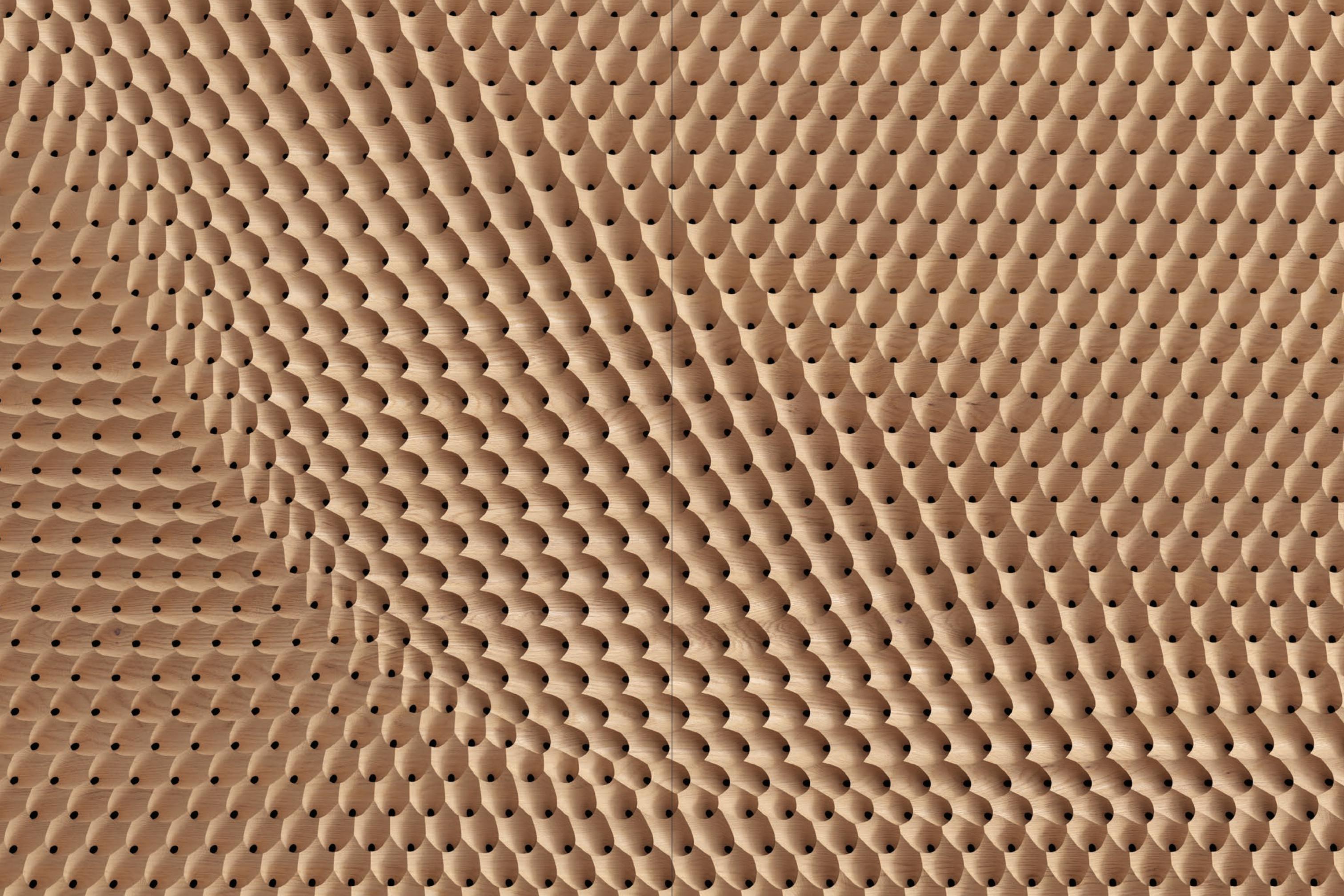


Formfelder

Formfelder





Formfeld

8

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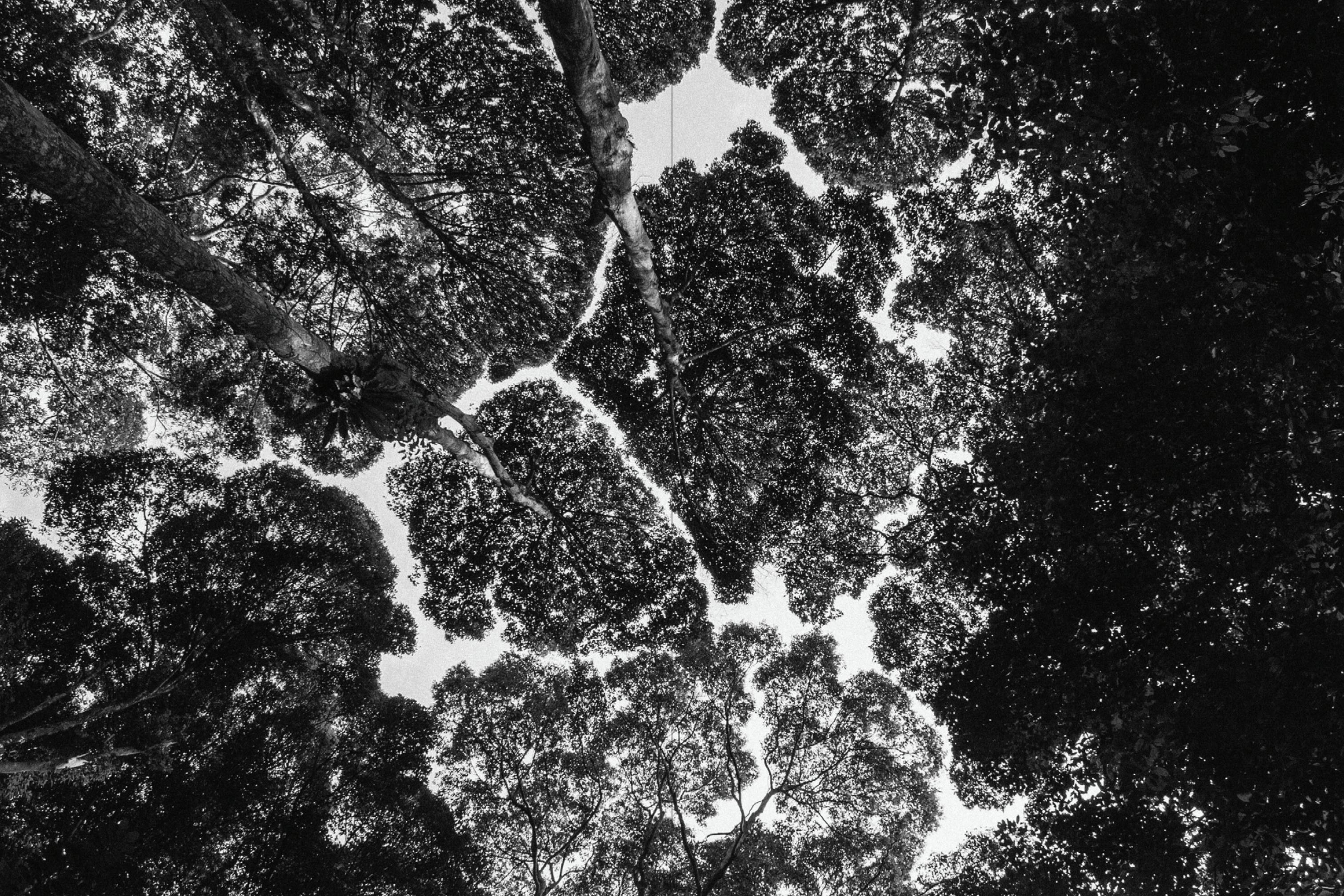
Every room shapes our perception and mood. Form, color, and sound change our sense of wellbeing and aesthetics. We develop surfaces from natural materials that are defined by mathematical models - algorithms. These proprietary algorithms produce structures that make each surface unmistakably unique. We call them „Formfelder“ - “form fields” in German. Our design principle blends digital and artisanal aesthetics. Formfelder change space and they can do even more: they electrify.



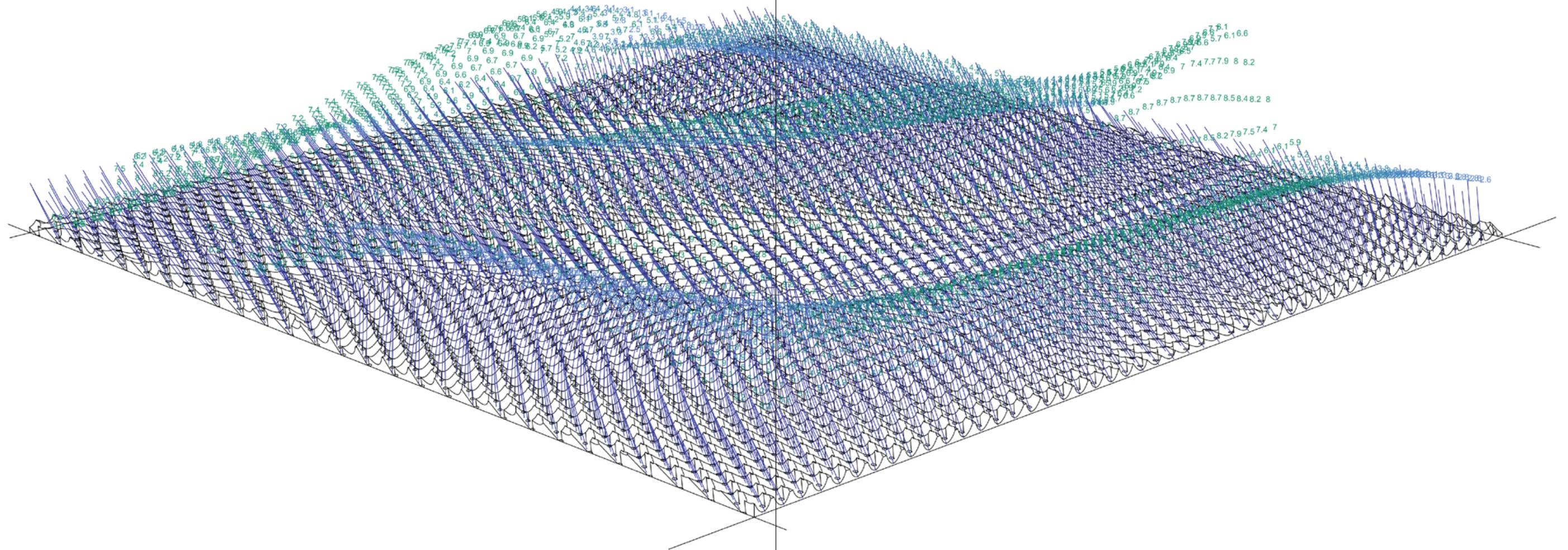
Natural Structures

11

Nature is based on a set of rules that sometimes remain hidden and sometimes emerge - under the microscope or from afar. The branches of a river, the canopy of a forest, and the Starlings' flight formations are examples of complex structures that follow those hidden instructions. Humans have developed an intuitive understanding of these geometric patterns. We are fascinated by their complexity. Formfeld surfaces are an abstract representation of nature and an extension of our viewing habits.



Algorithmic Design



Similar to a recipe, an algorithm consists of ingredients and actions through which a certain goal is to be achieved. Designing an algorithm it's not about the outcome, but the process. Each Formfeld has its underlying mathematical formula that synthesizes design principles, contextual

influences as well as the properties of the material and tools. The algorithm always produces a unique result, depending on the parameters flowing through. The similarities between two panels that belong to the same structure are evident - yet they are never the same.

Digital Craftmanship

The algorithms go hand in hand with the traditional craftsmanship in the timber workshop. The mathematical function provides exact information for the CNC machines to transform the raw wood into a Formfeld surface. The last step is the manual finishing of the surfaces with polish and wax oil.

16

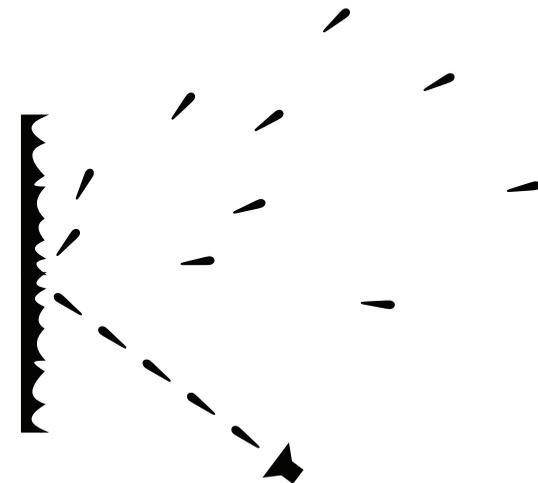
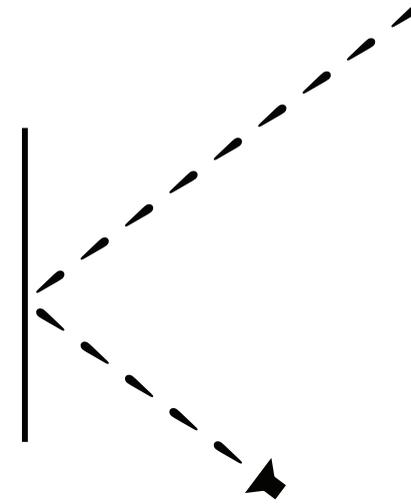


Sound and Reverberation

Sound bounces between the walls of rooms with hard surfaces. The level of noise rises and speech intelligibility suffers. Our structures reflect and evenly scatter sound energy back into the room. The result is a pleasant and three-dimensional sound.

18

19



Resource Wood

Formfeld surfaces are mostly made from solid wood. Its liveliness and complex structure inspire us. The cold perfection of the mathematical functions is contrasted by the individual character of this organic material - the result is a symbiosis of digital and natural aesthetics. Longevity and a natural aging process are part of the philosophy and a conscious decision.



Formfeld 1

22

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The structure Formfeld 1 is characterized by a dynamic flow of movement - similar to the natural swarming behavior of fish and birds. Formfeld 1 surfaces can be manufactured as solitary wall panels or as permanently installed wall cladding.

Wall Panel
112 x 120 cm

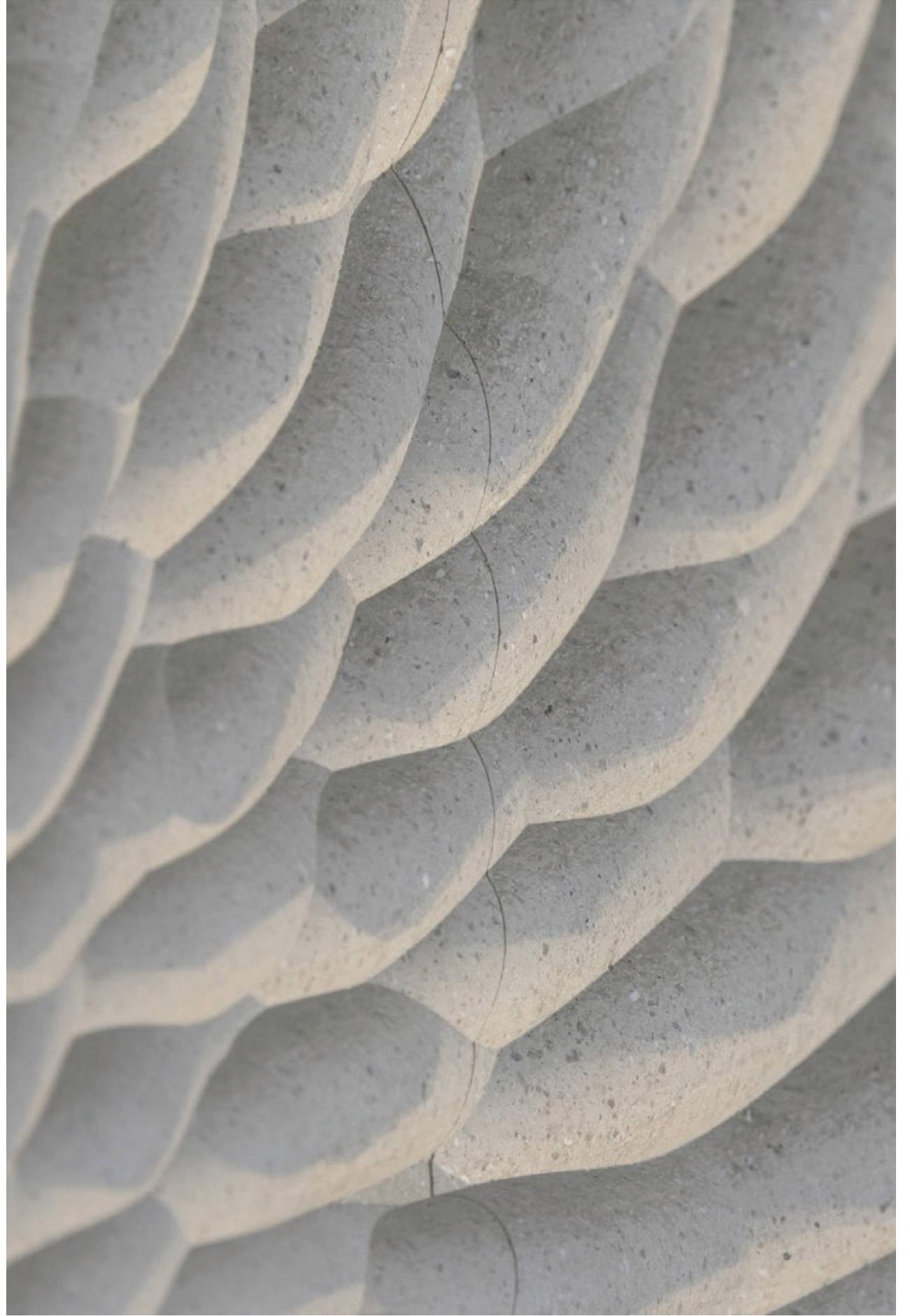
Gypsum Fibre Board
Natural

Structure
Formfeld 1



24

25



Gypsum Fibre Board
Natural

Structure
Formfeld 1



Wall Panel
173 x 120 cm

Maple
Hand Polished

Structure
Formfeld 1



Wall Panel
144 x 100 cm



White Oak
Oiled & Hand Polished

Structure
Formfeld 1

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White Oak
Oiled & Hand-Polished

Structure
Formfeld 1



Wall Panel
224 x 120 cm

White Oak
Oiled & Hand Polished

Structure
Formfeld 1





Wall Panel
2 * 120 x 240 cm

Black Oak
Oiled & Hand Polished

Structure
Formfeld 1



Wall Panel
120 x 83 cm

MDF Black
Matt Lacquered & Hand Polished

Structure
Formfield 1



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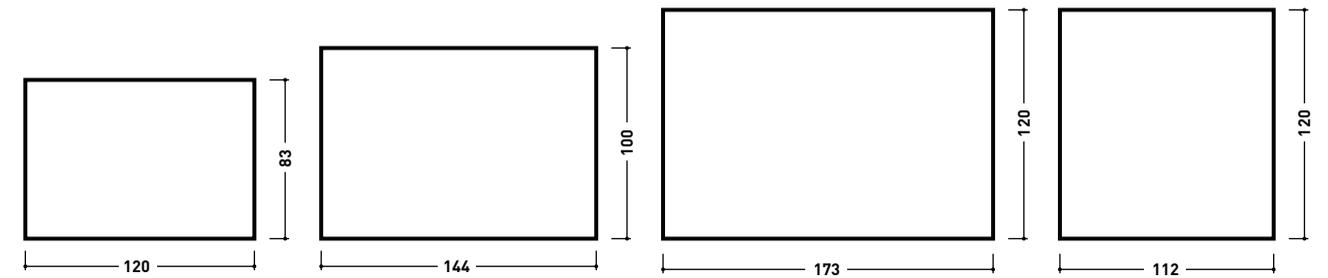
MDF Black
Matt Lacquered & Hand Polished

Structure
Formfield 1



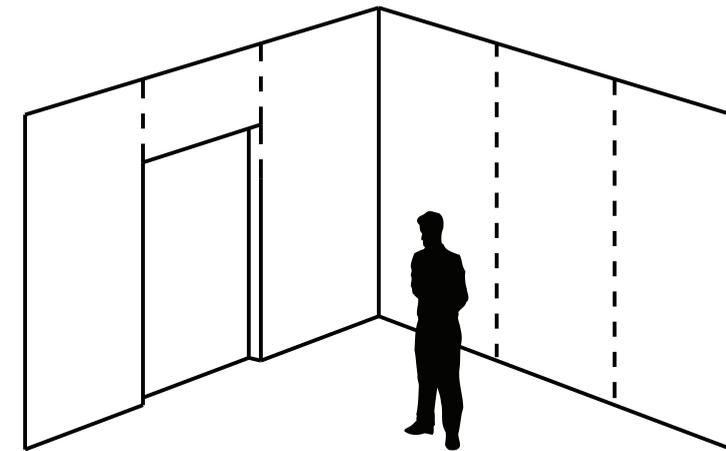
42

Formats



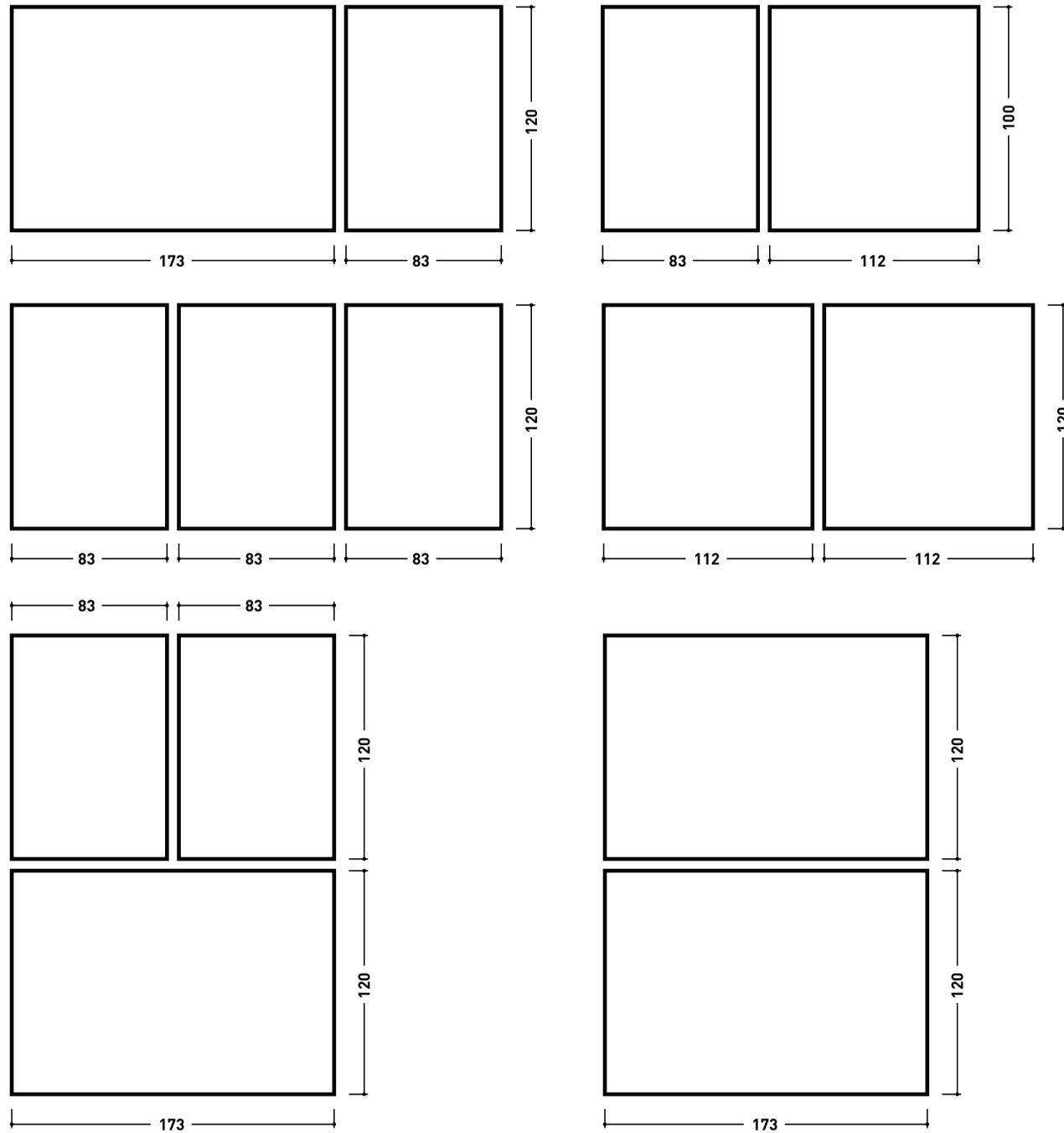
Solitary wall panels are available in four different sizes - either in portrait or landscape orientation. Custom formats are possible on request.

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Permanently installed wall claddings consist of segments whose field structure is continuous across seams. Their overall shape is highly customizable. Individual formats, cutouts, and freeform outlines can be realized.

Combinations



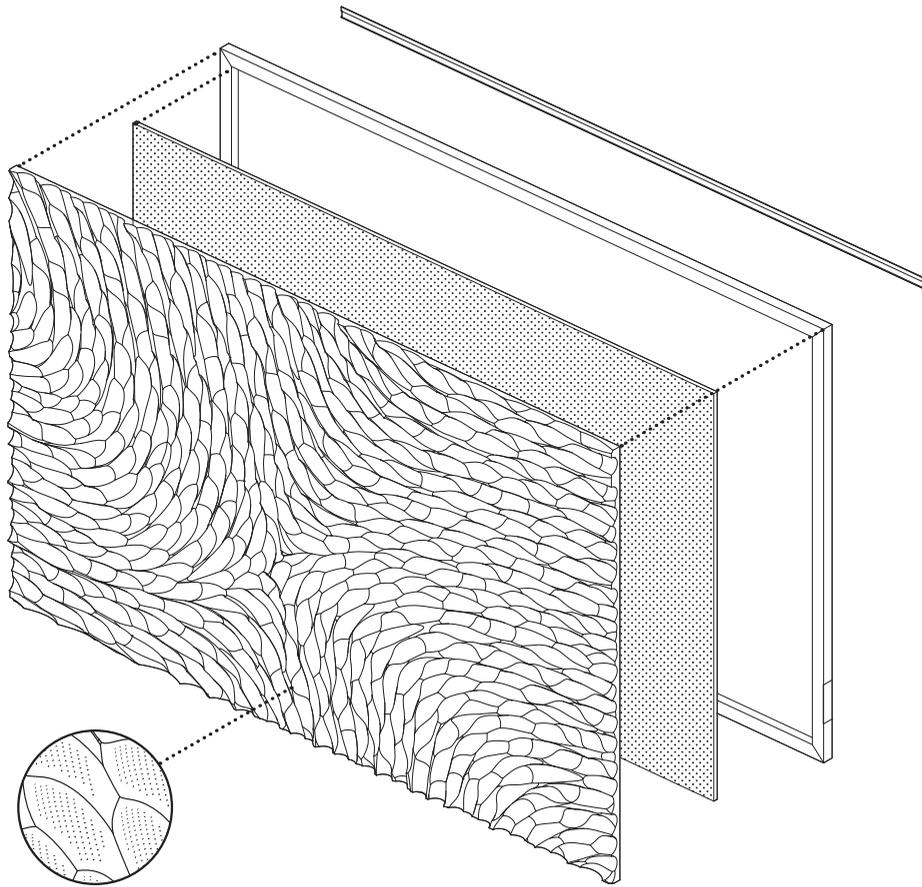
44

45



All formats can be combined with one another. The pattern is continuous across individual members of a set.

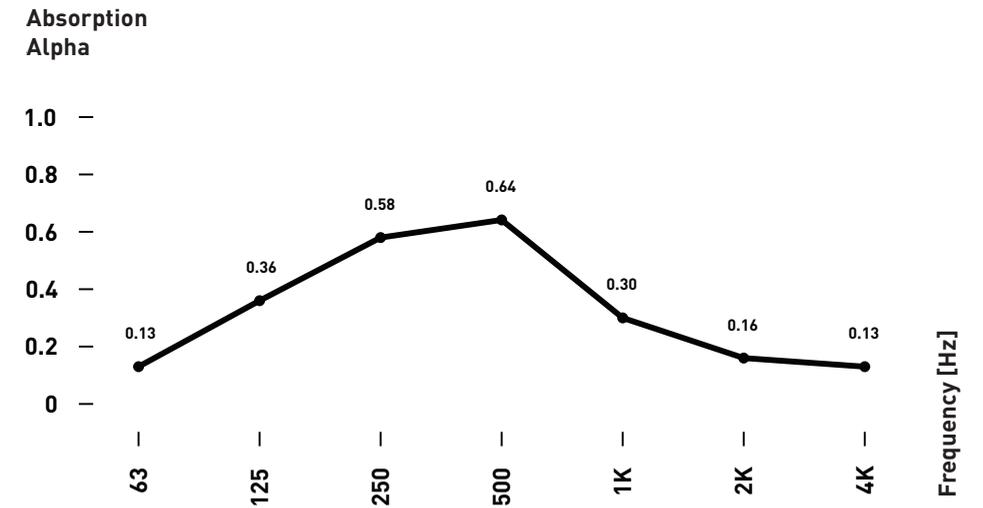
Acoustics



46

Wall panels are enclosed by a surrounding frame that is made of the same material as the surface. This frame ensures that the panel keeps its straight shape despite fluctuations in air humidity and room temperature. The frame encloses a cavity that offers space for acoustic insulation wool, which is needed for the perforated variants. It is closed off by a thin back wall. Wall panels can be hung on the wall like a painting using a rail system.

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The sound-scattering effect can be supplemented with absorbing properties by adding a hole perforation (pages 32-35) or micro-perforation (pages 26-29 and 38-39). Here the surface is punctured with a large number of microscopic holes that are largely invisible from a distance. Acoustic measurements show that the hole absorber is particularly effective in the lower speech range.

Projects

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Special projects require special solutions: We write tailor-made algorithms for individual projects, which consolidate concept, material properties, and production parameters. For manufacturing, we can rely on a high-quality network of local craftsmen and specialized planners.

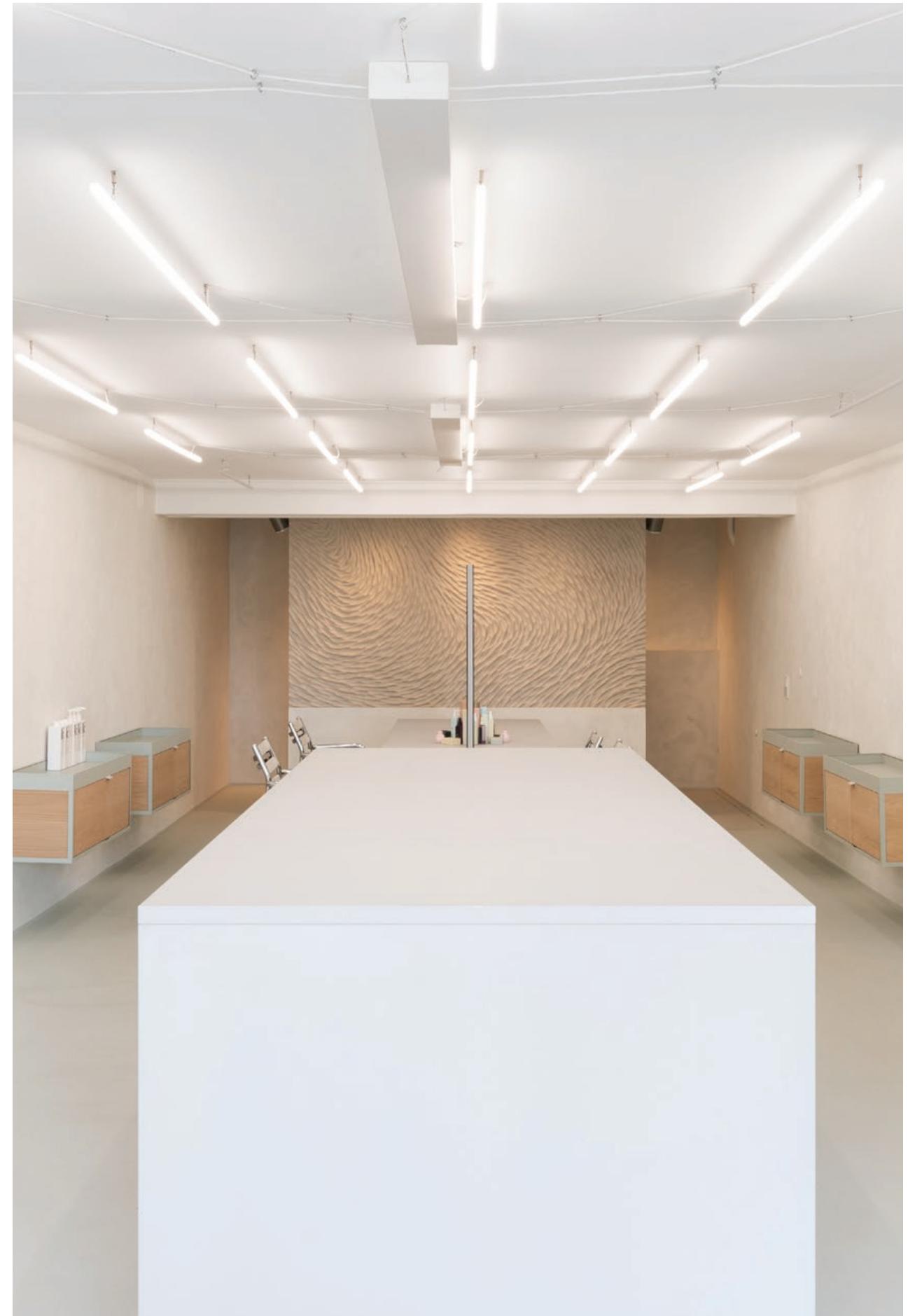
Hair Salon Cut Color Style

Structure *Formfeld 1* from Gypsum Fibre Board

Hair Salon Cut Color Style by Helmut Koller in Traunstein
Interior Architecture: AMU Architekten, Light: 507nanometer

50

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Wall Cladding
275 x 176 cm

Gypsum Fibre Board
Natural

Structure
Formfeld 1

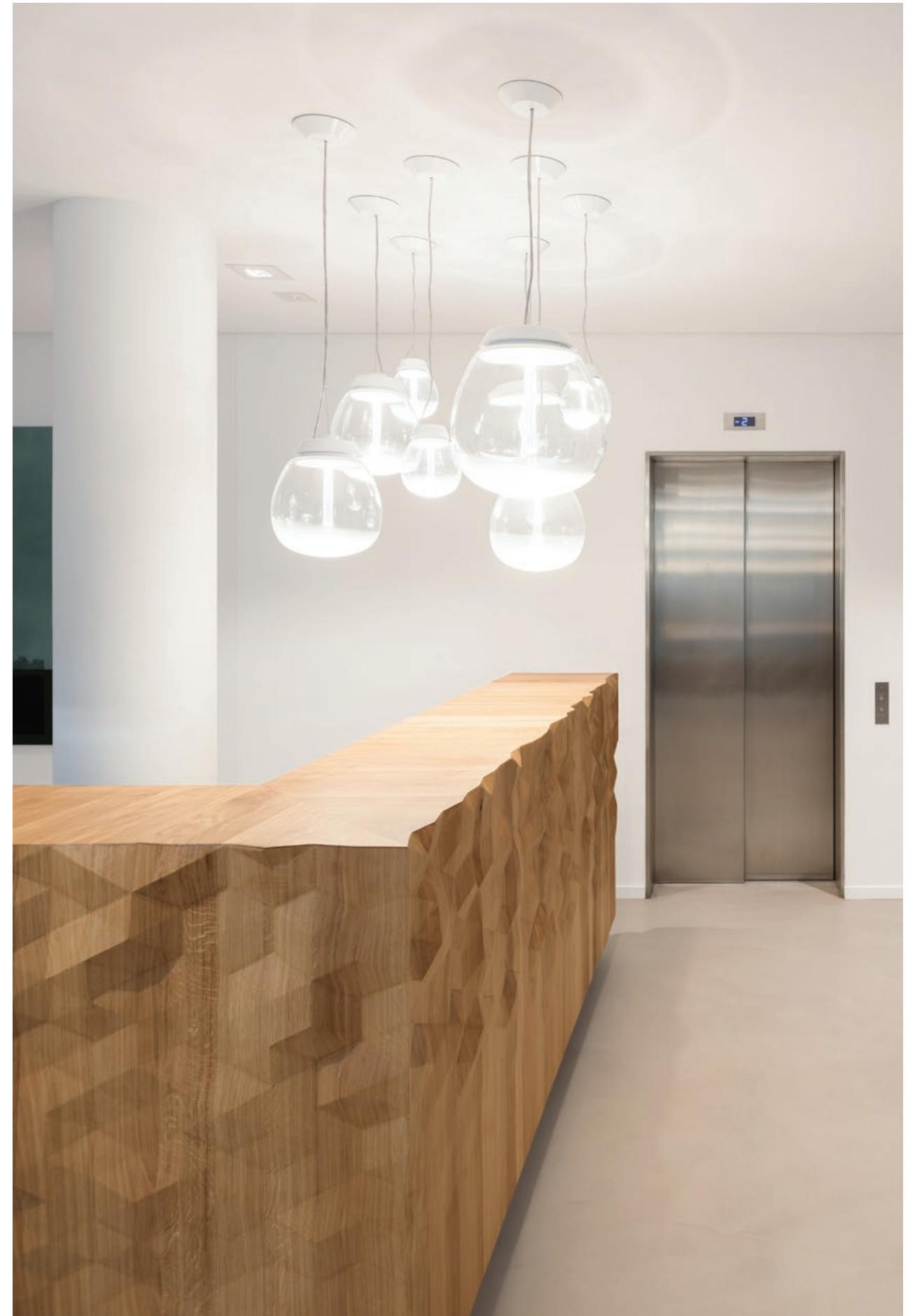
Zirngibl Lawyers

**Triangulated surface reliefs for a reception counter
and media furniture made of solid oak**

**Zirngibl Lawyers Munich
Interior Architecture: Studio Knack**

52

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Reception Counter
250 x 530 cm

Oak
Lacquered & Hand Polished

Structure
Formfeld 2





Oak
Lacquered & Hand Polished

Structure
Formfeld 2

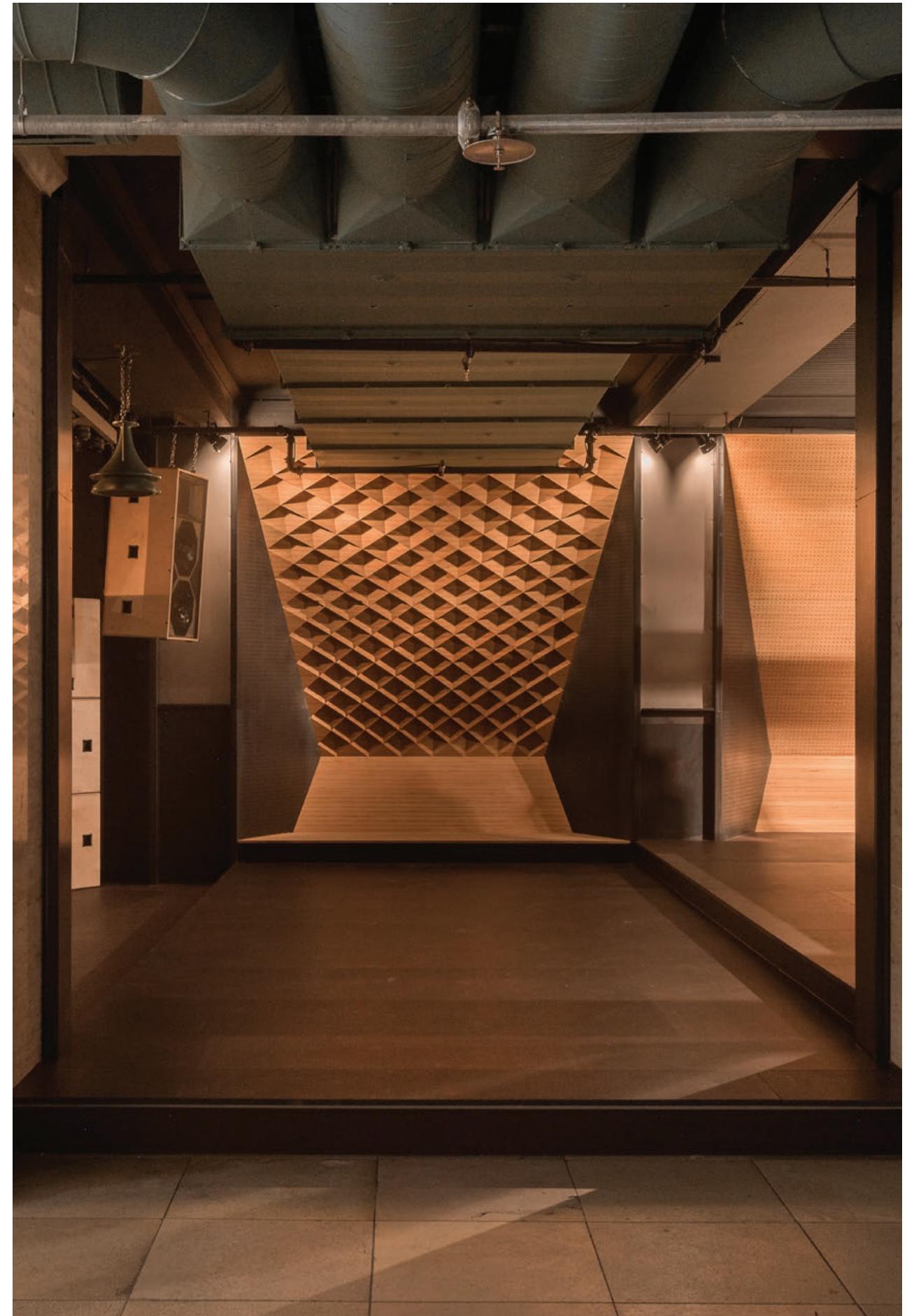
Blitz Music Club

Wall diffusers made of solid beech wood and Formfeld 1 claddings across multiple walls made of black MDF.

**Main and secondary floor of the Blitz Music Club in the former congress hall of the Deutsches Museum in Munich
Interior design with Studio Knack**

58

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Back Walls
6 x 300 x 270 cm

Pollmeier Baubuche
5-axis CNC machining, Oiled & Hand Polished

Structure
Formfeld 3





Structure
Formfeld 1

MDF Black
Lacquered & Hand Polished

Cladding across three walls
Continuous field-structure over 27 x 1,9 meters

Perforated
Absorber



Structure
Formfeld 1

MDF Black
Lacquered & Hand Polished

Cladding across three walls
Continuous field-structure over 27 x 1,9 meters

Perforated
Absorber

Neko Club

Triangulated wall reliefs made of black MDF

Music Club on the 17th and 18th floor of the Bahnhofsturm
in Freiburg i.Br. - Video projection by 507nanometer

66

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MDF Black
Lacquered & Hand Polished

Structure
Formfeld 4



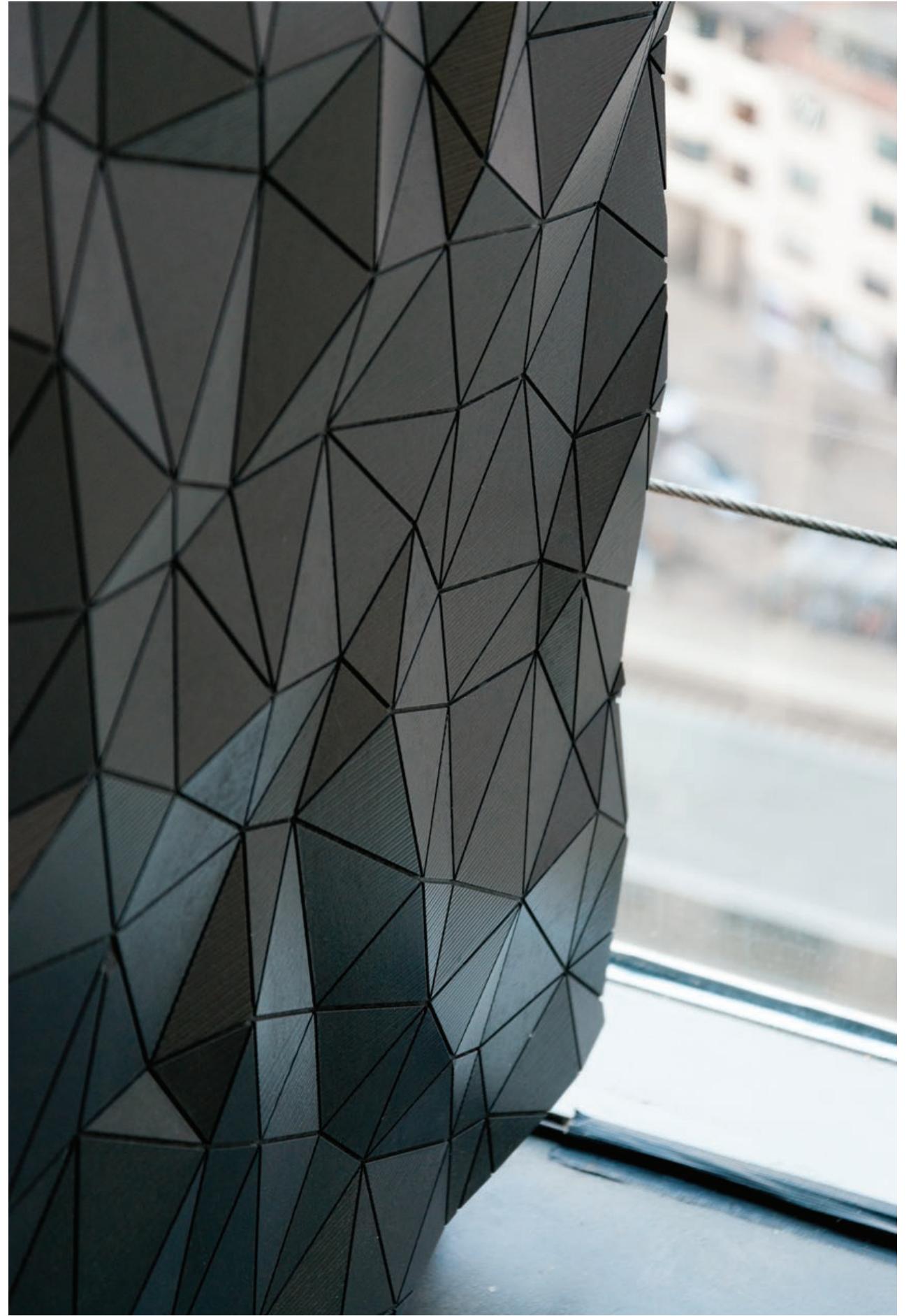
Main Wall
600 x 170 cm

MDF Black
Lacquered & Hand Polished

Structure
Formfeld 4



70



71

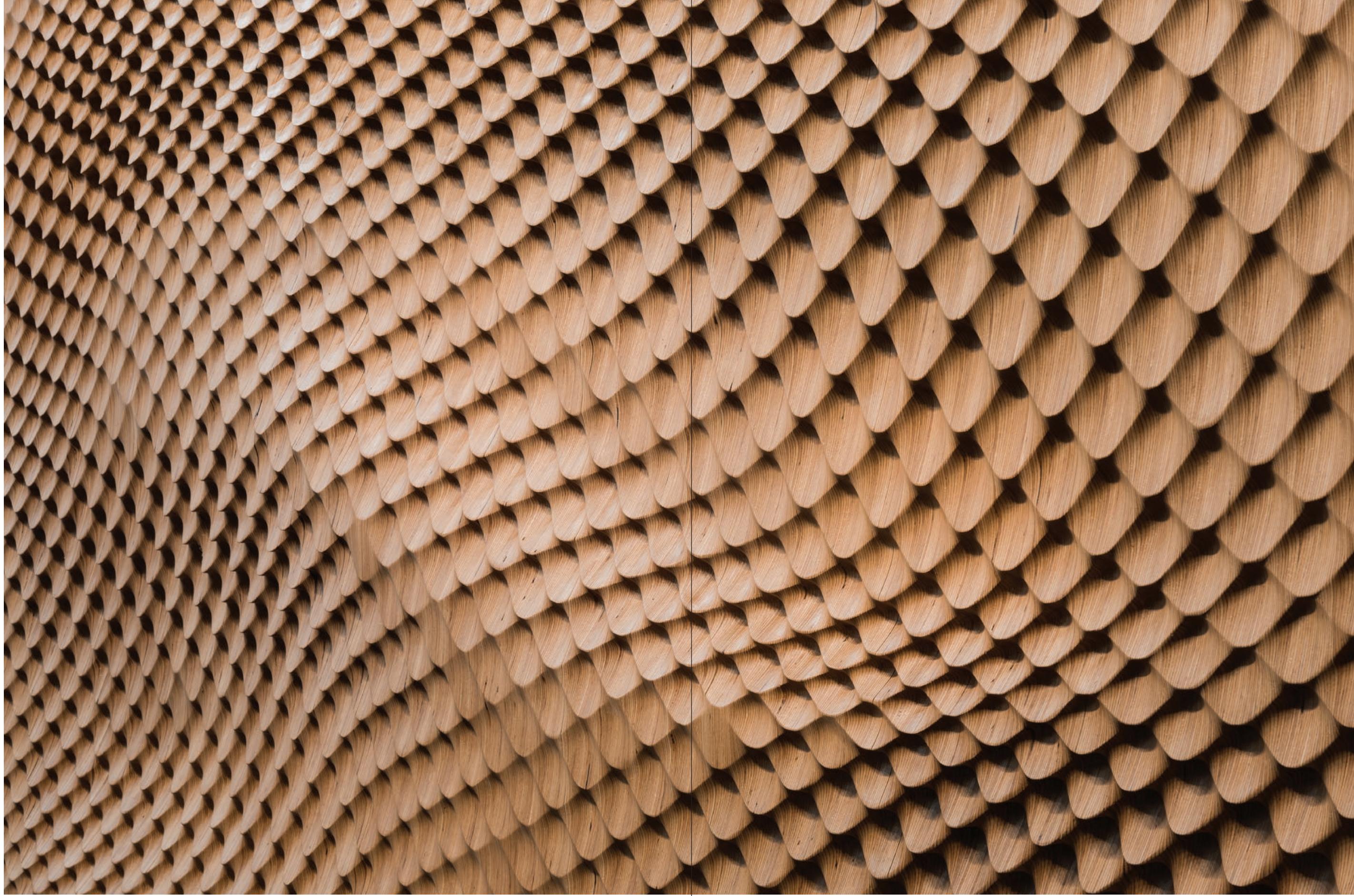
Pollmeier

Parametric, modular wall structure as a demonstration object for five-axis machined “Baubuche” by Pollmeier. Shown at Holzhandwerksmesse 2018 in Nuremberg and Dubai Hotel Show 2019.

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About

Formfeld structures have been developed by Vorhammer Computational Design since 2016. The fascination for mathematical structures found in nature and the background of Simon Vorhammer in the areas of parametric architecture and digital manufacturing gave the impetus for the design of these algorithmic surfaces. Simon's motivation lies in creating synergies from opposites: design and function, complexity and minimalism, digital manufacturing and traditional carpentry.

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