



# GREENHOUSE INSTALLATION MANUAL

## GREENHOUSE No 9





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 for Greenhouse No 9.

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

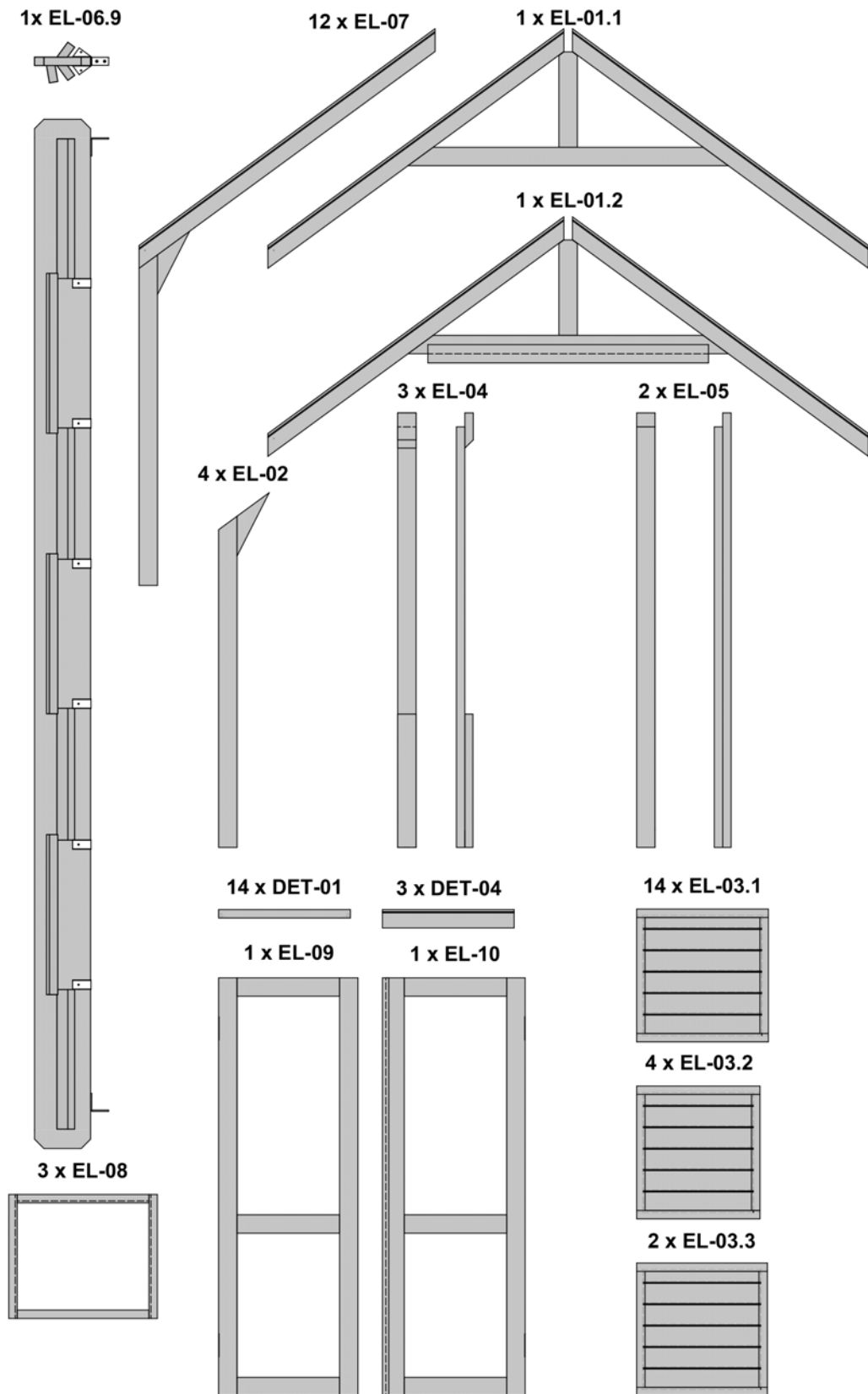
Please check that you have all necessary tools and safety equipment before installation!

**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.**

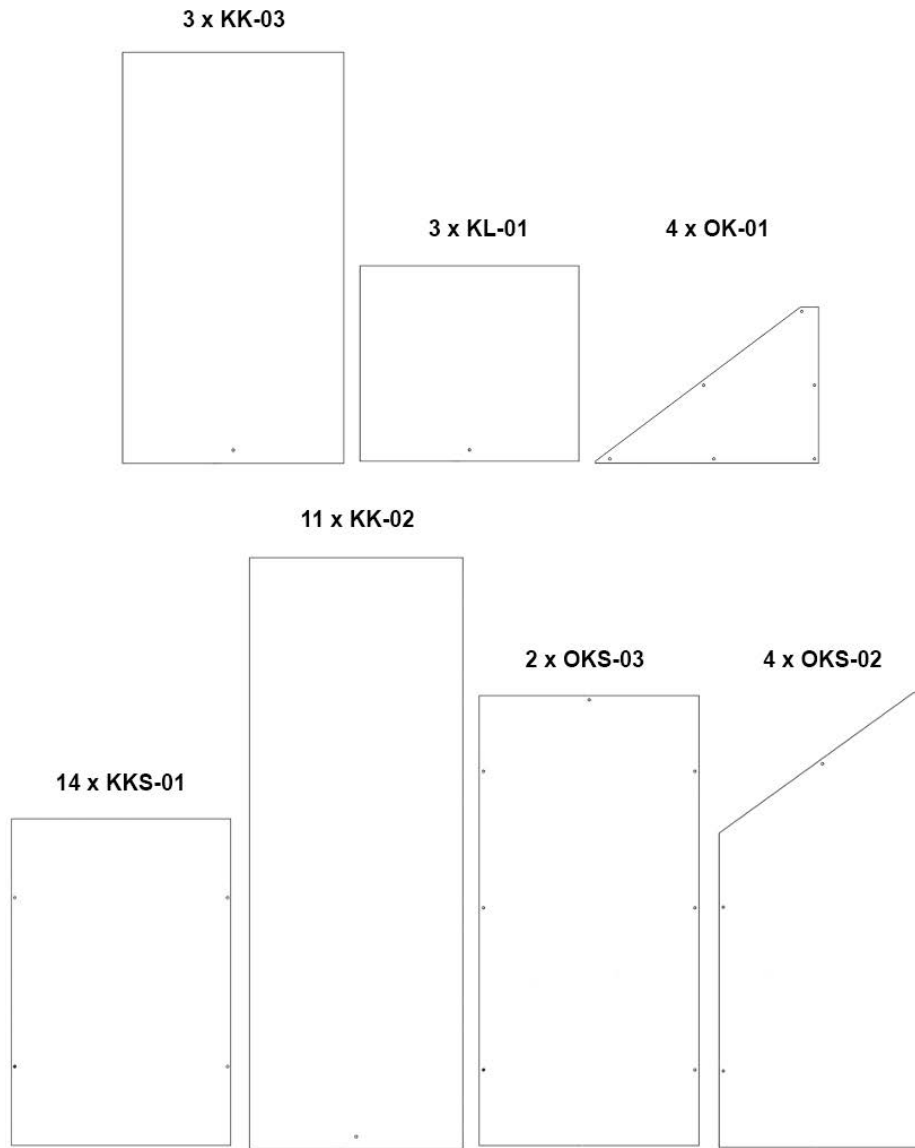
## 4. DETAILS

Numerous wooden details can be confusing when you unpack your greenhouse but sorting the details will help solve the puzzle. Remove the parts from the package and assemble the similar parts into bundles. Choose a flat and clean work surface that offers necessary 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 lose its warranty.**







## 5. FASTENERS

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

Quantity: 30 pcs



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

Quantity: 28 pcs



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

Quantity: 102 pcs



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

Quantity: 4 pcs



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

Quantity: 138 pcs + 138 pcs



**6. M6 x 55mm bolt + nut + washer**

Quantity: 12 pcs + 12 pcs + 24 pcs



**7. Wooden dowel**

Quantity: 28 pcs



**8. Long drill bit SHW TX25 for 5x40**

Quantity: 1 pc



**9. Glass assembly block 4mm**

Quantity: 1 pc

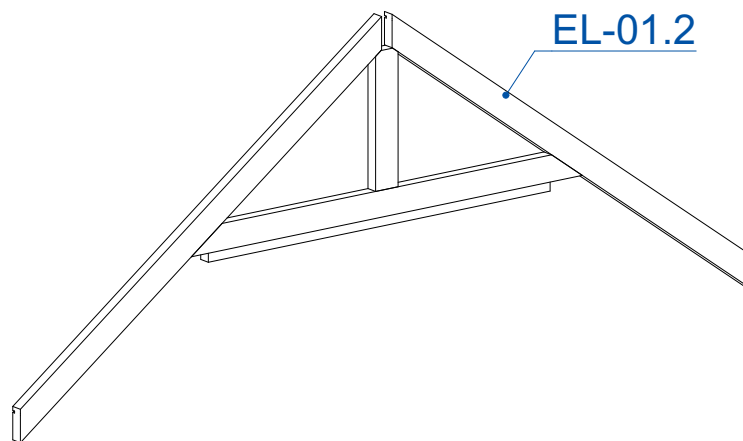
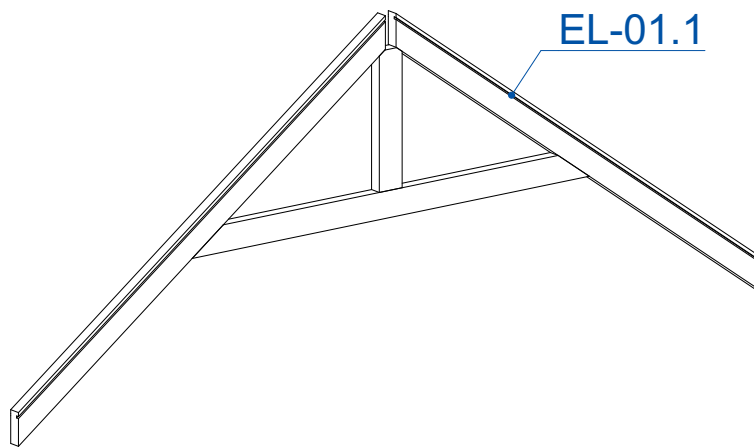


**NB! There may be extra amount of fasteners included!**

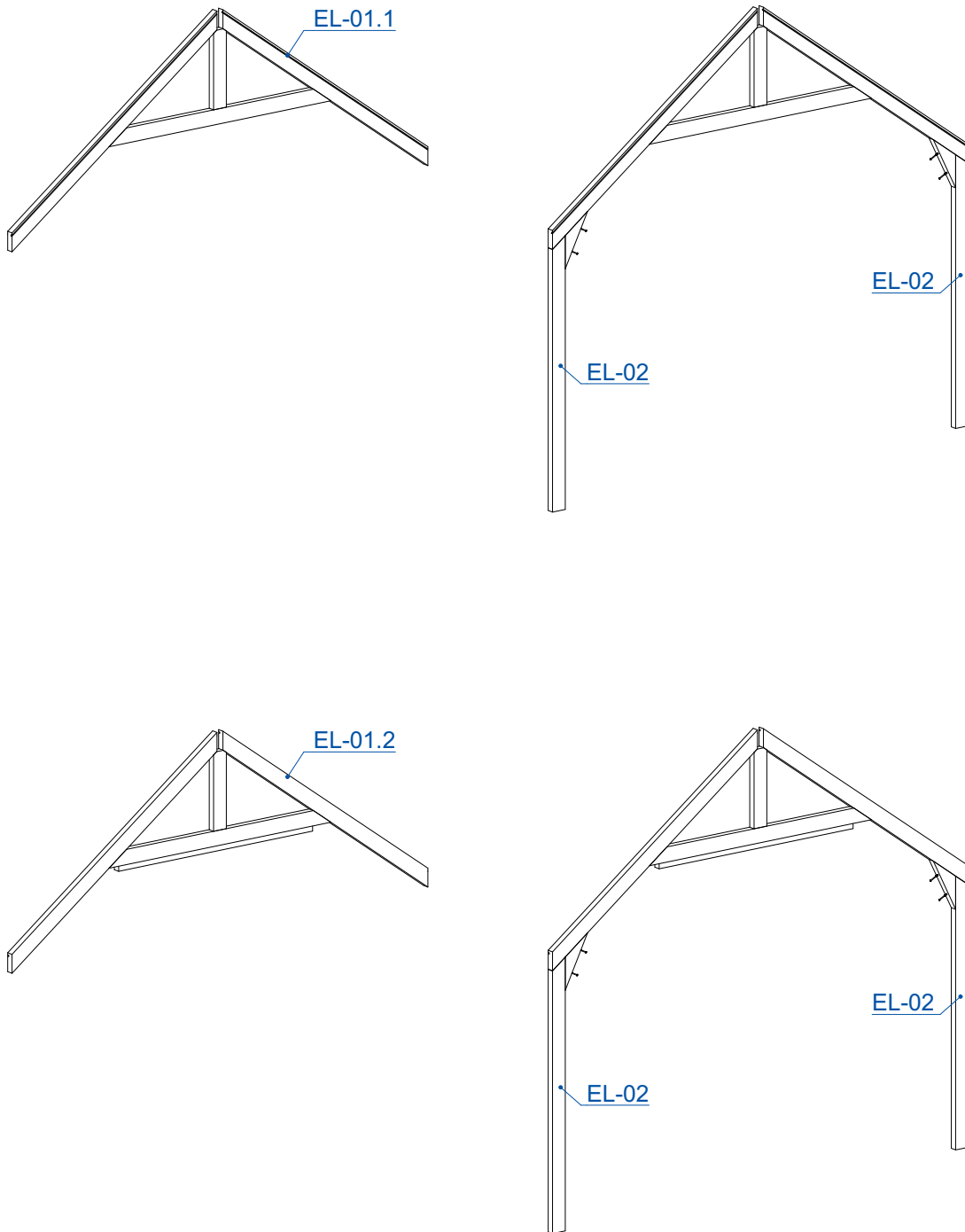
## 6. ASSEMBLY OF FRONT AND BACK WALL

Front and back wall upper triangles (EL-01.1 and EL-01.2) are partially disassembled for transportation. Details are packed together for easy recognition. Choose a flat and clean work surface that offers necessary support for correct assembling. All screws are already attached. Follow markings and place details to correct positions. Fasten screws into pre-drilled holes.

**NB! Details must be strongly attached into solid units. There must be no gaps between elements.**



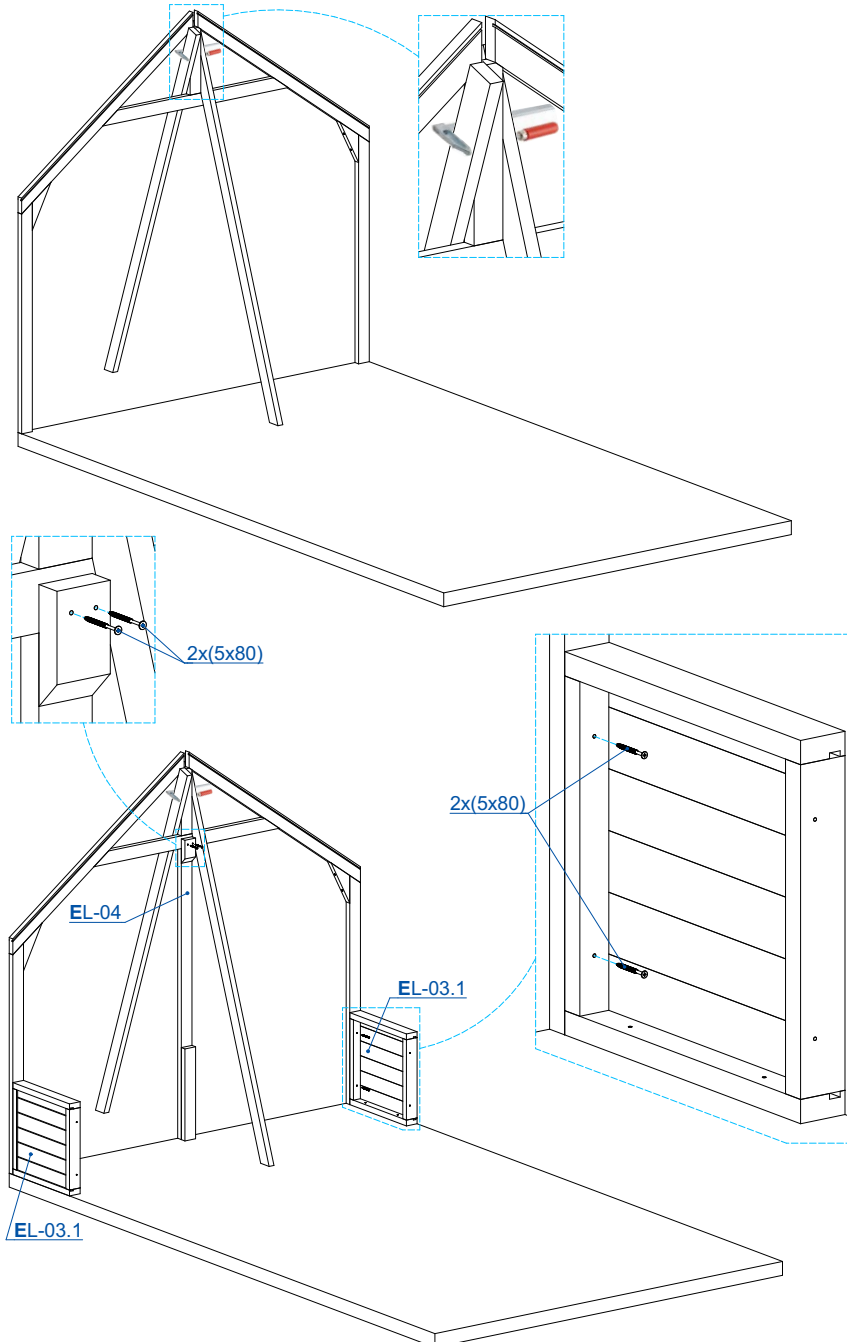
Connect upper triangles with side posts (EL-02). All screws are already attached. Follow markings and place details to correct positions. Fasten screws into pre-drilled holes.



## 7. INSTALLATION OF BACK WALL

Place back wall on the foundation. Use two longer wooden bars as a support and fasten them with a clamping screw. **NB! Use transportation box top bars as supports!**

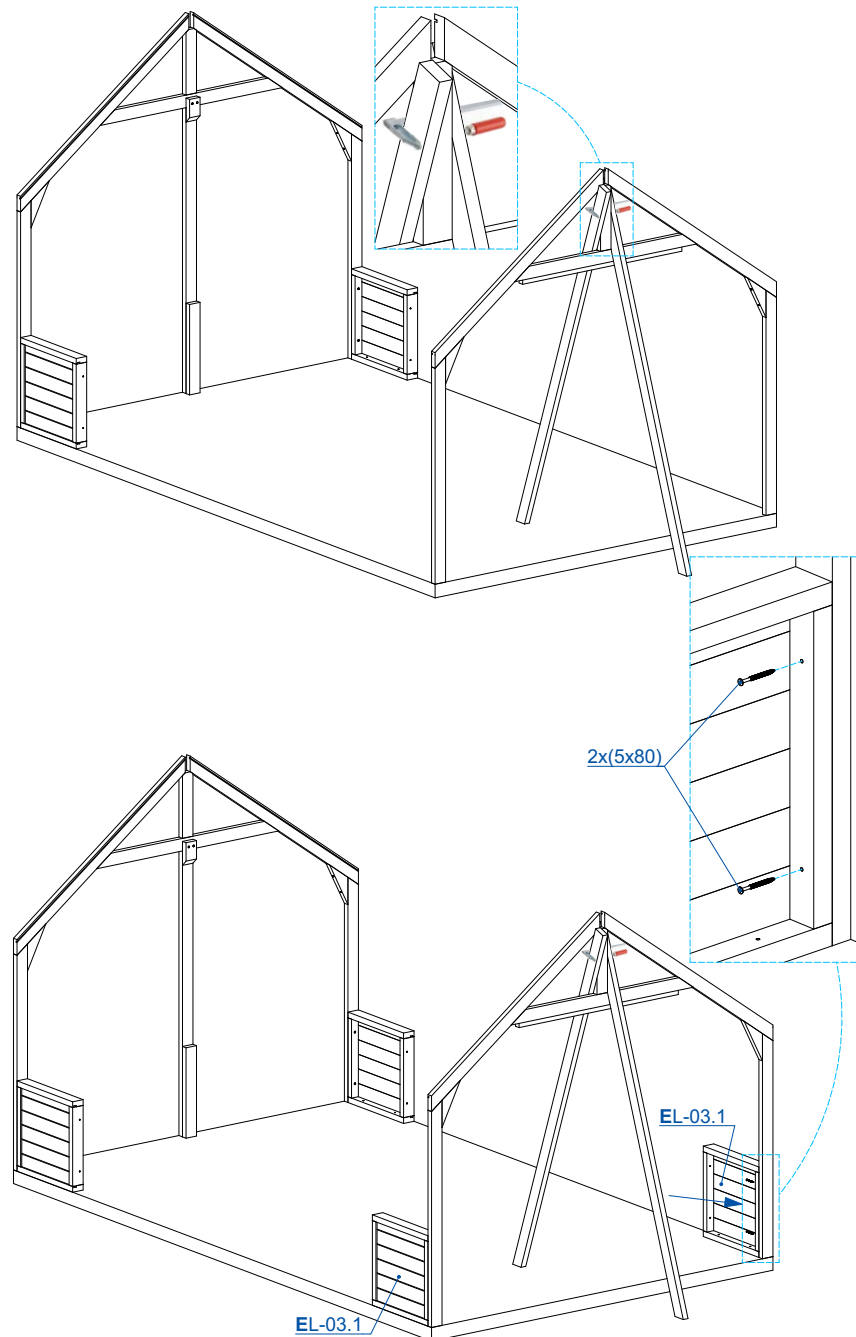
Place wooden side wall elements (EL-03.1) to the correct location and fasten to back wall posts. Place back wall middle post to correct location and fasten with screws.



## 8. INSTALLATION OF FRONT WALL

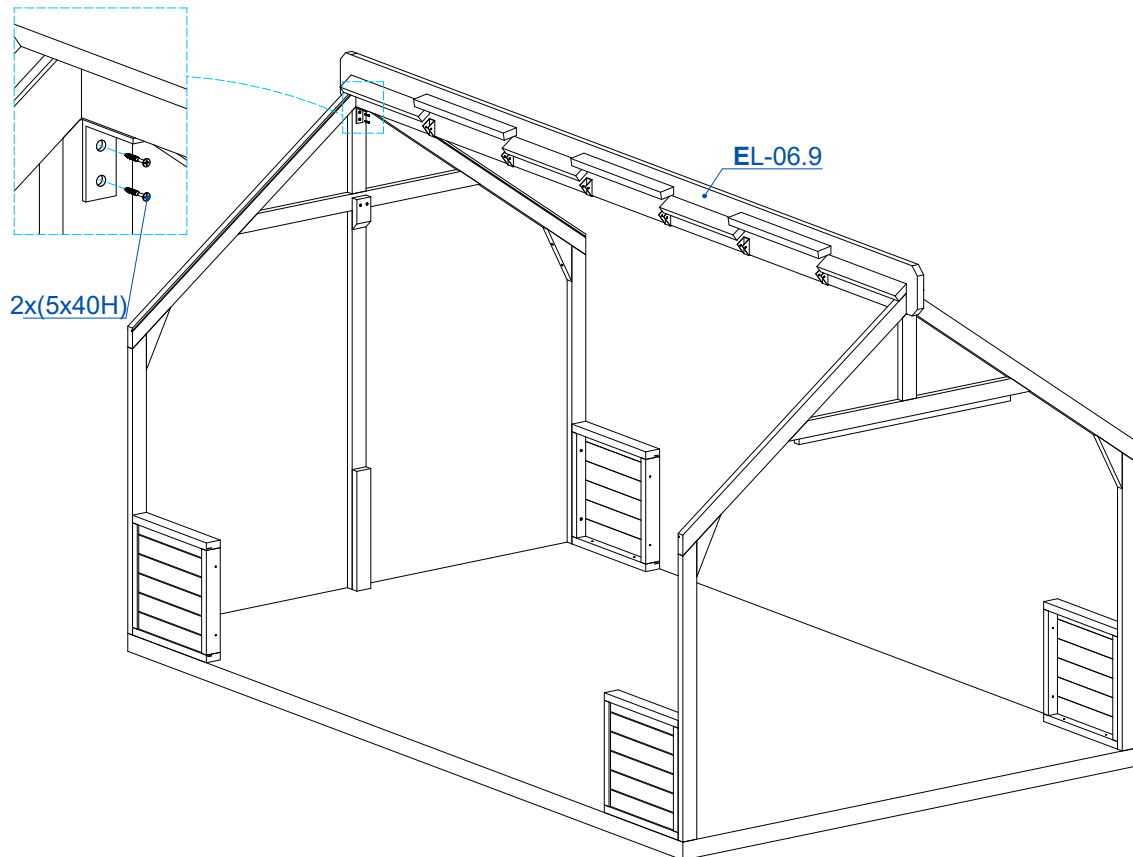
Place front wall on the foundation. Use two longer wooden bars as a support and fasten them with a clamping screw. **NB! Use transportation box top bars as supports!**

Place wooden side wall elements (EL-03.1) to the correct location and fasten to front wall posts.



## 9. INSTALLATION OF RIDGE BEAM

Place ridge beam (EL-06.9) on top of the front and back wall. Metal brackets are already attached to ridge beam. Fasten with screws.

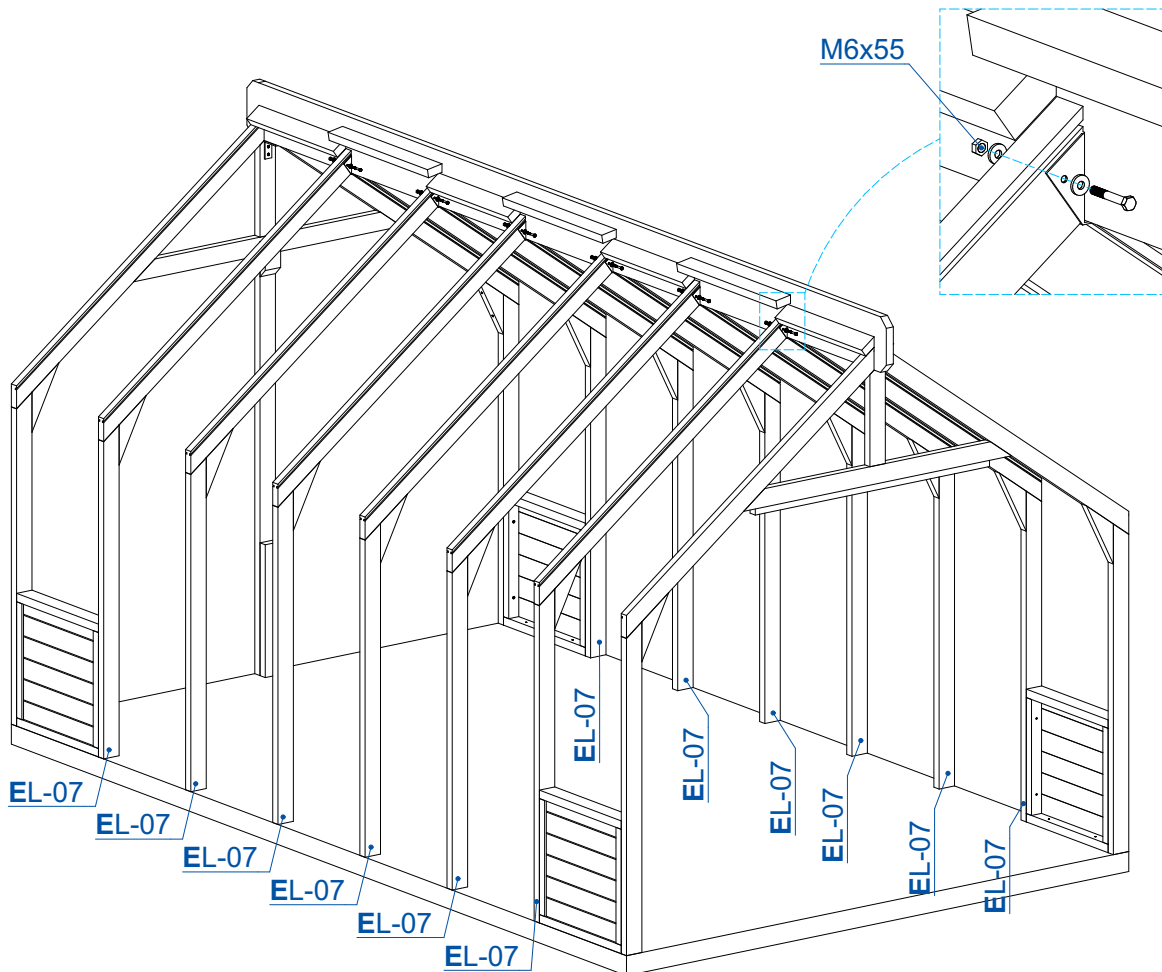




## 10. INSTALLATION OF RAFTERS

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

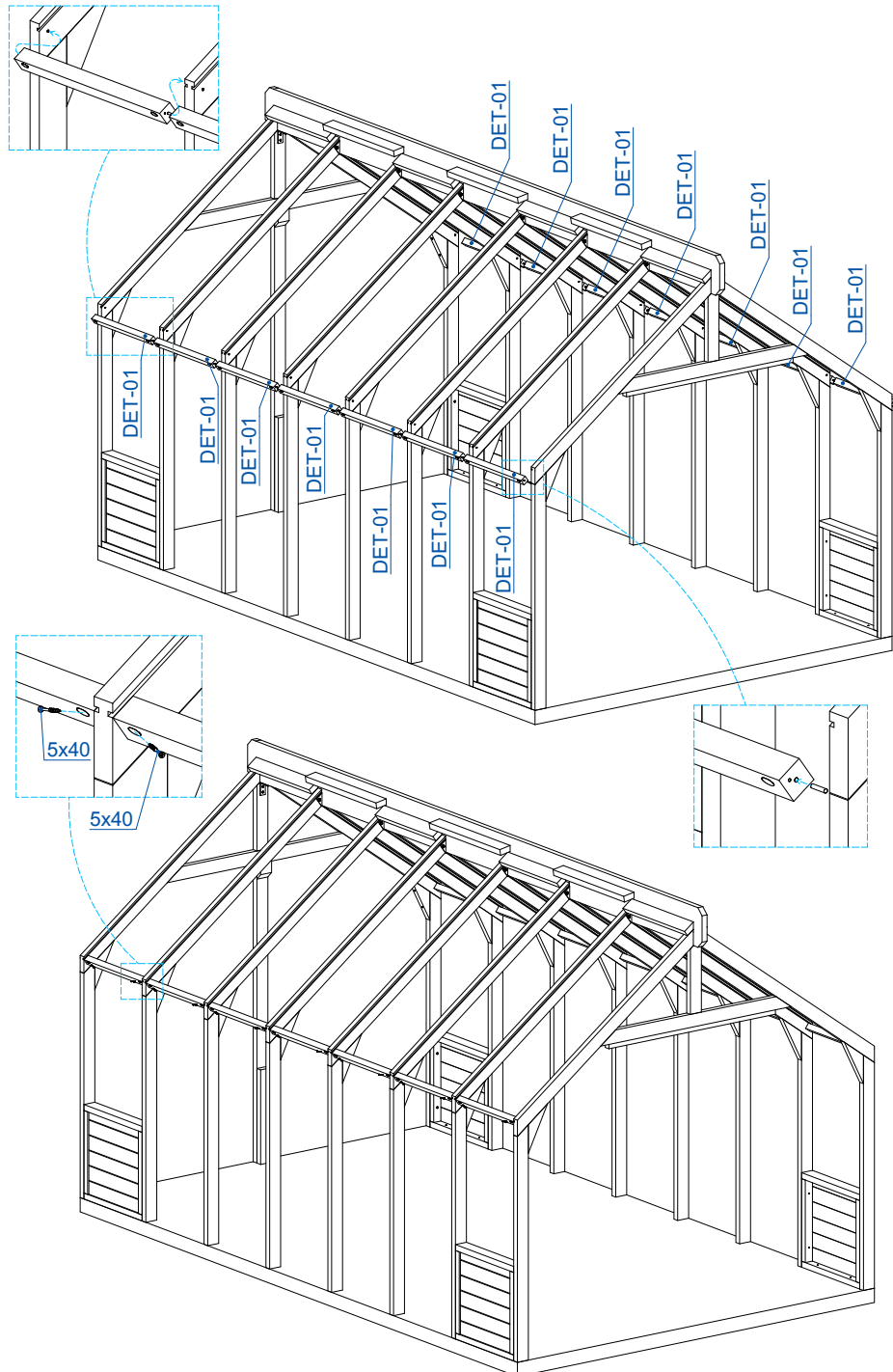
**NB! Make sure that the edge of the carrier does not cover rafter glass groove!**



**NB! Tighten the nut only later after installing the rafter middle details!  
(Look section 11)**

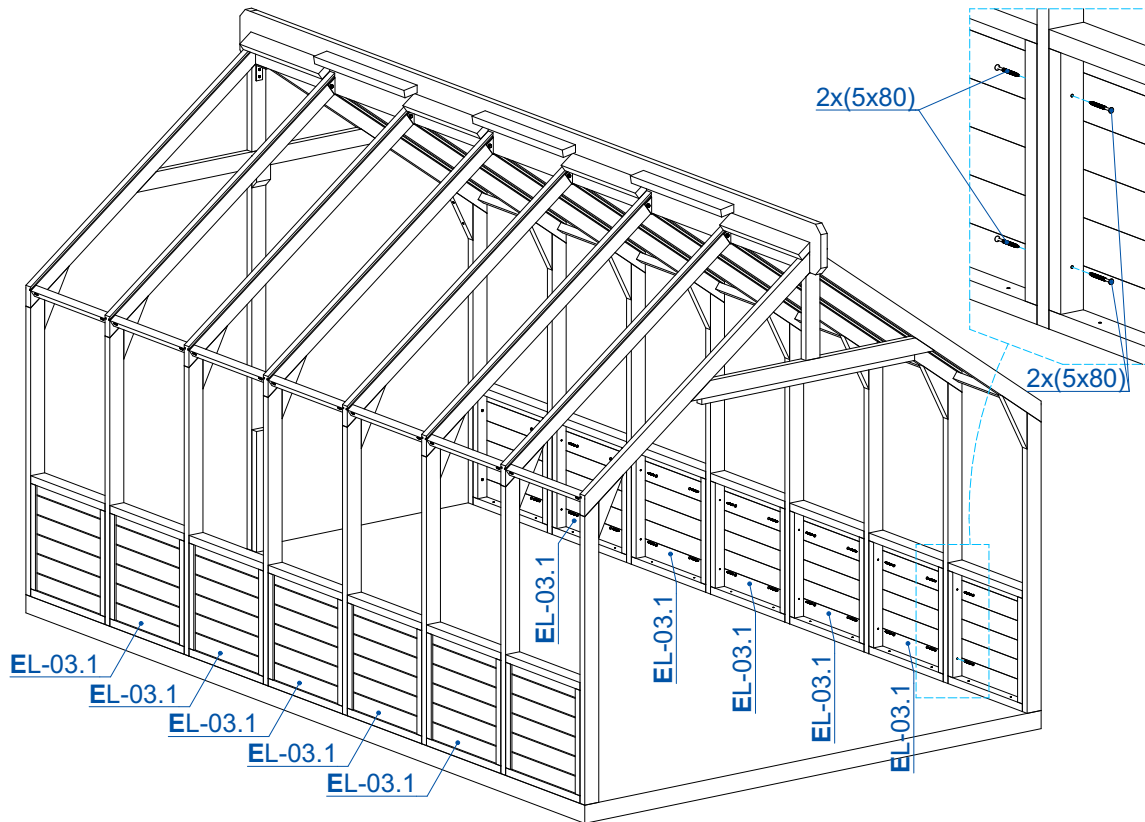
## 11. INSTALLATION OF RAFTER MIDDLE DETAILS

Place wooden dowels to holes at the end of rafter middle detail (DET-01) and place it between two rafters so that it is attached. Make sure that edge of the rafter middle detail is parallel with rafter glass groove and do not block groove. Fasten rafter middle detail strongly to rafters with screws. Use long drill pit.



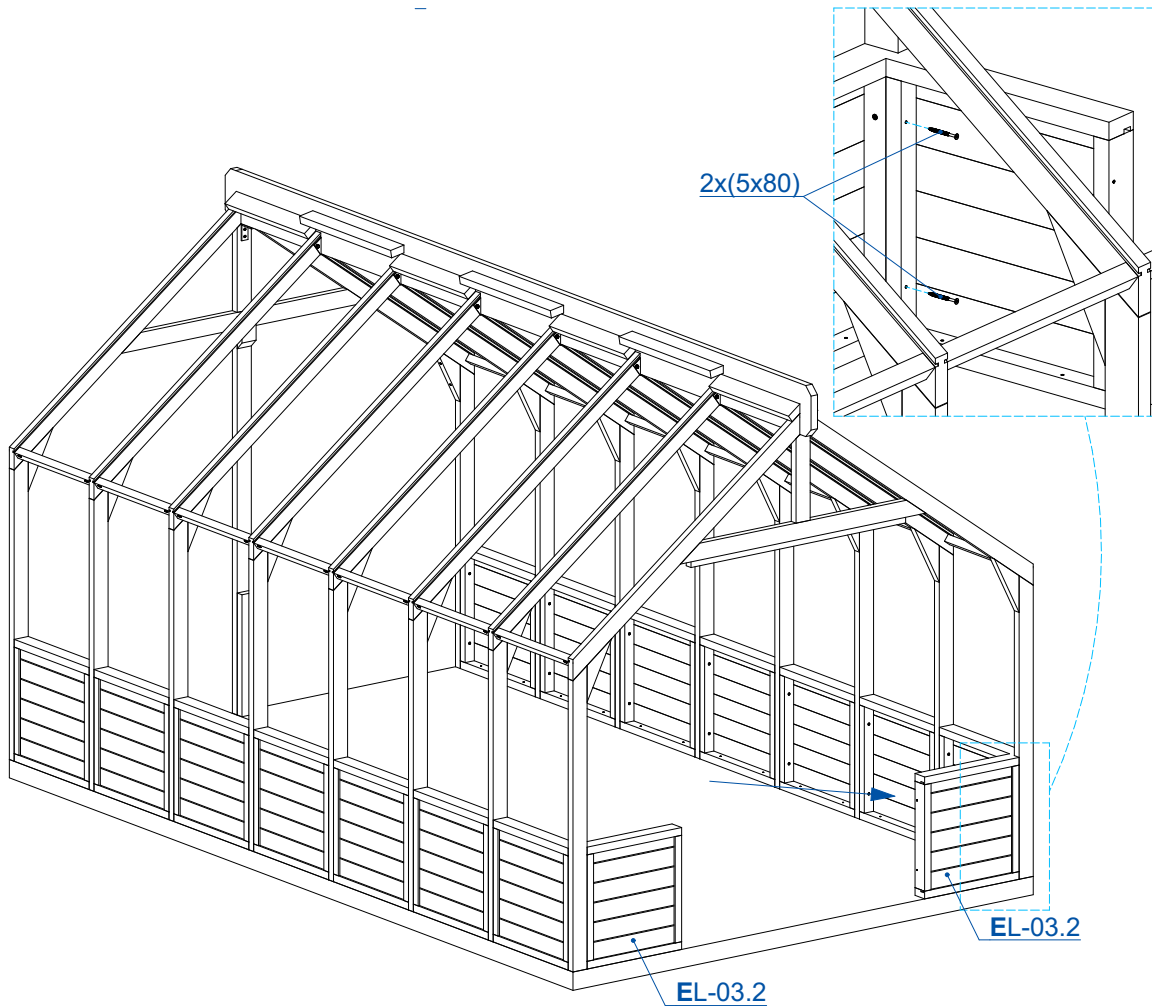
## 12. INSTALLATION OF WOODEN SIDE WALL ELEMENTS

Place wooden side wall elements (EL-03.1) to the correct location between rafter posts and fasten with screws.



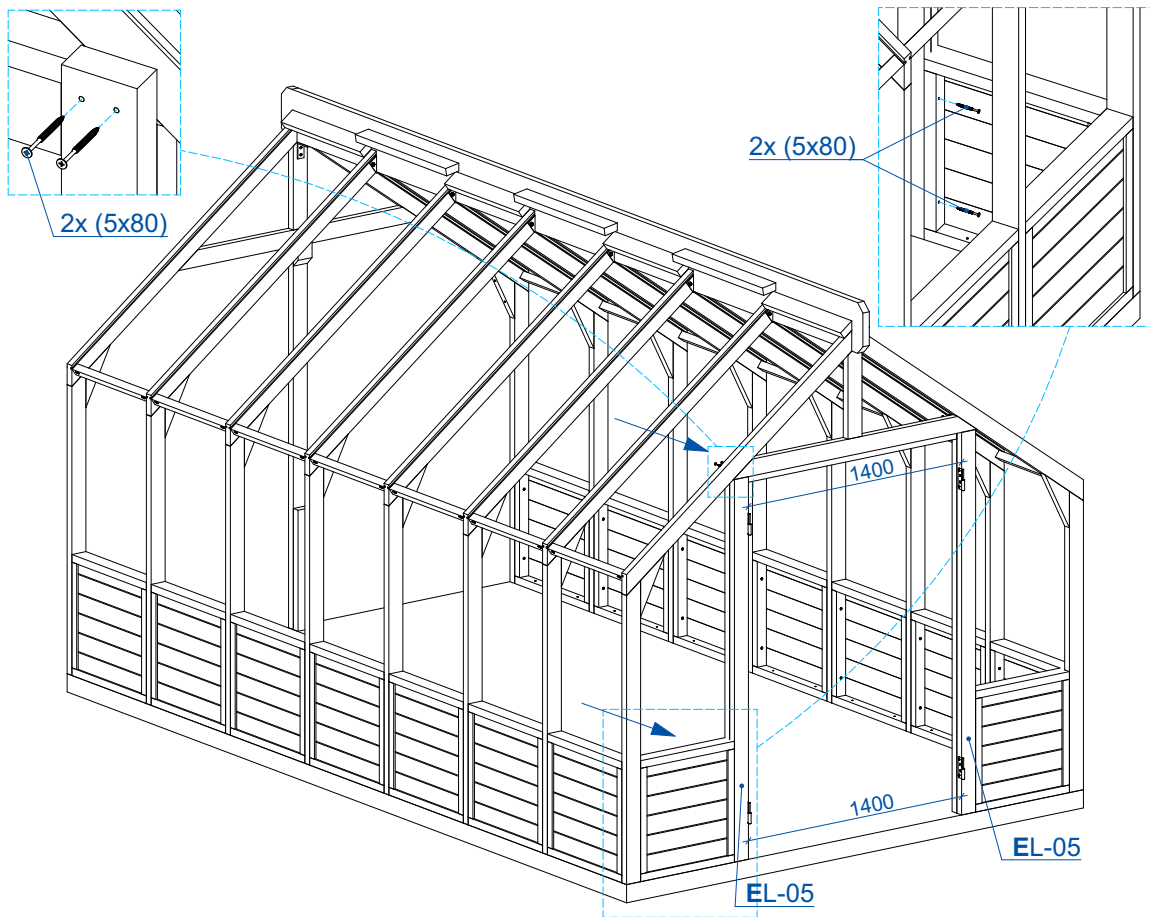
### 13. INSTALLATION OF WOODEN FRONT WALL OUTER ELEMENTS

Place wooden front wall elements (EL-03.2) to the correct location and fasten with screws to front wall posts.



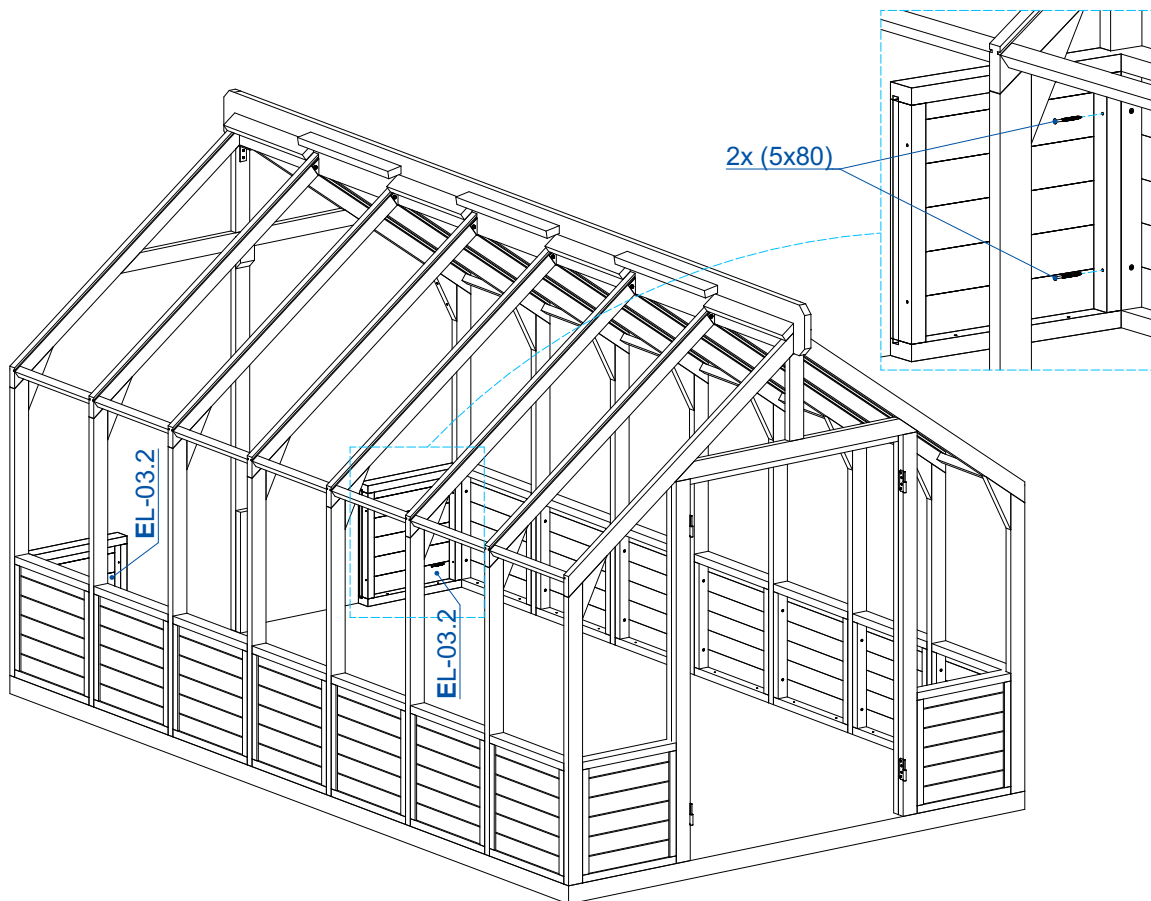
## 14. INSTALLATION OF DOOR POSTS

Place door posts (EL-05) to the correct location and fasten with screws.  
**NB! Make sure that door opening is exactly 1400 mm from top and bottom!**



## 15. INSTALLATION OF WOODEN BACK WALL OUTER ELEMENTS

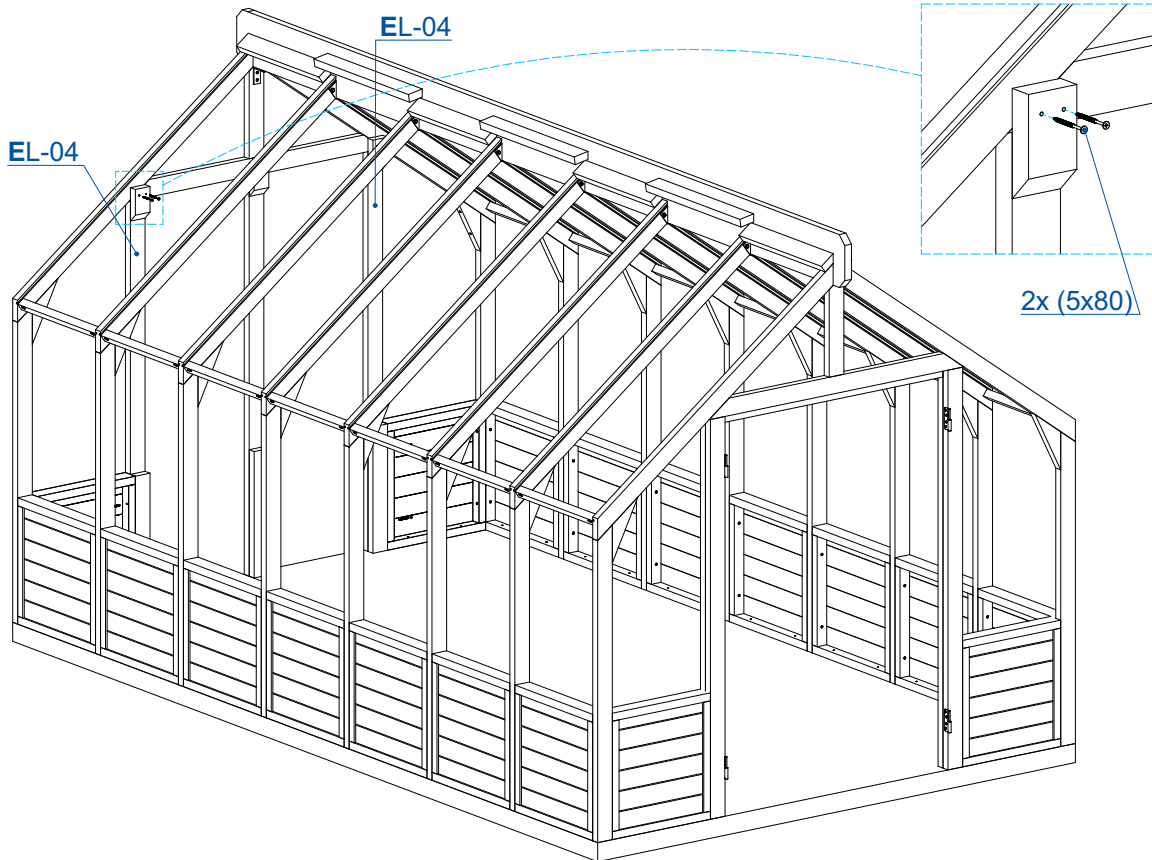
Place wooden back wall elements (EL-03.2) to the correct location and fasten with screws to back wall posts.



## 16. INSTALLATION OF BACK WALL INNER POSTS

Place back wall inner posts (EL-04) to correct positions and fasten with screws.

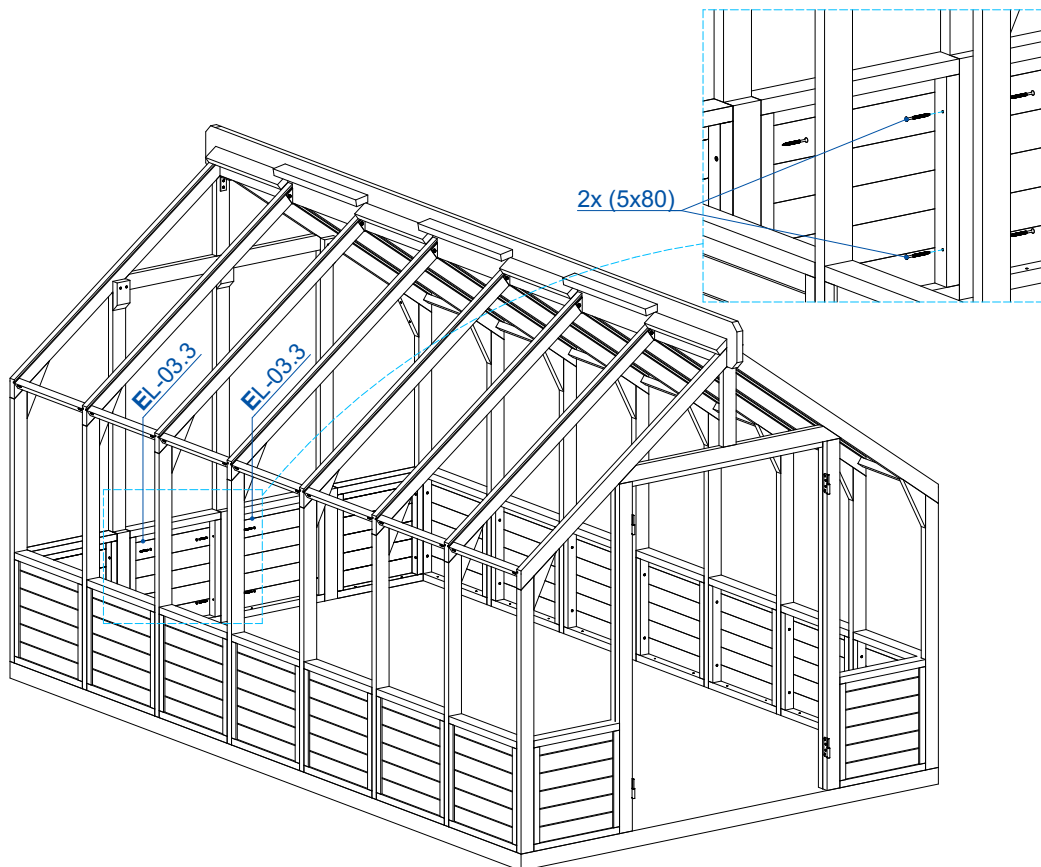
**NB! Make sure that caps between posts are equal from top and bottom!**





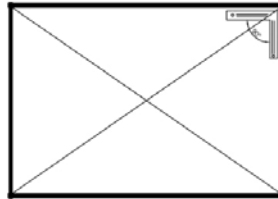
## 17. INSTALLATION OF WOODEN BACK WALL INNER ELEMENTS

Place wooden back wall elements (EL-03.3) to the correct location between posts and fasten with screws to back wall posts.

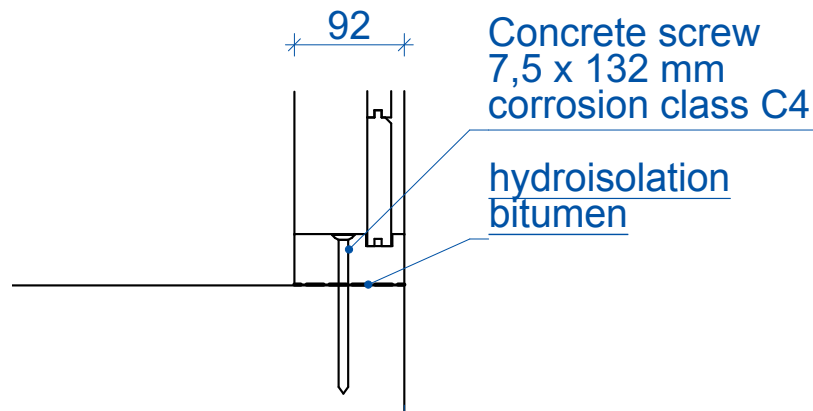


## 18. ATTACHING GREENHOUSE TO THE FOUNDATION

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



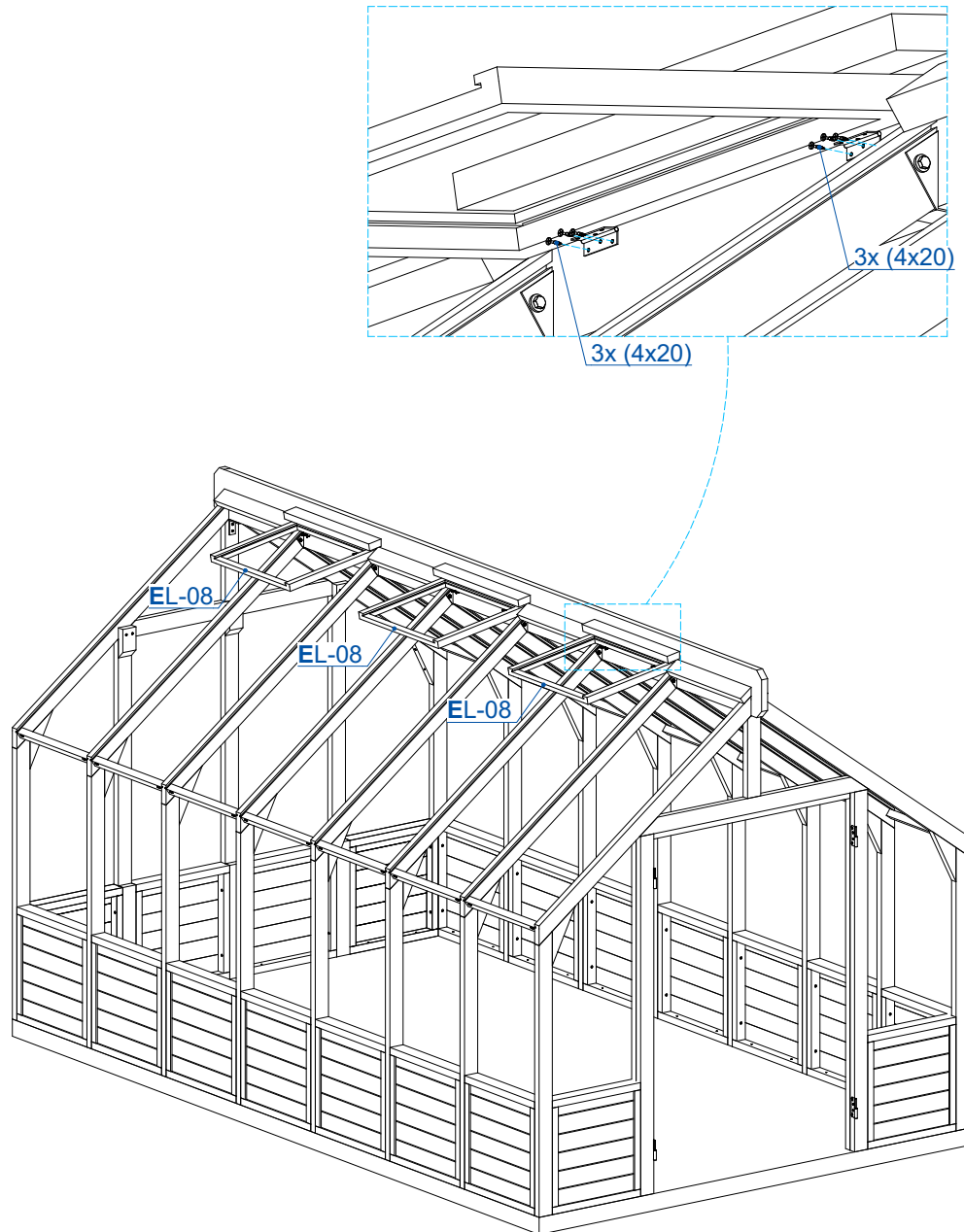
Attach greenhouse to the foundation through the wooden wall elements. Drill holes in advance and fasten with suitable screws (depending on the foundation type. Not included). Make sure that greenhouse sides and ends are strongly attached to foundation.



**NB! It is required to attach both ends and sides to the foundation.**

## 19. INSTALLATION OF ROOF WINDOWS

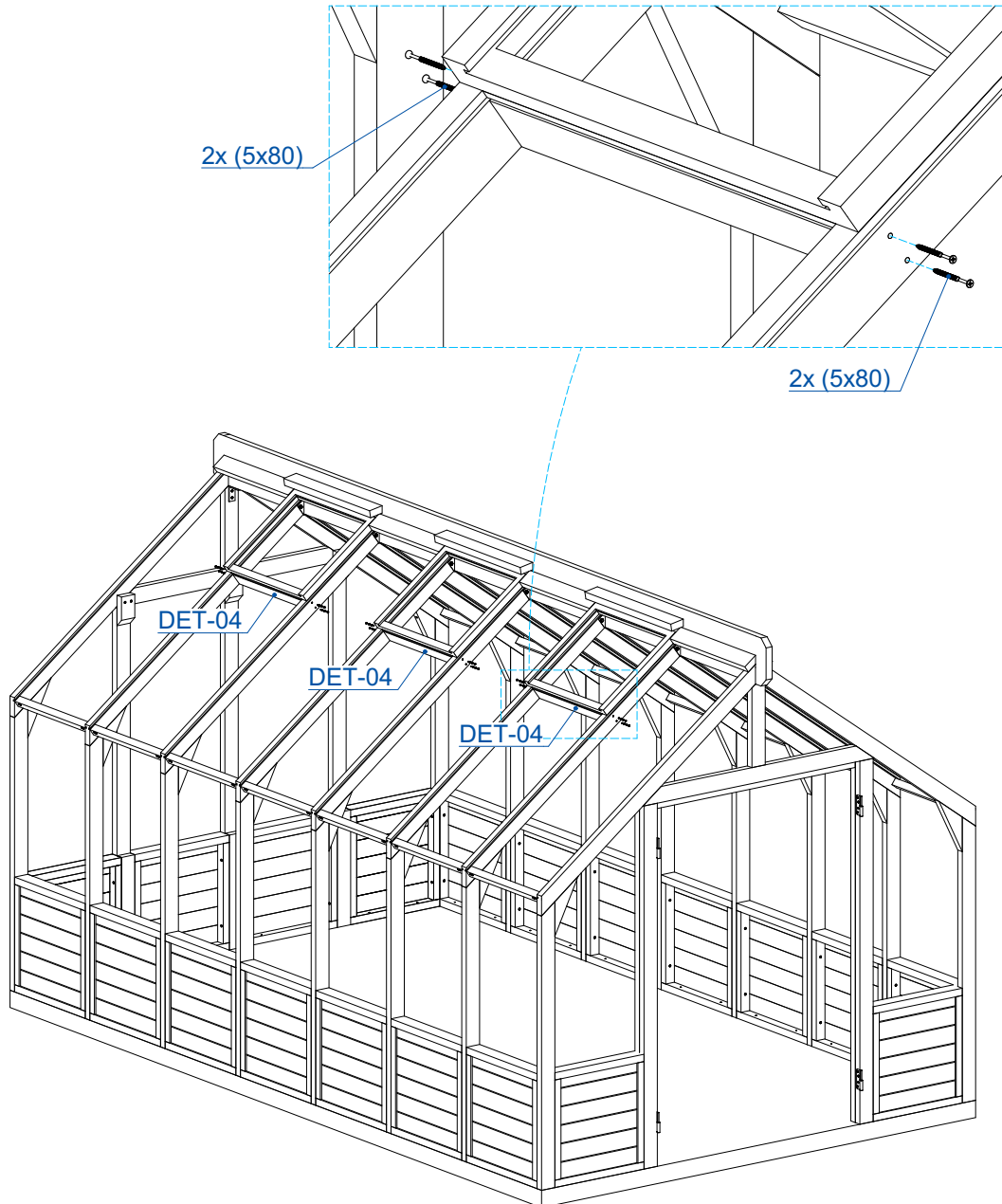
Place the roof windows (EL-08) to intended locations on rafters and push against ridge beam. Make sure roof windows are equally spaced on all rafters. Hinges are attached to the roof windows frames. Fasten to ridge beam with screws.



## 20. INSTALLATION OF ROOF WINDOW MIDDLE DETAIL

Place grooved middle details (DET-04) under roof windows. Make sure that middle detail groove lines with rafters grooves. Fasten with screws.

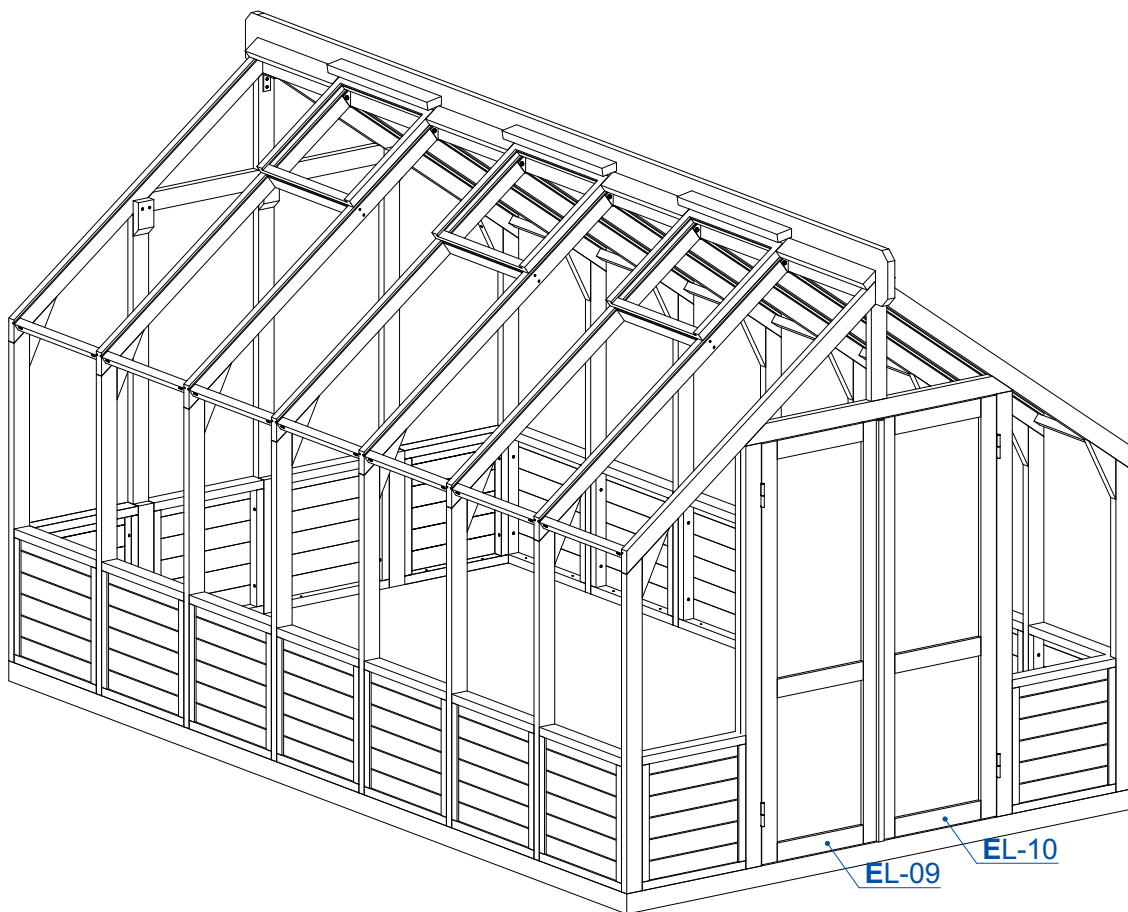
**Tip: To make it easier to install the middle detail, we recommend attaching it to the roof window with a clamping screw.**



## 21. INSTALLATION OF DOORS

Lift the door halves (EL-09 and EL-10) carefully to the hinges. Make sure that door halves align correctly and work properly.

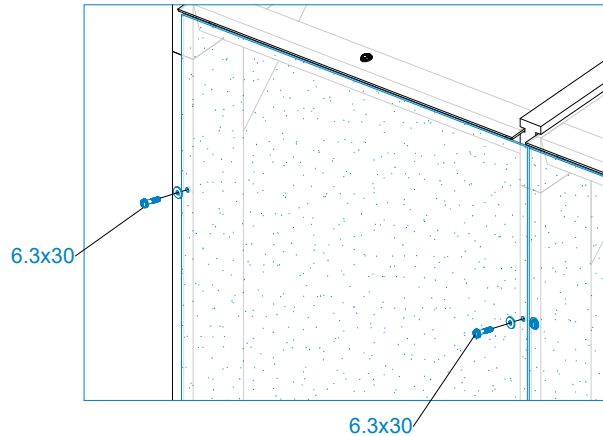
**NB! Install the door stops so that front wall glass will be not damaged when the door is opened!**



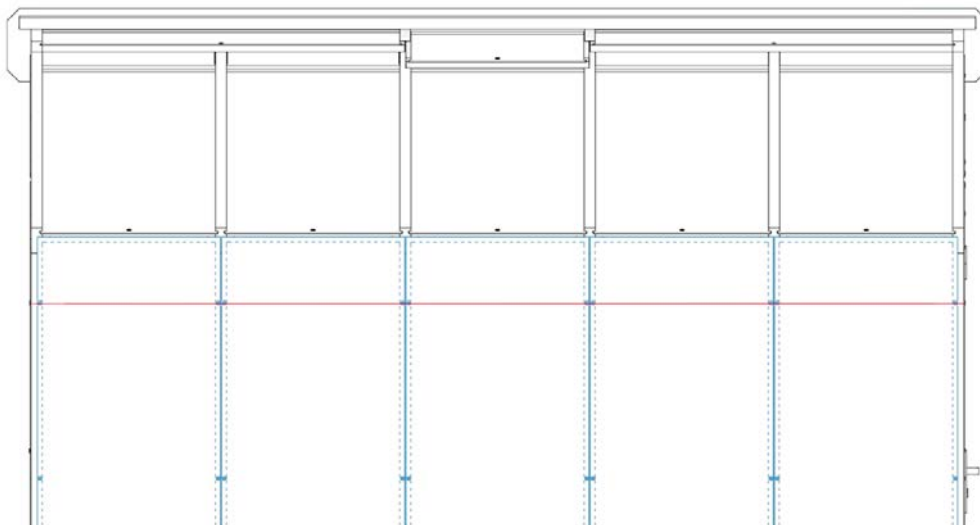
## 22. INSTALLATION OF GLASS

Make sure that you are well prepared and have necessary tools available. It is recommended to have at least two persons for glass installation and always use suction cups to lift glass safely. Make sure in advance that all posts are vertically level before installation of glass. If necessary, add a temporary supports for greenhouse frame.

The glasses are installed on the outer surface of the wooden frame and fastened with glass screws. Holes must be drilled advance and PVC washer must be between the glass and the screw head. If you use cordless drill then it is recommended to set the drill to the lowest speed and strenght. Turn the last part by hand so that PVC washer retains its shape and original thickness. **NB! Tightening the screw too hard will break the glass. Broken glass is not subject to warranty replacement!**



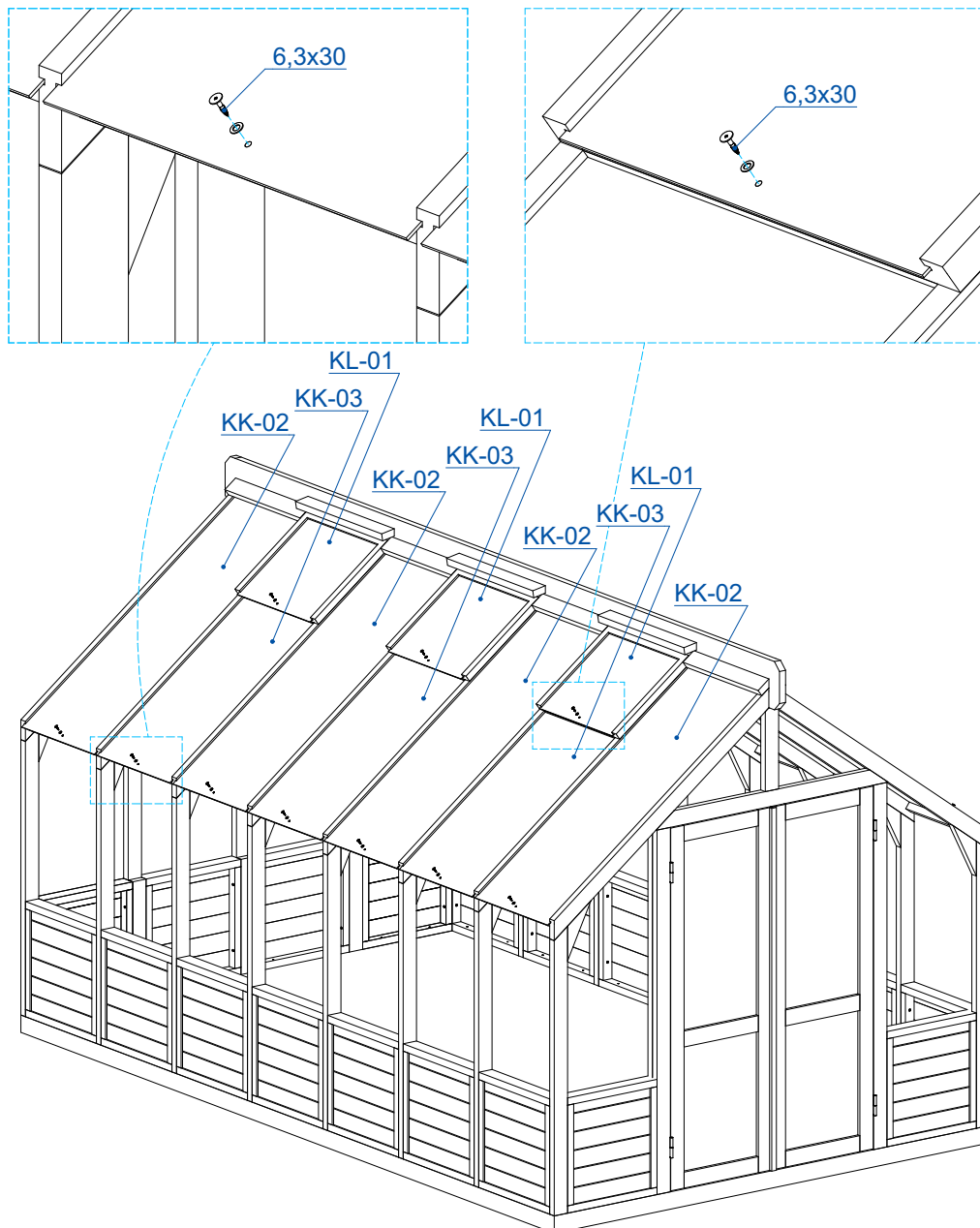
Placing glass to correct position on frame will be done on site by installer. For a best result it is important to check that glass is correctly positioned, gaps are equal and screws line up. We recommend using laser leveling tool or similar device for aligning screwheads.



## 22.1. 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 hole (size 5) in advance to the rafter middle detail and roof window lower frame with a depth of ca 30 mm. Fasten glass with a glass screw.

**NB! Align the glasses along the bottom edge. Do not over tighten screws (tighten carefully by hand)!**

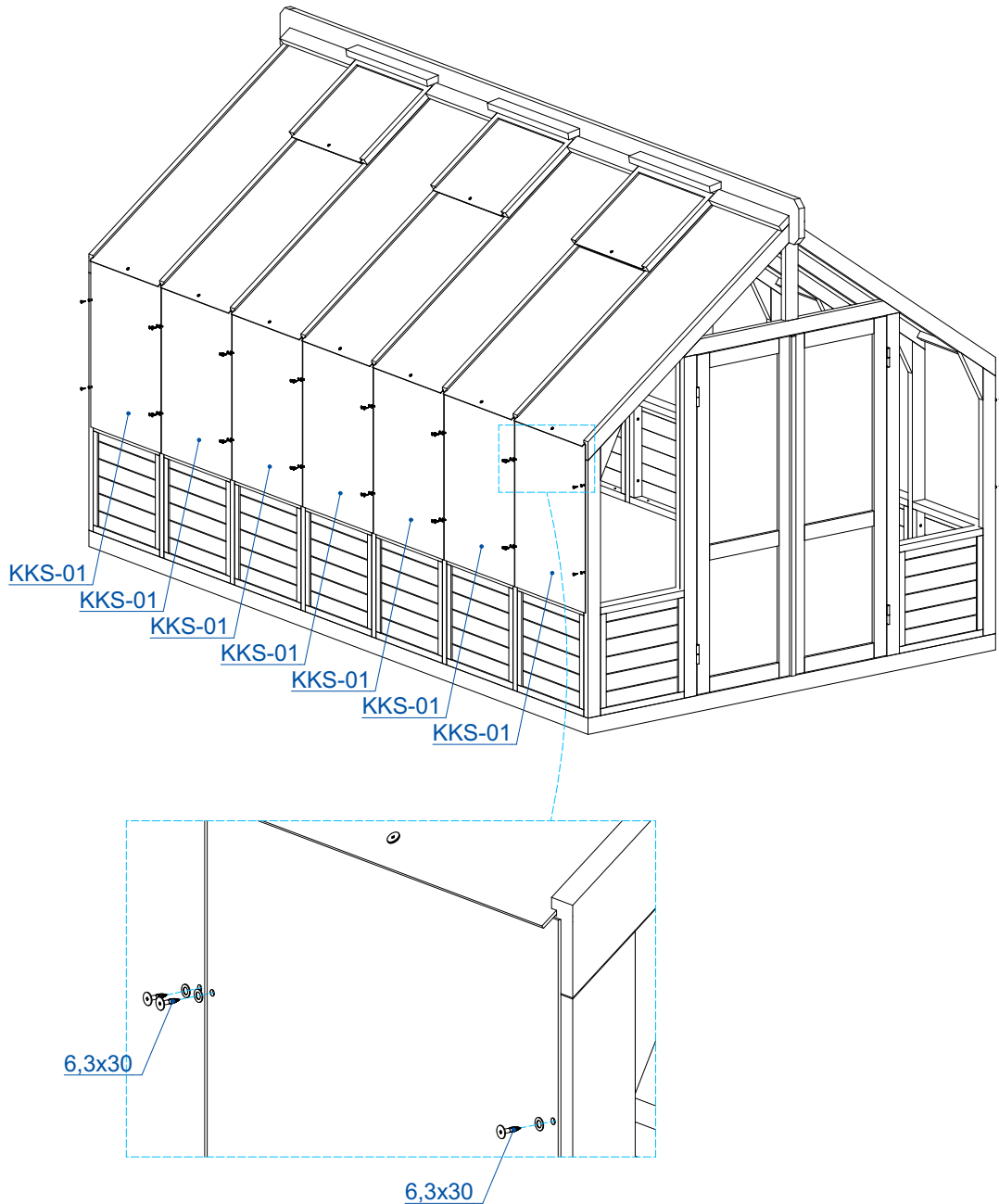




## 22.2. INSTALLATION OF SIDE WALL GLASS

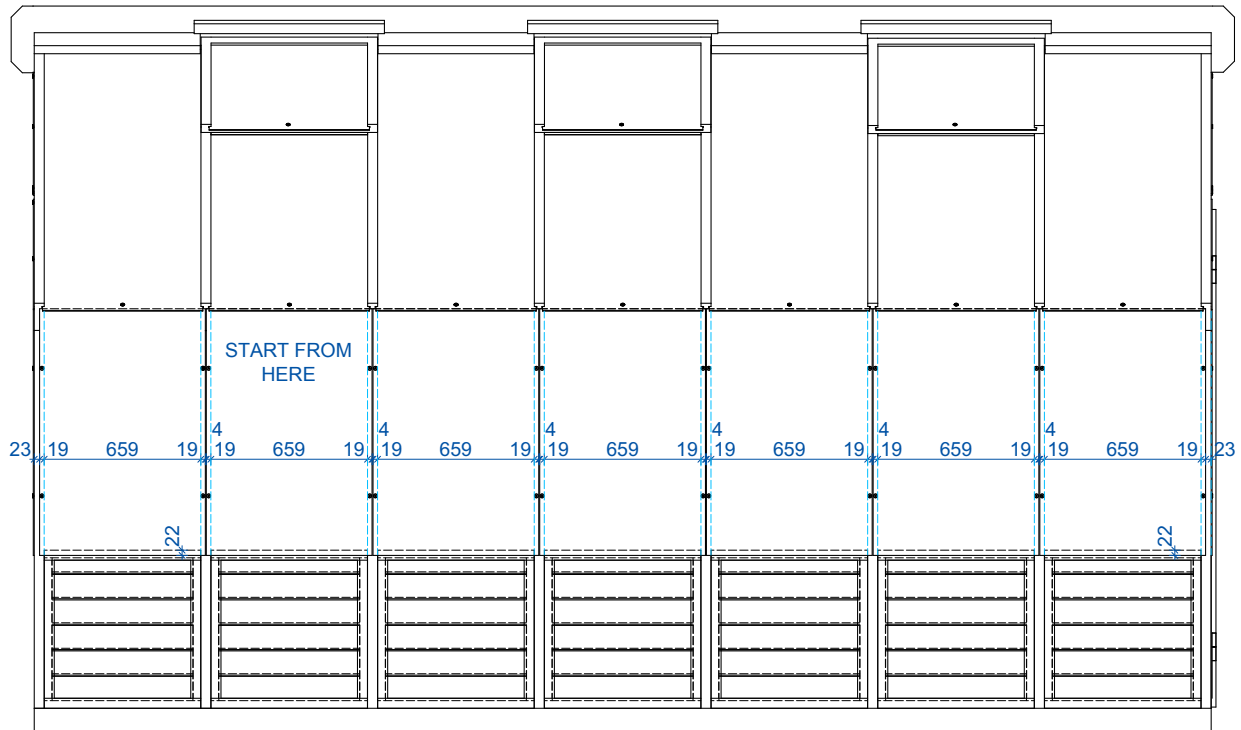
Place the upper end of the glass under the edge of the roof glass so that the lower edge of the side glass is 22 mm from top of the wooden side elements. Hold the glass in place and drill holes (size 5) in advance with a depth of 30 mm. Fasten the glass with a glass screws.

**NB! Do not over tighten screws (tighten carefully by hand)!**



Start installation of side glass from second glass. This gives a better understanding that two glasses must be attached to one post and that their edges must extend evenly on the post so that there must be an equal gap between the glasses. Use glass assembly block for keeping equal gaps.

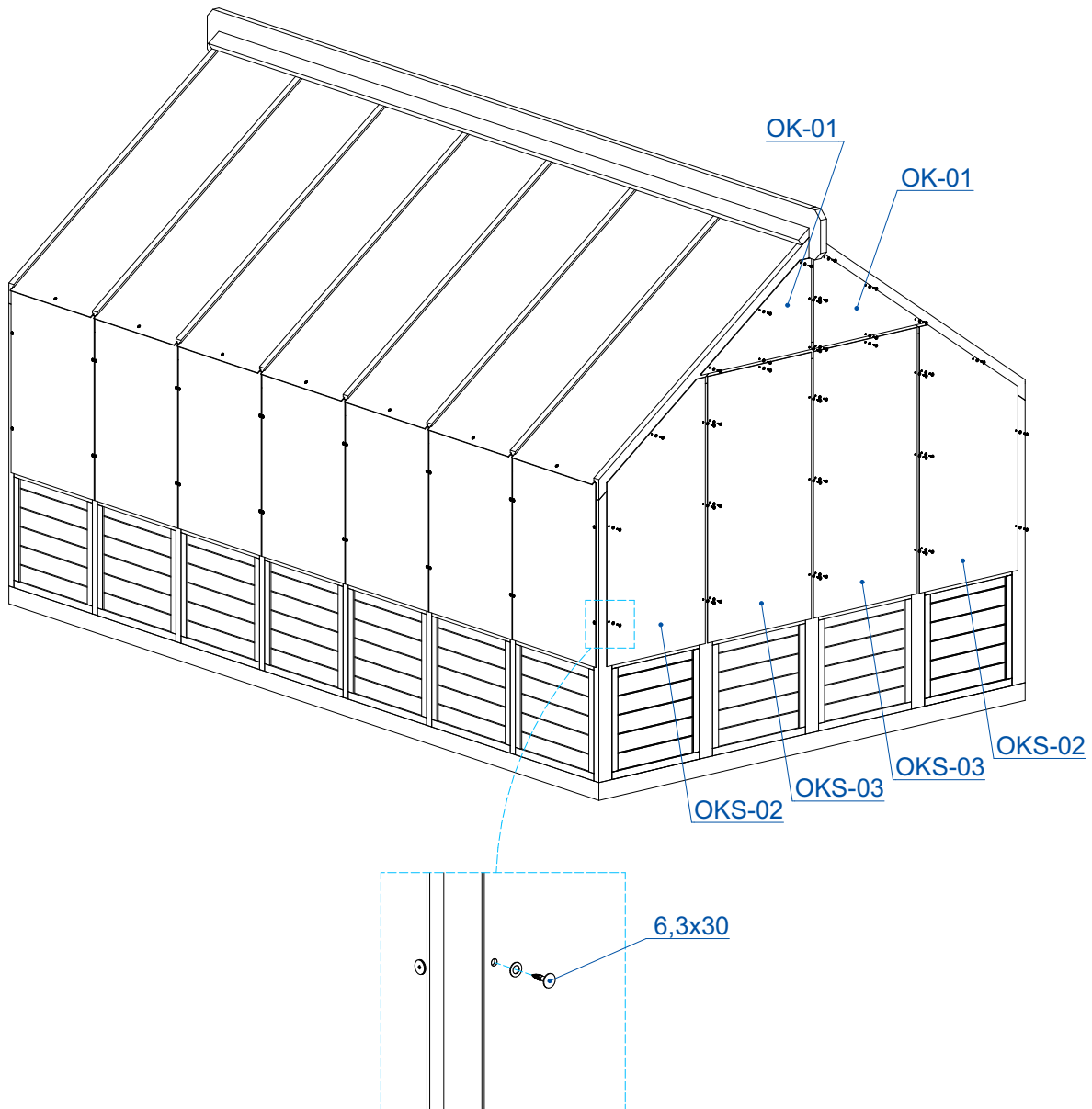
**NB! Align the glasses along the bottom edge.**



## 22.3. INSTALLATION OF BACK WALL GLASS

Start installation from largest glass OKS-03 and then complete installation with other glass. Place glass to intended location so that the lower edge of the glass is 22 mm from top of the back wall wooden element. Hold the glass in place and drill holes (size 5) in advance with a depth of 30 mm. Fasten the glass with a glass screws.

**NB! Do not over tighten screws (tighten carefully by hand)!**

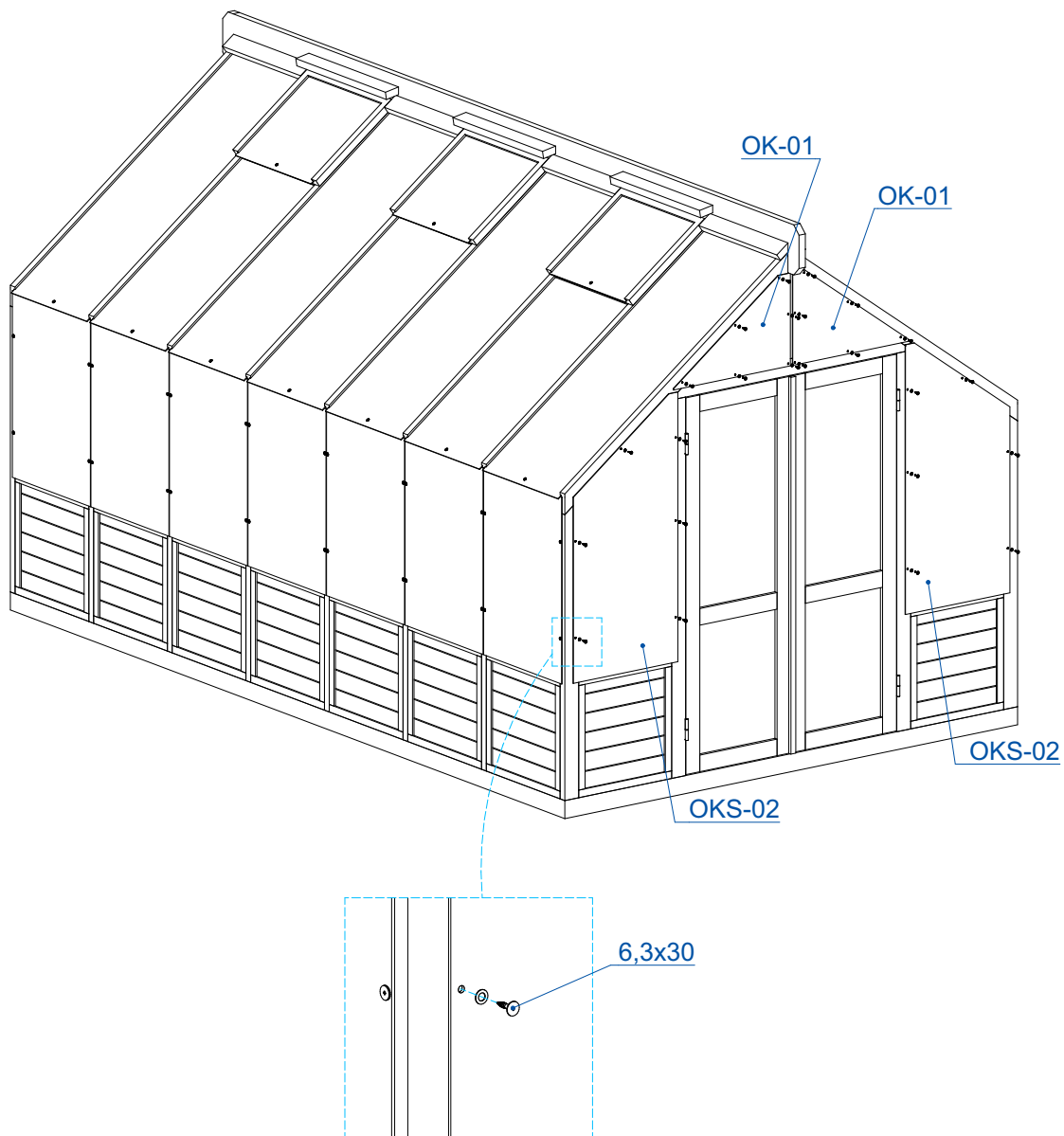




## 22.4. INSTALLATION OF FRONT WALL GLASS

Start installation from largest glass OKS-02 and then complete installation with other glass. Place glass to intended location so that the lower edge of the glass is 22 mm from top of the front wall wooden element. Hold the glass in place and drill holes (size 5) in advance with a depth of 30 mm. Fasten the glass with a glass screws.

**NB! Do not over tighten screws (tighten carefully by hand)!**



Start installation from largest glass OKS-02. Make sure that glass edges extend evenly on the post. Glass screws must align with side glass screws.

## 23. INSTALLATION OF ROOF WINDOW OPENERS

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 openers according to the manufacturer instructions.

**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).**

