



GREENHOUSE INSTALLATION MANUAL

Model No 4



www.lahehouse.com



Dear Customer

Thank you for choosing Lähe Greenhouse!

Please read this guide carefully before installing a greenhouse. Reading the installation manual will help you avoid mistakes when installing the 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.

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 lose its warranty.

All Lähe greenhouses are made of natural, high-quality Nordic heat-treated pine. Wood is a natural material, so it is not possible to avoid twigs, cracks caused by drying, differences in shade and other characteristics of wood. Since the wooden parts of our greenhouses are made of natural wood and not chemically treated, it is natural that they will turn gray over time.

We wish you a successful installation!

Lähe House

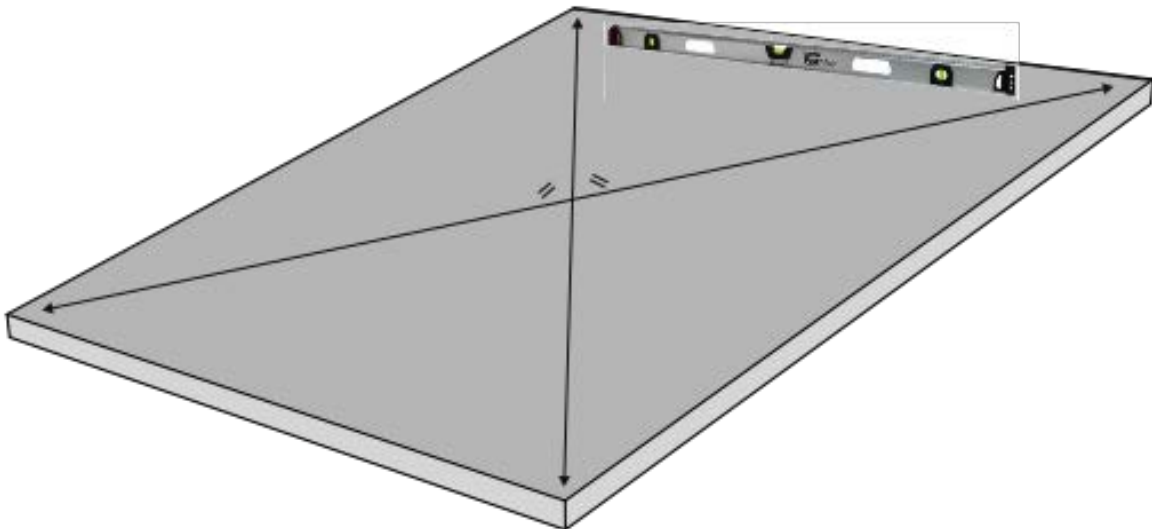


1. FOUNDATION

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. For Lähe greenhouses, a strong concrete slab or tape foundation must 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 it difficult to install details, causes problems with the operation of doors and windows, and reduces the stability and lifespan of the greenhouse. We recommend consulting a construction specialist when choosing a suitable foundation.

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



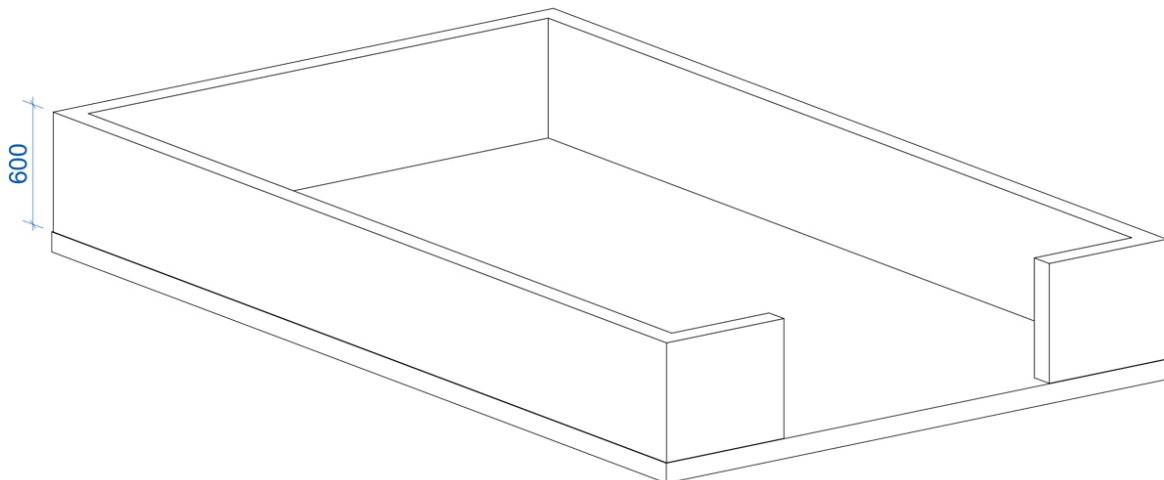
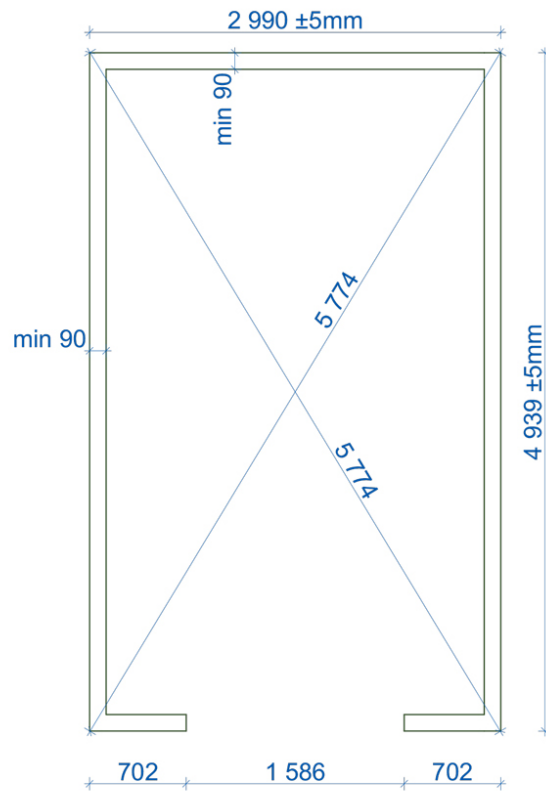
NB! Laying the foundation in the garden

Leave at least 2 meters of free space from both sides. Required for installing roof glasses!



Foundation wall

For the correct installation of Greenhouse No 4, it is necessary to prepare a 60 cm high foundation wall on which the wooden part of the greenhouse rests.





2. TOOLS

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

Cordless drill (preferably 2pcs), drill bits (TX20-25, HEX4), phillips screwdriver, ladder, clamping screws (2pcs), wood drill (2, 4 and 5mm), leveling tool, wrench 10mm (2pcs), wooden support bar (4pcs length ca 3m), glass lifting suction cups (preferably 2pcs).

3. DETAILS

Numerous wooden details can be confusing at the arrival of the greenhouse, but sorting the details will help solve the buzzle.

Remove the parts from the package and assemble the similar parts into bundles. 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.

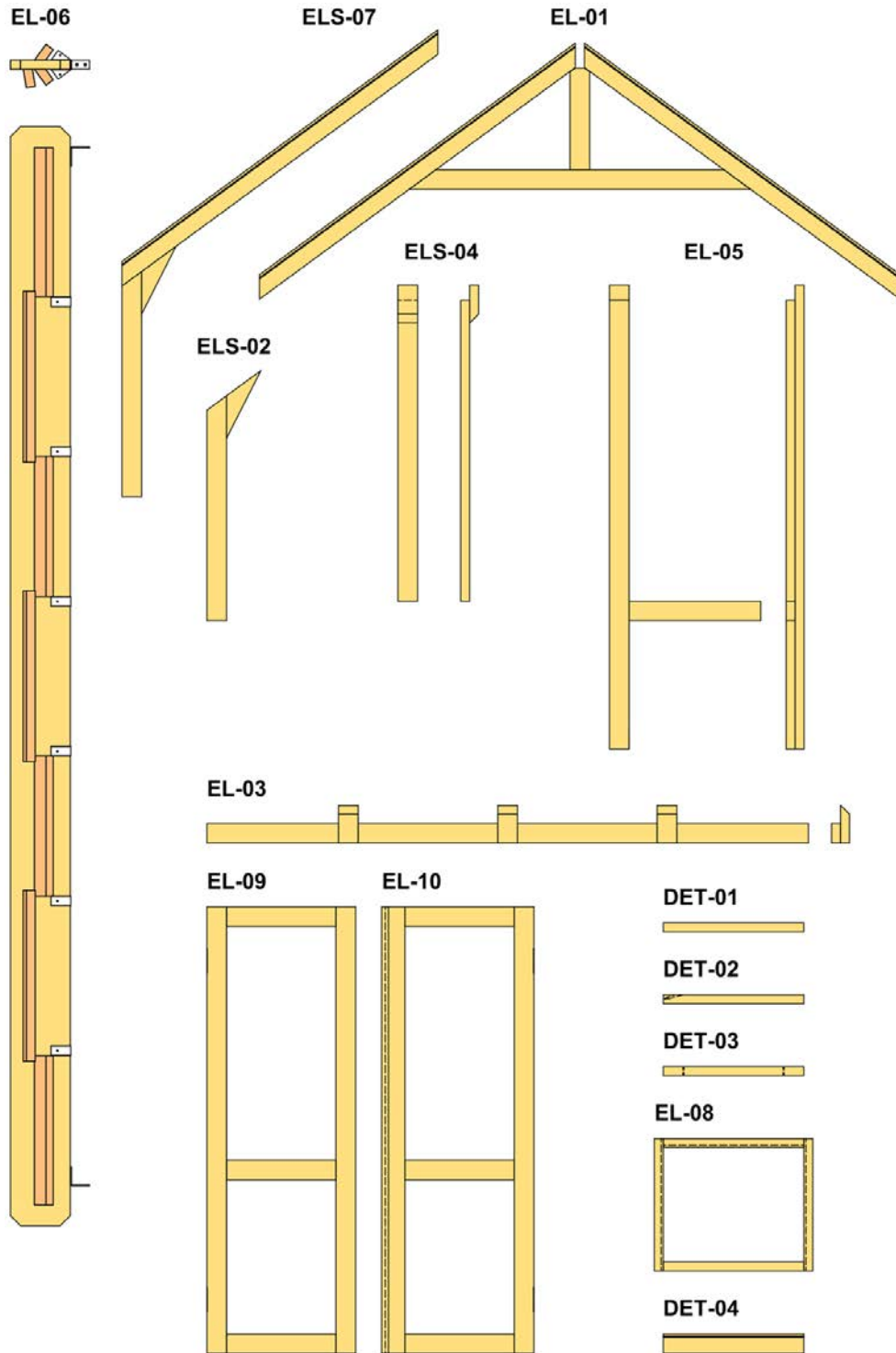


List of details

1. End wall upper triangle (EL-01) – 2 pcs
2. End wall post (EL-02) – 4 pcs
3. Back wall base detail (EL-03) – 1 pc
4. Back wall inner post (EL-04) – 3 pcs
5. Doorpost (EL-05) – 2 pcs
6. Ridge beam (EL-06) – 1 pc
7. Rafter (EL-07) – 12 pcs
8. Roof window (EL-08) – 3 pcs
9. Left side door (EL-09) – 1 pc
10. Right side door (EL-10) – 1 pc
11. Rafter middle detail (DET-01) – 14 pcs
12. Lower base detail (DET-02) – 14 pcs
13. Upper base detail (DET-03) – 14 pcs
14. Roow window middle detail (DET-04) – 3 pcs

NB! Start installing the greenhouse on the foundation only after sorting the details and thoroughly reading the installation manual.

Detail views

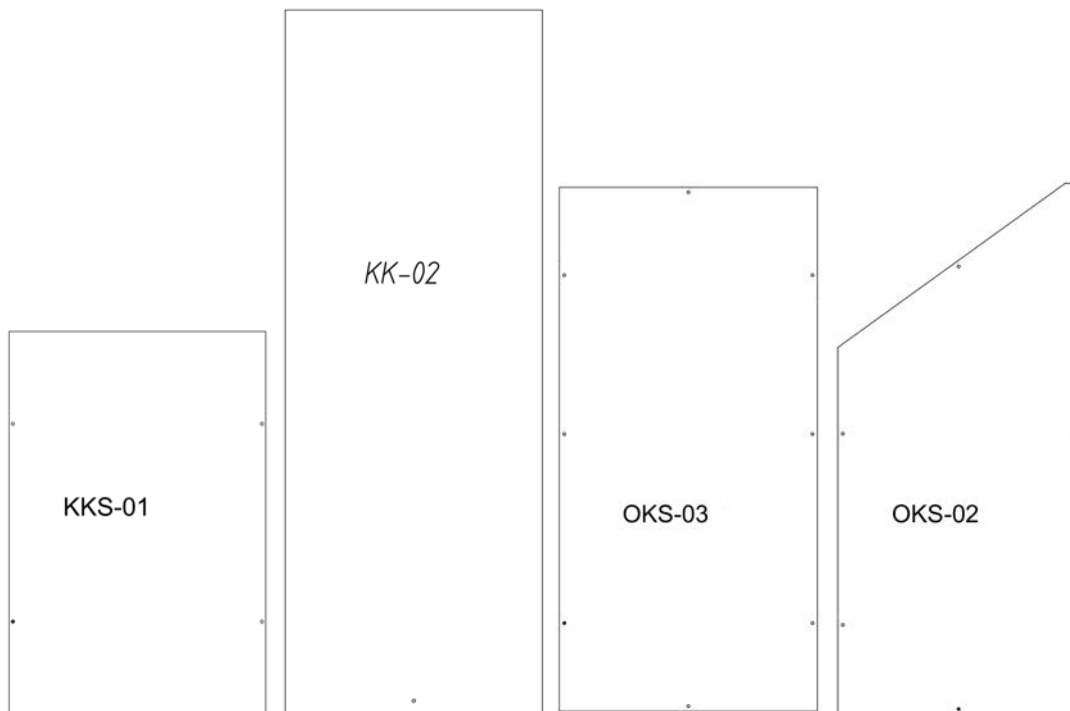
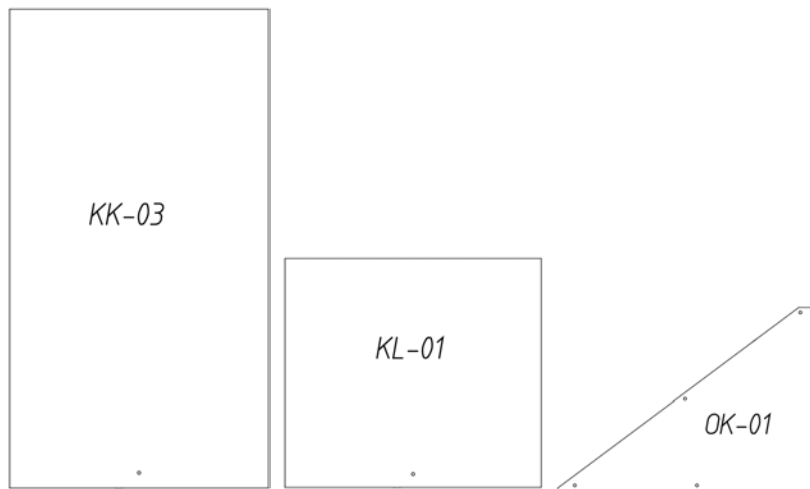




4. GLASSES

1. Endwall glass (OK-01) – 4 pcs
2. Endwall glass (OKS-02) – 4 pcs
3. Endwall glass (OKS-03) – 2 pcs
4. Side glass (KKS-01) – 14 pcs

5. Roof glass (KK-02) – 11 pcs
6. Roof glass (KK-03) – 3 pcs
7. Roof window glass (KL-01) – 3 pcs





5. FASTENERS

1. Wood screw 4x20 (drill bit TX20)

Quantity: 52 pcs



2. Wood screw 5x50 (drill bit TX25)

Quantity: 24 pcs



3. Wood screw 5x70 (drill bit TX25)

Quantity: 70 pcs



4. Wood screw 5x40 (drill bit TX25)

Quantity: 4 pcs



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

Quantity: 169 pcs + 169 pcs



6. M6 x 55mm bolt + nut + washer

Quantity: 12 pcs + 12 pcs + 24 pcs



7. Minifix bolt + fastener

Quantity: 28 pcs + 28 pcs



8. Long drill bit SHW TX25 for 5x50

Quantity: 1 pc



NB! There may be extra amount of fasteners included!



6. END WALLS UPPER TRIANGLE ASSEMBLY

Due transportation reasons End wall upper triangle (EL-01) is partially disassembled. Details are packed together for easy recognition. **NB! Do not mix front and back wall details!**

Choose a flat work surface that offers necessary support for correct assembling.

All screws are already attached. Follow markings and place details to correct positions. Tighten screws into pre-drilled holes.

NB! Details must be strongly attached into solid unit. Make sure that cap at the top of the triangle is 43 mm (enough space for Ridge beam)!



7. INSTALLATION OF MINIFIX BOLTS

Before starting the installation of the greenhouse, it is necessary to attach the minifix bolts to the End wall upper triangles (**EL-01**) and Rafters (**ELS-07**). Choose a flat work surface so that the wooden part will not be damaged. Insert the minifix bolt into the pre-drilled hole and strike with a hammer (lighter stroke). Make sure that the bolt is firmly attached to the wooden part.

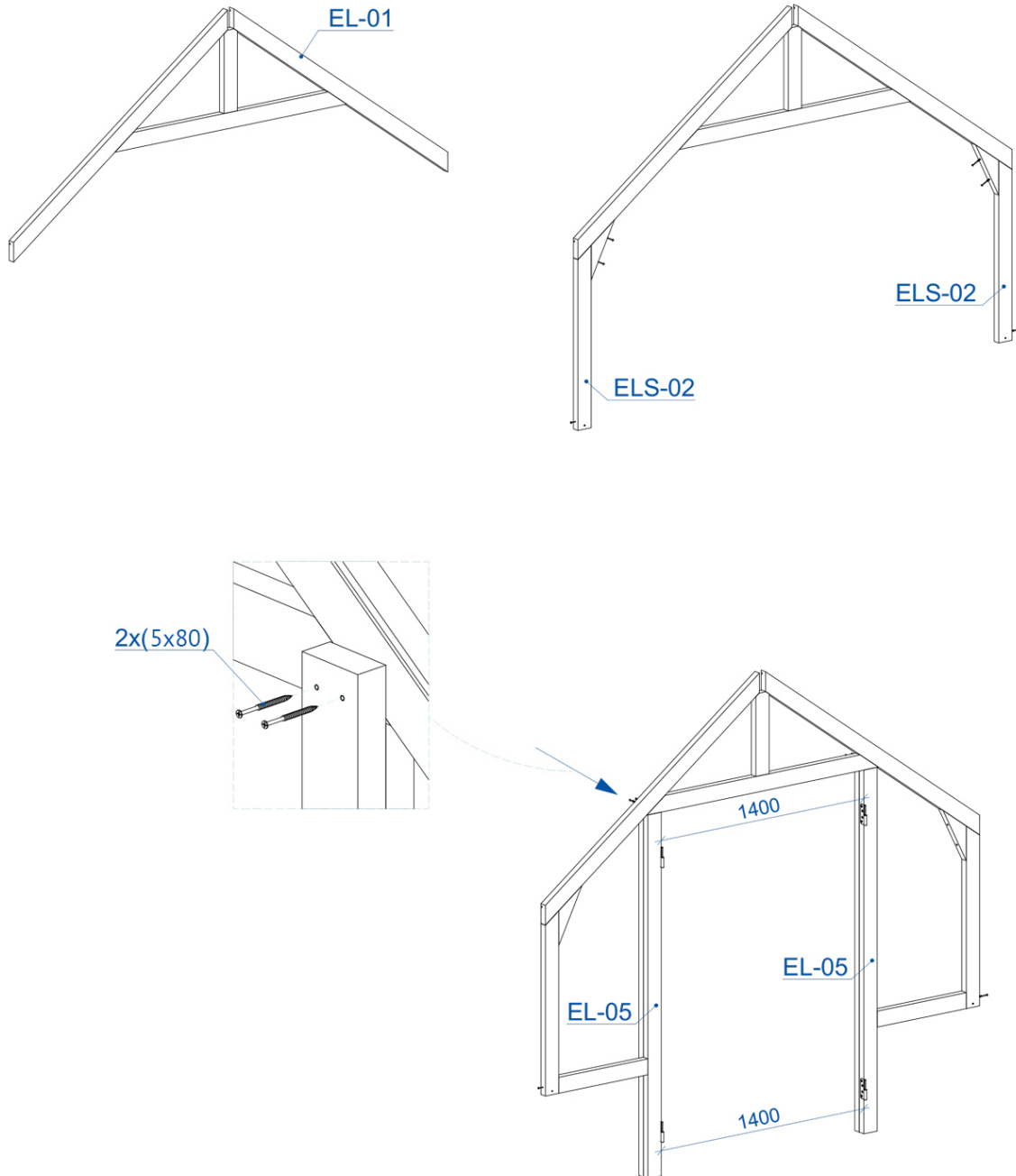




8. INSTALLATION OF FRONT WALL

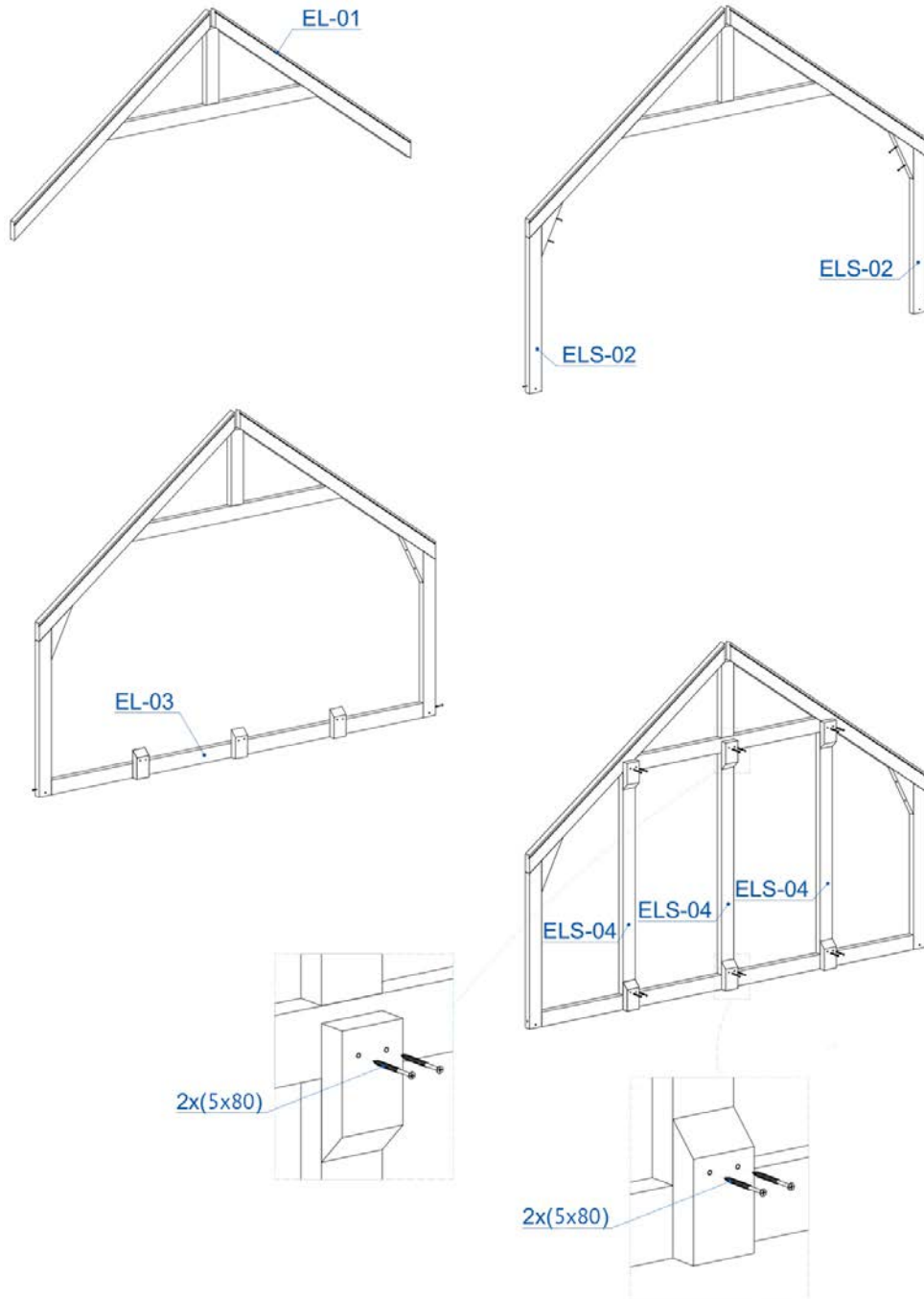
Holes drilled in advance. Screws partially placed in holes. Tighten to the end.

NB! Make sure that the width of the door opening is 1400 mm from both the top and bottom (otherwise the doors will not open properly). Look also section 15.



9. INSTALLATION OF BACK WALL

Holes drilled in advance. Screws partially placed in holes. Tighten to the end.
NB! Make sure distances between posts are equal.

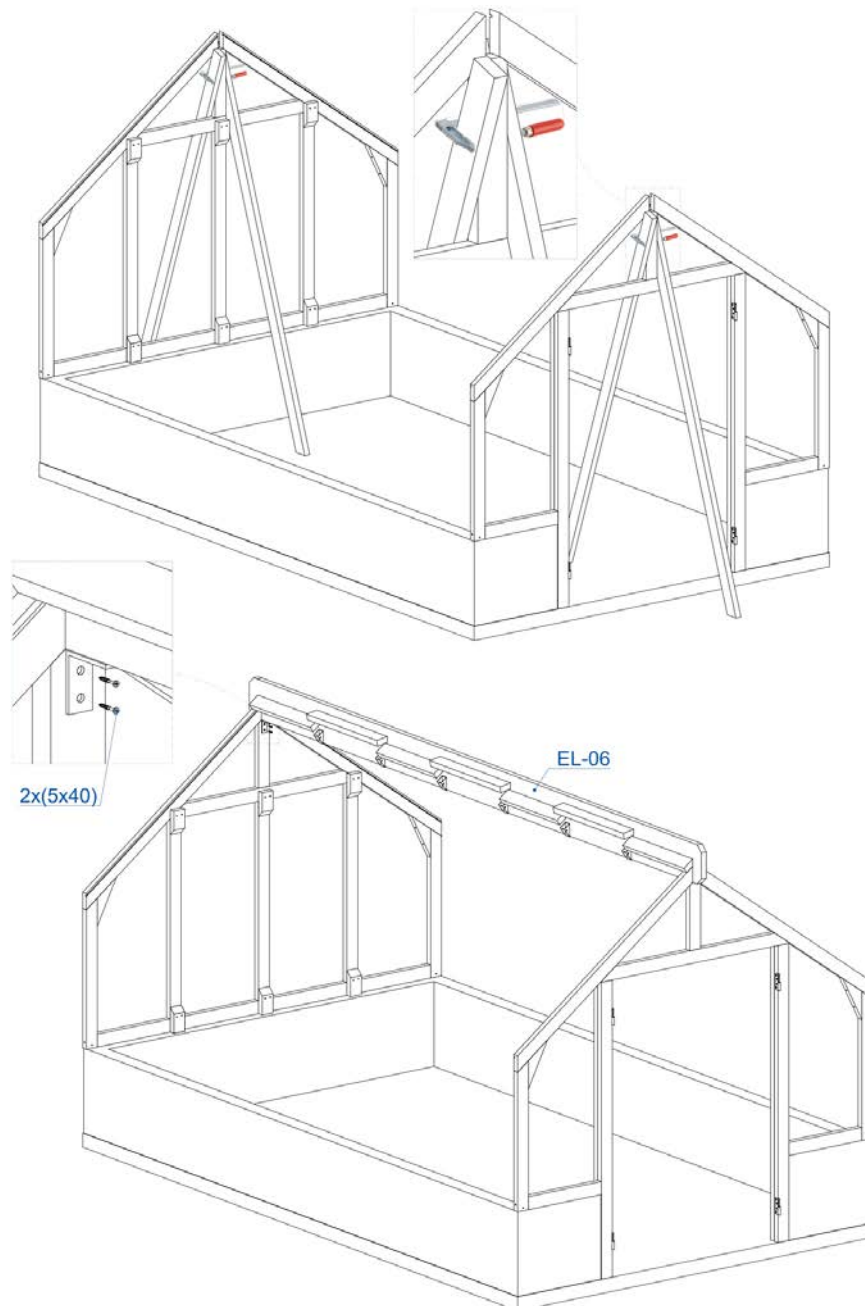


10. INSTALLATION OF RIDGE BEAM

Set front and back wall to the foundation ends (use two longer wooden bars as a support and fasten them with a clamping screw) and raise ridge beam on top of them.

Attach ridge beam to the front and back wall (metal brackets are already attached).

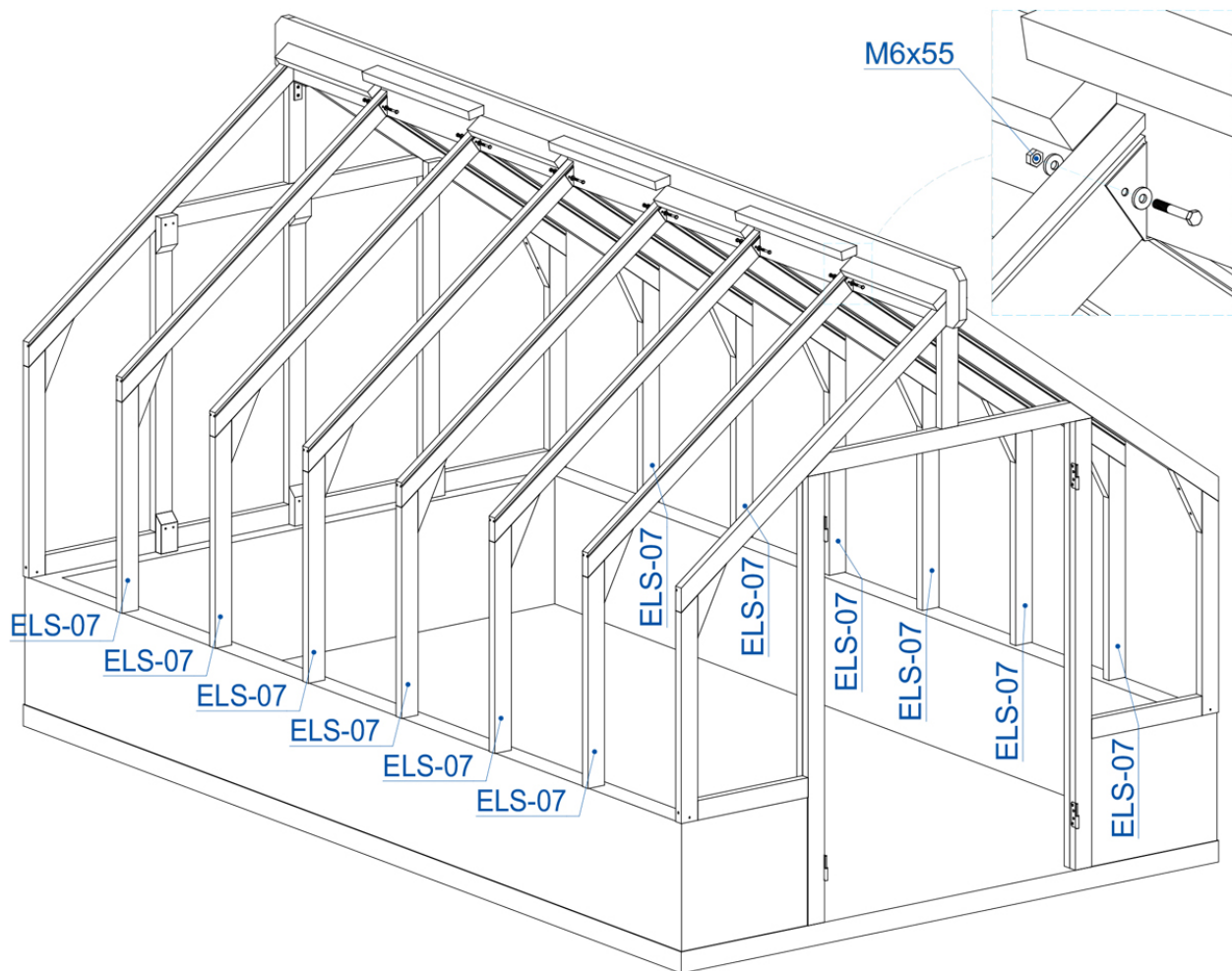
NB! Ridge beam position determines the side of the roof windows. Make sure the roof windows get to the desired side. Look also section 13.



11. INSTALLATION OF RAFTERS

Place the upper end of the rafter to the metal carrier and fasten with an M6 bolt and nut. Start installation of rafters from front wall and move toward back wall.

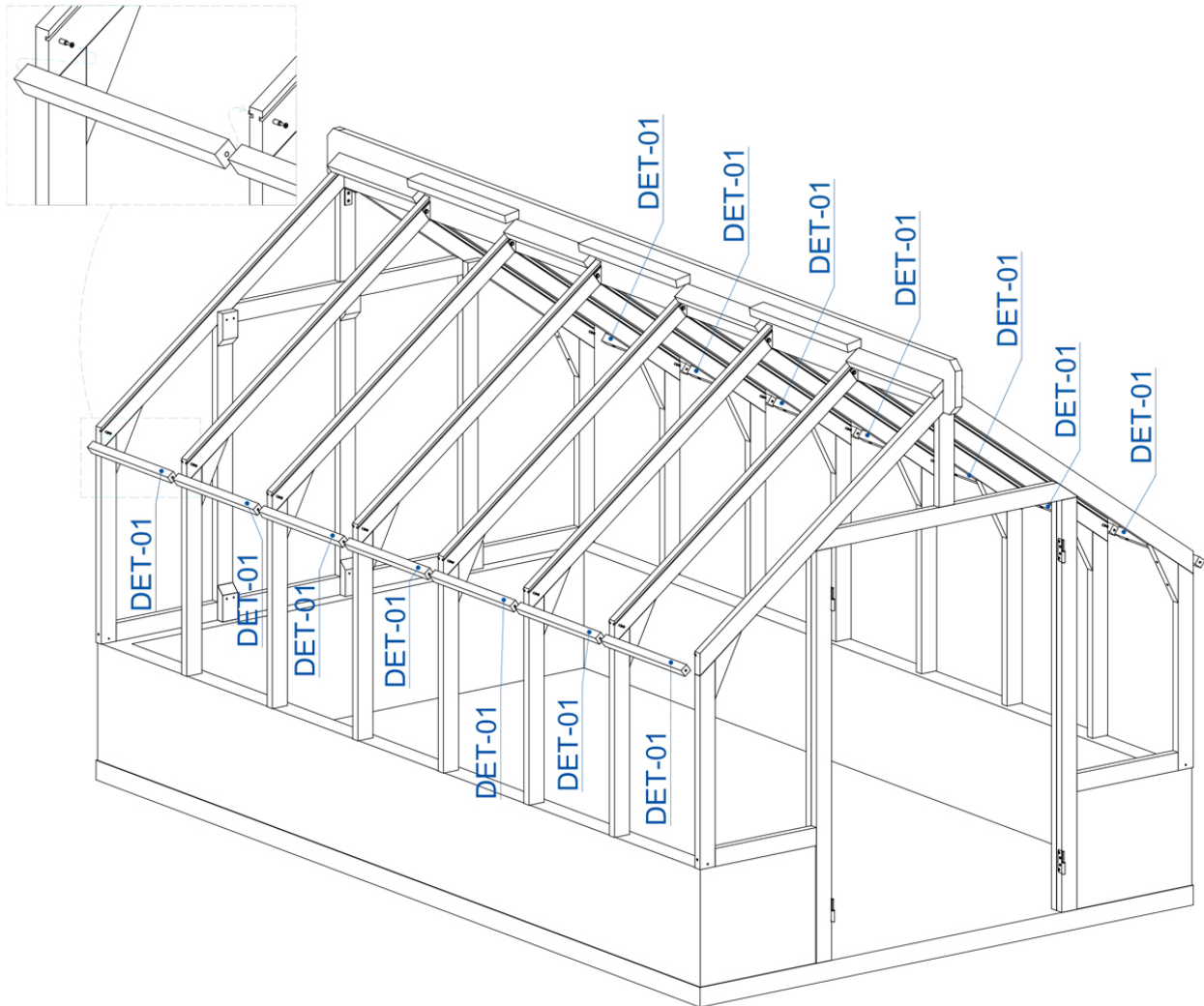
NB! Make sure that the edge of the carrier does not cover rafter glass groove (distance ca 2 mm) and rafter should be as against the rear wall of the carrier as possible.



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

12. INSTALLATION OF RAFTER MIDDLE DETAILS

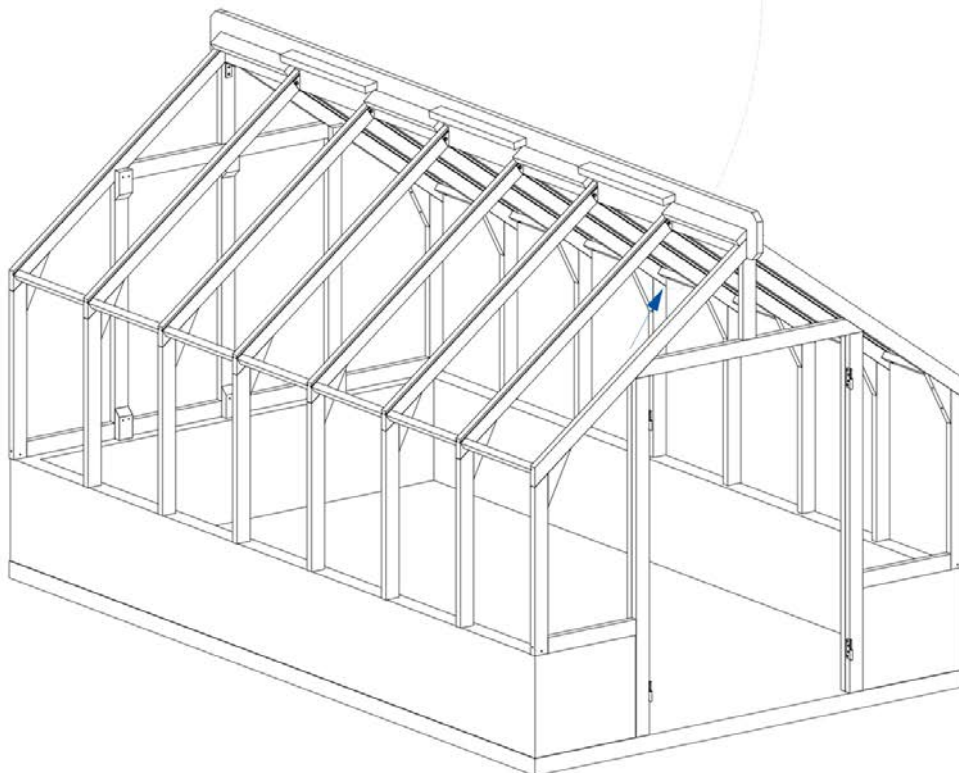
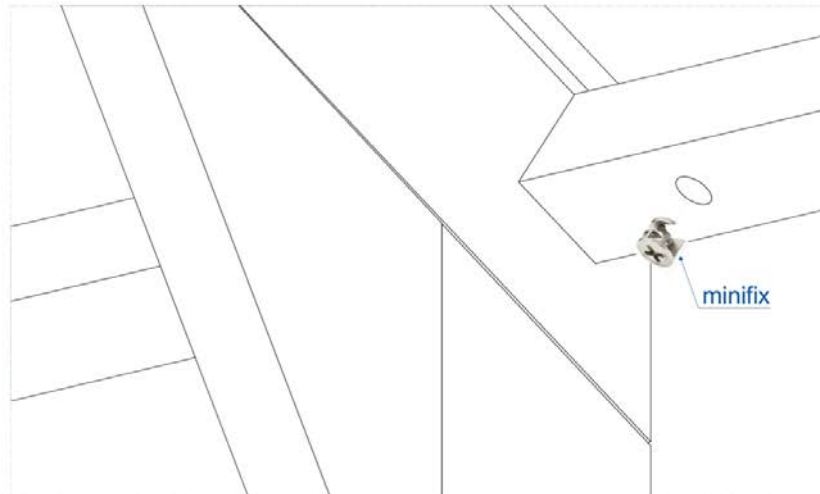
Place rafter middle detail between two rafters so that screw is visible from the hole and can be fastened with a round minifix fastener.





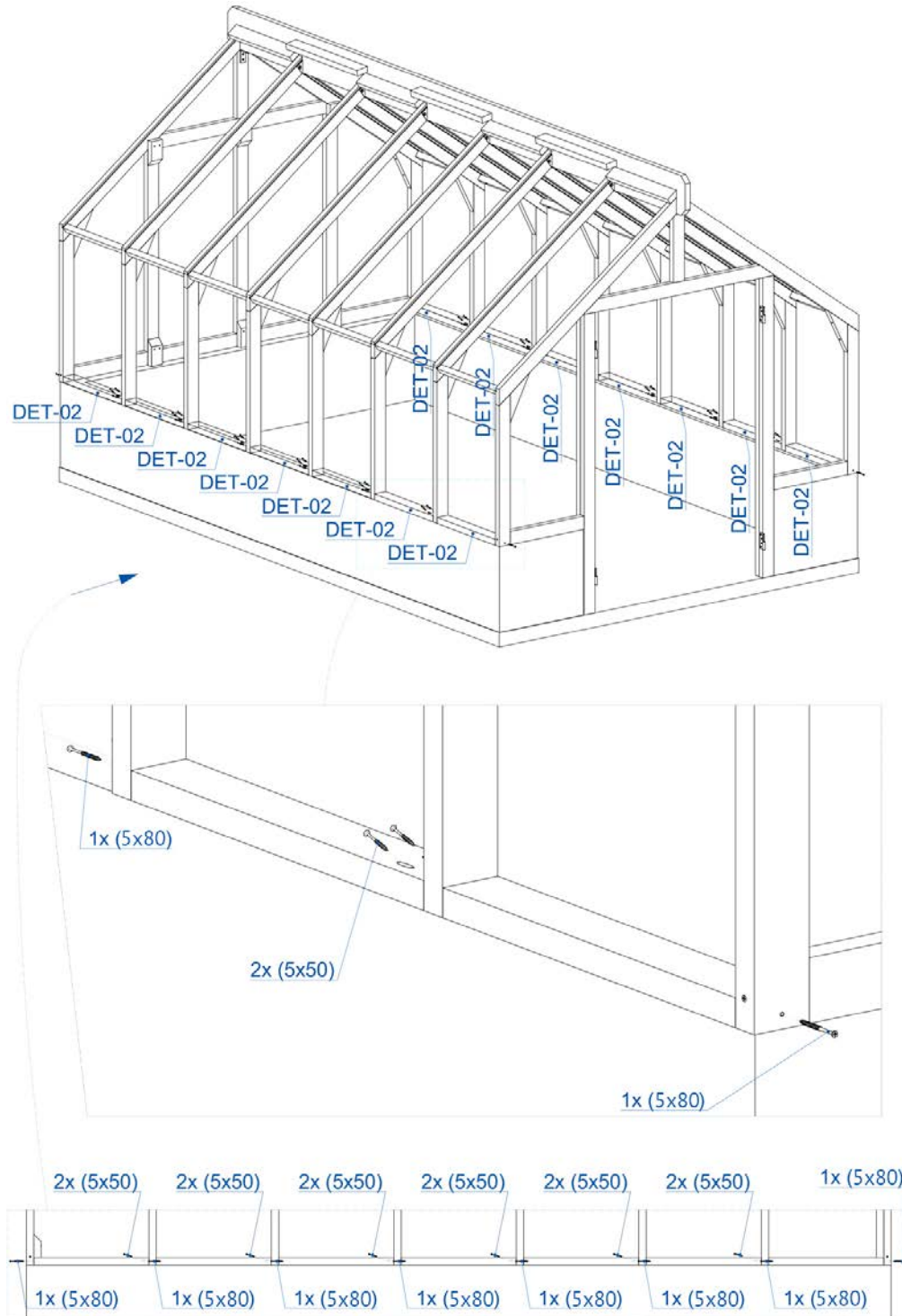
NB! The round minifix fastener hole should face downwards (inward toward the ground).

Rotate the minifix fastener so that it tightens the rafter middle detail firmly to the rafter on both sides. **Make sure the minifix fasteners are properly tightened! At the same time avoid over tightening as aluminium minifix fastener may break.**



13. INSTALLATION OF LOWER BASE DETAILS

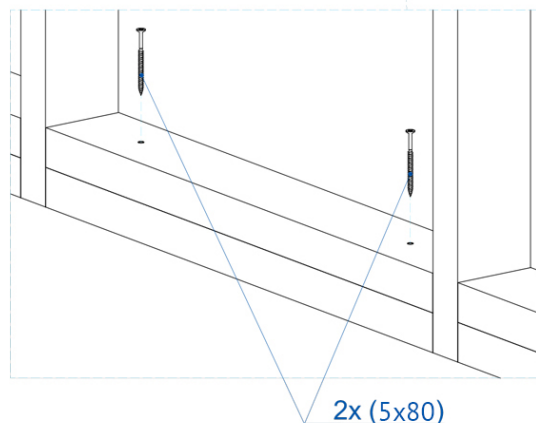
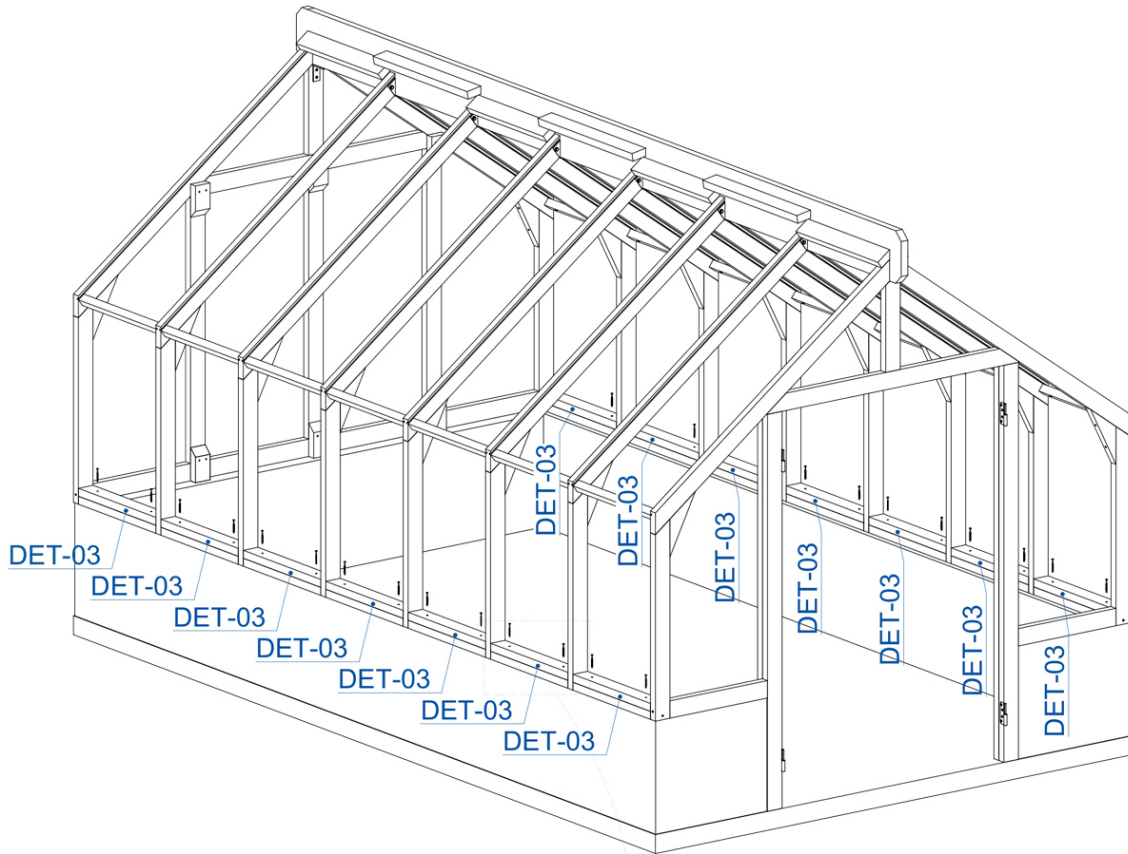
Place one lower base detail between each rafter on both sides. Holes drilled in advance.



14. INSTALLATION OF UPPER BASE DETAILS

Place upper base details on top of lower base details. Holes drilled in advance.

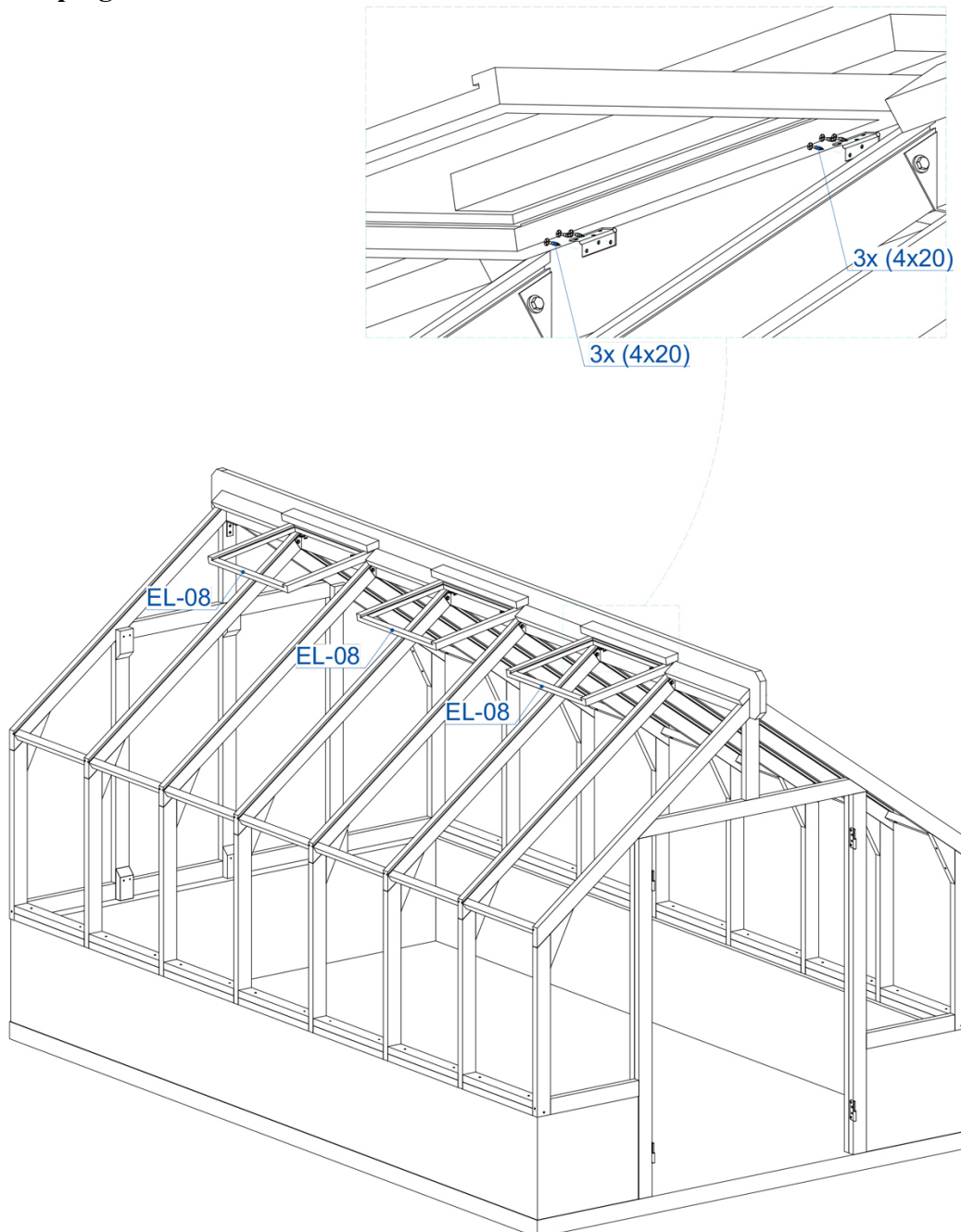
NB! You may skip fastening some of them. Do this only after attaching the greenhouse to the foundation and before attaching the glasses (look section 16).



15. INSTALLATION OF ROOF WINDOWS

The location for roof windows are recognized by the higher rain covers on ridge beam. Place the roof window on the rafters and fasten it to the ridge beam. Hinges are pre-attached to the roof window frame.

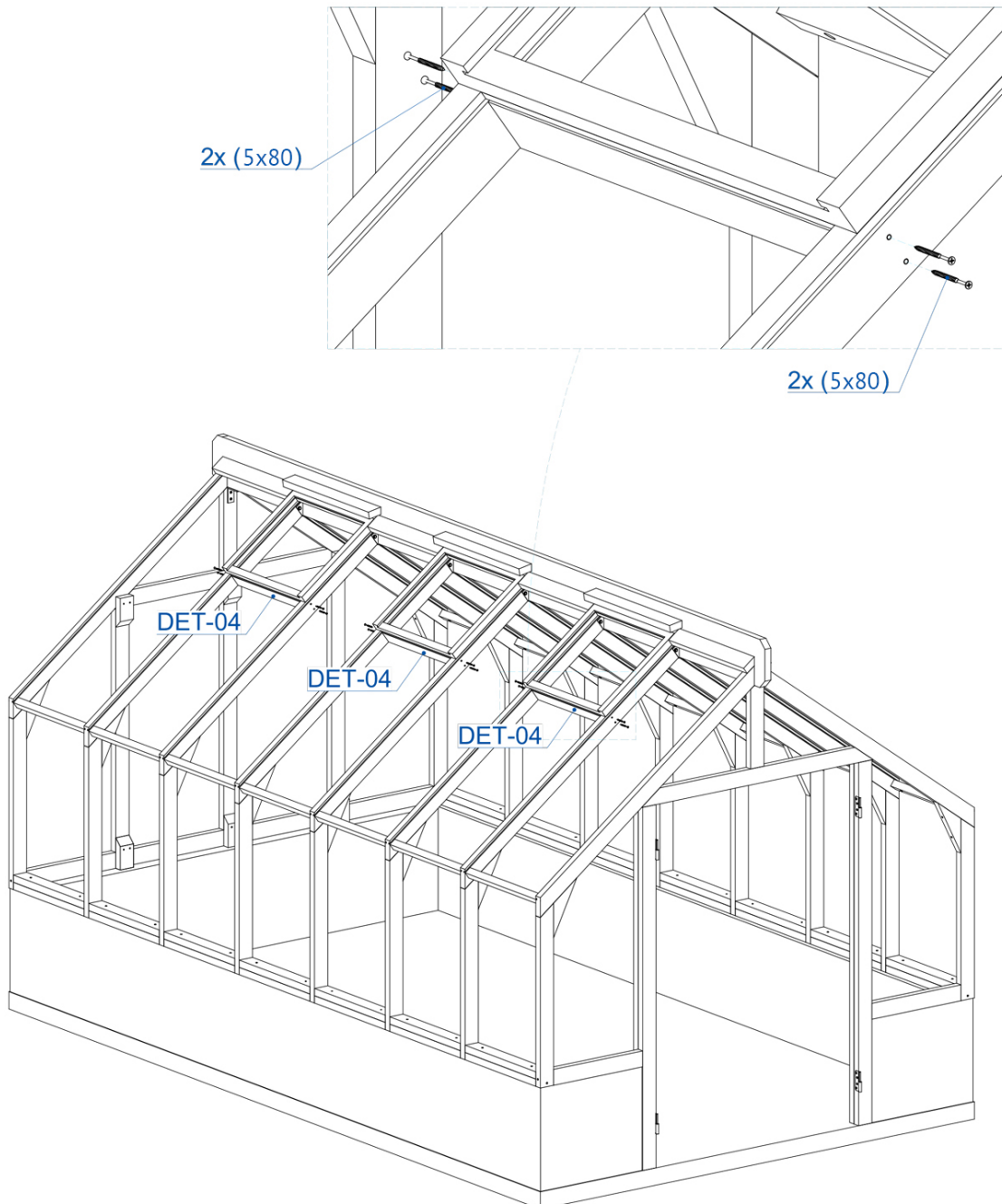
NB! To make it easier to install the roof window, we recommend attaching it to the rafters with a clamping screw.



16. INSTALLATION OF ROOF WINDOW MIDDLE DETAILS

Attach grooved middle detail (DET-04) under each roof window. Fasten with two screws at each end (mark and drill holes in advance with a 4 mm drill).

NB! To make it easier to install the middle detail, we recommend attaching it to the rafters with a clamping screw.





17. INSTALLATION OF DOORS

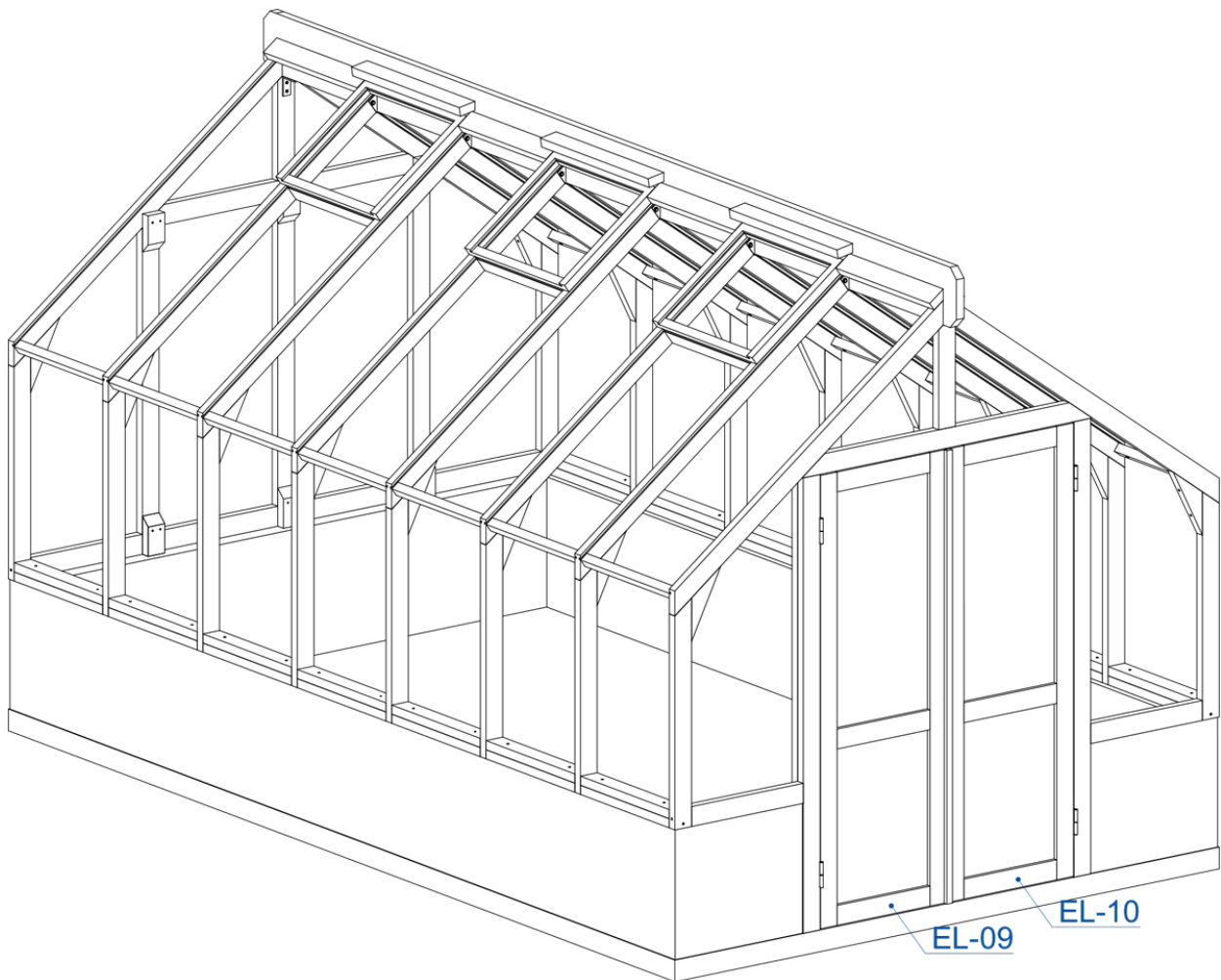
Door posts (EL-05) must be vertically level and door opening must be exactly 1400mm from the top and bottom! (otherwise the doors will not work properly).

Make sure that the hinges on the door and the wooden post fit correctly.

Lift the doors to the hinges, the door with the lock (EL-10) goes to the right side. Attach the door latches to the inward of the left side door (EL-09).

Install the door stops to the outside so that glasses are not be damaged when the door is opened.

NB! OPENING A DOOR WITHOUT THE DOOR STOPS INVOLVES DANGER TO BREAK THE FRONT WALL GLASSES.



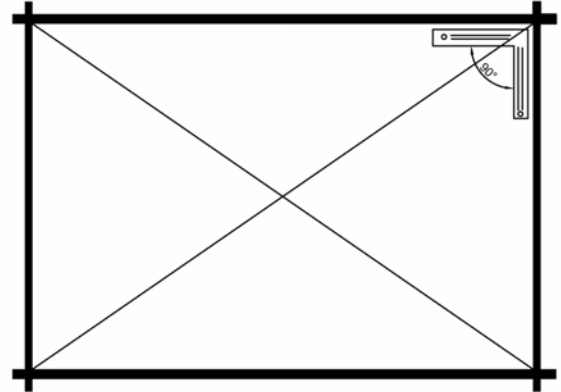


18. ATTACHING THE GREENHOUSE TO THE FOUNDATION

NB! Make sure in advance that the corners of the greenhouse are 90 degrees and the diagonals are of equal length.

Attach the greenhouse to the foundation in a suitable place through bottom details. Pre-drill holes. Depending on the foundation type, choose the fastening method (screw, dowel etc.).

NB! It is recommended to attach both ends and sides.



19. INSTALLATION OF GLASS

Make sure in advance that all the rafters of the greenhouse are vertically level.

NB! All rafters must be level before installation of glasses!!!

If necessary, add a temporary support for the front or back wall of the greenhouse frame. So that rafters are stably level.

When installing glasses, we recommend the following order:

- 1) roof glasses
- 2) side glasses
- 3) front and back wall glasses

Glasses are fixed with a screw and the pvc washer must be between the glass and the screw head.

Be extra careful when attaching the glasses!!!

Tightening the screw too hard will break the glass. It is recommended to set the drill to the lowest speed and strength to 15. Turn the last part by hand so that pvc washer retains its shape and original thickness.

The last part must ALWAYS tightened by hand!!!

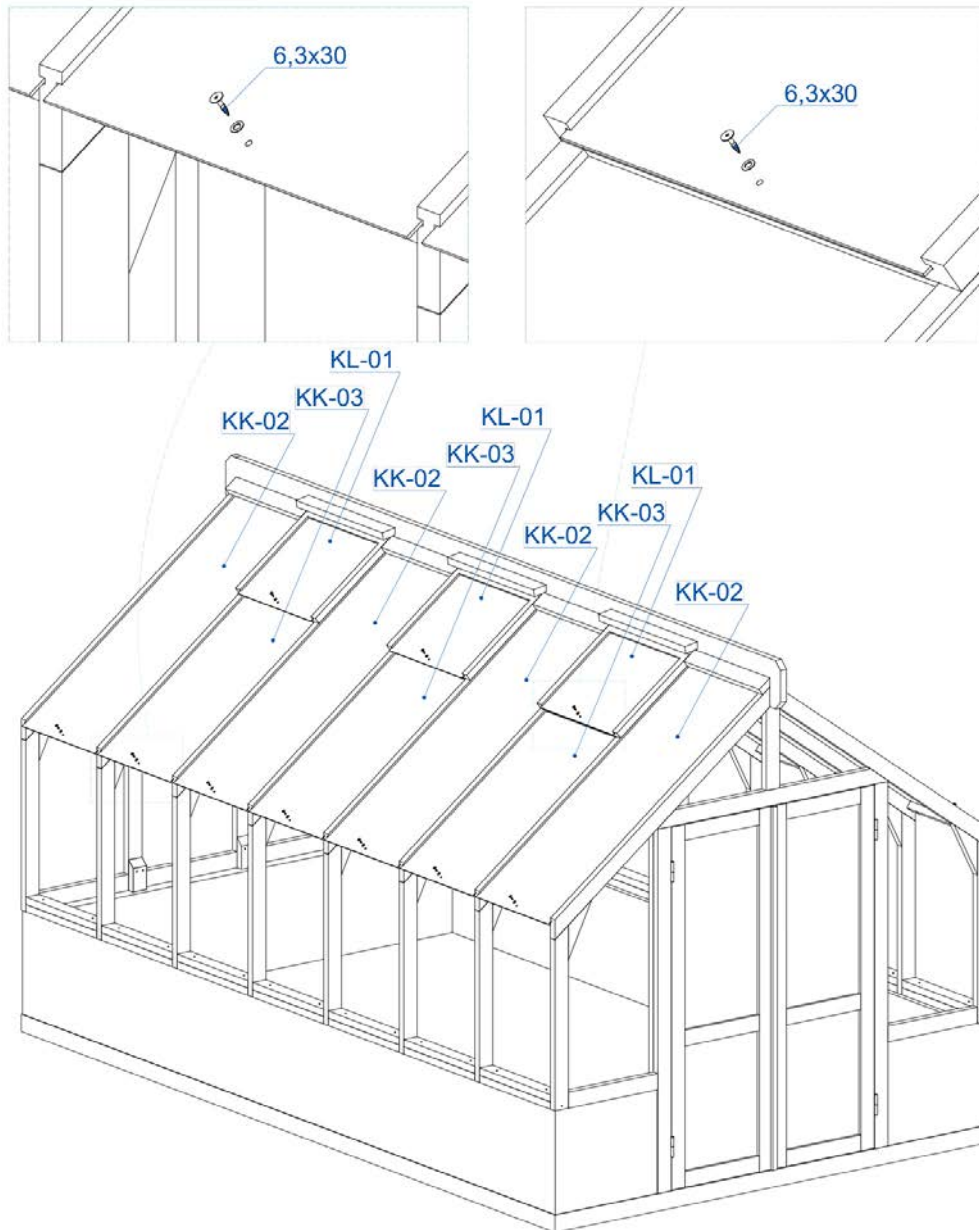
NB! Broken glasses are not subject to warranty replacement !!!



19.1. INSTALLATION OF ROOF GLASSES

Carefully place the end of the glass to rafter/roof window grooves and push it all the way to the end. Do not push the glass with force (glass must move lightly).

Make sure that the glass is evenly grooved and drill a hole to the middle detail (DET-01)/roof window lower frame with a depth of 30 mm. Wood drill size 5 mm. Fasten the glass with a glass screw. **NB! Do not over tighten!**



NB! Look also information about roof glass seals at point 21 on page 25!

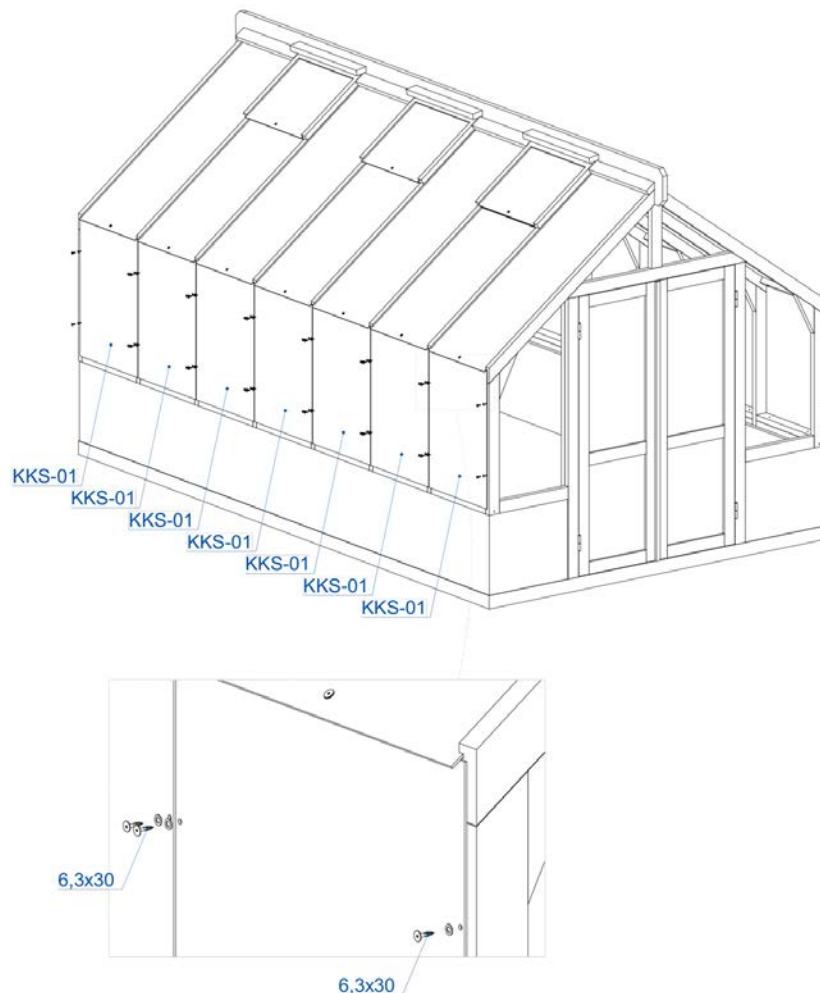
19.2. INSTALLATION OF SIDE GLASSES

Make sure the side posts are completely level! If necessary, adjust the greenhouse frame. Place the upper end of the glass under the edge of the roof glass and the lower edge of the side glass must be aligned with the space between the bottom details top and bottom layer. Hold the glass in place and drill holes with a depth of 30 mm. Fasten the glass with a glass screw.

Tip 1: Use the suction cups on the glasses to lift them.

Tip 2: Start installing the glasses from second section. This gives a better understanding that two glasses must be attached to one post and that their edges must extend evenly to the post so that there must be an equal gap between the glasses. Starting from the beginning, there may be an unequal gap at the first intermediate post.

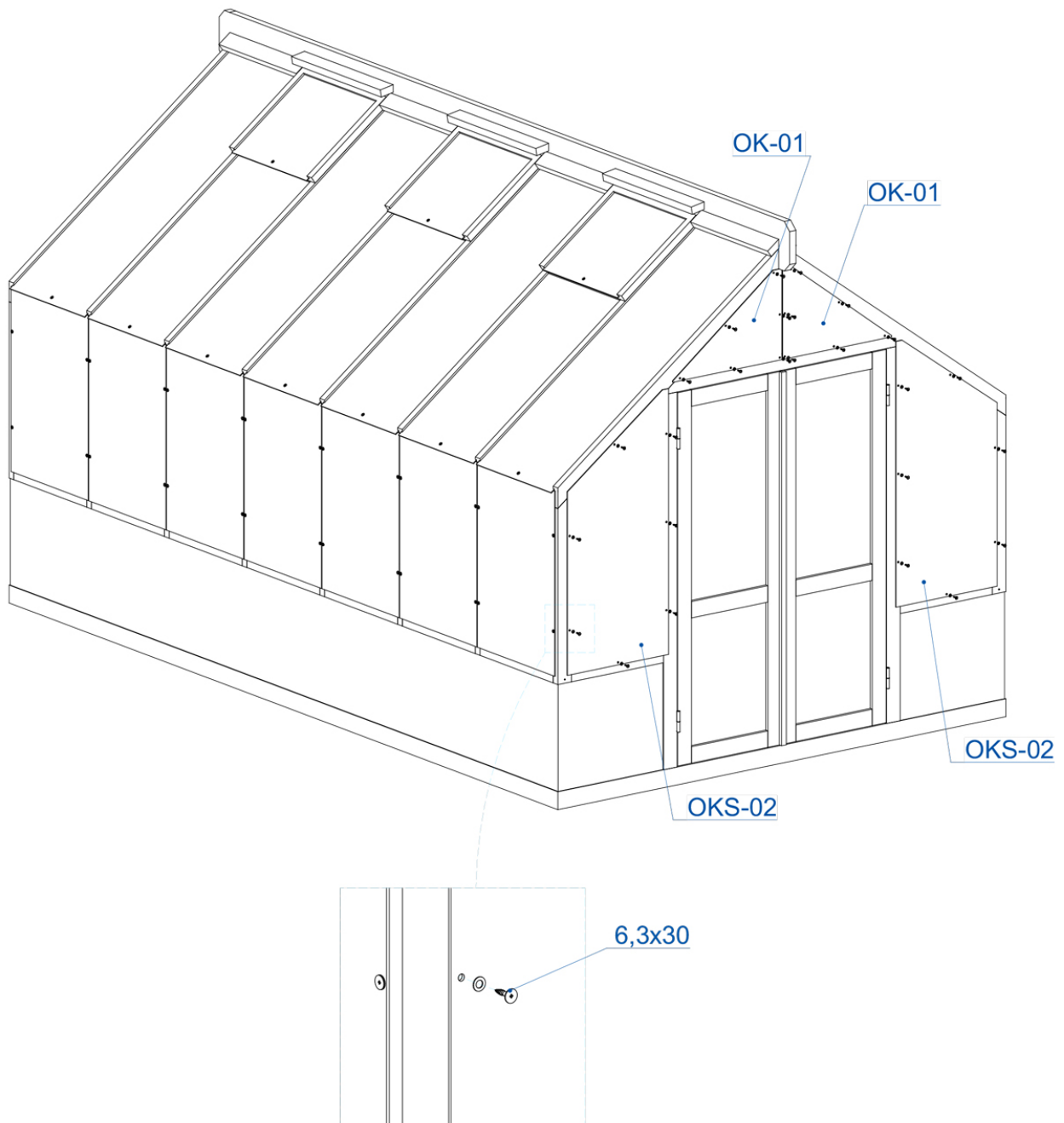
NB! Make sure that the glasses are evenly spaced and that the attachment points line up. Observe the alignment of the glasses at their lower edge. Do not over tighten screws!



19.3. INSTALLATION OF FRONT AND BACK WALL GLASSES

Installed with the same logic as the side windows. Make sure that lower edge of the glass remains at the same height as the side glass.

NB! The lower edge of the front or back wall glass must be 42 mm from the foundation and line up with side glass lower edge.





20. INSTALLATION OF ROOF WINDOW OPENER

Greenhouse kit includes automatic roof window openers Bayliss Autovents mk7 triple spring. Roof window openers are 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 wood screws (TX20) 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).



21. INSTALLATION OF ROOF GLASS SEAL (OPTIONAL)

The greenhouse comes with roof glass seals, which you can install if you need it.

When installing a greenhouse, there is a small gap between the Ridge beam and the roof glass, which is part of the greenhouse ventilation system. However, with heavy rain and wind, a small amount of water can reach the interior of the greenhouse through this gap.

If you use the greenhouse mainly for growing plants, we recommend that you do not add seals to ensure better ventilation. The small amount of rainwater that can seep through from time to time does not damage the structure of the greenhouse!



However, if you use the greenhouse mainly as a pavilion, we recommend adding seals to prevent possible ingress of rainwater.



22. DOORS ADJUSTMENT (IF NECESSARY)

If, after the installation of the greenhouse and its is settled, it becomes necessary to adjust the height of the doors, this can be done by adjusting the hinges. To adjust the door hinges, remove the hinge cover and turn the hinge adjustment screw until the doors are horizontally aligned.

