

# **GREENHOUSE INSTALLATION** MANUAL

## **GREENHOUSE ML 1**





**Dear Customer** 

Thank you for choosing Lähe Greenhouse!

Please read this installation manual carefully before installing a greenhouse! Reading the installation manual will help you avoid mistakes and damage when installing a greenhouse and ensure better results with less time.

If you have no previous experience in installing a greenhouse or construction work, we recommend using the services of an experienced craftsman or construction company. Errors that may be made during the installation process may lead to injury or product damage which is expensive to repair and voids our 10 year warranty.

All Lähe greenhouses are made of natural heat treated wood. Wood is a natural material, so it is not possible to avoid twigs, cracks, small fissures, differences in shade and other characteristics of wood. These are not considered to be defects but something that is unique to every tree from where they have made their way into your product. Rest assured that they do not compromise the structure's quality and are also not considered to be defects.

If you have any doubts or questions during the installation process, feel free to contact us.

We wish you a successful installation!

Lähe House



#### 1. FOUNDATION

Greenhouse installation always starts from preparation of the foundation. The appropriate type of foundation depends on the soil, the purpose and the size of the greenhouse. A strong concrete slab or ribbon foundation is suggested but for Greenhouse ML 1 light foundation, stone parquet or wooden terrace can also be used.

The foundation must be horizontally level and all angles 90 degrees. Only a proper, level and load-bearing foundation ensures an impeccable result. A failed foundation makes installation difficult, causes problems with the operation of doors and windows, and reduces the stability and lifespan of the greenhouse.

NB! Subsequent damage to the greenhouse due to the wrong foundation is not covered by the warranty!

#### 2. PLANNING

We strongly advise you to plan installation ahead and make sure that you are well prepared. Check the weather report and plan the installation for a dry and sunny day.

The assembly of our greenhouses is a two-person job. Some of the larger and heavier parts need at least two people to be able to lift them safely. If you decide to install the product alone, Lähe House will not be responsible for any injuries or harm done to the product.

#### 3. TOOLS

Please check that you have all neccessary tools and safety equipment before installation!

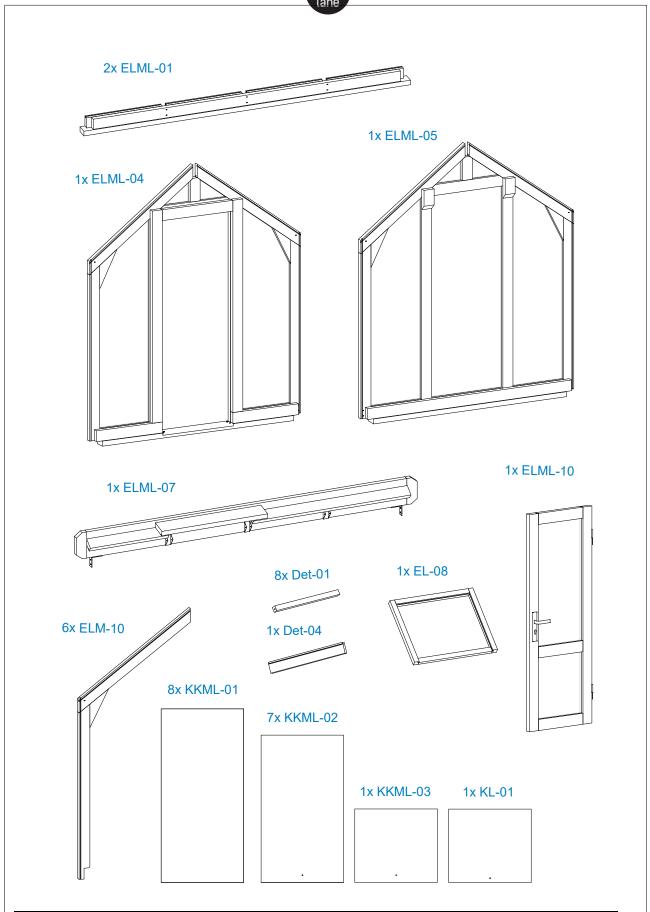
Cordless drill (preferably 2 pcs), wood drill (2, 4 and 5 mm), drill bits (TX20/25, HEX4), clamping screws (2 pcs), leveling tool, wrench 10 mm (2 pcs), wooden support bars (4 pcs), glass lifting suction cups (2 pcs), ladder (2 pcs), tape measure and work gloves.

#### 4. DETAILS

Numerous wooden details can be confusing when you unpack your greenhouse but sorting the details will help solve the buzzle. Remove the parts from the package and assemble the similar parts into bundles. Choose a flat and clean work surface that offers neccessary support for storing details before installation. Follow the markings on the details. Two parts with the same symbol will be connected during installation. During sorting, you get full confidence that all the necessary details are present and without defects.

ATTENTION: When opening the greenhouse packaging, the presence of parts and possible defects must be checked immediately. Missing details and defects must be reported before installing the greenhouse. Otherwise, the greenhouse may loose its warranty.







#### 5. FASTENERS

1. Wood screw round head 4x20 (drill bit TX20)

Quantity: 20 pcs

2. Wood screw round head 5x40 (drill bit TX25)

Quantity: 16 pcs

3. Wood screw hidden head 5x80 (drill bit TX25)

Quantity: 24 pcs

4. Wood screw hidden head 5x40H (drill bit TX25)

Quantity: 4 pcs

5. Glass screw 6,3x30 (drill bit HEX4) + PVC washer

Quantity: 9 pcs + 9 pcs

6. M6 x 55mm bolt + nut + washer

Quantity: 6 pcs + 6 pcs + 12 pcs

7. Wooden dowel

Quantity: 16 pcs

8. Long drill bit SHW TX25 for 5x40

Quantity: 1 pc

NB! There may be extra amount of fasteners included!

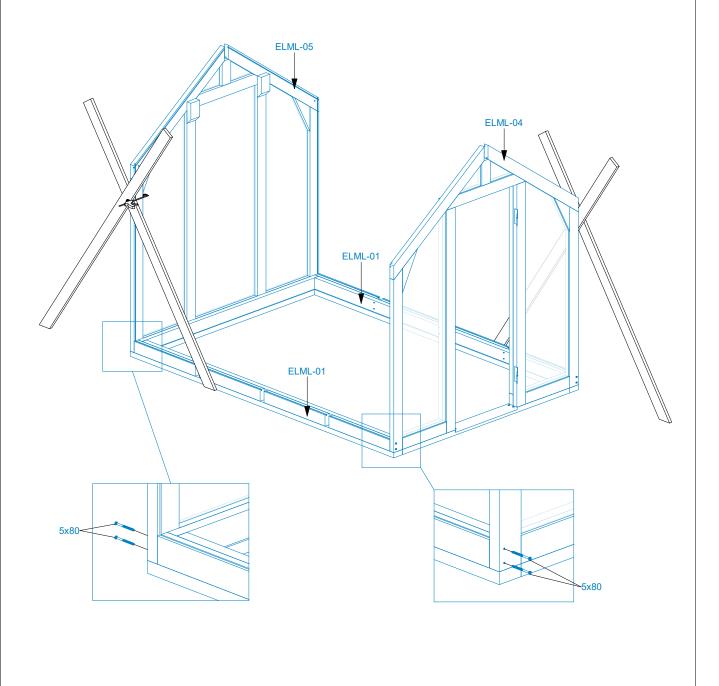




### 6. INSTALLATION OF BASE FRAME AND END WALLS

Place the side wall base frames (ELM-01), front wall (ELML-04) and back wall (ELML-05) in a suitable position on the foundation. Place hydroisolation layer (not included in installation kit) between foundation and greenhouse base frame. Fasten elements together.

Tip: Use longer wooden bars as a support for end walls and fasten them with a clamping screws.

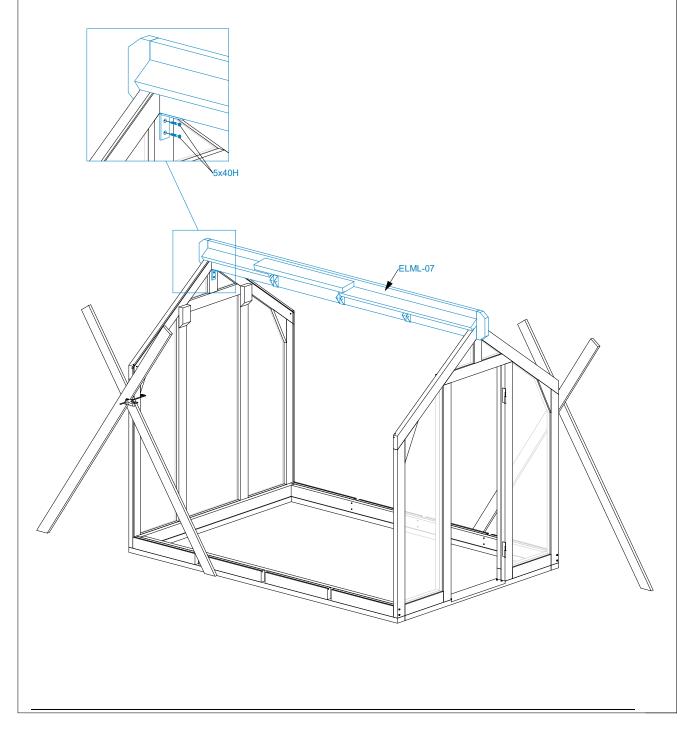




### 7. INSTALLATION OF RIDGE BEAM

Attach ridge beam (ELML-07) on top of the front and back wall (metal brackets are already attached to ridge beam). Fasten with screws.

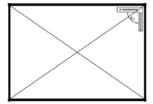
NB! Ridge beam position determines the side of the roof window. Make sure the roof window is at correct side!



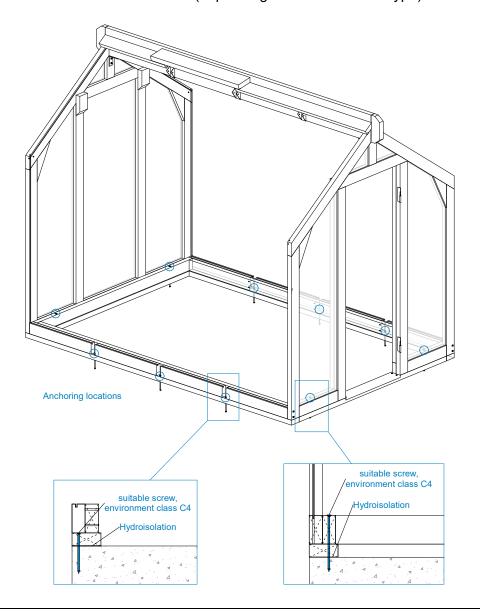


### 8. ATTACHING GREENHOUSE TO THE FOUNDATION

Before attaching greenhouse to the foundation, make sure that the corners of the greenhouse are 90 degrees and the diagonals are of equal length!



Attach greenhouse to the foundation through the base frame at marked locations. Drill hole in advance and attach with suitable screws (depending on the foundation type).

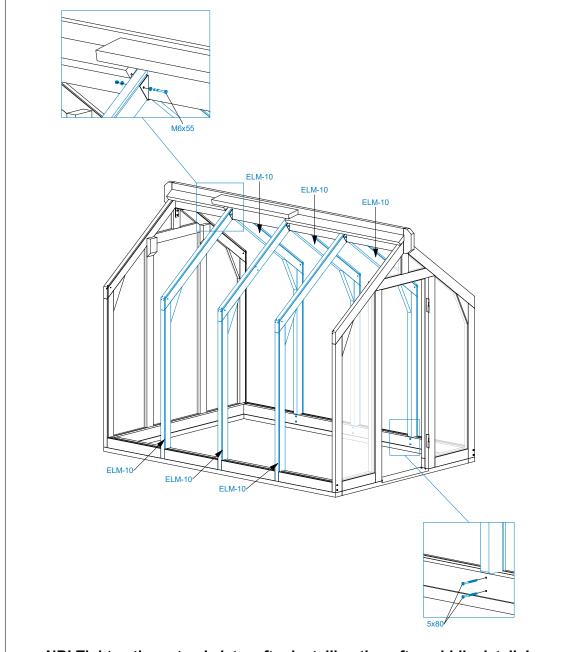




## 9. INSTALLATION OF RAFTERS

Place the lower end of the rafter (ELM-10) to the intended location in base frame and upper end of the rafter to the ridge beam metal carrier. Fasten lower end with screws and upper end with an M6 bolt, washer and nut.

#### NB! Make sure that the edge of the carrier does not cover rafter glass groove!

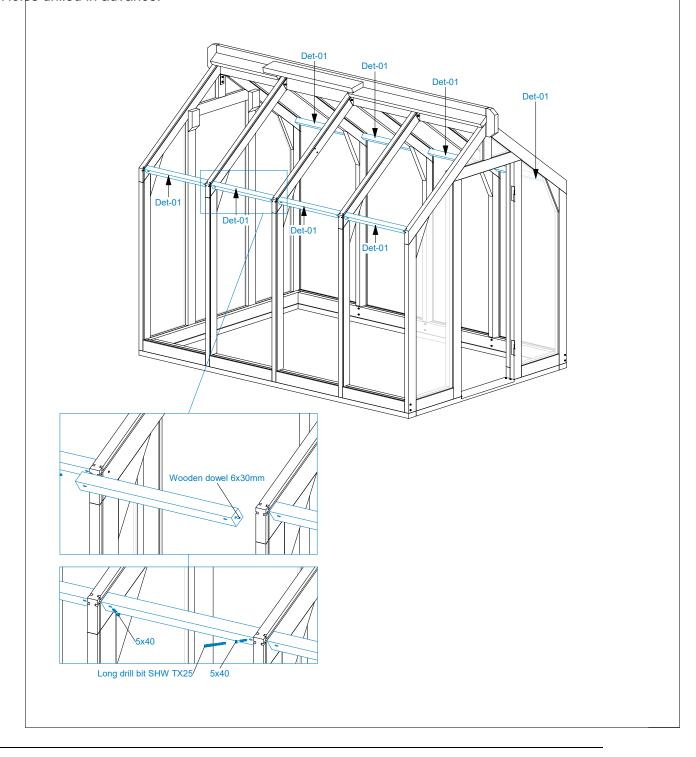


NB! Tighten the nut only later after installing the rafter middle details! (Look section 10)



## 10. INSTALLATION OF RAFTER MIDDLE DETAILS

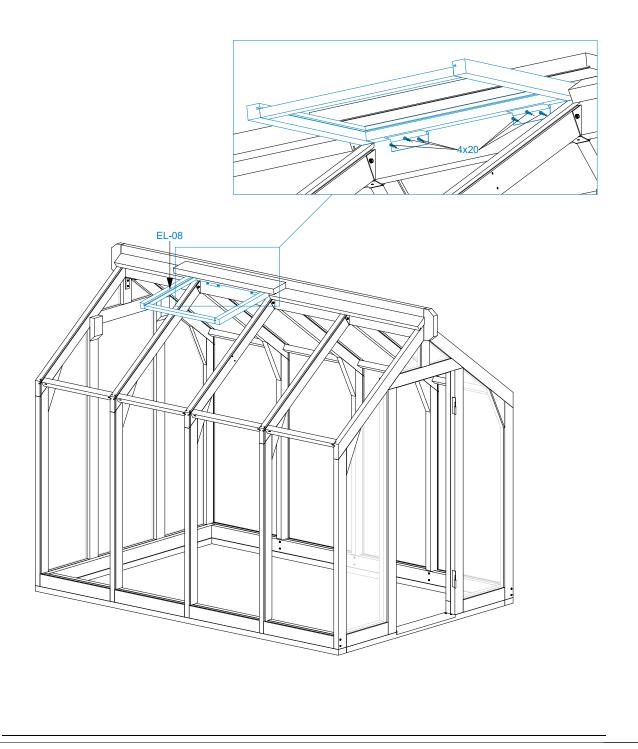
Place wooden dowels to holes at the end of rafter middle detail (DET-01) and place it between two rafters so that it is fixed. Make sure that edge of the rafter middle detail is parallel with rafter glass groove and do not block groove. Attach rafter middle detail strongly to rafters with screws. Holes drilled in advance.





### 11. INSTALLATION OF ROOF WINDOW

The location for roof window is recognized by the higher rain cover on ridge beam. Place the roof window (EL-08) on the rafters and push against ridge beam. Make sure roof window is equally on both rafters. Hinges are pre-attached to the roof window frame. Attach to ridge beam with screws.

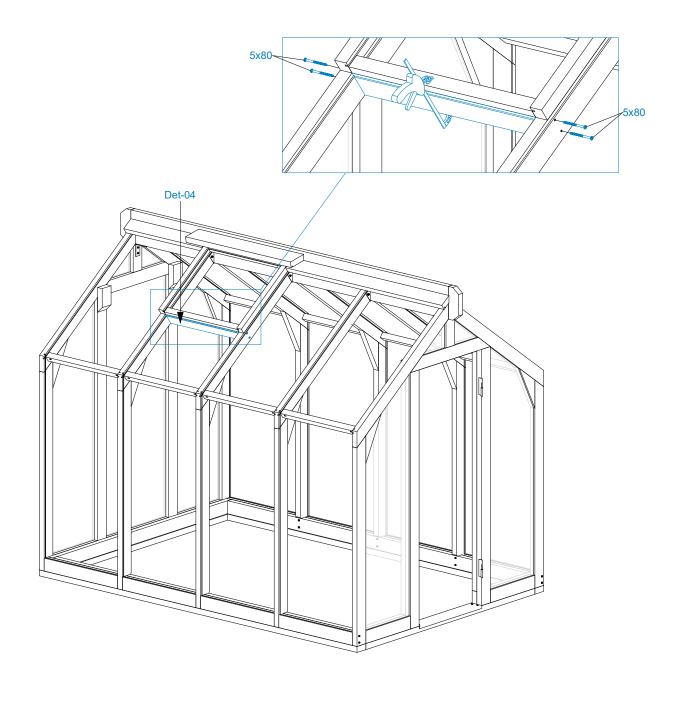




## 12. INSTALLATION OF ROOF WINDOW MIDDLE DETAIL

Place grooved middle detail (DET-04) under roof window. Make sure that middle detail groove lines with rafters grooves. Drill holes in advance with a 4 mm drill and fasten with screws.

Tip: To make it easier to install the middle detail, we recommend attaching it to the roof window with a clamping screw.



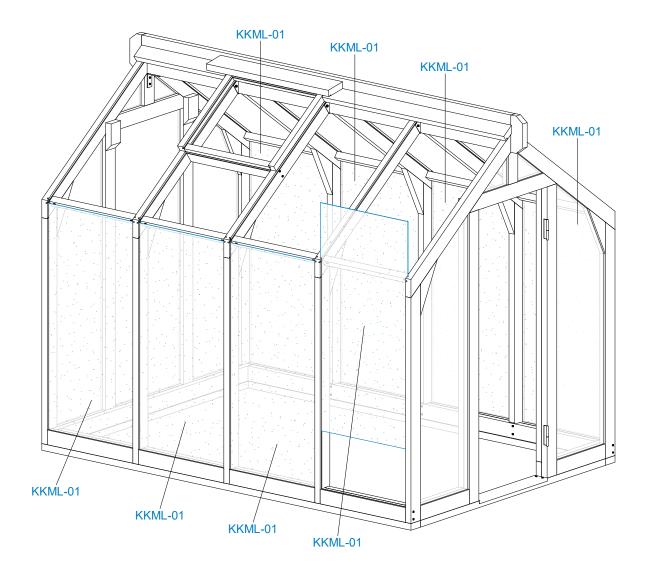


#### 13. INSTALLATION OF SIDE GLASS

Make sure in advance that all the rafters and end wall posts are vertically level. If necessary, add a temporary support for the front or back wall of the greenhouse.

NB! Be careful and always use suction cups to lift glass safely. Broken glass is not subject to warranty replacement!

Carefully place the end of the side glass (KKML-01) to side wall grooves and push it all the way down to the end. Do not use force (glass must move smoothly). Make sure that the glass is evenly grooved.

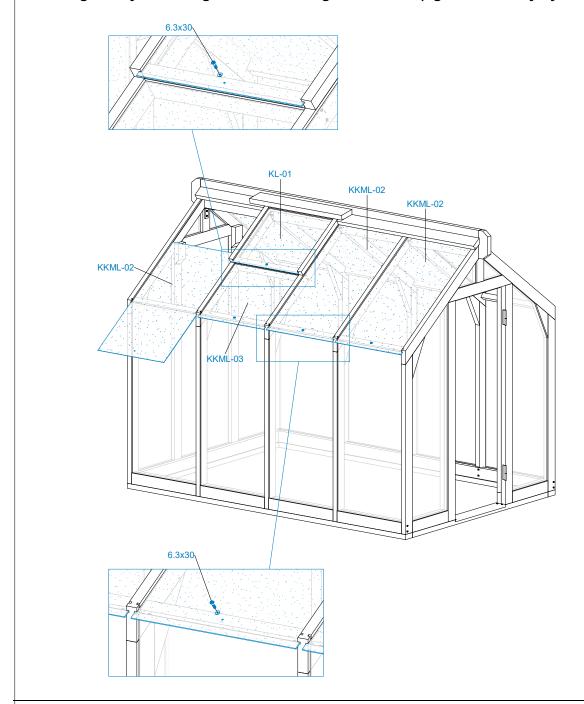




### 14. INSTALLATION OF ROOF GLASS

Carefully place the end of the glass to grooves and push it all the way up to the end. Do not use force (glass must move smoothly). Make sure that the glass is evenly grooved. Drill holes to the middle detail (DET-01) / roof window lower frame with a depth of ca 30 mm. Wood drill size 5 mm. Fasten glass with a glass screw. Start from roof window glass (KL-01).

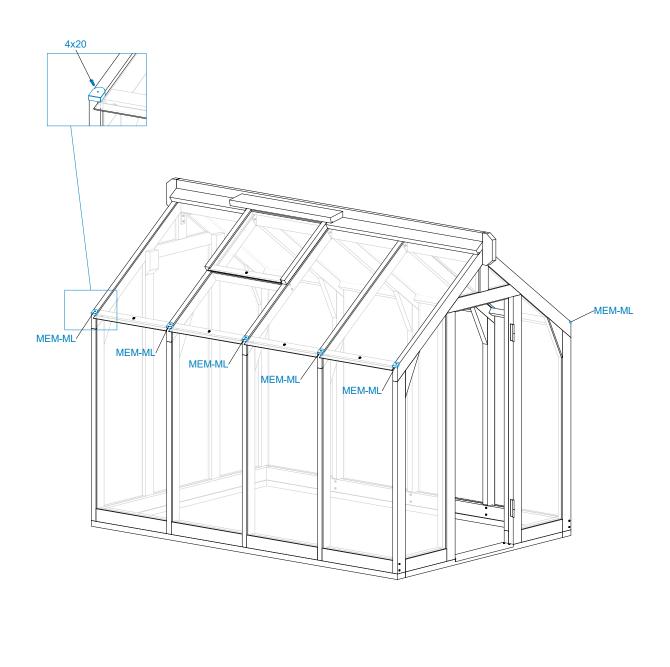
NB! Line glass by lower edge. Do not over tighten screws (tighten carefully by hand)!





## 15. INSTALLATION OF RAFTERS CORNER COVERS

Place rafter corner cover (MEM-ML) on top of rafter corner so that it covers beginnings of glass grooves. Fasten with screw.

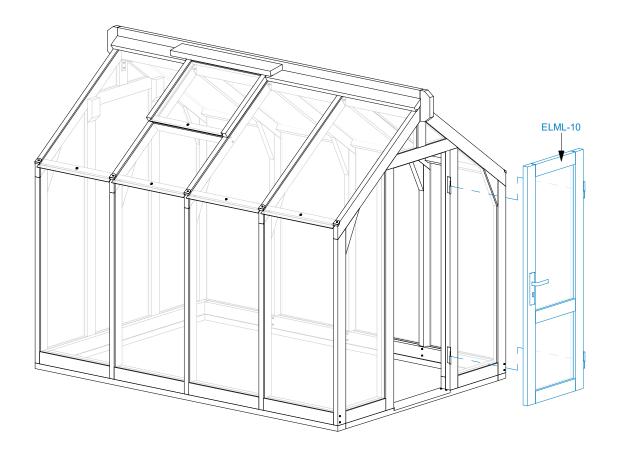




## **16. INSTALLATION OF DOOR**

Lift the door (ELML-10) carefully to the hinges. Make sure that it works properly.

NB! Install the door stops so that front wall glass will be not dameged when the door is opened!





## 17. INSTALLATION OF ROOF WINDOW OPENER

Greenhouse kit includes automatic roof window opener Bayliss Autovents mk7 triple spring. Roof window opener is in manufacturer original package.

Install the roof window automatic opener according to the instructions. Installation instructions for the automatic opener are included in its packaging.

Tip 1: Use a 4x20 stainless steel wood screws as these fit better than the ones provided from manufacturer and will not rust.

Tip 2: We recommend pre-drilling a hole with a thin (2 mm) wood drill (to prevent cracks).

