Linda

Suchanová

DESIGN OF A MODULAR ALUMINUM CHAIR

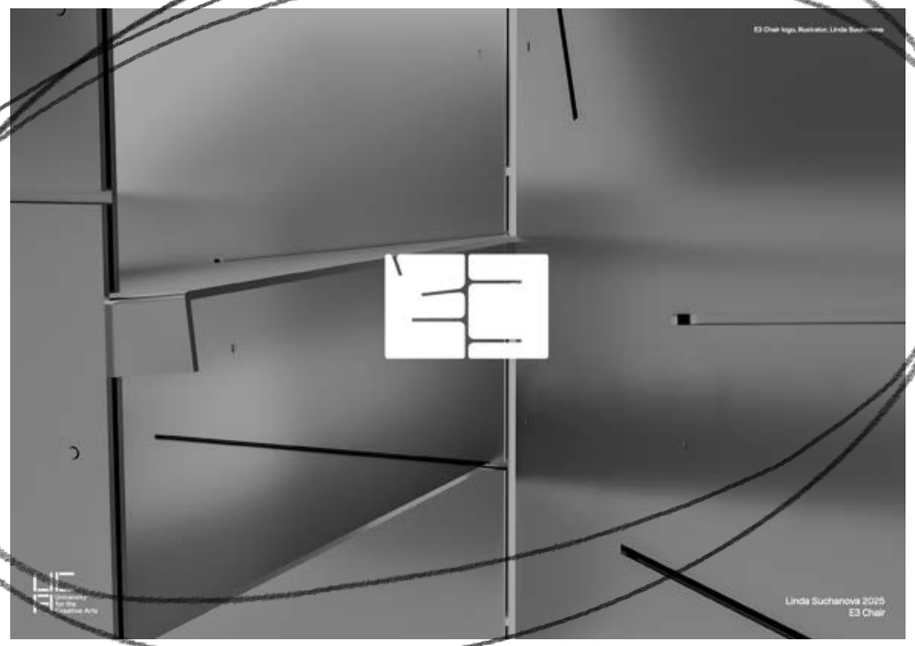


Fig.1. Screenshot of the first portfolio, Linda Suchanová

This portfolio centers around the idea of designing a piece of furniture that stands out as a statement yet remains timeless and adaptable enough to fit into any interior. I wanted to create something bold—but not loud—visually unique, but still functional, compact, and suitable for frequent relocation.

Inspired by my own experience of moving often, I recognized a gap in the market: most portable or modular furniture lacks character, while most design-forward furniture is difficult to move or adjust. My goal was to merge these qualities—to design a piece that is both sculptural and practical, capable of lasting through time, spaces, and emotional connections.

Material choice and surface finish played a key role. I chose aluminium for its lightness, recyclability, and potential for texture and finish. Through sanding, pattern-making, and experimentation, I explored ways to give the metal surface a distinct, evolving identity—something that could age beautifully and feel personal to the user.

This project is not just about mobility—it's about creating a meaningful, expressive object that enhances any room, while being light, modular, and easy to live with. A piece that moves with you, but never fades into the background.

PREVIOUS PORTFOLIO OVERVIEW I.

PREVIOUS PORTFOLIO OVERVIEW II.

1.

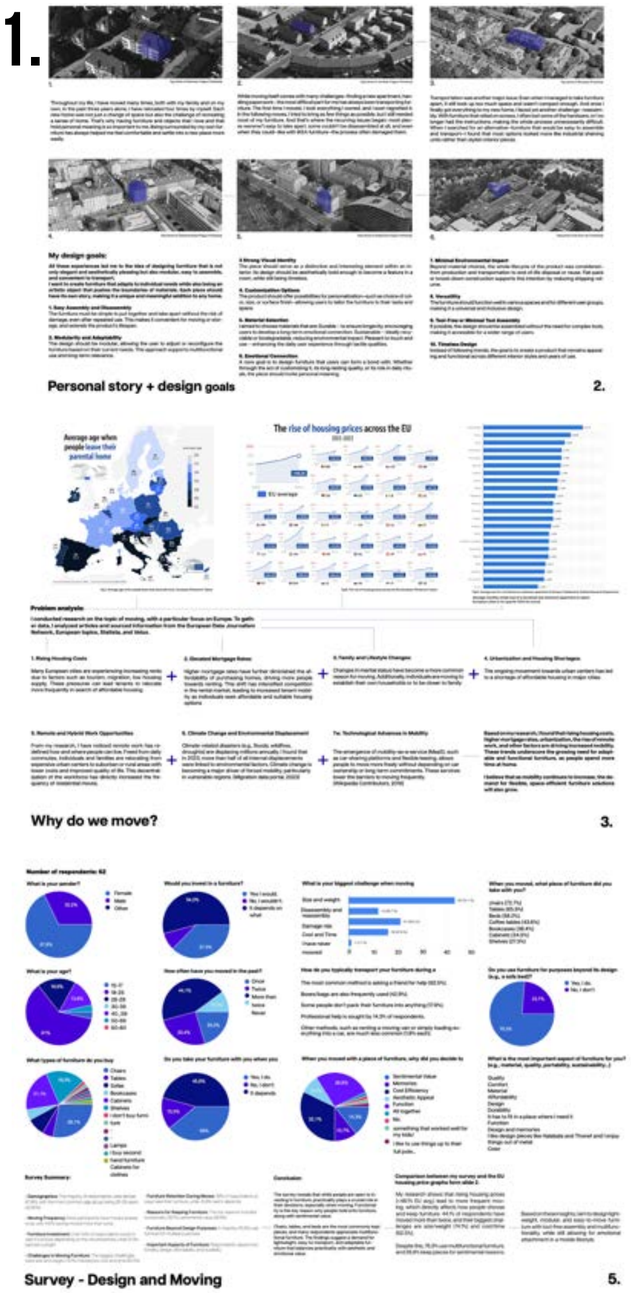


Fig.2. Screenshots of slides from the first portfolio I. , Linda Suchanová

In this part of the portfolio, I explored the topic of moving—both through my own experience and a survey. Frequent relocations led me to question why people take certain furniture with them. The research showed that weight, size, and emotional value are key factors. These insights inspired me to design furniture that is ,easy to transport, and personal enough for people to want to keep it.

2.

Fig.3. Screenshots of slides from the first portfolio II. , Linda Suchanová

In these slides, I focused on finding the ideal material for my design. I compared several options—wood, plastic, textiles—but concluded that metal, specifically aluminium, is the most suitable. It's lightweight, durable, recyclable, and easy to process, making it perfect for furniture that needs to be moved often.

I then explored metal in more depth, researching production methods, surface treatments, and possibilities for recycling or using waste materials.

3.

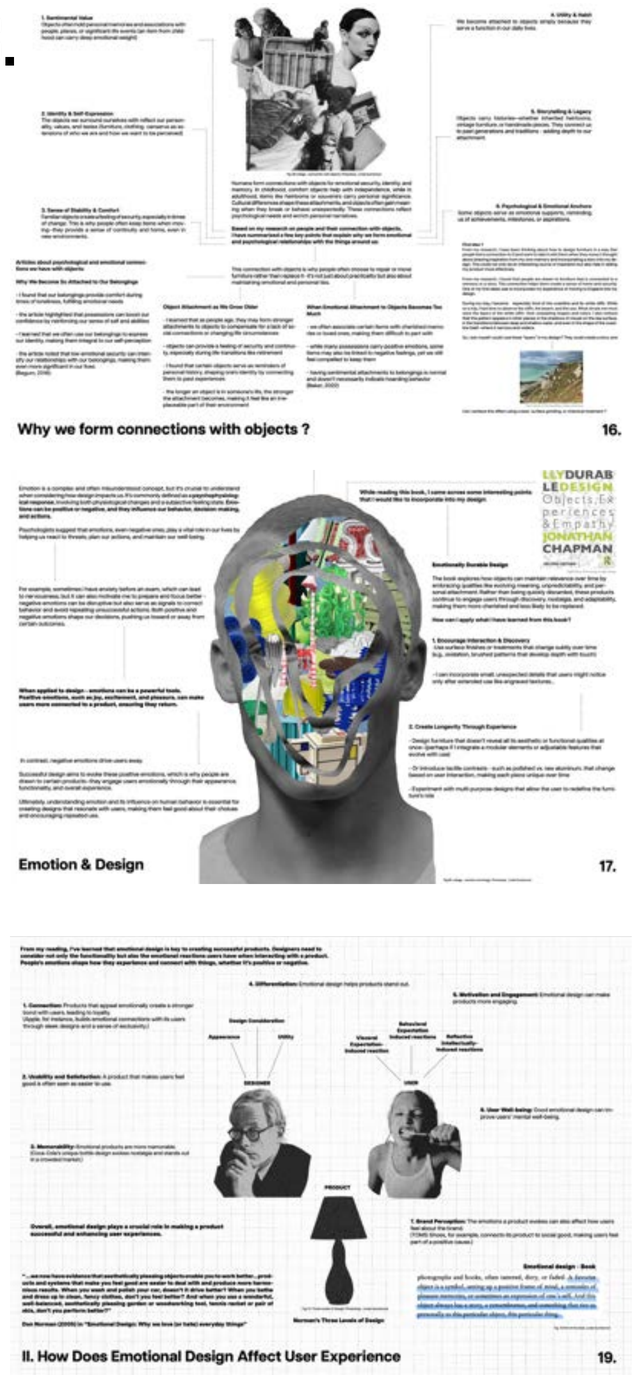
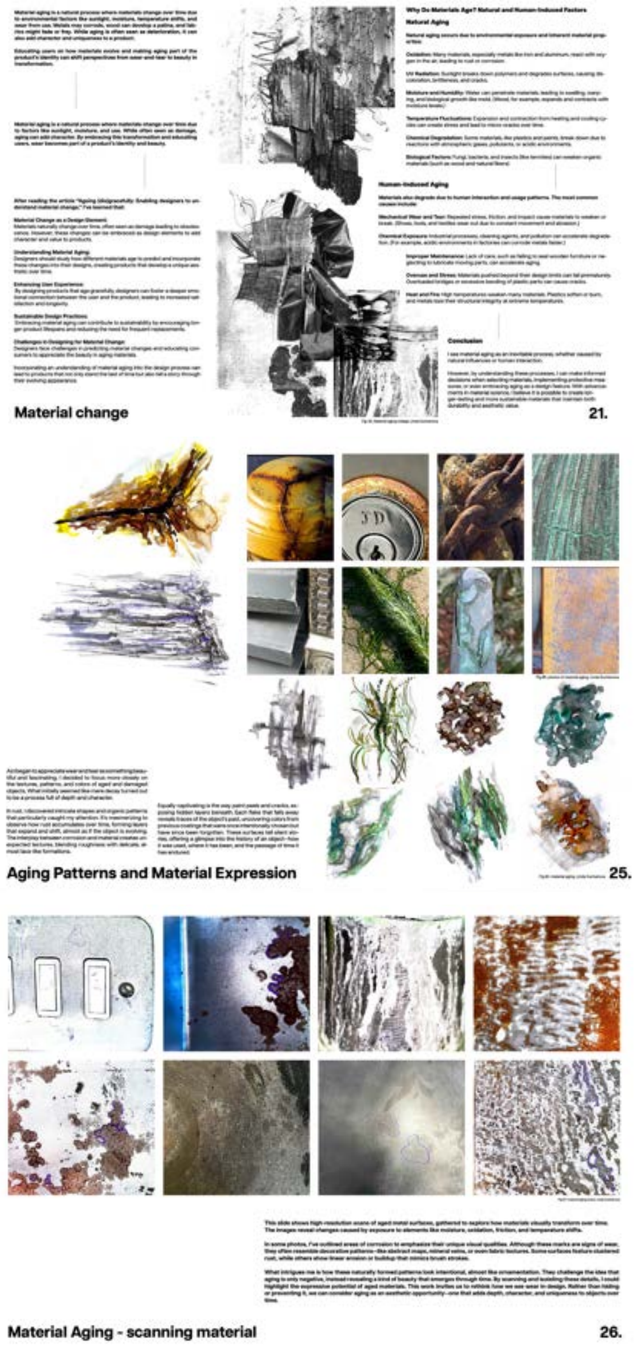


Fig.4. Screenshots of slides from the first portfolio III. , Linda Suchanová

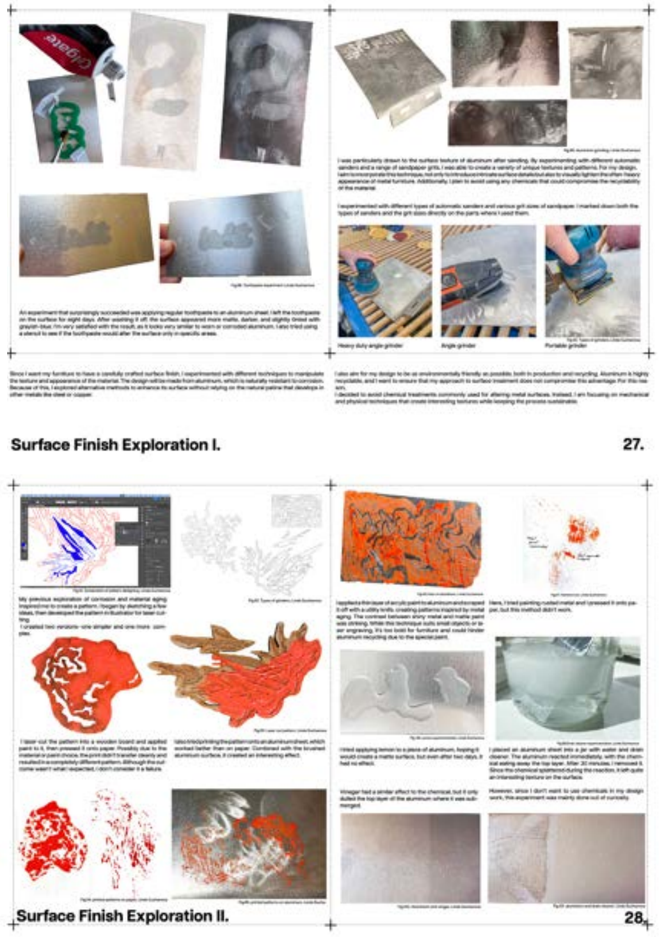
In these slides, I explored the emotional connection people form with furniture. I looked into why certain pieces become meaningful—through memories, identity, routine, or a sense of comfort. My research showed that people often keep furniture not just for its function, but because it carries personal stories. This led me to consider how design can support emotional attachment—through customization, aging surfaces, and storytelling—so that furniture becomes more than just an object, but something users truly want to keep.



4.

Fig.5. Screenshots of slides from the first portfolio IV. , Linda Suchanová

In these slides, I focused on how materials change over time and how this natural aging process can add character to a product. I explored how factors like touch, sunlight, and moisture affect surfaces, especially metals, and how these changes can be embraced rather than hidden. Instead of seeing wear as damage, I looked at it as a way to create deeper emotional connections. This inspired me to experiment with surface textures that evolve with use—adding uniqueness, storytelling, and long-term value to the furniture.

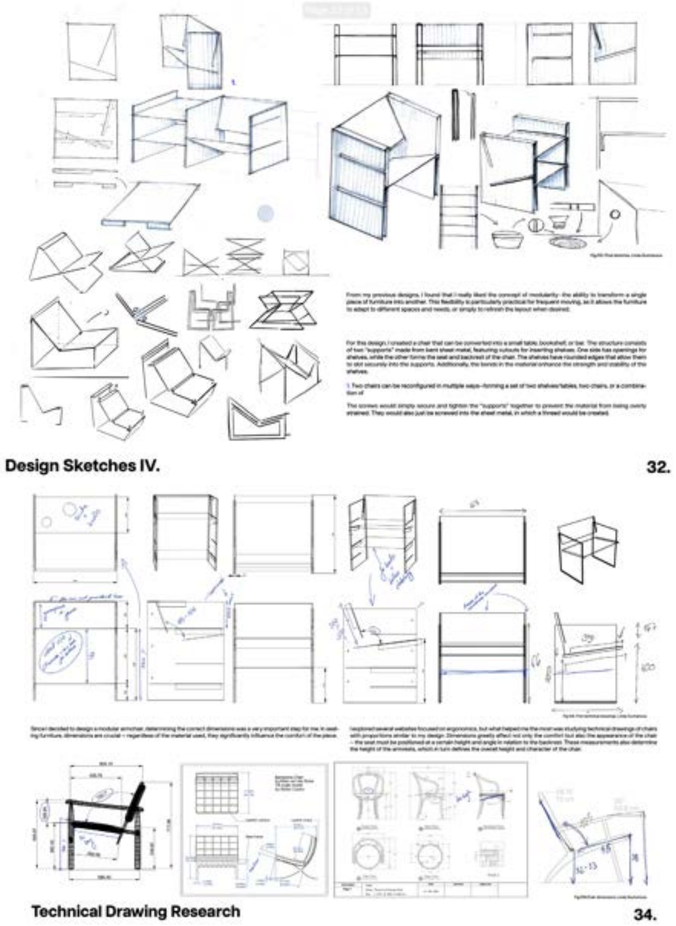


5.

Fig.6. Screenshots of slides from the first portfolio VI. , Linda Suchanová

In these slides, I focused on testing different surface treatments to explore how I could give aluminium a distinct and expressive finish. I experimented with sanding, grinding, toothpaste, vinegar, and laser-engraved patterns—avoiding chemical treatments to keep the process sustainable and recyclable. These tests helped me understand how subtle textures and surface changes can add depth and individuality to the furniture

These slides highlight my initial visual thinking and experimentation with form. I developed a range of modular, adaptable furniture concepts—such as stackable chairs that double as shelving, adjustable bookcases, and sculptural storage elements. My goal was to design pieces that are both practical and expressive, capable of changing with the user's needs while maintaining a strong and unique visual identity.

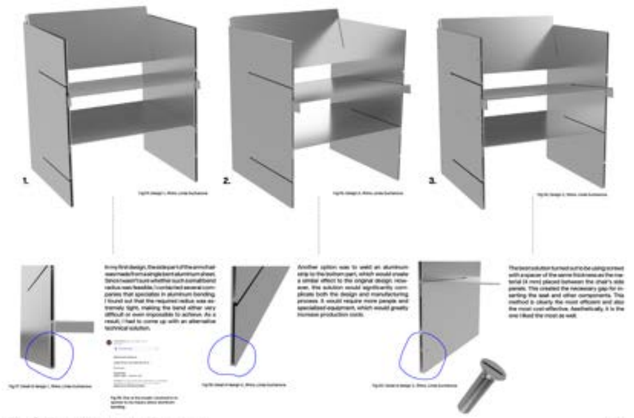


6.

Fig.7. Screenshots of slides from the first portfolio VII. , Linda Suchanová

These slides document the development of my chair design, starting with refining its form, proportions, and assembly logic to create a piece that is both sculptural and functional. I then built a 1:1 model to test stability, and the practicality of the construction in real scale. Finally, I explored surface treatment and pattern creation on aluminium.

7.



Chair Development Process 36.

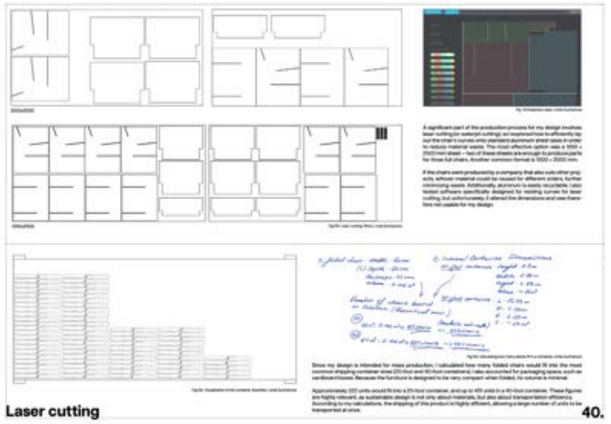
1:1 Model 38.

Surface Treatment: Pattern Creation & Aging Behavior 39.

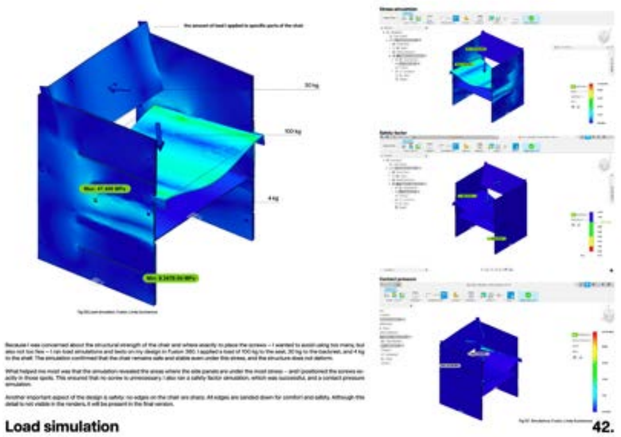
Fig.8. Screenshots of slides from the first portfolio VIII. , Linda Suchanová

This part of the project focuses on the technical refinement and user adaptability of the design. I plan to use laser cutting to produce precise aluminium components, allowing for clean joins, efficient production, and easy assembly. Load simulations helped me test the chair's structural performance and validate the strength of the design under pressure. I also explored customisable upholstery concepts—developing ideas for soft elements that could be added or adjusted to suit different user preferences, enhancing both comfort and personal connection to the piece.

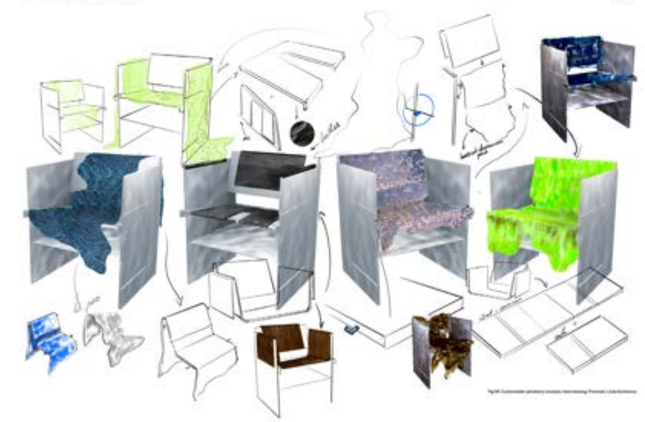
8.



Laser cutting 40.



Load simulation 42.



Customizable upholstery concepts 46.

Fig.9. Screenshots of slides from the first portfolio IX. , Linda Suchanová

I. Scene renders + what makes this chair innovative 44.

II. Scene renders + Chair concept and use 45.

9.

Fig.10. Screenshots of slides from the first portfolio X. , Linda Suchanová

This section presents the final concept of the chair within real-life settings, showing how it fits naturally into different interior environments while still standing out as a strong visual element. The design balances sculptural form with practical features like modular construction, tool-free assembly, and lightweight materials. What makes this chair innovative is its adaptability—both visually and functionally.

WHAT I HAVE LEARNED FROM THIS PROCESS

1.

The Emotional Side of Design Matters Deeply

I learned that people often keep furniture for emotional rather than practical reasons—especially when it holds memories or personal meaning.

Emotional design—triggered by surface wear, customisation, or storytelling—can greatly increase a product's longevity.

2.

Material Choice Shapes Experience

I discovered aluminum is ideal for my purpose because it's lightweight, durable, recyclable, and allows for easy forming and processing without excessive tools.

I explored multiple surface treatments (e.g. sanding, anodising, chemical-free aging) and how they affect not only the look and feel but also the emotional connection to an object.

3.

Furniture Must Evolve with Lifestyle

My research into nomadic living and housing trends revealed a growing need for furniture that is mobile, adaptable, and multifunctional.

I realized that many users need furniture that is tool-free, compact, customizable, and stylish—without looking like industrial shelving.

4.

Modularity Enhances Value and Usability

Through sketches and prototypes, I learned how modularity can allow for transformation and adaptation of furniture over time and across different spaces.

Modularity also encourages creativity, which fosters a deeper bond between the user and the object.

5.

User Research Informs Real Needs

My survey confirmed that many people move frequently and value lightweight, easy-to-disassemble furniture.

It also highlighted that emotional connection, design, and practicality are key reasons why people keep furniture.

6.

Design Can Embrace Material Aging

I now see aging not as damage, but as a potential design feature that adds depth, uniqueness, and beauty to objects.

By studying material wear, corrosion, and surface change, I learned how to work with time, not against it.

7.

Hands-On Research is Crucial

Visiting metal workshops and plexiglass studios gave me a real sense of how materials behave and how designs must adapt to technical constraints.

This practical exposure helped me refine my design for manufacturability and aesthetics.

8.

Surface Treatment is a Powerful Design Tool

I explored both mechanical and chemical surface techniques (toothpaste, drain cleaner, sanding, pattern printing).

These experiments showed me how texture, reflectivity, and even imperfection can all communicate emotion and narrative.

9.

My Design Voice Emerged

I developed a clearer idea of what I want my design to express: a balance between elegance and utility, softness and structure, material honesty and emotional storytelling.

Fig.1 photo of Gurtler workshop, Linda Suchanova

FABRICATION PREPARATION

PROJECT GOALS & FABRICATION SITE EXPLORATION

My goal with this design was to create a fully functional, full-scale (1:1) model.

It had to be life-size because otherwise I wouldn't be able to test the chair by sitting on it and evaluating its comfort. I also designed the chair to be simple enough for either one-piece production or mass production.

I decided to produce the model in the Czech Republic due to material costs and, after speaking with the technician at the university workshop, I found out that they didn't have the necessary machines to manufacture the chair.

For this reason, I began searching for companies that could laser-cut and bend aluminum to realize my design.

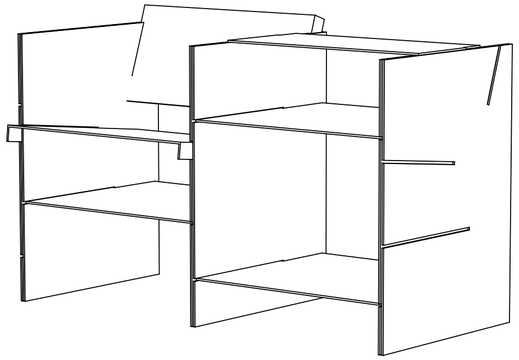


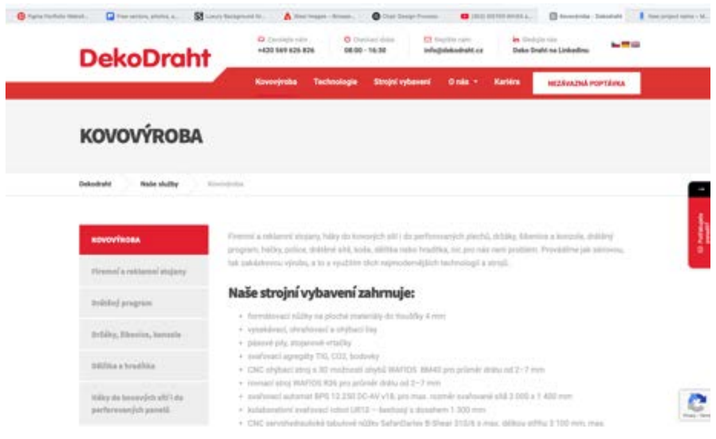
Fig.1. Furniture in line I., Illustrator,Linda Suchanová

I came across several companies offering these services, but I also decided to consult friends and others with experience working with aluminum to find the most suitable option. My priority was to find a reliable processing company, as I had limited time to complete the model. Price and production quality were also important factors.

Eventually, I found a company called Gurtler, which was recommended to me. After some email communication, we agreed that they would produce my design.

Before the consultation, I had thoroughly prepared all the necessary documents, including technical drawings, so there was no need for any further adjustments afterwards. The only point the technician mentioned was the radius at the bending points, which would be slightly larger. However, I had anticipated this possibility and left enough tolerance in the design, so it did not pose any problem.

METAL FABRICATION:



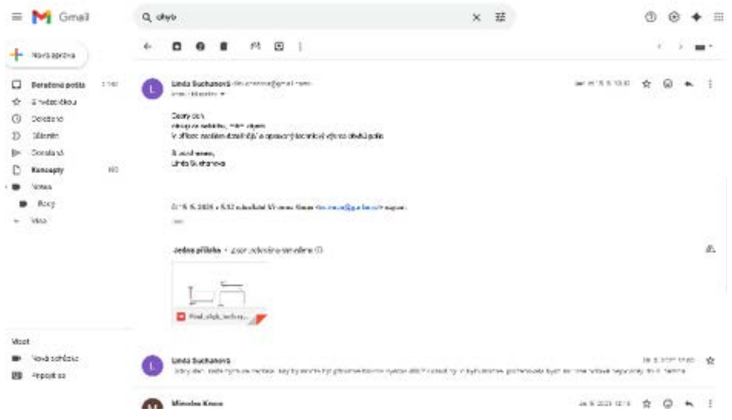
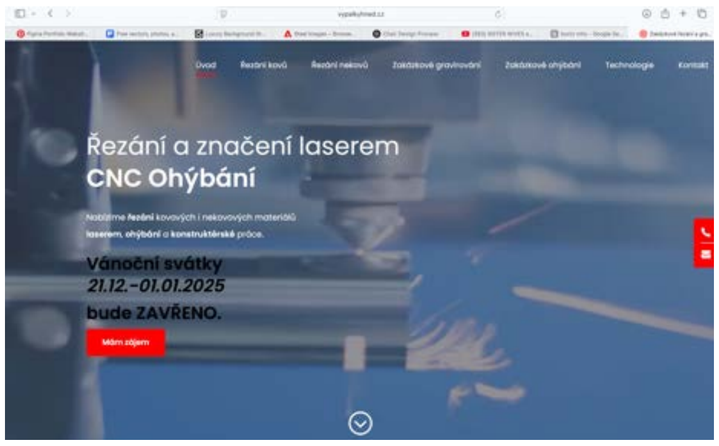
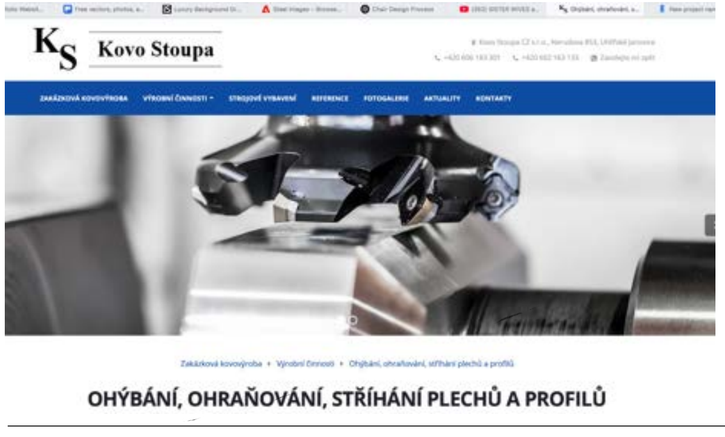


Fig.12. Communication with Gürtler ,Linda Suchanová





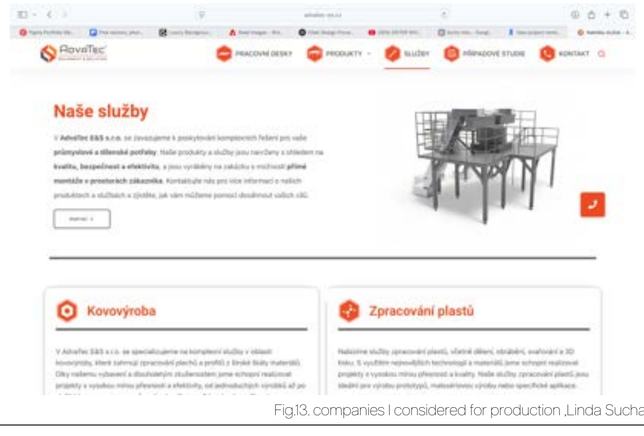
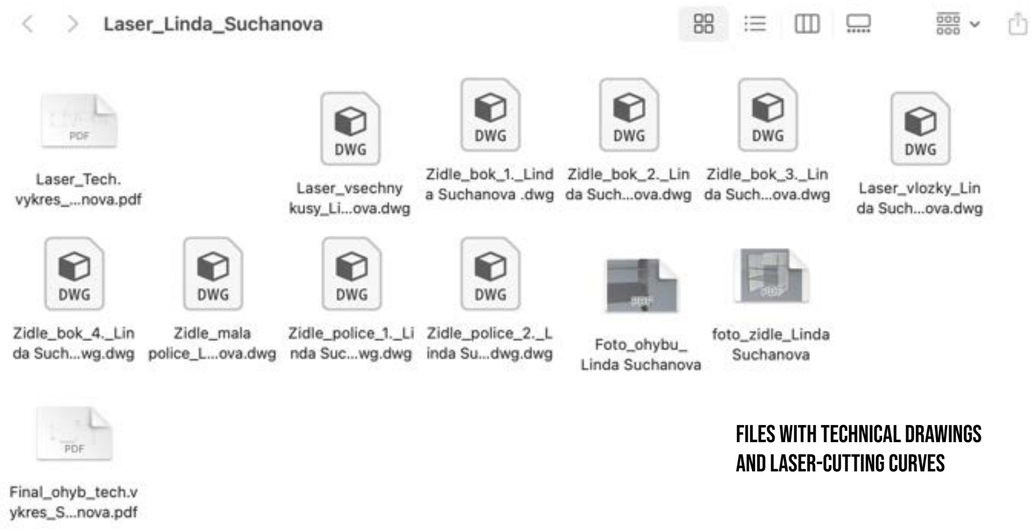


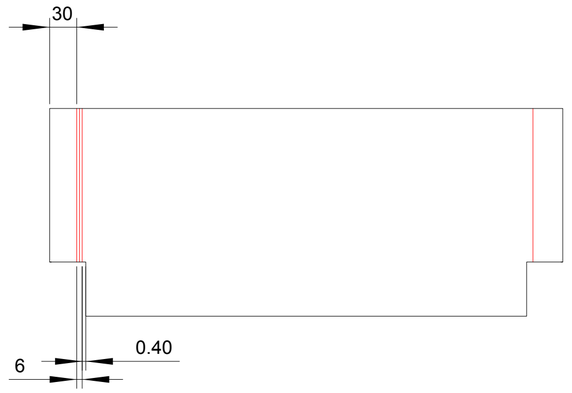
Fig.13. companies I considered for production ,Linda Suchanová

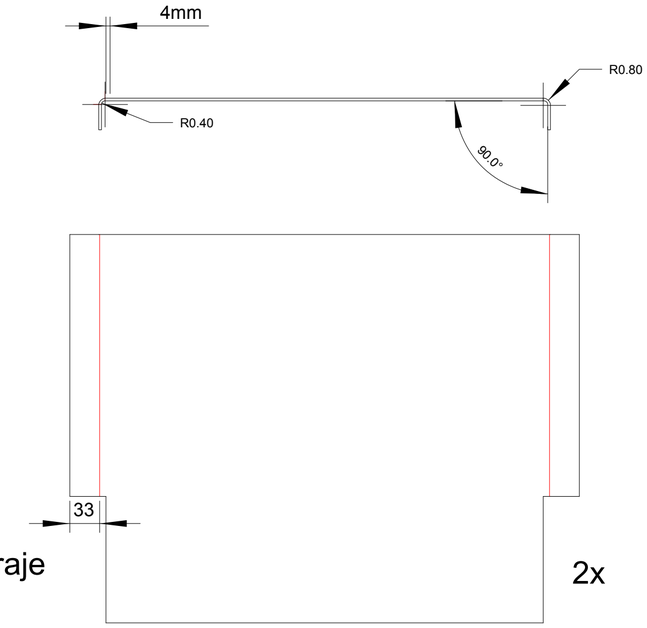
TECHNICAL DRAWINGS FOR PRODUCTION

After contacting the manufacturer, I sent them the technical drawings along with a specific drawing for the shelf bending.
I provided the drawings in both PDF and DWG formats, the latter being ideal for laser cutting.



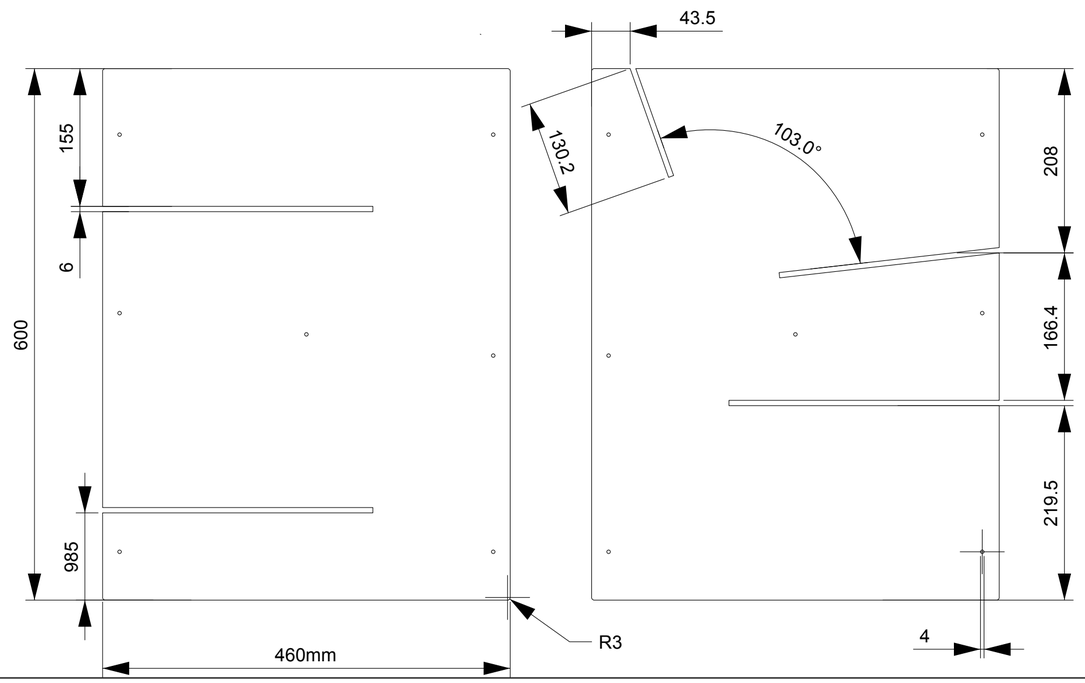
FILES WITH TECHNICAL DRAWINGS AND LASER-CUTTING CURVES

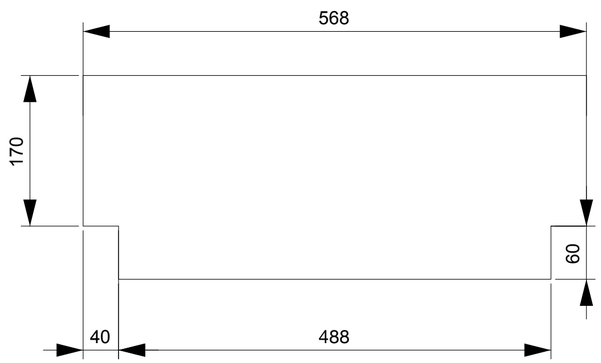


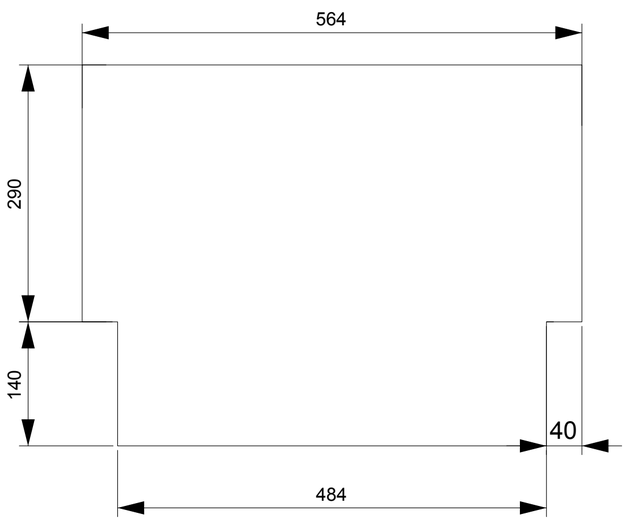


Střed ohybu 33mm od kraje

TECHNICAL DRAWING OF THE BEND



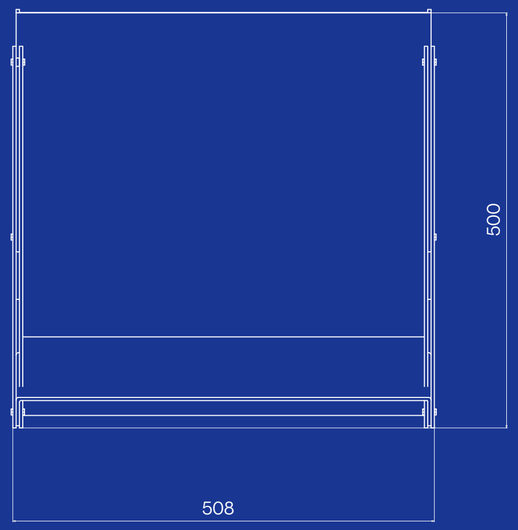


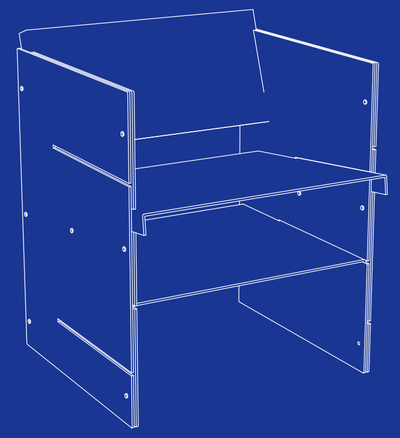


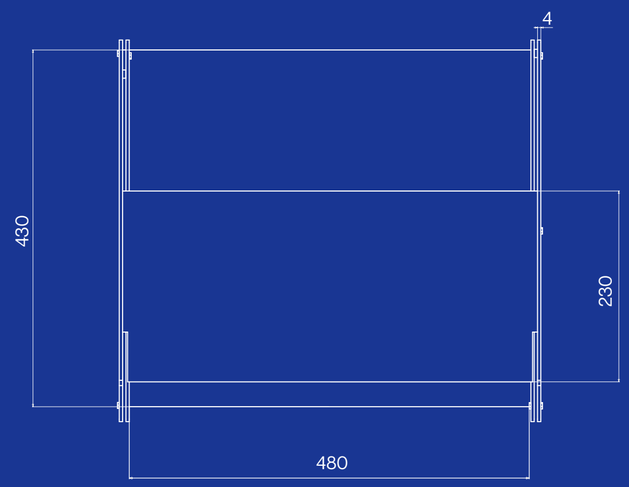
OVERALL TECHNICAL DRAWING

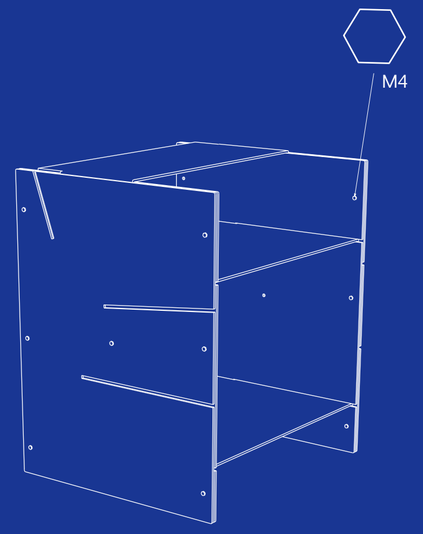
Fig.14. technical drawings and files with curves for laser,Rhino, Illustrator,Linda Suchanová

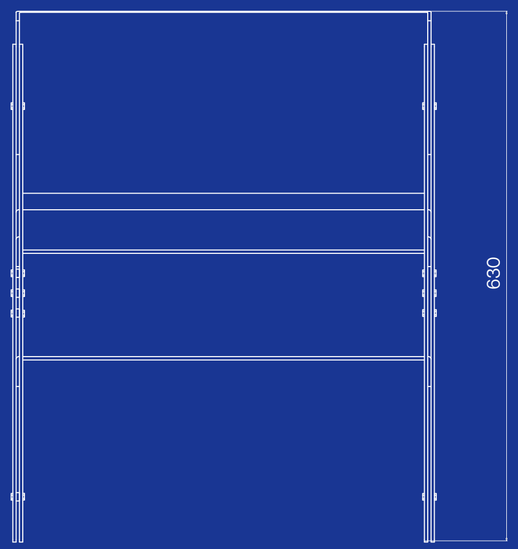
DETAILED TECHNICAL DRAWINGS

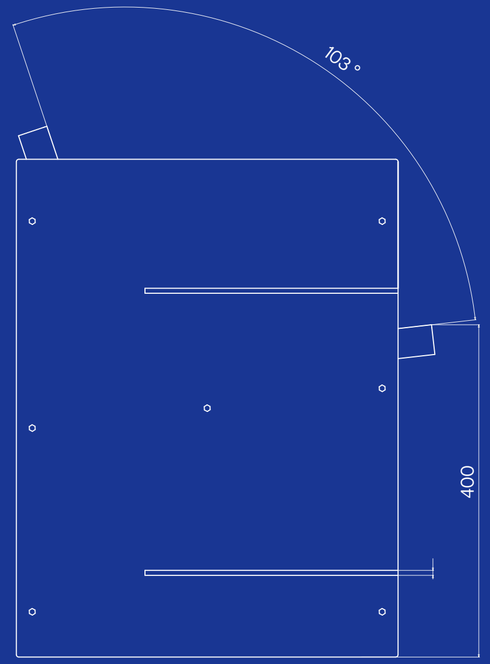


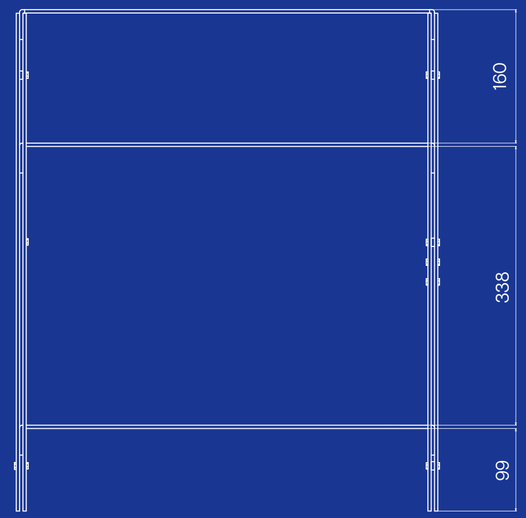












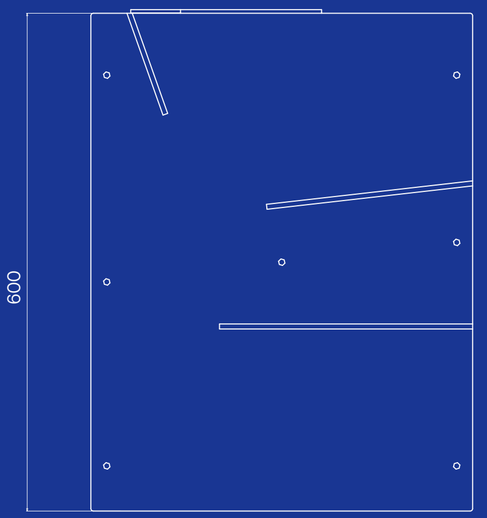


Fig.15. Final technical drawings, Rhino, Illustrator ,Linda Suchanová

FINAL RENDERS I.

Smart Structural Logic
The chair functions through a system of bent edges on the seat and backrest panels, which slide into the side supports. Once the sides are tightened using bolts, the entire structure is securely fixed—ensuring stability without the need for

Easy to Transport
The use of aluminum ensures strength while keeping the weight low. The parts can be transported in a compact flat-pack format, ideal for people who move frequently.

Aesthetic Versatility
The minimalist form, neutral metallic tones, and clean lines make the chair and shelf compatible with a wide range of interior styles—from contemporary to industrial.

Durability
Aluminum is a fully recyclable material. The chair is designed with longevity in mind, allowing for repeated use and easy repair, making it a long-lasting product.

Fig.16. Final renders I., Blener, Rhino ,Linda Suchanová

FINAL RENDERS II.

Expandable System
The chair and shelf can be easily joined together to create a high seating element, such as a bar or an elegant console. This flexibility allows users to adapt the furniture to different spatial or functional needs.

Emotional Durability
Beyond function, the design encourages users to form a long-term emotional connection through repeated use, transformation, and visual identity.

Visible Construction as Identity
The exposed joints and visible assembly method are not hidden, but celebrated. They highlight the structure and make the build process part of the furniture's personality.

Recyclability
Made entirely from aluminum and a small number of bolts, the design is 100% recyclable at the end of its life cycle—supporting a circular economy.

Fig.17. Final renders II., Blener, Rhino ,Linda Suchanová

1:1 MODEL MAKING PROCESS

Fig.18. 1:1 model making process,Linda Suchanová

MODEL MAKING I. LASER CUTTING

1.

Fig.19. material selection Linda Suchanová

The process began with selecting the right material. After careful research and material testing, I chose 4mm aluminum for the construction of the chair. This specific thickness offers an ideal balance between structural durability and visual lightness, ensuring the piece feels both sturdy and refined.

To confirm the material's suitability, I ran stress simulations in Fusion 360, which demonstrated that 4mm was optimal for withstanding daily use without unnecessary weight or overengineering. These simulations allowed me to confidently move forward with the design, knowing the structure would perform reliably under typical loads.

2.

Fig.21. Laser cutting softwear, Linda Suchanová

3.

Fig.20. laser cutter, Linda Suchanová

Once the digital model was finalized, I prepared precise 2D curves and outlines for manufacturing. These files were then uploaded into the company's specialized laser-cutting software.

The fabrication was done using a high-powered industrial laser, capable of cutting through a wide variety of materials and thicknesses with exceptional accuracy. This technology ensured that each component was produced with clean edges and exact dimensions, allowing for seamless assembly later in the process.

4.

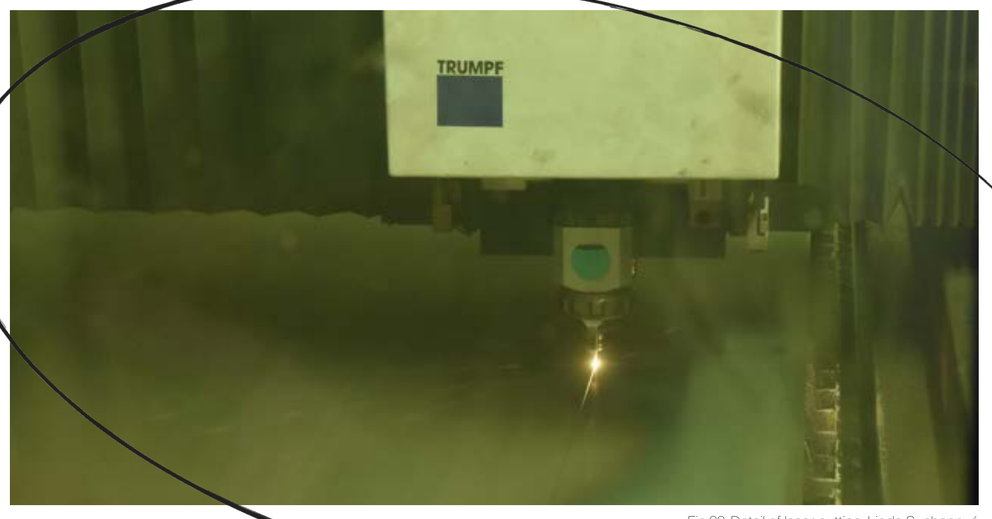


Fig.22. Detail of laser cutting, Linda Suchanová

MODEL MAKING II. BENDING

After the laser cutting was completed, the next step was bending the sides of the shelves (the seat part). For this process, they used special software that allowed them to set the exact angle of the bend. The workshop technician showed me the entire machine used for the bending process and explained how it worked.

In addition to the main parts, I also had small spacer plates laser-cut – these are placed between the side panels of the chair,
in the areas where the screws are tightened. These were made from the same 4 mm aluminum as the rest of the chair. With this step done, the chair was finished.

One small detail that isn't very noticeable, but is a bit of a shame, is that the corners at the bends developed slight cracks. This only happened on two pieces – one shelf remained in perfect condition. It's possible that the bending was done too quickly, which may have caused the material to crack.

If I were to produce the chair again, I would definitely ask them to pay extra attention to this detail. Aside from that, the overall production process was fast and reliable.

Even though I tried to be present during the actual manufacturing, unfortunately it wasn't possible. Still, it was very valuable to see the process and the machines that were used for the production.

5.

Fig.23. Softwear for metal bending, Linda Suchanová

6.

Fig.24. bending machine, Linda Suchanová

7.

Fig.25. detail bending machine, Linda Suchanová

8.

Fig.26. cracked bend part, Linda Suchanová

1. After bringing the individual parts of the chair home, I began researching what would be needed for surface finishing.

2. I wasn't sure what would be best for smoothing out the edges after laser cutting, as the edges of the chair were quite sharp and showed visible marks from the laser. I also needed to find the most efficient way to unify the surface finish of the aluminium.

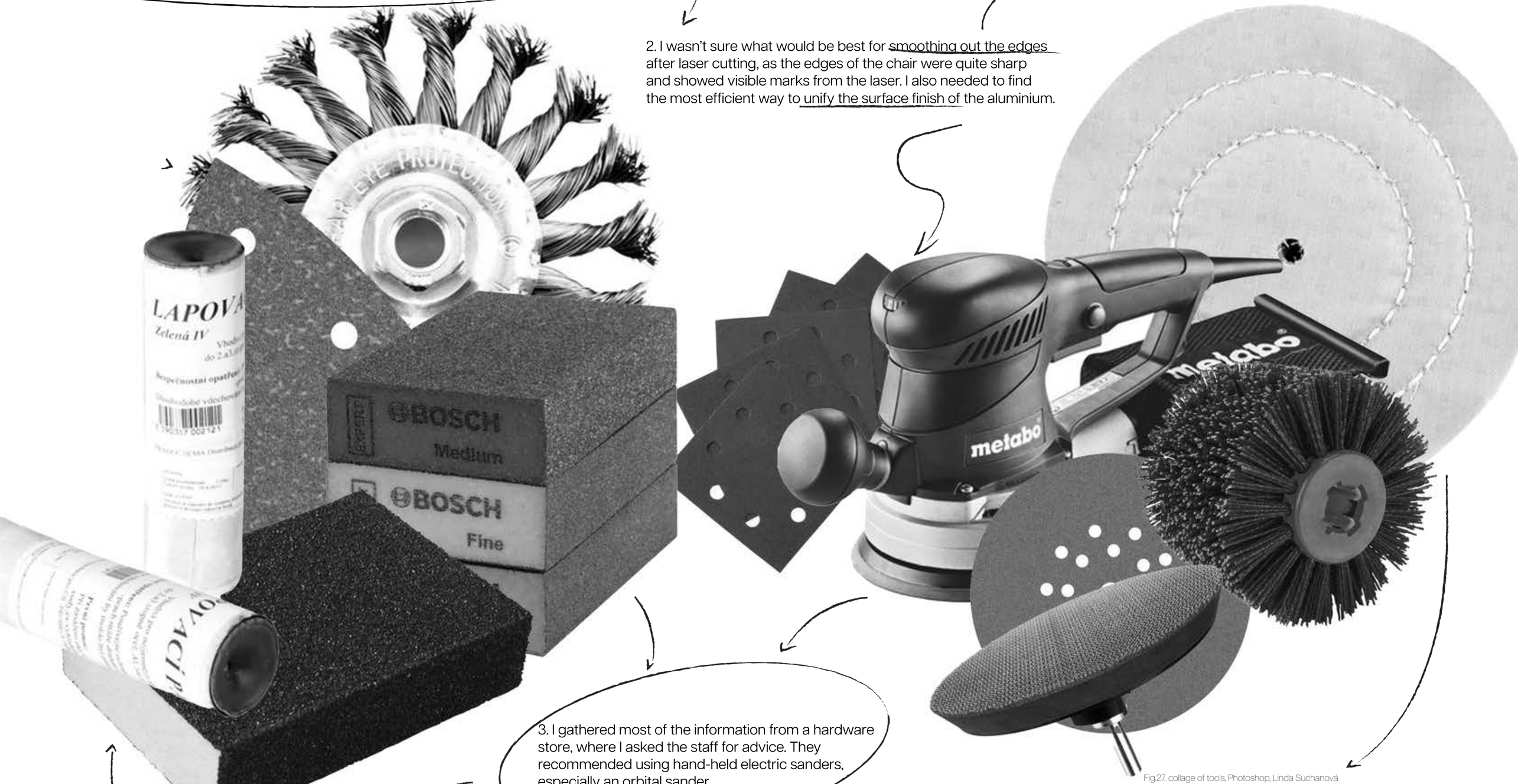


Fig.27. collage of tools, Photoshop, Linda Suchanová

3. I gathered most of the information from a hardware store, where I asked the staff for advice. They recommended using hand-held electric sanders, especially an orbital sander.

4. I also knew I would need several types of sandpaper, ranging from coarse to fine. Since I had worked with metal a few times before, I had a good idea of what tools and materials to choose.

5. What was new to me, however, were polishing pastes, which I wanted to use to create a specific pattern on the chair. I also discovered fabric polishing wheels that are used to buff the paste and give the surface a refined finish.

SURFACE FINISHING RESEARCH

Fig.28. Gurtler workshop, Linda Suchanová

After picking up the manufactured components from the GÜRTLER workshop, I brought the chair home and assembled it for the first time to see how the parts fit together and what the chair looked like as a whole. I also tried disassembling and reassembling it on a shelf to test the process. I found that all the parts fit well. The only issue I encountered was that inserting the components into each other was a bit difficult—but I knew this was because the edges hadn't been sanded yet.

Fig.29. First Assembly of the Chair, Linda Suchanová

I also had the chance to see what the chair would look like if the aluminium were completely polished. At first, I thought I might like the effect, but in the end, the high-gloss finish distracted too much from the shape of the chair.

Fig.30. polishing paste 1, fabric polishing wheel, Linda Suchanová

Based on a recommendation, I bought a polishing paste. However, when I first tried it, I realised it was too thick and difficult to work with, so I bought a second one that worked perfectly. I also got a fabric polishing wheel to use with the paste.

Fig.31. polishing paste 2. fabric polishing wheel, Linda Suchanová

For the larger sanding tasks, I borrowed an orbital sander and bought finer-grit sandpaper for it. To smooth and round off the edges, I purchased a special deburring knife, which was ideal for this purpose and had been recommended to me at the hardware store. Lastly, I needed quite a few sheets of fine sandpaper to smooth the edges and refine the surface finish.

SURFACE FINISHING TOOLS

Fig.32. orbital sander, Linda Suchanová

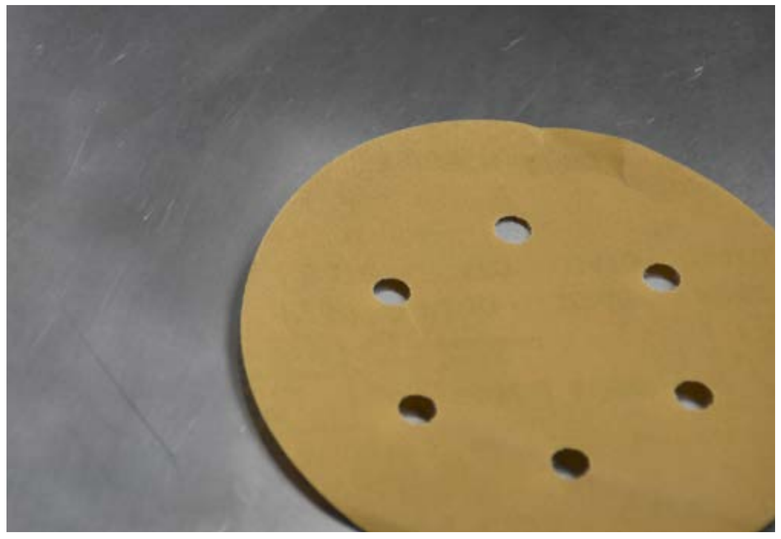
Fig.33. deburring knife, Linda Suchanová

Fig.34. sandpapers, Linda Suchanová

Fig.35. tools I Plan to Use, Linda Suchanová

EDGE ROUNDING AND SURFACE PREPARATION

I rounded the edges of each individual chair component using a special deburring knife. I wanted the edges to be more curved and softened, as even after the first cut, the improvement in the overall look of the chair was noticeable. Once all the edges were rounded, I needed to sand them so they would be perfectly smooth and pleasant to the touch.



To begin with, I used coarse sandpaper mounted on a firm backing block. This allowed me to refine the shape of the rounded edges while also removing the visible marks left by the laser cutting process. After shaping and evening out the surface, I switched to a fine sanding sponge, which gave the edges a completely polished and refined feel.

To achieve a uniform matte finish across the entire surface, and to remove deeper scratches that had formed when the laser-cut pieces were secured into the bending machine, I used a large orbital sander fitted with coarse-grit sandpaper. This process not only reduced the imperfections but also gave the aluminium a softer, more even texture that would serve as a good base for the next stages of finishing.

Fig.36. Edge Rounding and Surface Preparatione, Linda Suchanová

MAKING OF PATINA

Fig.37. Making of patina, Linda Sucharová

SURFACE JOURNEY

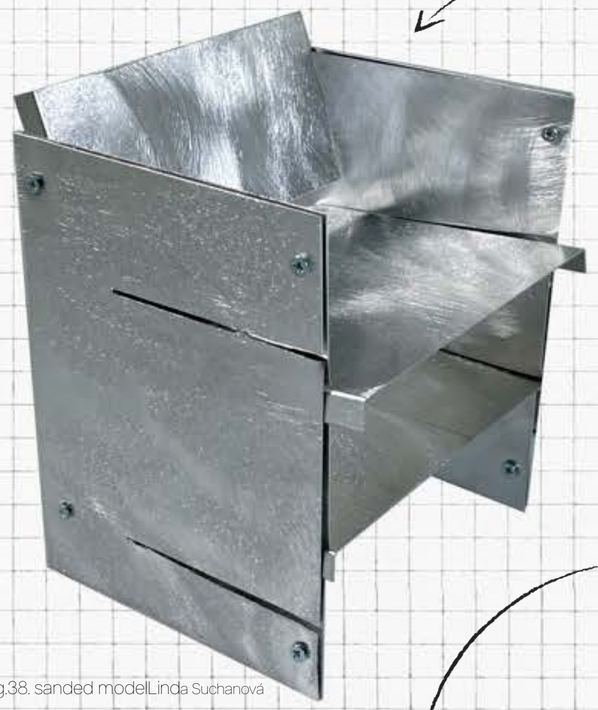


Fig.38. sanded modelLinda Suchanová

2.

When I assembled the chair for the first time, however, it was still unsanded and left with a glossy, mirror-like surface. Because both the chair and the shelving unit share a very minimalistic form, the reflections of surrounding objects in the polished aluminium unexpectedly overshadowed the silhouette itself. The result was that the chair appeared heavier and lost some of the elegance I had envisioned.

1.

When I was considering what surface finish the chair should have, I drew on the research and experiments I had carried out in the previous semester. From these, my initial idea was to create a distinctly organic, hand-sanded texture, inspired by corrosion and natural patina. I also wanted the signs of wear and use not to be a reason to replace the chair, but rather something that would enhance its character and appearance over time.

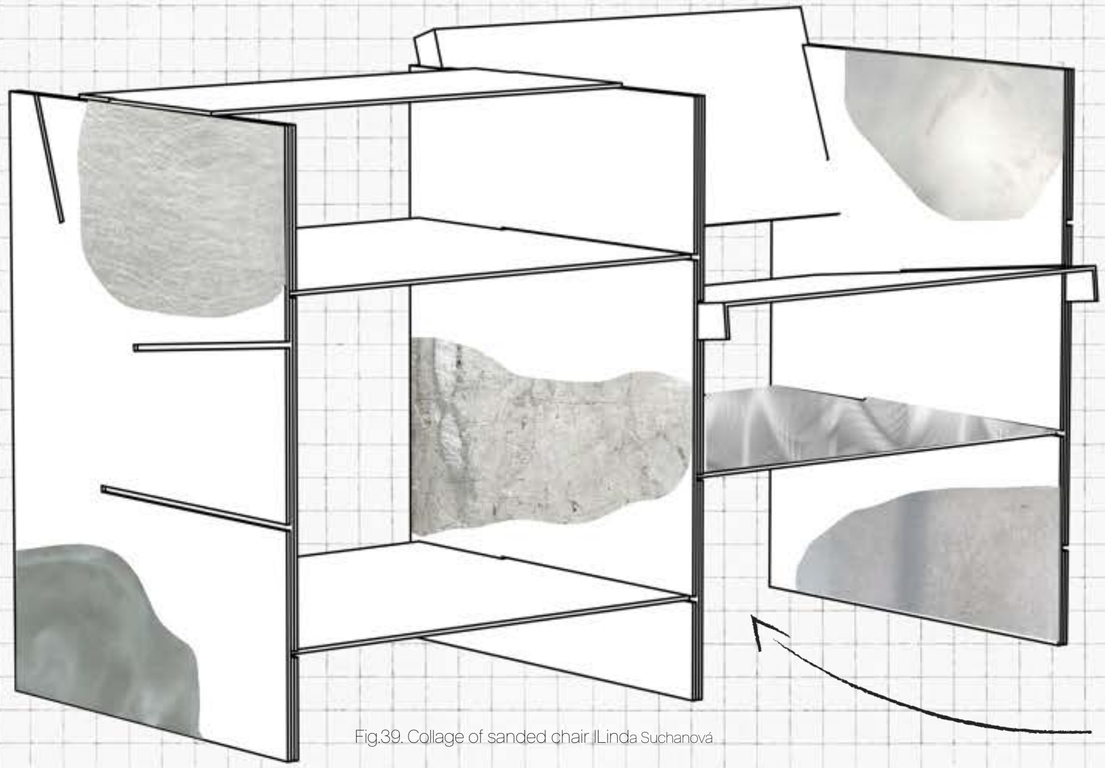


Fig.39. Collage of sanded chair ,Linda Suchanová

Fig.40. sanded render Blender, Rhino, Photoshop Linda Suchanová

3.

Although I had conducted thorough research, developed a clear concept, and carried out small-scale experiments, it was impossible to fully predict or test the final surface finish without having a full-scale 1:1 model in the actual aluminium I intended to use.

Every type of aluminium behaves differently, and this also has a strong influence on how it responds to sanding. I therefore knew that once I had the finished model in front of me and could test how the material reacted to the sanding process, my original idea would naturally evolve. These hands-on trials would ultimately determine how the final surface treatment would look, ensuring it complemented both the material and the minimalistic design in the best possible way.

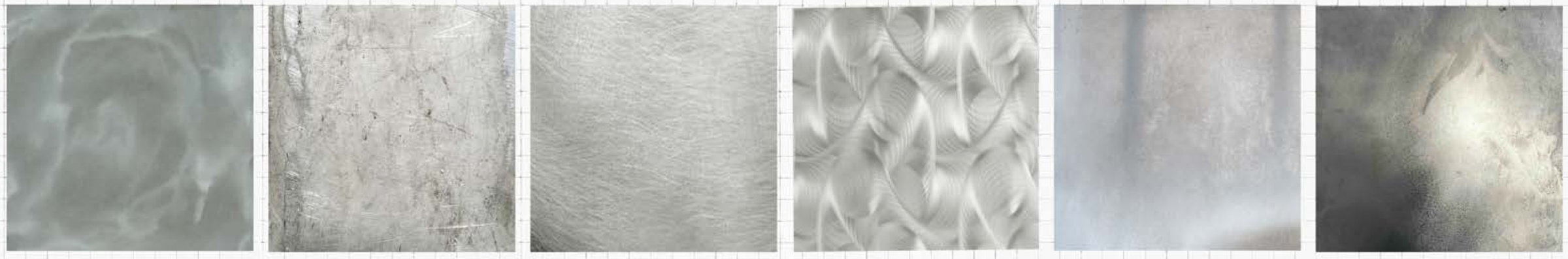


Fig.41. exsamples of surface treatments, Linda Suchanová

I began experimenting directly on the actual model, as this was the most effective way to explore how the material would react and to see what kind of finish would ultimately look best. Before moving on to polishing, I carefully sanded all of the chair's components to ensure they had a uniform matte surface. This preparation step was crucial because even the smallest imperfections or inconsistencies in the aluminium would become very noticeable once the surface was polished.

Once the sanding was complete, I began polishing with the first paste I had available. Since this was my very first time working with this particular paste, I was uncertain how it would behave on aluminium and what type of finish it could achieve. For the polishing process, I mounted a fabric wheel onto a drill, which allowed me to work evenly across the surface. The recommended method is to apply the paste directly onto the spinning fabric wheel rather than onto the aluminium surface itself, as this technique ensures the paste spreads consistently and produces a smooth, high-quality polish.

Unfortunately, the paste did not adhere to the wheel as it should have. To continue, I attempted applying it directly onto the surface of the chair. This, however, created visible lines and streaks that disrupted the finish, and I quickly realised it was impossible to achieve a proper result this way. Because of that, I had no choice but to sand the entire surface back down to its matte state and restart the process from the beginning.

Fig.38. sanded part of the chair, Linda Suchanová

Fig.39.chair polishing experimentation, Linda Suchanová

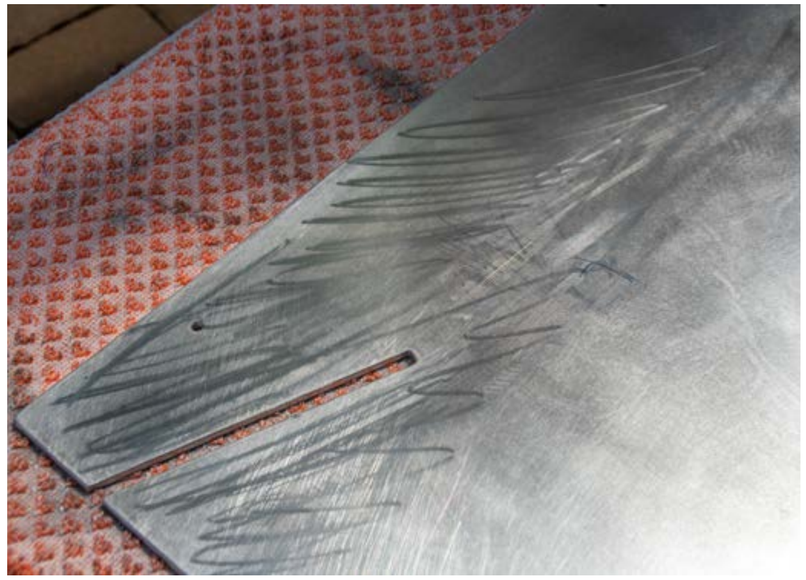


Fig.40.chair polishing detail, Linda Suchanová

When I returned to the hardware store to discuss the issue, the staff recommended switching to a different polishing paste, one that was formulated to be softer and easier to work with. This alternative paste proved to be much more effective. It adhered to the fabric wheel without any difficulty, spread evenly during polishing, and produced a far cleaner and more refined finish.

Through this trial and error, I not only achieved a better surface result but also gained valuable practical experience. I learned how important the choice of paste is when working with aluminium, how critical the correct application technique is for a smooth finish, and how preparation, patience, and repetition can influence the quality of the final outcome.

This stage of experimentation gave me deeper insight into material behaviour and the subtle technical details that make a polished surface visually and tactically satisfying.

PATINA PROCESS I.

Fig.42. second paste polishing, Linda Suchanová

Fig.43. polishing with fabric wheel, Linda Suchanová

PATINA PROCESS I.

The new polishing paste brought out a beautiful shine on the surface and created a very intriguing effect. The aluminium immediately darkened, while subtle layers of colour and reflections appeared. To make the transition between the matte and polished areas less pronounced, I used a soft sponge, which helped achieve a smoother gradient. I repeated this method several times to explore the different effects I could create on the chair.

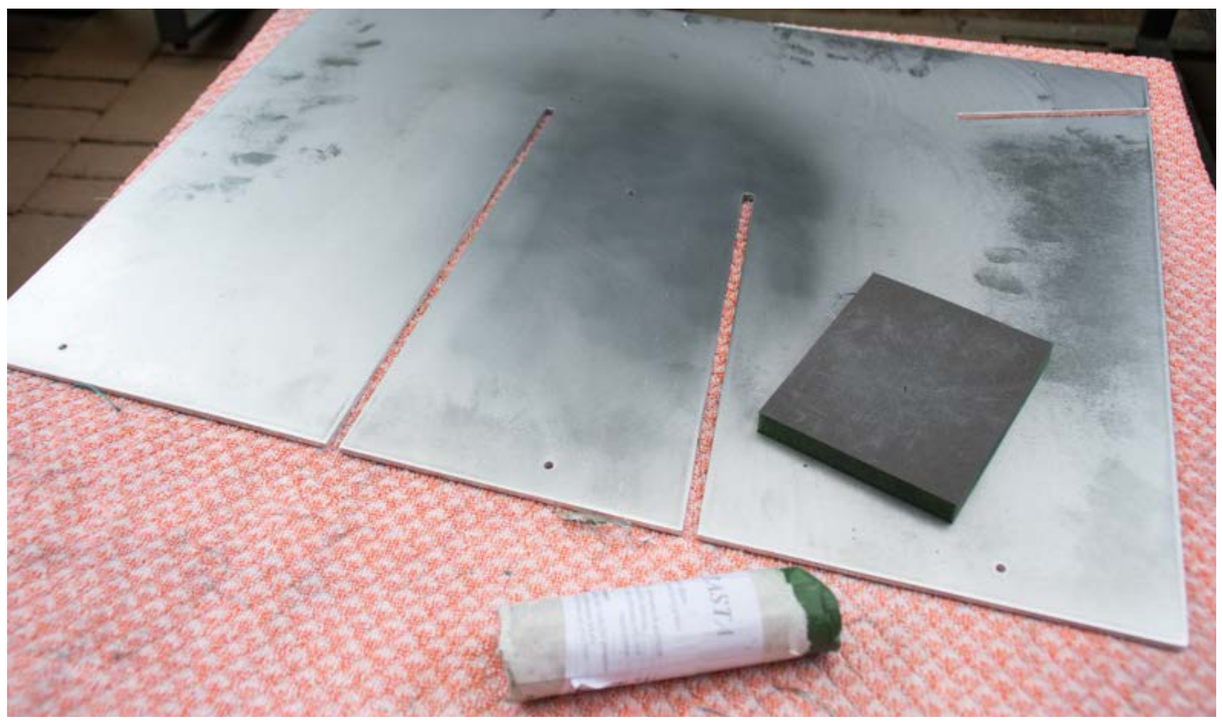


Fig.44. second paste polishing and sanding sponge, Linda Suchanová

Fig.45. detail of polishing, Linda Suchanová

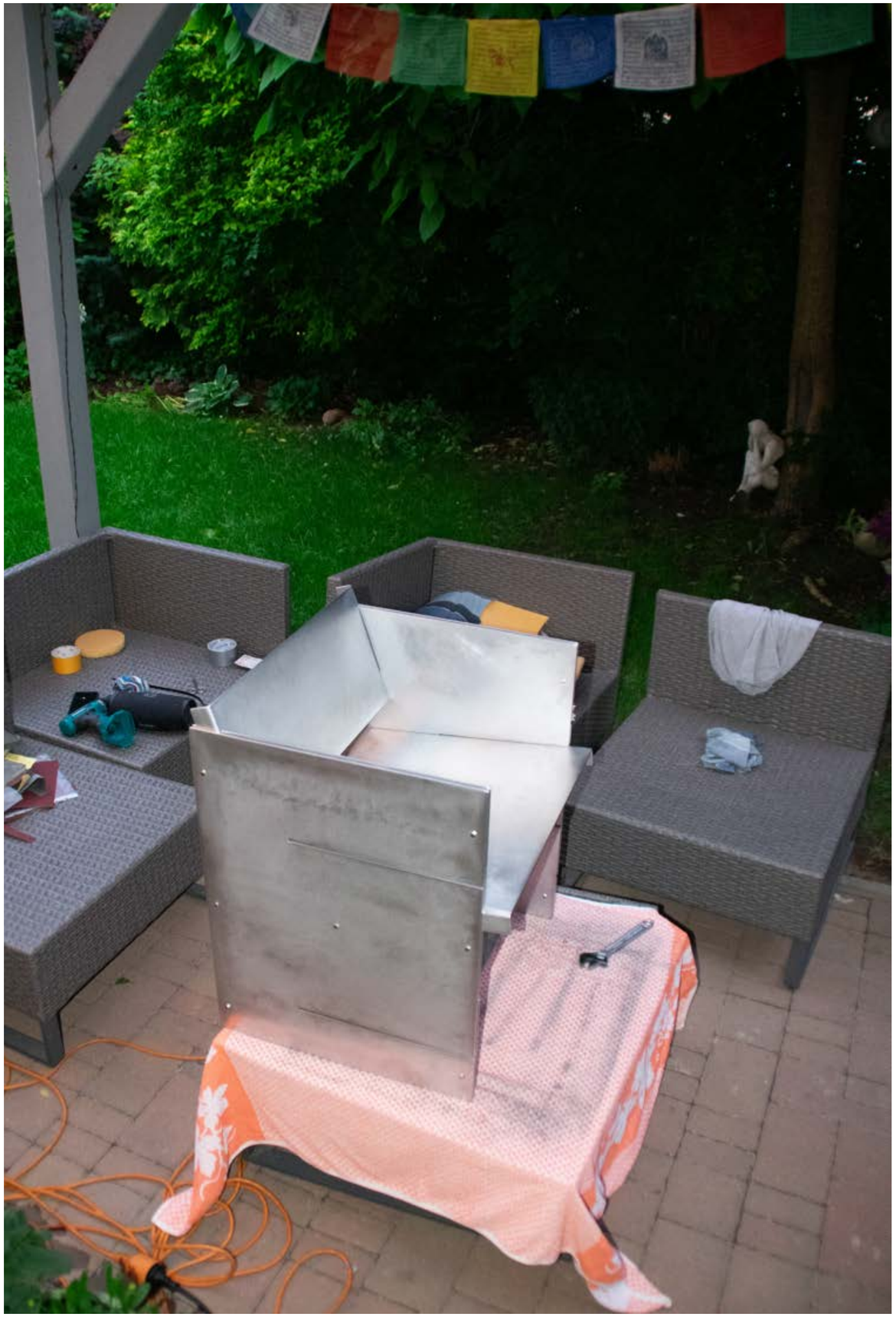


Fig.46. finished chair, Linda Suchanová

FINISHING PATINA

In the end, I decided to create an imitation of patina, as the polished surface naturally suggested this direction. I focused on polishing the areas where patina would realistically develop over time through regular use – mainly on the seat, the backrest, and along the sides where hands would naturally rest.

This final finish gave the chair a very distinctive character. It appeared more dynamic and, despite being made of metal, also felt warmer and visually lighter. What pleasantly surprised me was how the patina interacted with light: from almost every angle and under different lighting conditions, the surface looked slightly different, which I believe makes the chair even more engaging.

I also appreciated how the patina effect worked when the chair was repositioned or placed near a shelf – the surface seemed to transform depending on its surroundings, further enhancing its expressive quality.

Fig.47. finished patina, Linda Suchanová

Fig.48. Completed Patina Polishing, Linda Suchanová

Fig.49. Final Patina Finish, Linda Suchanová

CHOOSING THE RIGHT BOLT AND NUT

A very important step was finding the ideal bolt and nut that would suit the chair. This is a crucial detail because the bolts are visible, and choosing the wrong type could disrupt the overall design of the chair.
At first, I considered designing my own bolt, but during the design process I realized that the available bolts weren't significantly different from my concept, and using them was also more cost-effective.
I bought several types of bolts to find the best option:

Fig.50. bolt with a cross-head, Linda Suchanová

1.

I liked one bolt with a cross-head drive, but because it had a countersunk head, I concluded that—given the aluminum is 4 mm thick—the connection might not be strong enough, and the nut would still stick out on the other side.

Fig.51. bolt M5,Linda Suchanová

2.

Another bolt matched the chair visually, but it was size M5 instead of M4, which would have required enlarging the pre-laser-cut holes and grinding off the markings on the bolt head.

Fig.52. bolt option, Linda Suchanová

3.

This bolt had a head that stuck out too much and overall, its shape didn't suit the chair.

Fig.53. Nut M4,Linda Suchanová

4.

For the nut, I chose a standard M4 hex nut.

Fig.54. bolt option, Linda Suchanová

5.

In the end, I selected an M4 bolt with a hex head that had no markings, so there was no need for any additional modifications.

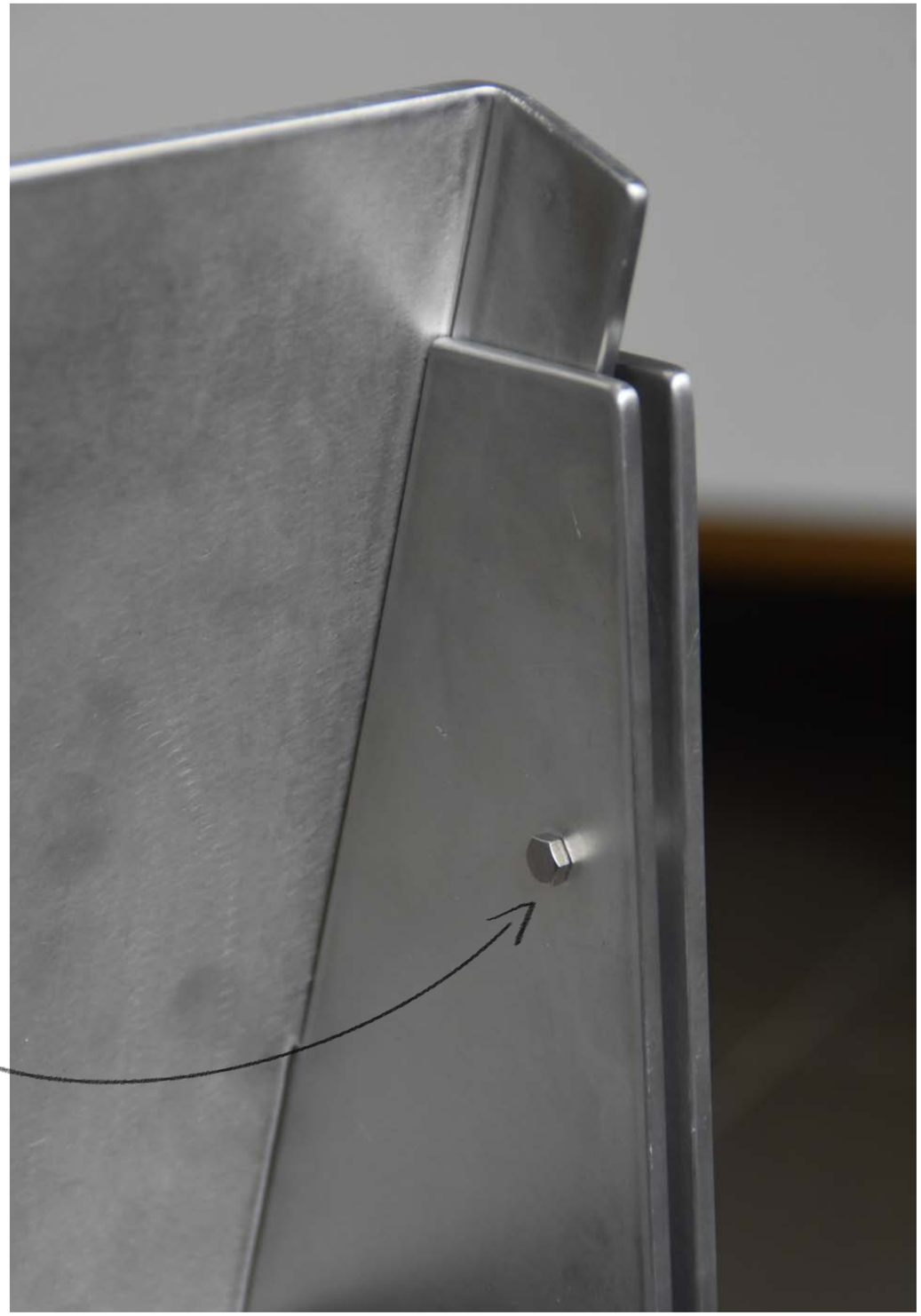


Fig.55. bolt detail, Linda Suchanová

Fig.56. Furniture assembly video, Linda Suchanová

I recorded a video demonstrating how easily the furniture can be assembled. The shelves slide into the sides, the chairs are then tightened against them, and the piece is ready to use.

FURNITURE ASSEMBLY VIDEO

THEATRE LOCATION SHOOT

It was very important to me to photograph the chair in a setting where it could truly stand out while also blending naturally into the interior. Some of the photos were taken at a friend's home, but for the main shots I wanted something more striking.

I eventually decided to photograph the chair inside the New Stage of the National Theatre. The building is designed in the Brutalist style, which also inspired the design of the chair.

I thought that the theatre's interior – especially the distinctive green wall cladding – would complement the aluminium surface beautifully. I contacted a staff member at the theatre, and together we arranged the opportunity to carry out the photoshoot there.

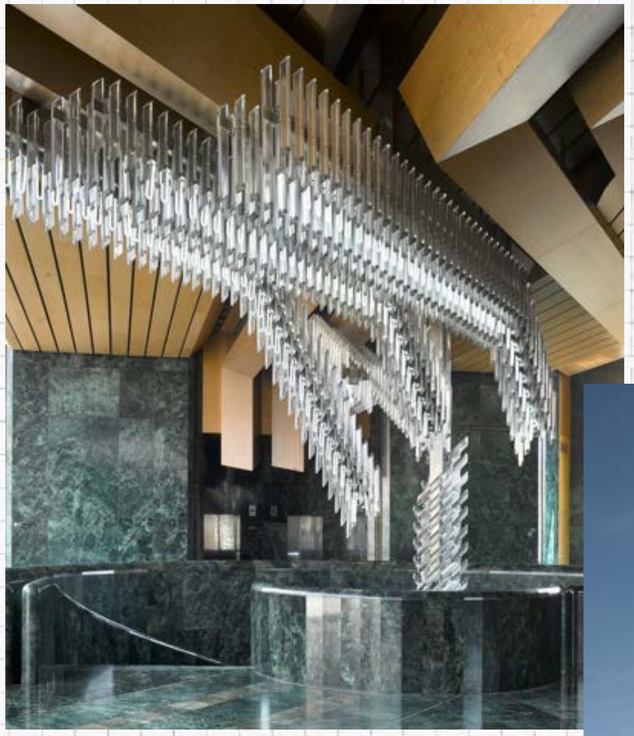


Fig.57. Theatre interior, Linda Suchanová

Its distinctive façade of green glass blocks makes it instantly recognisable, while the interior continues the Brutalist style with bold forms and green tiling.

Fig.58. New Stage of the National Theatre.

Completed in 1983, it is one of the most notable examples of Brutalist architecture in Prague, designed by architect Karel Prager. (National Theatre, n.d.)

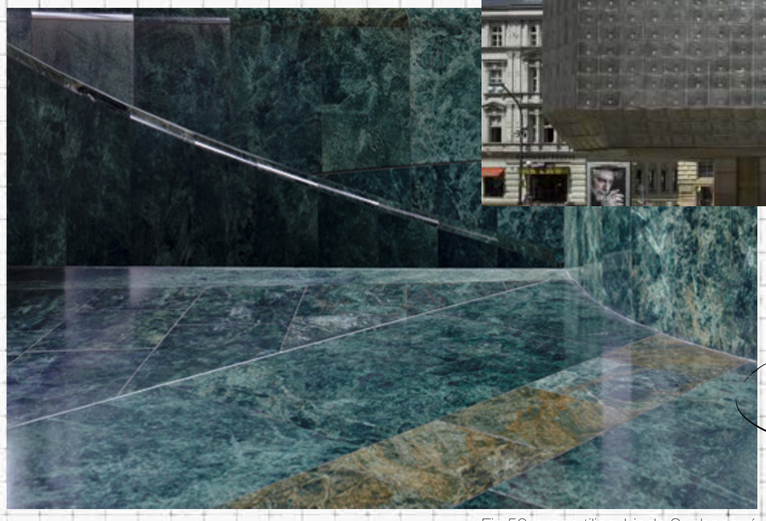


Fig.59. green tiling, Linda Suchanová

Today, it serves as a venue for drama, ballet, and alternative performances and stands as an important cultural and architectural landmark.

My chair

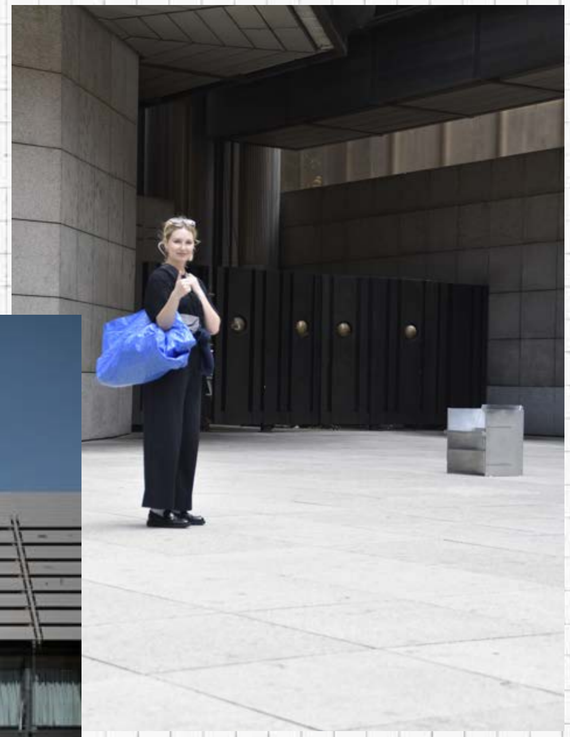


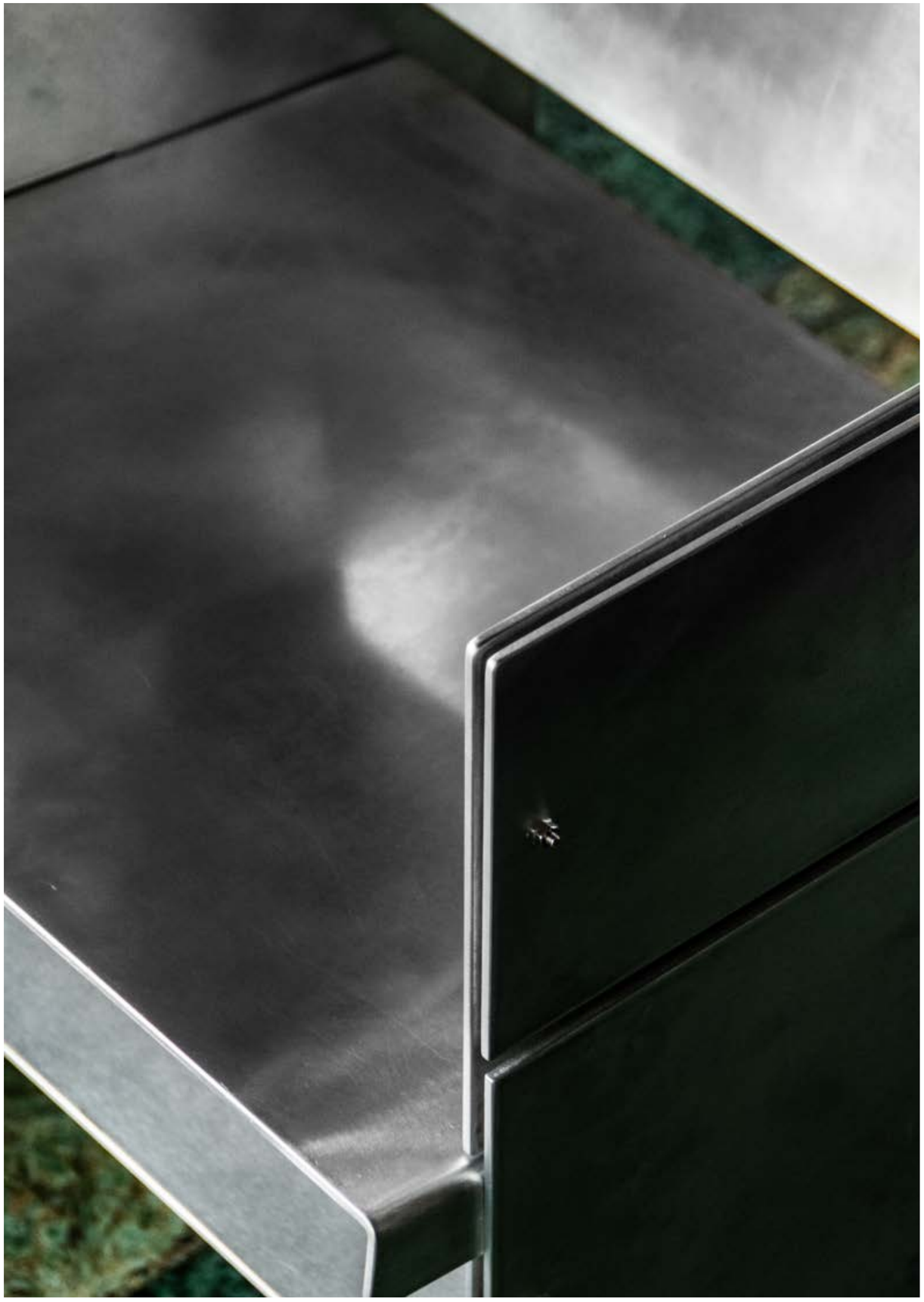
Fig.60. Me at the Photoshoot, Linda Suchanová

The monumental and beautiful chandelier was designed and crafted by the glassmaker Pavel Hlava.

Fig.61.Theatre interior II.

Fig.62. Final photo of chair, Linda Suchanová

FINAL PHOTOGRAPHY



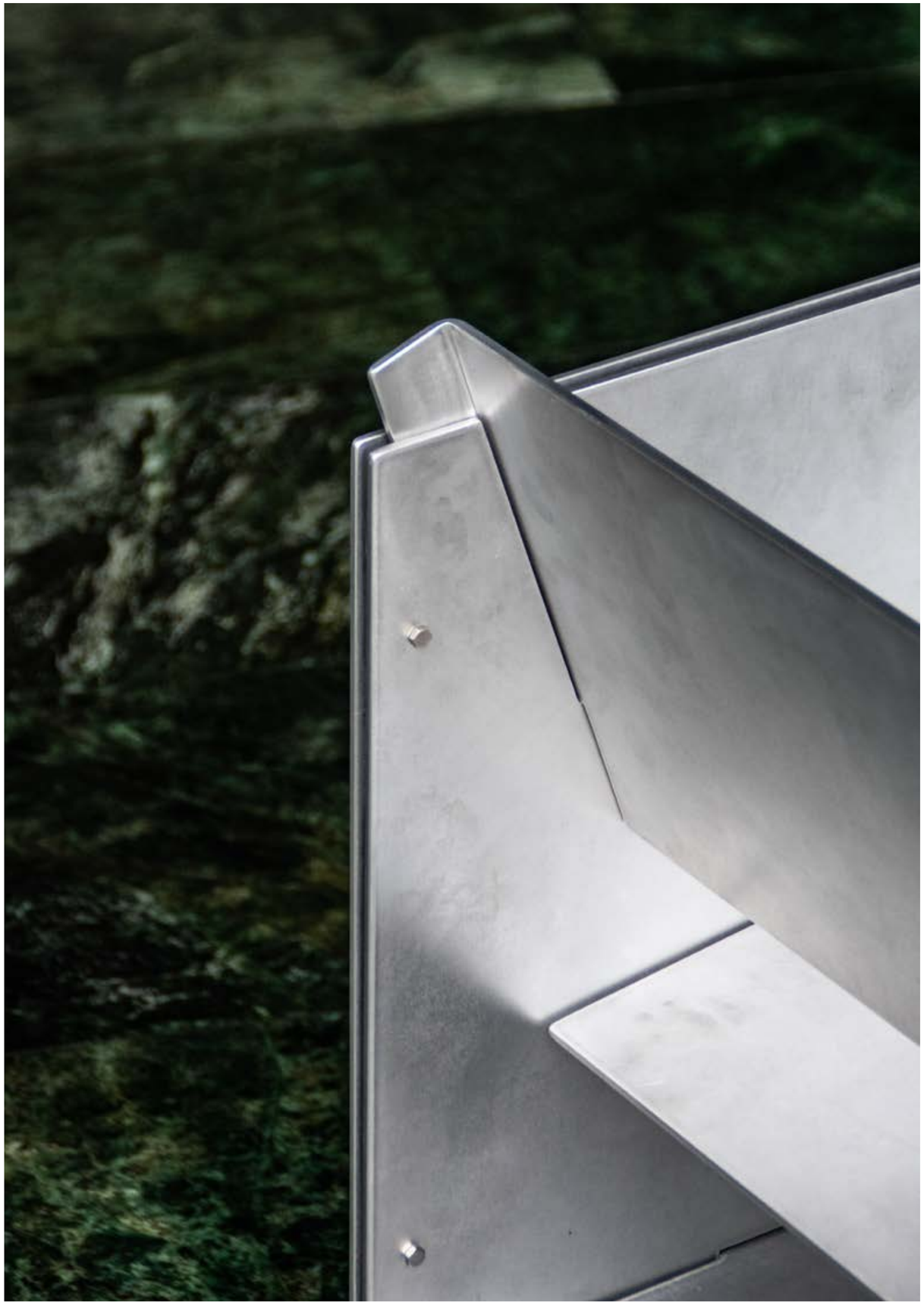


Fig.63. Final photo of chair II., Linda Suchanová

Fig.64. Final photo of chair III., Linda Suchanová

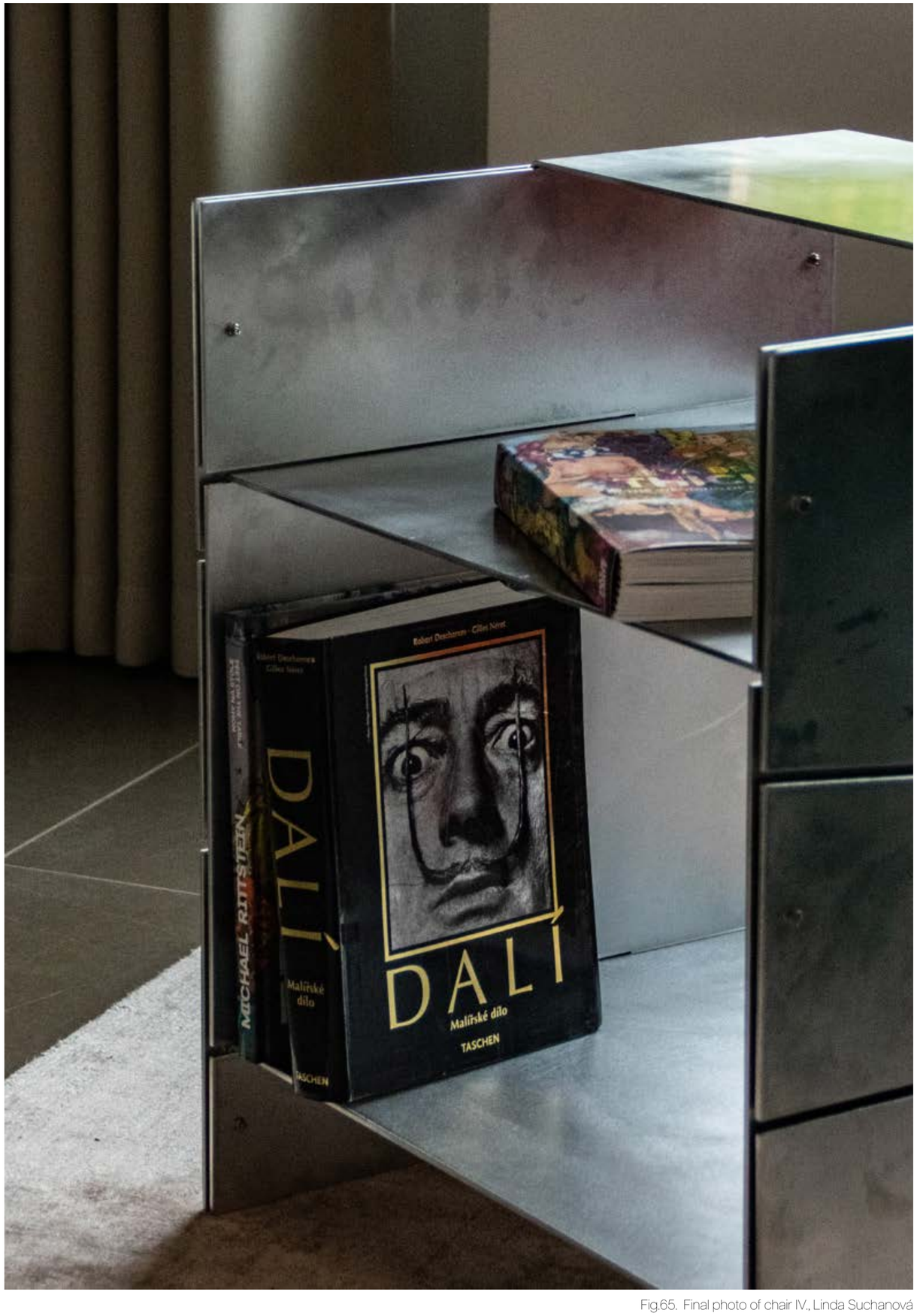
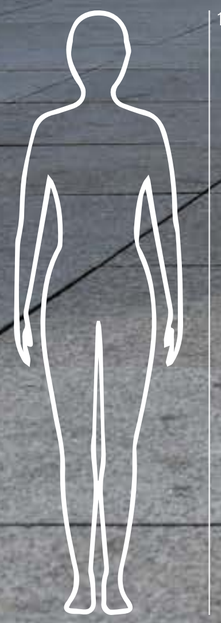


Fig.65. Final photo of chair IV., Linda Suchanová

Fig.66. Final photo of chair V., Linda Suchanová

Fig.67. Final Chair Photography VI., Linda Suchanová

ANTHROPOMETRIC CONSIDERATIONS



The person in the photo is 186 cm tall. The chair's dimensions are designed to provide comfort and support for both women and men of varying heights and body types.

Fig.68. antropometrical considerations, Linda Suchanová

Fig.68. Exploring modularity., Linda Suchanová

Fig.69. Exploring modularity ,chair from back, Linda Suchanová

Fig.70. Exploring modulariti, detail, Linda Suchanová

After completing the chair, I realised it could also be reconfigured: the smaller shelf (originally the backrest) can be slid onto the chair from the back, while the larger shelf becomes the new backrest. In this way, I created a third option for how this modular furniture can be used.

This version of the chair is very comfortable, especially thanks to the taller backrest. However, I still find the first design of the chair to be more elegant.

EXPLORING MODULARITY

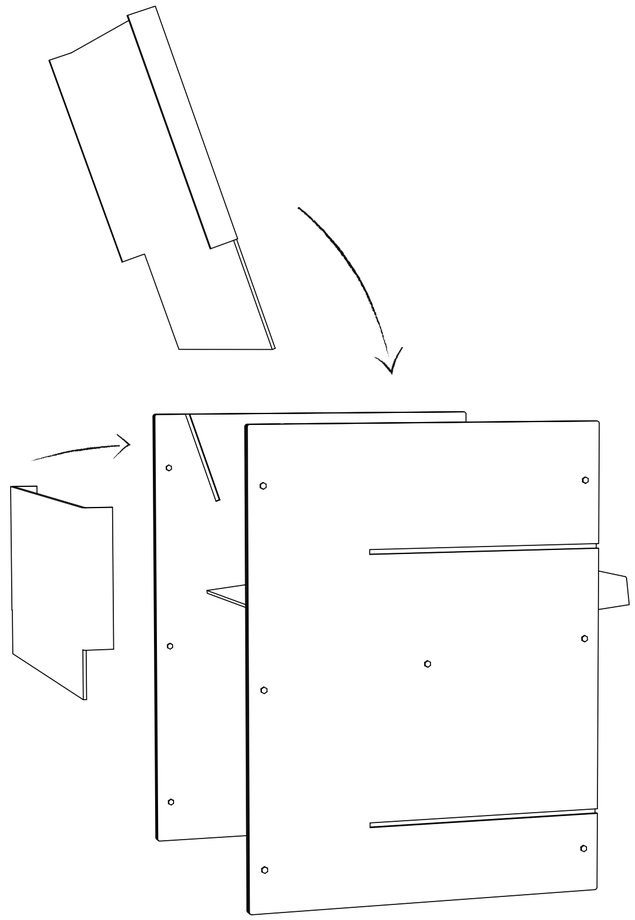


Fig.71. Exploring modulariti, chair in lines,Illustrator, Linda Suchanová

DISASSEMBLED CHAIR

Fig.72. Disassembled chair I., Linda Suchanová

Fig.73. Disassembled chair, detail, Linda Suchanová

From the very beginning of the design process, the goal was to ensure that the chair could be compact when folded. In the photos, the disassembled chair measures approximately 50 cm in width, 60 cm in depth, and 40 cm in thickness. This makes it dimensionally compact and easy to transport.

Fig.74. Disassembled chair II., Linda Suchanová

EXTERIOR PHOTOGRAPHY

Fig.75. Exterior photography I., Linda Suchanová

Because the chair can also be used outdoors, I photographed it in the sunlight. With the changing light, the surface of the chair transformed once again, and I find it beautiful how the polished areas (patina) reflect the sun. The outdoor light also highlighted the contrast between the matte and glossy finishes, making the surface appear more dynamic. This interaction with natural light adds another dimension to the design and reinforces the idea that the chair changes character depending on its environment.

Fig.76. Exterior photography II., Linda Suchanová

Fig.77. Exterior photography III., Linda Suchanová

DESIGN OF MANUAL

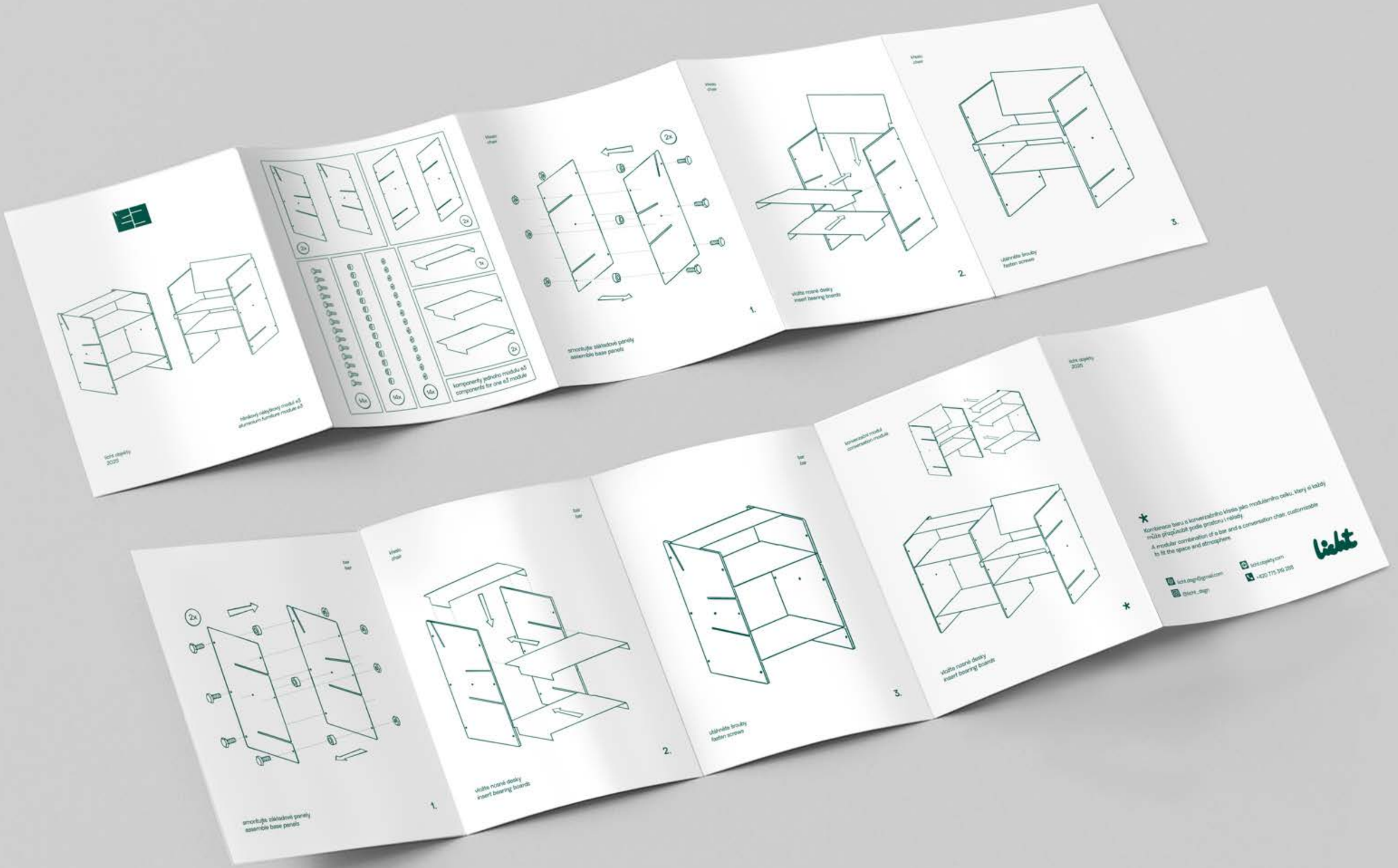
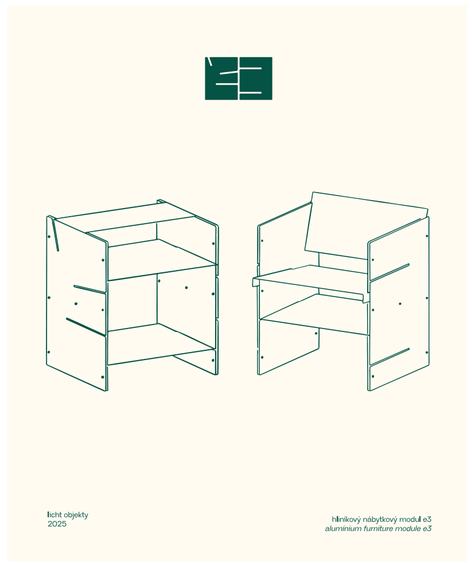
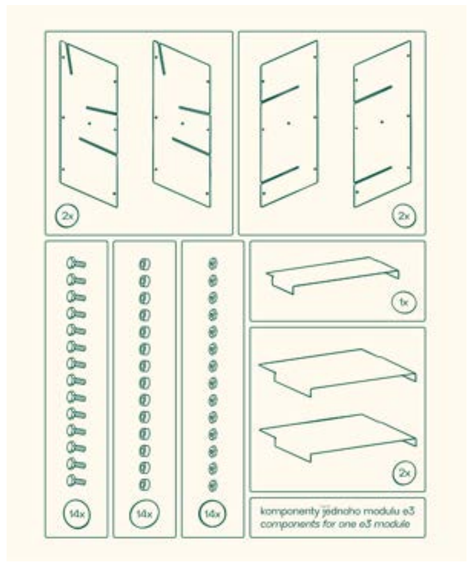
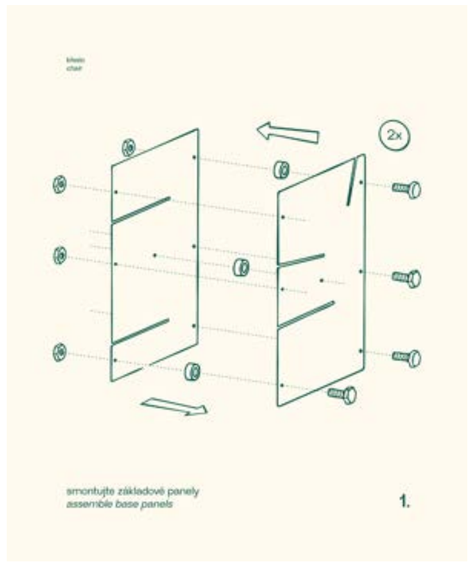
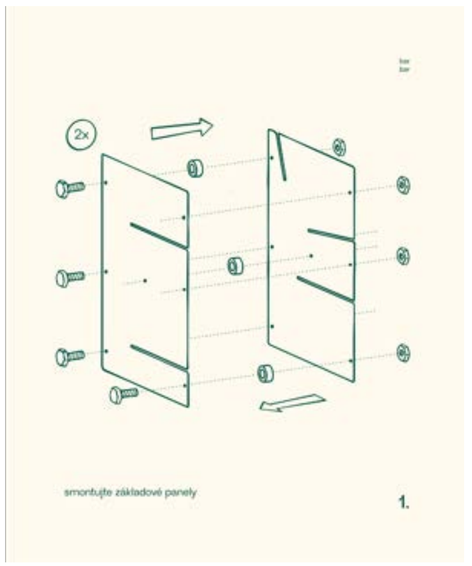


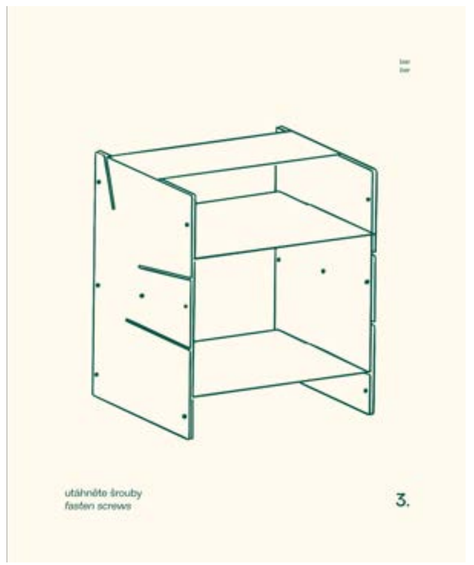
Fig.78. Design of manual, Linda Suchanová











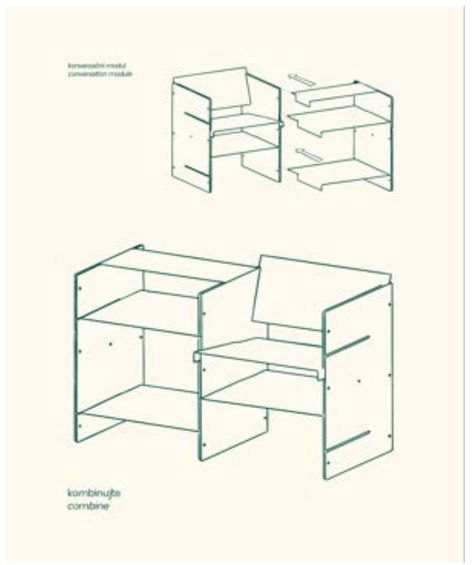


Fig.79. manual design details, Linda Suchanová

I designed a manual that would be included with each chair. I believe the manual is a very important detail, as it not only explains how the furniture should be assembled but also complements the overall design. By keeping the lines loose and playful, the manual adds a sense of lightness and an enjoyable experience to the product.

The manual would be printed as a fold-out booklet on slightly yellow-tinted paper, which harmonises with the green lines of the drawings. It would also include contact details, making it both functional and visually consistent with the design of the chair.

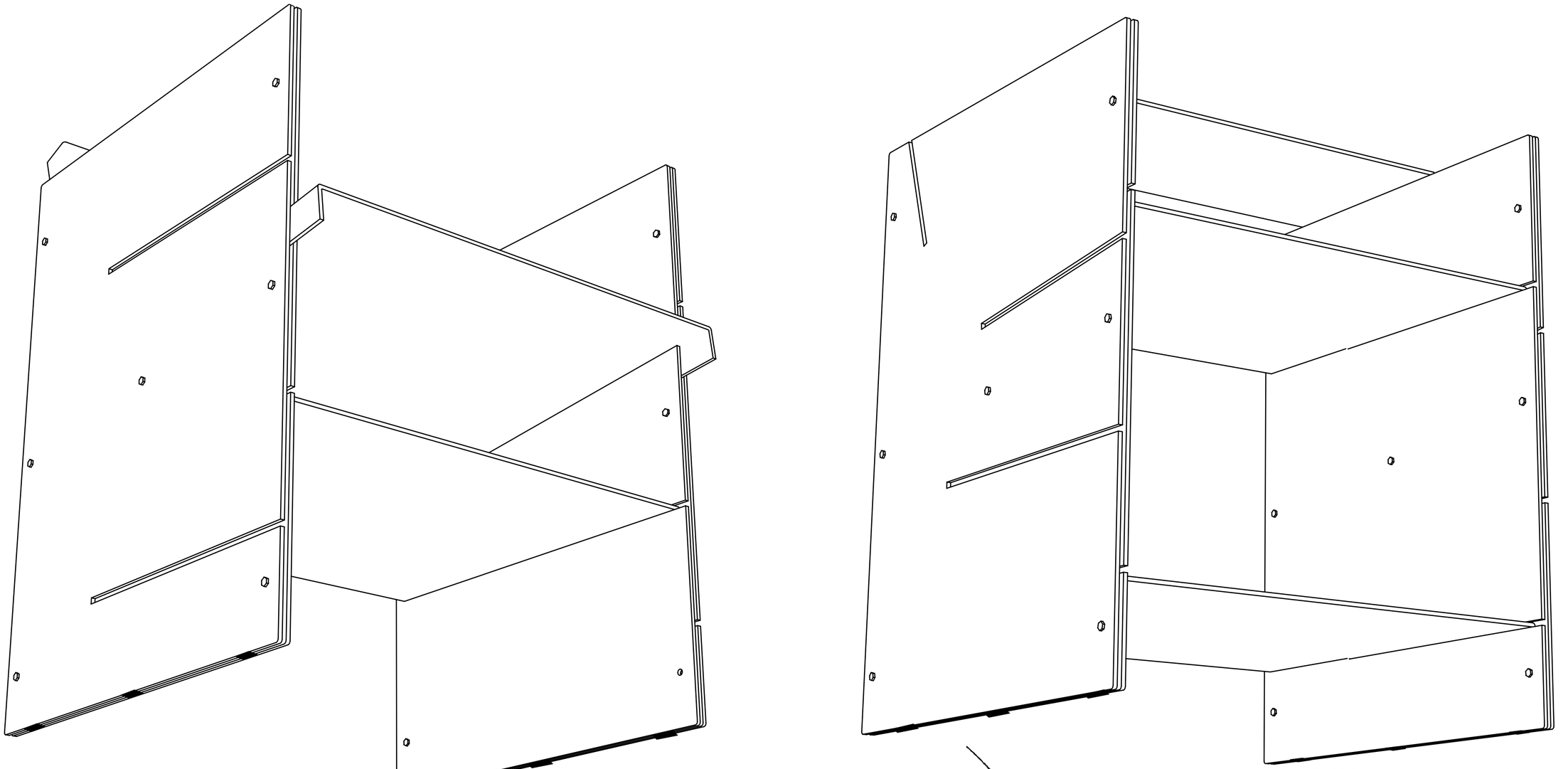


Fig.80. Protective pads, chair, Linda Suchanová

Even though the chair has rounded and smooth edges, I designed simple protective pads to prevent the floor from being scratched. The pads would be 3D printed from flexible black filament (TPE – thermoplastic elastomer, or TPU – thermoplastic polyurethane). Although the material is described as black, once printed it appears more like a dark grey, which is ideal because it remains discreet and unobtrusive.
The shape of the pad is kept as simple as possible to ensure easy printing. It is also designed in such a way that it can be inserted between the sides of the chair, where it locks securely in place.

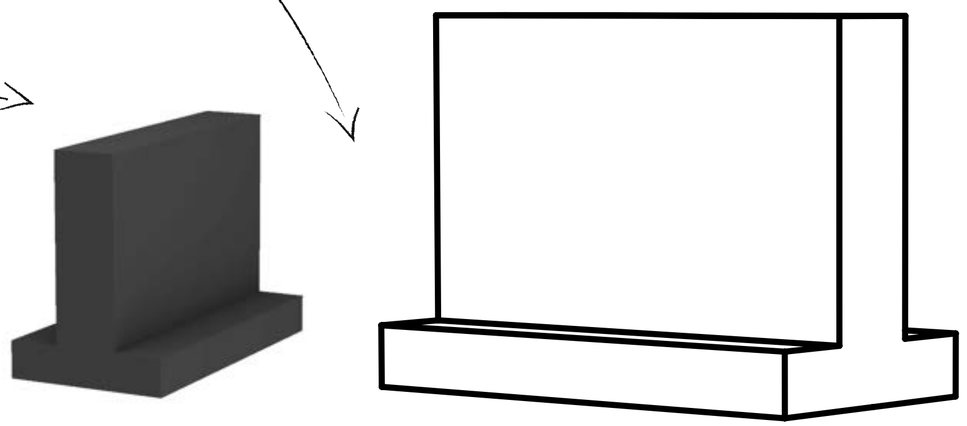


Fig.81. Protective pads, Rhino, Linda Suchanová

PROTECTIVE PADS

1. Cost of producing one chair
Laser cutting and bending: £238
Materials: £102
Total cost for one chair: £340

2. Cost for producing 50 chairs (20% discount on all)
Laser cutting and bending: £190.40
Materials: £81.60
Unit cost: £272
Total for 50 chairs: £13,600

3. Cost for producing 100 chairs (30% discount on all)
Laser cutting and bending: £166.60
Materials: £71.40
Unit cost: £238
Total for 100 chairs: £23,800

When estimating the cost of producing a chair, it is important to consider both the direct costs £238 of production and how these costs change with quantity. For a single chair, the main expenses are laser cutting and bending, which cost, and materials, which cost £102. This gives a total cost of £340per chair.
However, when producing multiple chairs, the unit cost usually decreases due to the principle of economies of scale. This reduction in cost happens for several reasons:

Fixed setup costs are spread over more units. Setting up a laser cutter or preparing a work process may take the same amount of time whether producing one chair or fifty, so the effective cost per chair decreases as production quantity increases.

Material costs can be lower. Suppliers often offer discounts for bulk purchases, and some waste is reduced when producing a series rather than single prototypes.

Labor efficiency improves. Workers become faster and more effective when producing multiple items in sequence, reducing the labor cost per unit. (Loo, 2025)

Summary of costs

Number of chairs	Laser cutting & bending	Materials	Unit cost	Total cost
1	£102	£102	£340	£340
50	£190.40	£81.60	£272	£13,600
100	£166.60	£71.40	£238	£23,800

COST ANALYSIS: SINGLE VS. BATCH PRODUCTION

GOALS + METHODS OF EMBEDDING TECHNOLOGY AND INNOVATION IN MY PROJECT

From this project, I learned many new things – from technical skills to a deeper understanding of how people perceive furniture and why they become attached to it. I experimented with different surface treatments of aluminum, learned how to prepare production documentation for laser cutting and bending, and realized how important it is to pay attention to even the smallest technical details during manufacturing. I gained experience with material testing, workshop production processes, and final sanding and polishing.

On the other hand, the project reminded me that design is not only about function – the emotional aspect is equally important. I understood that the aging of materials and the trace of time should not be seen as a problem but as a value that distinguishes furniture and gives it a personal story. Thanks to research and prototyping, I also realized the importance of modularity and easy repairability for the long-term lifespan of a product.

During this process, I also identified a gap in the market. Many pieces of furniture are compact and modular but lose their aesthetic value and simply do not look appealing. On the other hand, there are chairs that are visually striking but lack the practical aspects, such as the possibility of being reassembled or their manageable size. With my design, I succeeded in bridging these two worlds – the chair is visually distinctive and unique while at the same time highly practical and adaptable.

I am glad that I managed to achieve all the main goals I set for myself: to create modular and compact furniture that is timeless, easily repairable, and has an original design. This project not only helped me to further develop my practical and technical skills but also to strengthen my own design voice.

POSTER DESIGN

I really liked this photo, so I created a poster design for the chair. The aim was not to make a descriptive or technical poster, but rather an artistic one where the photo itself is the main focus. For this reason, I kept the layout very minimalistic and added only the chair's logo and name.

Fig.82. Poster design, Linda Suchanová

PROFESSIONAL RESEARCH AND NETWORKING DOCUMENTATION = DESIGN COMPETITIONS

Czech Design Award

Fig.83. Czech Design Award

Fig.84. The Czech International student Design Award

I decided to submit my chair design to two international competitions: the Czech Design Award and the National Award for Student Design.

A very positive outcome was that I won the Czech Design Award, which has opened the door to new and exciting opportunities. The results of the second competition have not yet been announced.

Czech Design Award Winner 2025

Fig.85. Czech Design Award Winner 2025

CV AND JOB SEARCHING DOCUMENTATION

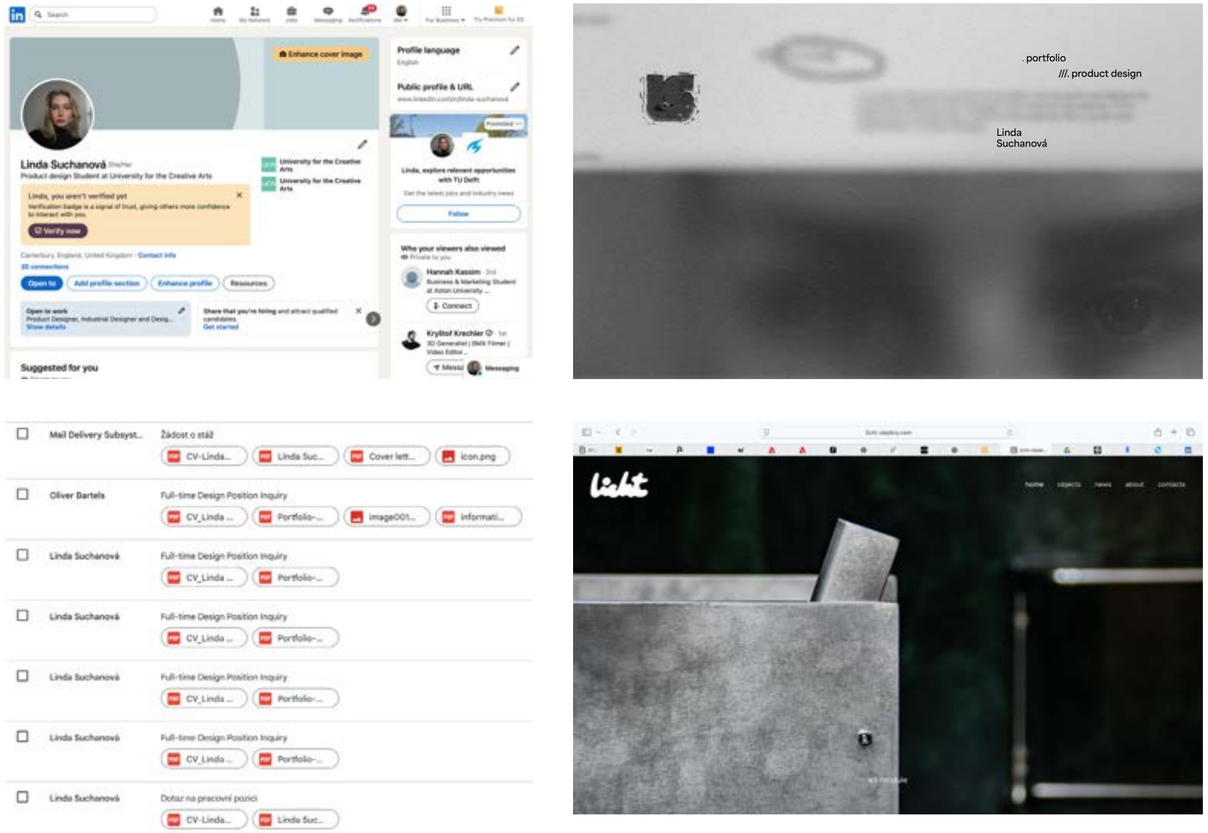


Fig.86.. Job searching, Linda Suchanová

Before I started looking for a job, I prepared my CV and also a portfolio with the projects I have completed so far, selecting the ones that I felt represented my work the best. After that, I began sending my portfolio and CV to various design studios. I also created a LinkedIn profile, where I uploaded a few of my projects.

My main goal is to have my own studio, where I will have the freedom to create and design products, installations, and more. That is why I founded a studio called Licht together with my partner, who is also involved in product design. Thanks to winning the Czech Design Award, we now have the opportunity as a studio to exhibit during Czech Design Week.

+420728156969
lisuchanova@gmail.com
Instagram - licht_dsgn
LinkedIn - Linda-Suchanová

Barista | Café Roaster Voznice May 2023 – Jan 2024
Gained expertise in coffee roasting and bean varieties while preparing high-quality coffee. Strengthened teamwork and customer service skills through collaboration and interaction with international customers in central Prague.

Barista | Bistro Orechovka Feb 2022 – Dec 2022
Worked in a fast-paced environment, preparing coffee and beverages, handling cashier duties, and collaborating with a team, strengthening my ability to perform under pressure.

Runner/Assistant Production | Czech Television CT1
Assisted with production tasks on a Czech Television series, managing extras and actors. Gained valuable insight into filming while strengthening coordination, time management, and teamwork skills.

Custodian | Museum City of Prague
Provided historical information and ensured appropriate visitor behavior at the Prague Charles Bridge towers, enhancing communication skills and managing diverse visitors.

NATO Charity Bazaar | NATO, Belgium
Represented the Czech booth at the NATO charity bazaar, engaging with a diverse international audience and enhancing communication and interpersonal skills.

WORK EXPERIENCE

Rhinoceros
V-Ray
Adobe Photoshop
Adobe Illustrator
Adobe InDesign
Nomad
Procreate
Affinity Publisher
Twinmotion

TECHNICAL SKILLS

TRAINING

Stained Glass Course [2021]

LINDA SUCHANOVA

I am a MA Product Design student at UCA who's Passionate about material innovation and functional aesthetics.

LANGUAGES

Czech; English

I have worked on various design projects, including a collaboration with the Czech premium lighting brand Brokis. I thrive on exploring new design possibilities, where even the smallest details can transform a product's character and usability.

EDUCATION & QUALIFICATIONS

Sept. 2024
University for the Creative Arts Canterbury UK
Field of study: MA Product design

Sept. 2021- June 2024
CTU Faculty of Architecture Prague
Bachelor's Degree in Product Design

Sept. 2017 - June 2021
Academy of Applied Arts Svetla nad Sazavou
Graduate Diploma Industrial Design

Winner of the Czech Design Award
2025
Awarded for the design of the modular aluminium furniture piece E3, created within my own design studio licht.

Hydro
I was part of the team behind the award-winning HYD.RO design, developed with students from Mechanical Engineering and Design at CTU. This infiltration-measuring device gave me experience in cross-disciplinary collaboration, time management, and problem-solving.

ACHIEVEMENTS

Lighting Design Collaboration
While designing the light fixture, I collaborated with the glassmaking company Brokis, which provided me with valuable professional insights and hands-on experience.

Finalist – Grand Prix Mobitex
I was selected as a finalist with an innovative design of an inflatable cradle, which was presented at the trade fair.

Installation for Bokovka Karlovy Vary International Film Festival 2025
I collaborated on the design of an installation for the wine bar Bokovka for the Karlovy Vary International Film Festival 2025. The installation featured 3D-printed lights coated in wax, inspired by the interior and atmosphere of Bokovka.

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