econit® Wood

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FOREWORD

Our team has been on a journey fueled by a deep belief in the power of materials to shape our spaces, our experiences, and our impact on the world. With econitWood, we sought to create a medium that merges sustainability with design freedom - rethinking how we use resources, how we craft, and how we build.

Thank you for being part of this journey.
Whether you are here as a designer, an architect, a re-thinker, or simply someone looking for something new, I hope you find inspiration in these pages.

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Image
Collection Printed Nature
by Harry Thaler with additive tectonics

Bubbles Collection

DESIGNED BY US

Bubbles Ceiling

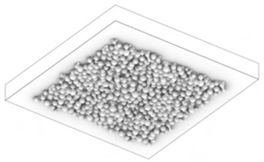
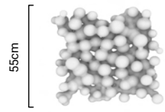
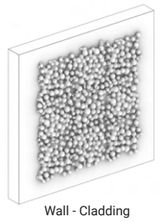
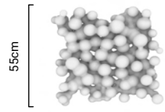
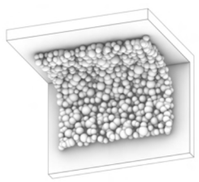
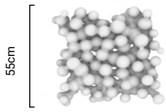
Elevating acoustic design to a new level, Bubbles Ceiling brings texture and depth to overhead surfaces. Functioning as integrated ceiling panels, they effectively diffuse and absorb sound, enhancing auditory comfort in large spaces. The organic formations create a sense of fluidity, visually softening environments while contributing to a more balanced acoustic experience.

Available in two versions, Bubbles Ceiling enhanced out as one of the most performative acoustic solutions on the market. With the ability to be custom-shaped through 3D printing, these elements adapt effortlessly to complex architectural geometries, including vaulted ceilings, curved surfaces, and edge transitions. Bubbles Ceiling can integrate seamlessly with lighting fixtures, ventilation systems, and other ceiling-mounted appliances, ensuring a harmonious and functional aesthetic.

Bubbles Wall

Designed as modular acoustic panels, Bubbles Wall transforms vertical surfaces into tactile landscapes. The unique topology of interconnected spherical forms breaks up sound waves, reducing echoes and optimizing room acoustics. Whether applied in architectural interiors, workspaces, or hospitality environments, these panels offer a bold yet functional alternative to conventional flat surfaces. Thanks to advanced 3D printing, walls can seamlessly transition into curved or faceted structures, unlocking new dimensions of material expression.
ond aesthetics, Bubbles Wall integrates with office furniture, technological appliances, and other functional elements, enabling a cohesive and adaptable workspace. The panels can be customized to incorporate fixtures, displays, or interactive elements, making them an innovative solution for modern offices, conference rooms, and collaborative spaces. Whether creating an

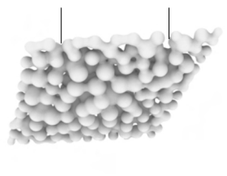
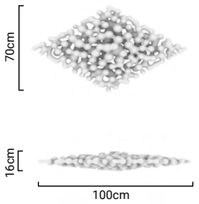
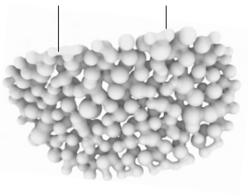
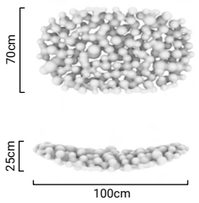
Beyond aesthetics, Bubbles Wall integrates with office furniture, technological appliances, and other functional elements, enabling a cohesive and adaptable workspace. The panels can be customized to incorporate fixtures, displays, or interactive elements, making them an innovative solution for modern offices, conference rooms, and collaborative spaces. Whether creating an immersive design statement or a discreet acoustic enhancement, Bubbles Wall offers both flexibility and efficiency in spatial planning.

	Material		Colour	Weight	ID number
 Ceiling - Cladding 	econitWood™ 	econitWood™ Enhanced 	nature stained black stained white	19 kg/m²	BCL-5621-101
 Wall - Cladding 	econitWood™ 	econitWood™ Enhanced 	nature stained black stained white	19 kg/m²	BCL-8349-102
 Edge - Cladding 	econitWood™ 	econitWood™ Enhanced 	nature stained black stained white	19 kg/m²	BCL-2197-103

Bubbles Hanging

Bubbles Hanging, a solitary suspended acoustic element designed for dynamic spatial arrangements. Available in two distinct shapes—Pringle and Diamond—these hanging elements can be arranged in clusters above work areas, meeting rooms, or collaborative zones, creating a sculptural acoustic cloud that enhances both aesthetics and sound performance.

Thanks to lightweight 3D-printed construction, Bubbles Hanging offers seamless adaptability, allowing designers to integrate them into various environments with ease. The combination of form and function ensures a balanced acoustic environment, reducing ambient noise while contributing to a visually engaging space. Whether installed individually or in groups, Bubbles Hanging is a versatile solution for enhancing acoustics in open-plan offices, creative workspaces, and hospitality settings.

		Material	Colour	Weight (kg)	ID number
 Raute		econitWood™	**nature** **stained black** **stained white**	**25**	**BHB-7832-001**
 Pringel		econitWood™	**nature** **stained black** **stained white**	**32**	**BHB-9475-002**

Your Collection

DESIGNED BY YOU

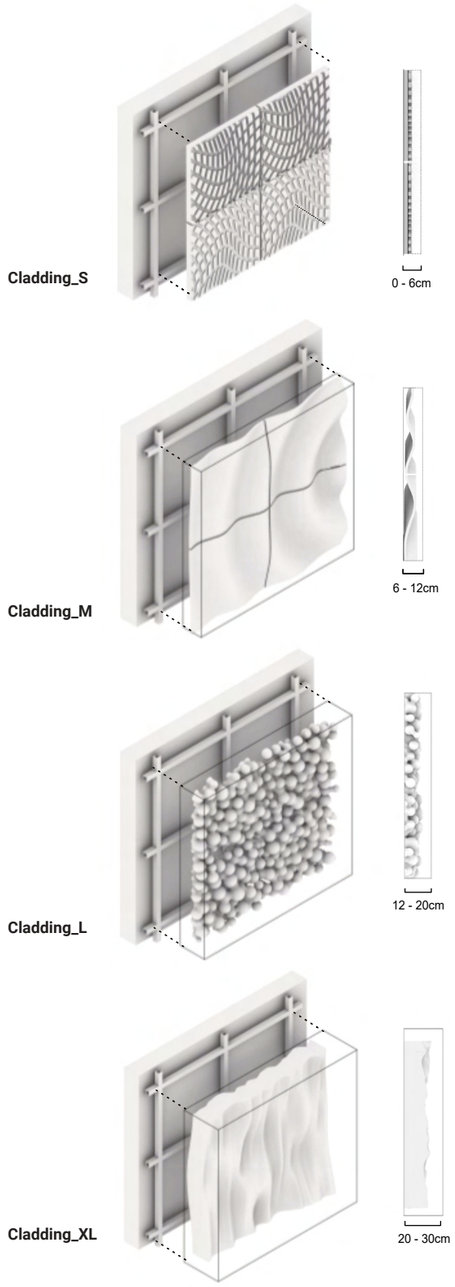
Image
FinalForm.stl
by Esmée Willemsen

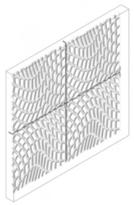
Your Cladding

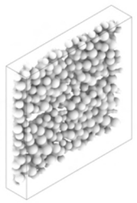
Building upon the modularity and acoustic benefits of the Bubbles system, Your Cladding allows architects, designers and other creators to imprint their unique designs onto wall and ceiling panels. Through advanced 3D printing technology, personal motifs, patterns, or textures can be brought to life, transforming surfaces into bespoke art pieces that also serve functional purposes.

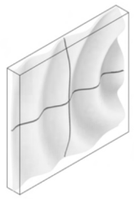
The system is available in four sizes, determined by the depth of the design's protrusion from the baseplate:

S: 0 – 6 cm
M: 6 – 12 cm
L: 12 – 20 cm
XL: 20 – 30 cm



Cladding_S	Part	Material	Colour	Weight (kg)	ID number
	 0 - 4cm	econitWood™	nature stained black stained white	max. 10 kg/m²	YCL-1045-201

Cladding_M	Part	Material	Colour	Weight (kg)	ID number
	 4 - 8cm	econitWood™	nature stained black stained white	max. 30 kg/m²	YCL-3768-202

Cladding_L	Part	Material	Colour	Weight (kg)	ID number
	 8 - 16cm	econitWood™	nature stained black stained white	max. 80 kg/m²	YCL-3768-203

Cladding_XL		Material	Colour	Weight (kg)	ID number
	 16 - 24cm	econitWood™	nature stained black stained white	max. 150 kg/m²	YCL-3768-204

Image
Lumo
by Friedrich Gerlach

Your Product

Your Product is an open invitation to co-create with econitWood, blending technology, sustainability, and craftsmanship into one seamless process. Designers can create unique functional objects—from prototypes to serial products— with econitWood's unique properties.

Prototype: is an initial 1:1 model or early sample created to test design ideas, identify problems or gather feedback from stakeholders.

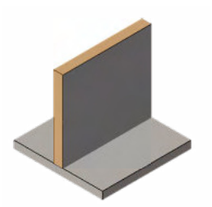
One-Offs: refer to singular, unique or custom pieces created only once. These are typically not (yet) intended to be replicated.

Small series: a singular production run of a particular design, limited-edition or identical pieces aimed to maintain quality consistency across multiple pieces.

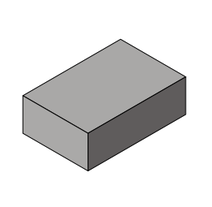
Series: a larger-scale or continuous production run that involves batch production and repeatable manufacturing processes for sizable numbers.

How It Works:
Create Your Design – Using 3D modeling software, customers design their object while adhering to size, thickness, and geometry guidelines. (sometimes a sketch is also enough and we take care of the 3D model)
Check Feasibility – Before production, we review the design to ensure compatibility with econitWood's material properties.
Production Begins – Once approved, we manufacture the piece using our cutting-edge 3D printing technology.
Finishing & Customization – The finished object can be sanded, colored, or coated to match specific aesthetic or functional needs.

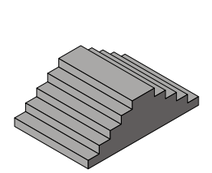
Image
Lumo
by Friedrich Gerlach



Minimum unsupported wall thickness: **8mm**

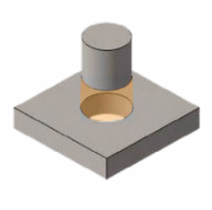


Maximum Dimension of machine
4m x 2.5m x 1m (LxWxH)

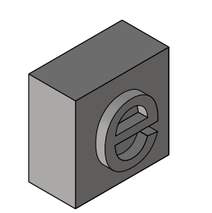


Visible surface pattern due to additive manufacturing

Opening for powder removal of hollow parts: **200 mm**

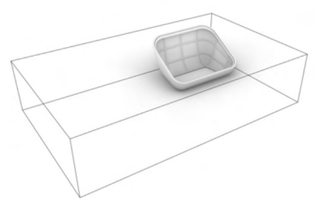


Tolerance between parts: **8mm**
If the parts are sanded calculate: **5mm**

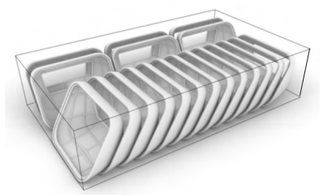


Minimum font sizes: **25pt / 9mm**

Prototyp	Amount	Material	Colour	ID number
	1	econitWood™	nature stained black stained white mineral coating	YP-2046-201

One Offs	Amount	Material	Colour	ID number
	1-5	econitWood™	nature stained black stained white mineral coating	YP-2046-202

Small Series	Amount	Material	Colour	ID number
	5-30	econitWood™	nature stained black stained white mineral coating	YP-3768-203

Serial Design	Amount	Material	Colour	ID number
	30-1000	econitWood™	nature stained black stained white mineral coating	YP-3768-204

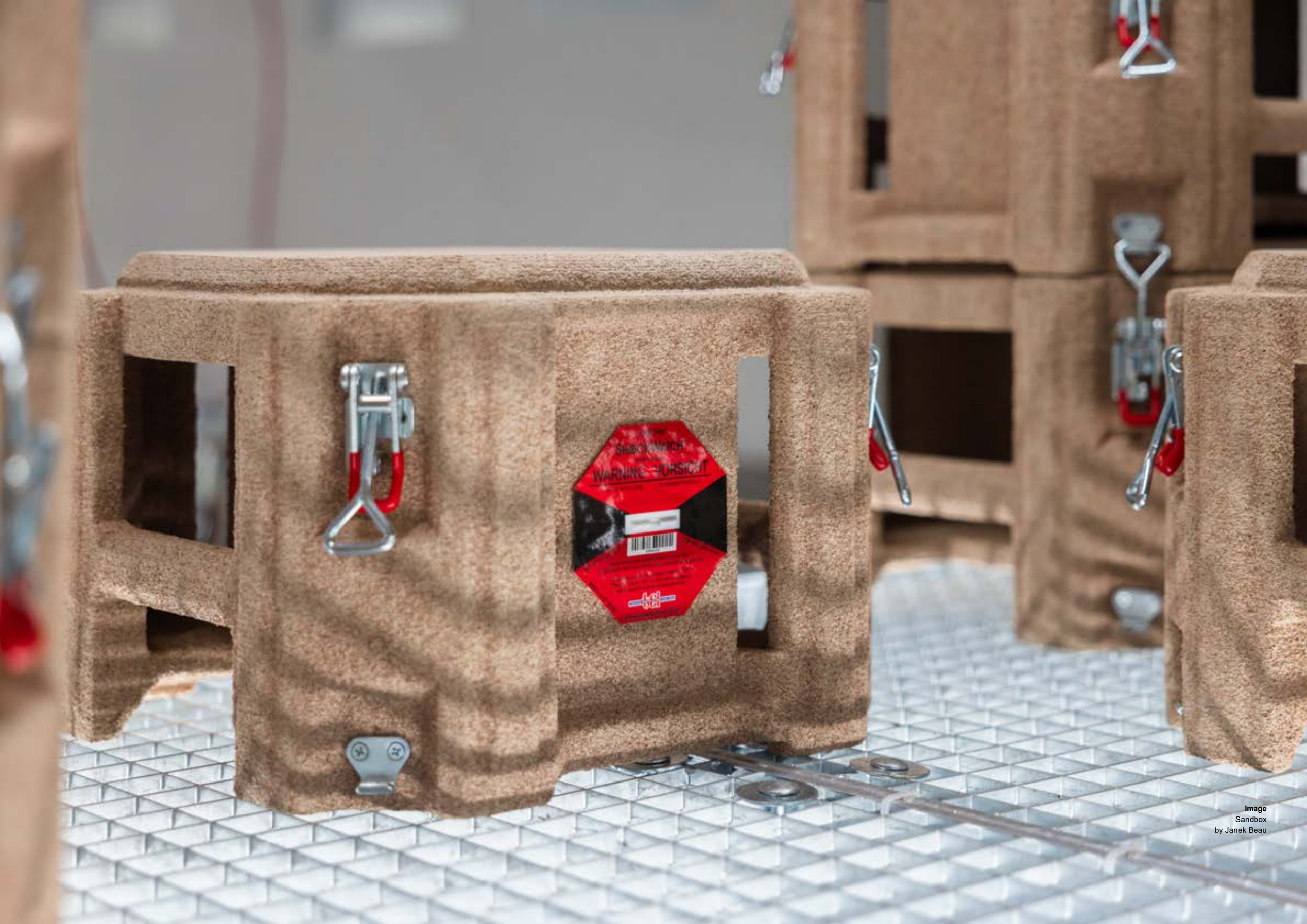


Image
Sandbox
by Janek Beau

Printed Nature Collection

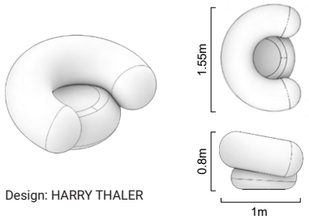
DESIGNED BY HARRY THALER

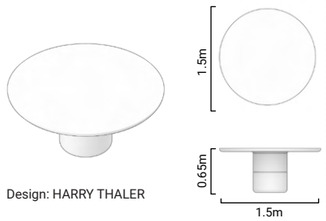
Image
Seater
by Harry Thaler

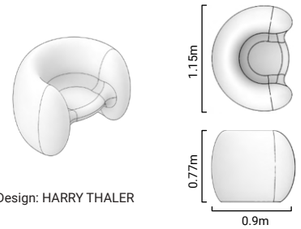
Image
Chair and Table
by Harry Thaler

Printed Nature Seating

In the Seating collection, Harry Thaler explores enveloping, organic forms that invite users to settle in comfortably while appreciating the remarkable potential of the new econitWood material. Soft curves evoke natural silhouettes, and in some pieces, anatomical references become apparent—almost like living organisms that gently cradle the body. This sculptural sensibility is balanced by Thaler’s commitment to functionality, drawing on his background as a goldsmith to integrate hidden connections and precise construction details. The result is seating that feels both playful and practical: large, cocoon-like chairs and subtle lounge pieces that fit effortlessly into hotel lobbies, reception areas, or collaborative workspaces.

econitWood_Seater	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	94	PNS-8732-001

econitWood_Table	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	169	PNS-8732-002

econitWood_Chair	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	80	PNS-8732-003

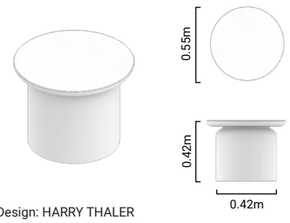
econitWood_coffe table	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	22	PNS-8732-004

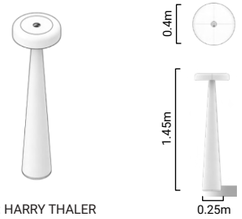
Image
Chair and Table
by Harry Thaler

Image
Collection Printed nature
By Harry Thaler with additive tectonics

Image
Lamp
by Harry Thaler

Printed Nature Lighting

The Lighting collection demonstrates econitWood’s capacity for bold expression, as lamps seem to sprout from the floor like clusters of mushrooms. Certain designs push the limits of scale, rising up to six meters in height, yet maintaining a sense of effortless elegance. This combination of grandeur and minimalism is enhanced by the material’s acoustic properties, making them a perfect choice for communal spaces such as open-plan offices or meeting areas. Whether they stand alone as eye-catching statement pieces or are grouped together to create a forest-like atmosphere, these fixtures showcase Harry Thaler’s playful exploration of 3D-printed forms. They also highlight the core ethos of Printed Nature—merging sustainability, technological innovation, and artistic freedom to envision objects that transform our experience of everyday spaces.

econitWood_Lamp145	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	65	PNL-9475-001
		Power	**Voltage**		
		max. 60W	220 - 250V		

econitWood_Lamp195	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	75	PNL-9475-002
		Power	**Voltage**		
		max. 60W	220 - 250V		

econitWood_Lamp245	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	100	PNL-9475-003
		Power	**Voltage**		
		max. 60W	220 - 250V		

econitWood_Lamp295	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	113	PNL-9475-004
		Power	**Voltage**		
		max. 60W	220 - 250V		

econitWood_Lamp345	Parts	Material	Colour	Weight (kg)	ID number
 Design: HARRY THALER		econitWood™	nature	127	PNL-9475-005
		Power	**Voltage**		
		max. 60W	220 - 250V		

Technical Specifications

Image
Chair
by Dr. Ana Goidea & Bruno Knychalla

Surfaces & Colors

Because econitWood is composed of wood industry offcuts and mineral binders, it naturally boasts a warm, organic surface that lends itself to a variety of finishing options. Beneath its subtle, layered texture lies a balanced interplay of wood fibers and minerals, which imbues each piece with visual character and tactile depth. Designers and manufacturers can decide whether to highlight this raw, unrefined look—celebrating the material's 3D-printed origins—or to apply finishes that create smoother, more elegant contours. By choosing how much or how little of the underlying structure to reveal, they can emphasize either the sculptural essence of econitWood or its refined surface quality.

Our natural finish celebrates the material's understated warmth and layered striations without obscuring its 3D-printed essence. The stained finish introduces subtle or more pronounced hues, allowing designers to explore diverse color palettes while retaining the composite's distinctive organic quality. Finally, our mineral finish provides a gentle sheen and an added layer of durability, reinforcing econitWood's robust structure. Each of these finishes is formulated to align with our commitment to sustainability, incorporating low-emission materials and maximizing renewable or recycled components wherever possible.

We are constantly researching and developing new sustainable finishes—working closely with local suppliers, chemists, and designers to explore innovative, eco-friendly treatments.

NATURAL FINISH

econitWood offers a distinctively natural finish, celebrating the organic textures and tones of upcycled wood fibers. Unlike conventional engineered panels, econitWood retains a warm, tactile surface, free from synthetic coatings or chemical treatments.

STAINED

For those seeking a customizable aesthetic, econitWood is available in a stained finish, enhancing its natural texture while offering a broader palette of color and design possibilities. The staining process deepens the wood's grain, highlighting its organic structure while providing richer, more uniform tones that complement various interior styles. Unlike synthetic coatings, econitWood's stains are designed to penetrate the material, preserving its breathability and natural feel while adding durability and resistance to wear. Whether in warm, earthy hues or deep, sophisticated shades, the stained finish allows for flexibility without compromising the material's sustainable and tactile essence.

MINERAL FINISH

econitWood's mineral finish offers a performance surface that combines durability with sustainability. This innovative coating provides increased resistance to moisture and wear, making it ideal for demanding interior applications with a subtle, warm aesthetic.

ASK FOR MORE!

We are continuously developing new sustainable coatings, enhancing econitWood's durability, aesthetics, and eco-performance. From natural stains to advanced protective treatments, we're always exploring innovative, low-impact solutions. Get in touch for our latest developments!

Image
Offset
by Julia Huhnholz

Joinery & Connections

Geometric connections, or interlocking joints, enhance stability by preventing lateral movement without additional fasteners. Similar to a lid fitting onto a pot, econitWood components interlock for secure, tool-free assembly. Our additive process enables intricate interlocking designs for effortless construction. Contact us for guidance on optimizing these joints.

econitWood supports mechanical fasteners, like screws and bolts, for strong, adaptable connections. We recommend stainless steel screws to prevent corrosion and ensure longevity. Ideal for load-bearing applications, mechanical joints provide flexibility for adjustments and replacements.

For adhesive connections, selecting the right bonding agent is key. econitWood's properties require specific adhesives for durability and strength. We offer tailored recommendations to ensure secure, sustainable bonding while enabling disassembly and recyclability.

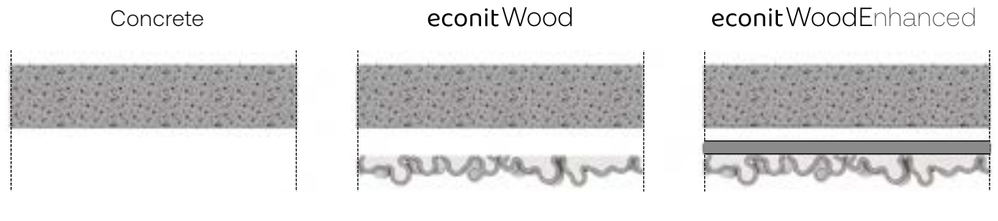
Acoustics

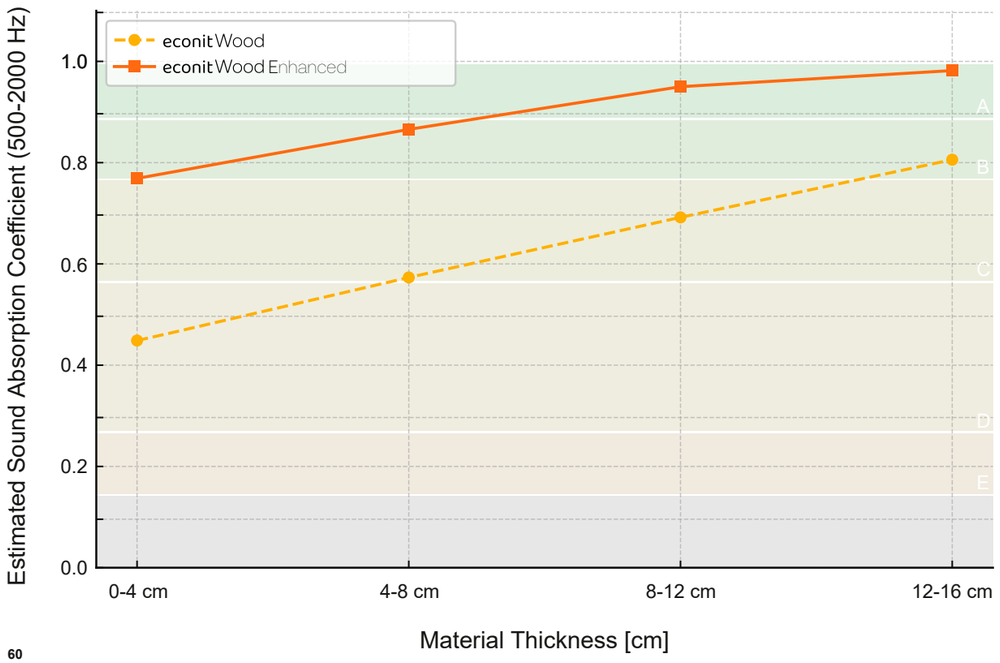
econitWood is an advanced sustainable material, engineered to provide precise sound control in architectural and interior design applications. Unlike traditional acoustic panels, econitWood balances sound reflection and absorption, creating a well-tuned auditory environment.

econitWood ensures speech clarity and sound distribution, making it ideal for offices, public spaces, auditoriums or concert halls.
At minimal thickness, econitWood absorbs 20-35% of incident sound in the 500-2000 Hz range, making it suitable for spaces requiring acoustic enhanment.

By using our econitWoodEnhanced product line, the absorption rate increases significantly, reaching near Class A performance (αW ≈ 0.90 - 1.00) in almost all material thickness variation.

The absorption effect scales with thickness, The reflection effect scales with the complexity of the surface - both can be engineered towards an optimal sound expericen.





Flammability

econitWood is engineered to provide enhanced fire resistance while maintaining its sustainable and natural composition. Classified as B-s1, d0, econitWood demonstrates low flammability, ensuring it does not contribute to fire growth. The material's fire growth rate index (FIGRA) of only 30 W/s is well below the threshold for higher fire safety classifications, and its total heat release (THR) of 2.4 MJ remains well within safe limits for interior applications. Additionally, the material successfully prevents lateral flame spread, making it a reliable choice for public and commercial spaces where fire safety is a concern. Beyond flame resistance, econitWood excels in minimizing smoke production, a critical factor in fire safety. With a smoke growth rate (SMOGRA) of 0 m²/s² and a total smoke production (TSP) of only 4 m², the material significantly outperforms many traditional wood-based panels, reducing the risk of smoke inhalation in the event of a fire.

Expected Classification according to DIN EN 13501-1: **B-s1, d0**

Specific results of a Single-Burning-Item-Test on 30 mm econitWood panels for 20 minutes according to DIN EN 13823.

Test Parameter	Description	Test Results	Requirement for Class A2-s1, d0
FIGRA 0.2 MJ	Fire Growth Rate Index	30 W/s	<= 120 W/s
THR 600s	Total Heat Released	2.4 MJ	<= 7.5 MJ
LFS < spec. edge	Lateral Flame Spread	Positive	Positive
SMOGRA	Smoke Growth Rate	0 m^2/s²	<= 30 m²/s²
TSP 600s	Total Smoke Production	4 m²	<= 50 m²

Sustainability

As our name suggests, sustainability is not an afterthought—it is the foundation of our material philosophy. What sets econitWood apart is its mineral-bound composition, which eliminates the need for plastics and synthetic resins. Instead, we use a binding process involving calcined magnesia from the Alps, an ingredient approved for use in animal feed, combined with purified magnesium chloride derived from sea salt.

Our approach to sustainability extends beyond material selection. On-demand 3D printing reduces excess production, aligning with a circular economy model that minimizes waste. We use FSC®-certified and PEFC-certified timber from sustainably managed European forests, ensuring that our raw materials are harvested in a way that protects biodiversity and promotes responsible forestry practices.

Additionally, our wood is free from pollutants and solvent-free, creating a material that is both safe for people and the environment.

econitWood is making a conscious decision to support sustainable production, waste reduction, and ecological balance. At the same time we aim to give creatives the power to innovate with these values in mind.

CO^2 Values & Capturing

Carbon is an essential element in both nature and material innovation. During the production of econitWood, CO_2 is released—primarily from the processing of raw materials in our mineral binder. But econitWood also stores carbon and actively reabsorbs it over time. Each metric ton of econitWood stores approximately 125 kg of CO_2 from the beech wood used in its composition. The material undergoes a process known as carbon mineralization, where atmospheric CO_2 is absorbed and permanently integrated into its structure.

Due to its highly porous nature, econitWood provides an extensive surface area that accelerates CO_2 absorption. Research suggests that our binder absorbs between 211 g and 331 g of CO_2 per kg under optimal conditions. Even with conservative estimates, around 100 kg of CO_2 per ton of econitWood can be permanently mineralized, resulting in a material with a neutral carbon footprint.

Technology

We've structured our manufacturing around an industrial-grade process that is continually being refined to increase speed, enhance efficiency, and reduce costs. Our commitment extends to the automation of complex production steps, ensuring a streamlined transformation from digital designs to tangible products. Our fully digital pipeline leverages state-of-the-art manufacturing technologies and sophisticated software, allowing for meticulous oversight of the production process. This approach not only boosts our production capabilities but also aligns with our dedication to providing superior, sustainable products in a cost-effective manner. As we evolve, our focus remains on technological advancements to better serve the dynamic needs of the construction and design industries.

Our factory is designed to perform under high loads with different types of manufacturing orders being produced at the same time. Our Production capacity is two cubic meters of material per hour, and we can fabricate up to 18 hours a day.

	unit	value	value (safety factor)
layer height	mm	1.5	1.5
size of construction space	m	4 x 2.5 x 1	3.9 x 2.4 x 0.9
max. construction volume	m^3	10	8.4
min. part measurement	cm	5 x 5 x 2	7.5 x 7.5 x 3
resolution	dpi	25	20

COMPETITIVE THROUGH SIZE & SPEED

History

1995

FIT

Fruth Innovative Technologies (FIT) GmbH is founded in Lupburg by the engineer Carl Fruth in his garage. The company becomes successfull by focusing on rapid prototyping and additive manufacturing from the start.

2009

NETFABB

FIT creates its own 3D software with netfabb. Originally designed to control a large inventory of machines, netfabb quickly develops into a powerful, world-leading software for 3D models. (design, simulation and repair)

2015

ACQUISITION BY AUTODESK

Autodesk acquires netfabb and makes a strategic investment in the FIT Group. From then on, the two companies collaborate to increase adoption of technology for industrial additive manufacturing.

2020

ADDITIVE TECTONICS

On the 25th anniversary of FIT, Carl Fruth and his nephew Bruno Knychalla team up to found the subsidiary additive tectonics GmbH. The goal is to venture into the future of construction: Large-scale architectural 3D printing

2024

ECONIT

After 4 years of Research and Development, the team at additive tectonics had found the missing piece for real change in the field of architecture - a sustainable and digital material system. As a registered trademark, the econit journey begins.

How to Order

Ordering your econitWood product is designed to be straightforward and efficient—whether you're selecting a standard piece from our existing collections or making your own from the "your collection".

Select Your Product
Each of our products, from seating to lighting to architectural elements, has a unique Product ID. Simply note the Product ID associated with your chosen item or items.

Contact Our Team
Reach out to us via email, phone, or through our online contact form. When submitting your order request, please include:

- Product ID(s) of the item(s) you wish to purchase -
Desired quantity and finish
- Any special instructions or customizations
- Your details (name, company, adress, email, phone number)

Once we receive your request, our team will confirm availability, provide an estimated lead time, and share a quote for your order. If you have any questions about product dimensions or need design advice, we're here to help you finalize your selection.

Production & Quality Check
After you approve the quote, your econitWood pieces move into production. Our manufacturing process follows the zero-waste philosophy behind econitWood, and each piece is thoroughly inspected to ensure it meets your standards for design, durability, and sustainability.

Shipping & Delivery
We work with trusted logistics partners to ship your order safely and on time. You'll receive shipping updates and tracking details so you know exactly when to expect your new econitWood pieces.

Feel free to contact us at any point with questions, special requirements, or to explore additional customization options, our team will guide you through each step.

Contact
info@econit.info

Responsible
additive tectonics GmbH Am Grohberg 1 92331 Lupburg
Germany

Telephone: +49 (0) 9492 9429 200 **Telefax:** +49 (0) 9492 9429 11 **E-mail:** info@econit.info

Management Board: Carl Fruth (Managing Director), Bruno Knychalla (Managing Director)
Seat: Lupburg
Registration Court: Amtsgericht Nürnberg
Registration Number: HRB 38032
VAT No.: DE335826920

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For updates check econit.info

Thank you to all Designers and Photographers for their contributions

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