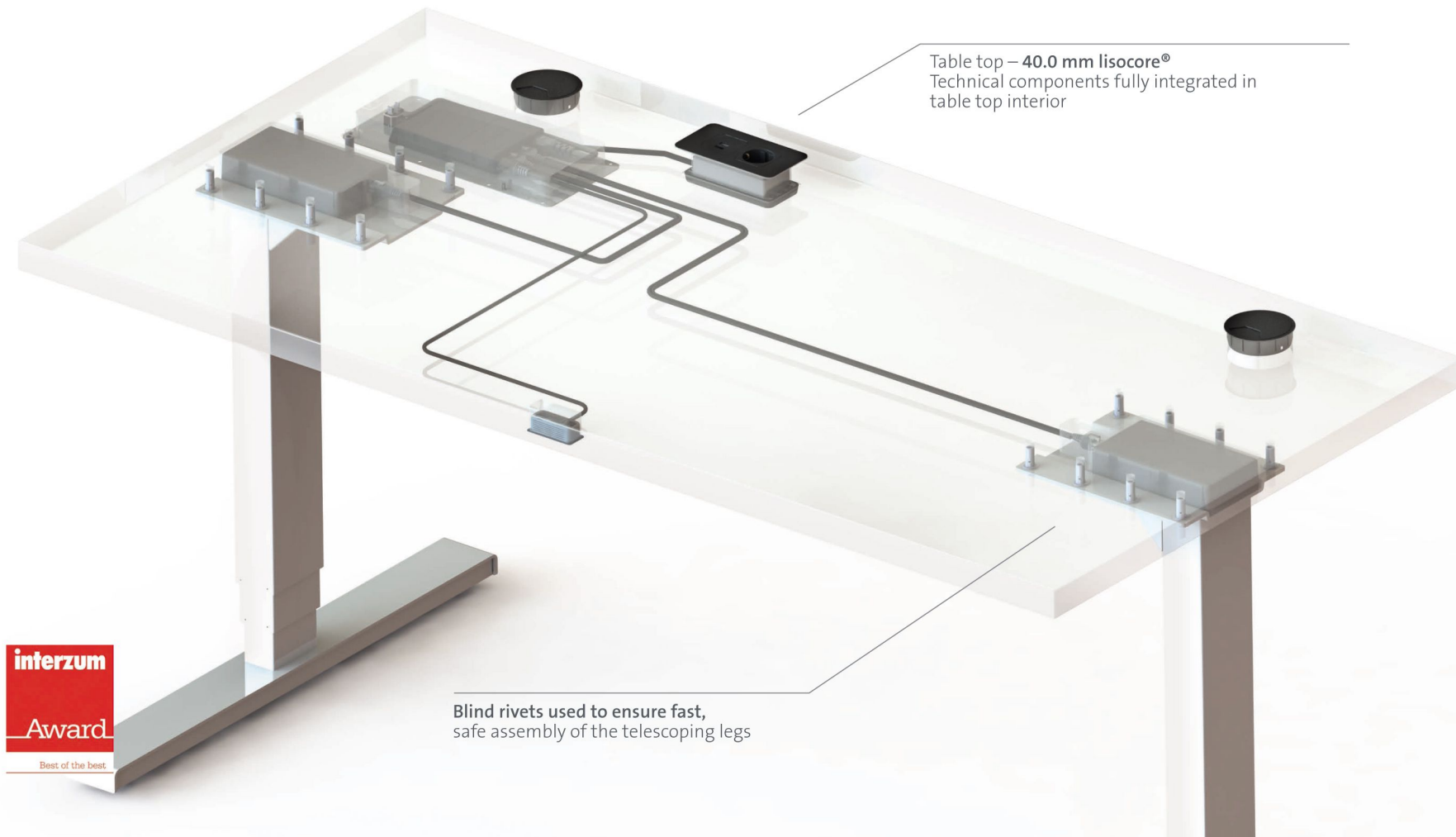


Table top – 40.0 mm lisocore®  
Technical components fully integrated in  
table top interior

Blind rivets used to ensure fast,  
safe assembly of the telescoping legs

## A revolution in integration

Sit-stand desk system redefined and TÜV-certified

Actiforce, the international specialist of high-quality, height-adjustable table frames, is now using the lightweight construction material lisocore® as part of an innovative no-crossbar sit-stand desk system.

With lisocore® there is no need for connectional components such as cross-bars. Furthermore, technical devices, such as power pack units and motors are integrated into the table top. The telescopic legs enable almost limitless height adjustment and offer whole new possibilities in workplace design.

This innovative concept has been awarded as “best of the best” in the category “materials and surfaces” of the Interzum Award 2017.

Developed for use in lightweight construction,  
solid and silent telescopic legs  
“Actiforce Elements” (stroke 650 mm)

no-crossbar sit-stand desk system  
with freeform table top “Kidney”





## Creating free space

Scalable room-in-room modules reinterpreted

se:cube combines maximum functionality with clever equipment, and the Office Cube system impresses with numerous equipment variants and different sizes. The se:cube from Sedus sets standards in terms of installation, acoustics and atmosphere and offers space for up to eight people, whether to retreat, for small meetings or for relaxation.

Thanks to the use of **lisocore®**, the cubes offer not only logistical but also assembly-related advantages. Even the cubes in size L can be assembled, dismantled and moved in record time if they are needed elsewhere.



Size S  
1,500 x 1,000 mm



Size M  
2,000 x 1,500 mm



Size L  
2,500 x 2,500 mm

Ceiling elements – **60.0 mm lisocore®**  
with melamine decorative coating  
Integration of **fully automatic ventilation and LED lighting**

Wall elements – **60.0 mm lisocore®**  
with melamine decorative coating  
**Connection of the latest means of communication** and acoustically absorbing elements

Floor elements – **40.0 mm lisocore®**  
Integration of **electrical components** and assembly connection points





## Modern design, ultra-light weight

With the TRAVELINO, KNAUS is revolutionising the caravan market.

KNAUS TABBERT is a leading manufacturer of leisure vehicles and operates four production facilities in Europe. With the TRAVELINO model, the caravan maker is now redefining mobile home construction. With the new "Ultralight" range, KNAUS combines innovative lightweight topics such as FibreFrame construction, KALTSCHMELZ® technology and weight-optimised compression moulded parts from natural fibres as interior cladding elements within the vehicle.

The use of lisocore® as a panel material for the interior fit-out is also a crucial factor in being able to produce a fully featured 4-berth caravan with a gross vehicle weight of just 750 kg.

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15.0 and 22.0 mm lisocore®  
for interior fit-out

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Corner joints feature  
**KALTSCHMELZ®** technology from  
Adolf Würth GmbH & Co. KG



**SYSBOARD® THE OPTIMAL ECO SETUP**



## Ecology and efficiency in harmony

The environmentally friendly lightweight construction wall system SYSBOARD® for trade fairs, events and exhibitions

The high-performance material **lisocore®** serves as the basis for the flexible lightweight construction wall system.

Frameless with a flowing, exclusive look: SYSBOARD by Studio Hartensteiner is functional and easy to handle and can be reused at any time. The sophisticated modular principle allows for a high degree of variability with little effort for a wide variety of applications.

### Patented connecting technologies

Connection is form-fitting and self-compacting

Safe load-bearing capacity on the front and rear sides

Can be reassembled and replaced at any time



1. Basic | Melamine top layer

2. Premium | HPL top layer

3. FIRE+ | Fire classification C-s3

4. ECO+ | Raw top layer, can be painted over



# Production facility with a demonstration character

Innovative production technology as the basis for the lightweight construction material liscore®

As part of the Environmental Innovation Programme launched by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, a large-scale commercial production facility was set up.

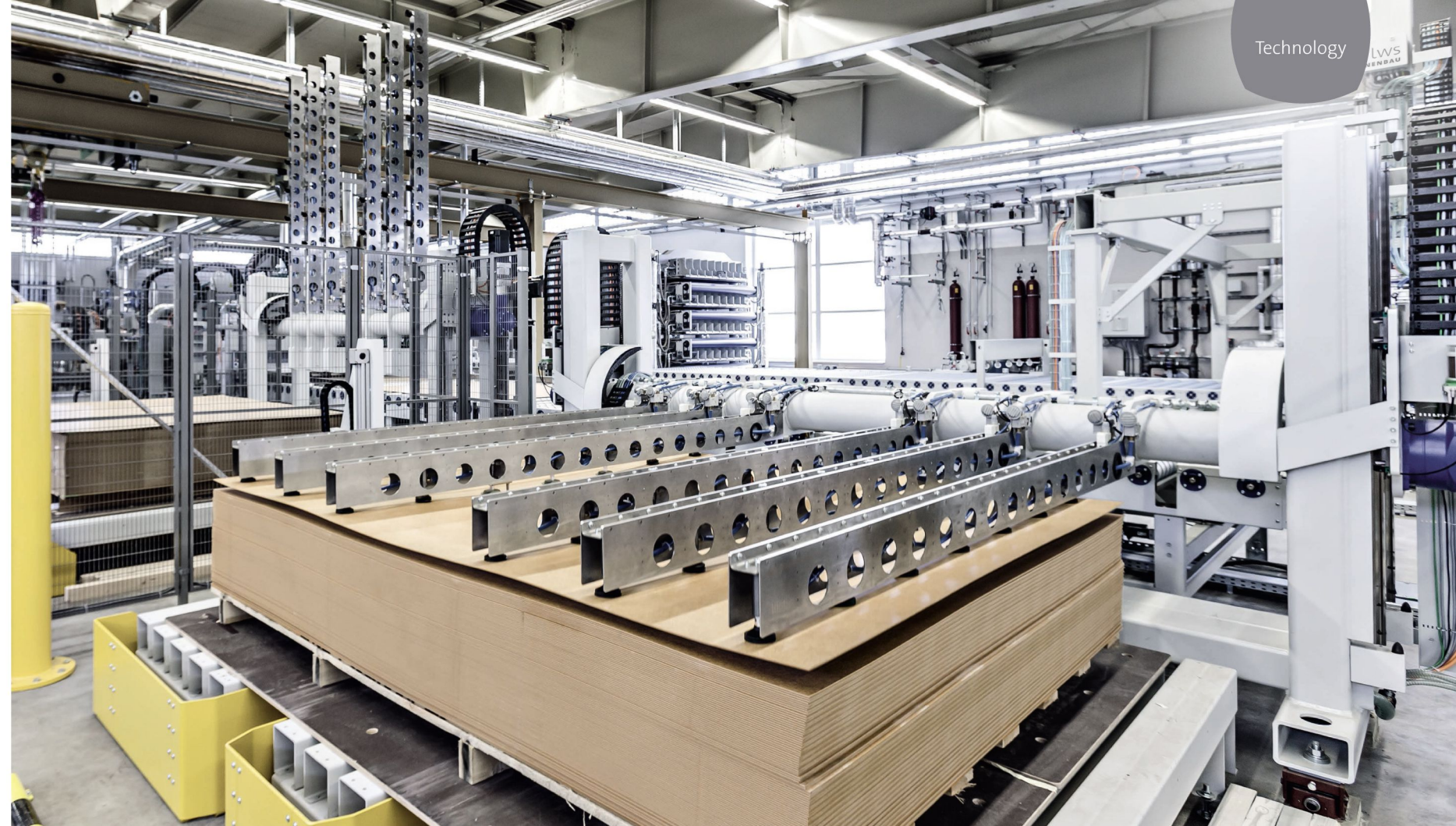
The aim of this project was to develop and implement the energy- and resource-efficient production technologies required for the manufacture of the lightweight material liscore®.

The innovative production technology has the following key features:

- Highest level of material and energy efficiency
- Low-emission manufacturing process
- Use of the smallest amounts of adhesives
- Energy recovery systems



A completely new production process was created with the help of subsidies from the Environmental Innovation Program of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.



# From your idea – to the application

Our services for your success

“We make ideas a reality!”

Our customers value our wealth of technological expertise and our sound advice on applying lisocore®.

In addition to our basic product range, we also manufacture customer-specific items. These are coordinated to match the application or our customers' individual manufacturing processes and can also include features such as bars or inlays.

The delivery takes place as raw or coated sheet material or, if required, as ready-made goods, through to the finished part.

In addition, our in-house research department offers the opportunity to answer questions about our products and to support product development and testing processes.

Our range of services enables us to assist our customers from application consulting and the production of individual panel superstructures to the successful on-schedule production of ready-made series products.

- Application consulting
- Product development and design
- Technical design
- Surface finishing
- CNC machining
- Assembly
- Material tests
- Quality assurance





solution-oriented

future-oriented

passionate

responsible

personal



# The lightweight construction specialist

lightweight solutions develops and manufactures materials and products according to the principles of modern lightweight design. The solutions offer added value while also raising the bar for design freedom, processing capabilities and quality.

For lightweight solutions, the customer and enterprise benefit take centre stage, alongside the efficient and resource-friendly use of raw materials.



# lightweight SOLUTIONS

for a new sense of being light



SCHWEIGHOFER PRIZE 2009

Awarded the innovation prize for the European Forest-Based Sector