

Bamboo^{Ability}



Instruction Manual

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Project Description

Bamboobility is an open-source initiative that aims to enable the creation of a low-tech wheelchair that is accessible to all people, regardless of geographic or economic constraints.

The project focuses on affordability, simplicity, and accessibility. The wheelchair is designed as a DIY build, using low-cost materials and simple tools that are widely available, making it possible to reproduce and repair in low-resource contexts.

Developed at the **RWTH Aachen University** in collaboration with the Swiss association **Roll On**, Bamboobility places special emphasis on the use of bamboo, an abundant, renewable, and locally available material in many regions of the world. Bamboo's strength, flexibility, and sustainability make it a suitable core material for a robust and repairable wheelchair design.

As an **open-source project**, Bamboobility actively encourages discussion, experimentation, and shared improvements. Builders, users, engineers, designers, and communities are invited to contribute ideas, adaptations, and refinements, ensuring that the wheelchair can continuously evolve to better meet real-world needs.

Rollon.



Intended Use and Loading Capacity

The Bamboobility wheelchair is designed for daily mobility use in both **indoor and outdoor environments**. While the wheelchair can be used outdoors, **prolonged exposure to rain is not advised**, as moisture may cause the rope bindings to absorb water and temporarily lose tension, which can affect structural stability.

The wheelchair supports **self-propelled use** through hand rims mounted on the wheels, allowing the user to move independently. In addition, it is designed for **assisted use**, where a second person can push the wheelchair from behind. The design is optimized for regular walking **speeds of up to approximately 8 km/h**. It is not intended to be pulled behind motorized vehicles, as this may introduce forces beyond the design limits.

Bamboobility is suitable for daily use, including longer distances. However, when traveling for extended periods, it is recommended to take regular breaks, for example every 30 minutes, to reduce strain on the upper body. The wheelchair is **not intended as a sports or racing device**, and it should not be used for activities involving high speed, jumping, or aggressive maneuvering.

The wheelchair can also be used in rural environments with less fortified or uneven roads. That said, even and well-maintained surfaces are strongly recommended. The wheelchair is rated for safe operation on slopes up to **12° ascent, 11° descent, and 16° lateral tilt**.

Intended Use and Loading Capacity

The **maximum recommended loading capacity is 80 kg**, including the user body weight and potential luggage. This limit is based on testing and is intended to ensure safe operation under normal conditions. The actual **load-bearing capacity may vary** depending on several factors, including:

- The quality and species of bamboo used
- The precision and strength of the rope bindings and knots
- The overall craftsmanship and construction quality
- Regular inspection and maintenance of the wheelchair

Rapid **changes in temperature and humidity should be avoided**, as they can lead to bamboo splitting or loosening of joints. Whenever possible, the wheelchair should be **stored in a dry, sheltered environment** to prolong its lifespan and maintain safety.



**Max. load
80 kg**



**Max. slope
sideways**



**Max. slope
ascent**



**Max. slope
descent**



**Max. velocity
8 km/h**



**Avoid changes
in temperature**



**Avoid changes
in humidity**



**Avoid intense
rainfall**

Cost Calculation

The cost estimates are based on inquiries with potential suppliers for quantities corresponding to the production of **1,000 wheelchairs**. Prices for locally sourced materials were calculated using **local market prices in Indonesia**. As a result, the total cost of the wheelchair should be understood as a **general reference only** and cannot be directly applied to other regions without appropriate adjustments.

Additionally, the stated costs do **not include labor expenses** or costs related to tool wear, maintenance, or replacement incurred during the construction process.

	<i>Amount per chair</i>	<i>Costs per unit</i>	<i>Total costs</i>
Wheelchair wheels	2 pcs	\$ 10.20 / pcs	\$ 20.40
Bamboo rods	30 m	\$ 0.19 / m	\$ 5.70
Foam material	0,4 m ²	\$ 12.20 / m ²	\$ 4.88
Heavy-duty wheels	2 pcs	\$ 1.35 / pcs	\$ 2.70
Sea freight (1000 pcs)	FCL + 2,5 m ³	\$ 2130 + \$ 55 / m ³	\$ 2.60
Steel rod	1 pcs	\$ 2.15 / pcs	\$ 2.15
Natural fiber rope	100 m	\$ 0.02 / m	\$ 2.00
Inland freight (30 pcs)	100 km	\$ 2.60 / pcs	\$ 1.28
Kit packaging costs	1 pcs	0.55 \$ / pcs	\$ 0.55
Clamp ring	2 pcs	0.55 \$ / pcs	\$ 0.55
Adhesive tape	1 roll	\$ 0.24 / roll	\$ 0.24
Total costs			\$ 43.05

Suggested Suppliers

Externally sourced items

The following items are available on request as a DIY kit through our partner NGOs. For each component, we recommend qualified suppliers suitable for bulk orders and centralized kit assembly. Distribution and shipping must be centrally organized e.g., by the NGO.

Suggested Suppliers	
Wheelchair wheels	Qindao Major Tools (CN), Qingdao Rightway Industrial (CN)
Heavy-duty wheels	Kingstron Appliance (CN), Guangzhou Xinyin Industrial Parts (CN)
Steel rod	Sms Perkasa (ID), PT. Lob Machinery Jaya (ID), Hdt Tubing (CN)
Clamp ring	Shandong Zoxa International (CN), Wuxi Ashility Technology (CN)

Locally sourced items

The following items should be sourced locally, preferably by the builder. We recommend using **local hardware stores** or **online marketplaces**, such as Lazada or Toko in Indonesia. When building multiple wheelchairs at once, additional cost savings can be achieved through bulk purchasing.

Suggestions	
Natual fibre rope	Choose strong rope with at least 4 mm diameter
Adhesive tape	Use thin tape to make it easier to thread the rope through the holes
Bamboo rods	Choose thick-walled and dried bamboo, for example Tam Vong
Foam and padding	Choose at least 3 cm thick padding, if available, use pipe insulation for the handles and cushions for the seat. It is also possible to use (rice) straw or other natural material

Assembly Instructions

Final Assembly

Materials,
Tools,
Construction
Overview

Basic
Binding
Technique

Mobility
Module
Construction

Preparation

Interface
Module
Construction

Framework
Module
Construction



Materials



100 Meter
Natural Fiber Rope



25 Meter
Tam Vong Bamboo



2x
Wheelchair Wheels



700 Millimeter Pipe Insulation
Pipe Insulation



2x
Clamp Ring 20mm



600 Millimeter
Steel Rod 20mm with 4mm
wall thickness



2x
Heavy-Duty Wheels



Some
Adhesive Tape



2x
Cushioning

Tools



Electric Drill



Wood Saw



6mm Drill Bit for Steel



5mm Drill Bit for Wood

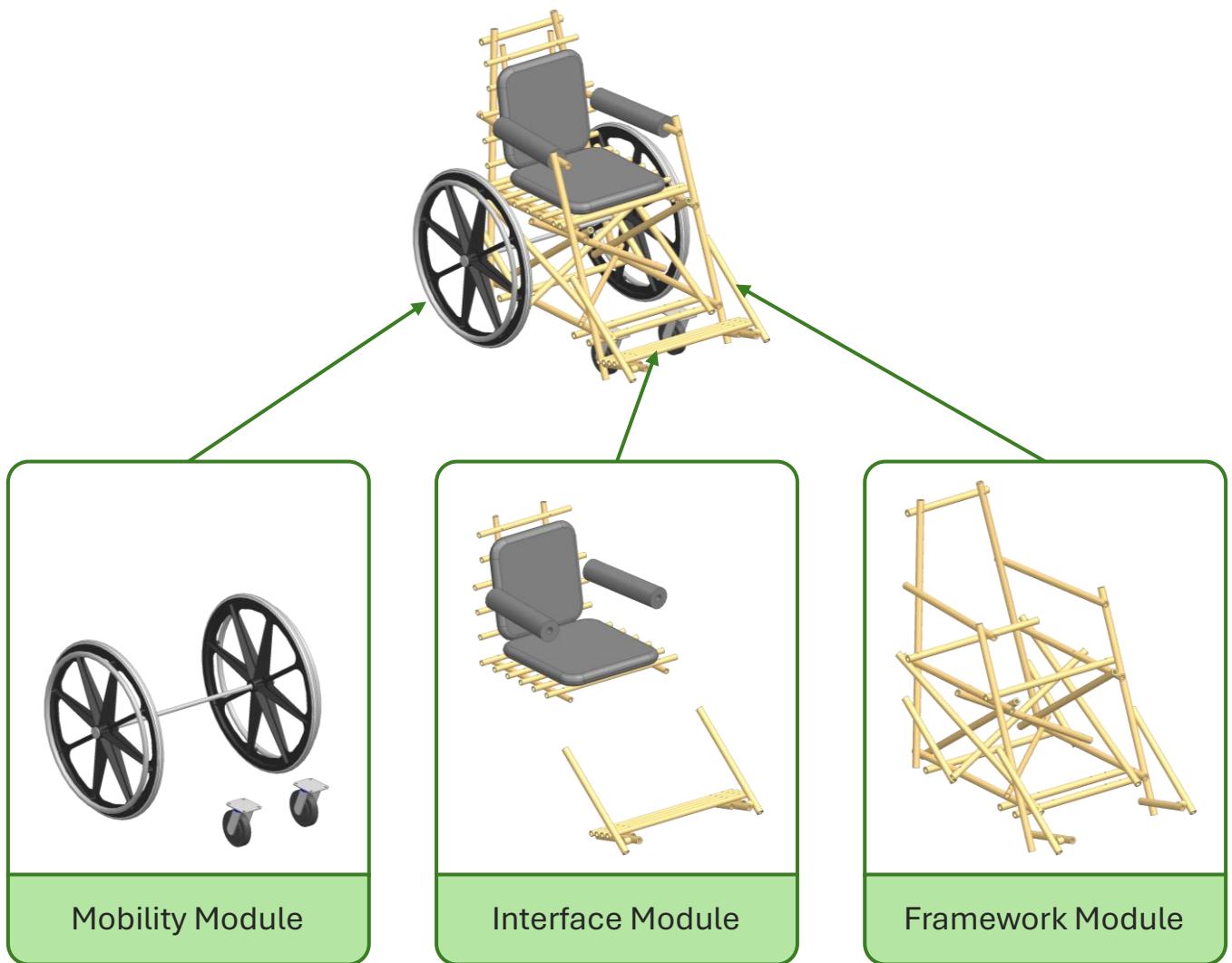


Scissors



Allen Key for Clamping Rings

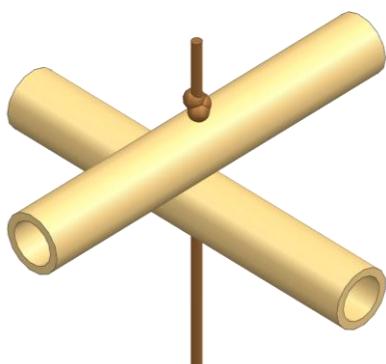
Construction Overview



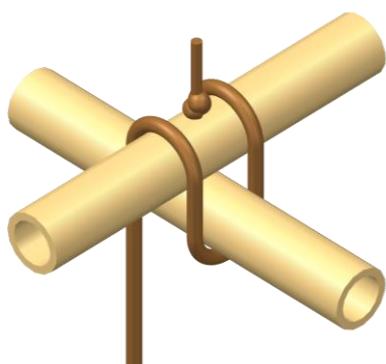
Basic Binding Technique

Simple square lashing

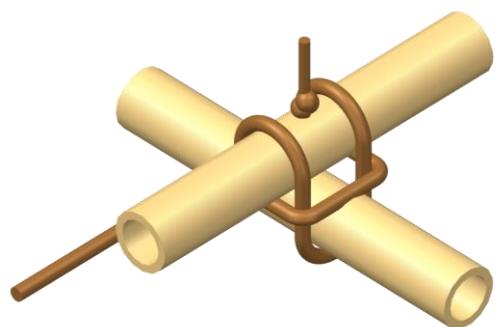
1



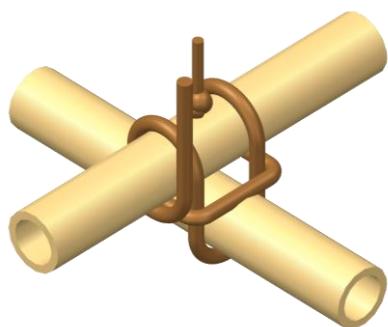
2



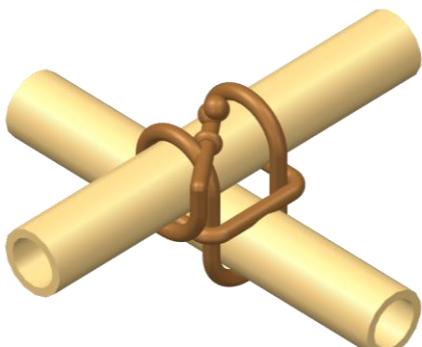
3



4



5

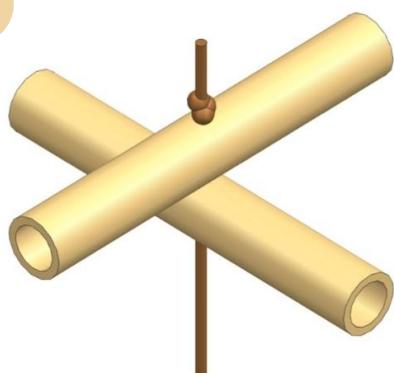


1. Pull the knotted rope through the rods
2. Bind the rope around the rods
3. Trap the rope between the rods with high tension
4. Pull the rope up while keeping tension
5. Knot the rope beginning and end together using a classic square knot

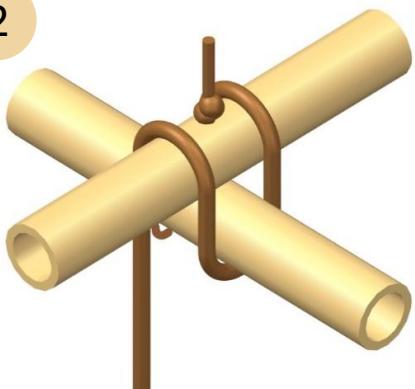
Basic Binding Technique

Strong square lashing

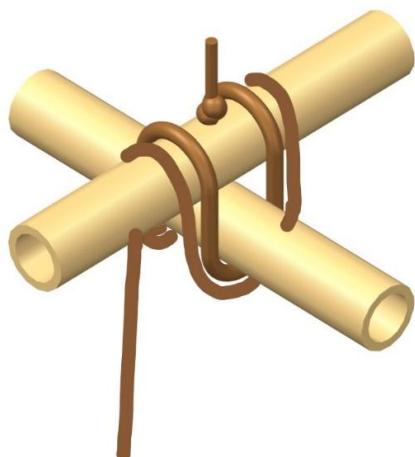
1



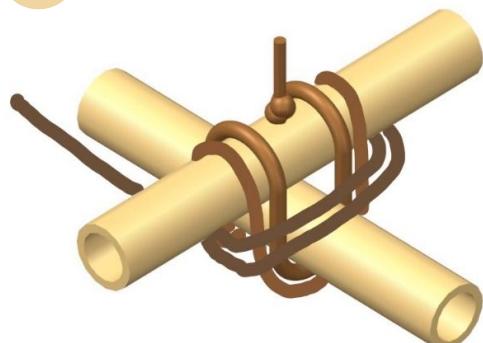
2



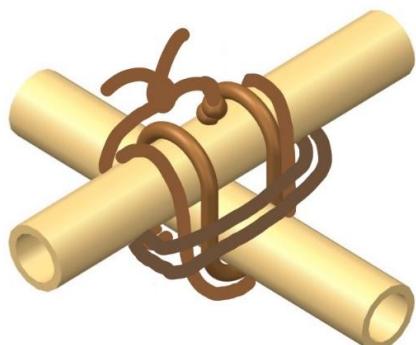
3



4



5

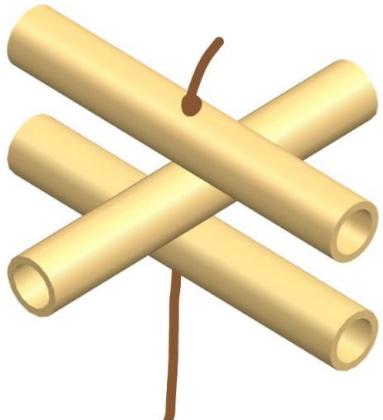


1. Pull the knotted rope through the rods
2. Bind the rope around the rods
3. Repeat Step 2
4. Trap the rope between the rods with high tension multiple times
5. Knot the rope beginning and end together using a classic square knot

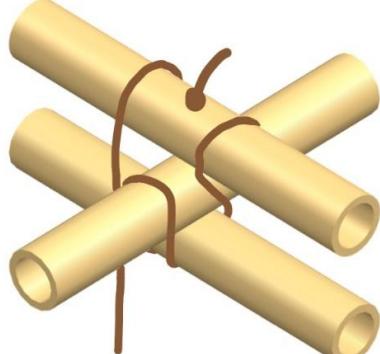
Basic Binding Technique

Double strong square lashing

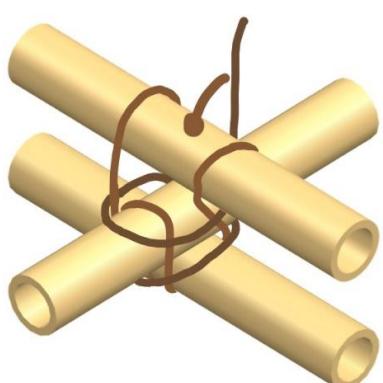
1



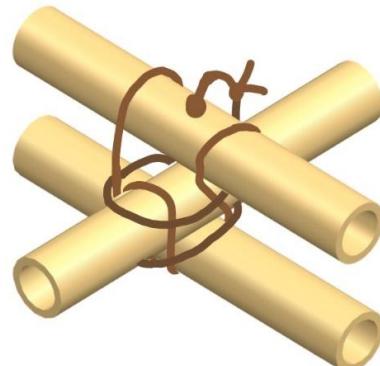
2



3



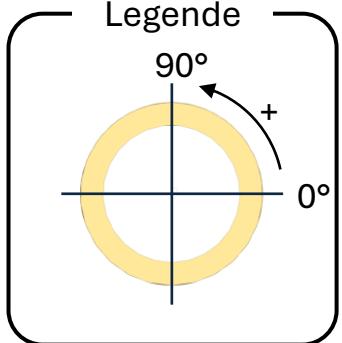
4



1. Pull the knotted rope through the rods
2. Bind the rope around the rods multiple times (not visualized for greater clarity)
3. Frap the rope between the lower and upper rods with high tension
4. Knot the rope beginning and end together using a classic square knot

Preparation

Legende



Step: Rod Preparation

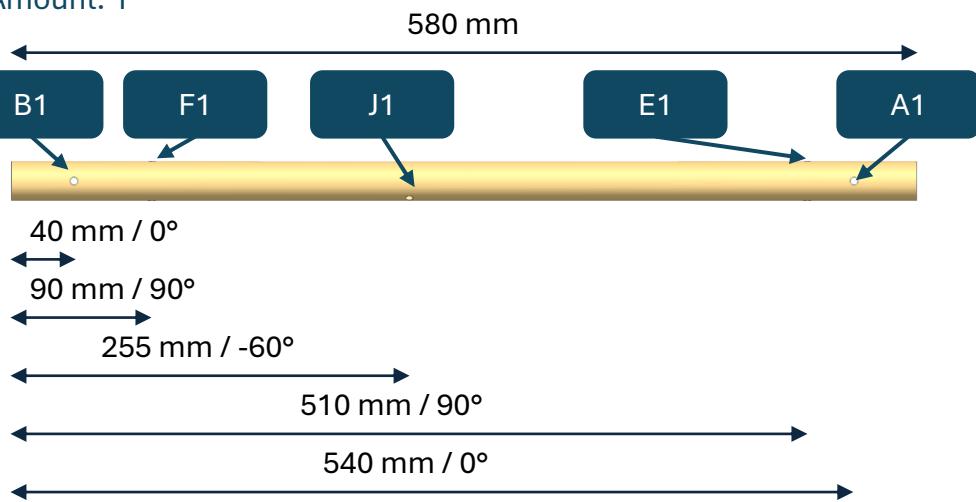
Needed Materials: Bamboo

Needed Tools: Wood saw, electric drill, 5 mm drill bit for wood

1. Mark the lengths, holes and hole numbers on the bamboo
 - The hole positions are defined by the distance from the bamboo edge and the angle as can be seen in the upper right corner
2. Cut the bamboo using the wood saw
3. Drill 5 mm holes ate the marked positions using the electric drill with a 5 mm drill bit for wood

Bamboo 1.1

Amount: 1



Preparation

Bamboo 1.2

Amount: 1

580 mm



B2

F2

J2

E2

A2

40 mm / 0°

90 mm / 90°

230 mm / 60°

510 mm / 90°

540 mm / 0°

Bamboo 2

Amount: 2

782 mm

D1, D2

A1, A2

40 mm / 0°

413 mm / 0°

742 mm / 0°

Preparation

Bamboo 3

Amount: 2

625 mm

B1, B2

C1, C2



40 mm / 0°

295 mm / 0°

585 mm / 0°

Bamboo 4.1

Amount: 1

650 mm

D1

H1

K1

M1

C1

40 mm / 0°

60 mm / 90°

140 mm / 90°

360 mm / 60°

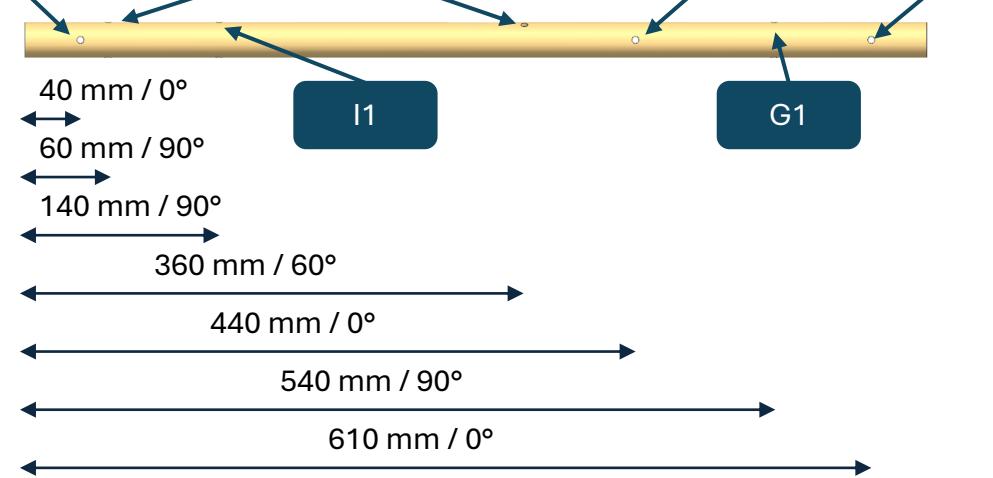
440 mm / 0°

540 mm / 90°

610 mm / 0°

I1

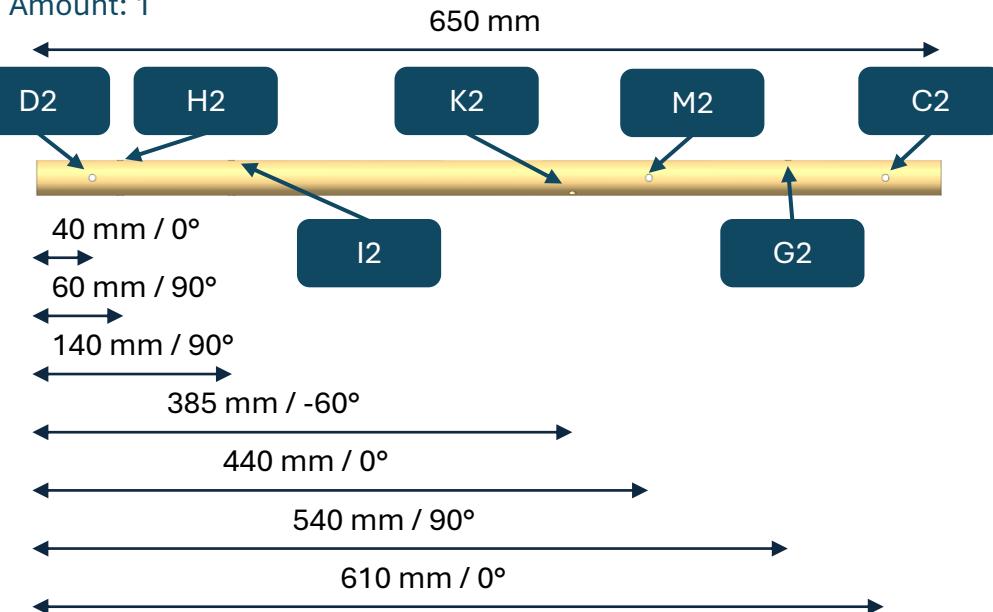
G1



Preparation

Bamboo 4.2

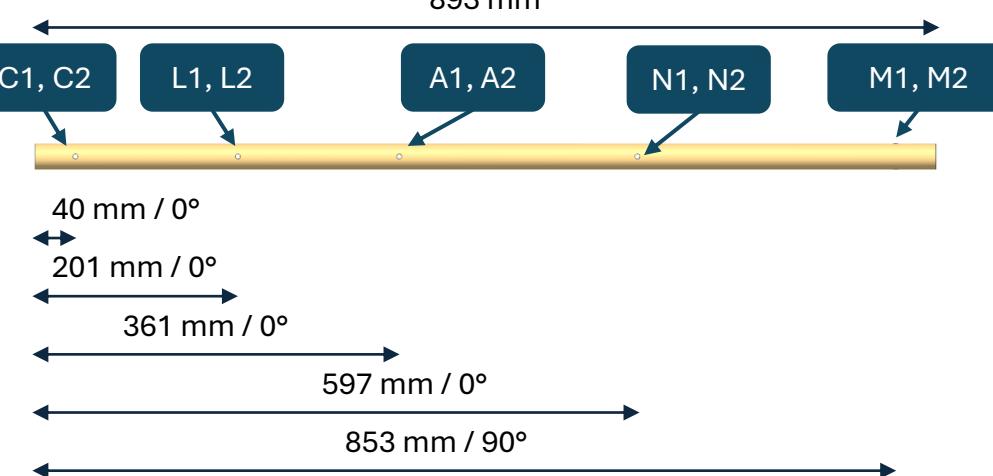
Amount: 1



Bamboo 5

Amount: 2

893 mm



Preparation

Bamboo 6

Amount: 2

772 mm

Q1, Q2

D1, D2

R1, R2

B1, B2

O1, O2

50 mm / 0°

145 mm / 0°

320 mm / 0°

485 mm / 0°

732 mm / 0°

Bamboo 7

Amount: 2

635 mm

J1, J2

K1, K2

40 mm / 0°

317.5 mm / 90°

595 mm / 0°

Bamboo 8

Amount: 3

540 mm

E1, F1, G1

E2, F2, G2

40 mm / 0°

500 mm / 0°

Preparation

Bamboo 9

Amount: 2

533 mm

O1, O2

N1, N2

40 mm / 0°

493 mm / 0°

Bamboo 12

Amount: 2

540 mm

H1, I1

H2,I2

40 mm / 0°

100 mm / 0°

160 mm / 0°

380 mm / 0°

440 mm / 0°

500 mm / 0°

Bamboo 21

Amount: 2

335 mm

M1, M2

L1, L2

40 mm / 0°

295 mm / 0°

Preparation

Bamboo 22

Amount: 1

690 mm

I2

G1

X1: 40 mm / 0°



X2: 650 mm / 0°



Bamboo 20

Amount: 1

334 mm

P1

P2

X1: 40 mm / 0°



X2: 295 mm / 0°



Bamboo 13

Amount: 2

230 mm

S1, S2

Q1, Q2

X1: 20 mm / 0°



X2: 190 mm / 0°



Preparation

Bamboo 14

Amount: 2

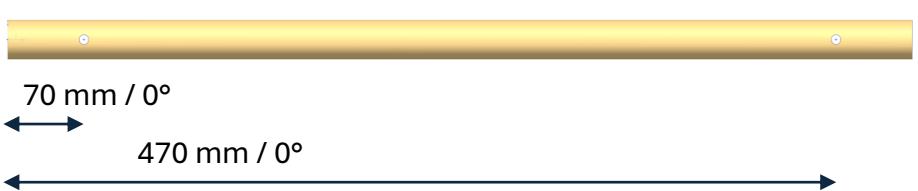
420 mm



Bamboo 10

Amount: 6

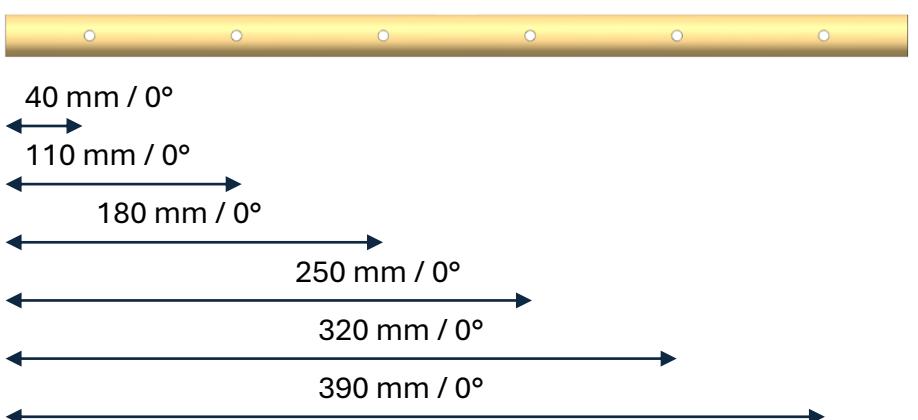
540 mm



Bamboo 11

Amount: 2

430 mm



Preparation

Bamboo 17

Amount: 2

430 mm



40 mm / 0°

110 mm / 0°

180 mm / 0°

250 mm / 0°

320 mm / 0°

390 mm / 0°

Bamboo 18

Amount: 2

380 mm



90 mm / 0°

290 mm / 0°

Bamboo 19

Amount: 3

460 mm



130 mm / 0°

320 mm / 0°

Preparation

Bamboo 15

Amount: 4

590 mm



40 mm / 0°



90 mm / 0°



500 mm / 0°



550 mm / 0°



Bamboo 16

Amount: 4

130 mm



20 mm / 0°



50 mm / 0°



80 mm / 0°



110 mm / 0°



Preparation

Bamboo Number	Length	Amount	Holes [No. : x / alpha]
1.1	580 mm	1	B1: 40mm/0°, F1: 90mm/90°, J1: 255mm/-60°, E1: 510mm/90°, A1: 540mm/0°
1.2	580mm	1	B2: 40mm/0°, F2: 90mm/90°, J2: 230mm/60°, E2: 510mm/90°, A2: 540mm/0°
2	782mm	2	D1: 40mm/0°, -: 413mm/0°, A1: 742mm/0°
3	625mm	2	B1: 40mm/0°, -: 295mm/0°, C1: 585mm/0°
4.1	650mm	1	D1: 40mm/0°, H1: 60mm/90°, I1: 140mm/90°, K1: 360mm/60°, M1: 440mm/0°, G1: 540mm/90°, C1: 610mm/0°
4.2	650mm	1	D2: 40mm/0°, H2: 60mm/90°, I2: 140mm/90°, K2: 385mm/-60°, M2: 440mm/0°, G2: 540mm/90°, C2: 610mm/0°
5	893	2	C1: 40mm/0°, L1: 201mm/0°, A1: 361mm/0°, N1: 597mm/0°, M1: 853mm/90°
6	772	2	Q1: 50mm/0°, D1: 145mm/0°, R1: 320mm/0°, B1: 485mm/0°, O1: 732mm/0°
7	635	2	J1: 40mm/0°, -: 317.5mm/90°, K2: 595mm/0°
8	540	3	E1: 40mm/0°, E2: 500mm/0°
9	533	2	O1: 40mm/0°, N1: 493mm/0°

Preparation

Bamboo Number	Length	Amount	Holes [No. : x / alpha]
10	540	6	-: 70mm/0°, -: 470mm/0°
11	430	2	-: 40mm/0°, -: 110mm/0°, -: 180mm/0°, -: 250mm/0°, -: 320mm/0°, -: 390mm/0°
12	540	2	H1: 40mm/0°, -: 100mm/0°, -: 160mm/0°, -: 380mm/0°, -: 440mm/0°, H2: 500mm/0°
13	230	2	S1: 40mm/0°, Q1: 190mm/0°
14	420	2	S1: 40mm/0°, R1: 380mm/0°
15	590	4	-: 40mm/0°, -: 90mm/0°, -: 500mm/0°, -: 550mm/0°
16	130	4	-: 20mm/0°, -: 50mm/0°, -: 80mm/0°, -: 110mm/0°
17	430	2	-: 40mm/0°, -: 110mm/0°, -: 180mm/0°, -: 250mm/0°, -: 320mm/0°, -: 390mm/0°
18	380	2	-: 90mm/0°, -: 290mm/0°
19	460	3	-: 130mm/0°, -: 330mm/0°
20	334	1	P1: 40mm/0°, P2: 295mm/0°
21	335	2	M1: 40mm/0°, L1: 295mm/0°
22	690	1	I2: 40mm/0°, G1: 650mm/0°

Preparation

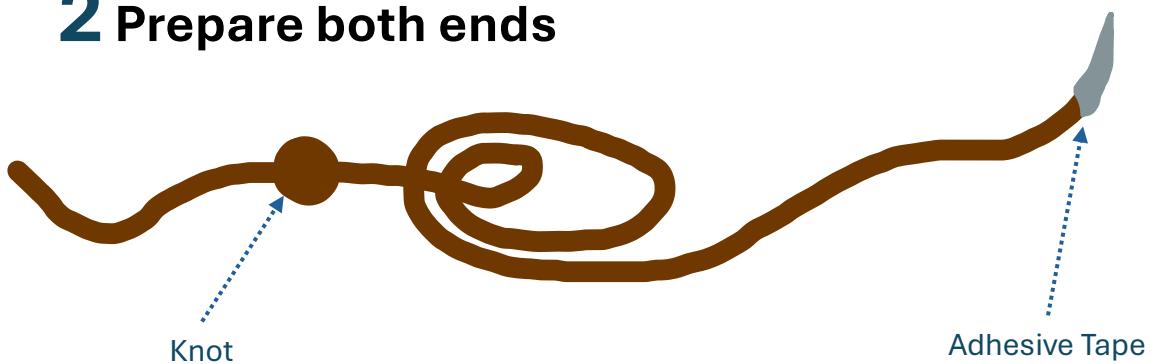
Step: Rope Preparation

Needed Materials: Rope/Adhesive Tape

1 Cut the ropes to length

	Simple Square Lashing	Strong Square Lashing	Strong Double Square Lashing	Miscellaneous
Quantity	38	16	8	20 Meter
Length [m]	1	1,60	2,10	

2 Prepare both ends



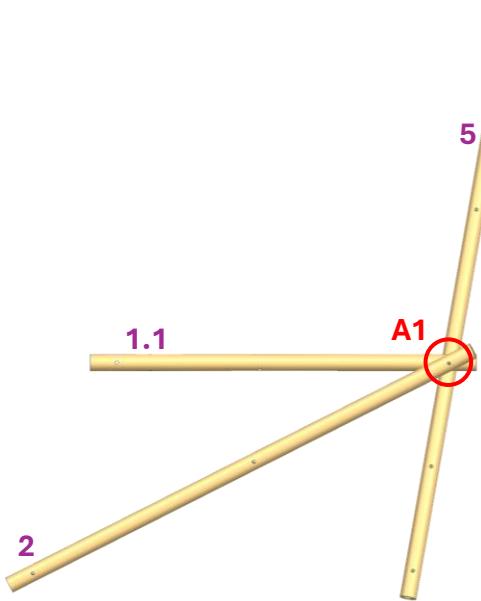
Wind adhesive Tape around the end of the Rope. This makes it easier to thread the rod through the holes of the bamboo rods

Framework Module Construction

front view



side view



Step: left frame structure

Needed Bamboo: 1.1 / 2 / 5

Knot Name: A1

Knot Design: double strong square lashing

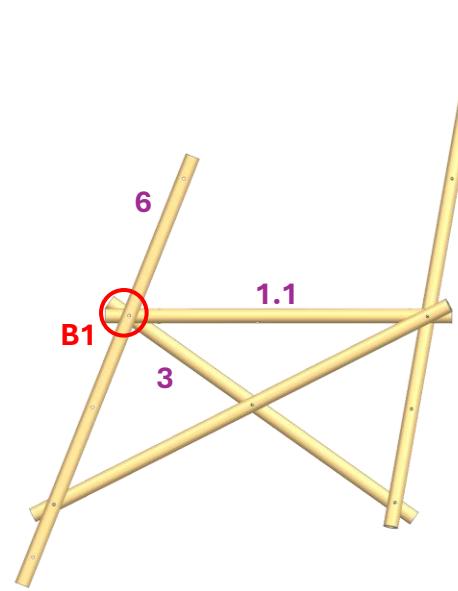
Comments:

Framework Module Construction

front view



side view



Step: left frame structure

Needed Bamboo: 1.1 / 3 / 6

Knot Name: B1

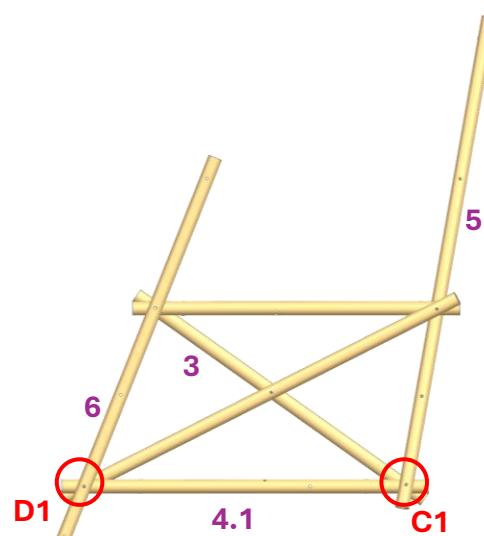
Knot Design: double strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: left frame structure

Needed Bamboo: 3 / 4.1 / 5 , 2 / 4.1 / 6

Knot Name: C1, D1

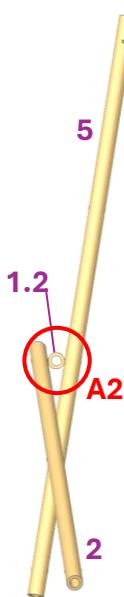
Knot Design: double strong square lashing

Comments:

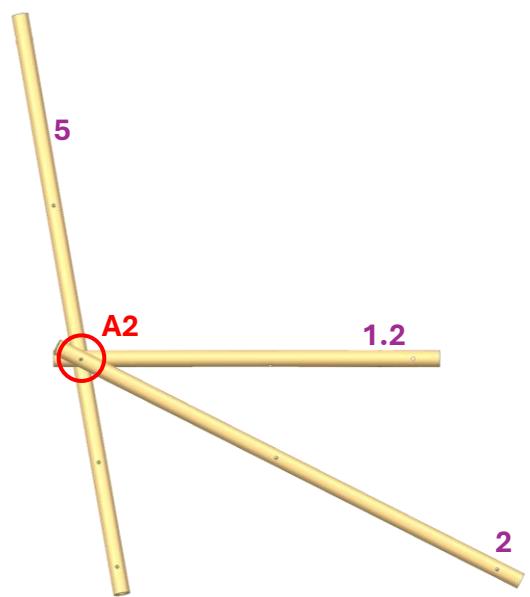
After this step the left frame structure is completed.

Framework Module Construction

front view



side view



Step: right frame structure

Needed Bamboo: 1.2 / 2 / 5

Knot Name: A2

Knot Design: double strong square lashing

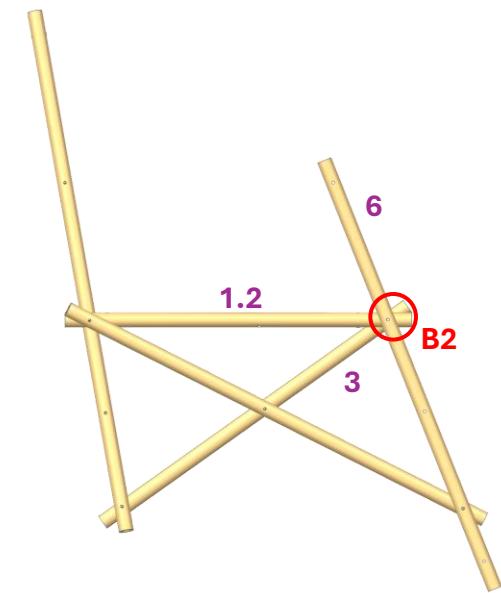
Comments:

Framework Module Construction

front view



side view



Step: right frame structure

Needed Bamboo: 1.2 / 3 / 6

Knot Name: B2

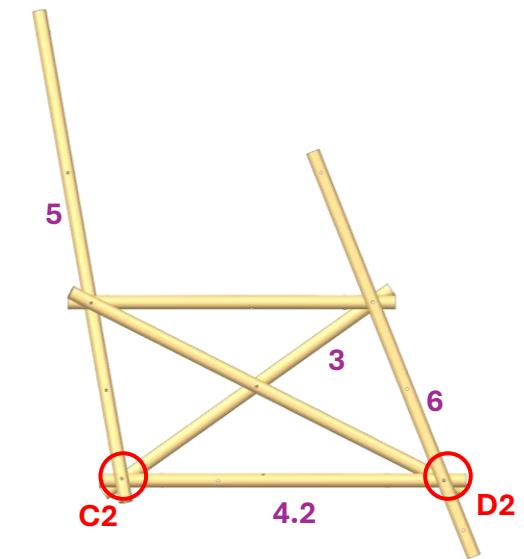
Knot Design: double strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: right frame structure

Needed Bamboo: 3 / 4.2 / 5 , 2 / 4.2 / 6

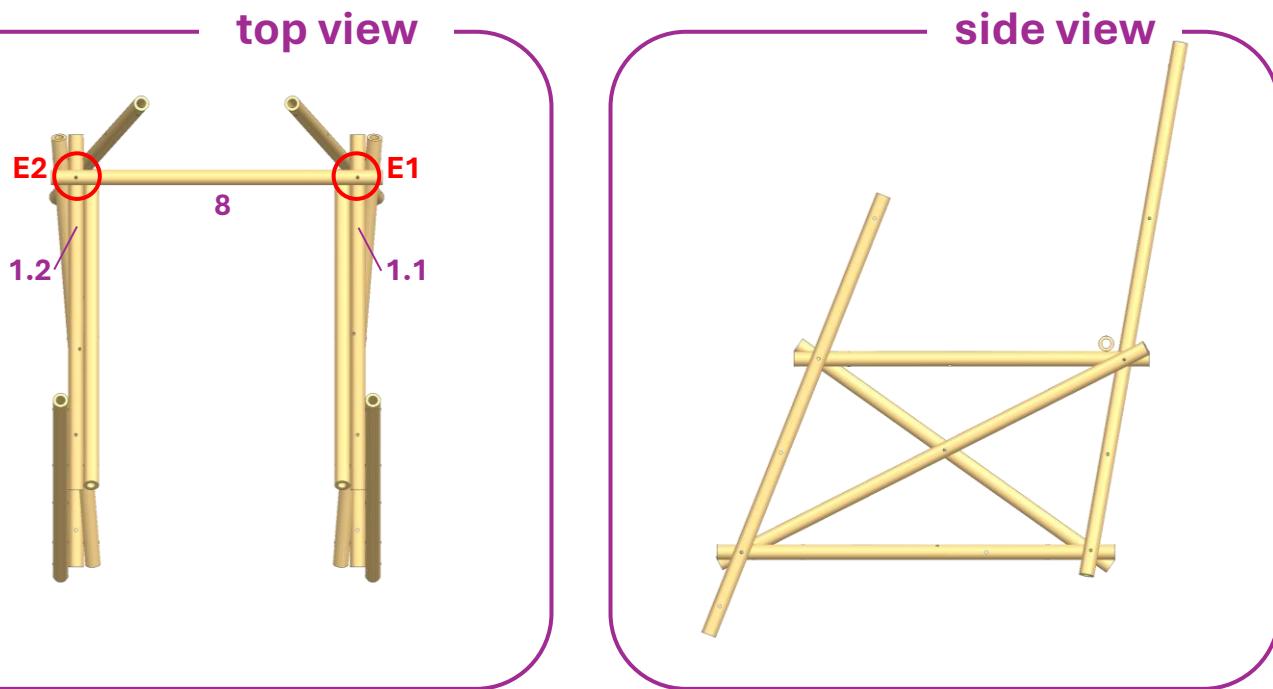
Knot Name: C2, D2

Knot Design: double strong square lashing

Comments:

After this step the right frame structure is completed.

Framework Module Construction



Step: connection rods

Needed Bamboo: 1.1 / 8 , 1.2 / 8

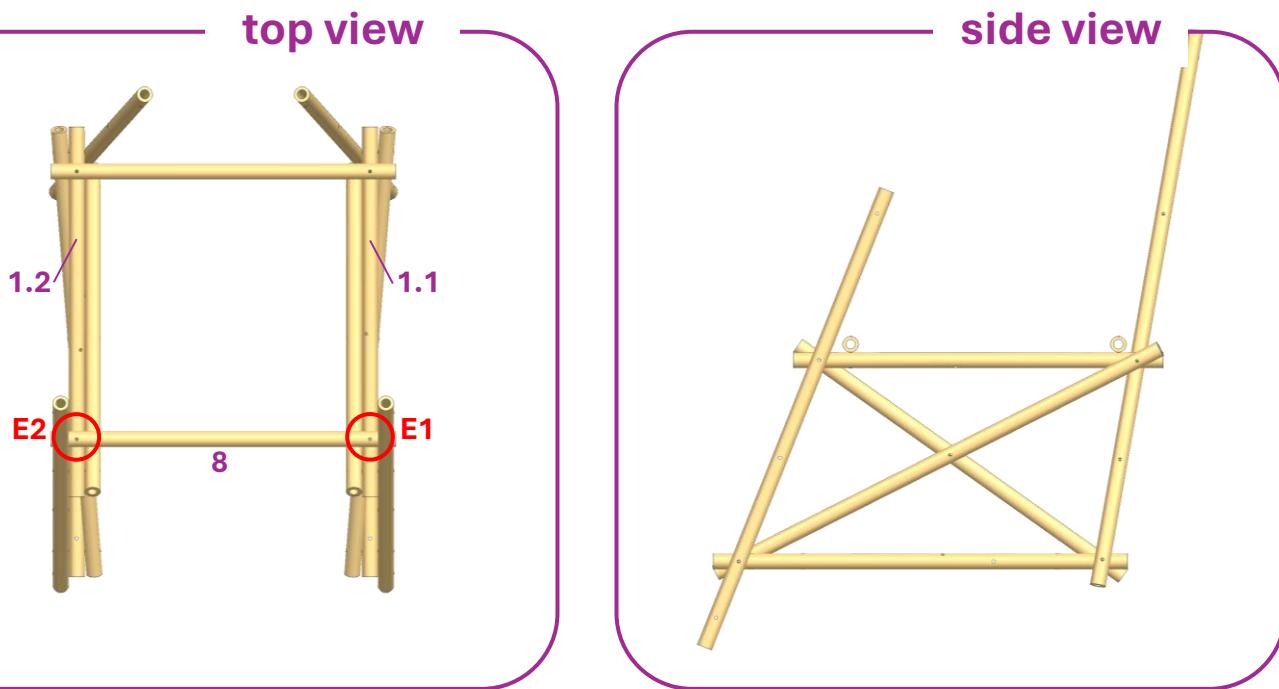
Knot Name: E1, E2

Knot Design: strong square lashing

Comments:

Connect left and right frame structure.

Framework Module Construction



Step: connection rods

Needed Bamboo: 1.1 / 8 , 1.2 / 8

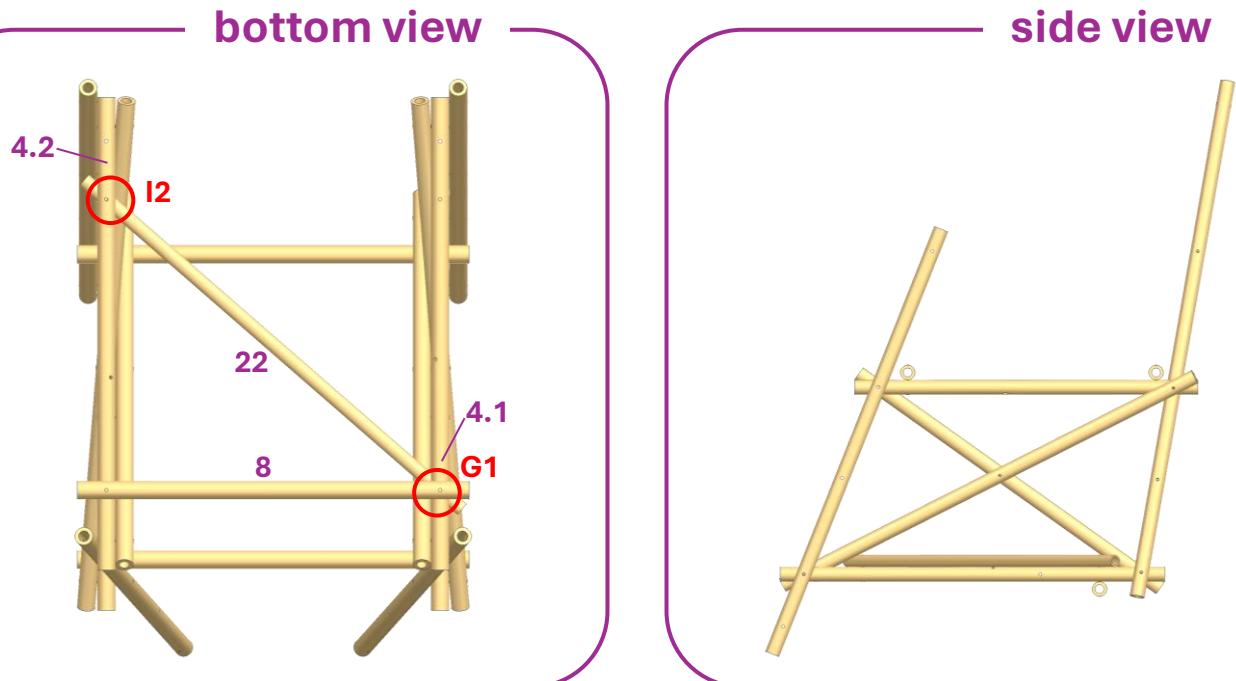
Knot Name: F1, F2

Knot Design: strong square lashing

Comments:

Connect left and right frame structure.

Framework Module Construction



Step: connection rods

Needed Bamboo: 4.1 / 8 / 22 , 4.2 / 8

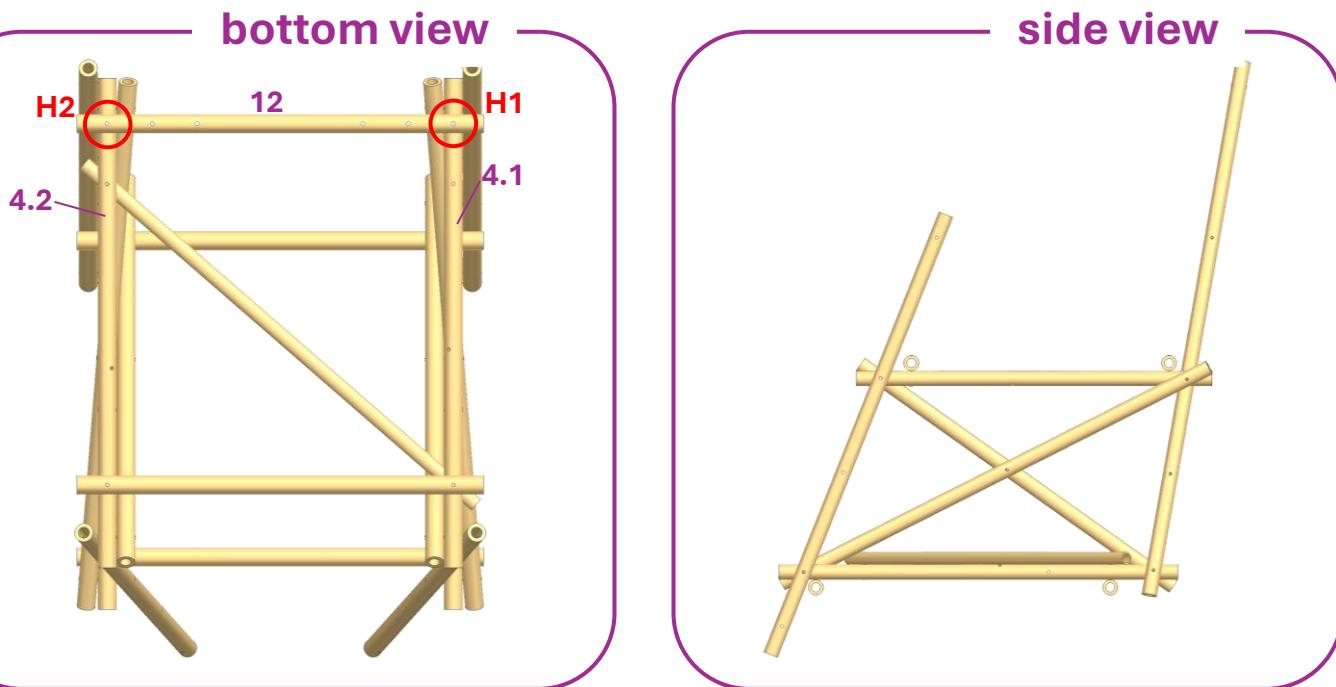
Knot Name: G1, I2

Knot Design: double strong square lashing

Comments:

I2 will be tied later.

Framework Module Construction



Step: connection rods

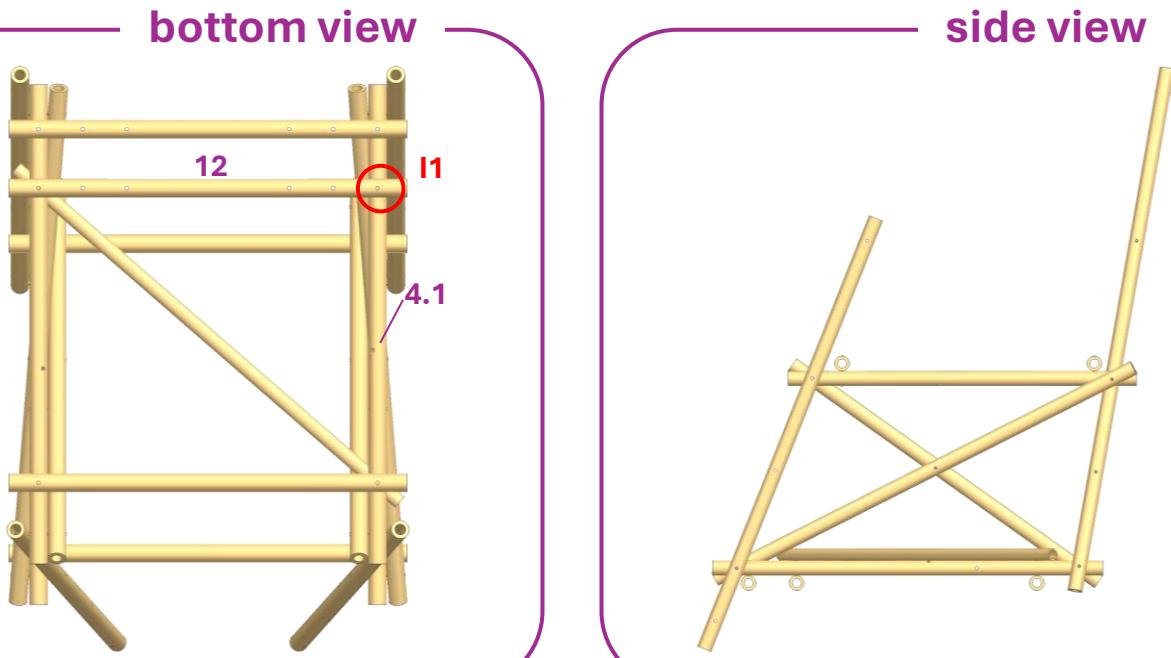
Needed Bamboo: 4.1 / 12

Knot Name: H1, H2

Knot Design: strong square lashing

Comments:

Framework Module Construction



Step: connection rods

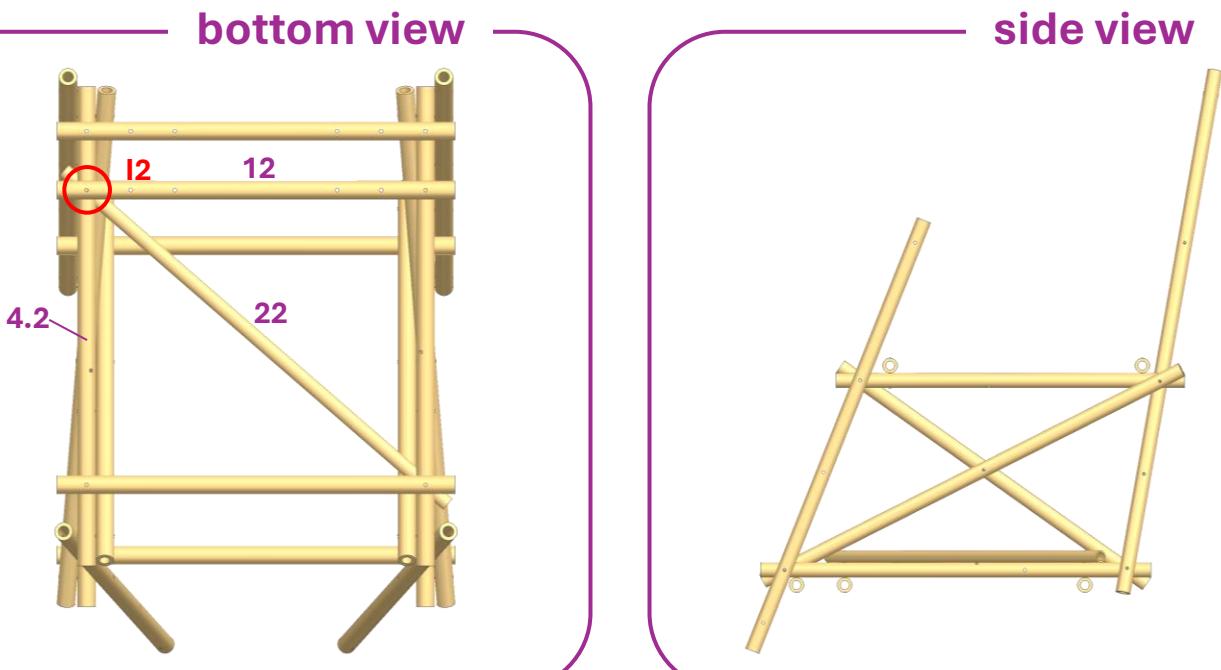
Needed Bamboo: 4.1 / 12

Knot Name: I1

Knot Design: strong square lashing

Comments:

Framework Module Construction



Step: connection rods

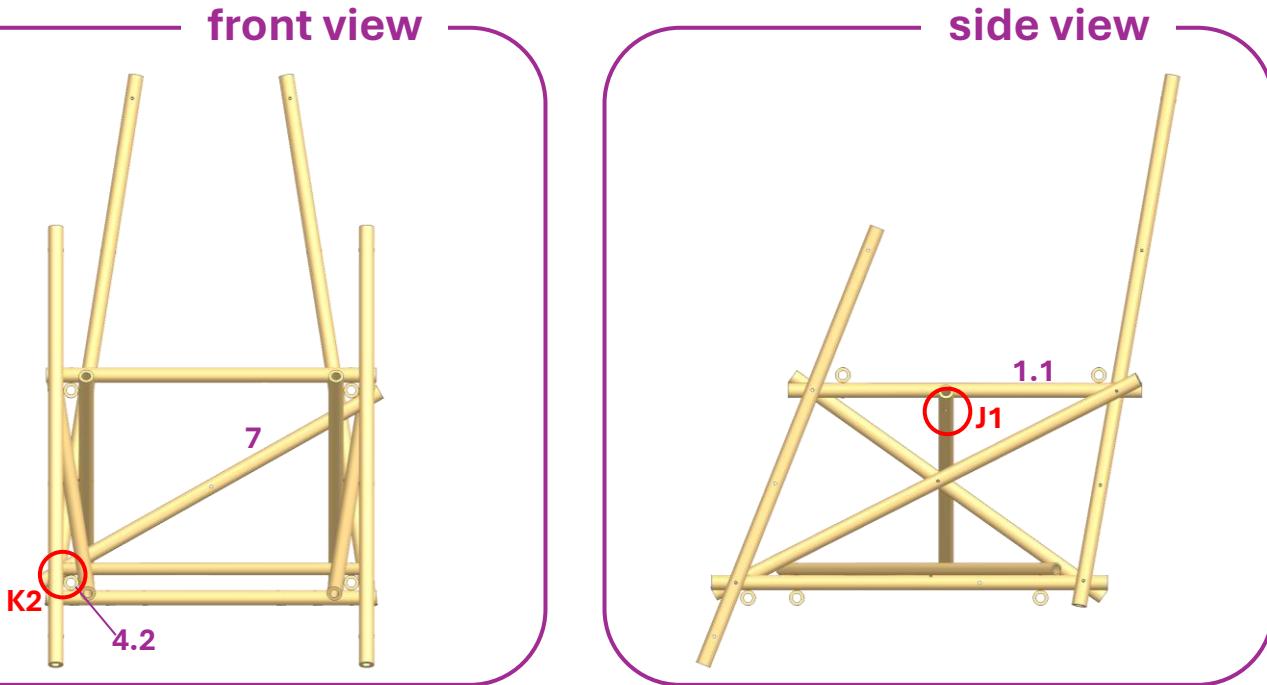
Needed Bamboo: 4.1 / 12 / 22

Knot Name: I2

Knot Design: double strong square lashing

Comments:

Framework Module Construction



Step: cross connection rods

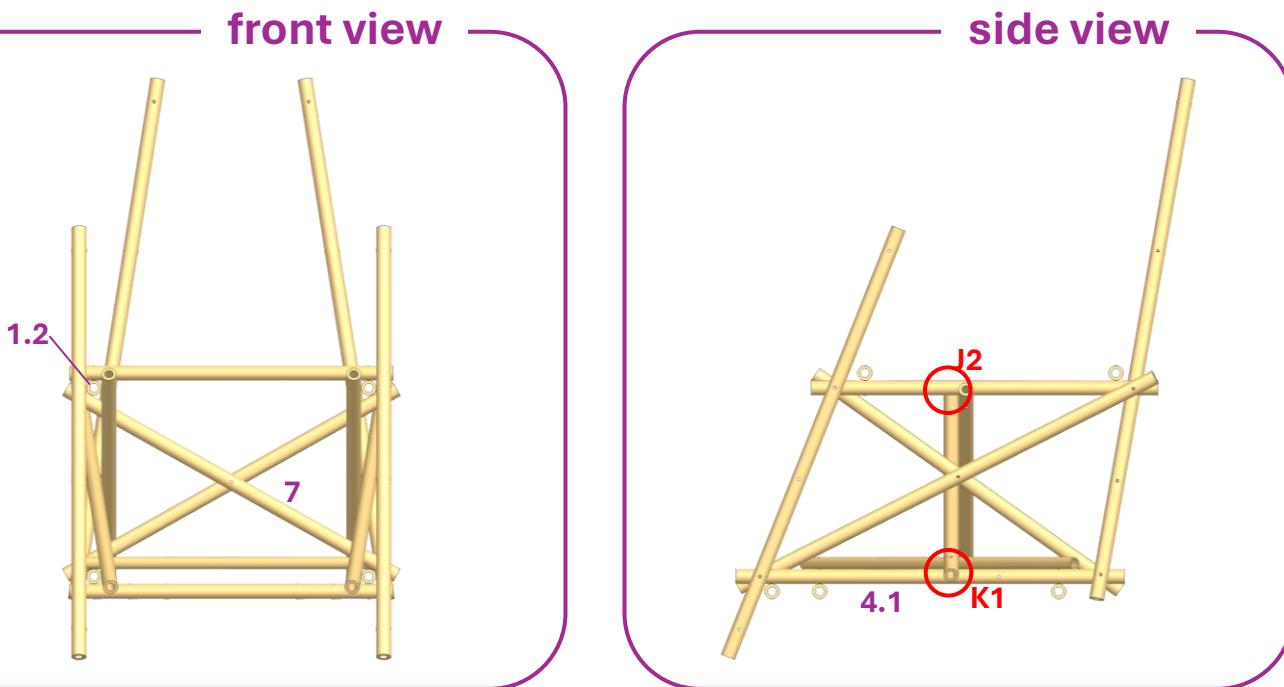
Needed Bamboo: 1.1 / 7 , 4.2 / 7

Knot Name: J1 , K2

Knot Design: strong square lashing

Comments:

Framework Module Construction



Step: cross connection rods

Needed Bamboo: 1.2 / 7 , 4.1 / 7

Knot Name: J2 , K1

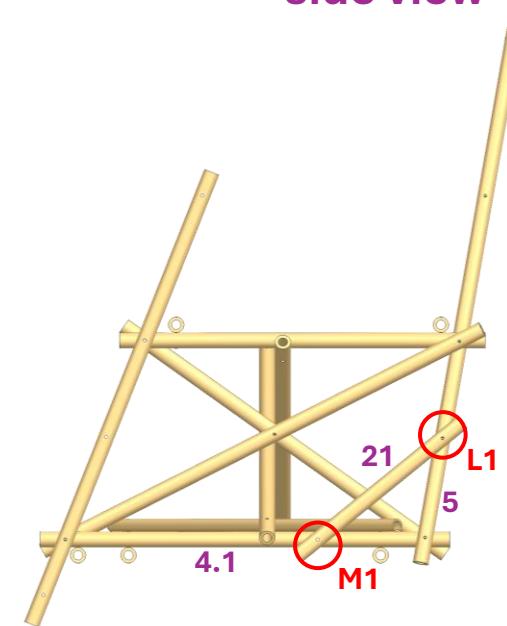
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: axle mount rod

Needed Bamboo: 5 / 21 , 4.1 / 21

Knot Name: L1 , M1

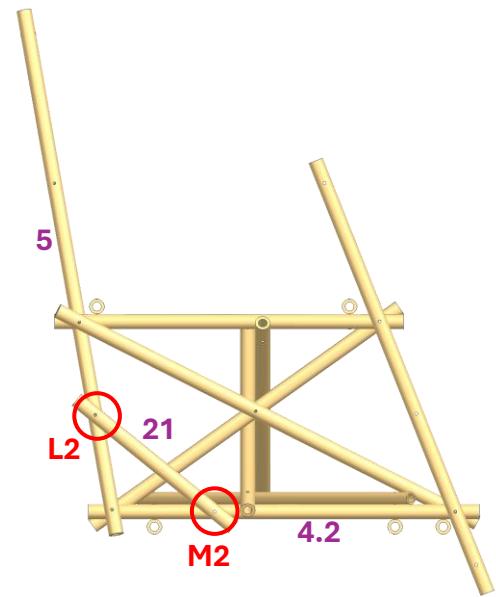
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: axle mount rod

Needed Bamboo: 5 / 21 , 4.2 / 21

Knot Name: L2 , M2

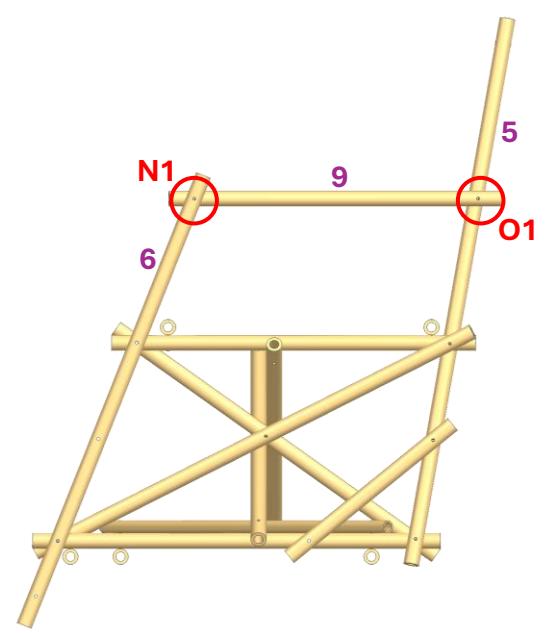
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: armrest rods

Needed Bamboo: 5 / 9 , 6 / 9

Knot Name: N1 , O1

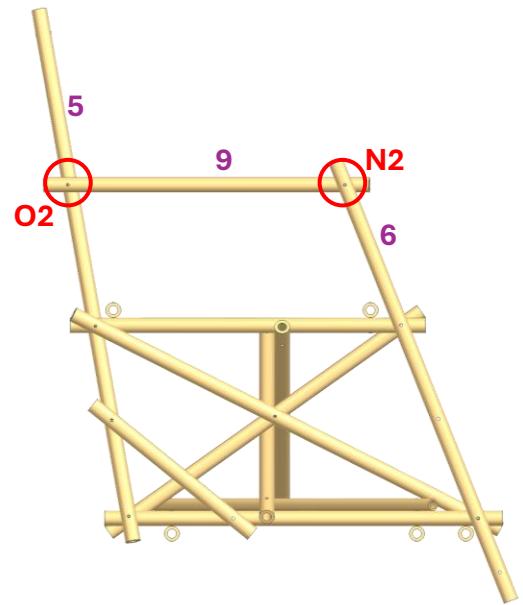
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: armrest rods

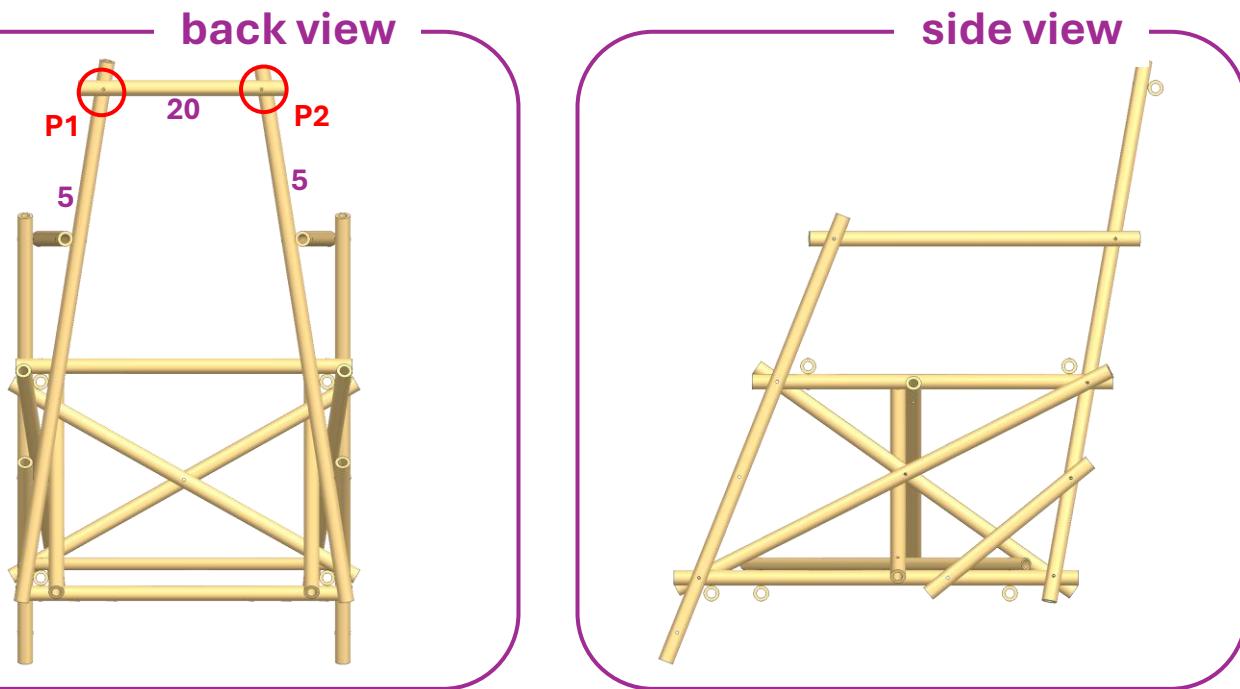
Needed Bamboo: 5 / 9 , 6 / 9

Knot Name: N2 , O2

Knot Design: strong square lashing

Comments:

Framework Module Construction



Step: push rod

Needed Bamboo: 5 / 20 , 5 / 20

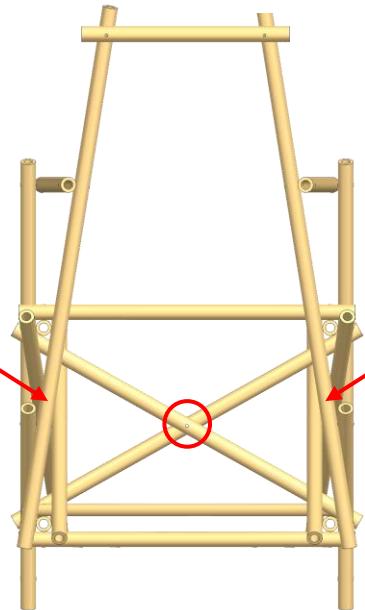
Knot Name: P1 , P2

Knot Design: strong square lashing

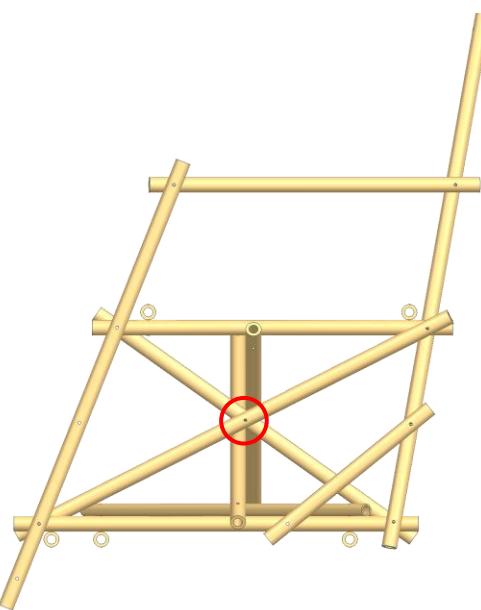
Comments:

Framework Module Construction

back view



side view



Step: cross rods

Needed Bamboo:

Knot Name:

Knot Design: strong square lashing

Comments:

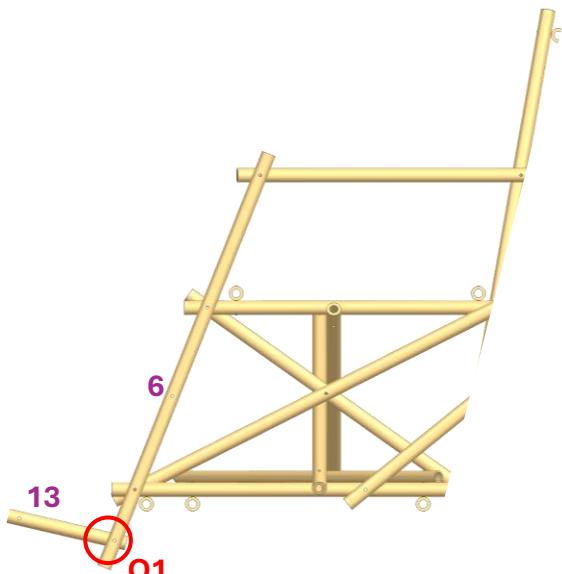
Tie all three crosses together.

Framework Module Construction

front view



side view



Step: footrest rods

Needed Bamboo: 6 / 13

Knot Name: Q1

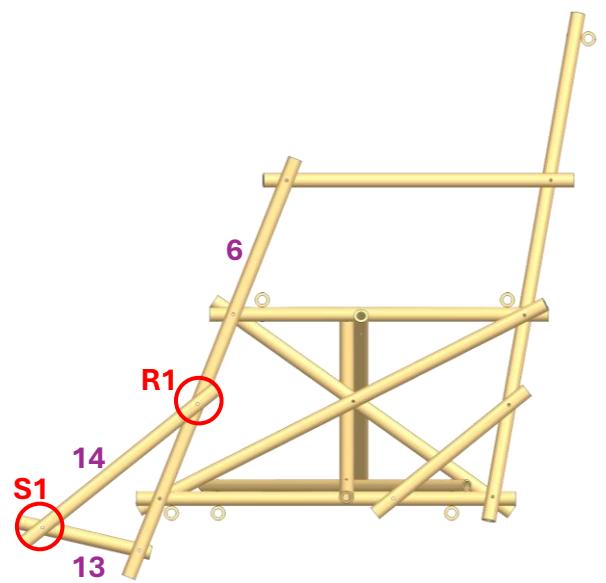
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: footrest rods

Needed Bamboo: 6 / 14, 13 / 14

Knot Name: R1 , S1

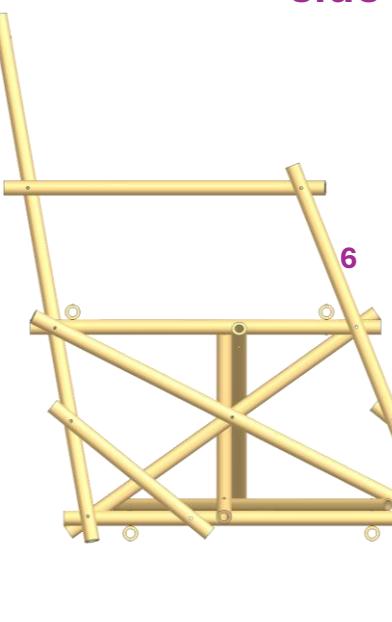
Knot Design: strong square lashing

Comments:

Framework Module Construction



front view



side view

Step: footrest rods

Needed Bamboo: 6 / 13

Knot Name: Q2

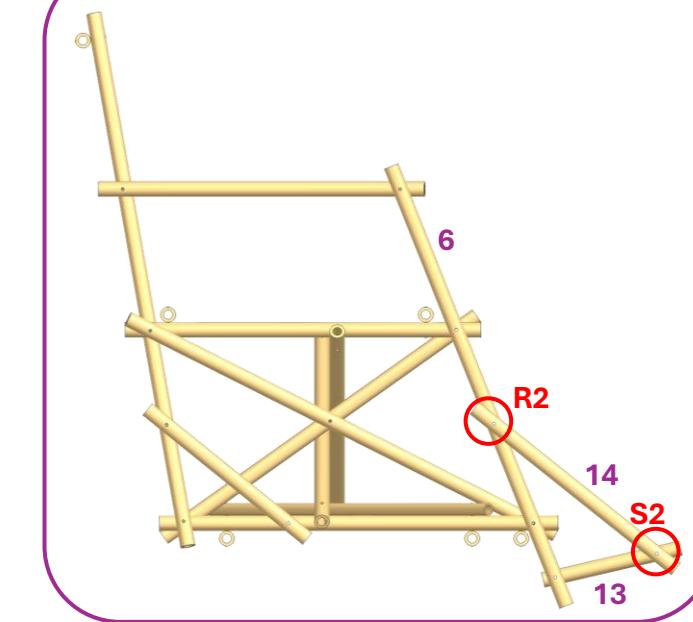
Knot Design: strong square lashing

Comments:

Framework Module Construction

front view

side view



Step: footrest rods

Needed Bamboo: 6 / 14, 13 / 14

Knot Name: R2 , S2

Knot Design: strong square lashing

Comments:

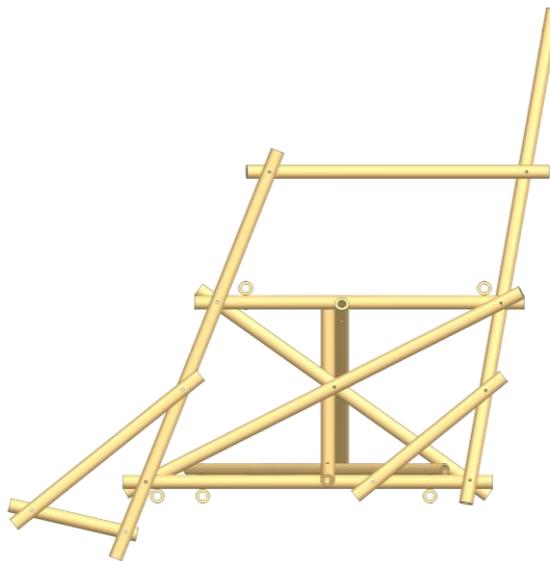
After this step the framework module construction is finished.

Framework Module Construction

front view



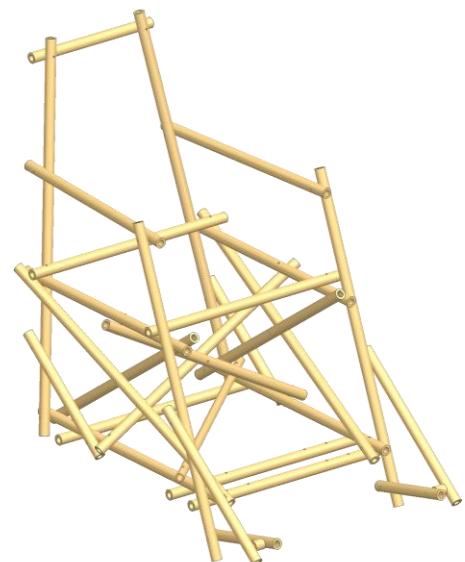
side view



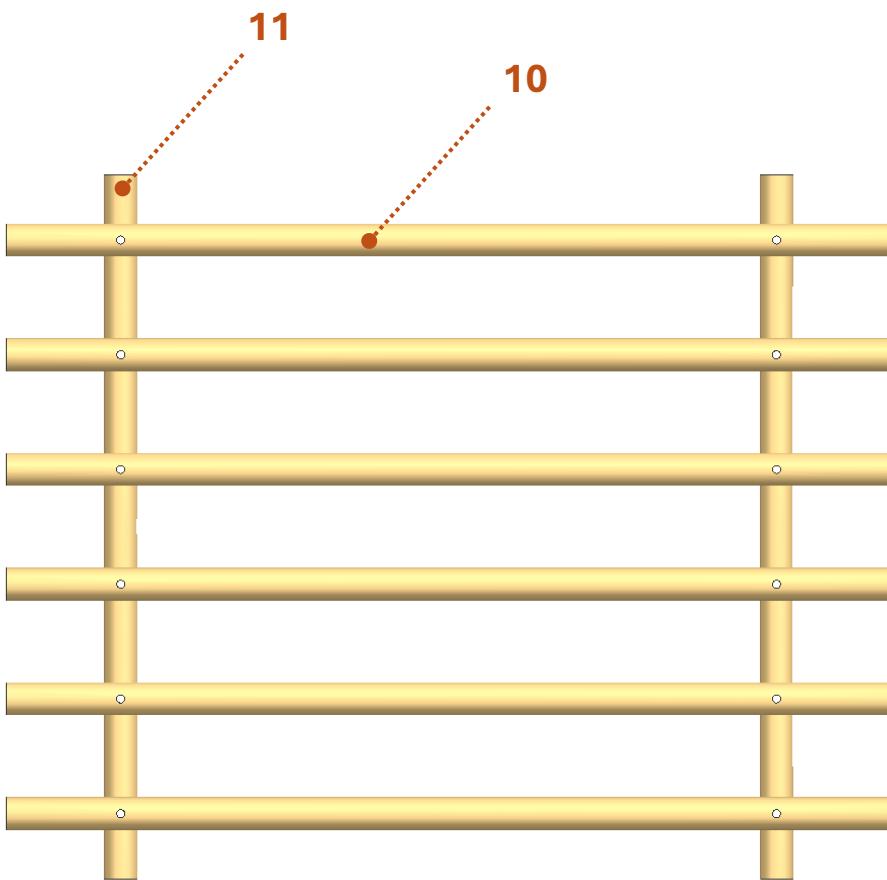
top view



iso view



Interface Module Construction

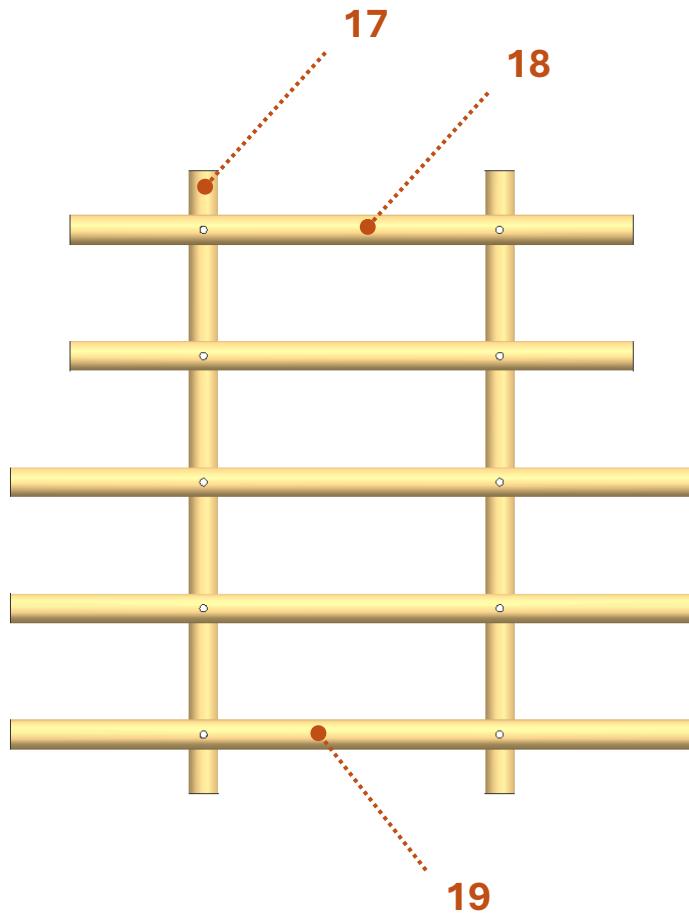


Step: Seat Module

Needed Bamboo: 6x10 / 2x11

Knot Design: Simple square lashing

Interface Module Construction

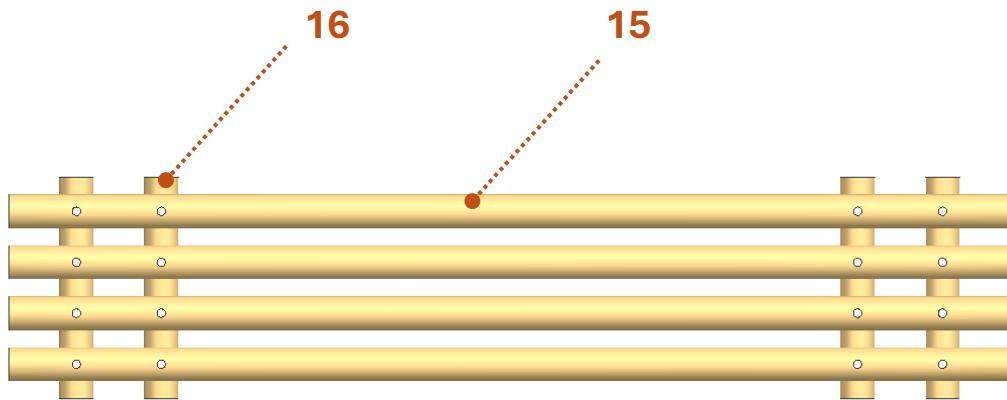


Step: Backrest Module

Needed Bamboo: 3x19 / 2x18 / 2x17

Knot Design: Simple square lashing

Interface Module Construction

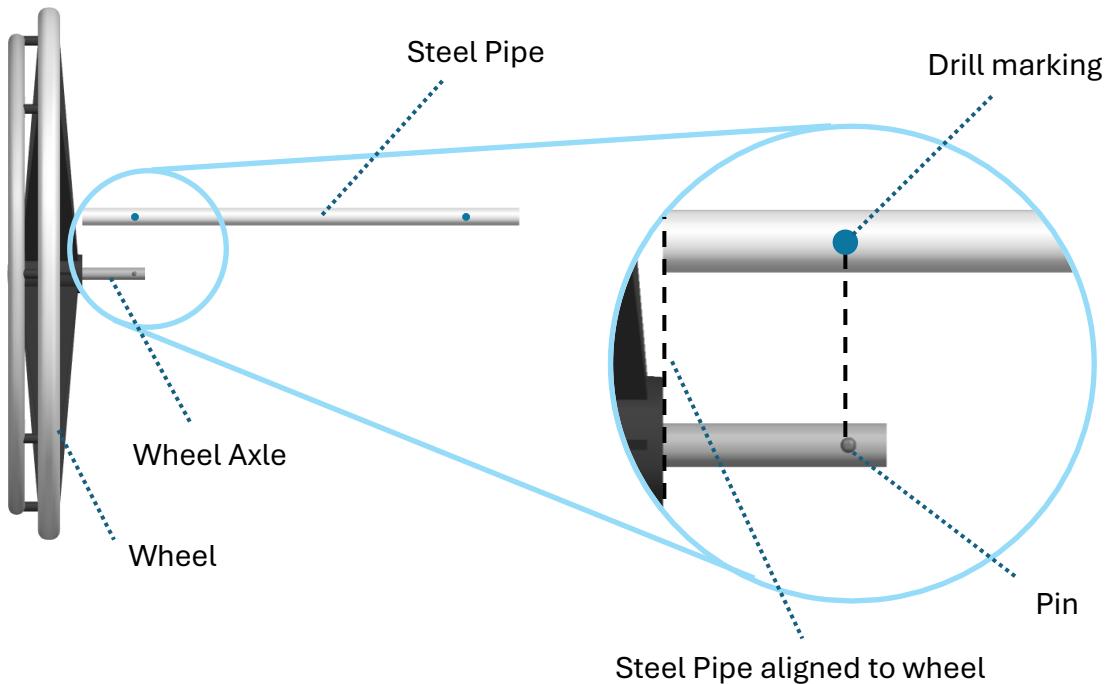


Step: Footrest Module

Needed Bamboo: 4x15 / 4x16

Knot Design: Simple square lashing

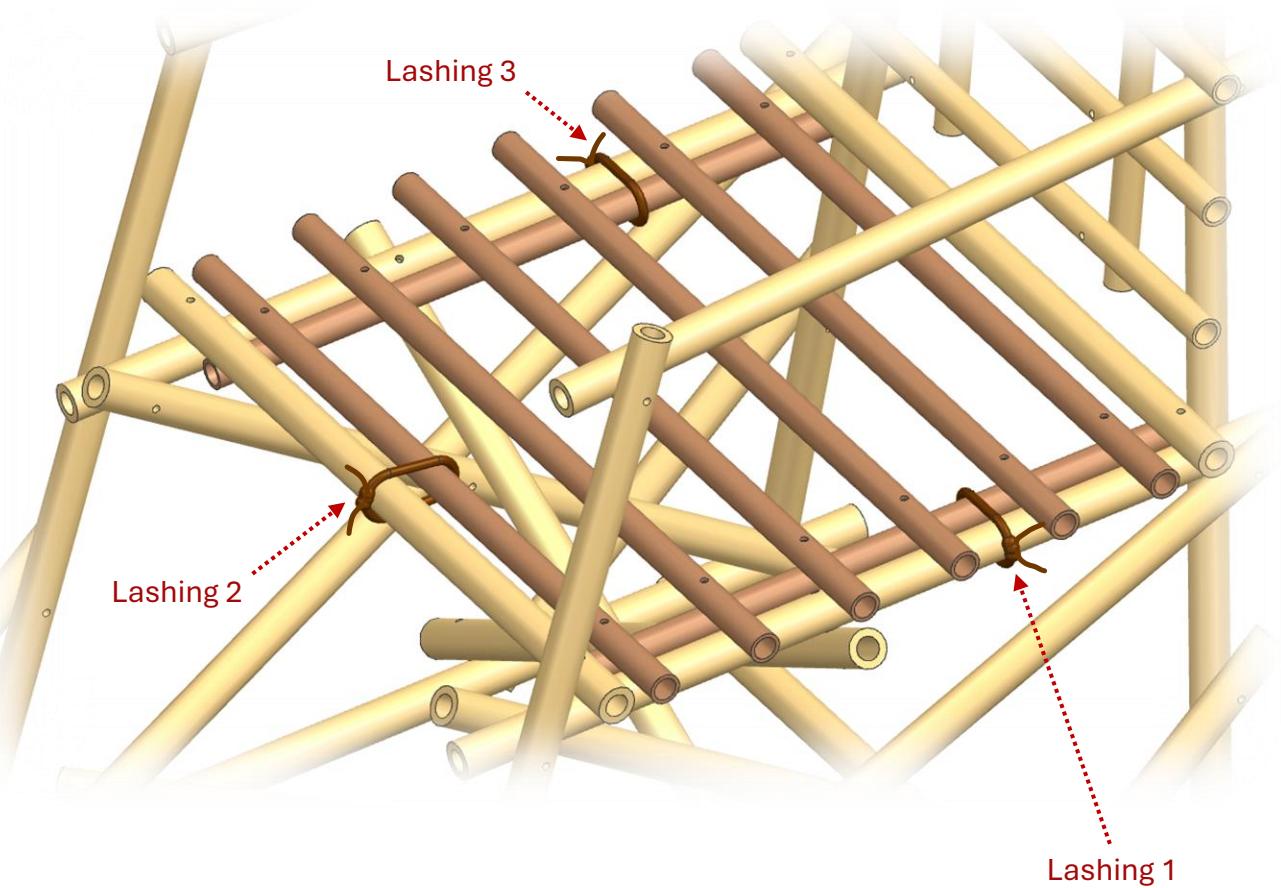
1 Mark the holes on the steel pipe



→ Repeat for the other side

2 Drill the holes into the steel pipe

Final Assembly

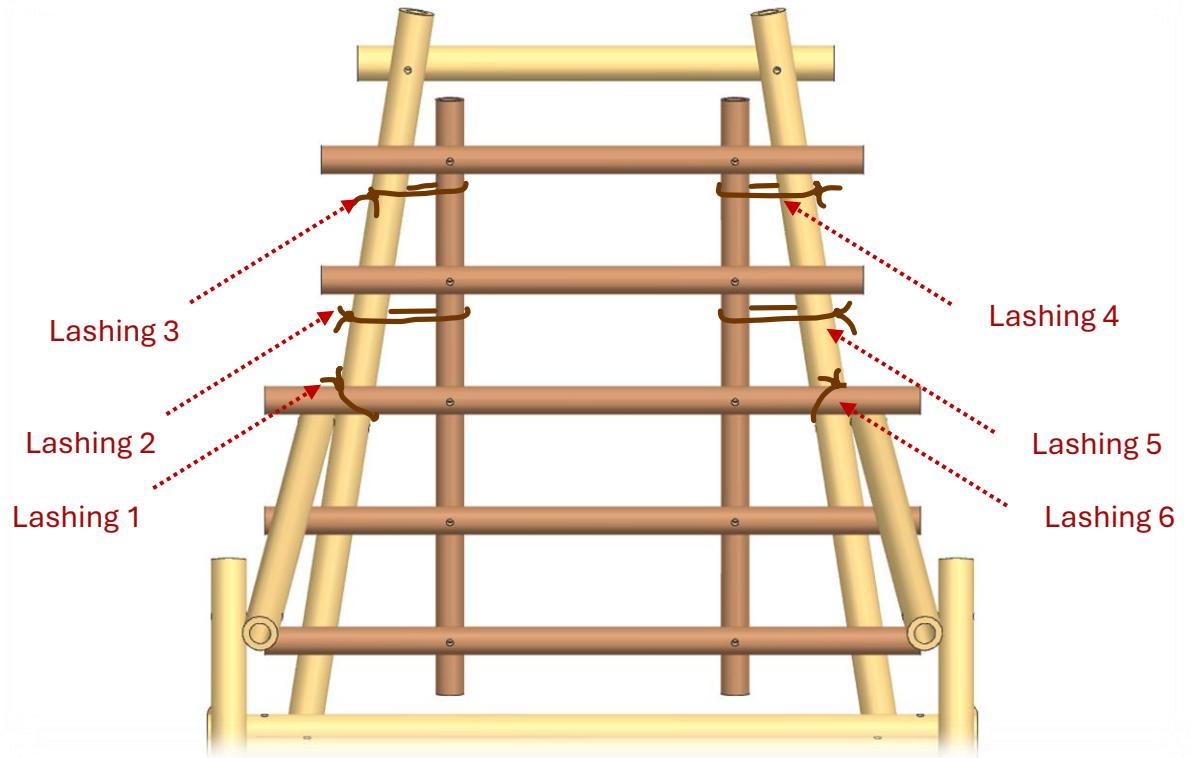


Step: Install the Seat

Needed Modules: Seat / Framework

Knot Design: Classic Square Knot

Final Assembly

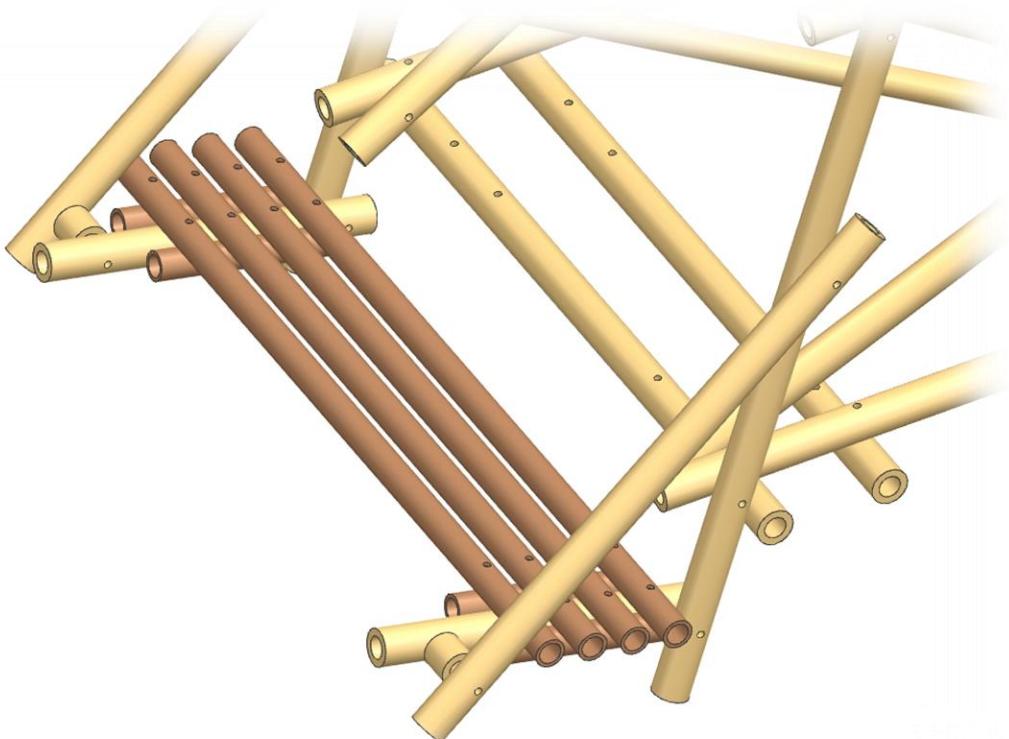


Step: Install the Backrest

Needed Modules: Backrest/Framework

Knot Design: Classic Square Knot

Final Assembly

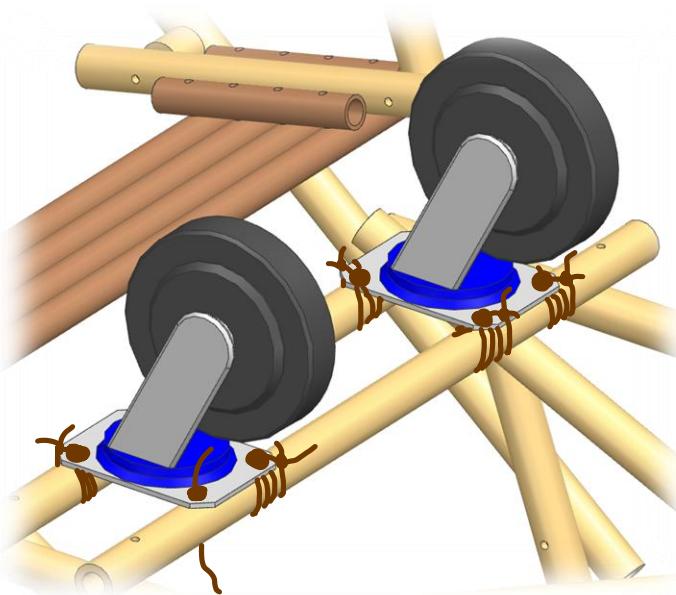


Step: Install the Footrest

Needed Modules: Footrest/Framework

Knot Design: No knot needed

Final Assembly



1. Tie the rope around the rod and the front wheel plate holes
2. Repeat as often as possible
3. Tie the end and beginning of the rope together using a classic square knot

Step: Install the Front Wheels

Needed Modules: Mobility/Framework

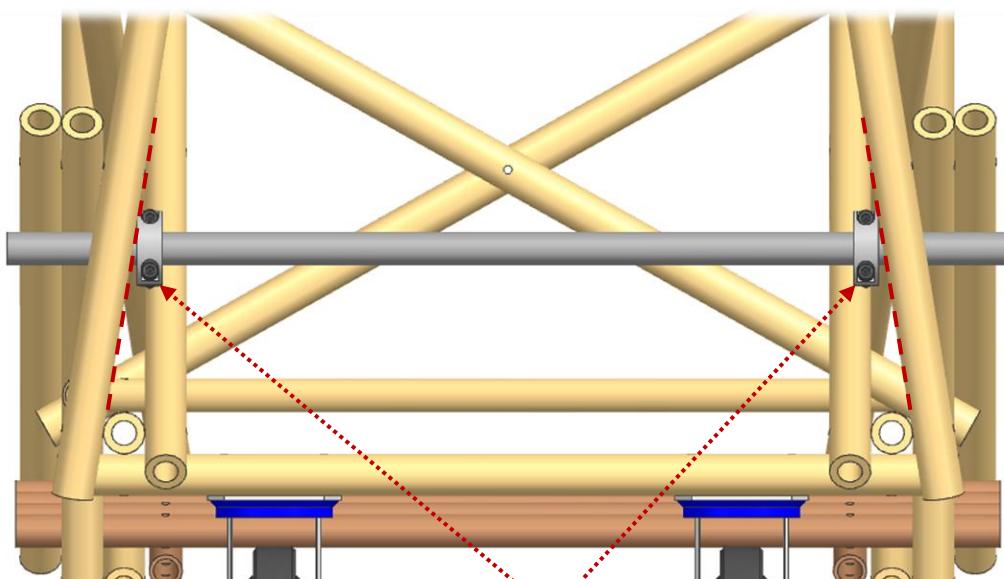
Knot Design: Classic square knot

Final Assembly

Step: Install the rear Wheels

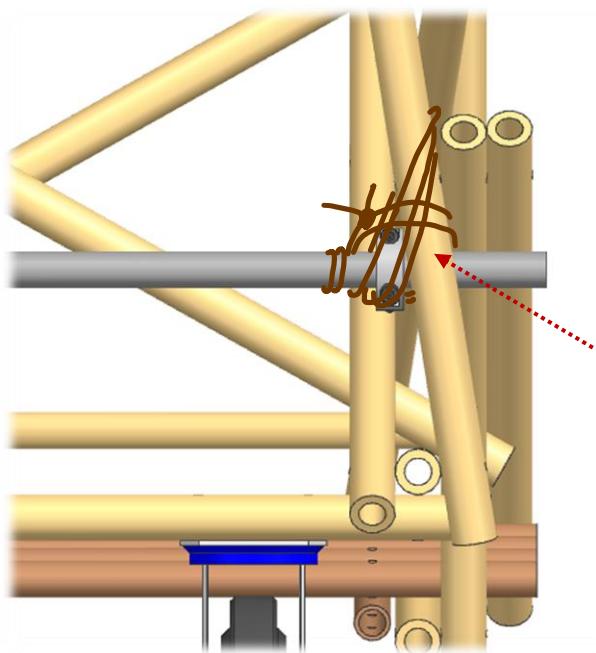
Needed Materials: Steel Pipe/Clamping Ring/Framework/Rear Wheels

1 Install the Clamping Rings on the Steel Rod



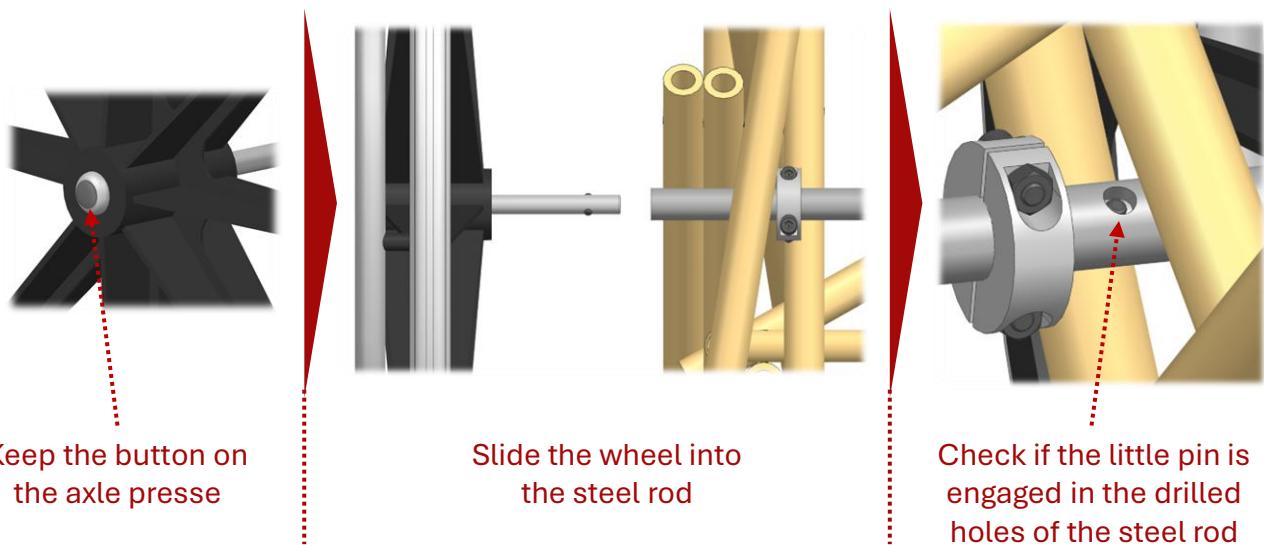
Clamping Ring sits flush to the bamboo rod

2 Install the Steel Rod to the Framework



Wind the rope around the neighboring rods. This binding ensures that the wheels stay connected to the framework when the wheelchair is lifted. Tie the beginning and end together using a classic square knot.

3 Install the rear Wheels

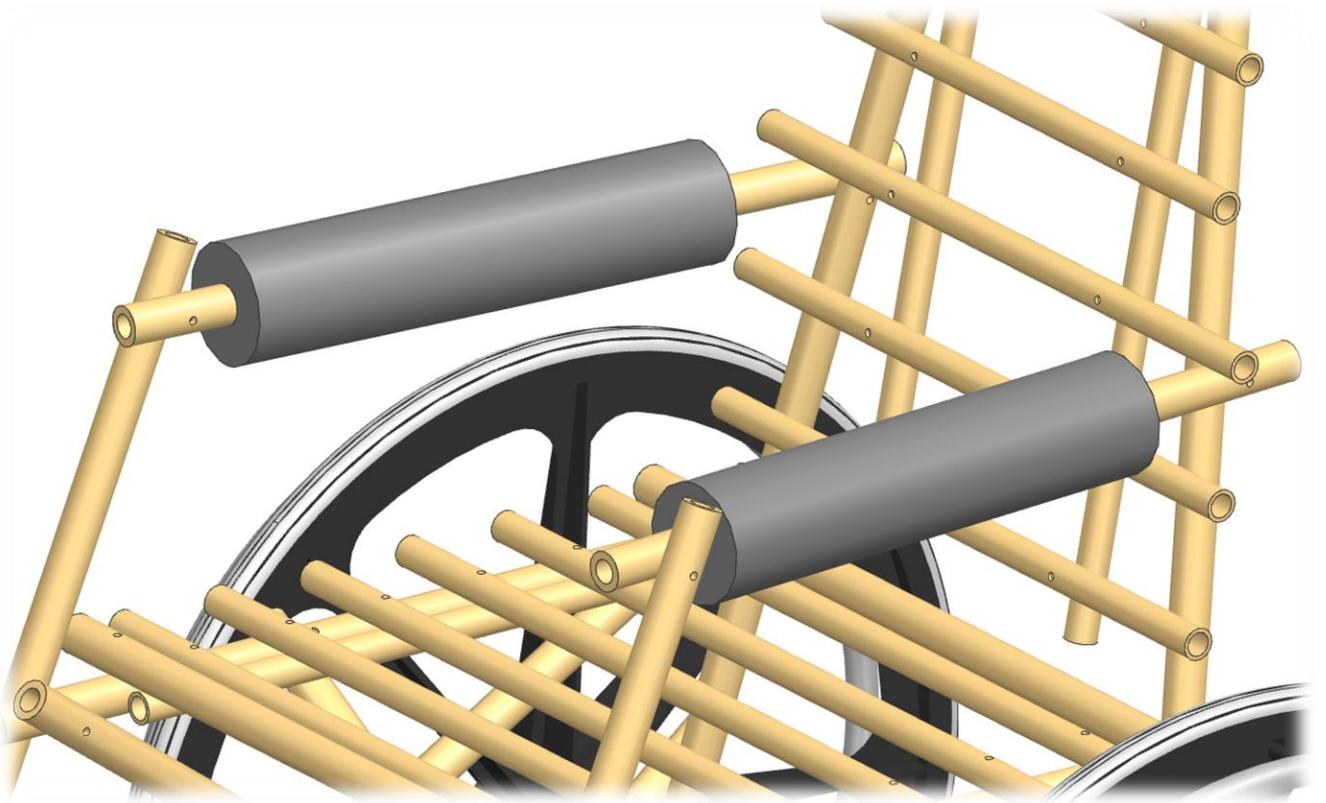


Keep the button on
the axle presse

Slide the wheel into
the steel rod

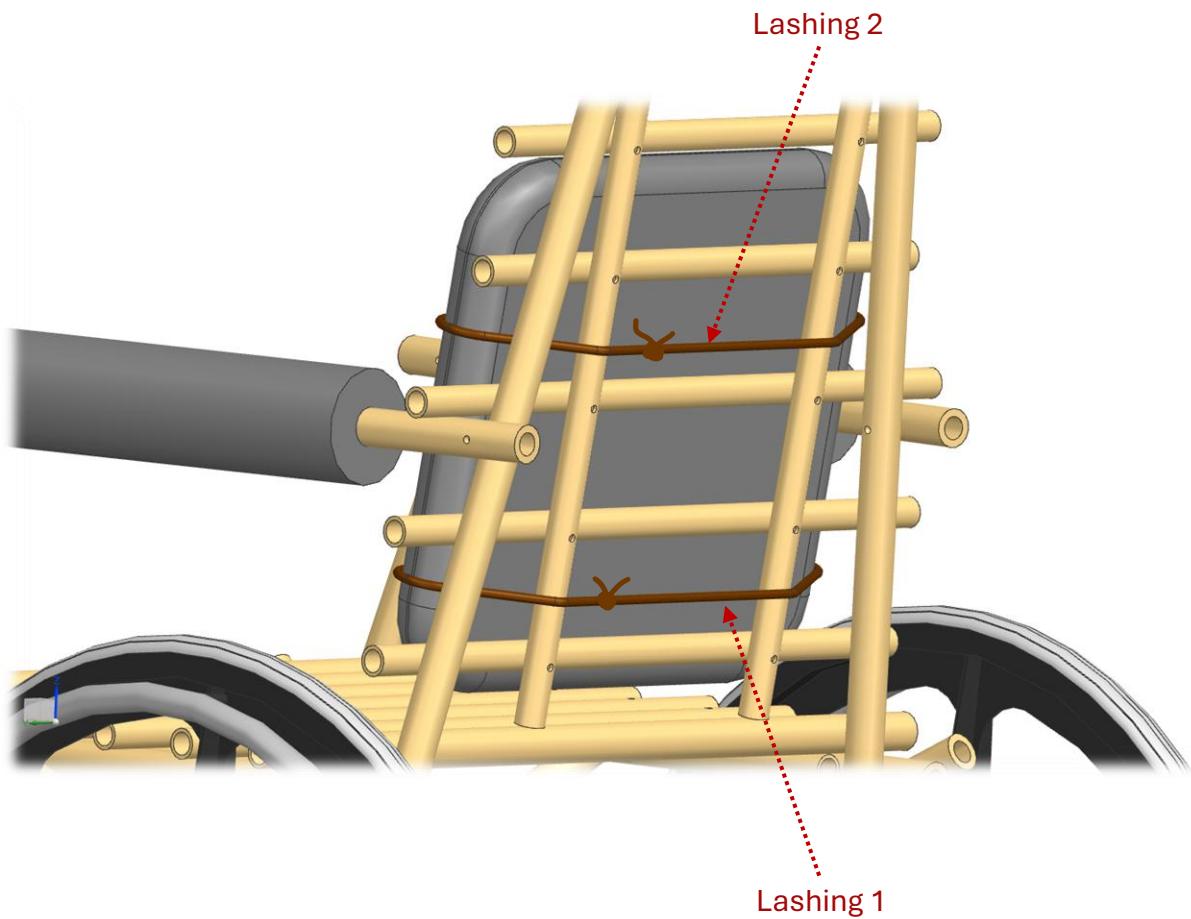
Check if the little pin is
engaged in the drilled
holes of the steel rod

Final Assembly



Step: Install the arm cushioning
Needed Materials: Pipe Insulation

Final Assembly

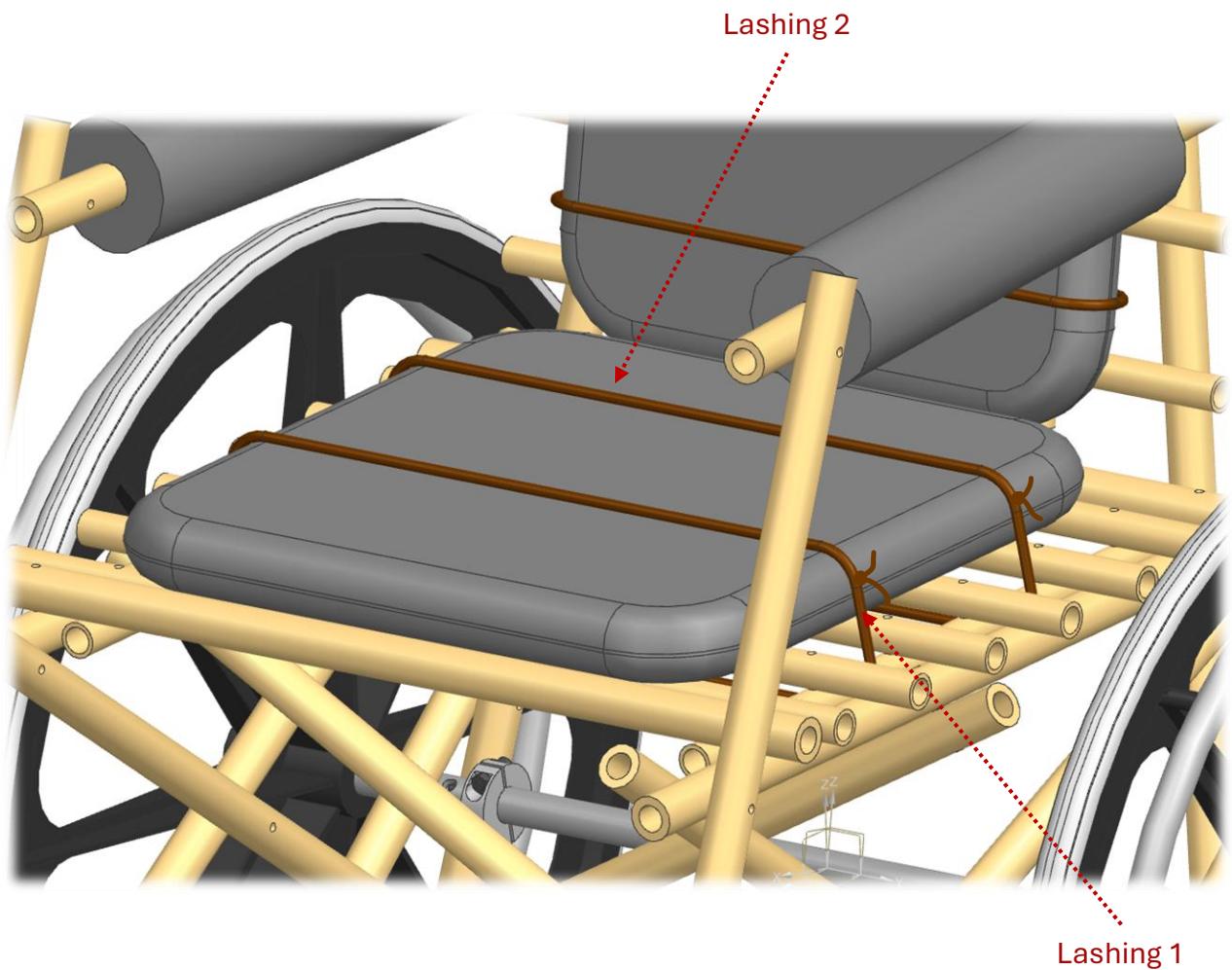


Step: Install the back cushioning

Needed Materials: Cushioning

Knot Design: Classic Square Knot

Final Assembly



Step: Install the seat cushioning

Needed Materials: Cushioning

Knot Design: Classic Square Knot

Final Assembly



Practical Tips and Typical Mistakes

Practical Tips

- Be **careful when bending the bamboo** rods in the right position, especially on the framework sides
- Use **high speed** and **little pressure** when drilling into bamboo to avoid cracks
- **Retighten the knots** after the first few rides because stretching of the ropes might appear
- You can use sections of **bamboo** with **smaller diameters** for the **interface modules**

Typical Mistakes

- **Wrong hole positions:** A wrong hole position can lead to an unsymmetrical wheelchair, pay extra attention that the holes are at the correct place and angle
- **Loose end knots:** Ensure that you do the classic square knot the right way, otherwise, it may loosen overtime

Warnings

The builder is responsible for ensuring the safe implementation of this instruction. The following warnings should be considered and taken seriously:

- **Wear gloves** when working with bamboo to be protected from sharp edges and splinters
- **Wear eye protection** for drilling holes into the steel rod to be protected from metal shavings
- **Do not exceed the maximum load of 80 kg** and make sure through tests that your own construction can take this load



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Nature of the Documentation

The assembly instructions and technical information provided in this documentation are **recommendations only**, describing one possible way to build a bamboo wheelchair. They do not constitute professional engineering, medical, or safety advice.

The information and instructions provided are **not a medical device** and do not represent a medical product within the meaning of the **EU Medical Device Regulation (MDR)** or any other comparable national or international regulation.

Responsibility of the Builder and User

Any person using this documentation to build a bamboo wheelchair does so entirely **at their own risk**. The **builder is fully responsible** for ensuring that:

- The wheelchair is structurally sound
- The materials used are suitable and safe
- The construction is appropriate for the intended use
- The wheelchair complies with any local laws or regulations

The builder is also solely responsible for **testing the wheelchair** before use. Any tests conducted by Bamboobility were performed under specific materials, methods, and environmental conditions, which may not apply to alternative materials, construction techniques, or local environments.

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- Damage to property
- Loss of profits or income
- Indirect, incidental, consequential, or special damages

This limitation of liability applies irrespective of the origin or cause of the damage. By using this documentation, you acknowledge and agree that **you assume full responsibility** for any outcomes resulting from the construction and use of a wheelchair based on the Bamboobility open-source design.

Conclusion and How to Contribute

With Bamboobility, we aim to **empower people around the world** to regain and maintain their mobility in everyday life through an affordable, accessible low-tech wheelchair solution. Beyond this specific wheelchair design, Bamboobility is also intended as **inspiration for other low-tech construction projects using bamboo**.

As an open-source project, continuous improvement depends on **community involvement**. We invite you to join the discussion, share your experiences, and contribute ideas for improvement on our GitHub repository or in the comments of our YouTube videos.

We wish you a **great and rewarding experience while building the wheelchair**, and we hope this documentation supports you throughout the process.

Stay Connected

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Website: bamboobility.github.io/Bamboobility

Github: github.com/Bamboobility/Bamboobility

YouTube: [@Bamboobility](https://www.youtube.com/@Bamboobility)



Thank you for being part of the Bamboobility community and for contributing to open, inclusive, and sustainable mobility solutions!

