



GREENHOUSE INSTALLATION MANUAL

GREENHOUSE ST 2





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 ST 2 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

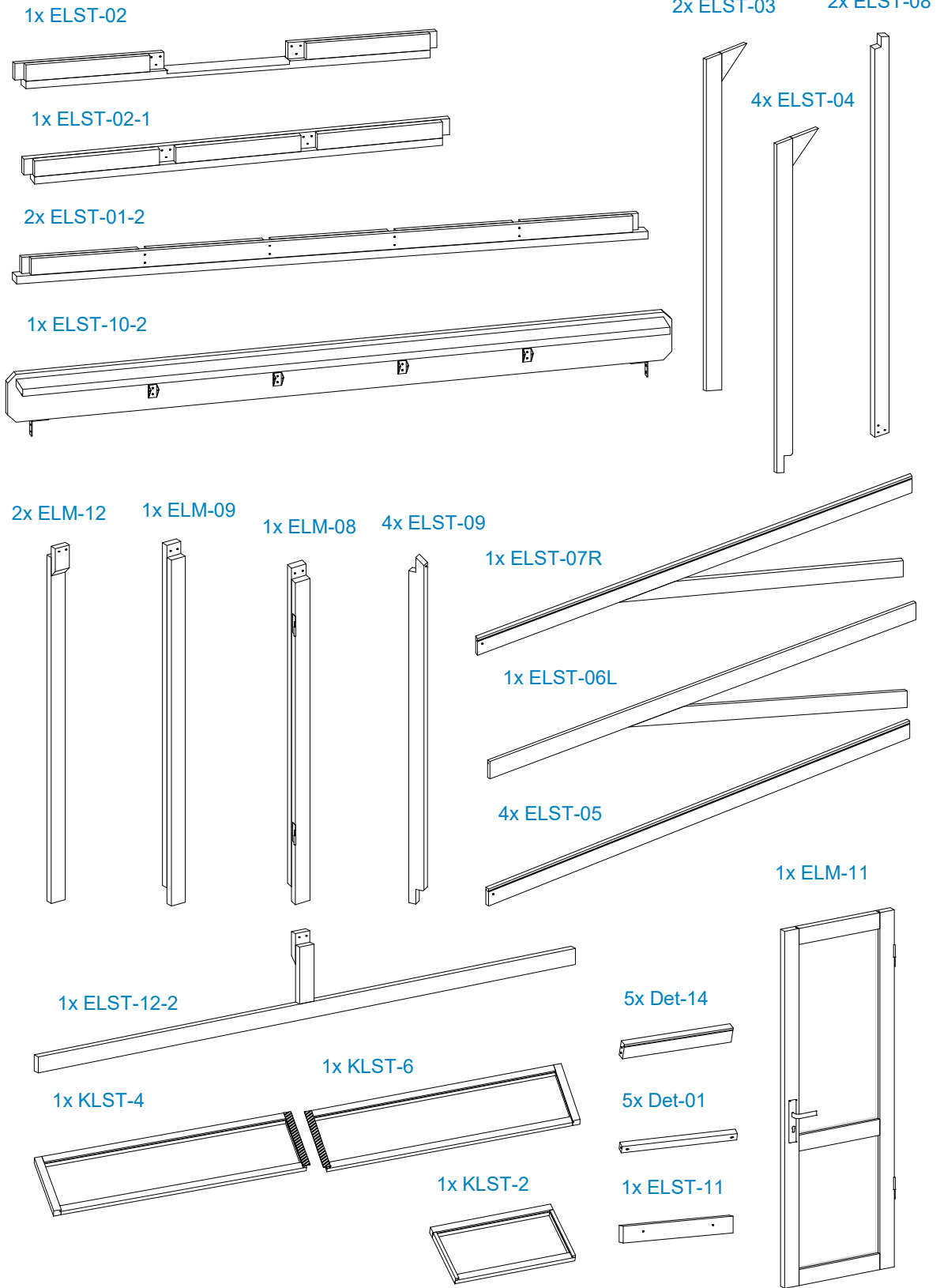
Please check that you have all necessary tools and safety equipment before installation!

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.

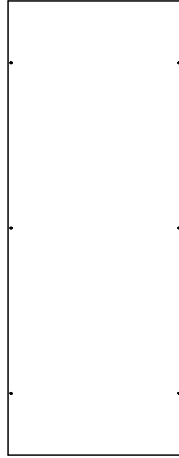
4. DETAILS

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.



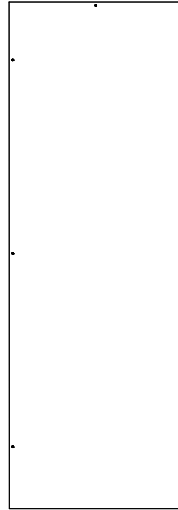
5x KKW-01



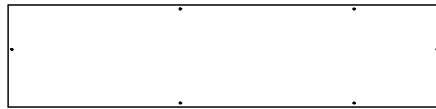
5x KKW-02



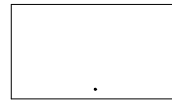
5x KKW-03



2x KKW-04



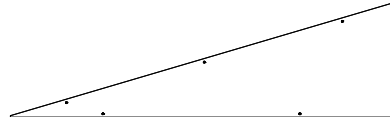
1x KLV-01



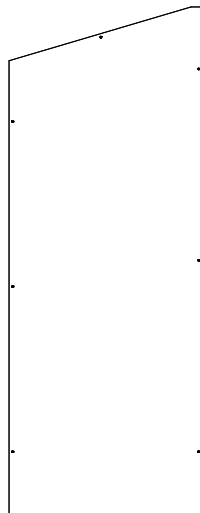
2x KLV-02



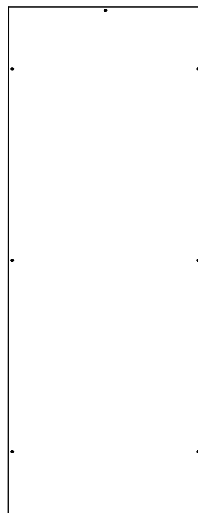
2x OKW-01



2x OKW-02



3x OKW-03



5. FASTENERS

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

Quantity: 23 pcs



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

Quantity: 10 pcs



3. Wood screw round head 5x50 (drill bit TX25)

Quantity: 20 pcs



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

Quantity: 70 pcs



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

Quantity: 6 pcs



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

Quantity: 132 pcs + 132 pcs



7. M6 x 55mm bolt + nut + washer

Quantity: 4 pcs + 4 pcs + 8 pcs



8. Wooden dowel

Quantity: 10 pcs



9. Long drill bit SHW TX25 for 5x40

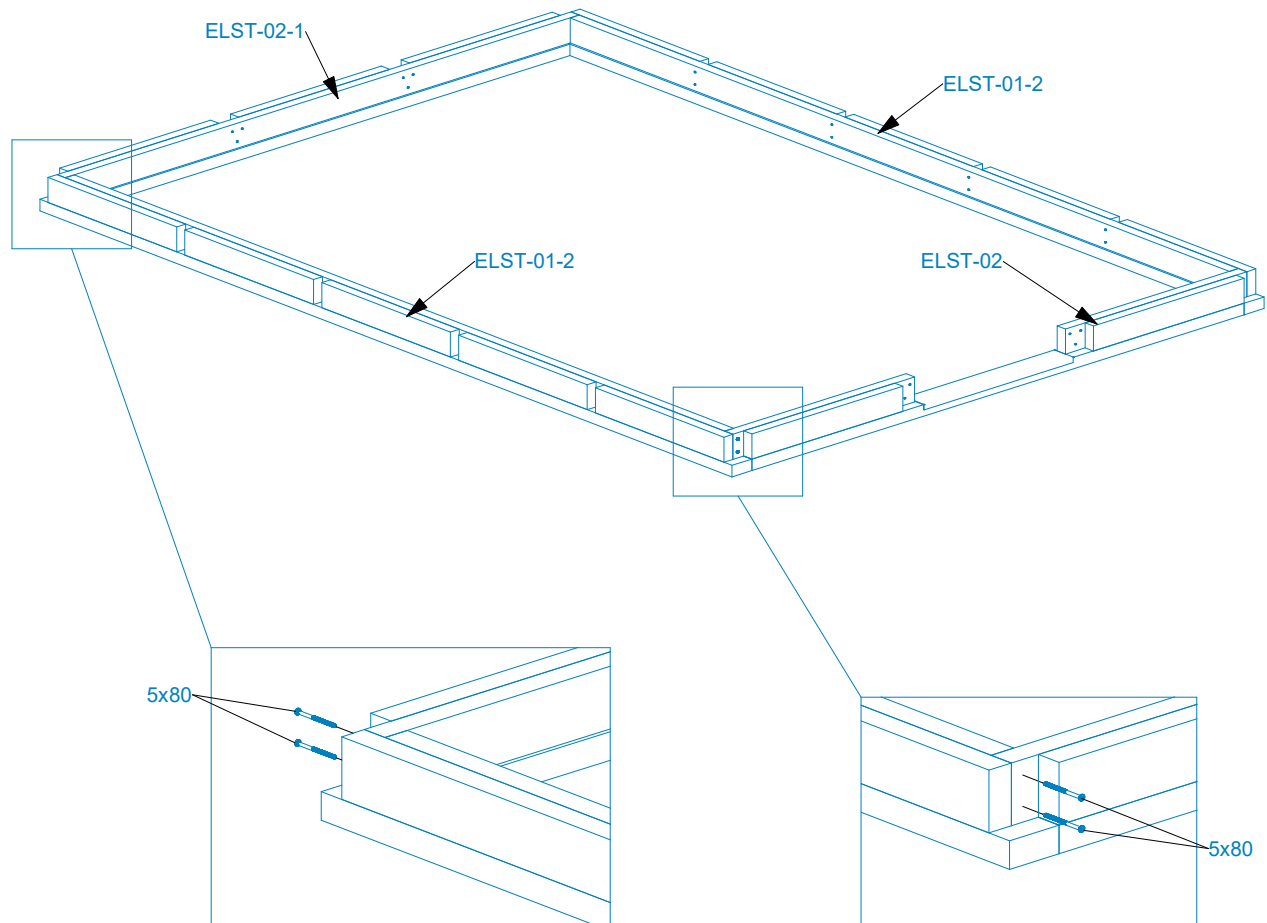
Quantity: 1 pc



NB! There may be extra amount of fasteners included!

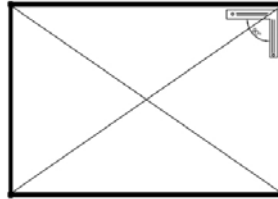
6. INSTALLATION OF BASE FRAME

Place the side wall base frames (ELST-01-2), front wall base frame (ELST-02) and back wall base frame (ELST-02-1) in a suitable position on the foundation. Place hydroisolation layer (not included in installation kit) between foundation and greenhouse base frame. Fasten elements together.

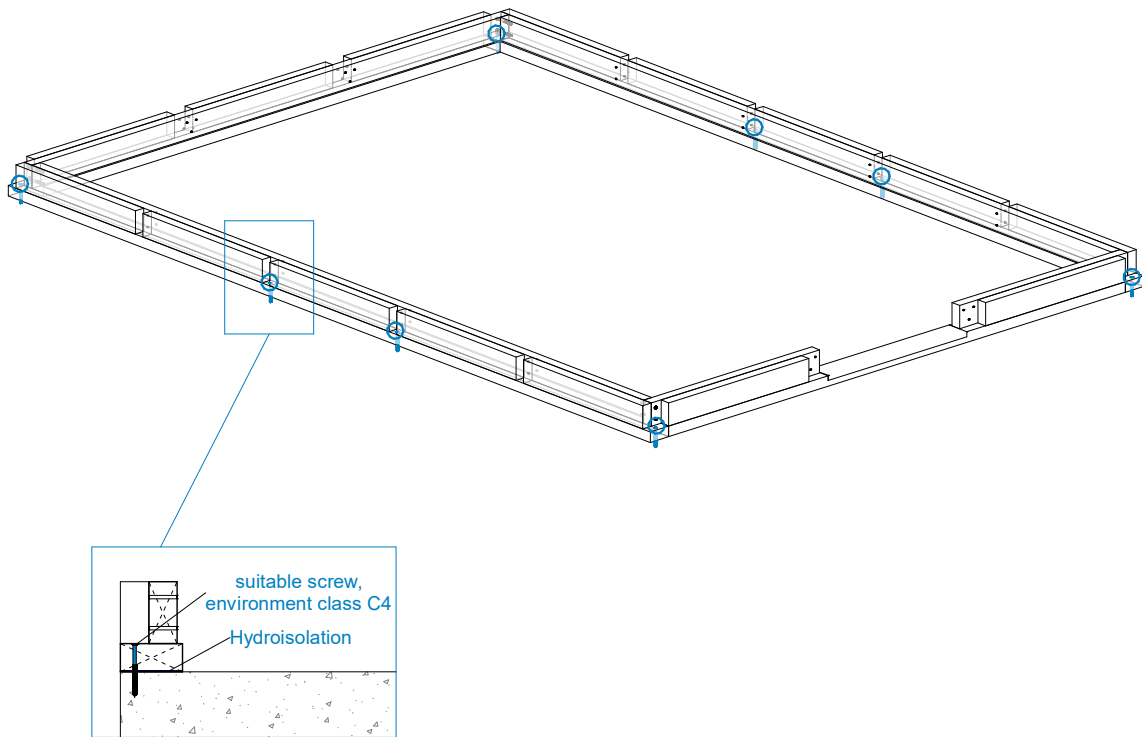


7. ATTACHING GREENHOUSE BASE FRAME TO THE FOUNDATION

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

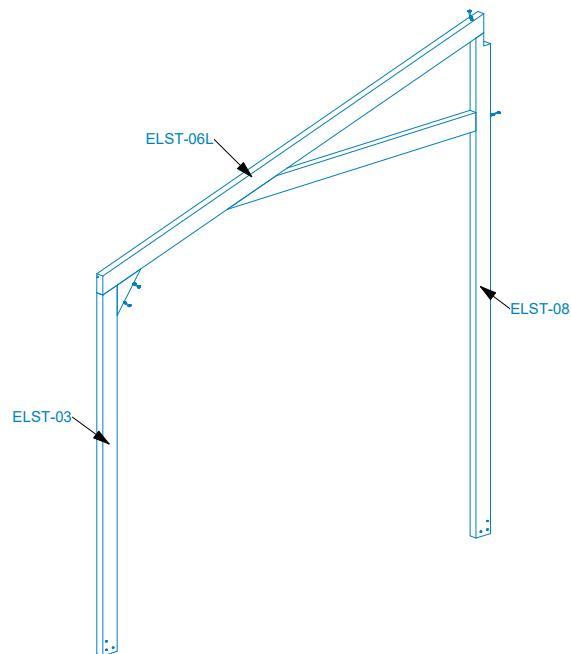
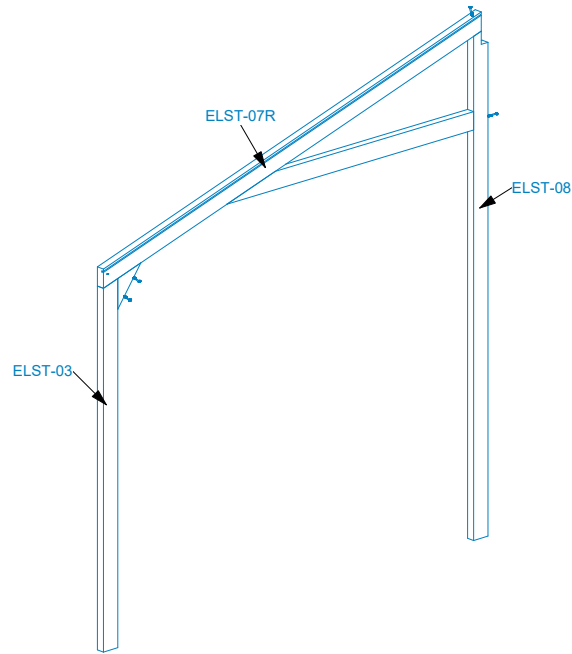


Attach greenhouse to the foundation through the base frame at marked locations. Drill holes in advance and fasten with suitable screws (depending on the foundation type. Not included).



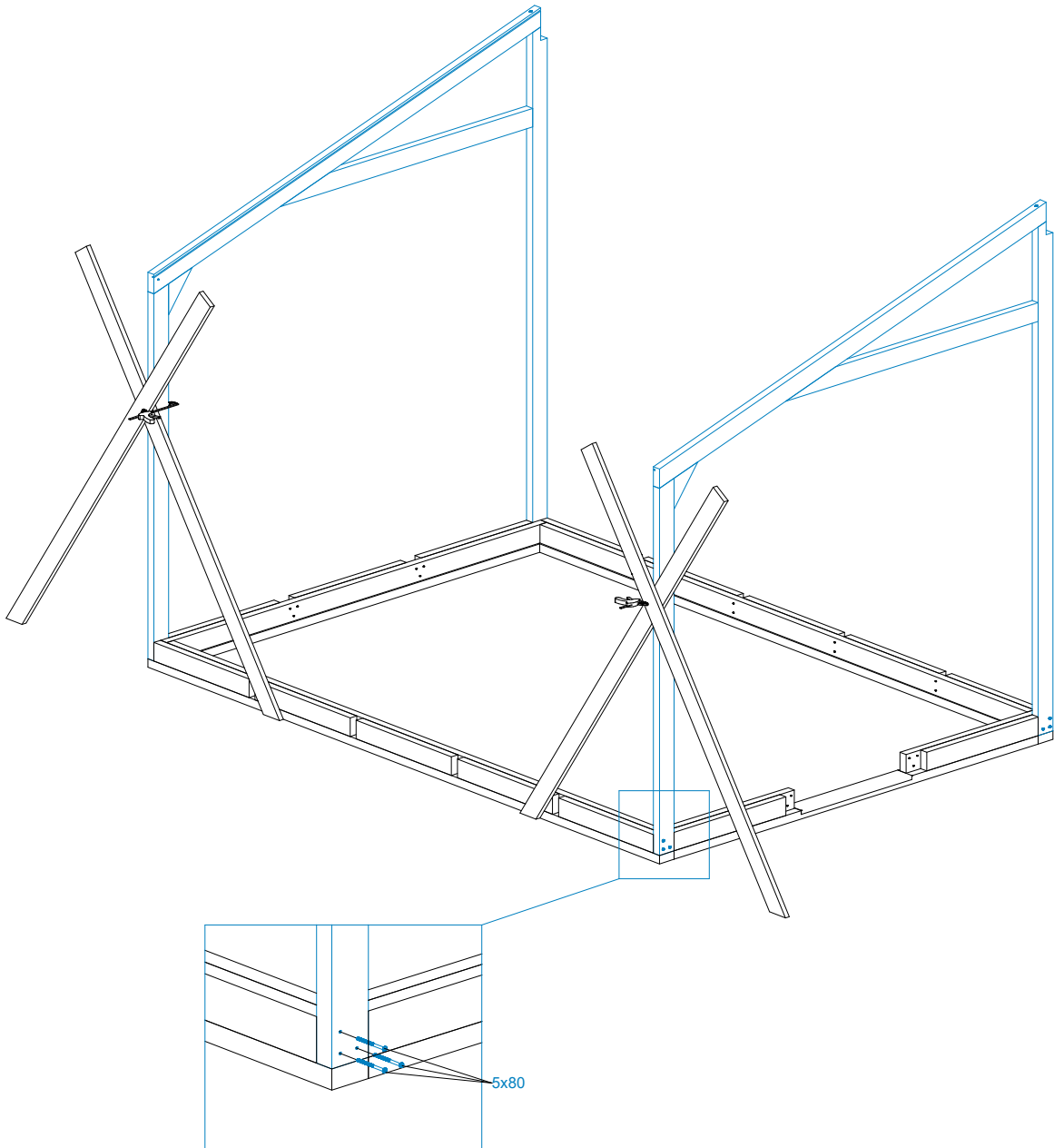
8. INSTALLATION OF FRONT AND BACK WALL

Assemble front and back wall. 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.**



Place back and front wall to the base frame ends and fasten with screws. Use two longer wooden bars as a support and attach them with a clamping screw.

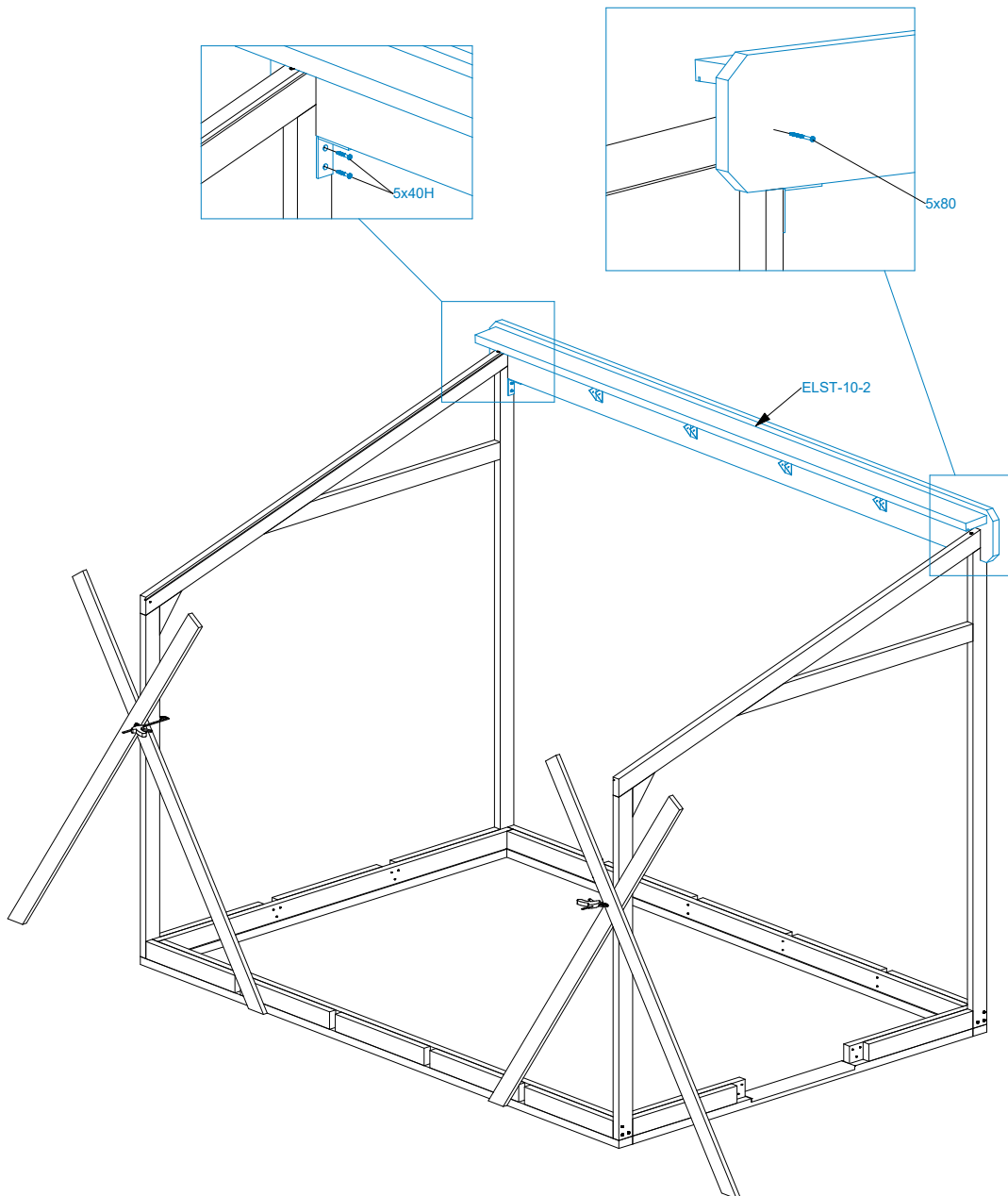
Tip: Use transportation box top bars as supports!



9. INSTALLATION OF RIDGE BEAM

Place ridge beam (ELST-10-2) on top of the front and back wall (metal brackets are already attached to ridge beam). Fasten with screws.

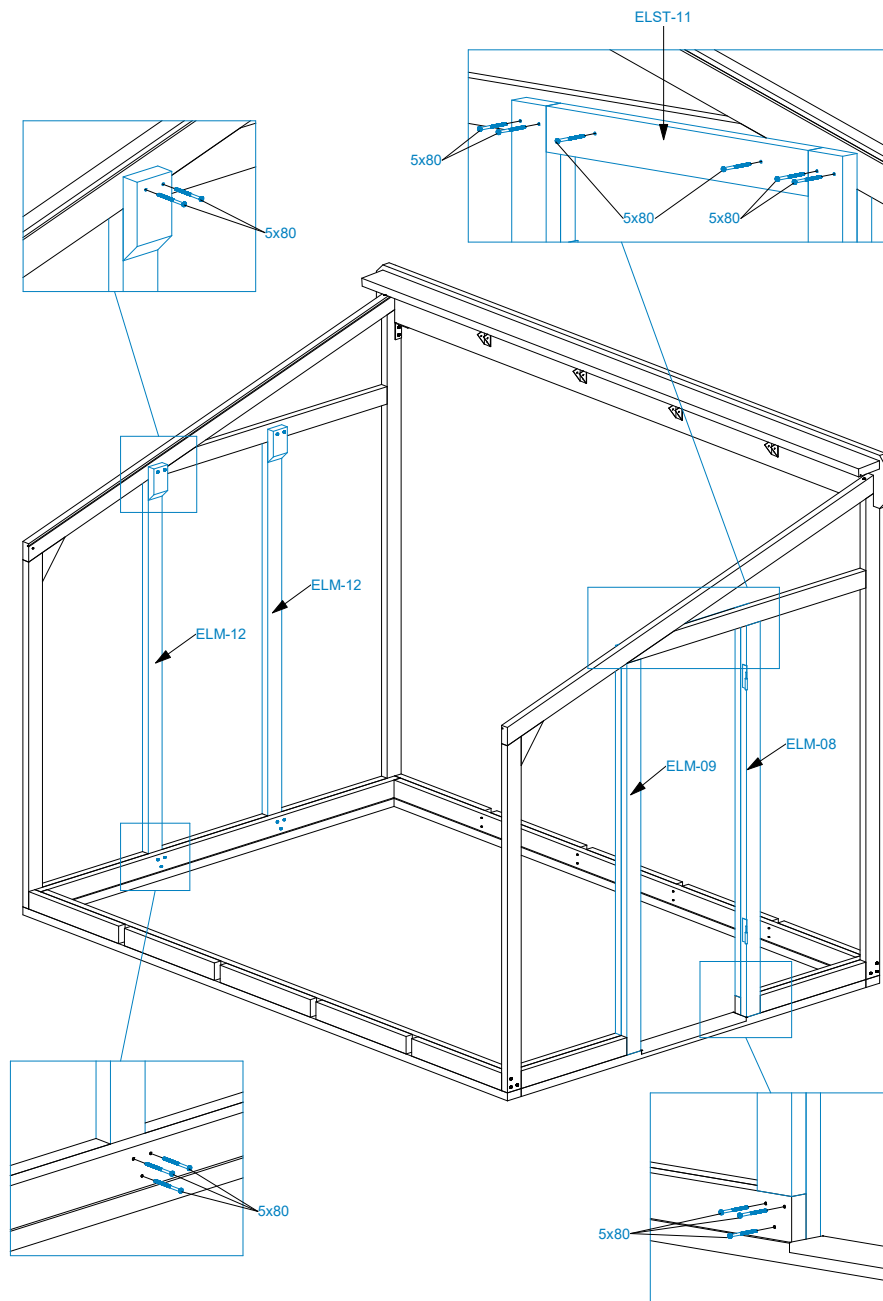
Attach ridge beam to front and rear wall also with additional screws from rear side of the ridge beam to make sure that it is securely fastened and there are no gaps.



10. INSTALLATION OF FRONT AND REAR WALL POSTS

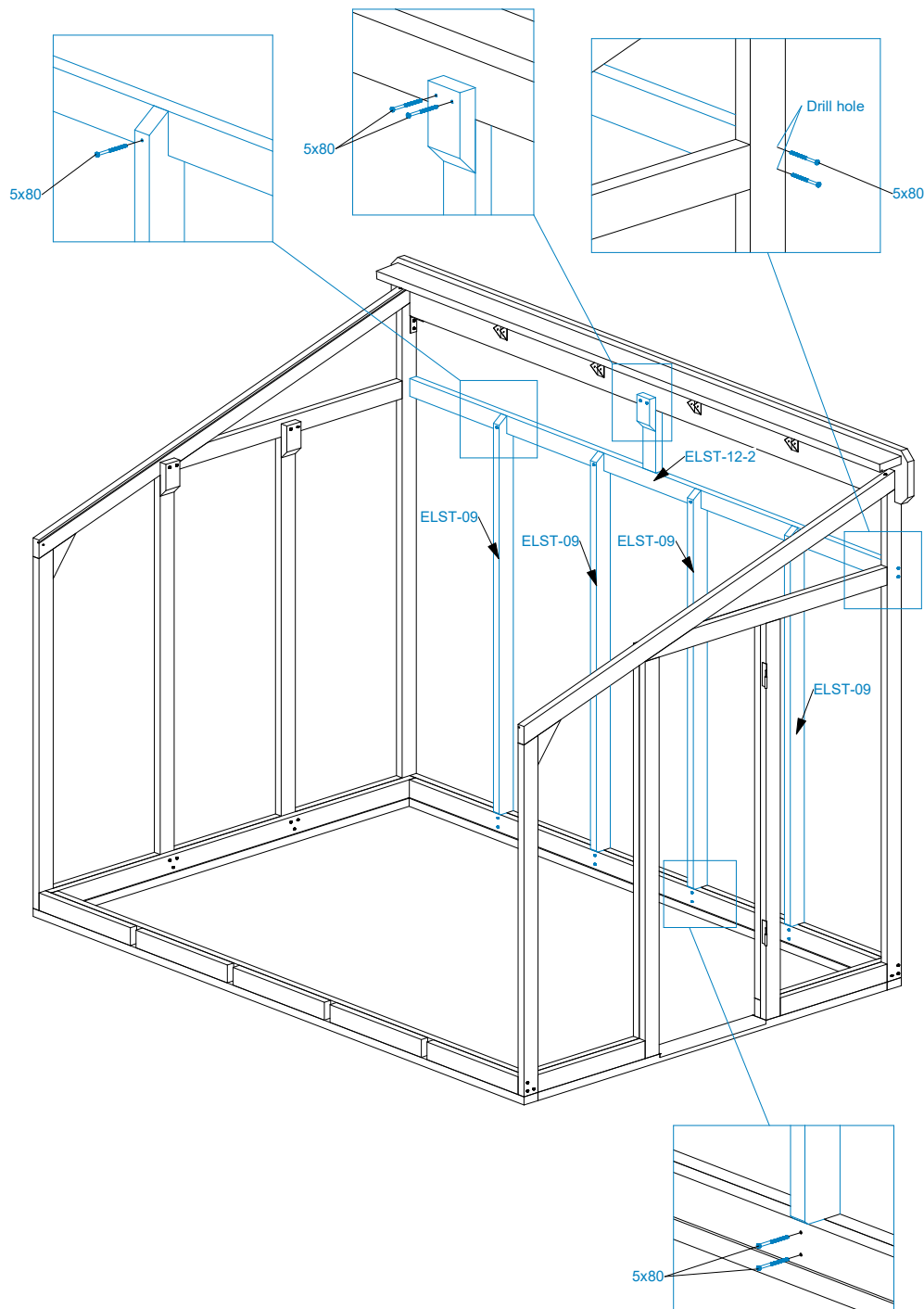
Place back wall posts (ELM-12) to intended locations and fasten with screws. **NB! Make sure distances between posts are equal from top and bottom!**

Place front wall posts (ELM-08 and ELM-09) and upper element (ELST-11) to intended locations and fasten with screws. **NB! Make sure that distances between posts are equal from top and bottom. Width of the door opening must be 702 mm!**



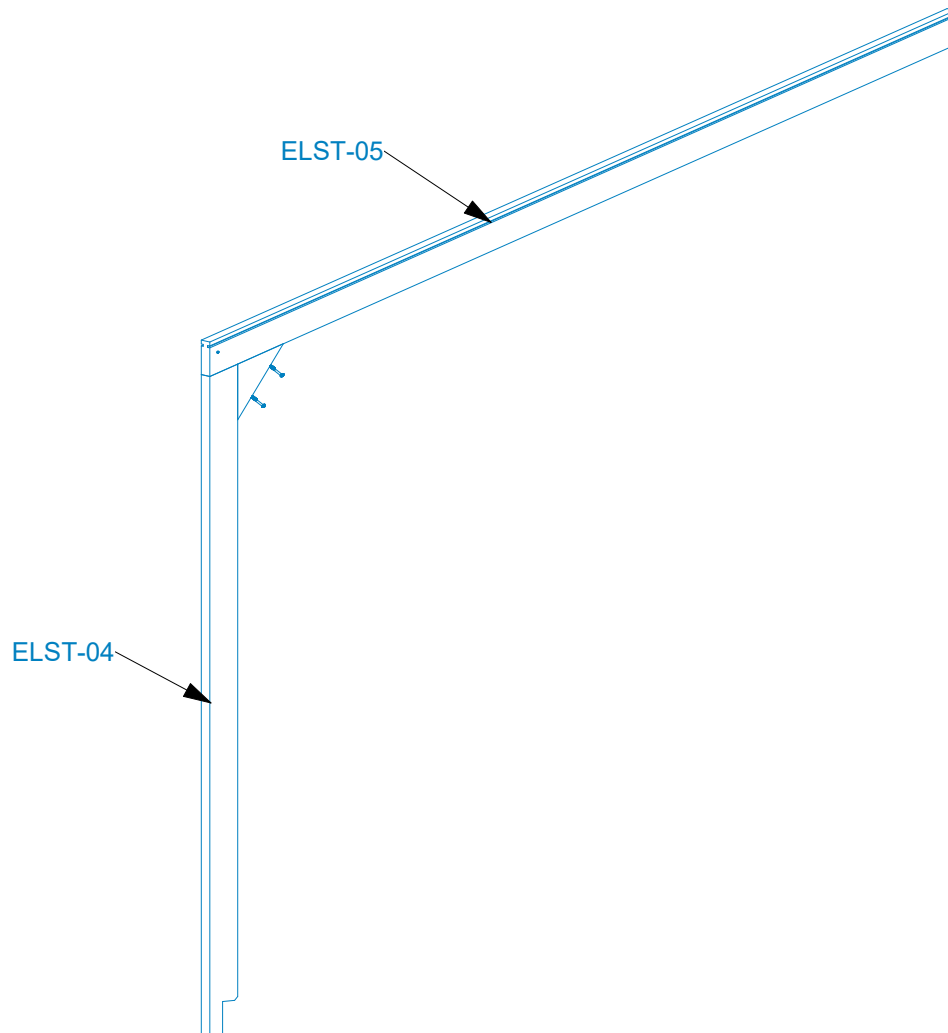
11. INSTALLATION OF REAR SIDE WALL

Place rear side posts (ELST-09) and upper element (ELST-12-2) to intended locations and fasten with screws. Drill holes in advance when fastening upper element (ELST-12-2) to end walls. **NB! Make sure that distances between posts are equal from top and bottom.**

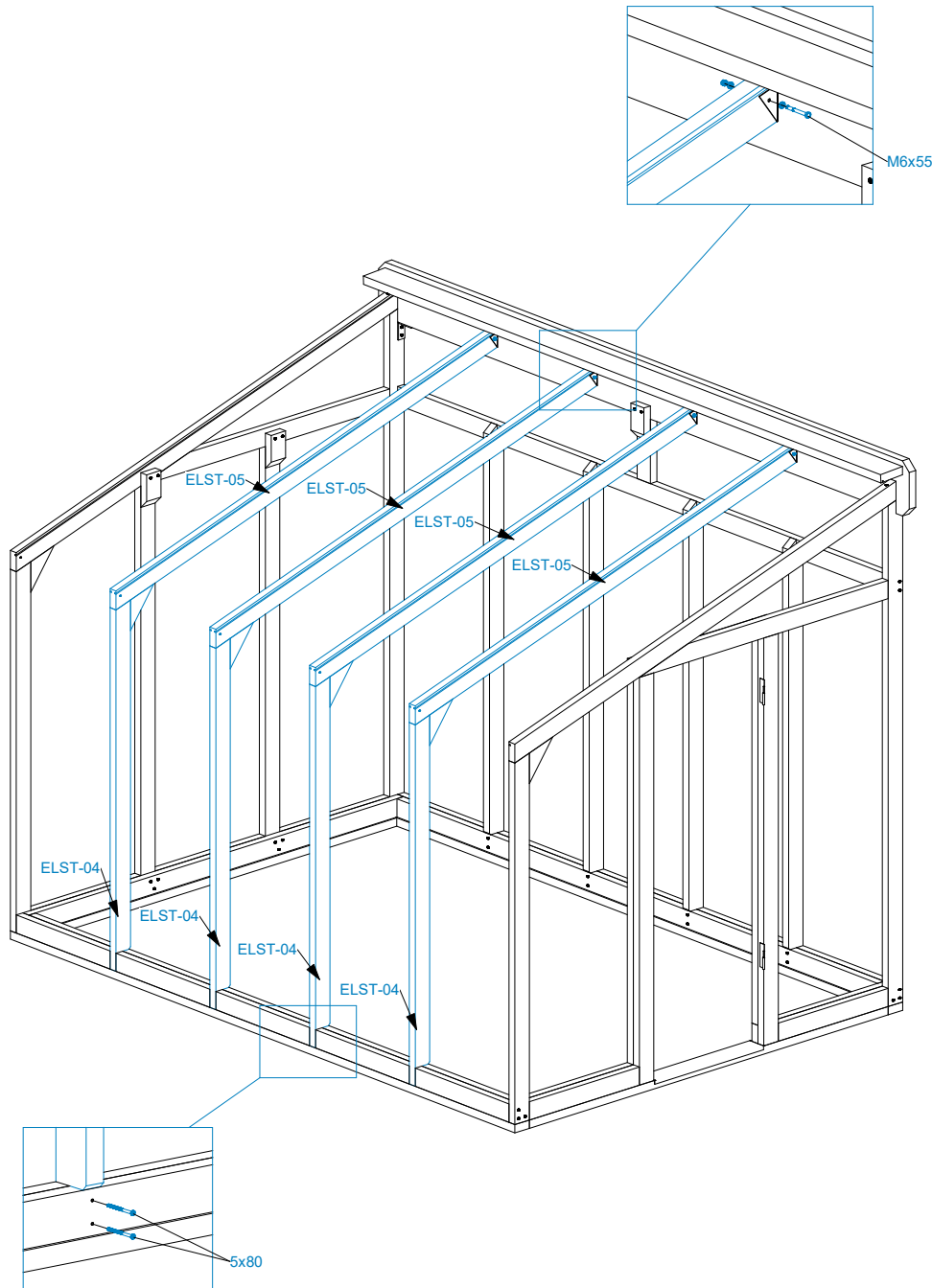


12. INSTALLATION OF RAFTERS

Assemble rafter elements (ELST-04 and ELST-05). 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.**



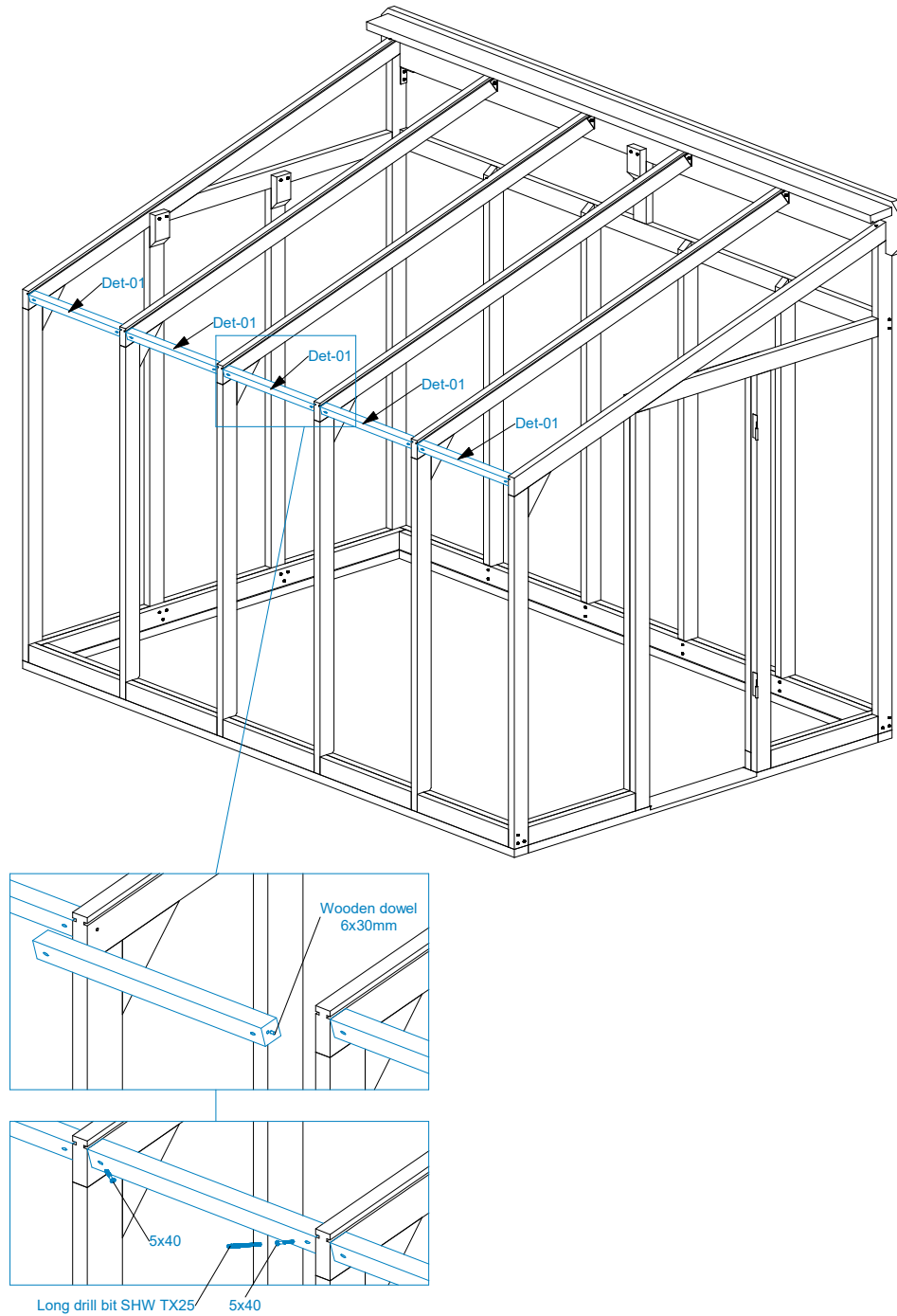
Place lower end of the rafter to the intended location in base frame and upper end of the rafter to the ridge beam metal carrier. Fasten lower end with screws and upper end with an M6 bolt, washer and nut. **NB! Make sure that the edge of the carrier does not cover rafter glass groove!**



**NB! Tighten the nut only later after installing the rafter middle details!
(Look section 13)**

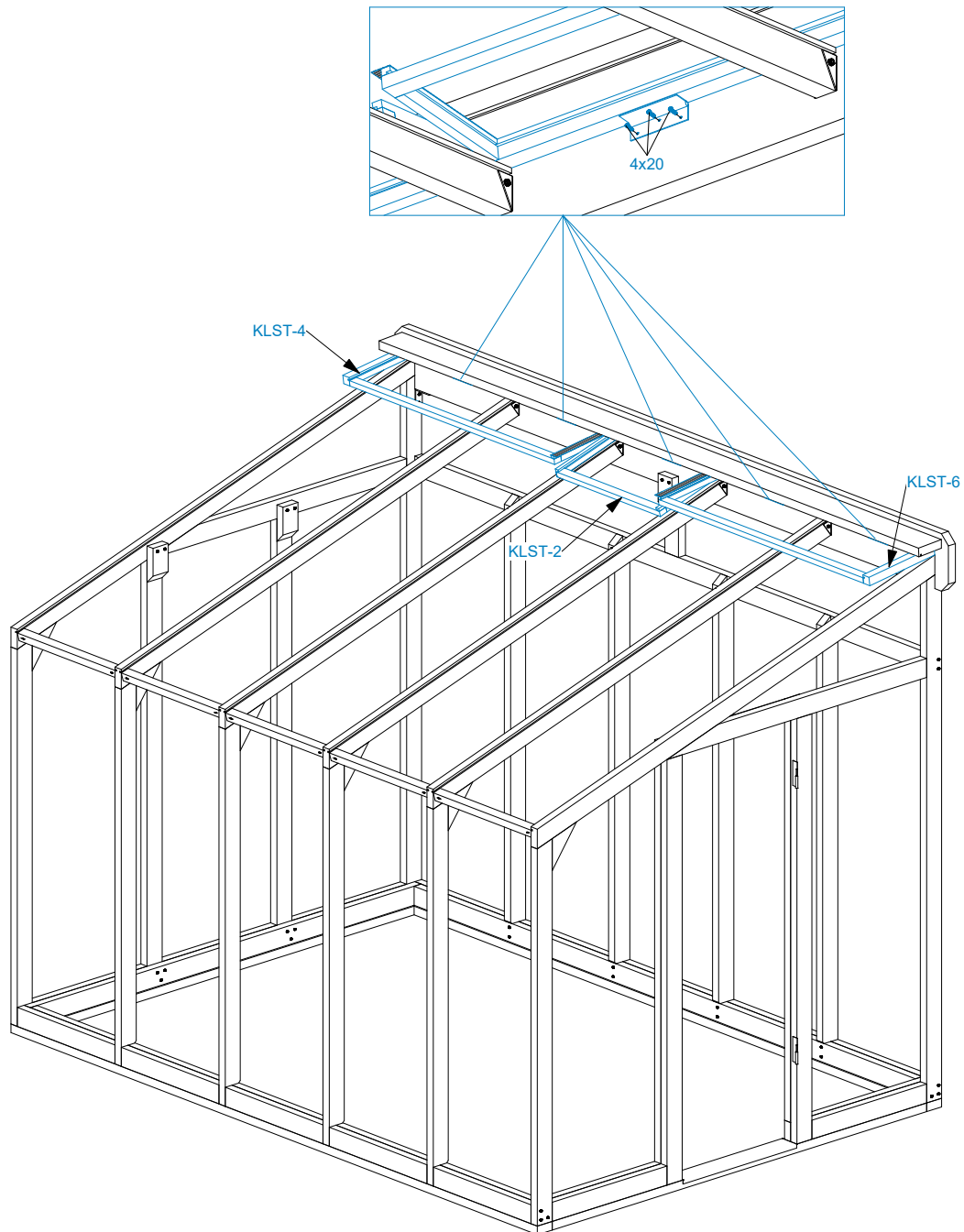
13. INSTALLATION OF RAFTER MIDDLE DETAILS

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.



14. INSTALLATION OF ROOF WINDOWS

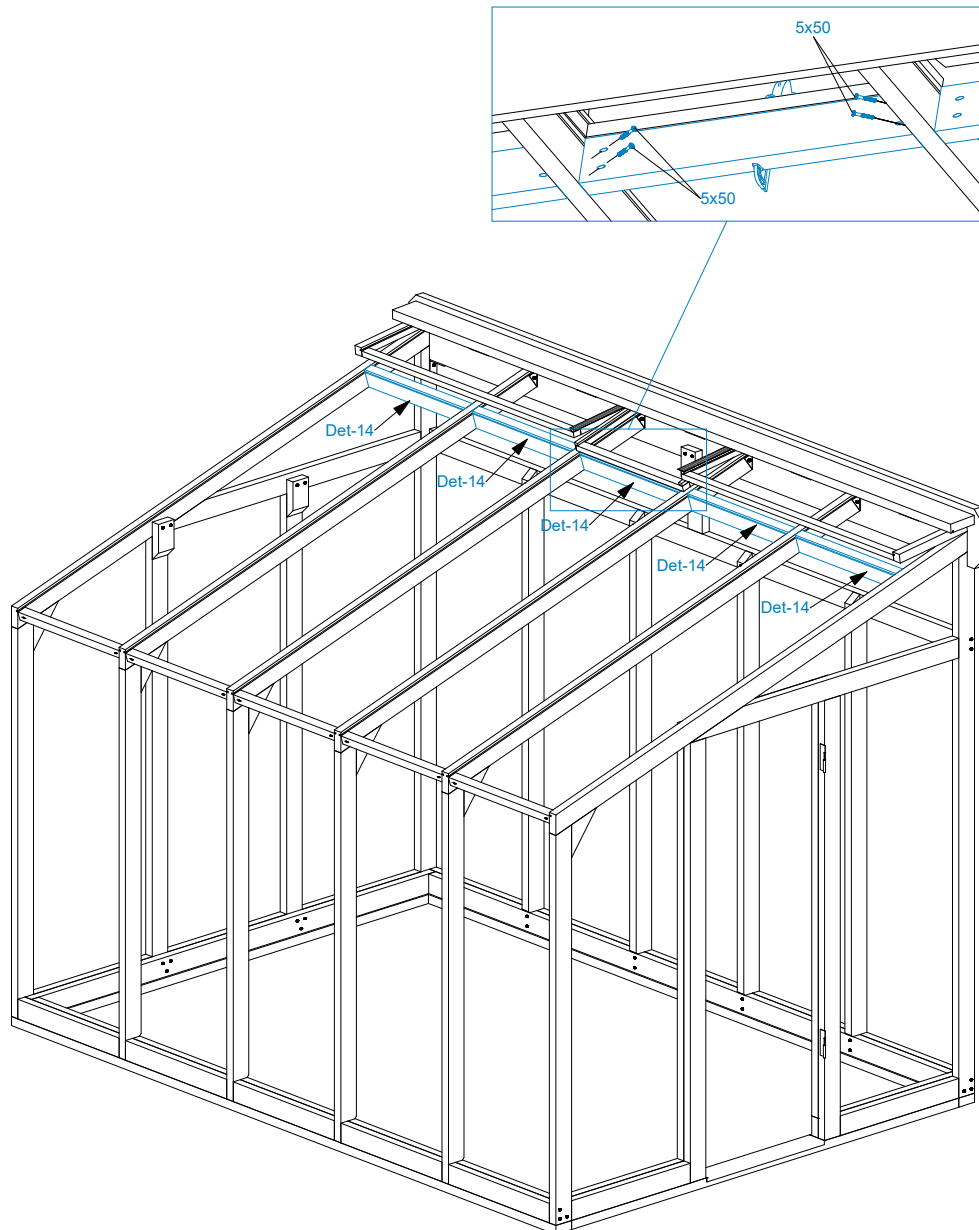
Place the roof windows (KLST-4, KLST-2 and KLST-6) to intended locations on rafters and push against ridge beam. Make sure roof windows are equally spaced on all rafters. Hinges are attached to the roof windows frames. Fasten to ridge beam with screws.



15. INSTALLATION OF ROOF WINDOW MIDDLE DETAIL

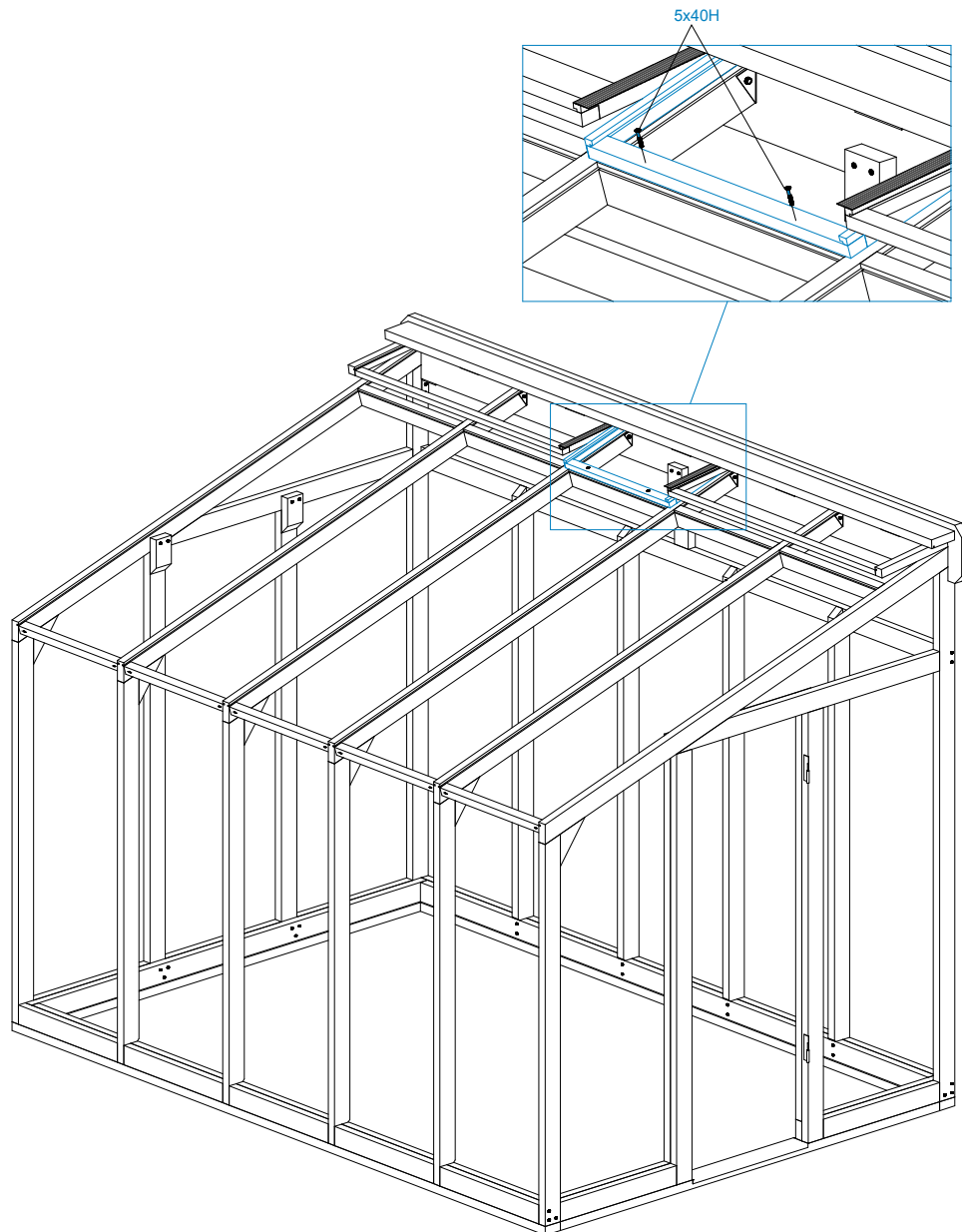
Place grooved middle details (DET-14) under roof windows. Make sure that middle detail groove lines with rafters grooves. Fasten with screws.

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



16. PERMANENTLY CLOSING MIDDLE ROOF WINDOW

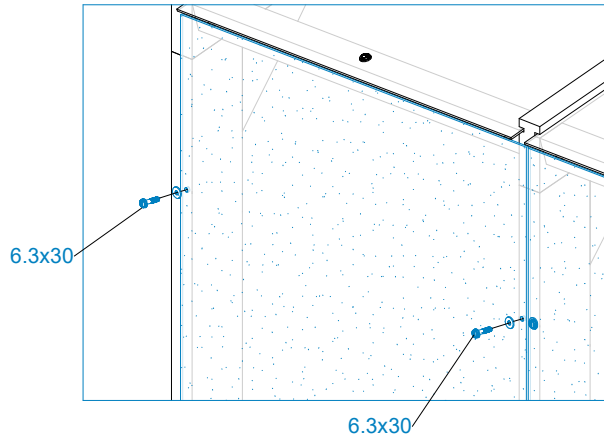
The middle roof window (KLST-2) is not intended to open and must be permanently closed. Therefore, it should be attached with screws to roof window middle detail. Drill holes in advance and fasten with screws.



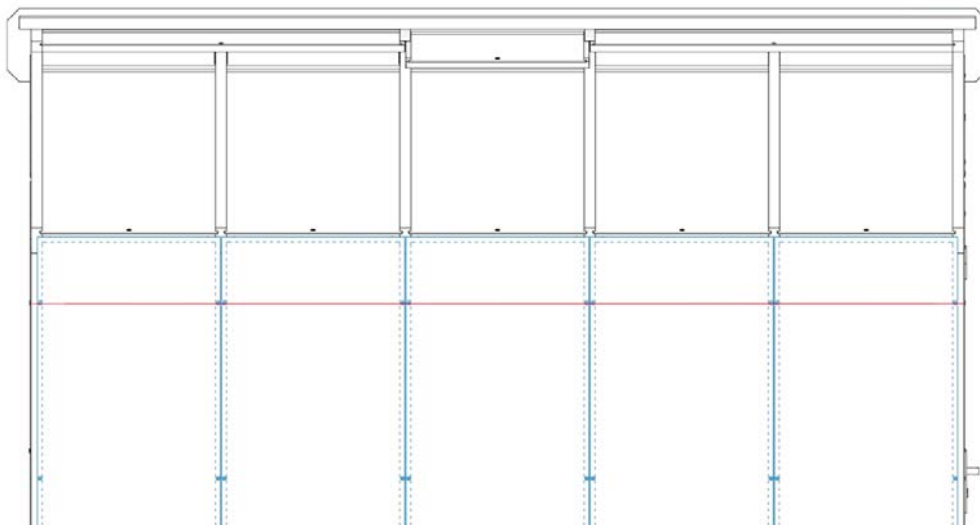
17. INSTALLATION OF GLASS

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!**



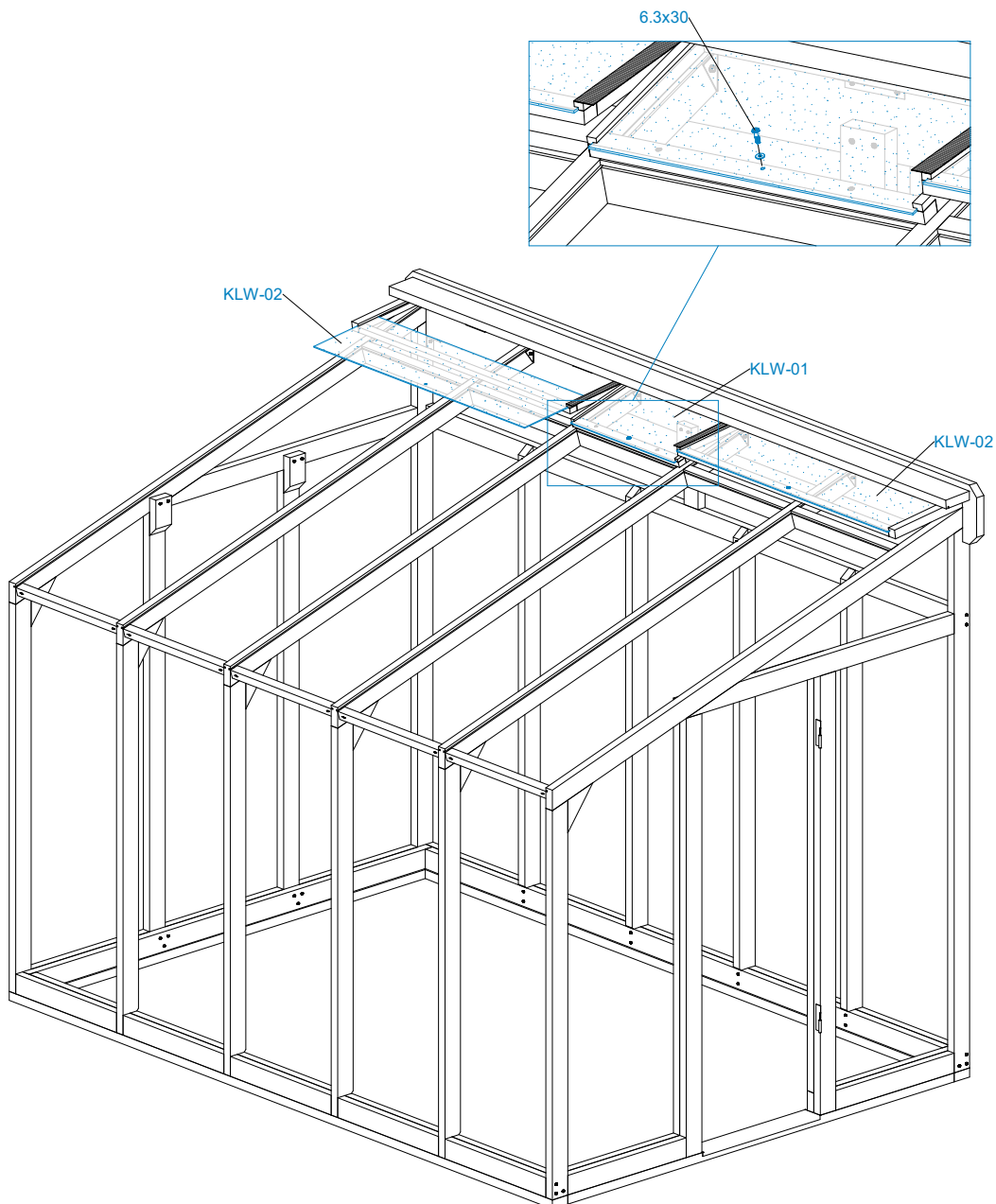
Placing glass to correct position on frame will be done on site by installer. For a best result it is important to check that glass is correctly positioned, gaps are equal and screws line up. We recommend using laser leveling tool or similar device for aligning screwheads.



17.1. INSTALLATION OF ROOF WINDOW 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 in advance to the roof window lower frame with a depth of ca 30 mm. Wood drill size 5 mm. Fasten glass with a glass screw.

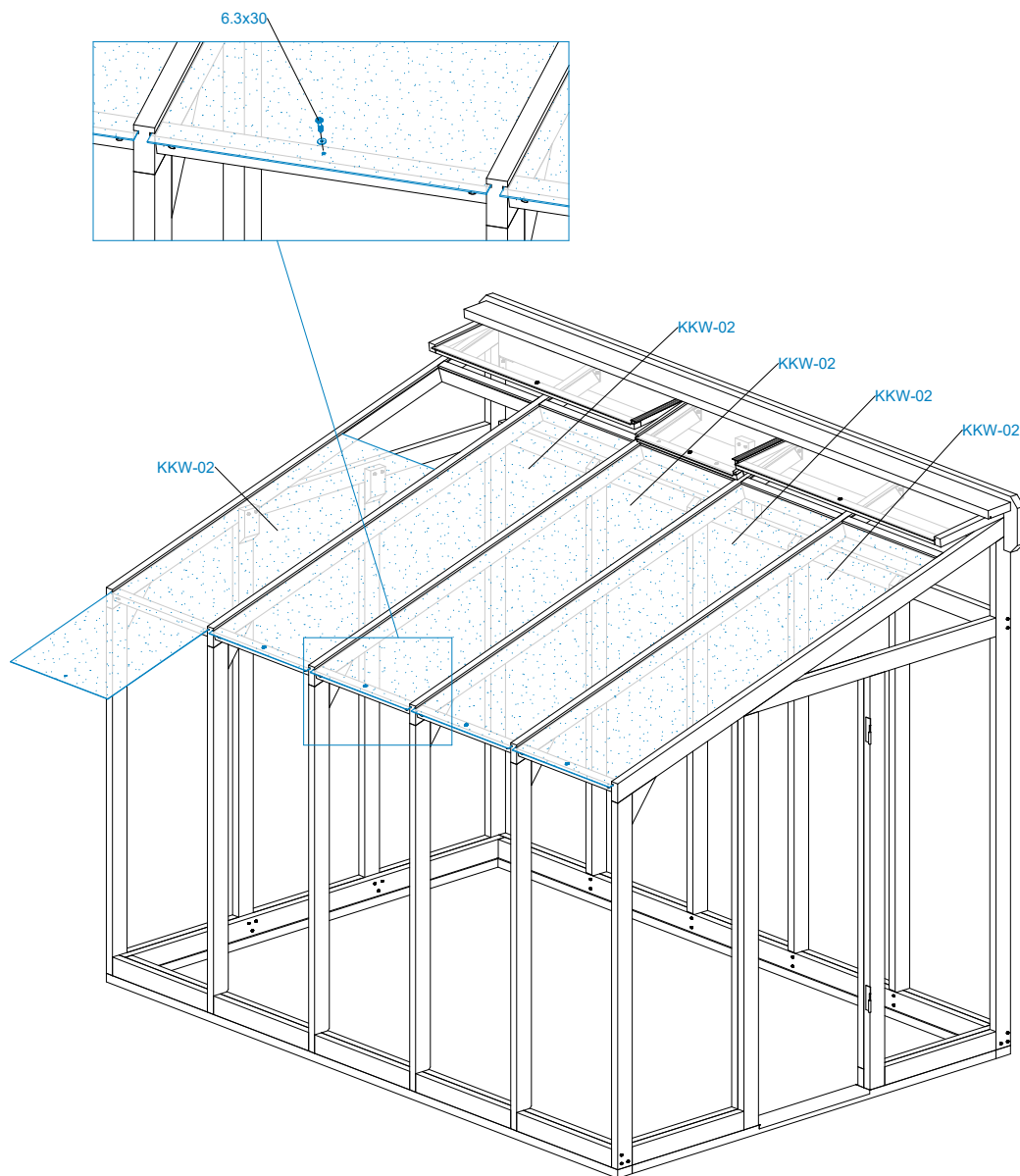
NB! Align the glasses along the bottom edge. Do not over tighten screws (tighten carefully by hand)!



17.2. 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 in advance to the roof window middle detail (DET-01) with a depth of ca 30 mm. Wood drill size 5 mm. Fasten glass with a glass screw.

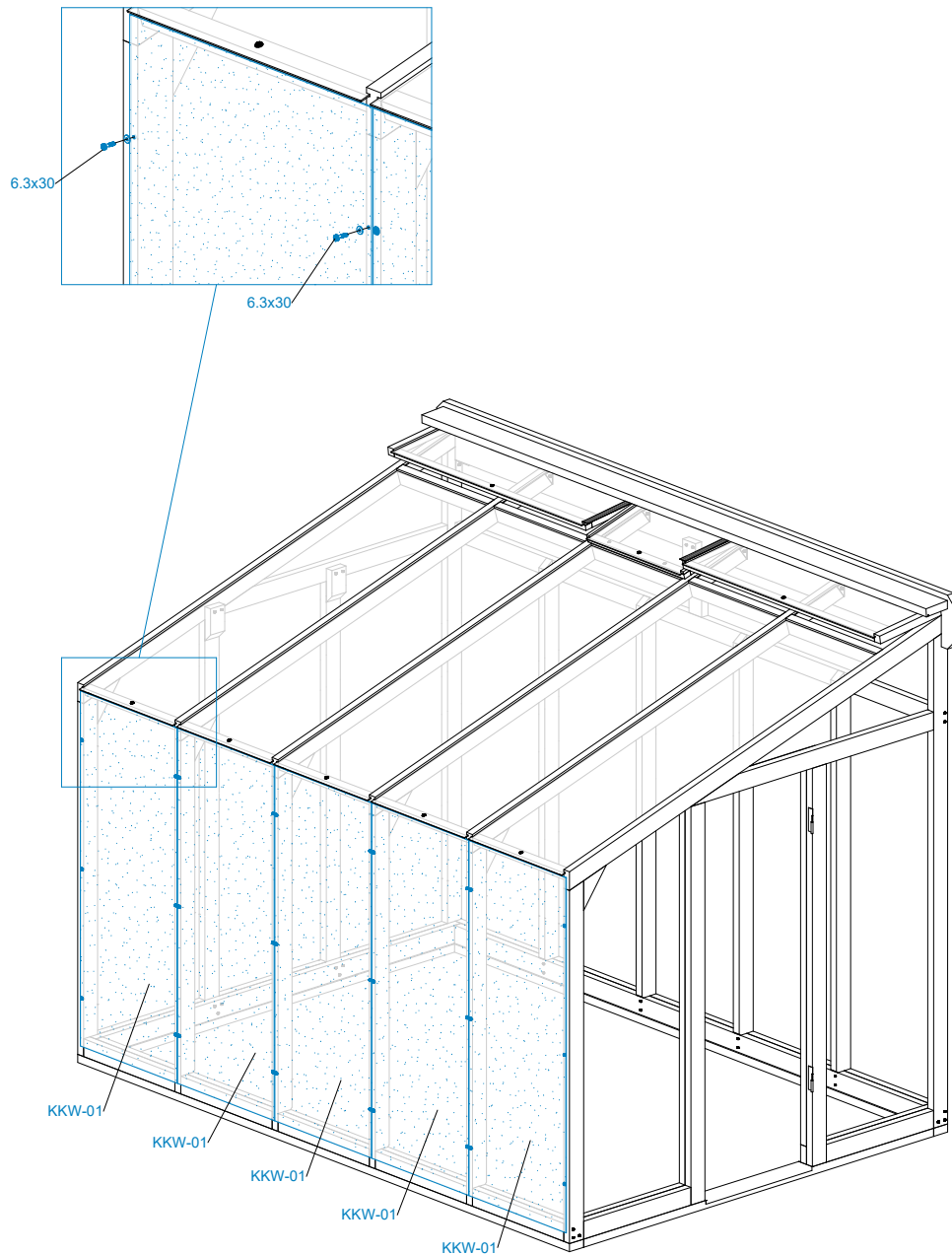
NB! Align the glasses along the bottom edge. Do not over tighten screws (tighten carefully by hand)!



17.3. INSTALLATION OF FRONT SIDE WALL GLASS

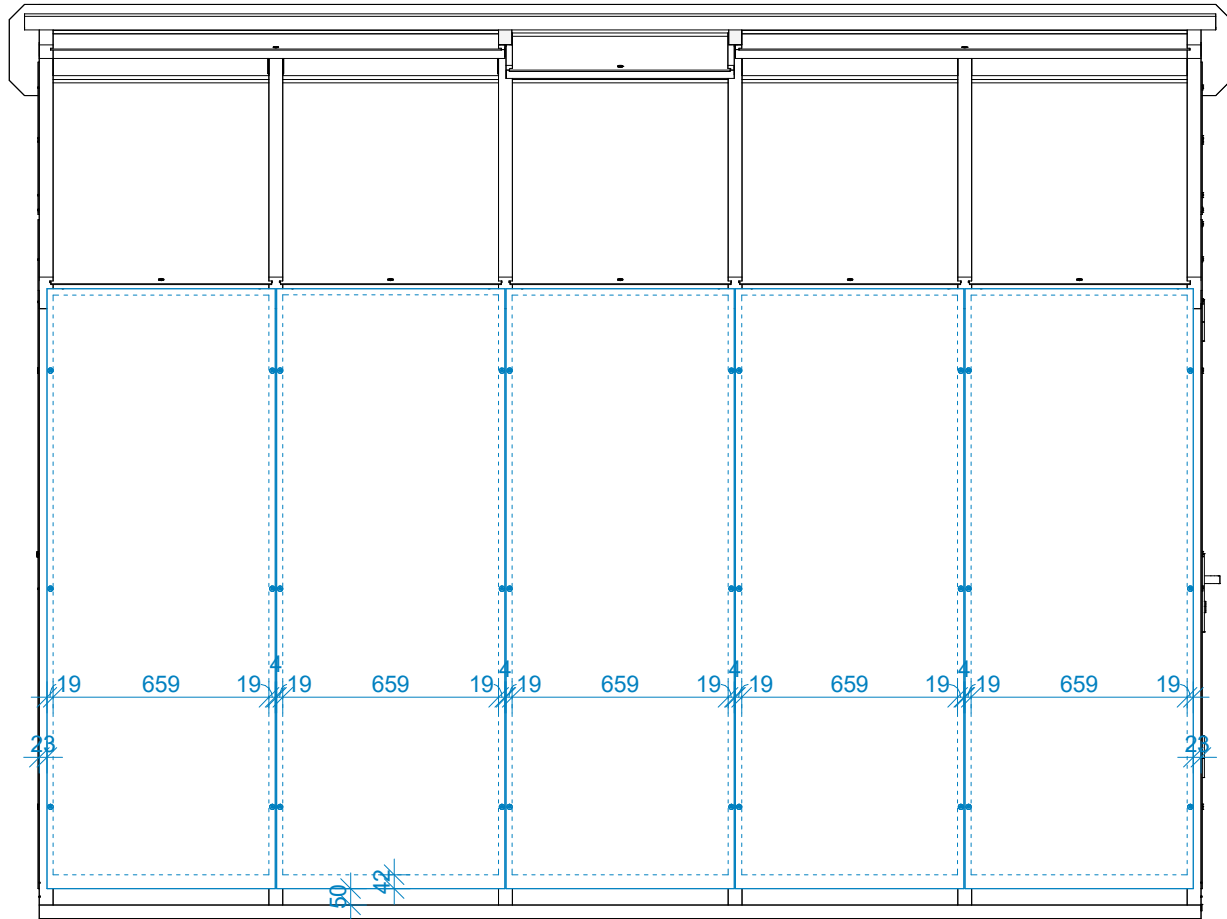
Place the upper end of the glass under the edge of the roof glass so that the lower edge of the side glass is 50 mm from base frame elements gap. Hold the glass in place and drill holes in advance with a depth of 30 mm. Fasten the glass with a glass screws.

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



Start installation of front 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.

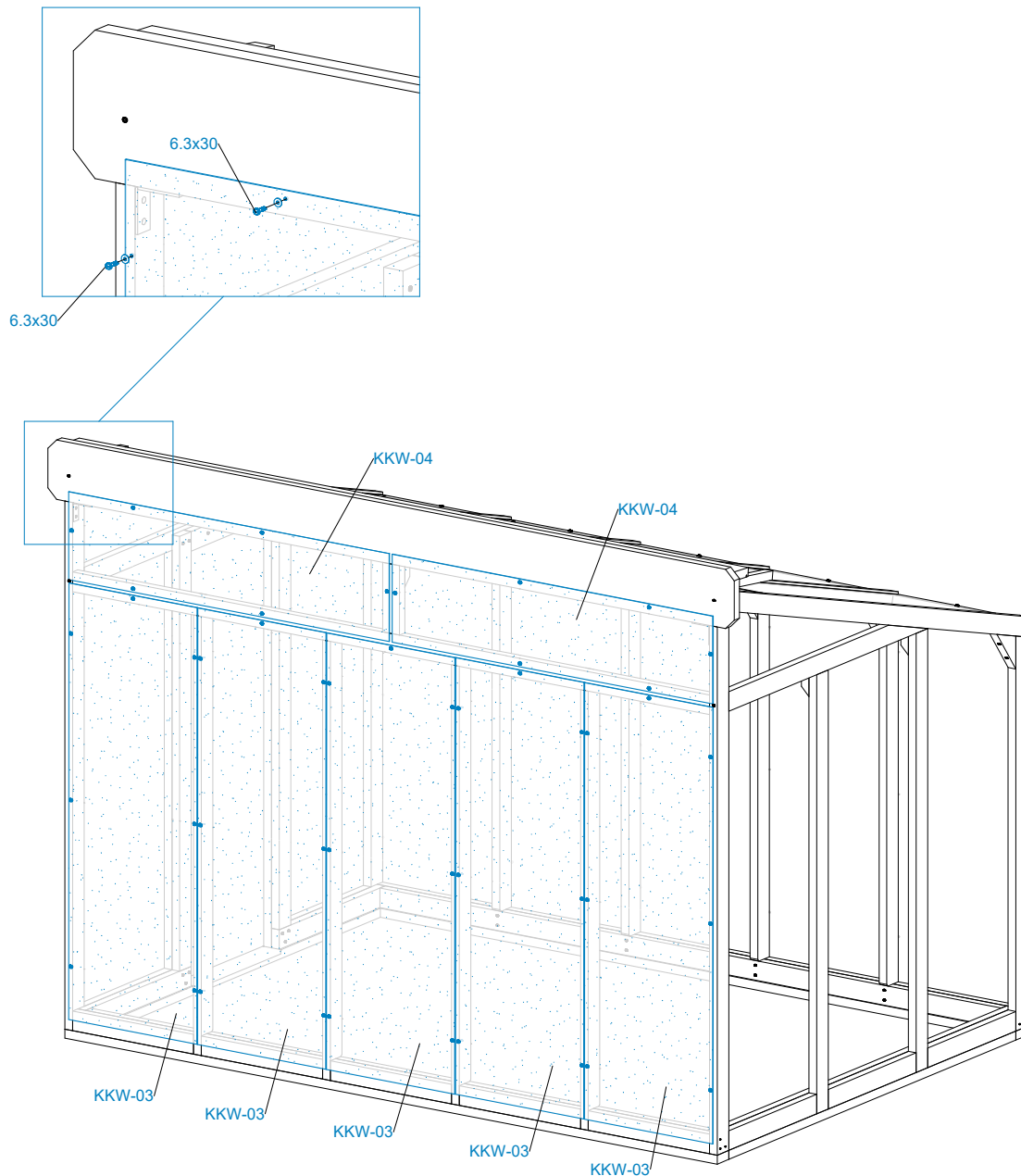
NB! Align the glasses along the bottom edge.



17.4. INSTALLATION OF REAR SIDE GLASS

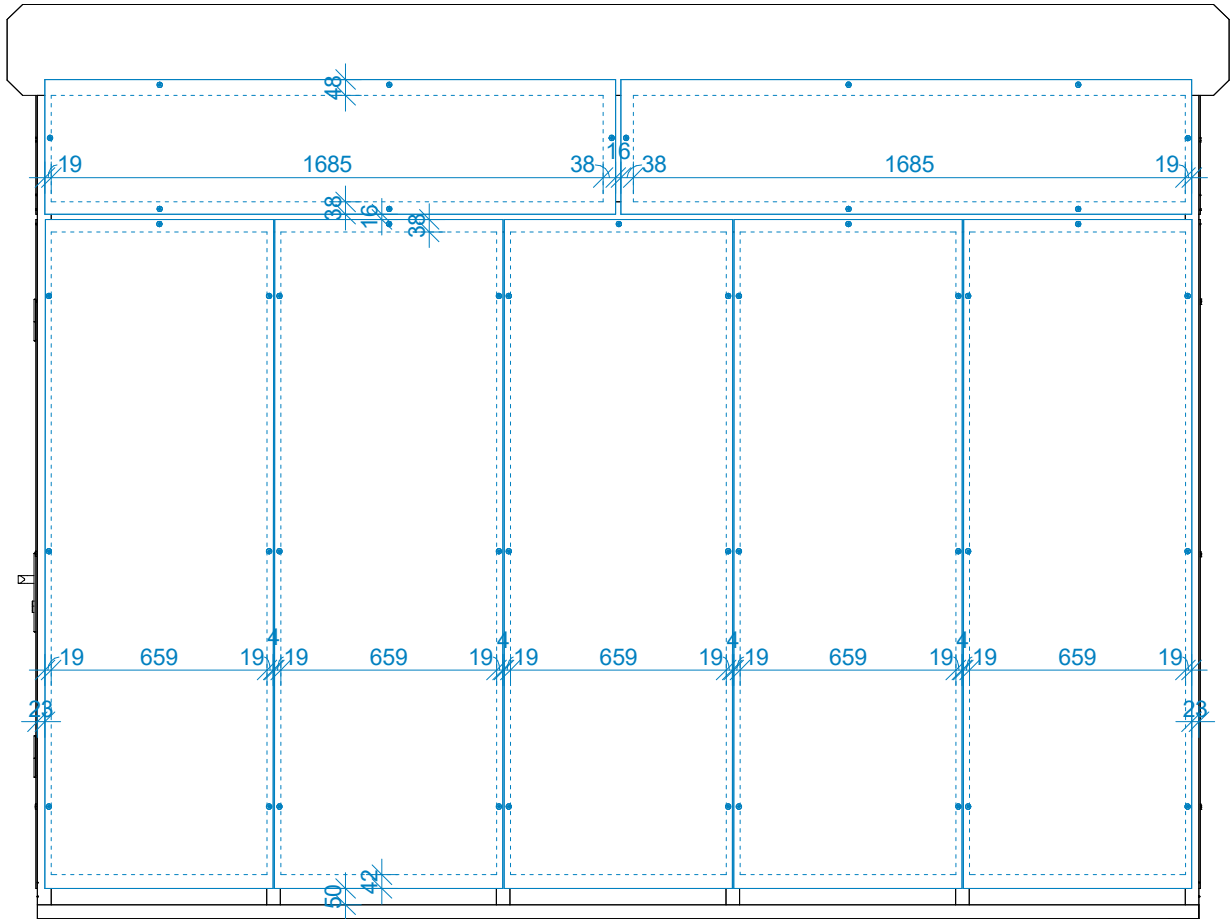
Start installation from lower glasses KKW-03 and then complete installation with upper glasses KKW-04. Place lower glass to intended location so that the lower edge of the side glass is 50 mm from base frame elements gap. Hold the glass in place and drill holes in advance with a depth of 30 mm. Fasten the glass with a glass screws.

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



Start installation of lower glasses 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.

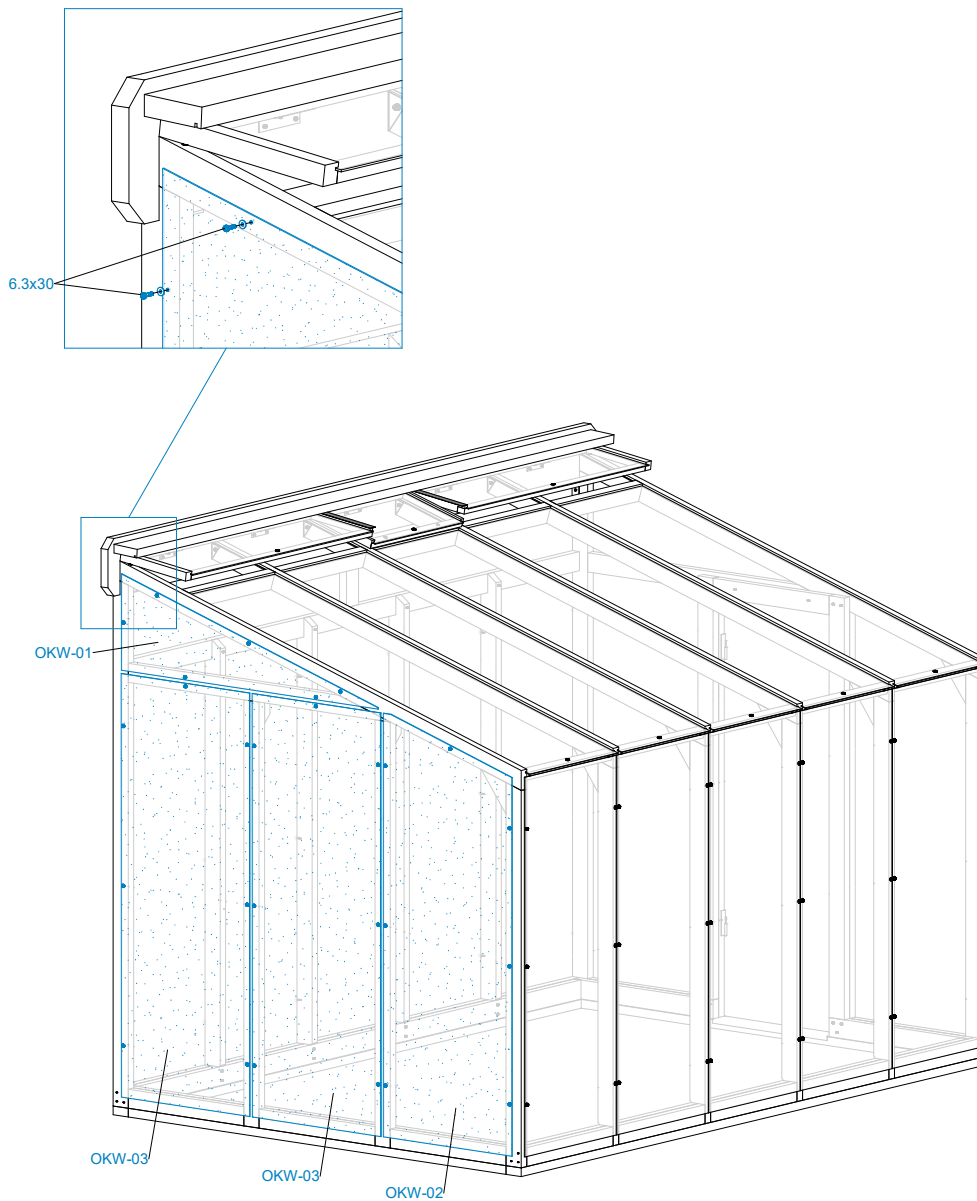
NB! Align the glasses along the bottom edge.



17.5. INSTALLATION OF BACK WALL GLASS

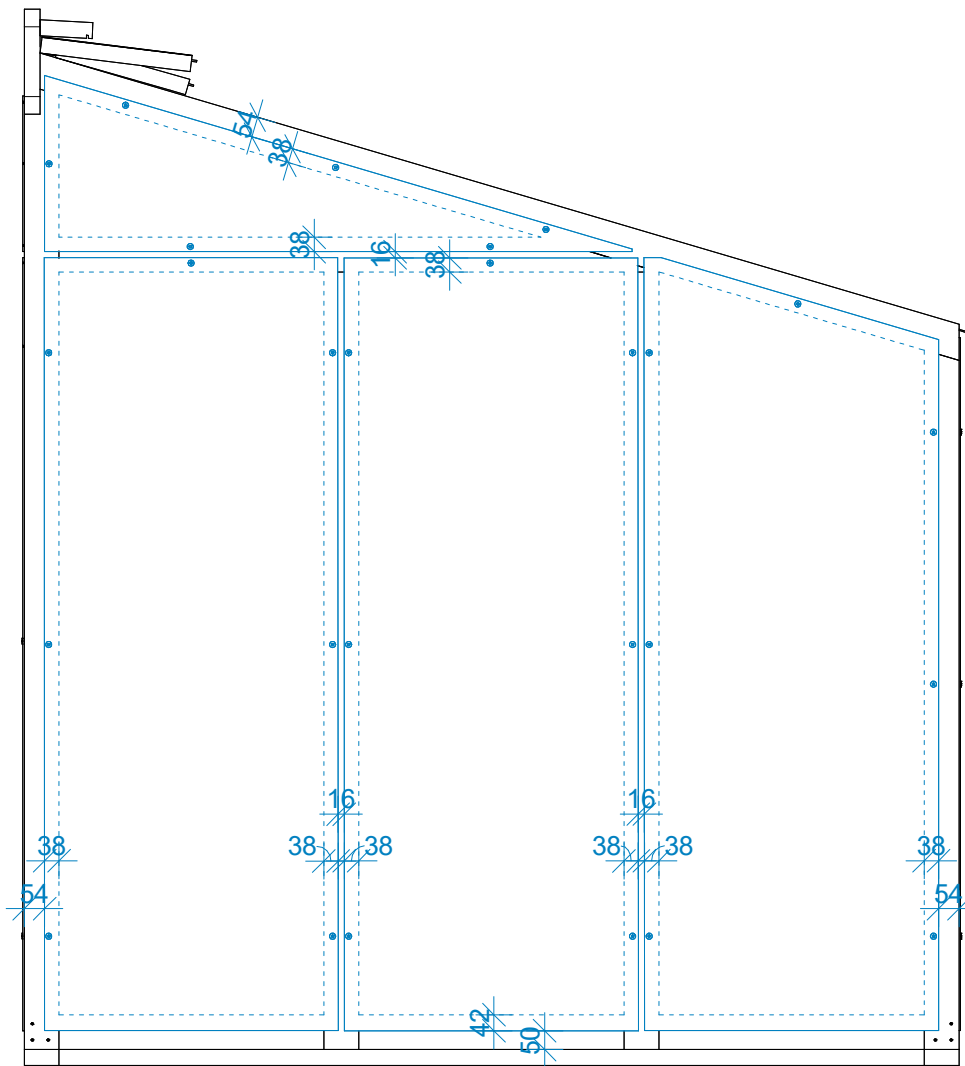
Start installation from largest glass OKW-03 and then complete installation with other glass. Place glass to intended location so that the lower edge of the side glass is 50 mm from base frame elements gap. Hold the glass in place and drill holes (size 5) in advance with a depth of 30 mm. Fasten the glass with a glass screws.

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



Start installation from middle 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. Glass screws must align with side glass screws.

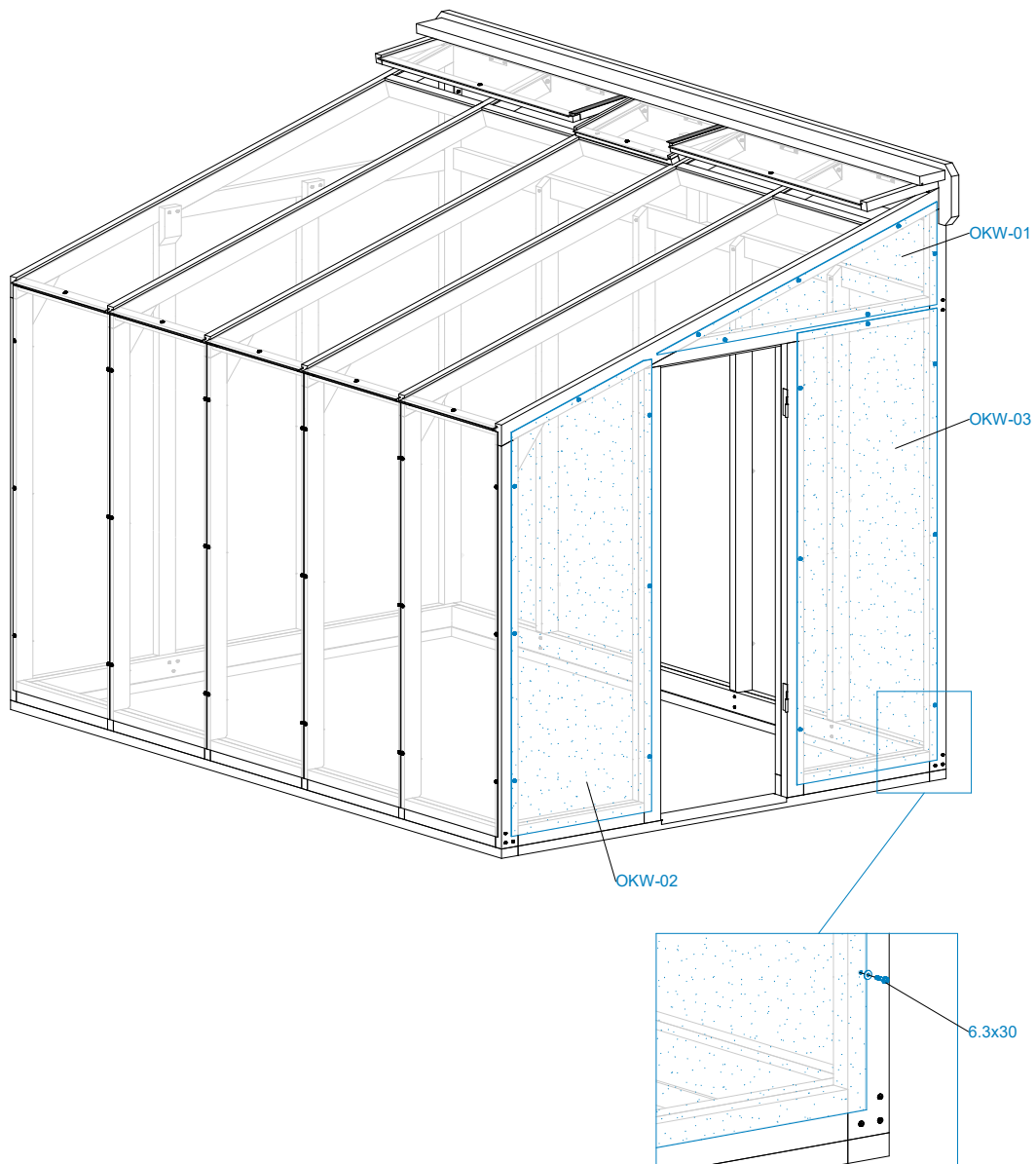
NB! Align the glasses along the bottom edge.



17.6. INSTALLATION OF FRONT WALL GLASS

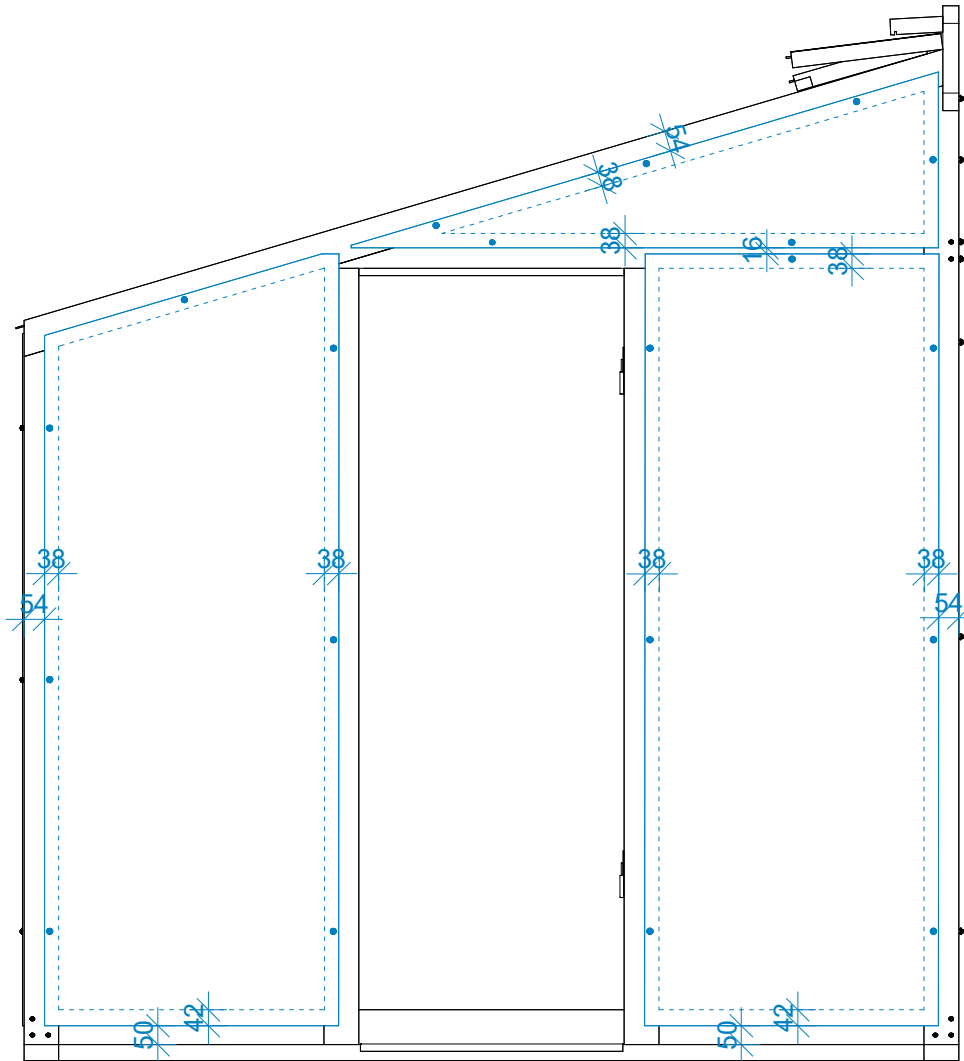
Start installation from largest glass OKW-03 and OKW-02 and then complete installation with upper glass OKW-01. Place glass to intended location so that the lower edge of the side glass is 50 mm from base frame elements gap. Hold the glass in place and drill holes (size 5) in advance with a depth of 30 mm. Fasten the glass with a glass screws.

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



Start installation from largest glass OKW-03. Make sure that glass edges extend evenly on the post. Glass screws must align with side glass screws.

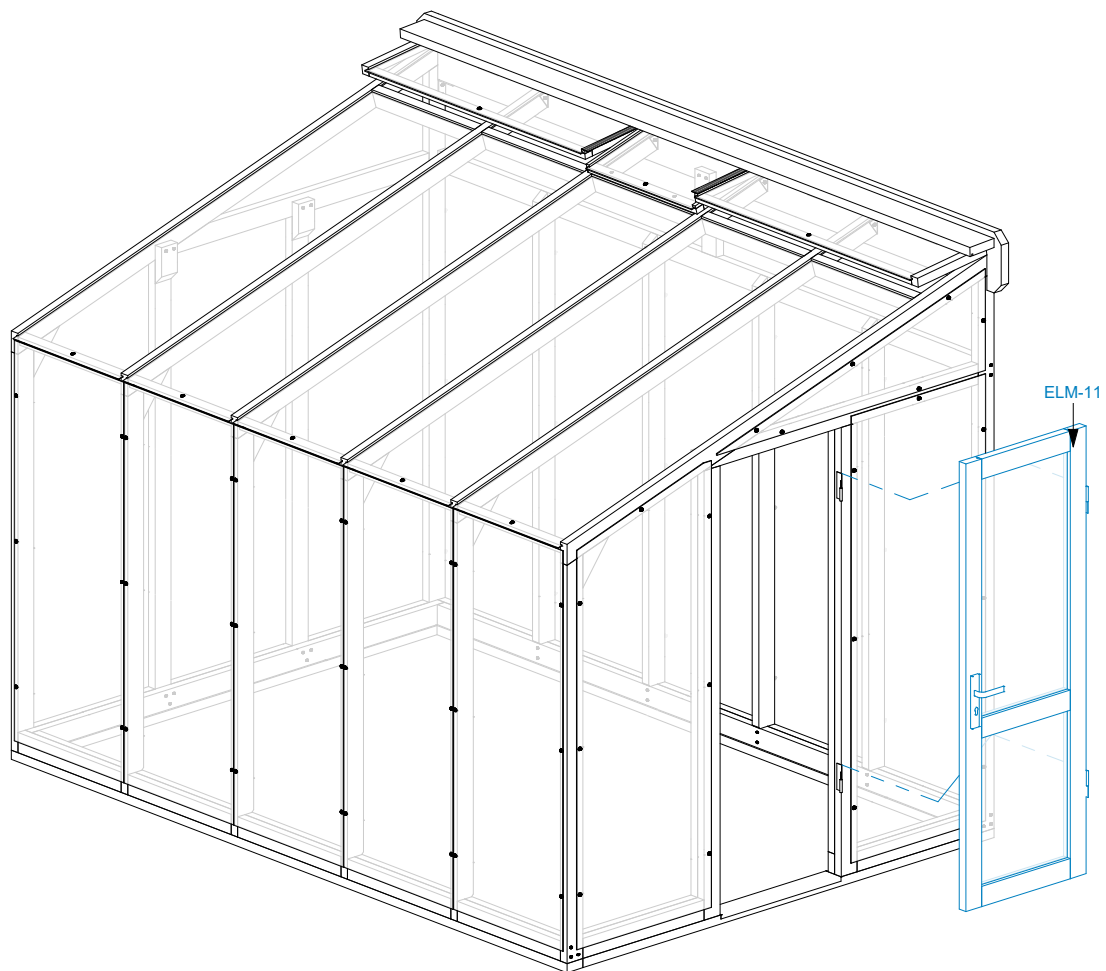
NB! Align the glasses along the bottom edge.



18. INSTALLATION OF DOOR

Lift the door (ELML-11) carefully to the hinges. Make sure that it works properly.

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



19. 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).

