

ASSEMBLY INSTRUCTIONS



TITAN greenhouse

It is **essential** to read these instructions before assembly.

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IMPORTANT INFORMATION

CHECKING PARTS LISTS

We strongly recommend checking the parts of the frame as well as the twin-wall sheets for completeness on the basis of the parts list.

With the guarantee that all parts are completely available, a continuous structure is ensured and you save time and hassle of having to stop assembly.

ATTENTION:

To rule out shortfalls as far as possible, we use **the most modern weighing techniques**, and the individual packing steps are **continuously and fully monitored by exact weight checks**.

This allows us to largely rule out any shortages or any mixing up of parts.

However, if a part is damaged during transport, or if a part is missing, we will send it to you as quickly as possible.

REQUEST:

The manufacturer / importer is GFP Handels GesmbH, Passauerstr. 24, A-4070 Eferding, Austria (hereinafter also referred to as "the manufacturer", "we" or "us").

If you have any questions about the assembly or the product itself, please contact the supplier through whom you purchased your product.

COMPLAINT CLAIMS FOR TWIN-WALL SHEETS

Sometimes when stapling the wall sheet cartons, **sheets** can be **slightly damaged at the side ends** by the stapler.

Please note that **twin-wall sheets normally do not have closed side edges** and this is a unique feature we offer.

Therefore, **minor damage** (any damage no longer visible either after insertion into aluminium profiles or after attachment of the rubber seal – i.e., no longer visible **further than approx. 7 mm** into the sheet) **do not constitute grounds for complaint**, since neither the function nor the appearance is impaired as a result.

Exchanging sheets of this type is **only possible after returning the original sheets!**

Assembly and safety instructions

Dear Customer,

You have acquired a meticulously constructed greenhouse, made by people for whom precision has become a tradition. The compact design allows for quick assembly. The possible applications are very versatile.

We reserve the right to make further developments in the interest of technical progress.

We ask for your understanding that there may be minor deviations from the illustrations and descriptions. We wish you every success with your new garden jewel.

PLEASE NOTE:

Before assembly, identify the aluminium profiles and check the quantities and dimensions.

Before assembling the greenhouse, make sure that no parts are missing on the basis of the individual parts list.

We are unable to pay any additional expenses paid to installation companies as a result of customers failing to conduct a proper inspection in advance of assembly.

If spare parts are required, please contact the supplier. You will need to let them know the item number of the part you need.

With twin-wall sheets, it should be noted that there is an interior side and an exterior side. The side with film or the side labelled "outside" is covered with a UV-protective coating. To avoid confusion, always remove the foil after inserting each sheet.

The foundation can be made of concrete or masonry. Your greenhouse must have a firm footing and must be properly secured (see sketches on page 3) – we therefore strongly recommend that you place the greenhouse on a foundation.

CAUTION – Safety instructions for assembly!

Assembly should be carried out by 2 people. We recommend wearing protective gloves, safety goggles and safety shoes when assembling the frame and glazing (risk of injury and breakage!). After complete assembly, all screw connections must be tightened again using a spanner.

NOTE!

The manufacturer is not liable for storm, wind, water or snow load damage (**we recommend that you remove snow from the roof during the winter months**). The warranty does not cover compensation for consequential damage or financial loss. If there is visible damage to components, they must be replaced with original spare parts.

TOOL LIST:

The following tools are required for assembly:



EXPLANATION OF SIGNS AND TERMS:

The following symbols are used in our assembly instructions:



Attention!
Important!



This
component



component is
moved!



Assembly
order

Danger of explosion!

The product can heat up strongly due to solar radiation. Explosive substances may explode and highly flammable or combustible substances may catch fire if stored in the product.

Do not store highly flammable, highly combustible or explosive substances in the product.

Danger of suffocation!

Small children can put individual assembly parts in their mouths and swallow them or get caught in the packaging film. In both cases, they can suffocate in the process.

Keep small children away from all assembly parts and the assembly site.

Make sure that small children do not put small parts in their mouths.

Do not let children play with the packaging wrapper.

Risk of injury!

During assembly, there is a particular risk of injury for children and people with reduced physical, sensory or mental abilities. They may not be able to assess the risks correctly.

Keep children and people with reduced physical, sensory or mental abilities away from the product during assembly.

Do not allow children or people with reduced physical, sensory or mental capabilities to assemble, clean, maintain or repair the product.

Risk of injury!

When stepping on the roof, you can break through the roof due to your weight.

Do not walk on roof surfaces! Risk of falling!

Risk of damage!

Improper handling of the product may result in damage to the product.

Close the door and windows in wind and storms.

Free the product from snow and ice. The roof is not designed to support large amounts of snow.

A depth of 36 cm for dry snow, 10 cm for wet snow and 5.5 cm for ice correspond to a weight of approx. 50 kg/m².

The roof cannot support the weight of a person!

Do not place heavy materials on the roof or on the glazing sheets of the product.

Do not strike the twin-wall sheets with hard objects at low temperatures below freezing point.

These may break as a result.

Do not step on the product if the individual parts are cracked or deformed. Only replace damaged components with suitable original spare parts.

Do not group several products together in one location.

NOTE!

The manufacturer is not liable for storm, wind, water or snow load damage (we recommend that you remove snow from the roof during the winter months).

The warranty does not cover compensation for consequential damage or financial loss.

To prevent theft, we recommend installing a padlock on the sliding door (not included).

Check product and delivery contents

The product can be quickly damaged if you are not careful when opening the packaging with a sharp knife or another pointed object.

Be very careful when opening it.

- 1. Take the individual parts of the product out of the packaging.**
- 2. Check whether the delivery is complete.**
- 3. Check whether the individual parts of the product are damaged. If this is the case, do not assemble or use the product. Please contact our service centre.**

Determine the installation site

Improper handling of the product may result in damage to the product.

Place the product in an easily accessible location that provides a minimum of protection from the wind.

Only place the foundation and the product on sufficiently solid ground.

If possible, do not place the product at the edge of your garden, so that it is accessible from all sides.

Place the product on a suitable foundation and attach the product to it.

Place the product in a suitable location only.

Assembly instructions

Perform the assembly step by step and with great care. If you do not follow these assembly instructions exactly, mistakes can be made, which may be very dangerous.

Assemble the product with great care and step by step, as specified in the assembly instructions.

Wear protective gloves, goggles and safety shoes during assembly.

Break sharp edges on the aluminium profiles with a file so that you do not cut yourself or get caught on them.

Do not step on the roof of the product. There is a danger of falling off or through the roof.

Movements during the assembly operations can loosen screw connections again somewhat. As a result, the product can become unstable.

After assembly, tighten all screw connections using a spanner.

Warranty statement

In addition to the seller's statutory liability for defects in greenhouses purchased from us, we also assume a 15-year warranty on the construction and frame and a 10-year warranty on our hollow chamber panels.

The warranty period begins with the date of taking charge of the goods. Any replacement deliveries shall not result in an extension of the warranty period.

The warranty for our greenhouses applies exclusively to the construction and frame.

Not covered by the warranty are delivery components such as seals, plastic parts and fasteners/joining elements. Similarly, the warranty does not extend to our extra greenhouse accessories.

The warranty for our twin-wall sheets extends exclusively to their weather resistance. It only applies in connection with the purchase of one of our greenhouses.

If justified claims arise under the warranty, the following warranty plan applies to the twin-wall sheets:

Time from date of purchase of material replacement	
Up to 5 years	100%
In the 6th year	75%
In the 7th year	60%
In the 8th year	45%
In the 9th year	30%
In the 10th year	15%

The basic prerequisite for claims under the warranty is a professional installation and proper maintenance of both the frame and the hollow-chamber twin-wall sheets.

The warranty expires in the event of reassembly.

Furthermore, the warranty does not cover defects and damage directly or indirectly attributable to the following:

- Using a material in a way that does not comply with our instructions
- Damage caused by improper handling before, during or after the assembly work
- Damage caused by force majeure
- Inappropriate foundations and fastenings
- An unsuitable location (e.g., with a particular wind or heat load)
- Insufficiently secured greenhouse anchoring
- On-site modifications made to the delivered item
- Improper cleaning with unsuitable cleaning agents (including aggressive cleaning agents, salt water, etc.)
- Lack of product care (cleaning)
- Contact of the material with incompatible chemicals
- Incorrect installation of the double or triple-wall sheets and causing scratches and stresses, or the use of incompatible adhesives or sealants or other incompatible materials

Materials

- Colour changes to the powder-coated surface caused by solar radiation
- A surface change of the press-finished parts caused by the formation of a natural oxide layer
- Maintenance joints (silicone joints)
- Commercial use

Warranty claims can only be made with the original purchase receipt, provided that the customer has fulfilled all payment obligations under the purchase contract.

If a warranty claim is made within the granted warranty period and is considered to be justified, we will supply material replacement free of charge. This warranty does not cover any other warranty claims, such as compensation for direct or indirect damage or other consequential damage.

Any further liability, e.g., for the removal or installation of claimed or subsequently delivered parts, as well as for other ancillary costs or consequential damages, is not covered under this warranty.

Such liability exists only within the framework of the legal requirements.

The roof of your greenhouse must be cleared of snow and ice during the winter months!

Warranty in case of complaints/claims:

Despite careful handling in production and shipping, there may be reasons for claims. In this case, we therefore ask for your support so that the missing or defective parts can be delivered and/or re-delivered as soon as possible.

Therefore, to ensure a smooth assembly, we recommend checking the delivered goods for completeness and intactness using the supplied parts list before assembly.

If you find that parts are missing or damaged, please inform us of the parts you need by email so that we can arrange for them to be delivered as soon as possible.

The scope of warranty covers only the free replacement of the defective or broken part. Consequential or additional costs, in particular, delivery and assembly or conversion costs, are not included in the scope of warranty.

**For information purposes, here is the legal basis, in brief,
on which both we as a supplier and our customers may rely on:**

Warranty

Warranty refers to customers' and buyers' rights to receive goods which are not defective. The defects at the time of purchase can be very different in nature:

- ⊗ The product does not function as promised and expected.
- ⊗ The product does not correspond to the specified and purchased size.
- ⊗ The external part of the product is defective.

If such a defect becomes apparent, then the warranty is valid for a period of two years. The buyer can report this defect through a complaint to the seller and demand rectification. On the other hand, a seller is not obliged to exchange the product.

What is a buyer entitled to in the event of a complaint?

The law defines exactly what rights and claims buyers have in the event of a complaint. Buyers should note that the law divides the claims into two successive stages. In plain language, this means: if a buyer submits a complaint, they cannot immediately withdraw from the purchase contract. Nor can they immediately claim compensation in monetary form, although the law lists this as an eventual possibility. In the event of a complaint, the seller must first be given the opportunity to repair the product. This is done, for example, by...

- ⊗ repairing the product.
- ⊗ exchanging the product.

Only if the seller lets a deadline elapse and does not comply with the claim for rectification due to the complaint, can buyers withdraw from the purchase contract or claim financial compensation in the second step.

Based on the legal basis, the following applies:

- ➔ Warranty claims are limited to the replacement of faulty or missing material.
- ➔ There will only be financial compensation, without exception, if we are unable to remedy the defect by replacing the product!
- ➔ Defective components that have already been installed or painted are excluded from replacement.
- ➔ All other claims are excluded!

Instructions for use and information about the foundation

INSTRUCTIONS FOR MAINTENANCE AND USE:

- Every 3 to 4 months, check the screw connections of your greenhouse and tighten them if necessary.
- After strong winds or storms, check that the twin-wall sheets and screw connections are fitted securely.
- In windy and stormy weather, windows and doors must be closed.
- When temperatures are below freezing, do not strike the twin-wall sheets with hard objects.
- The roof of your greenhouse must be cleared of snow and ice during the winter months. (Caution! – The roof cannot support the weight of a person!)
- The national building regulations must be observe

FOUNDATION

You can place your new greenhouse on a previously constructed concrete or masonry foundation (see Figure 1).

The foundation must be right-angled and level. Place your finished greenhouse on the foundation. You have two options for securing the greenhouse:

OPTION A:

Drill a hole through the floor profile. (See detail A). Secure the greenhouse to the foundation with suitable screws and dowels.

OPTION B:

Securing the greenhouse using brackets. These brackets can be fixed to the floor profile using screws (see detail B). No drilling work on the greenhouse is necessary for this. The greenhouse can then be attached to the foundation with suitable dowels and screws. (The brackets are not included in the delivery.)

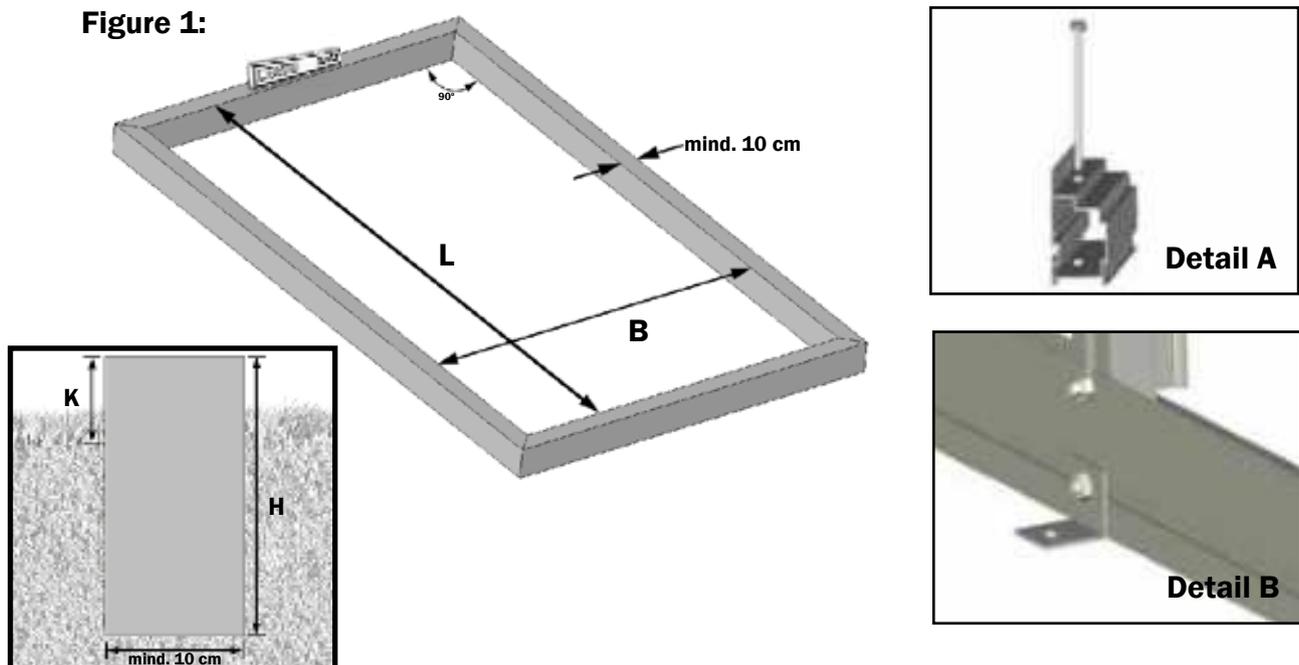
NOTE! Dowels, screws and ground anchors are not included in the delivery. Your greenhouse is made of lightweight aluminium and hollow twin-wall sheets. Neither has a particularly heavy weight. However, storms and wind have a particularly large loading surface. For this reason, anchor your greenhouse securely to the floor. Pay particular attention to the quality of the materials used!

CONCRETE OR MASONRY FOUNDATION

Here, you will find the relevant dimensions:

Model	Width [B] Inner dimensions	Length [L] Inner dimensions	Height [H]	Level [K]
TITAN 21 professional greenhouse	2070 mm	2070 mm	ca. 80 cm	mind. 50 mm
TITAN 22 professional greenhouse	2070 mm	2790 mm	ca. 80 cm	mind. 50 mm
TITAN 23 professional greenhouse	2070 mm	3500 mm	ca. 80 cm	mind. 50 mm
TITAN 24 professional greenhouse	2070 mm	4200 mm	ca. 80 cm	mind. 50 mm

Figure 1:



Information about the foundation – packaging info

A supporting role – the greenhouse foundation

With a solid greenhouse foundation, do-it-yourselfers have the guarantee that their building will withstand extreme weather conditions and that their valuable plants will be reliably protected against the weather.

As a load-bearing substructure, the greenhouse foundation should guarantee structural integrity under all conceivable weather conditions. The foundation must be capable of absorbing all static forces such as dead load and roof load, wind pressure and wind suction.

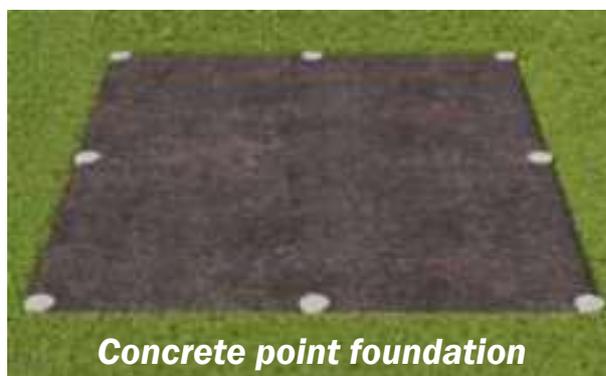
Furthermore, it must not sink into the ground or lift off from the ground if it is a lightweight construction. Also, the function for protecting against heat loss into the ground must not be forgotten, since this is particularly important for the plants in the greenhouse.

Installing a greenhouse in the garden without appropriate anchoring is not recommended.

Does every greenhouse need a foundation?

In principle, a foundation is required for almost every project in which a building is in contact with the ground. **A greenhouse should also stand on a firm foundation.**

Overview of common foundation options



ATTENTION, IMPORTANT INFORMATION ON PACKAGING!

The individual parts are packaged into the different boxes exclusively according to logistical considerations, which does not correspond to the order of the assembly steps!

Please open all frame boxes before starting your assembly work and sort out the parts according to the parts list – this is the only way to ensure a simple, smooth assembly!

(The boxes with glazing can remain closed until you start with the glazing work!)

Compilation of the greenhouse frames

TITAN 21

Front and rear wall package		1	Package
Basic package 3-section		1	Package
Small parts package		1	Package

TITAN 22

Front and rear wall package		1	Package
Basic package 2-section		1	Package
Extra package 2-section		1	Package
Small parts package		1	Package

TITAN 23

Front and rear wall package		1	Package
Basic package 3-section		1	Package
Extra package 2-section		1	Package
Small parts package		1	Package

TITAN 24

Front and rear wall package		1	Package
Basic package 2-section		1	Packages
Extra package 2-section		2	Package
Small parts package		1	Package

TITAN front and rear wall package

SKETCH	PART. NO.	DESIGNATION	LENGTH	QTY.
	9050014	Floor profile 3 sections	2138 mm	2
	9050143	Side corner profile	1630 mm	4
	9050068	Side wall strut	1630 mm	2
	9050112	TITAN roof support	505 mm	2
	9050150	Entrance/door profile	1630 mm	6
	9050168	Cross strut, single door	2138 mm	2
	9051181	Wind band side_1787	1787 mm	2
	9540182	Wind bracing front wall_1722	1722 mm	2
	9051268	Upper door rail_1065	1065 mm	2
	9051282	Lower door rail_1067	1067 mm	2
	9050304	TITAN door roller profile	546 mm	4

Parts list

TITAN basic package (two sections)

SKETCH	PART. NO.	DESIGNATION	LENGTH	QTY.
	9050006	Floor profile 2 sections	1432 mm	2
	9050020	Rain gutter 2 sections	1432 mm	2
	9050044	Ridge 2 sections	1432 mm	1
	9050068	Side wall strut	1630 mm	2
	9050075	Roof strut	1170 mm	2
	9050136	Roof corner profile	1170 mm	4
	9050181	Wind bracing, side	1787 mm	4
	9050198	Wind bracing, roof	1374 mm	4
	9050211	Window stop	676 mm	2
	9050228	Hinge profile	720 mm	4
	9050242	Window profile, side	590 mm	4

TITAN basic package (three sections)

SKETCH	PART. NO.	DESIGNATION	LENGTH	QTY.
	9050014	Floor profile 3 sections	2138 mm	2
	9050037	Downspout 3 sections	2138 mm	2
	9050051	Ridge 3 sections	2138 mm	1
	9050068	Side wall strut	1630 mm	4
	9050075	TITAN roof strut	1170 mm	4
	9050136	TITAN roof corner profile	1170 mm	4
	9050181	Wind bracing, side	1787 mm	4
	9050198	TITAN wind bracing, roof	1374 mm	4
	9050211	Window stop	676 mm	2
	9050228	Hinge profile	720 mm	4
	9050242	Window profile, side	590 mm	4

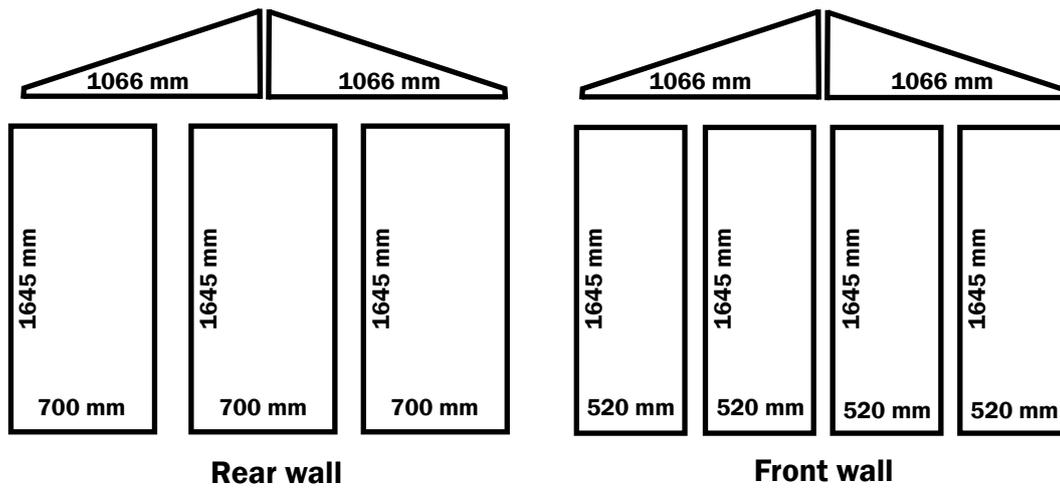
TITAN two sections extra package

SKETCH	PART. NO.	DESIGNATION	LENGTH	QTY.
	9050006	Floor profile 2 sections	1432 mm	2
	9050020	Rain gutter 2 sections	1432 mm	2
	9050044	Ridge 2 sections	1432 mm	1
	9050068	Side wall strut	1630 mm	2
	9050075	TITAN roof strut	1170 mm	2
	9050082	Coupling strut side/rear wall	1630 mm	2
	9050099	Coupling strut, roof TITANIUM	1170 mm	2
	9050518	Connector, 15x15 mm	250 mm	5
	9050427	Glass retaining clips strut	1.630 mm	2
	9050426	Glass retaining clips roof strut	1.170 mm	2
	9050428	Retaining clips for roof corner/rain gutter	1.430 mm	2
	9040563	Reinforcement ridge (1 hole)		1
	9040570	Reinforcement rain gutter (2 holes)		2
	690509	M6x12 screw		35
	690547	M6 nut		35
	9040556	Drilling screw, 4.8x13 mm		10

TITAN small parts package

SKETCH	PART. NO.	DESIGNATION	LENGTH	QTY.
	9050427	Retaining clips for roof and wall struts Excess lengths are to be shortened to size if necessary	1630 mm	6
	9050426	Glass retaining clips roof strut	1170 mm	5
	9050428	Retaining clips for roof corner and rain gutter Excess lengths are to be shortened to size if necessary	1430 mm	7
	690509	M6x12 screw		72
	690523	Screw M6X16		4
	690547	M6 nut		90
	690547	Self-locking M6 nut		4
	664753	Tapping screw, 4.2x22 (window)		8
	9040556	Drilling screw, 4.8x13 mm		12
	664754	Tapping screw - countersunk 4.2x22 (door)		16
	690622	Rhombus screw		8
	664555	Axle pin		8
	664548	Door roller		8
	9040334	Fastening clip	20 mm	2
	9040341	Brackets for floor profiles	32 mm	4
	665903	Connecting joint, straight		4
	665973	Door rail protection		2
	9040365	Door handle, inside/outside		4
	9050464	Covering cap for ridge		2
	9050471	Drain down pipe, left		2
	9050488	drain down pipe, right		2
	9050495	Covering cap, floor profile		4
	664425	Door gasket	3400 mm	1
	P9981G	Aluminium self-adhesive tape, 25 mm, 50 m		1
	665958	Window stay		2

Twin-wall sheet plan – TITAN professional greenhouse



700 mm 1645 mm	700 mm 1187 mm	1187 mm 700 mm	1645 mm 700 mm	Typ 21
700 mm 1645 mm	700 mm 1187 mm	592 mm 700 mm 592 mm 700 mm	1645 mm 700 mm	
700 mm 1645 mm	700 mm 592 mm 700 mm 592 mm	1187 mm 700 mm	1645 mm 700 mm	
700 mm 1645 mm	700 mm 1187 mm	1187 mm 700 mm	1645 mm 700 mm	
700 mm 1645 mm	700 mm 1187 mm	1187 mm 700 mm	1645 mm 700 mm	
700 mm 1645 mm	700 mm 1187 mm	1187 mm 700 mm	1645 mm 700 mm	
700 mm 1645 mm	700 mm 1187 mm	1187 mm 700 mm	1645 mm 700 mm	Typ 24

NOTE:

An aluminium adhesive tape is supplied to cover the upper edge of the twin-wall sheets. This prevents insects from getting trapped in the twin-wall sheets from above. We recommend not closing the underside of the wall sheets with the adhesive tape, so that any condensation water that may occur can drain downwards!

Step 1 – Connecting the floor profiles

STEP 1 – Connecting the longitudinal parts

In the first step, the floor profiles, rain gutters and ridge are connected using the supplied connectors. The floor, rain gutter and ridge must all be the same length!

Note:

For the TITAN 21 model, the side floor profiles, the rain gutters and the ridge are continuous; therefore, Step 1 can be omitted.

If you have purchased the TITAN 21 model, scroll forward to page 20 and start assembling the floor frame.

NOTE on the TITAN 23 model

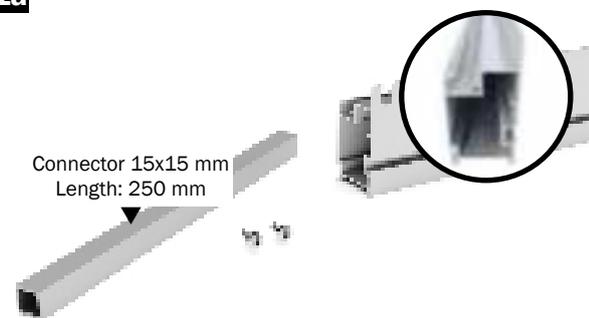
Make sure that the position of the profiles for 3 sections are in the same place for the floor profiles, rain gutters and ridge. We recommend using the longer profiles for 3 sections first.

The easiest way is to place the floor profiles and rain gutters next to each other and check that the profiles for the 3 sections are in the same position before assembly.

Please also note that the floor profiles and rain gutters must each be installed back-to-front!

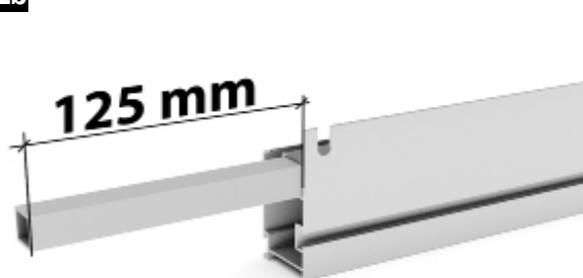
Therefore, it is best to place the longitudinal profiles correctly right at the beginning, and only then begin to assemble them and screw them together.

1a



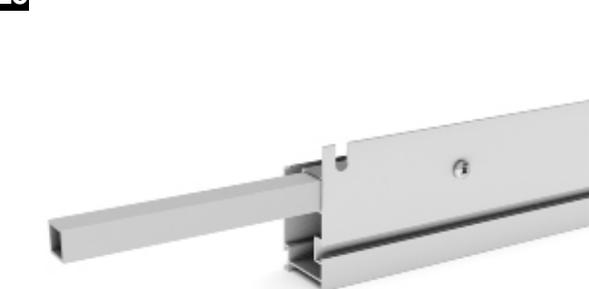
Prepare a floor profile, a connector and two 4.8x13 drilling screws.

1b



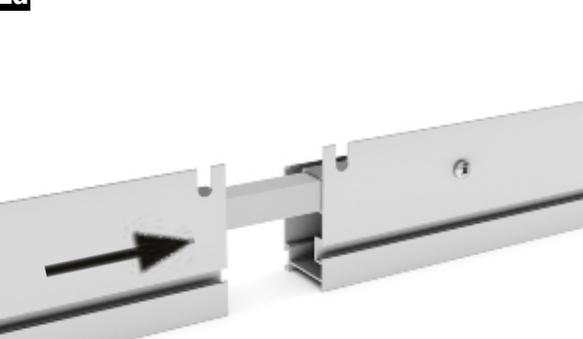
Insert the connector halfway into the floor profile so that the connector protrudes 125 mm out of the floor profile.

1c



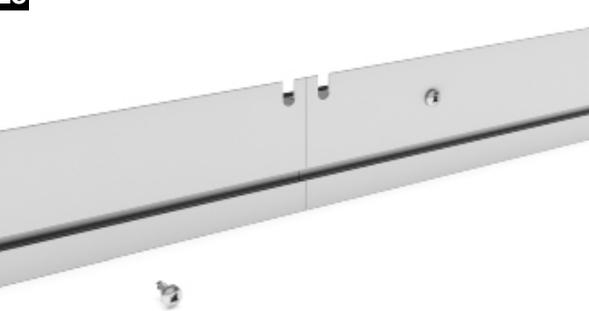
Screw the connector with a 4.8 x 13 mm drilling screw.

1d



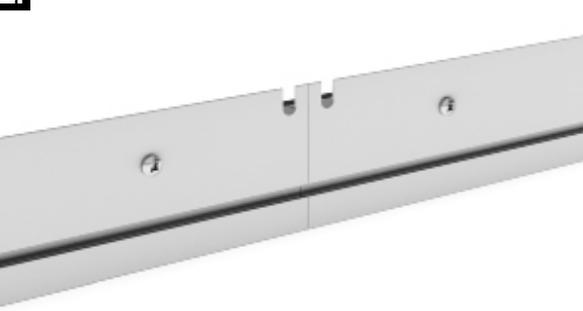
Fix the second floor profile onto the connector.

1e



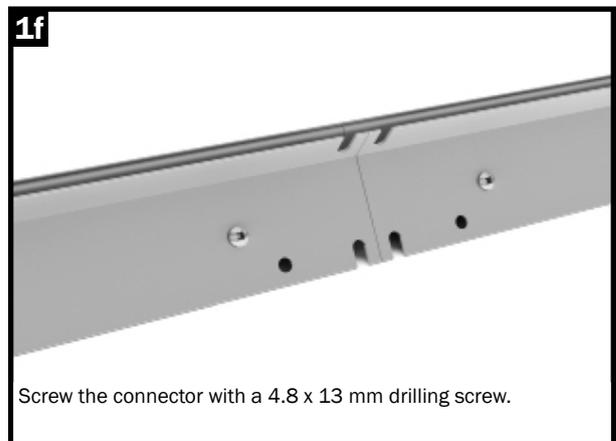
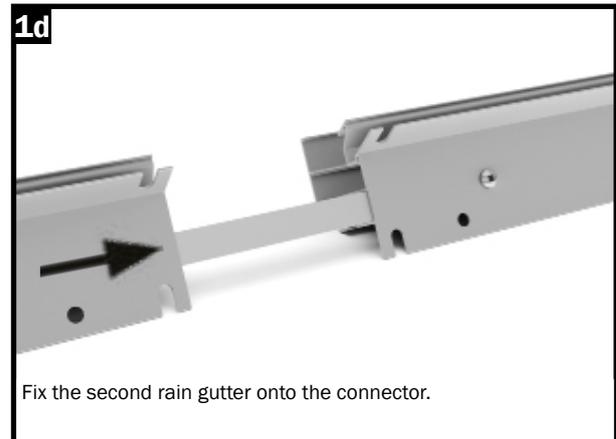
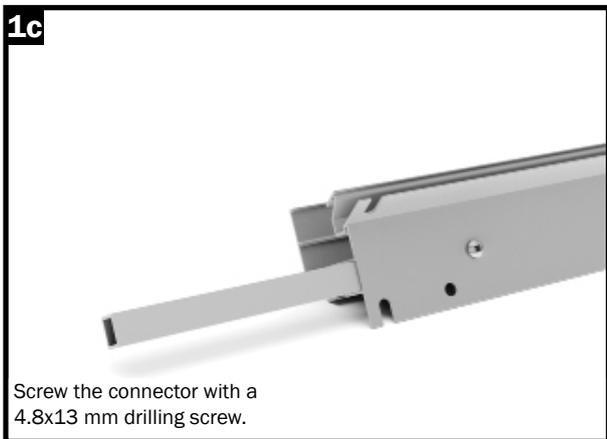
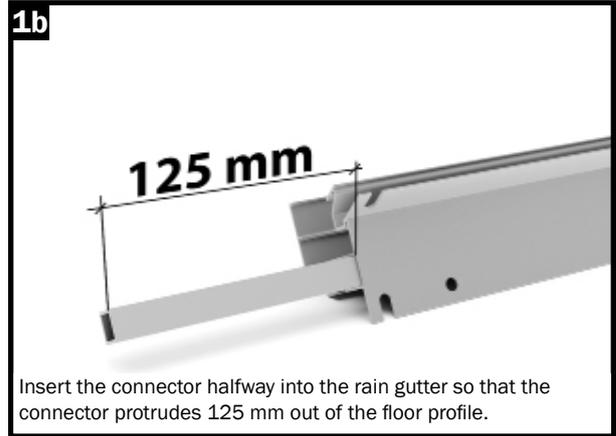
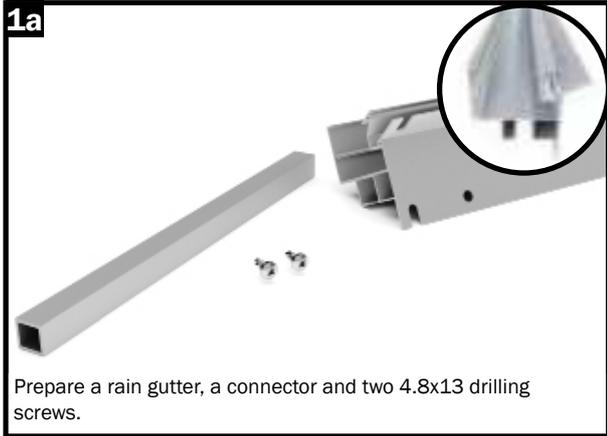
Press the floor profiles firmly together so that there is no more gap.

1f



Screw the connector with a 4.8 x 13 mm drilling screw.

Step 1 – Connecting the rain gutters



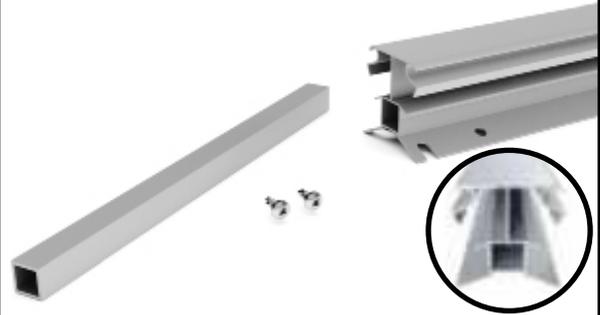
Step 1 – Connecting the ridge

NOTE on the TITAN 23 model

Make sure that the position of the profiles for 3 sections are in the same place for the floor profiles, rain gutters and ridge. We recommend using the longer profiles for 3 sections first.

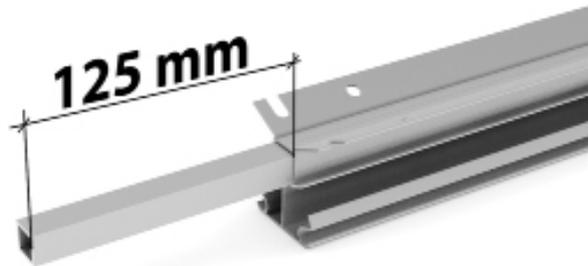
The easiest way is to place the ridge profiles next to the already prepared floor profiles and rain gutters and to check before assembly that the profiles for the 3 sections are in the same position.

1a



Prepare a ridge, a connector and two 4.8x13 drilling screws.

1b



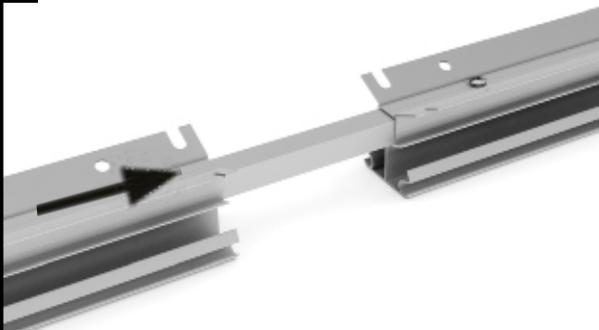
Insert the connector halfway into the ridge so that the connector protrudes 125 mm out of the ridge.

1c



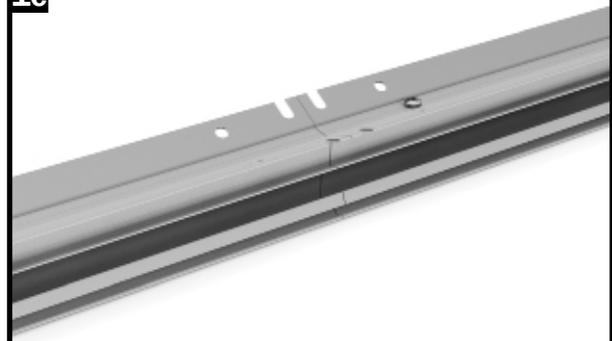
Screw the connector with a 4.8x 13 mm drilling screw from the bottom of the ridge.

1d



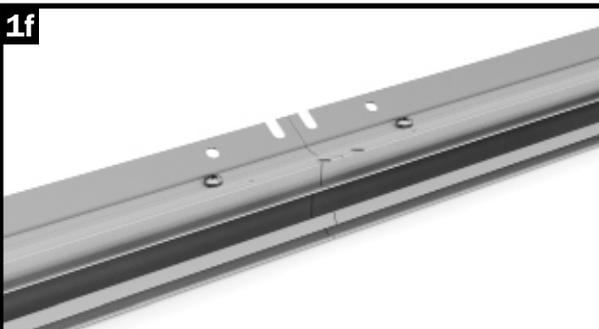
Fix the second ridge profile onto the connector.

1e



Press the ridge profiles firmly together so that there is no gap.

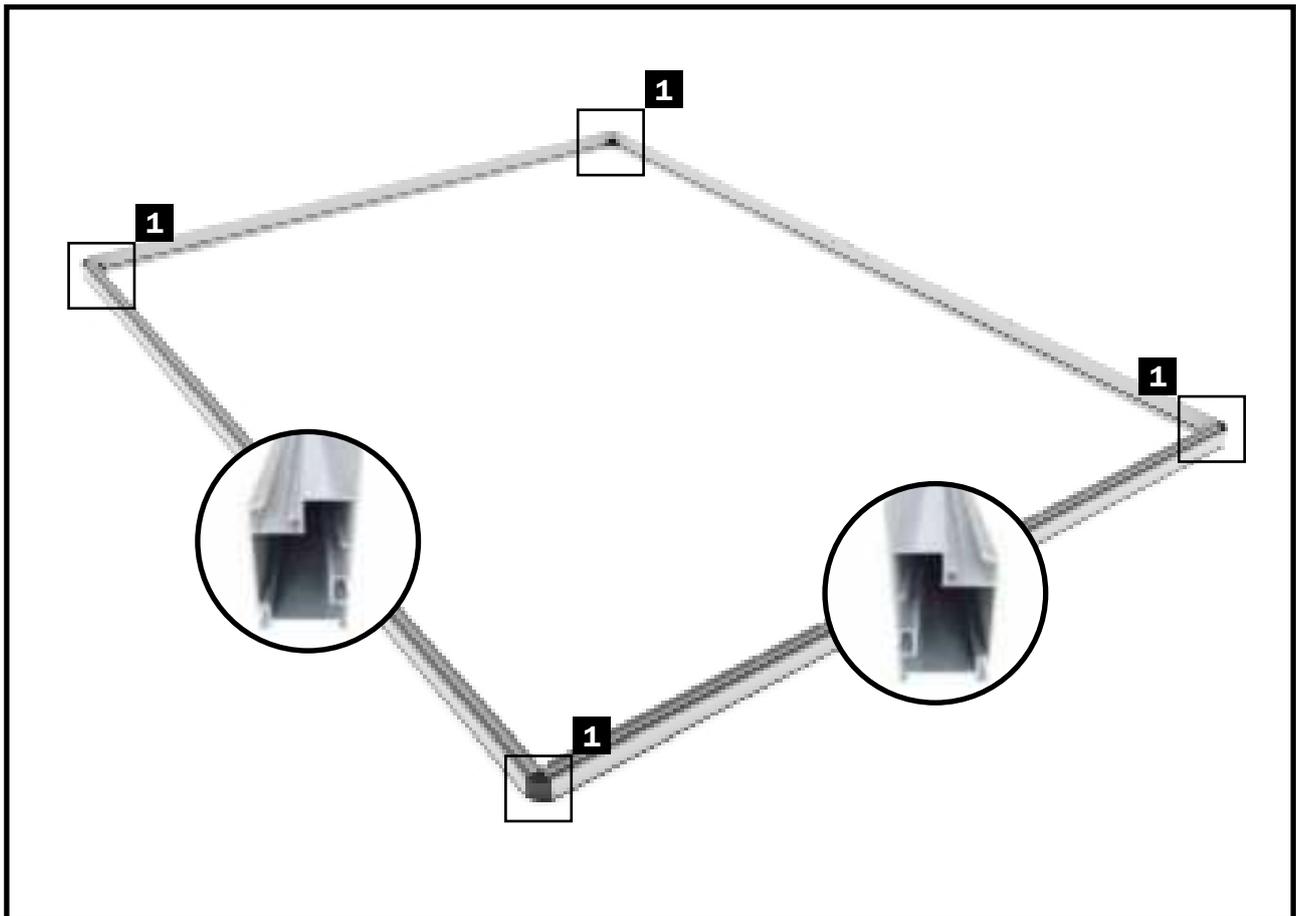
1f



Screw the connector with a 4.8x13 mm drilling screw.

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Step 2 – Assembling the floor frame



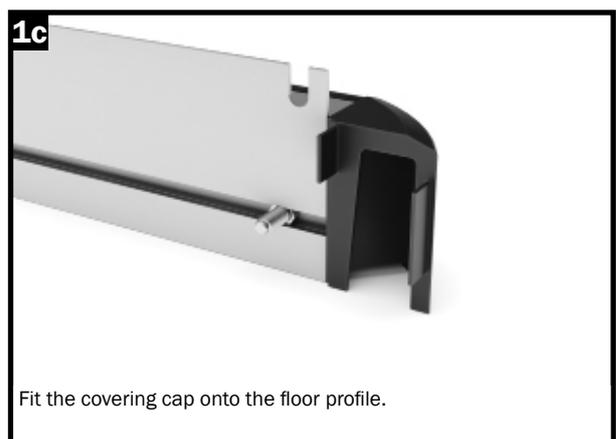
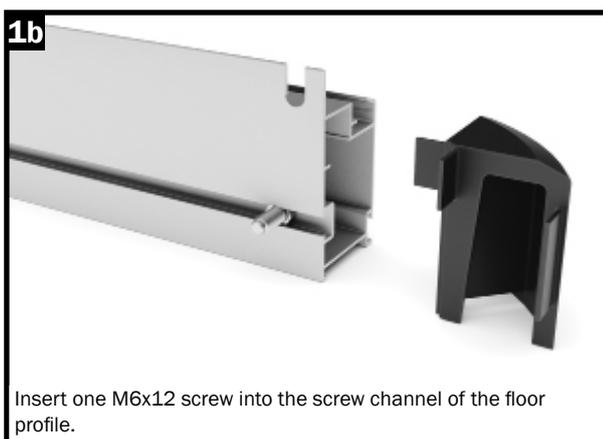
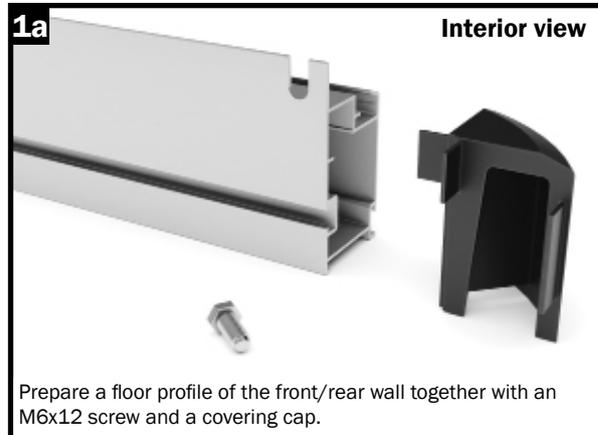
STEP 2 – Floor frame

In the following phase of assembly the floor profiles are joined at the corners. Before inserting the covering cap, insert an M6x12 screw each into the screw channel of the floor profile.

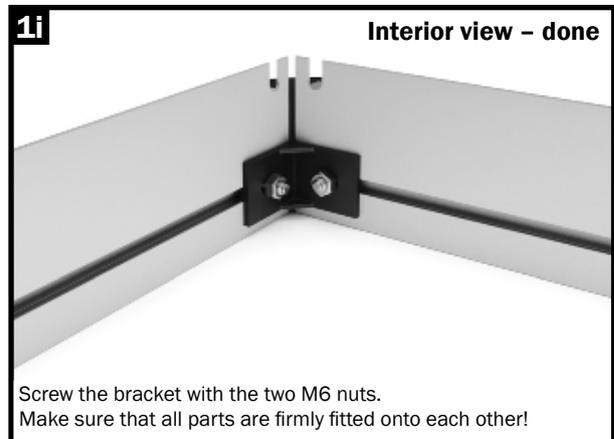
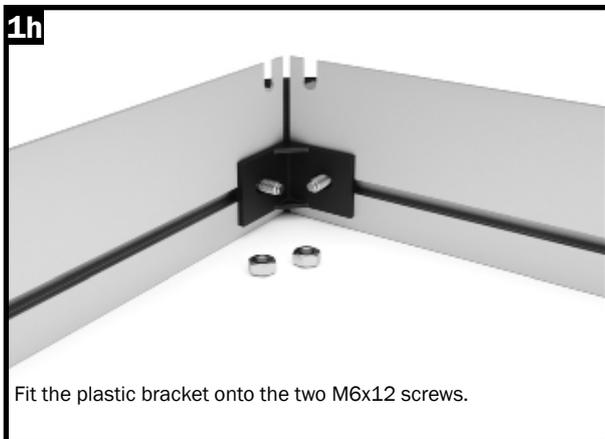
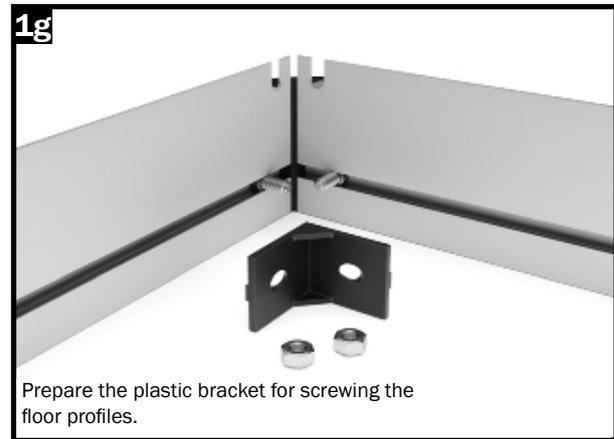
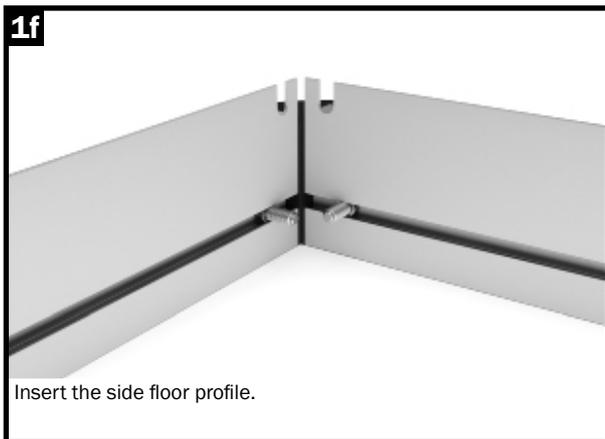
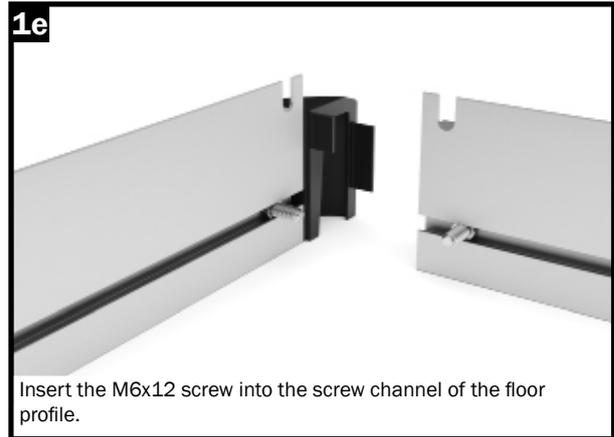
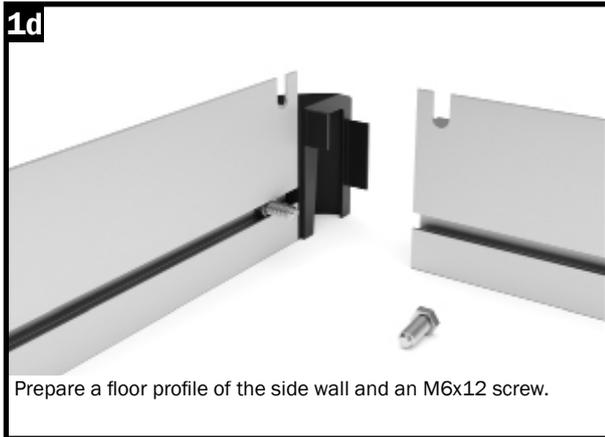
On these M6x12 screws, the floor profiles are screwed to the bracket (No. 9040341).

Note:

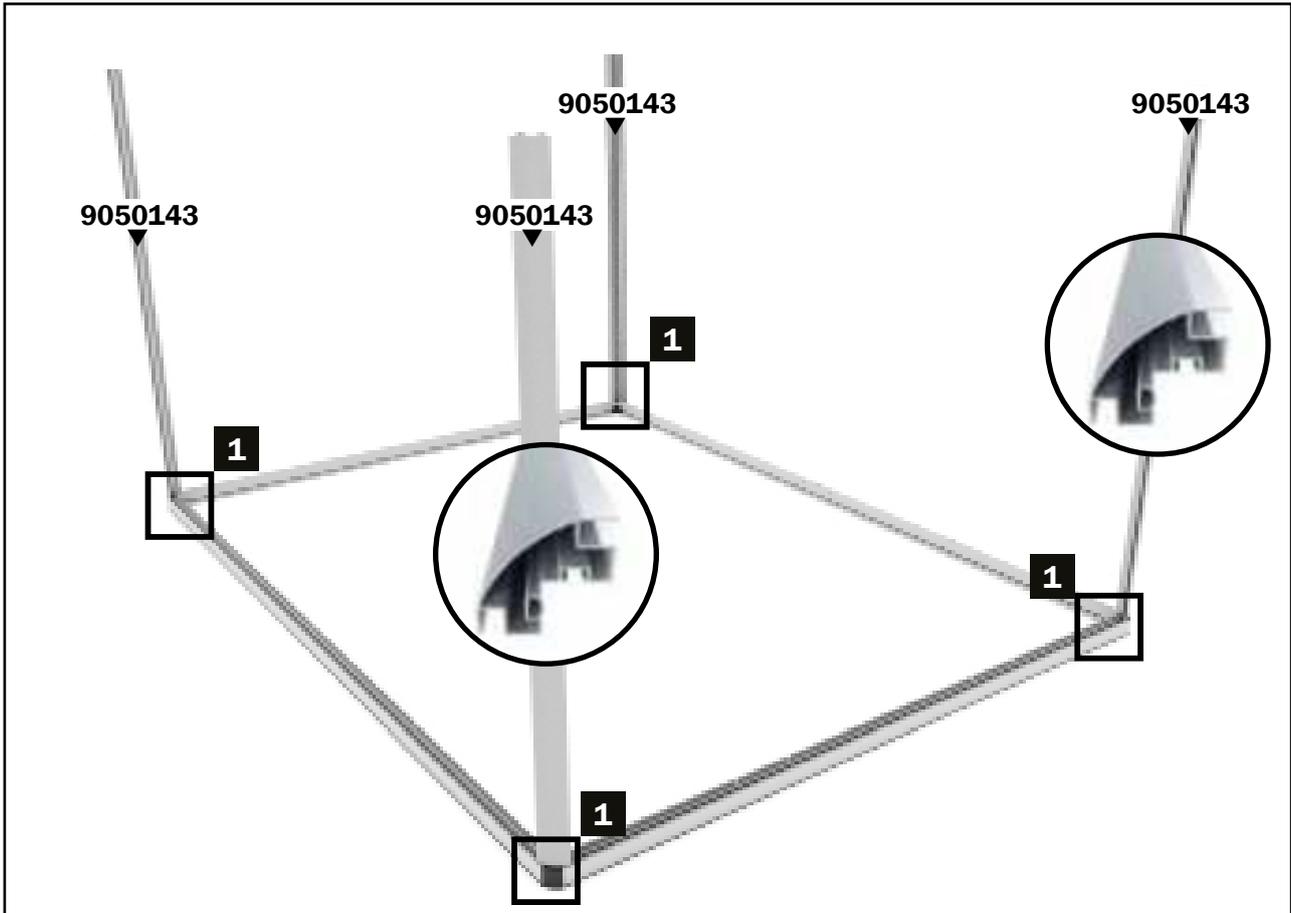
If you have also ordered a bracket set for the greenhouse, it would be advisable to insert the M6x12 mm screws into the screw channel beforehand.



Step 2 – Assembling the floor frame



Step 3 – Assembling the side corner profiles



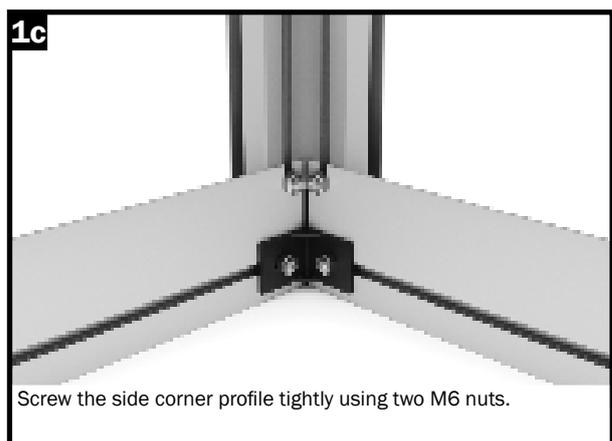
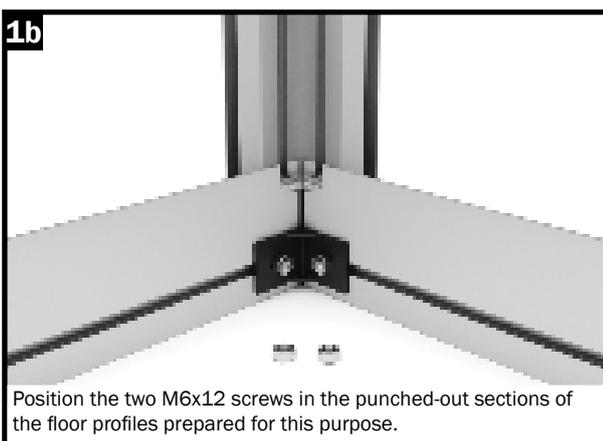
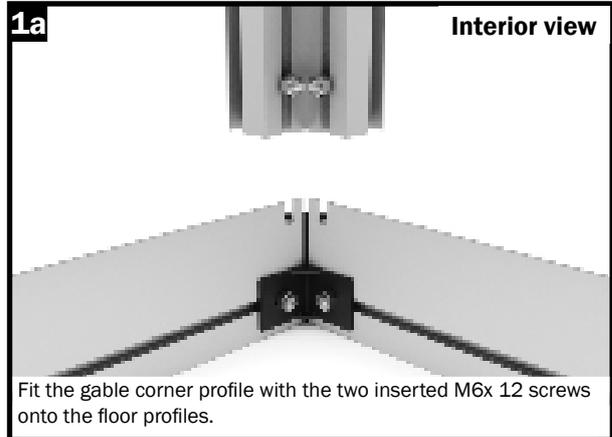
STEP 3 – Assembling the side corner profiles

In the following assembly phase, the side corner profiles are fitted onto the four corners. Before fitting the side corner profile, insert two M6x12 screws each into the screw channels of the side corner profile respectively.

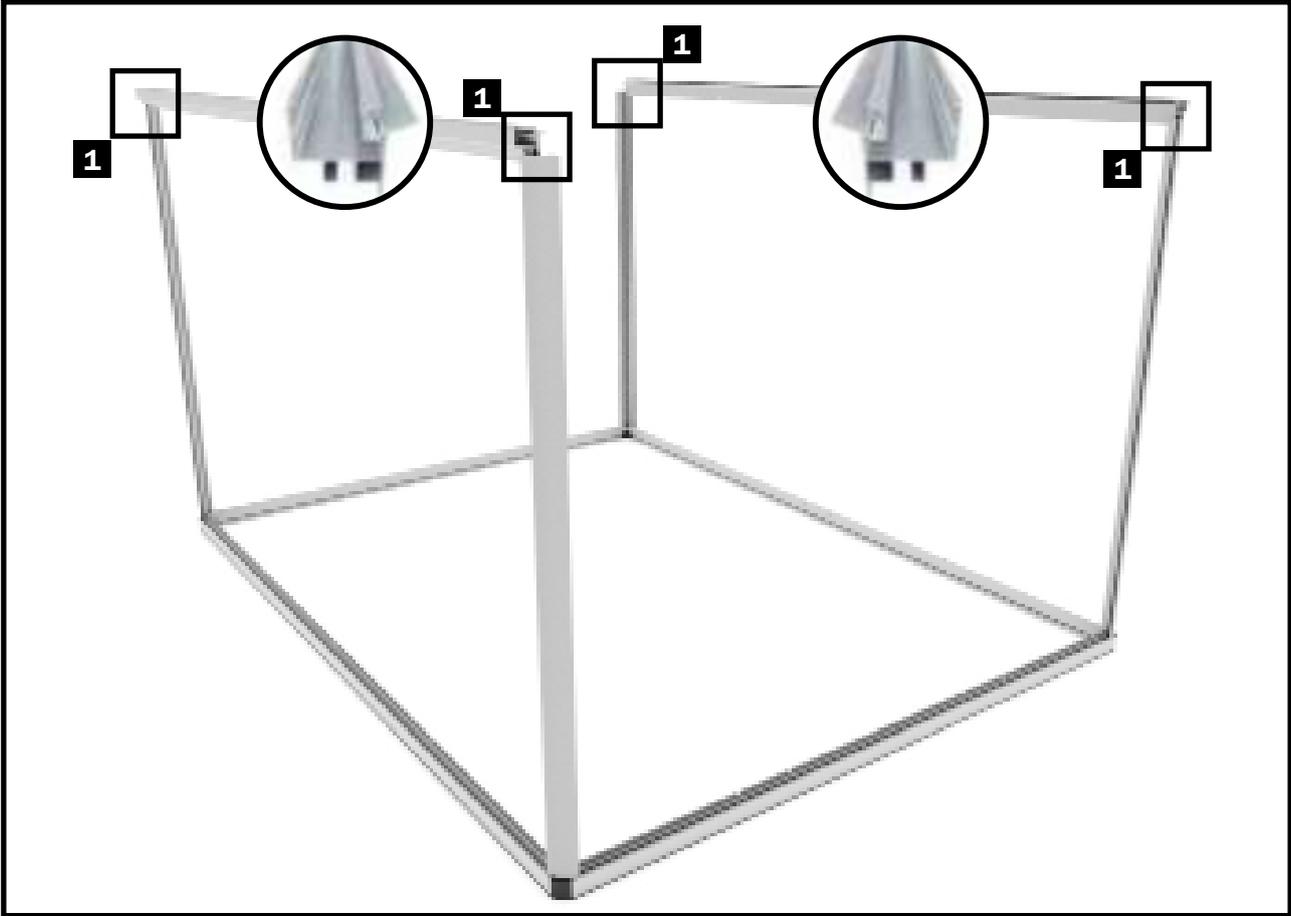
We recommend securing these screws with M6 nuts to prevent them from slipping.

Fit the side corner profile and screw it tightly with two M6 nuts.

Proceed the same way for all four corners.



Step 4 - Fitting the rain gutters



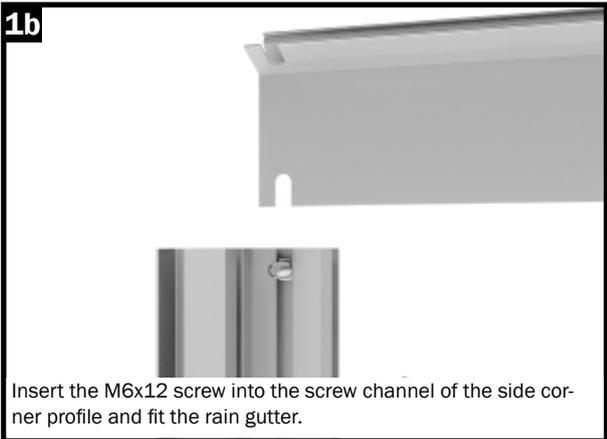
STEP 4 - Assembling the rain gutters

In the following assembly phase, the rain gutters are fitted onto the side corner profiles and screwed onto them.

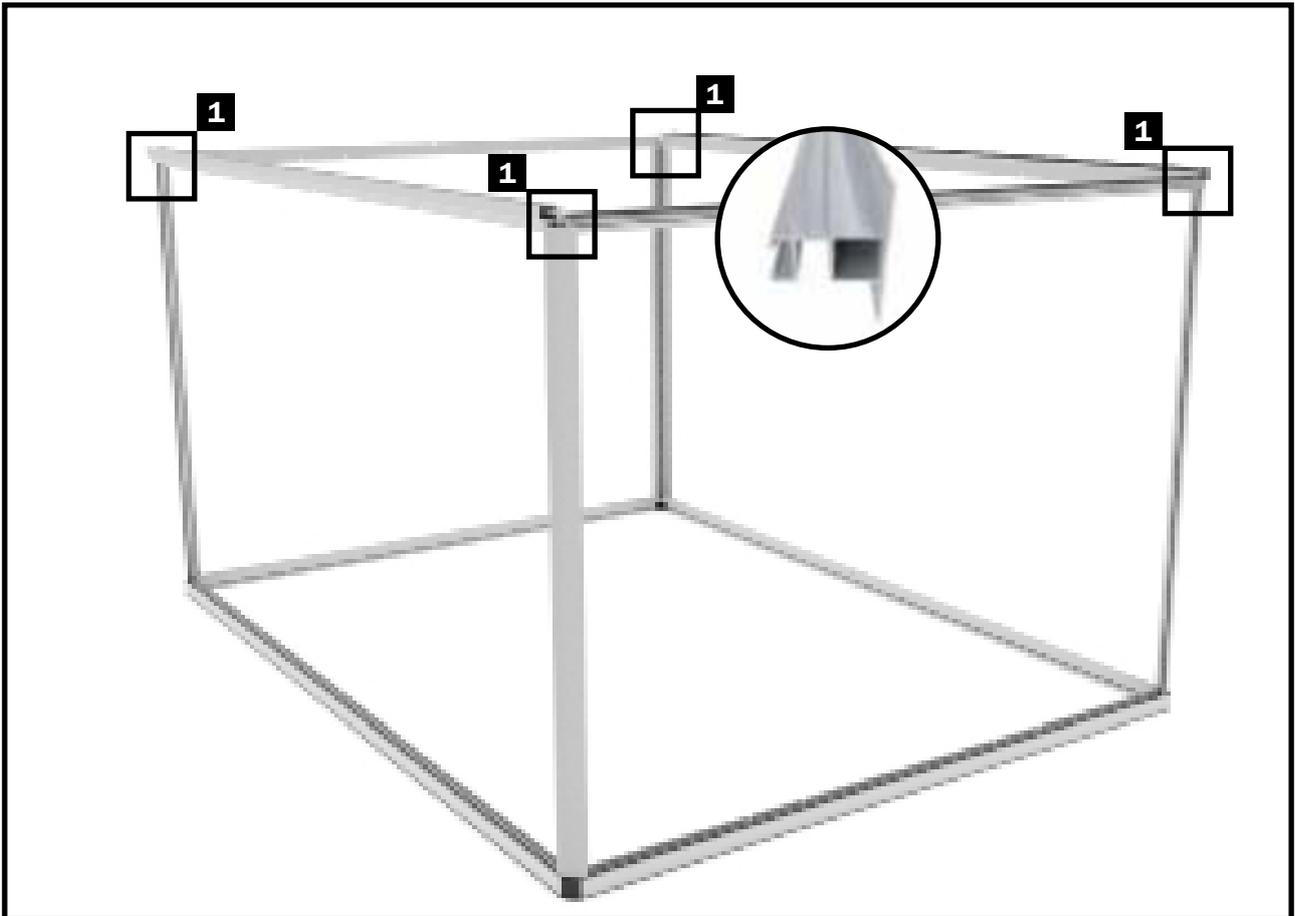
This assembly step should be carried out by two persons so that the rain gutters can be screwed together parallel on both sides.

For this assembly step, prepare a rain gutter, an M6x12 screw and an M6 nut.

Proceed the same way for all four corners.



Step 5 – Fitting the cross struts



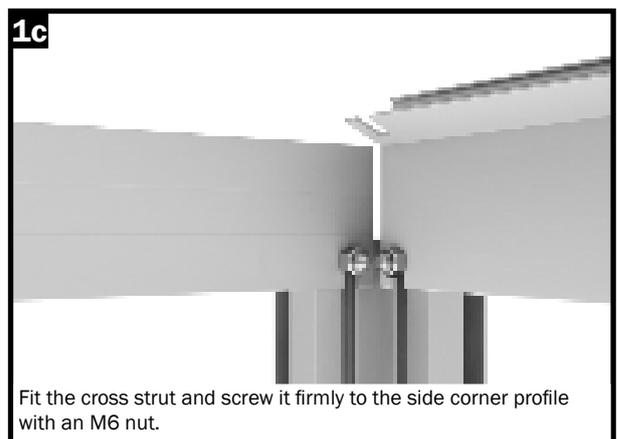
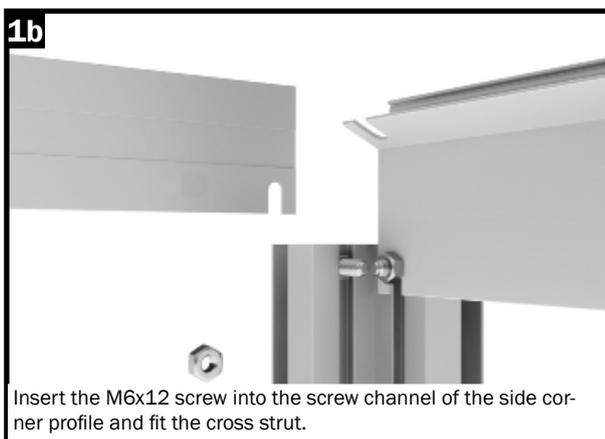
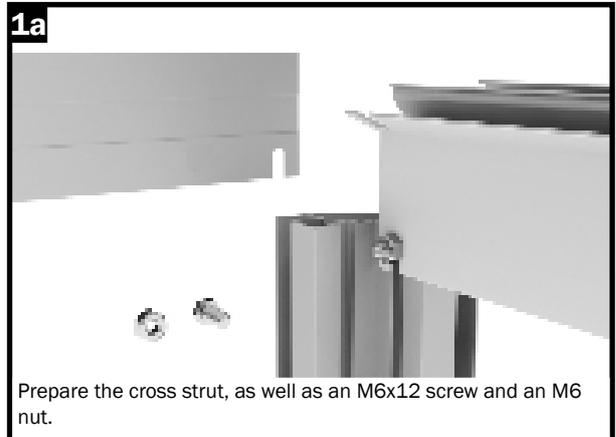
STEP 5 – Assembling the cross struts

In the following assembly phase, the cross struts of the front and rear walls are fitted onto the side corner profiles and screwed onto them.

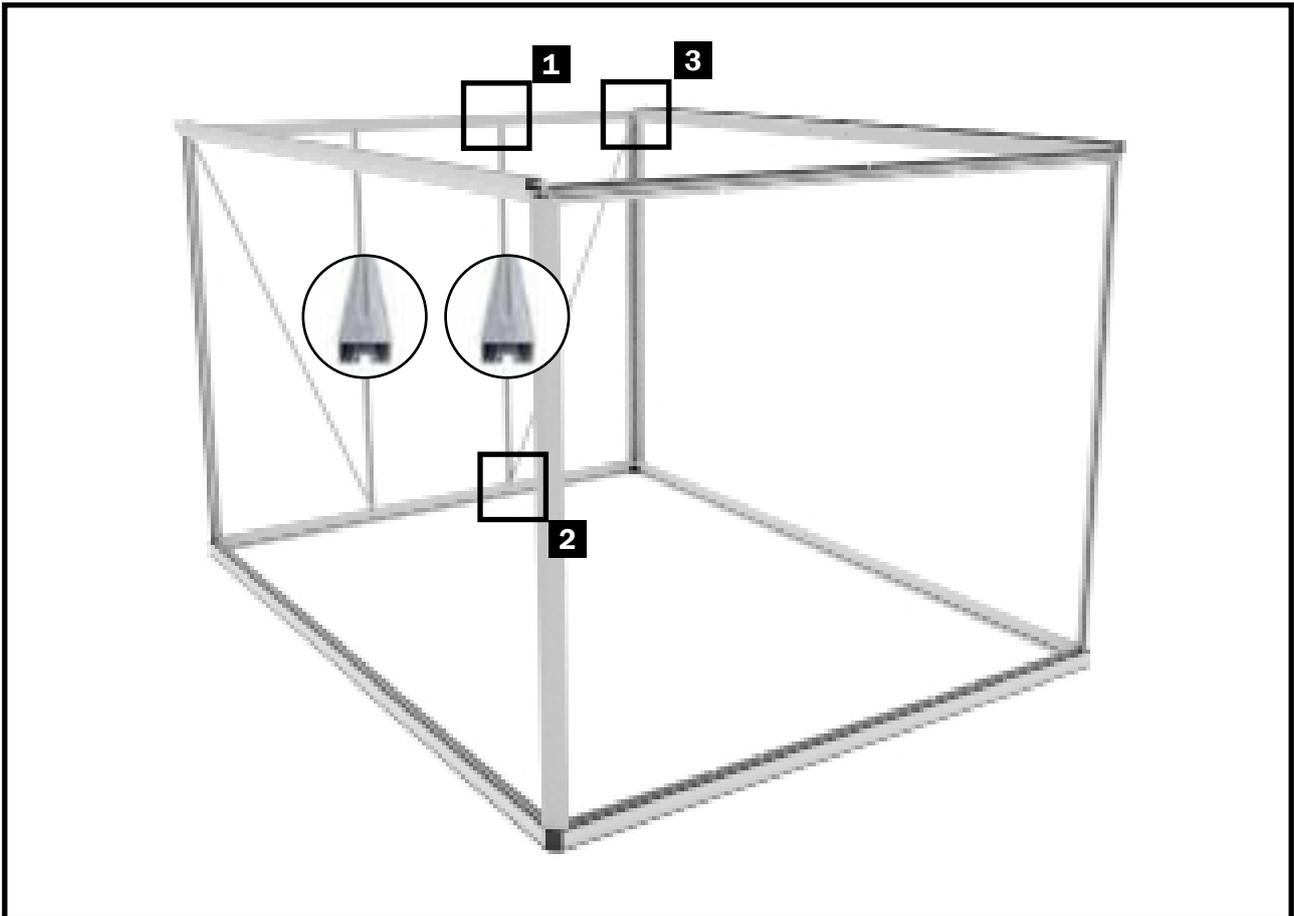
This assembly step should be carried out by two persons so that the cross struts can be screwed together at the same time on both sides.

For this assembly step, prepare the cross strut, an M6x12 screw and an M6 nut.

Proceed the same way for all four corners.



Step 6 – Assembling the rear wall struts



STEP 6 – Strut assembly of the rear wall

In the following assembly phase, the struts are installed on the rear wall, together with the two wind bracings.

1a



Pick up one strut, one M6x12 mm screw and one M6 nut.

1b



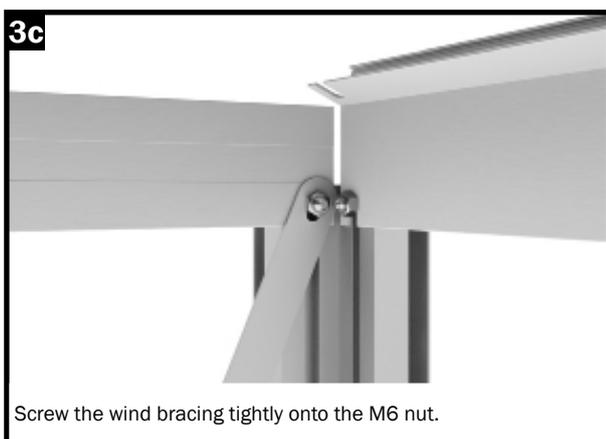
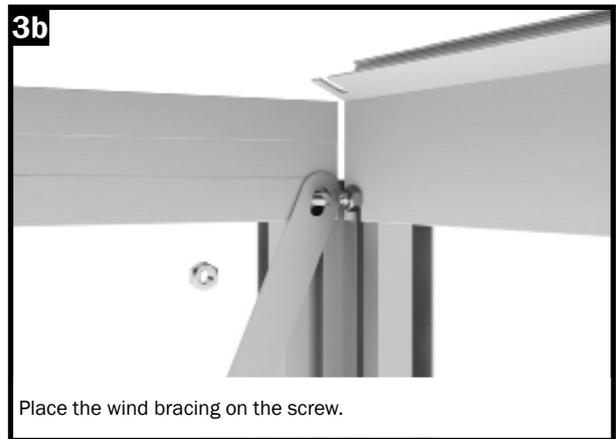
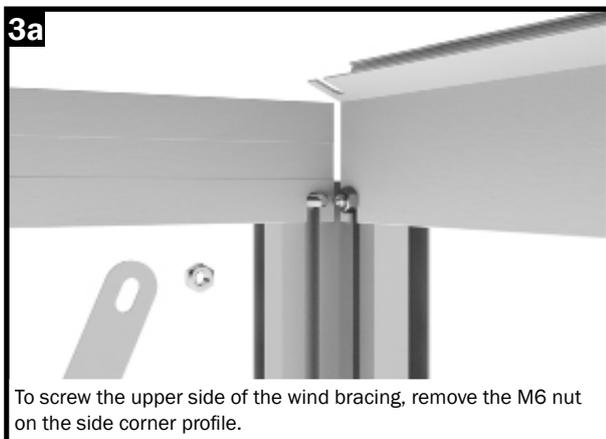
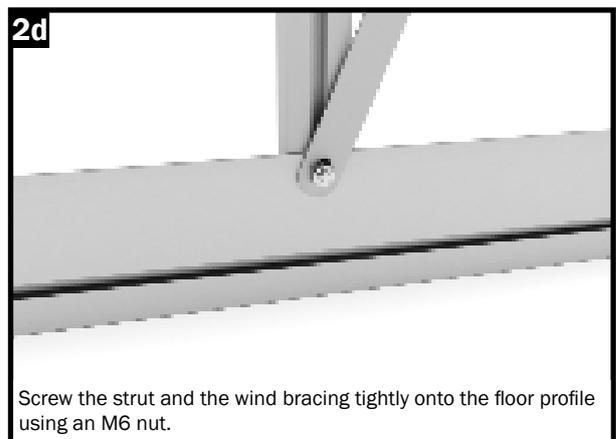
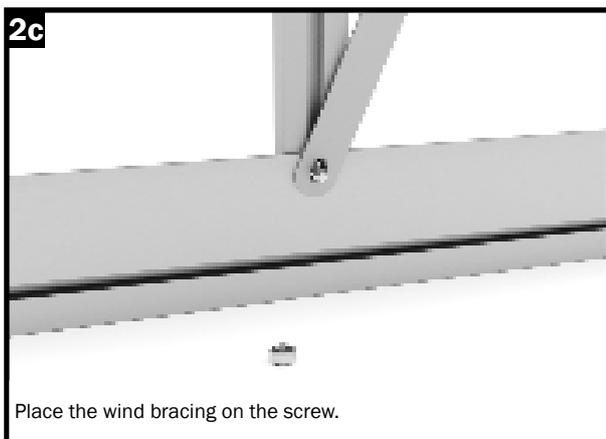
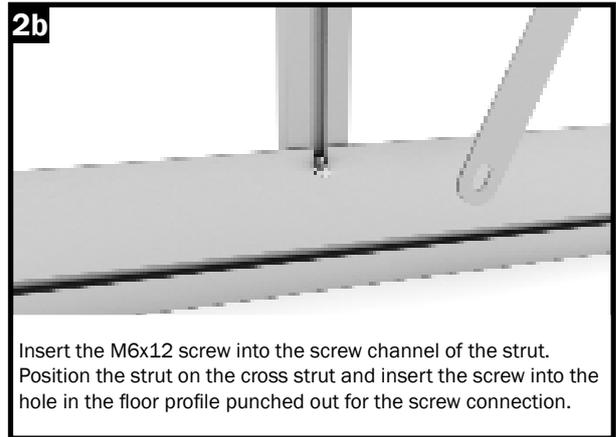
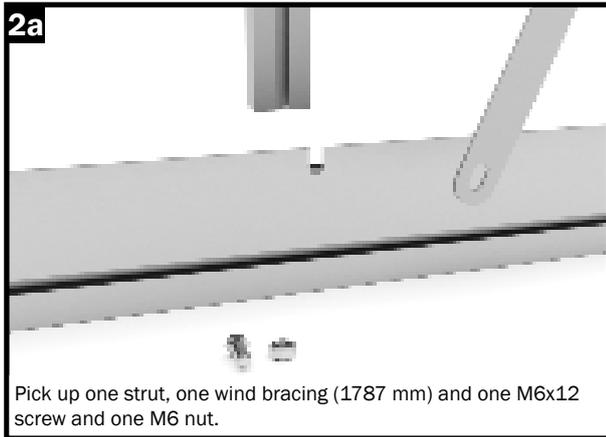
Insert the M6x12 screw into the screw channel of the strut. Position the strut on the cross strut and insert the screw into the hole in the cross strut punched out for the screw connection.

1c

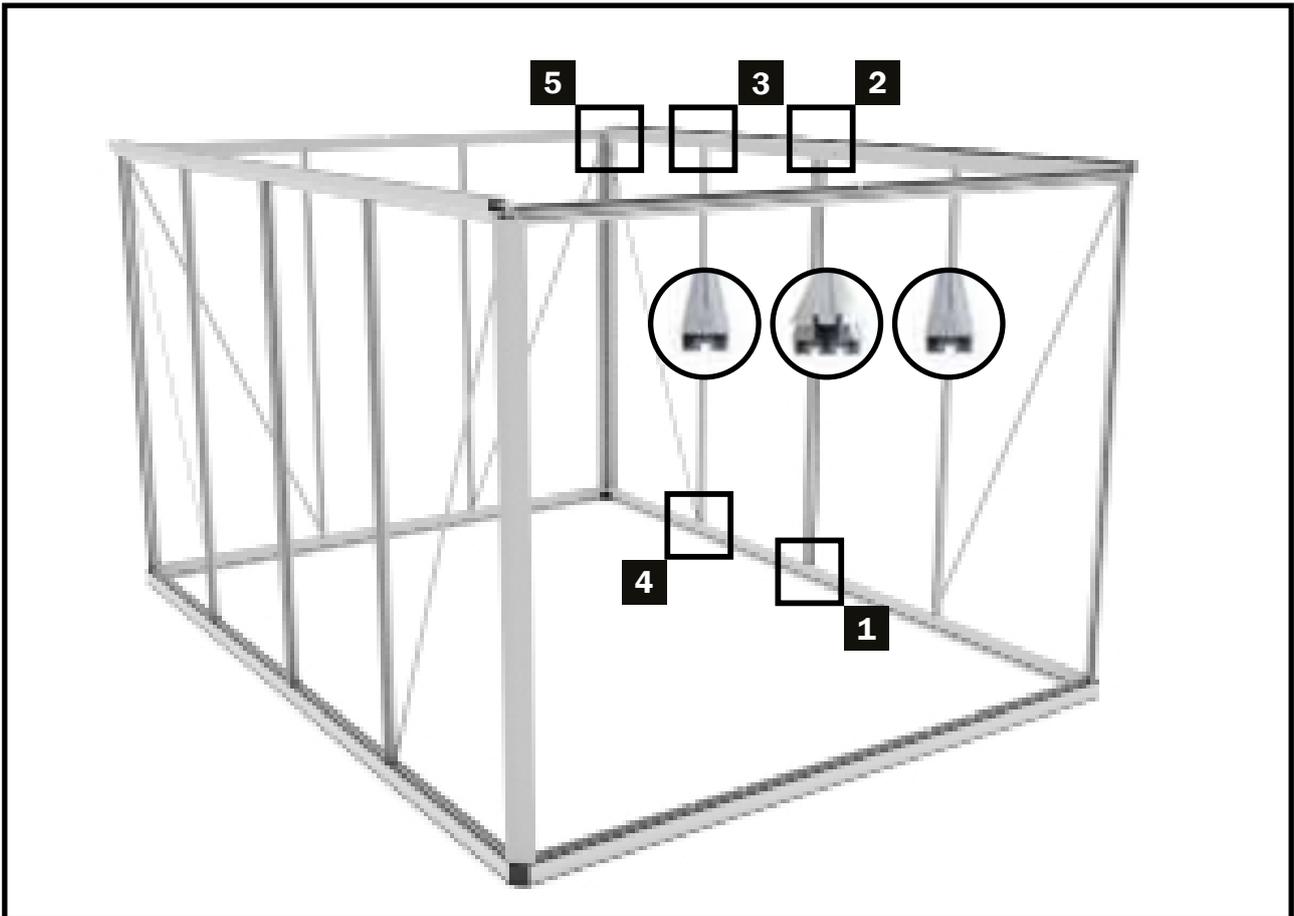


Screw the strut tightly onto the cross strut using an M6 nut.

Step 6 – Assembling the rear wall struts



Step 7 – Strut assembly (sidewall)



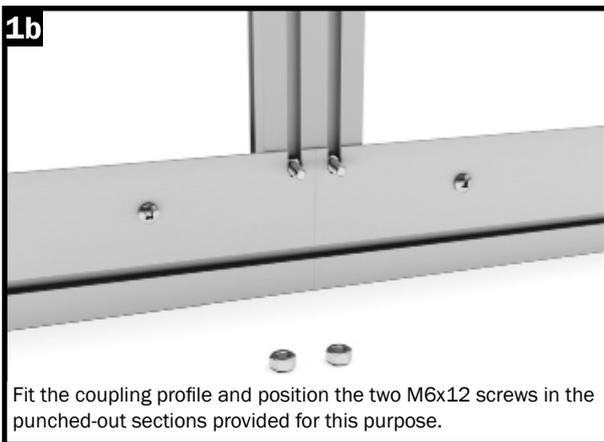
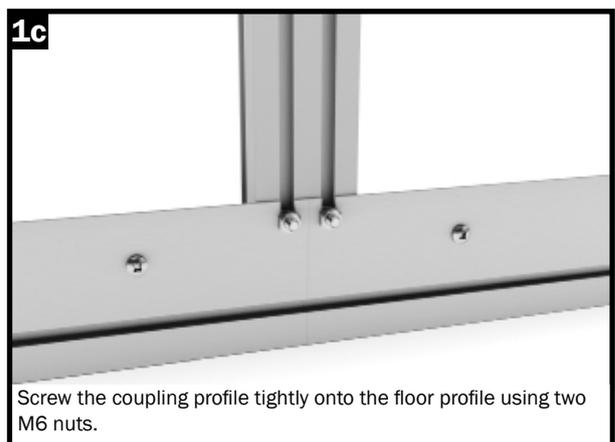
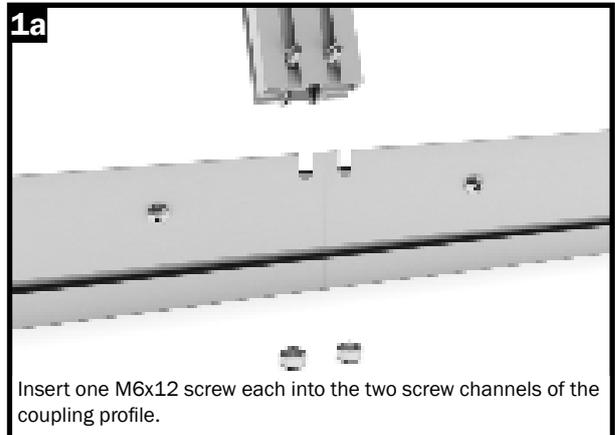
STEP 7 – Strut assembly of the sidewalls

In the following assembly phase, the struts and the coupling struts are installed on the side walls, together with the respective two wind bracings.

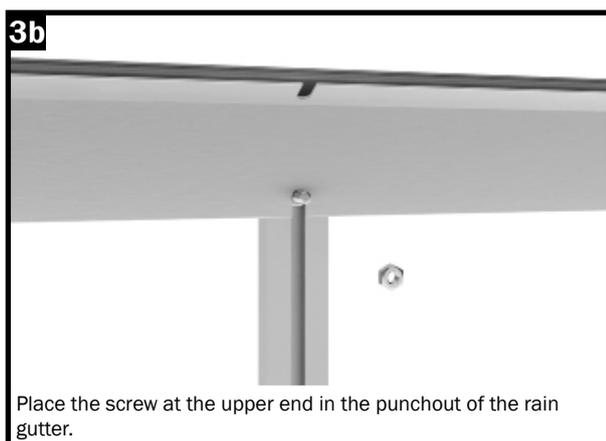
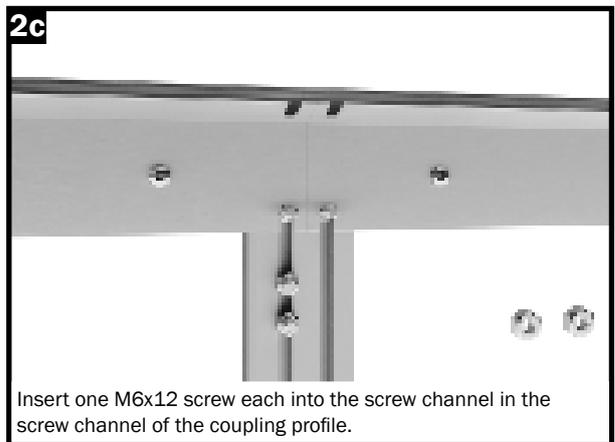
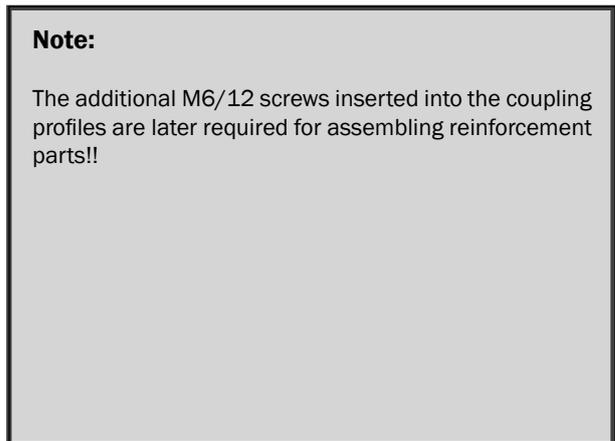
Please note that the longitudinal profiles (ridge, rain gutters and floor profiles) are not yet divided for the TITAN 21 model.

In contrast to Figures 1 and 2, these models do not use a coupling strut.

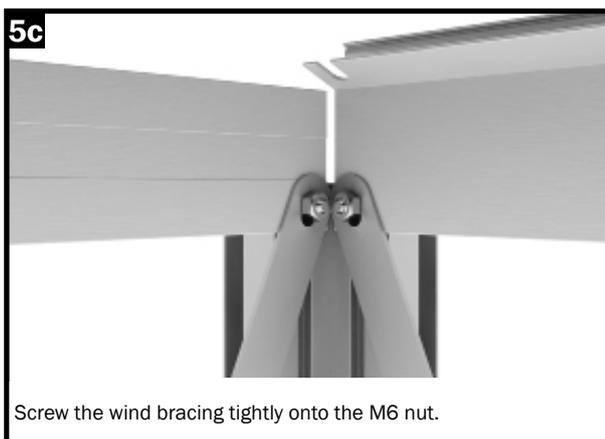
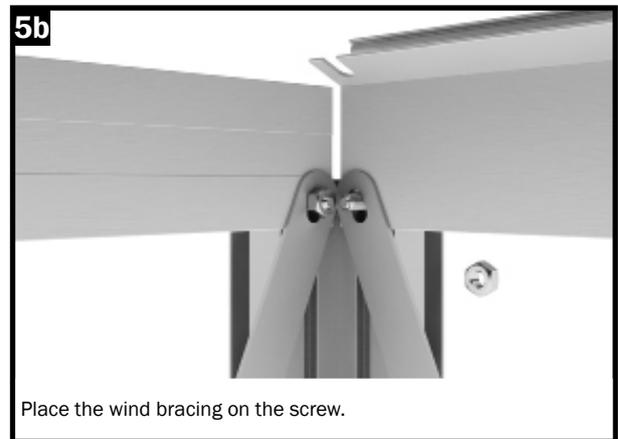
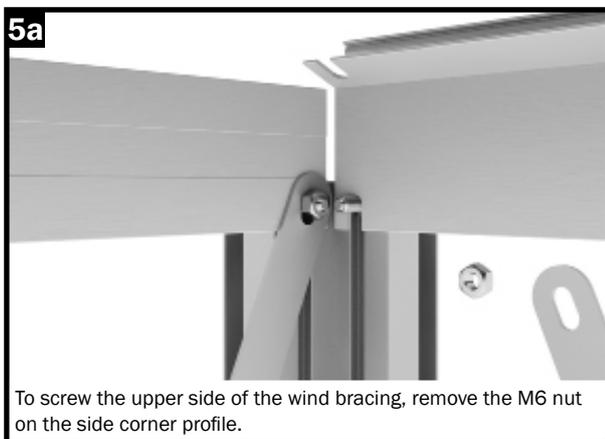
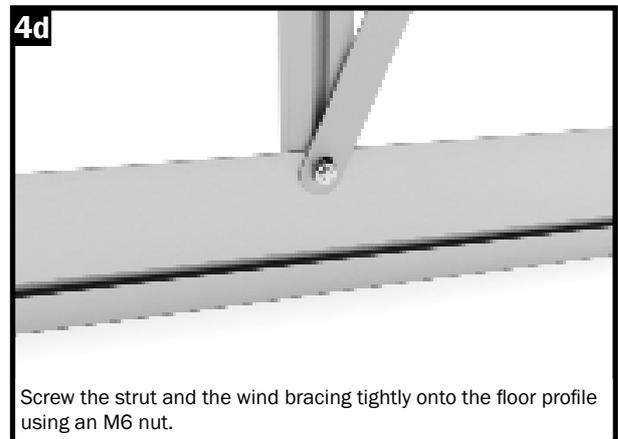
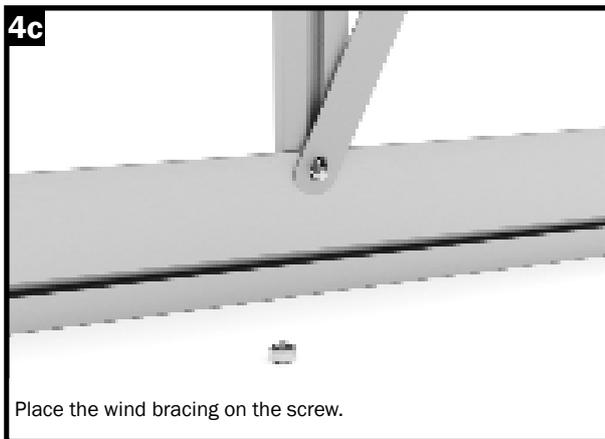
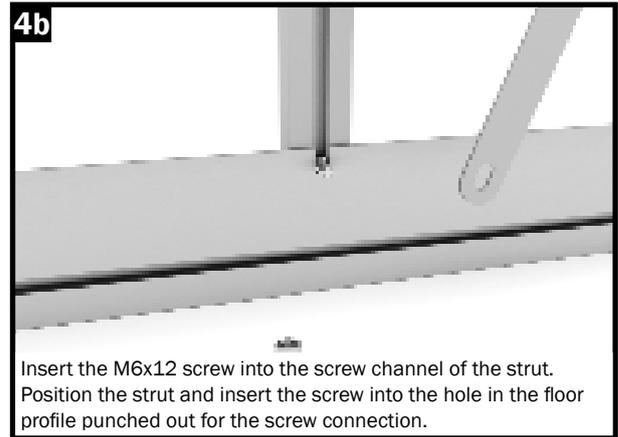
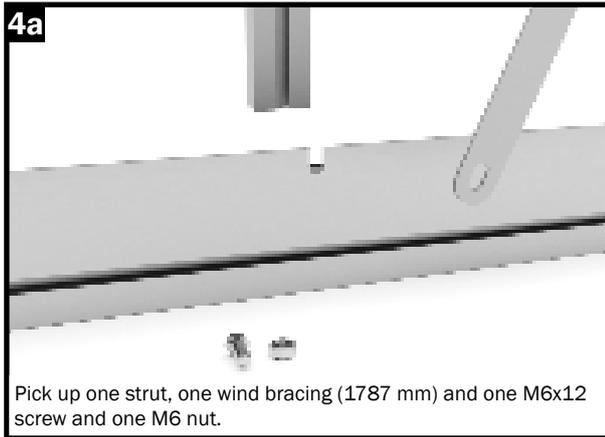
Only side wall struts are installed on each side – see Figures 3 to 5



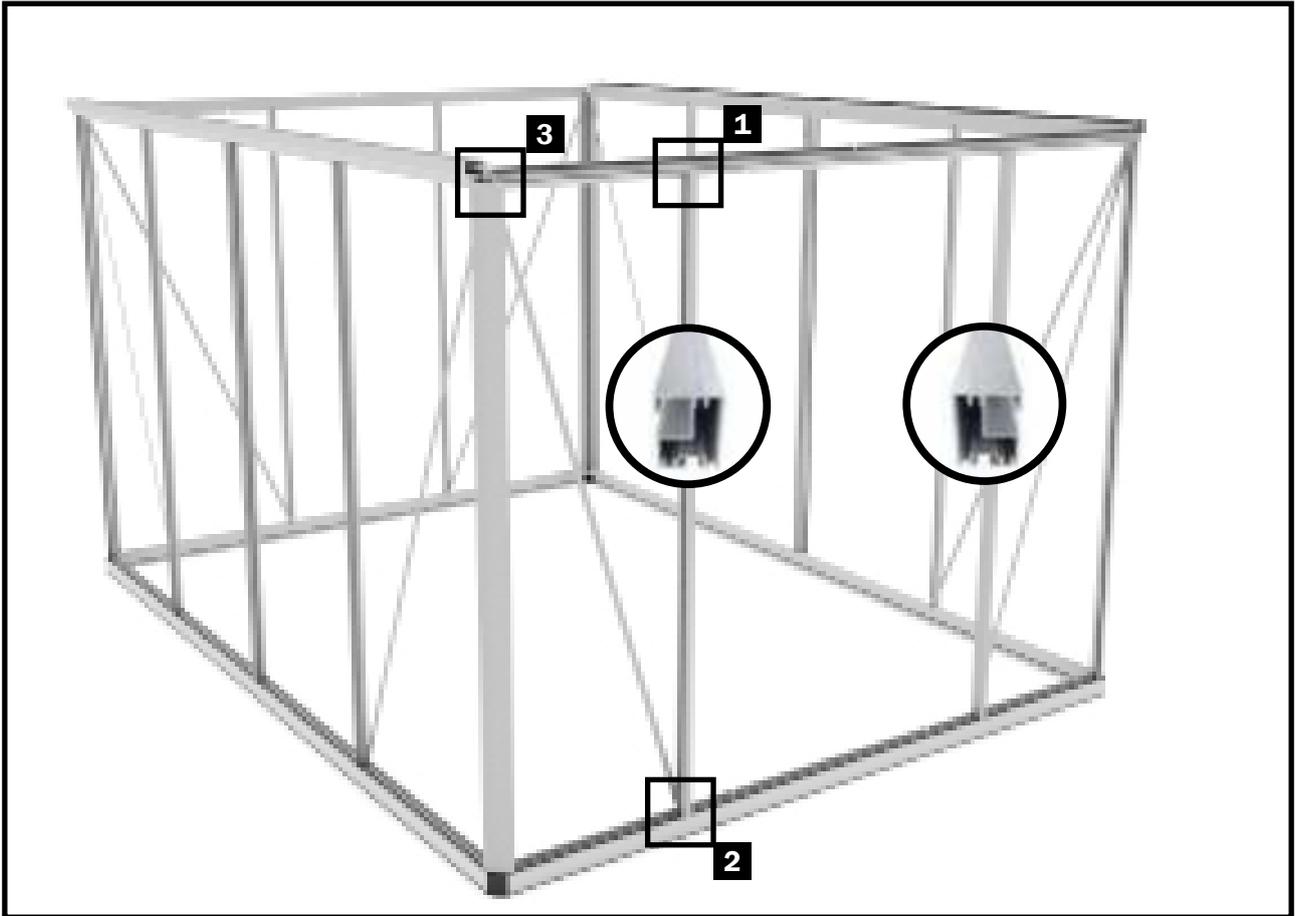
Step 7 – Strut assembly (sidewall)



Step 7 – Strut assembly (sidewall)

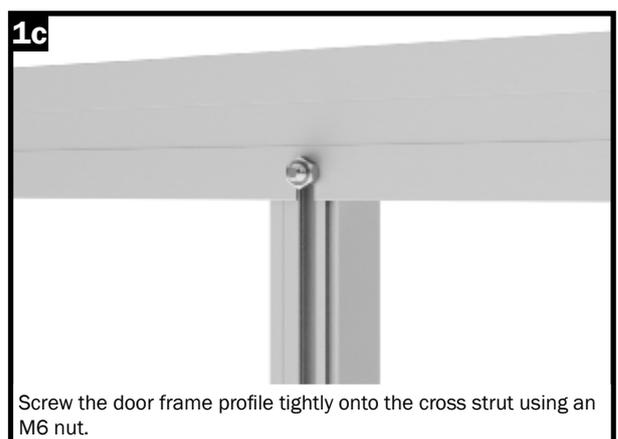
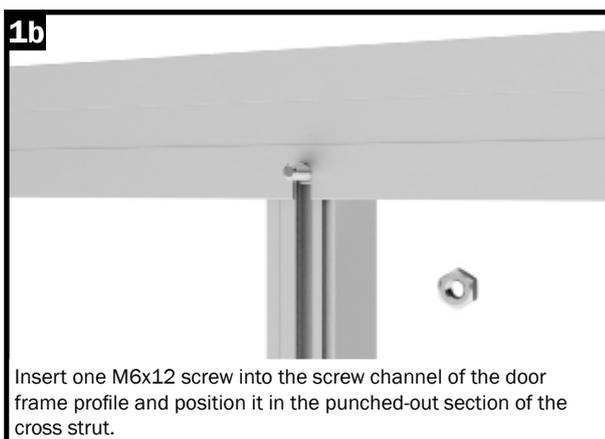
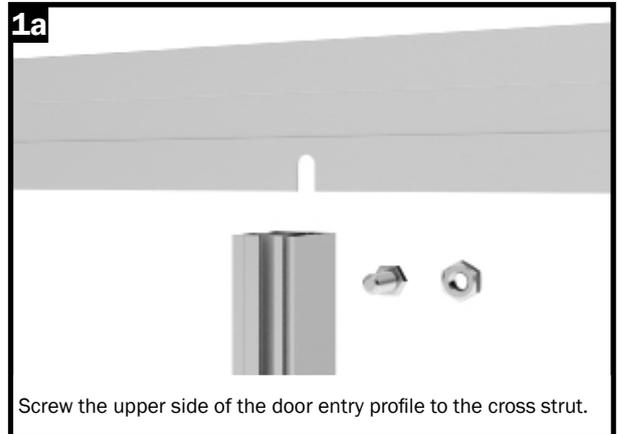


Step 8 – Door frame profiles

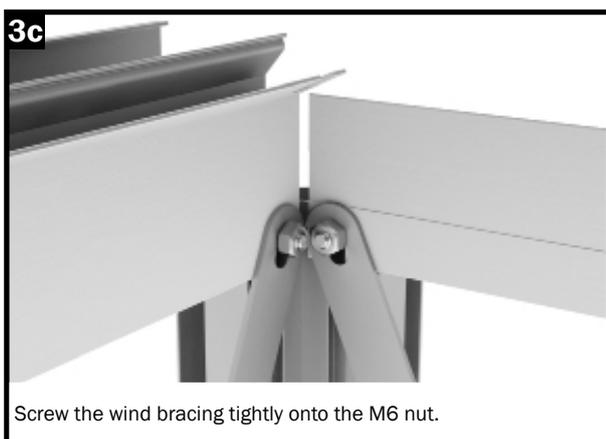
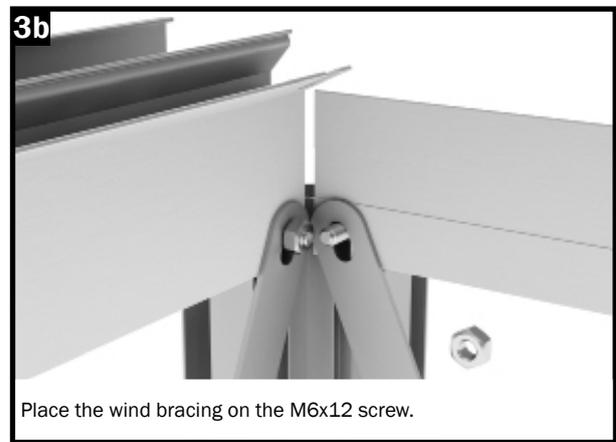
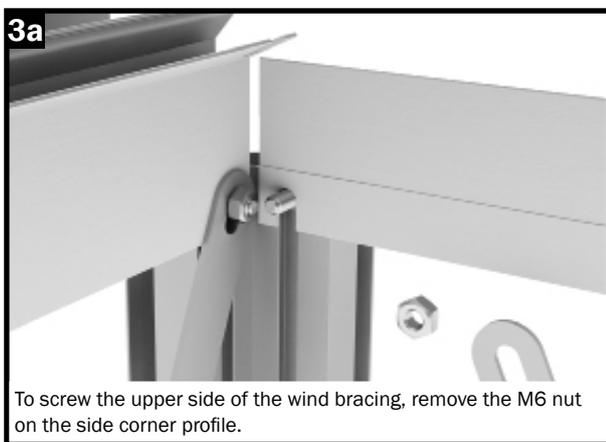
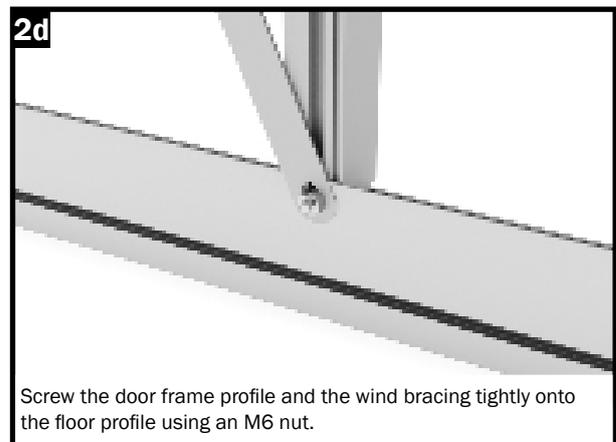
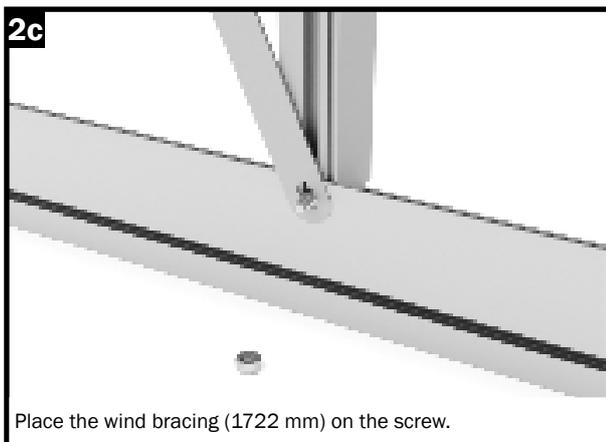
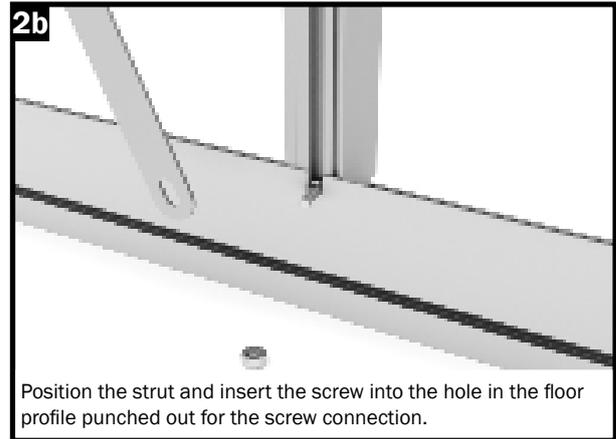
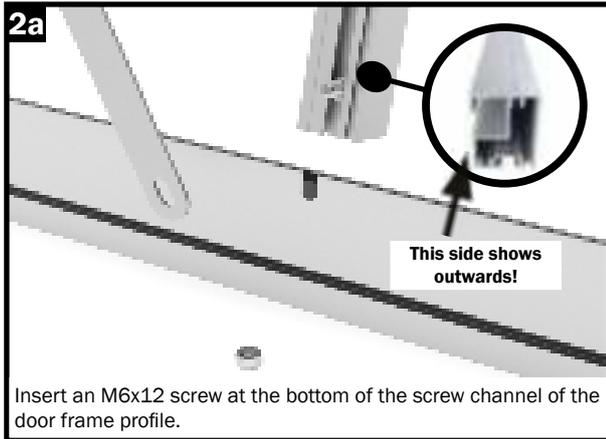


STEP 8 – Door frame profiles

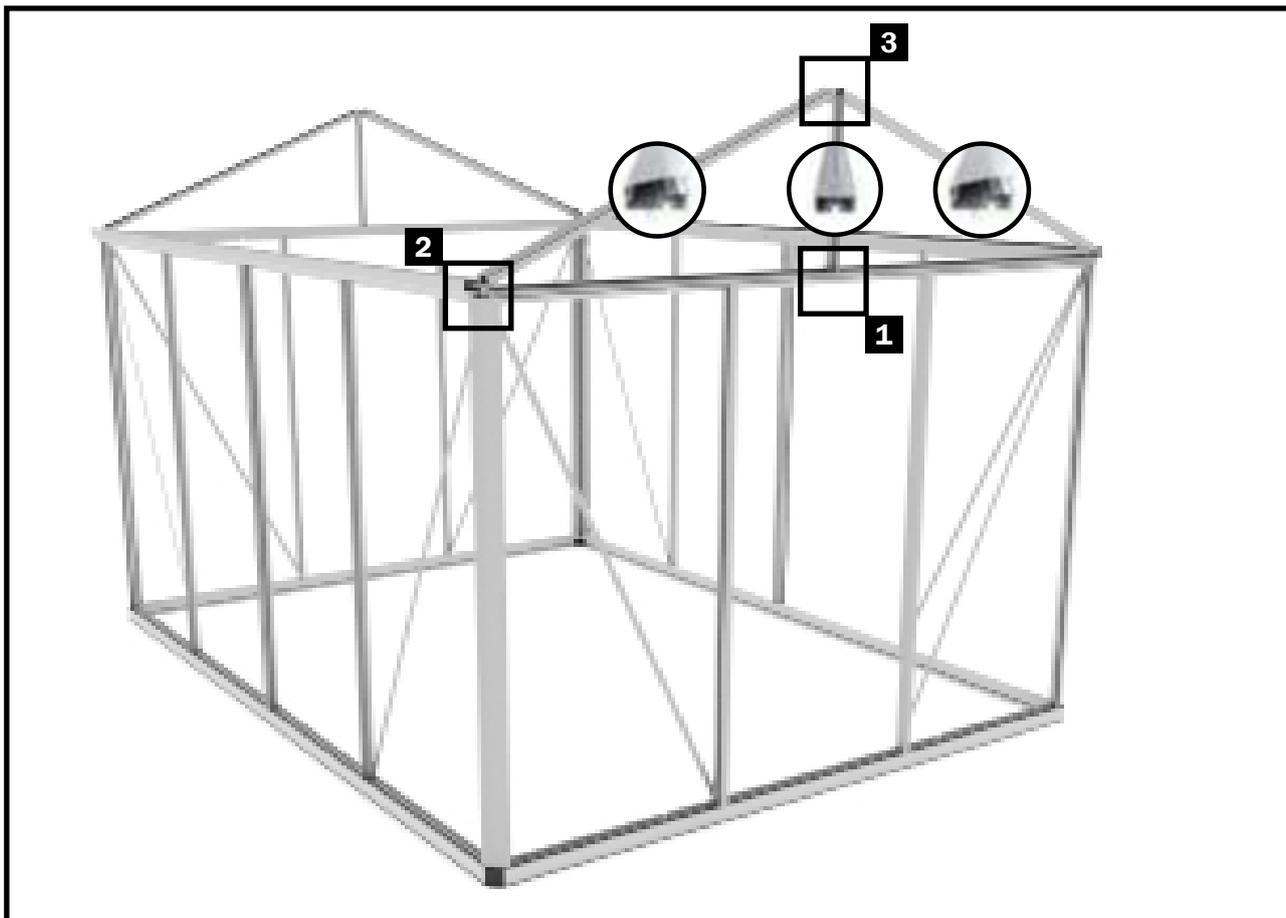
In the following assembly phase, the door frame profiles, together with the two wind bracings, are installed on the front wall.



Step 8 – Door frame profiles



Step 9 – Roof support and gable corner profiles

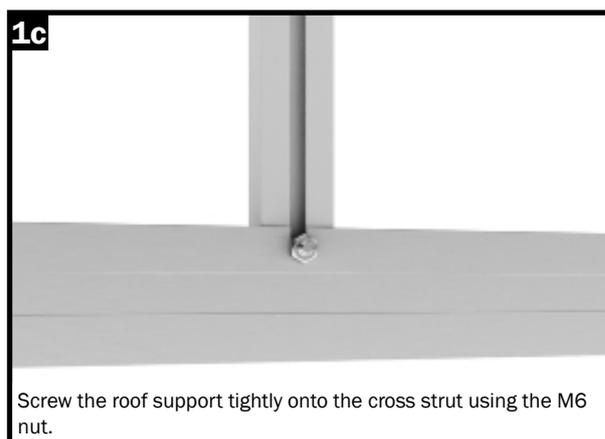
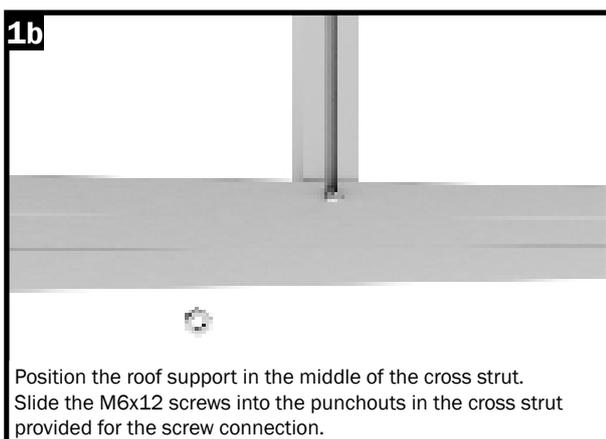
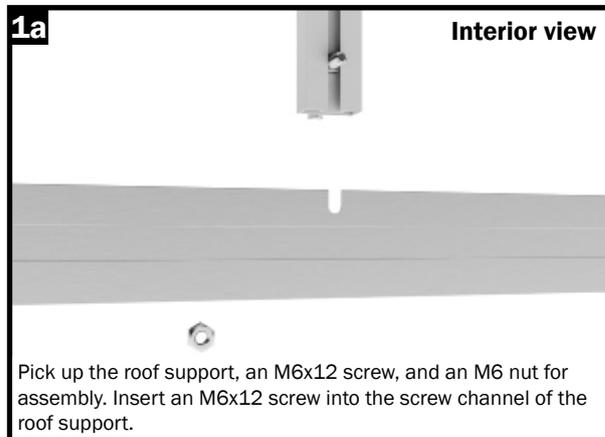


STEP 9 – Roof corner profiles

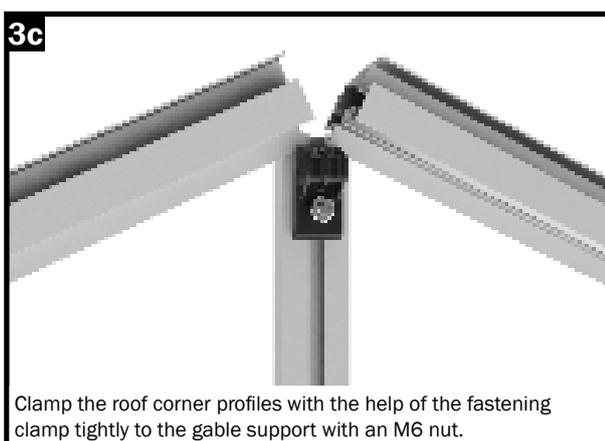
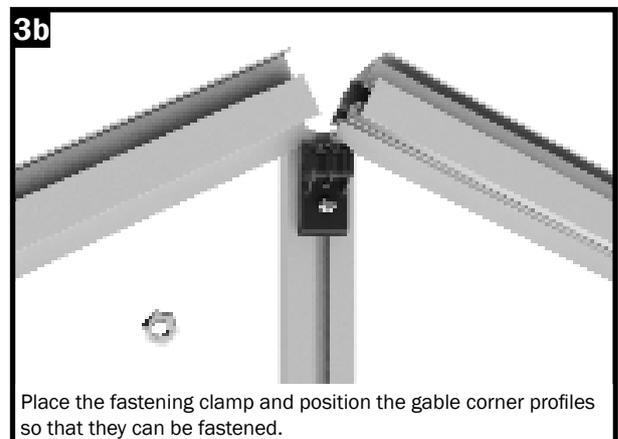
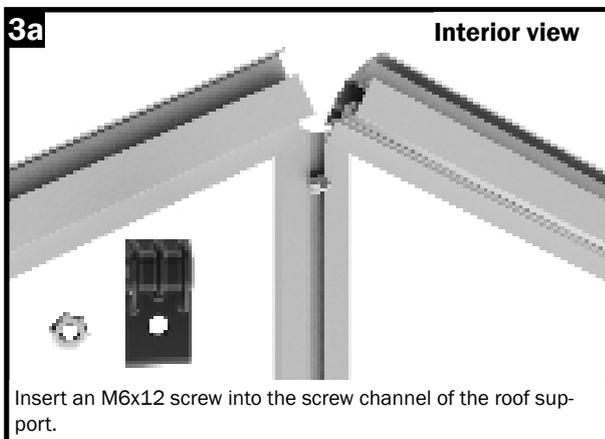
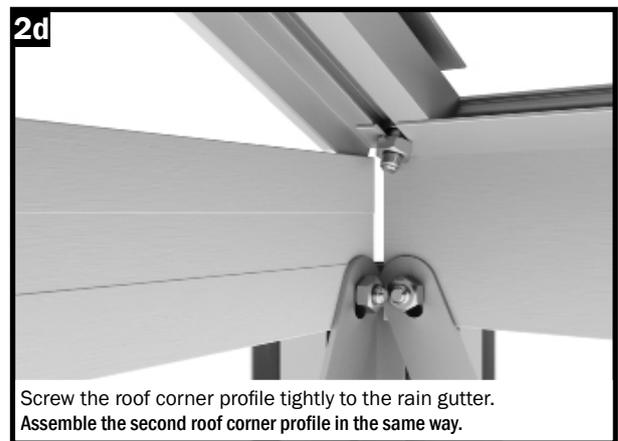
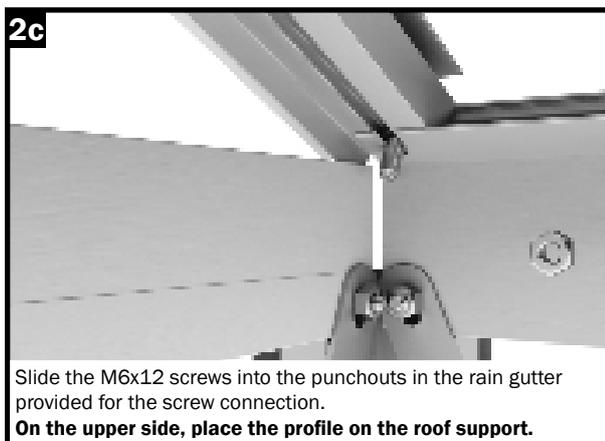
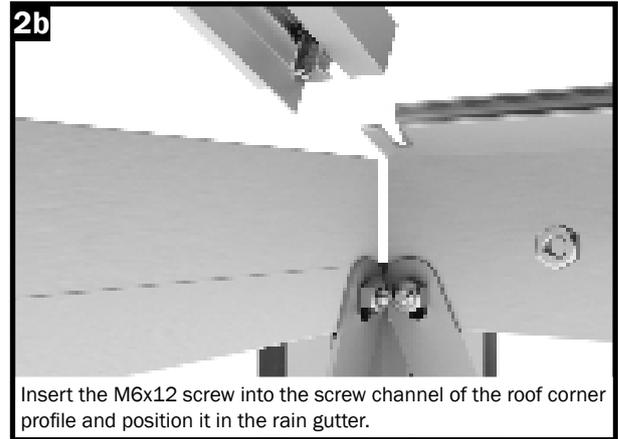
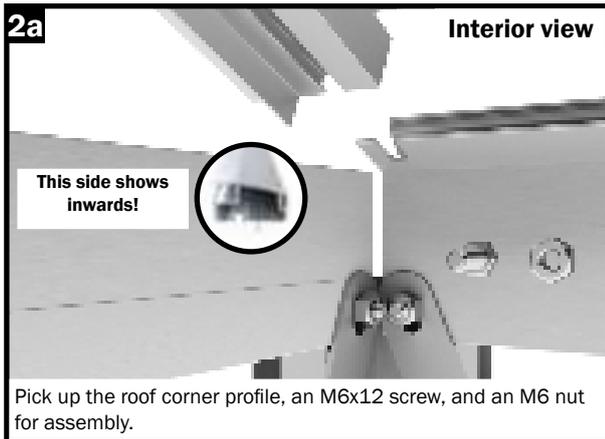
In the following assembly phase, the gable corner profiles, as well as the roof supports, are installed.

Note:

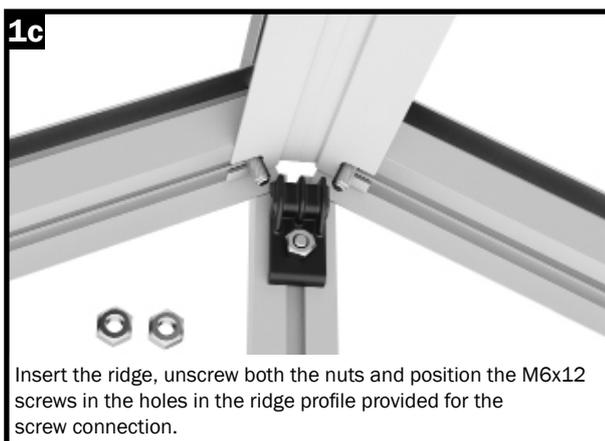
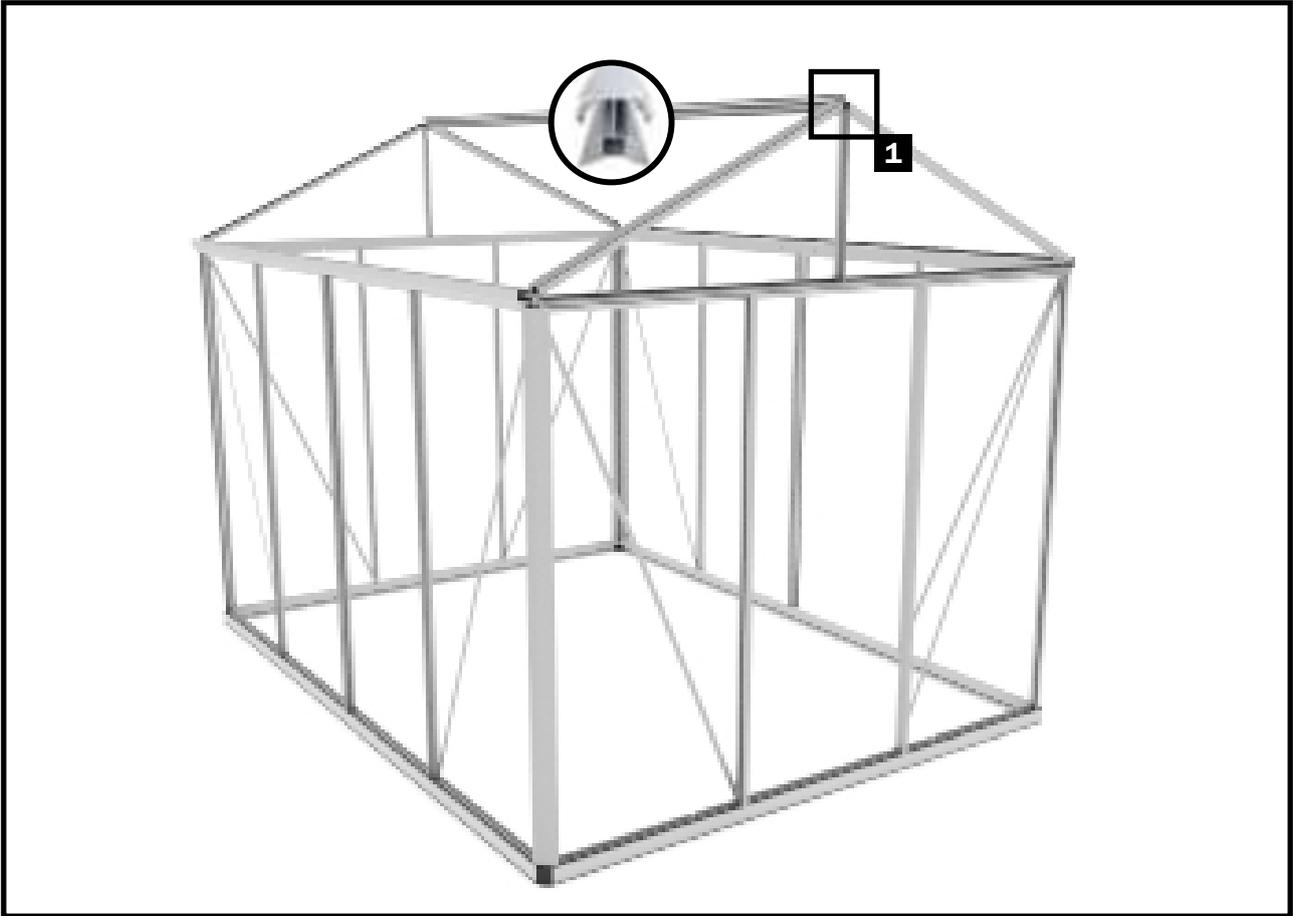
For assembling the roof corner profiles, seek help from a second person!



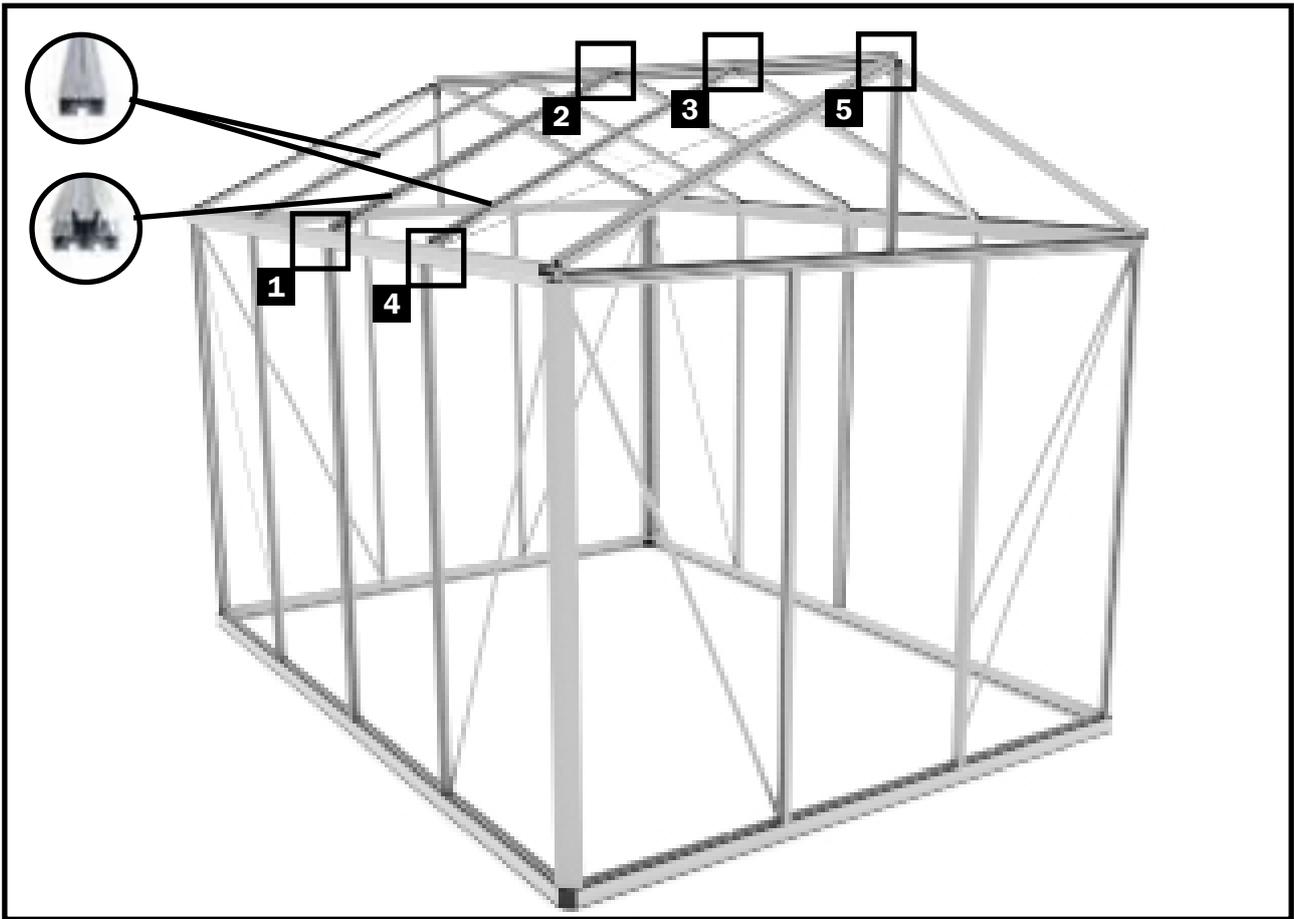
Step 9 – Roof support and gable corner profiles



Step 10 - Ridge



Step 11 – Assembling the roof struts

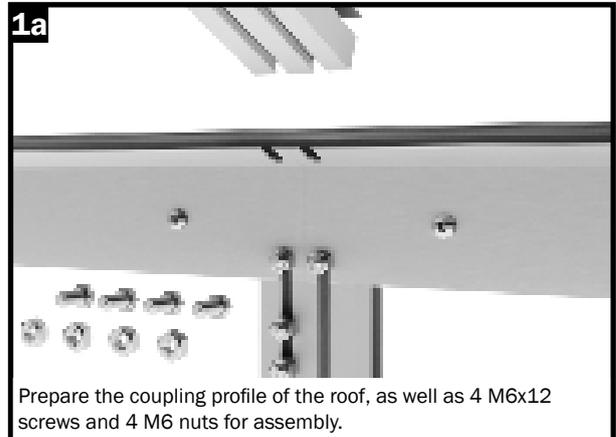


Step 11 – Assembling the roof struts

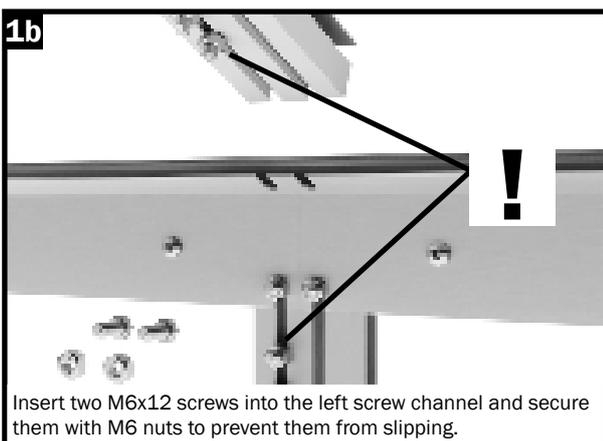
In the following assembly phase, the struts are installed on the roof surfaces.

Please note that the longitudinal profiles are not yet divided for the TITAN 21 model.

As with the side wall struts, these models do not require the coupling profile to be assembled.



Prepare the coupling profile of the roof, as well as 4 M6x12 screws and 4 M6 nuts for assembly.

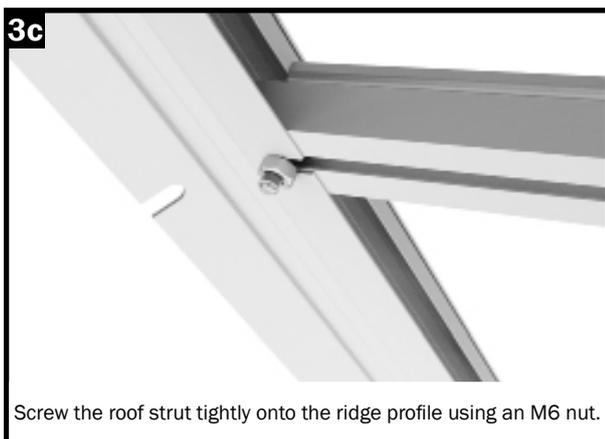
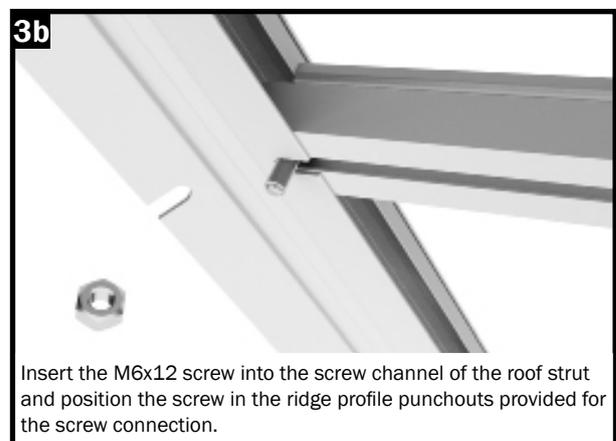
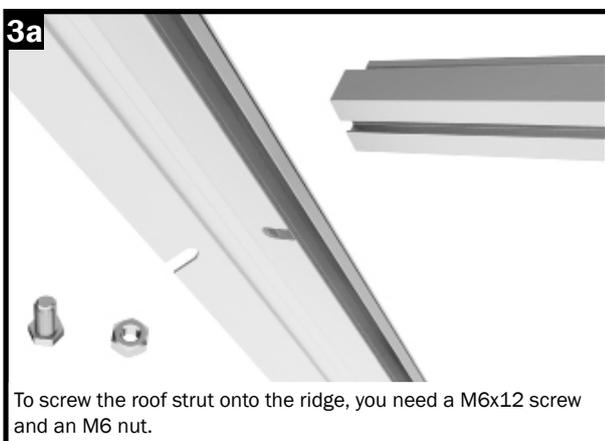
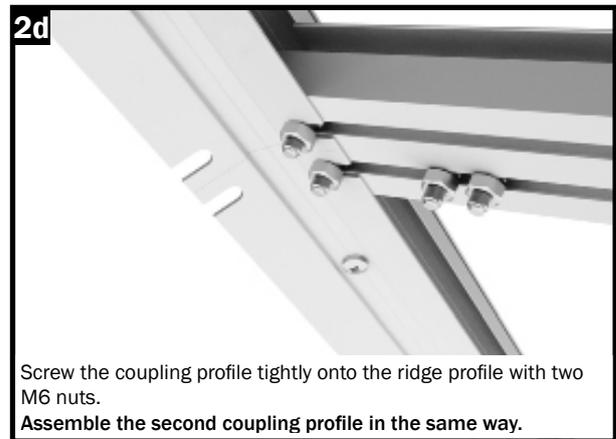
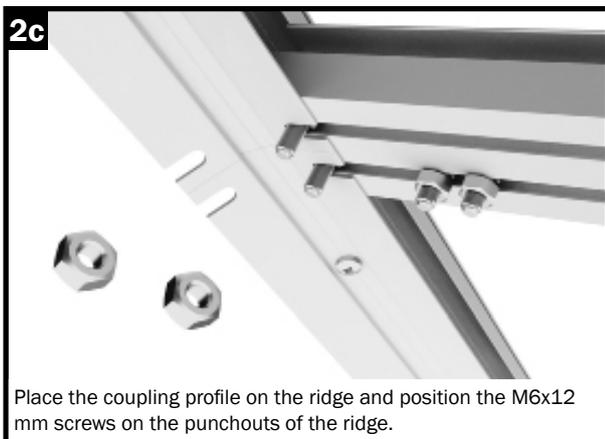
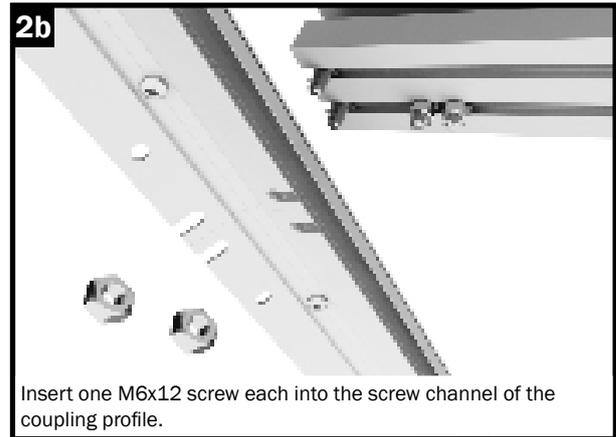
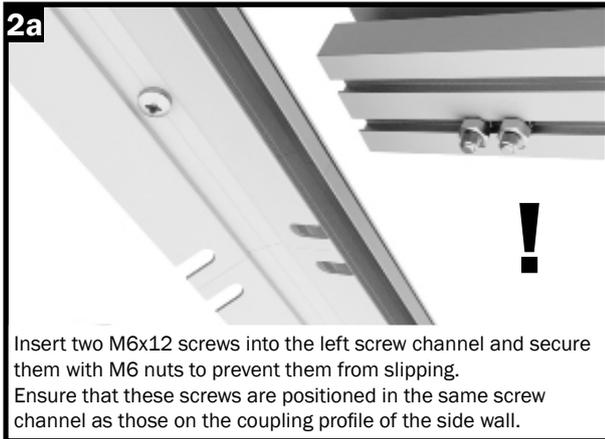


Insert two M6x12 screws into the left screw channel and secure them with M6 nuts to prevent them from slipping.

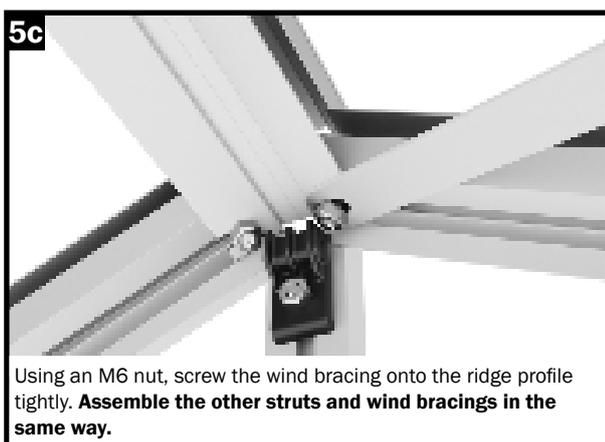
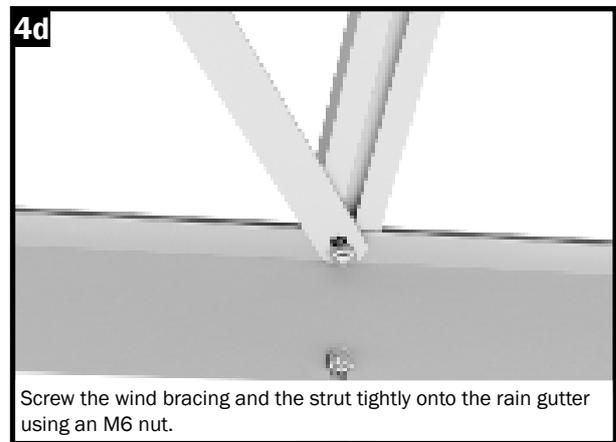
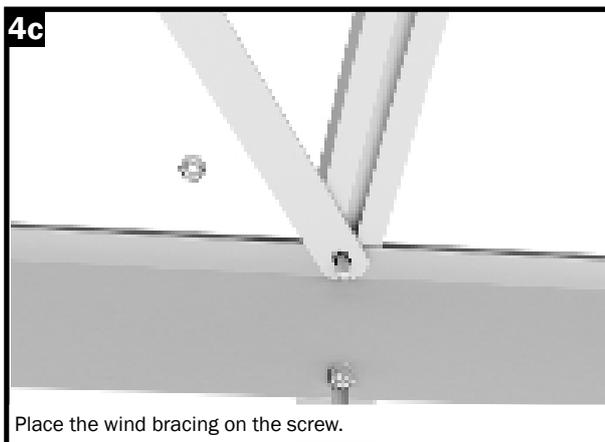
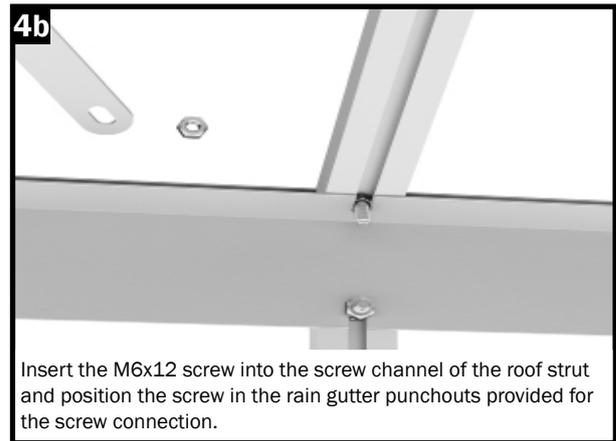
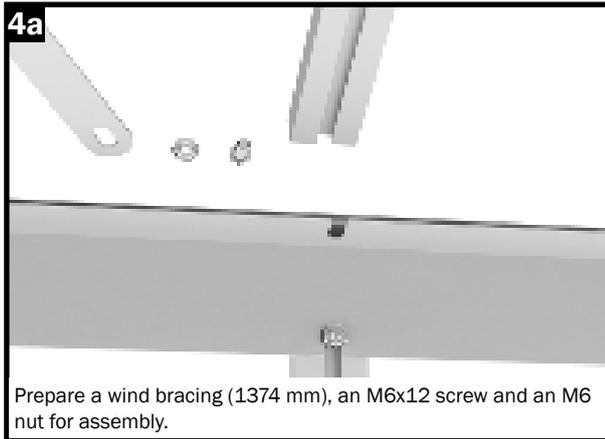


Insert one M6x12 screw each into the screw channel and screw the coupling profile firmly to the rain gutter.

Step 11 – Assembling the roof struts



Step 11 – Assembling the roof struts



Step 12 – Assembling the gusset plates (reinforcement of ridge, eaves)

Step 12a – Assembling the gusset plates

To further improve the roof loads of our greenhouses, we have provided the areas where the longitudinal profiles (ridge and rain gutter) are divided with additional gusset plates.

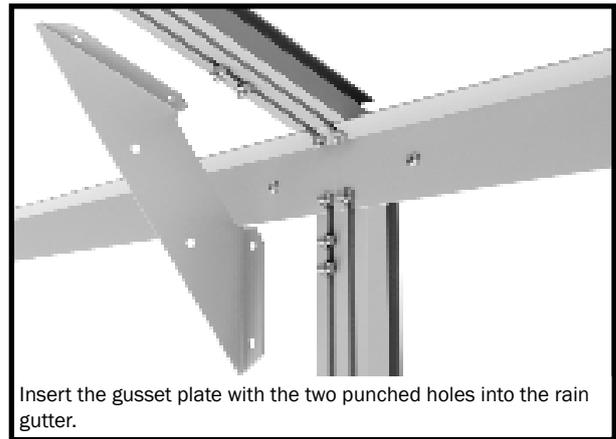
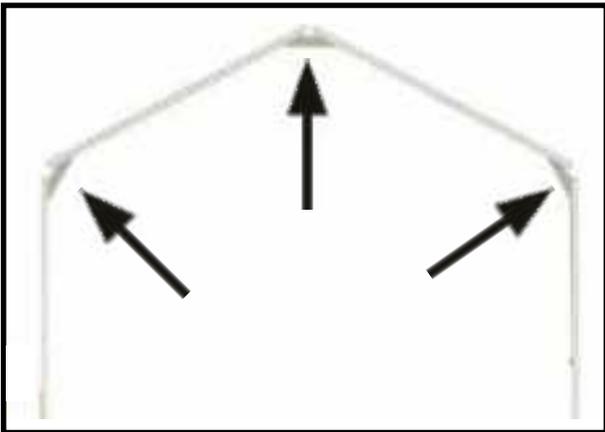
Please install one gusset plate each on the ridge partition and one on each of the two rain gutters. Please pay attention to the difference in the angles of the gusset plates at the ridge versus the rain gutter!

(The ridge gusset plate has one punched-out hole, the rain gutter gusset plate has two punched-out holes)

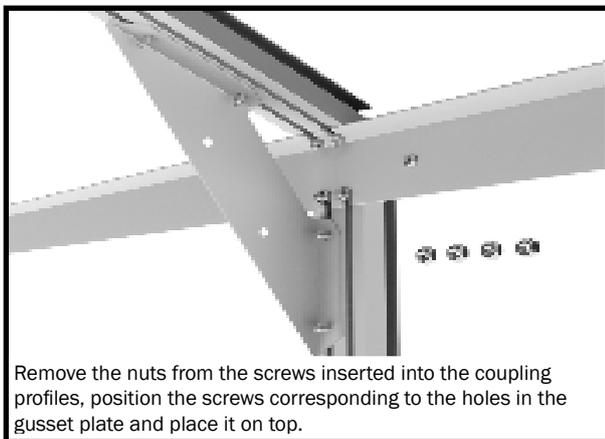
Tip:

To achieve the best stability, we recommend that you slightly span the ridge outwards with a support before installing the gusset plate onto the ridge. When installing the gusset plates onto the rain gutters, please make sure that they are aligned exactly straight and under no circumstances bend outwards!

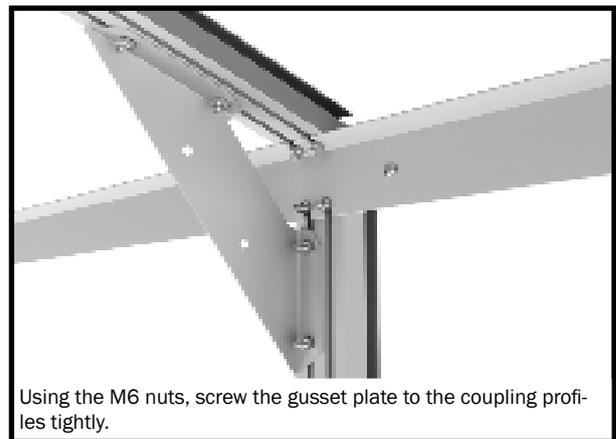
It is best to remove the support of the ridge only after the greenhouse has been glazed!



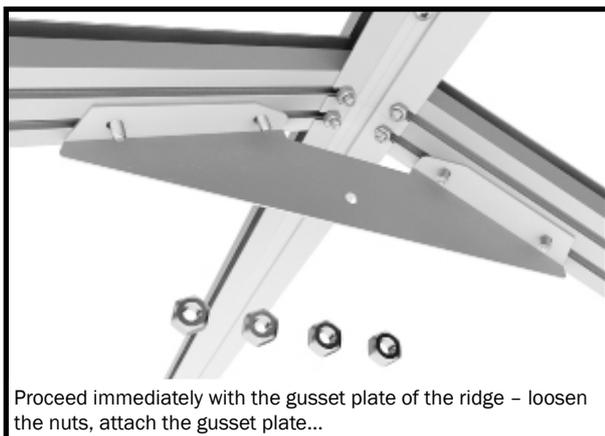
Insert the gusset plate with the two punched holes into the rain gutter.



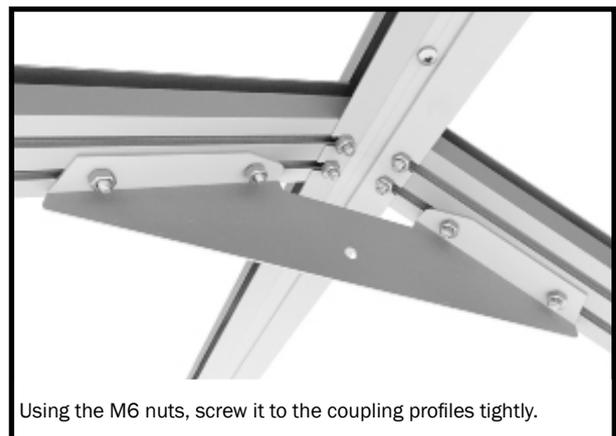
Remove the nuts from the screws inserted into the coupling profiles, position the screws corresponding to the holes in the gusset plate and place it on top.



Using the M6 nuts, screw the gusset plate to the coupling profiles tightly.



Proceed immediately with the gusset plate of the ridge – loosen the nuts, attach the gusset plate...



Using the M6 nuts, screw it to the coupling profiles tightly.

Step 13 – Inserting the twin-wall sheets

STEP 13 – Inserting the twin-wall sheets

In the following steps, the twin-wall sheets of your greenhouse are inserted into the prepared aluminium frame.

BEFORE ASSEMBLY:

Note that the supplied wall sheets have an inside and outside. The outside is UV-resistant and is marked with the inscription “outside”.

Alternatively, a film may have been applied to the sheets – the side with the film is the outer side.

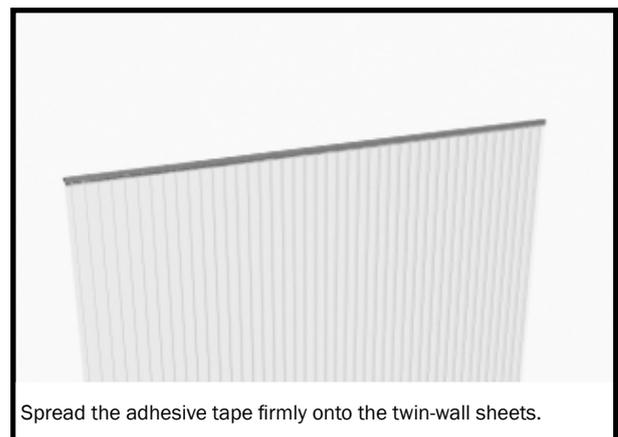
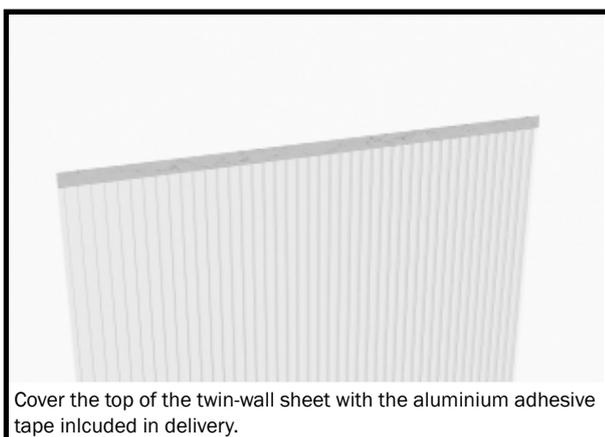
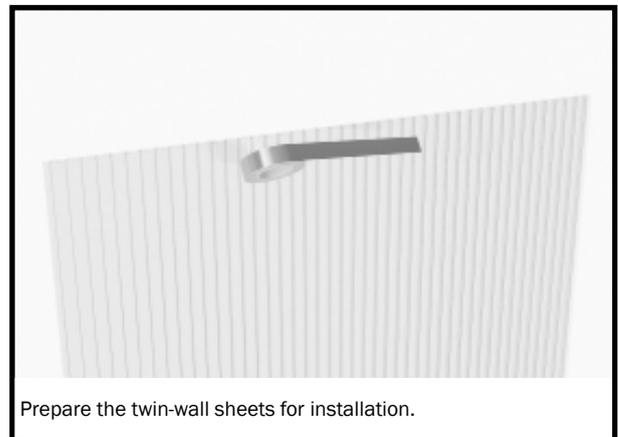
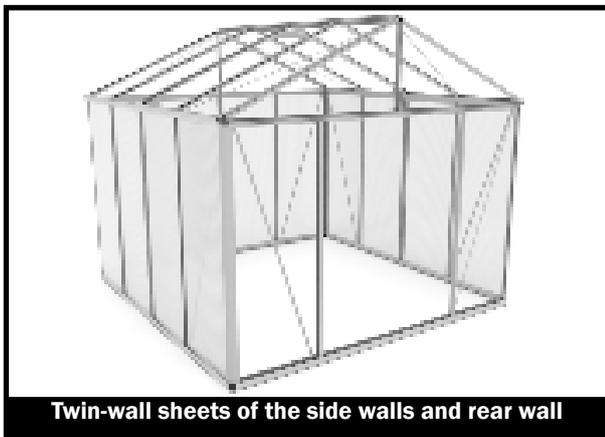


NOTE:

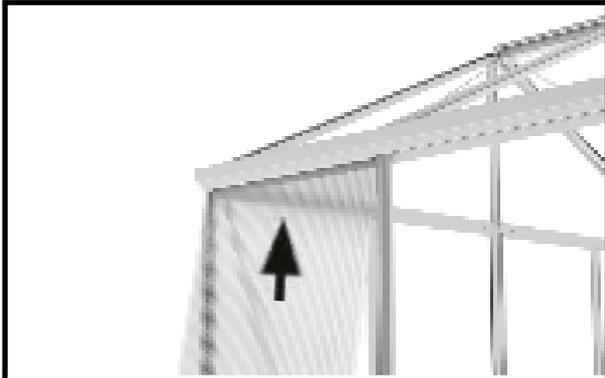
An aluminium adhesive tape is supplied to cover the upper edge of the twin-wall sheets. This prevents insects from entering the twin-wall sheets from above. We recommend not closing the underside of the twin-wall sheets with the adhesive tape, so that any condensation water that may occur can drain downwards!

Some of the plastic profiles must be fitted to the correct length.

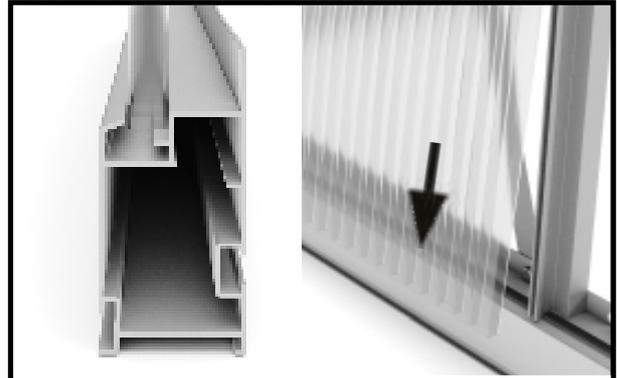
Please use a fine-toothed saw for this!



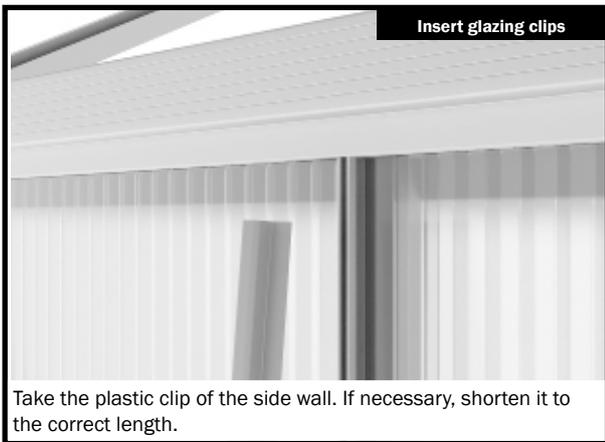
Step 13 – Inserting the twin-wall sheets



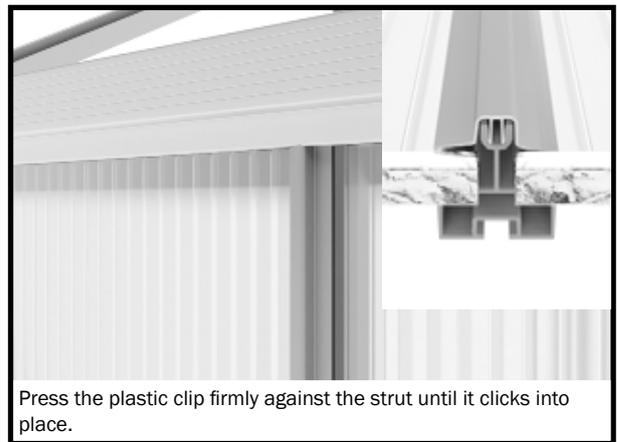
Insert the side wall panels into the frame by pressing them into the rain gutter from below.



Press the bottom against the side wall strut and then into the groove of the floor profile.



Take the plastic clip of the side wall. If necessary, shorten it to the correct length.



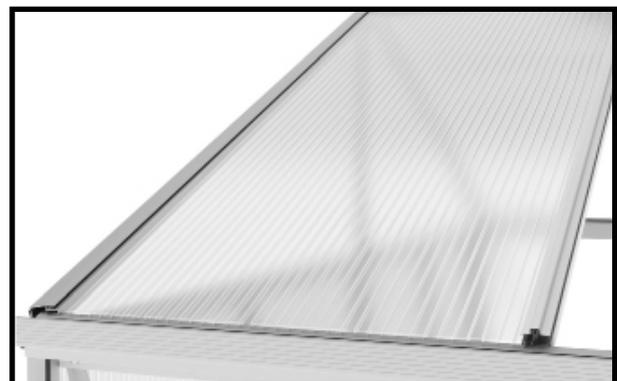
Press the plastic clip firmly against the strut until it clicks into place.

Glaze the side walls and the roof in the same way.

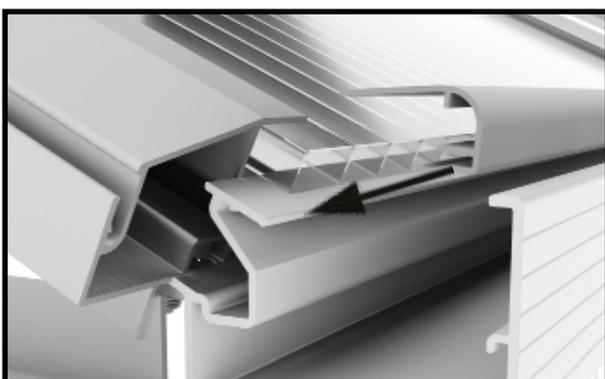
Note on twin-wall roof sheets:

When glazing the roof areas, you need to decide in advance where the windows will be placed. The windows are glazed in advance to mid height.

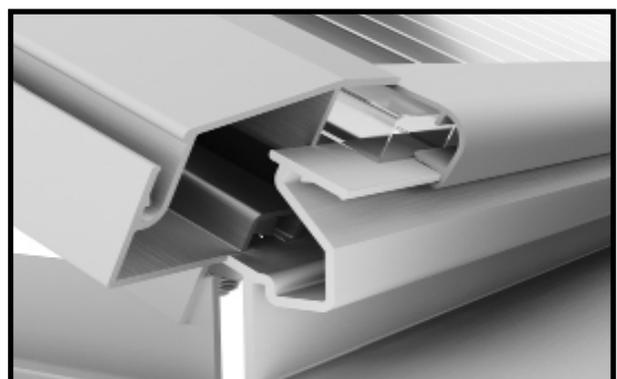
We recommend installing the window openings on the side facing away from the prevailing wind, if possible.



Insert the roof or window panels into the roof surface sections.



Fix the retaining clips onto the roof panels and the rain gutter.

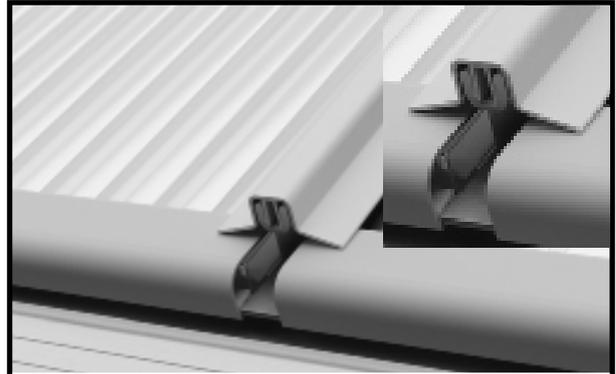


Press the clip firmly so that it snaps into place on the rain gutter.

Step 13 – Inserting the twin-wall sheets



Take a plastic clip. If necessary, shorten it to the appropriate length.



Press the plastic clip firmly against the strut until it clicks into place.

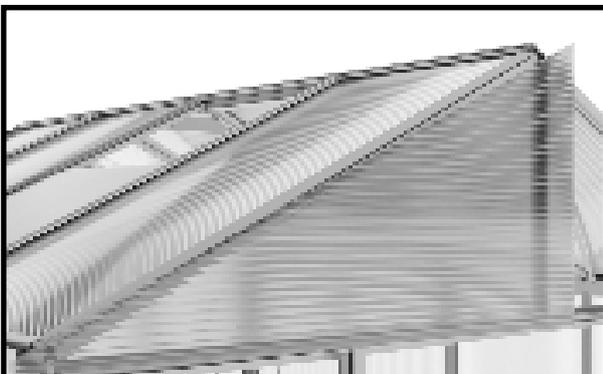
Installing the twin-wall sheets onto the front wall

Now attach the twin-wall sheets to the front wall. It is best to start with the triangular plates and then insert the wall plates.

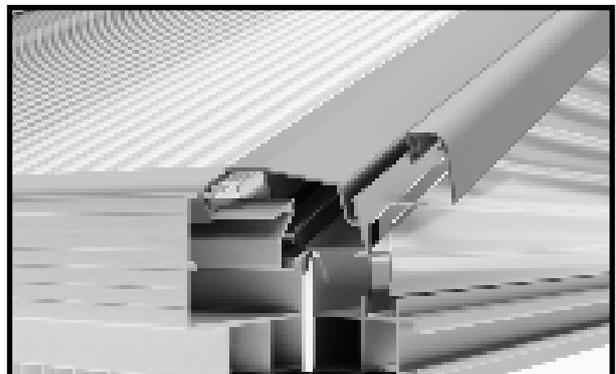
If the front wall has been glazed, please insert the glazing on the rear wall.



When glazing the front or rear wall, it is best to start with inserting the gable plates.



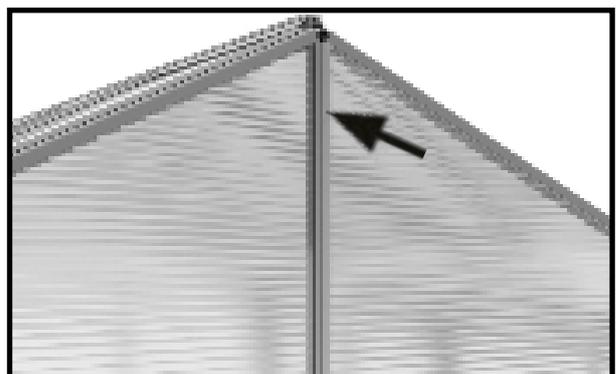
Insert the triangular plate so that it rests on the cross strut and abuts firmly against the gable support.



First cut the retaining clip to the same length as the roof corner profile. Fit the clip into the roof corner profile.



Press the clip firmly so that it snaps into place on the roof corner profile. Repeat this with the second triangle.



Shorten a plastic clip to the length of the gable support and press it firmly onto the strut until it clicks into place.

Step 13 – Inserting the twin-wall sheets

NOTE:

To glaze the two surfaces to the left and right of the door frame, the two already installed door frame profiles must be removed again, the twin-wall sheet must be inserted to the left and right of the door frame and then the door frame profile must be screwed back.

In this case, the twin-wall sheet is inserted into the „U“ shape on the door frame profile, holding it firmly in place.



Prepare the first twin-wall sheet for glazing the front wall.

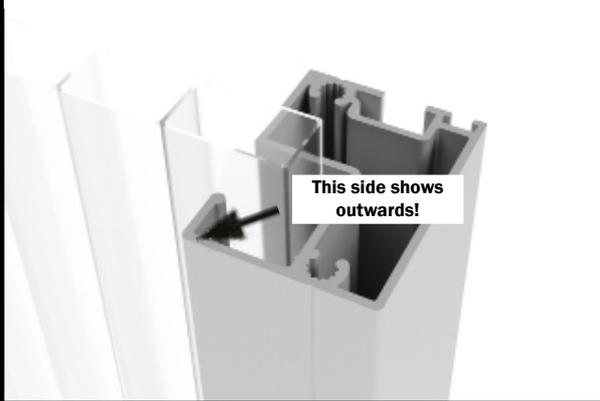


Remove the door frame profile of the front wall and insert the twin-wall sheet.

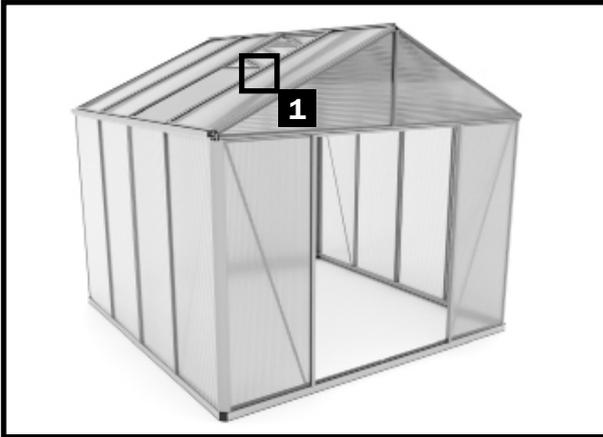


Fix the door frame/door side profile onto the twin-wall sheet and screw it back to the frame tightly.

Detail of the sheet in the door frame profile



This side shows outwards!

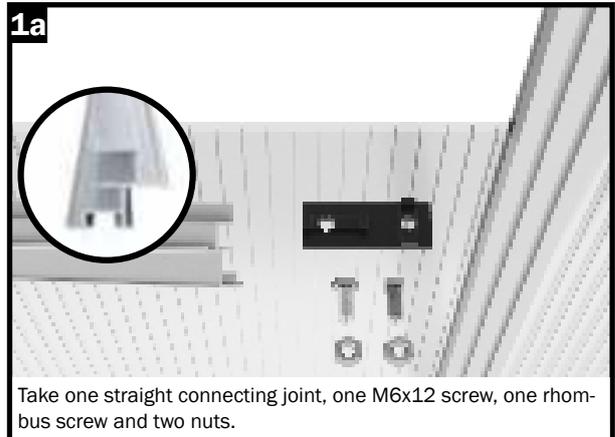


STEP 14 - WINDOW Stop

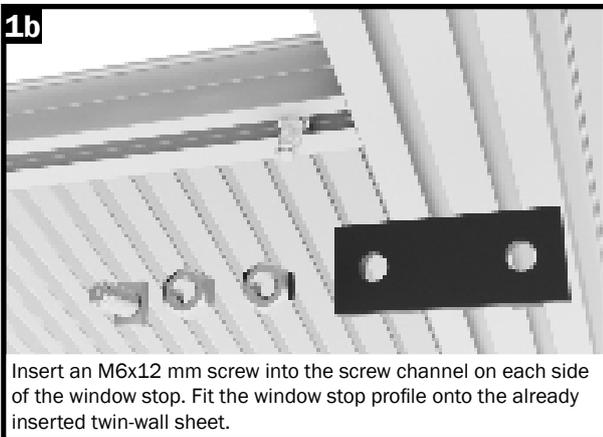
In the following phase of assembly the window stop is mounted at each of the roof panels where a window is to be fixed.

Note:

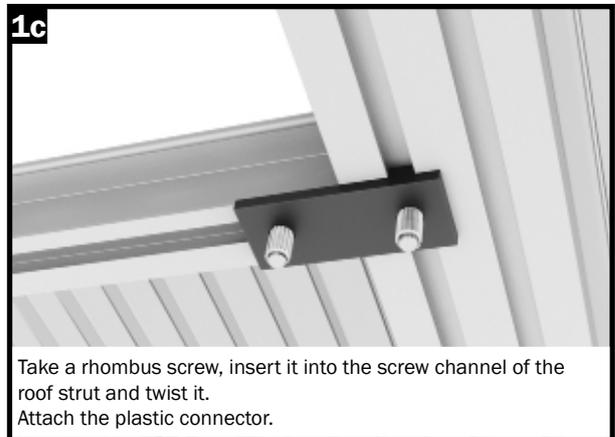
For installing the straight plastic connector (no. 665903) to the roof strut, use a rhombus screw 6/12 (no. 690622).



Take one straight connecting joint, one M6x12 screw, one rhombus screw and two nuts.



Insert an M6x12 mm screw into the screw channel on each side of the window stop. Fit the window stop profile onto the already inserted twin-wall sheet.



Take a rhombus screw, insert it into the screw channel of the roof strut and twist it. Attach the plastic connector.



Push the window stop down so that it abuts against the twin-wall sheet, and screw the plastic connector tightly with M6 nuts. Make sure that the rhombus screw stays wedged in the screw channel of the roof strut!

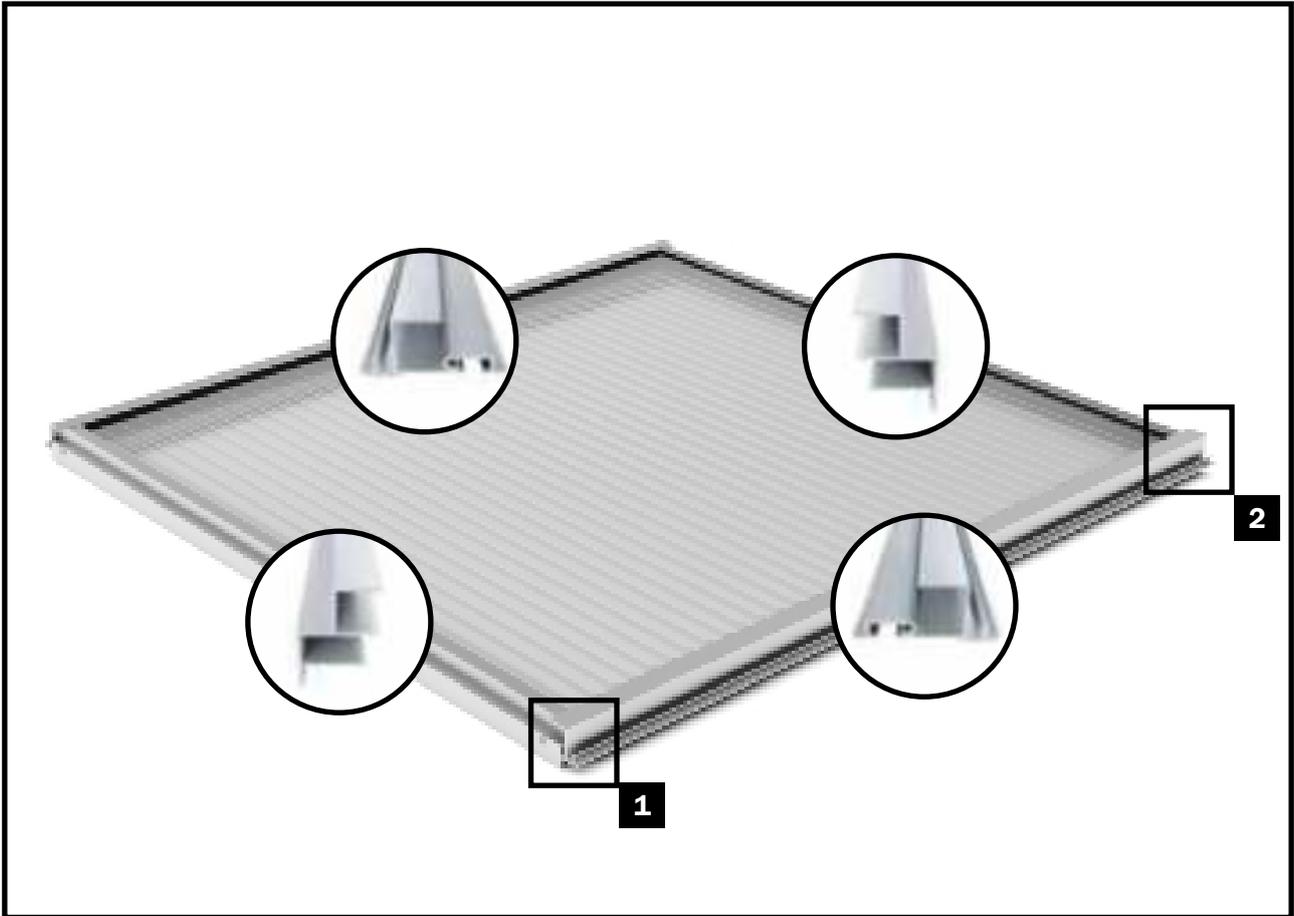
Automatic window opener

The installation of an automatic skylight opener is recommended as a useful accessory. This ensures carefree and optimal ventilation of your greenhouse. It protects your valuable plants from heat accumulation inside the greenhouse. The temperature is adjustable and it works without electricity.

The clasp included in the delivery contents is simply exchanged for the automatic opener.

IMPORTANT: In winter, the automatic window opener needs to be protected from frost. Replace the automatic window opener with the manual window stay!

Step 15 – Window assembly and installation



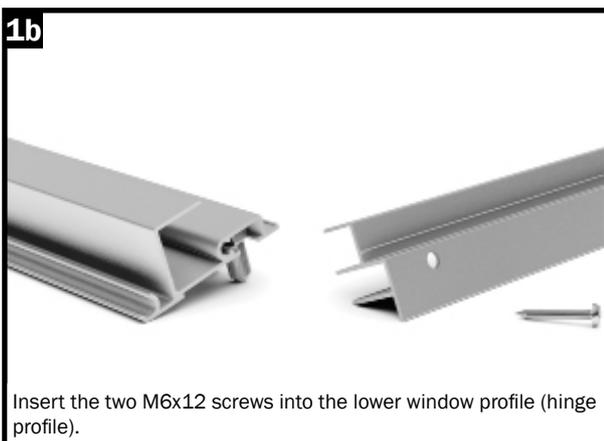
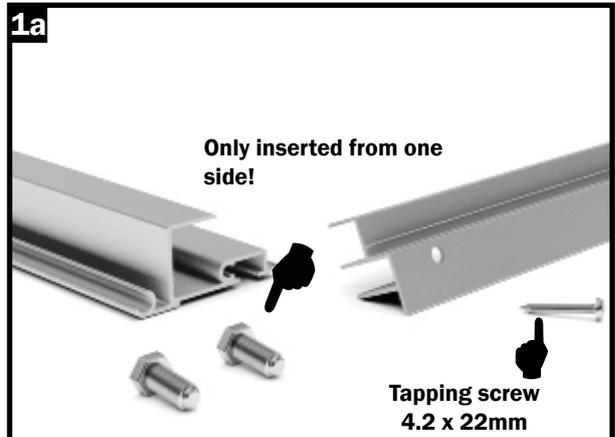
STEP 15 – Assembling and installing the window

The window is assembled in the following phase of assembly.

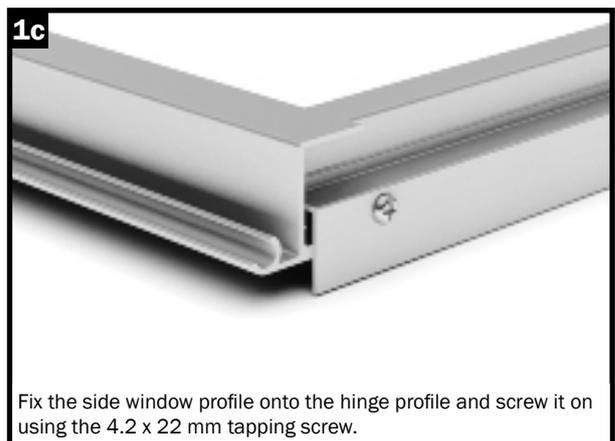
Note: The M6/12 screws shown in Figure 1a are only required in the lower of the two hinge profiles and are therefore only inserted on one side in the screw channel of only one hinge profile.

After assembly, the window is pushed into the ridge.

IMPORTANT: Push the window from the end of the ridge profiles to the desired location.

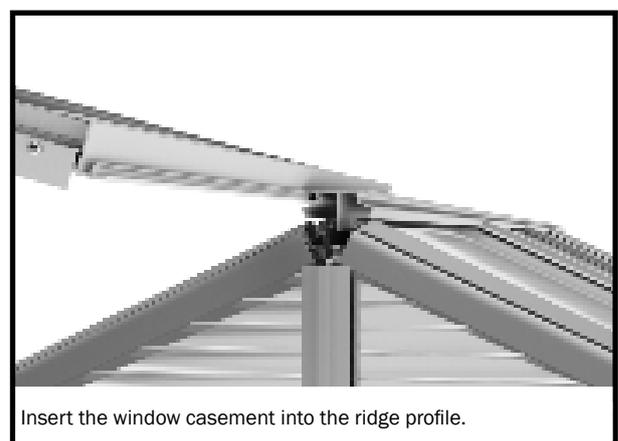
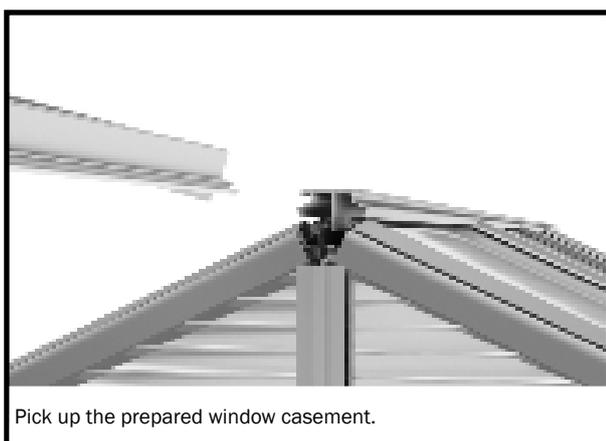
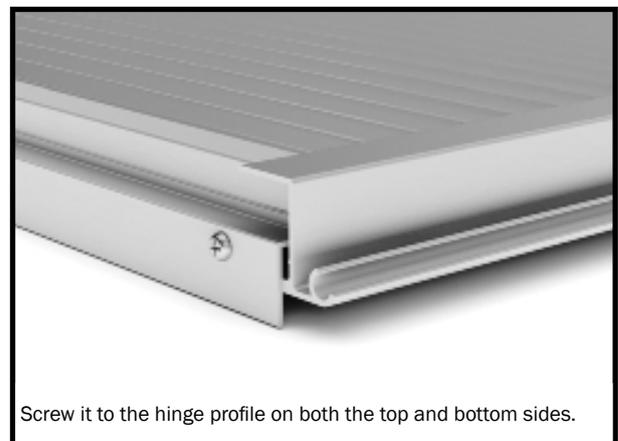
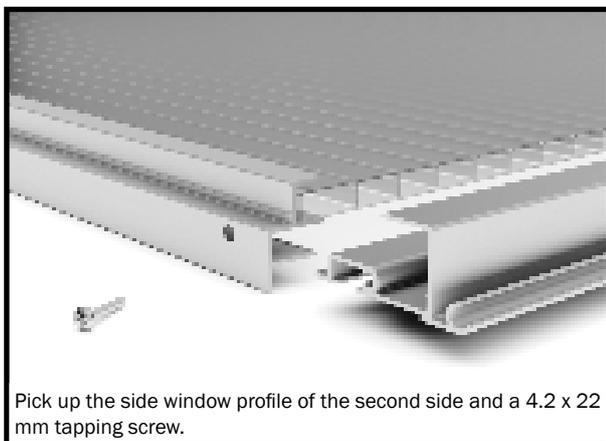
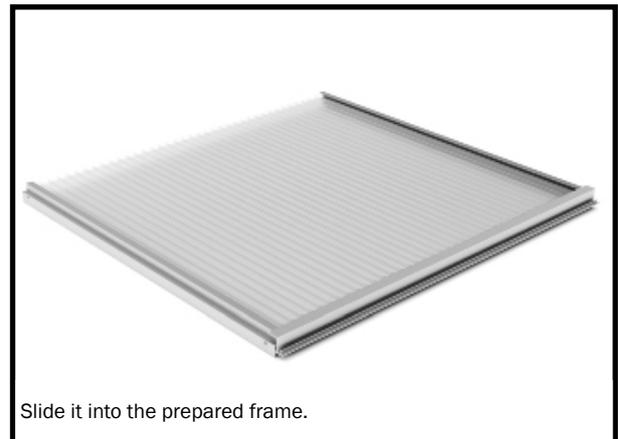
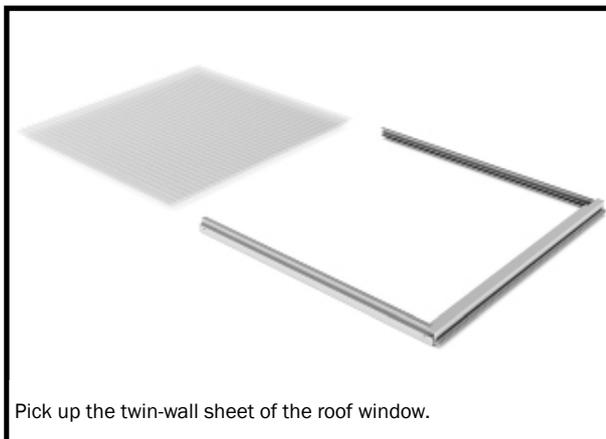
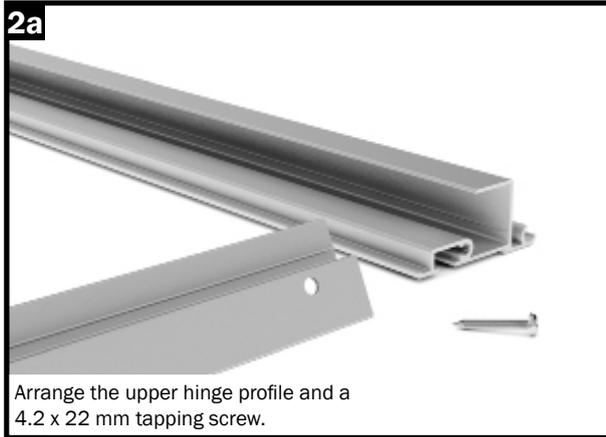


1b Insert the two M6x12 screws into the lower window profile (hinge profile).

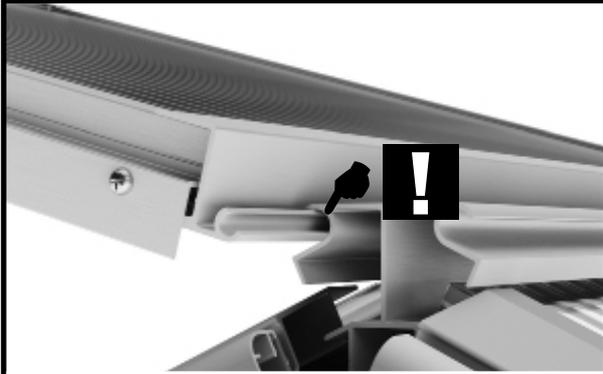


1c Fix the side window profile onto the hinge profile and screw it on using the 4.2 x 22 mm tapping screw.

Step 15 – Window assembly and installation



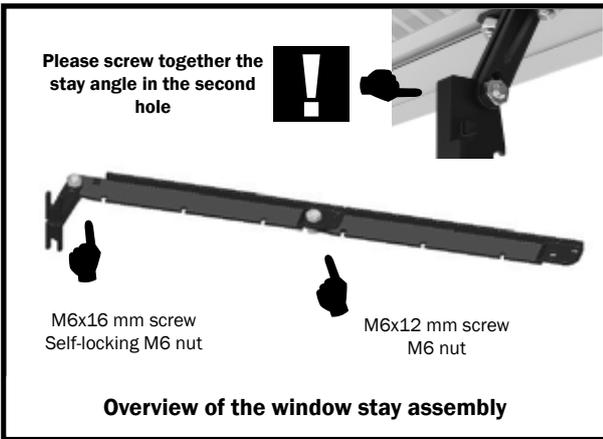
Step 15 – Window assembly and installation



Make sure that the hinge taper of the window casement is inserted into the hinge of the ridge profile.



Push each window to the window opening left free during roof surface glazing.



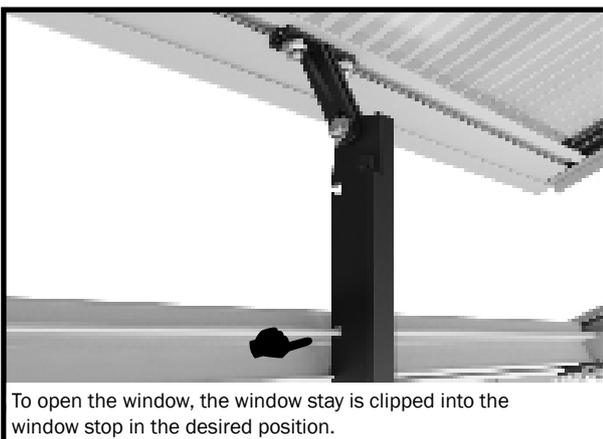
Position the two M6x12 screws of the lower hinge profile in the centre.



Fix the window stay onto both M6/12 screws in the lower hinge profile.



Screw the window stay with two M6 nuts.

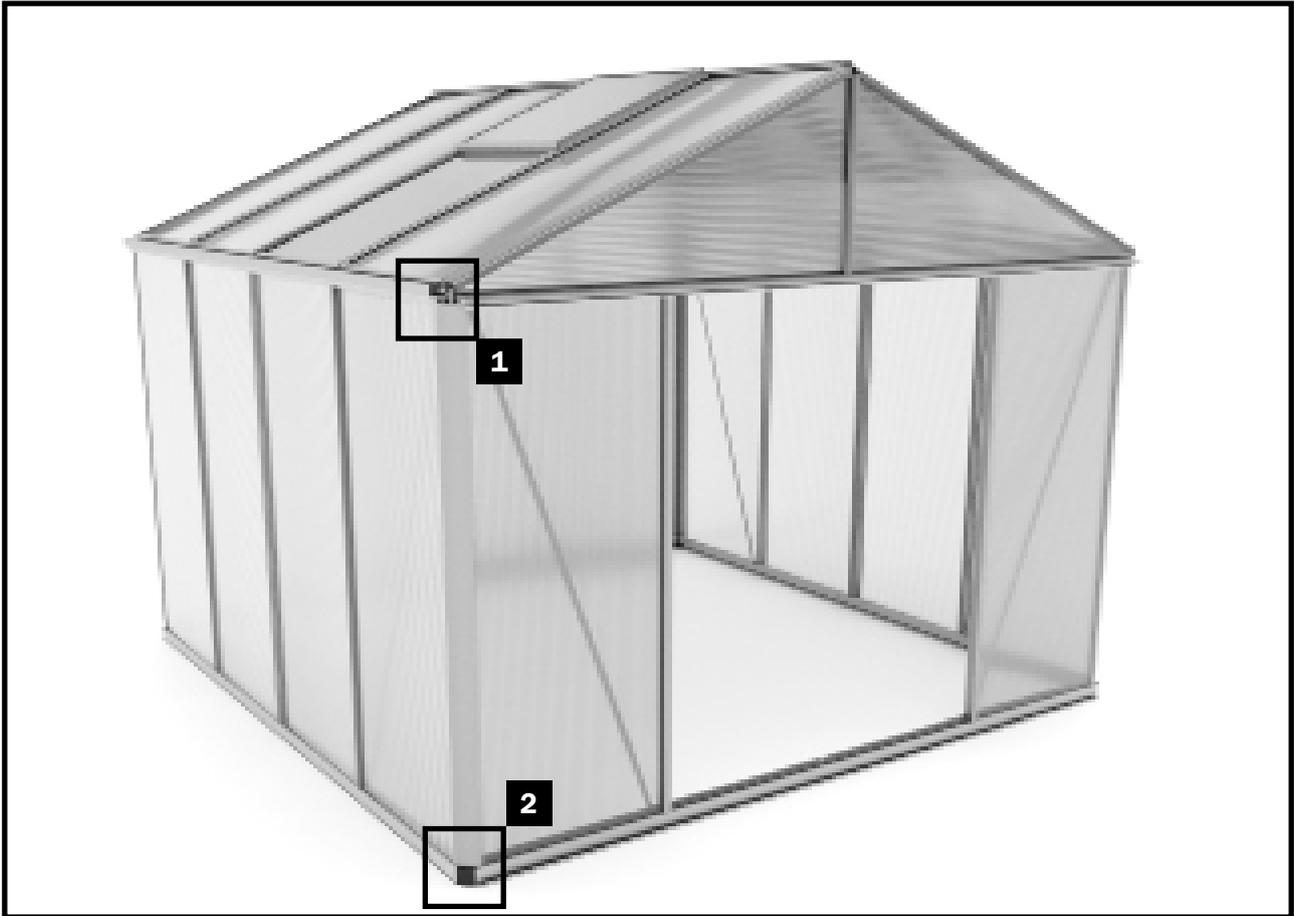


To open the window, the window stay is clipped into the window stop in the desired position.



To close the window, the stay is angled by 90 degrees.

Step 16 – Installing the door rails above and below

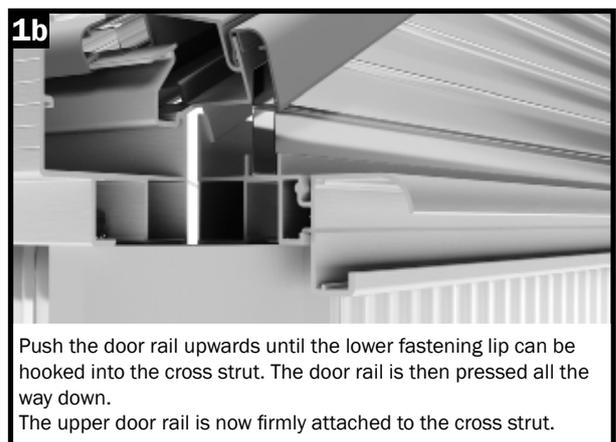
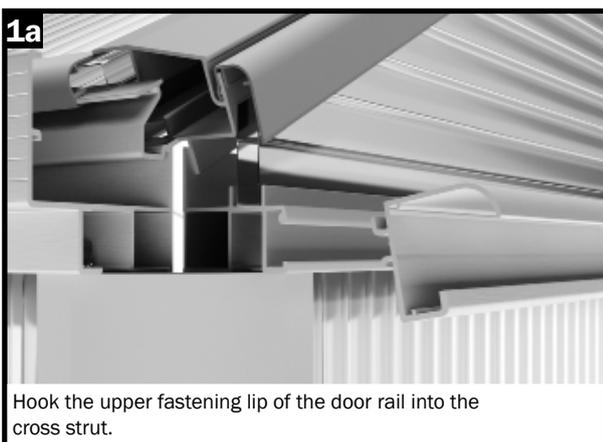


STEP 16 – Installing the door rail/installing the door

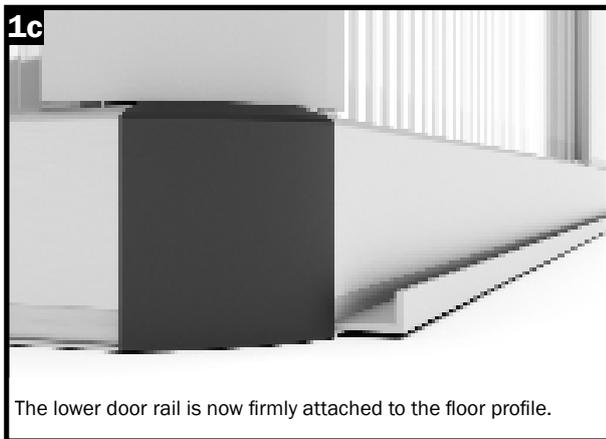
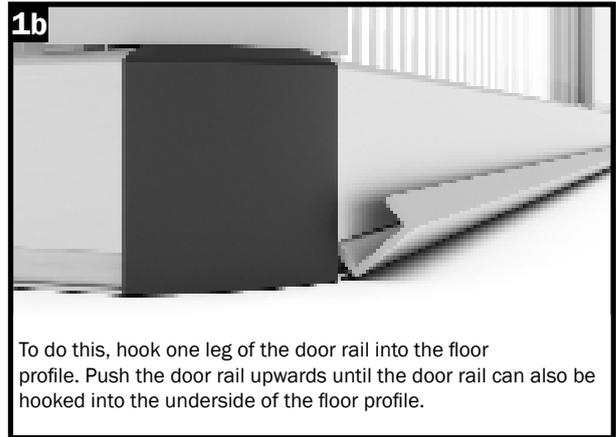
The door is mounted in the following phase of assembly.

Please note that the upper and lower door rails are made in two parts.

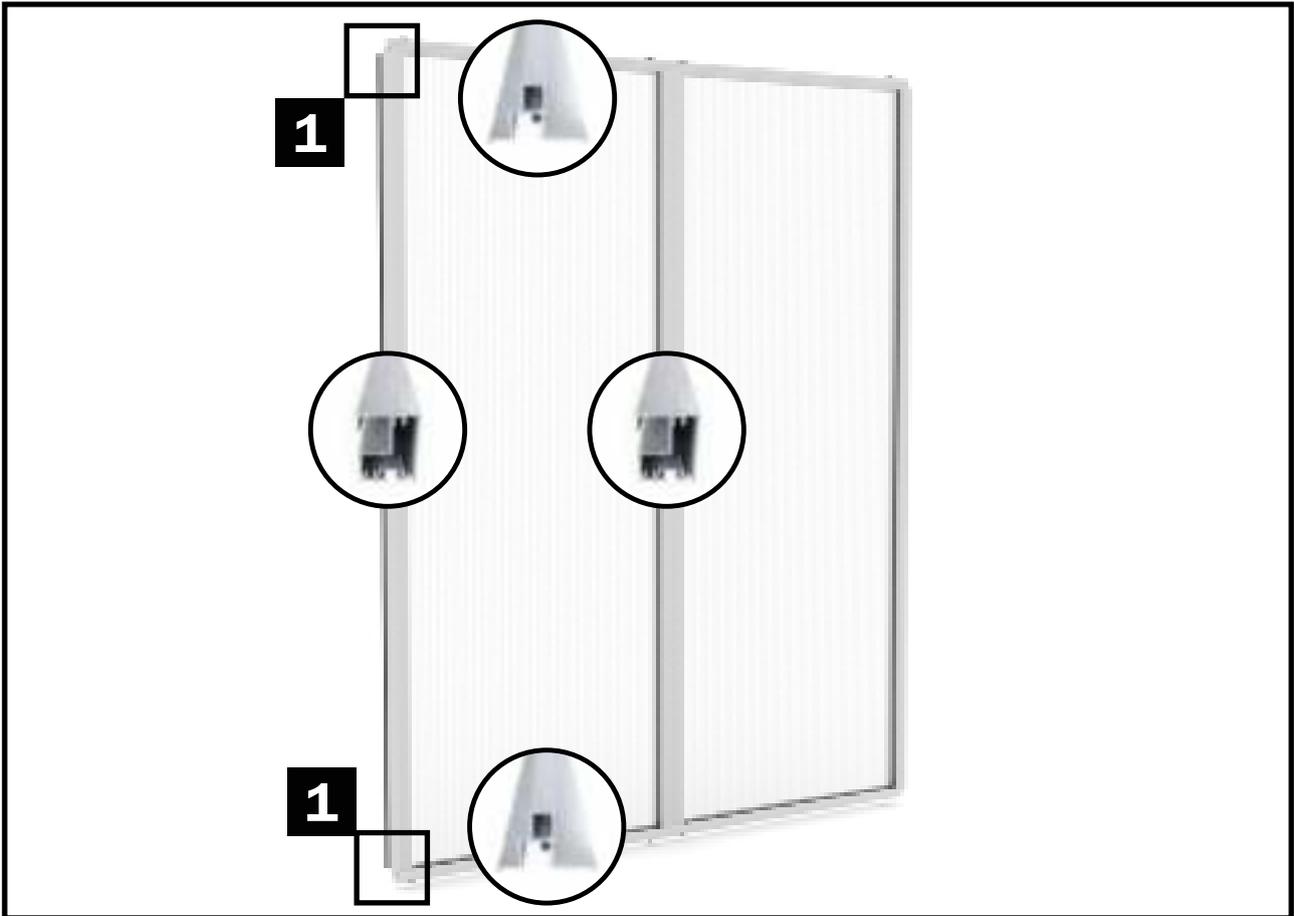
This makes installing the door rails considerably easier!



Step 16 – Installing the door rails above and below



Step 17 – Assembling and installing the door

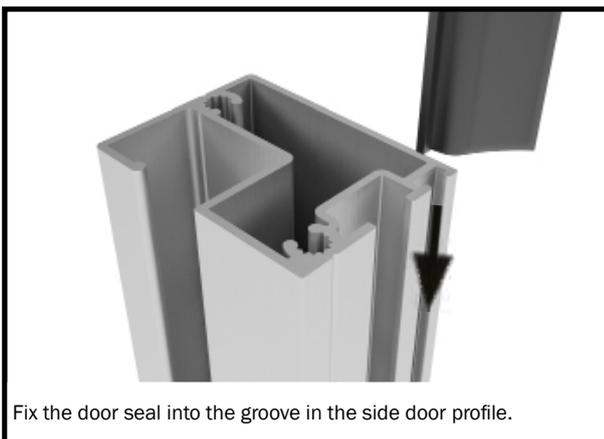


Inserting the door seal

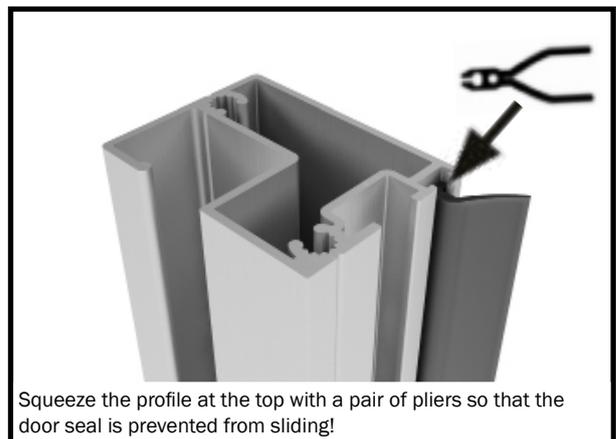
Note:

The door seal is only inserted into the door frame profiles pointing outwards.

No door seal is required on the side where the two door casements meet in the middle of the door frame!

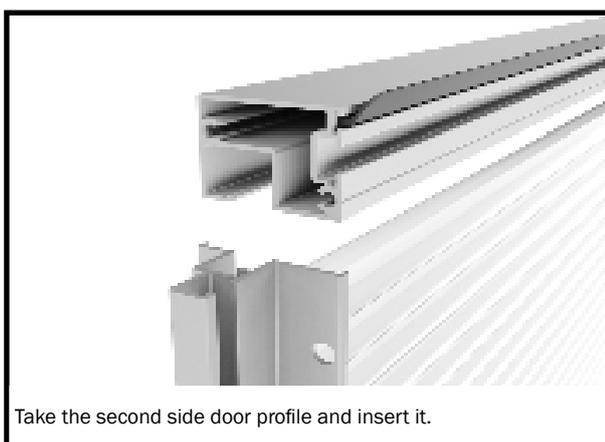
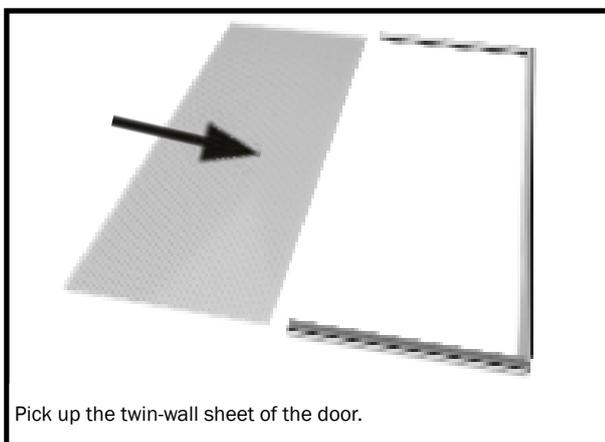
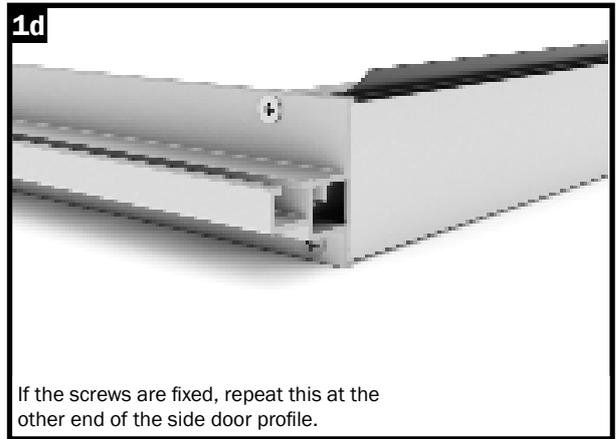
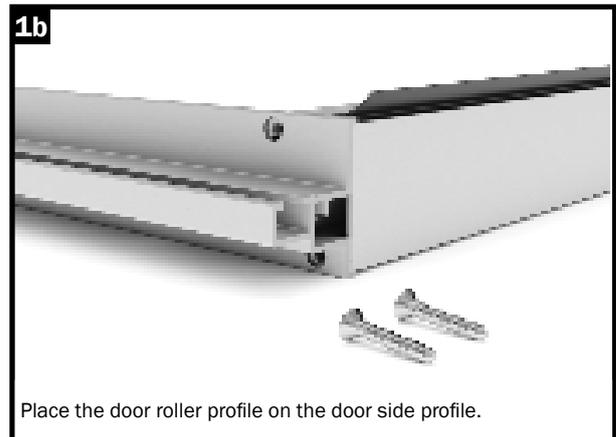
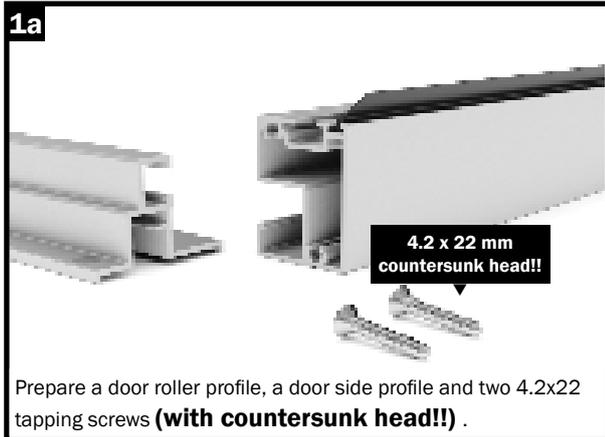


Fix the door seal into the groove in the side door profile.

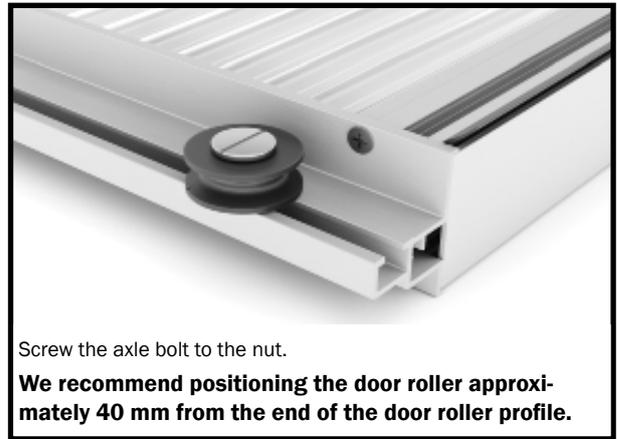


Squeeze the profile at the top with a pair of pliers so that the door seal is prevented from sliding!

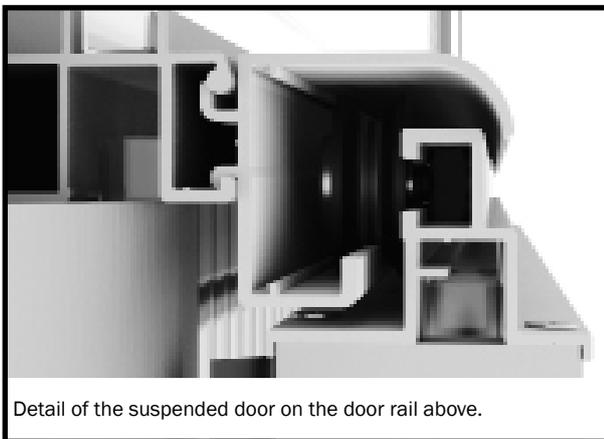
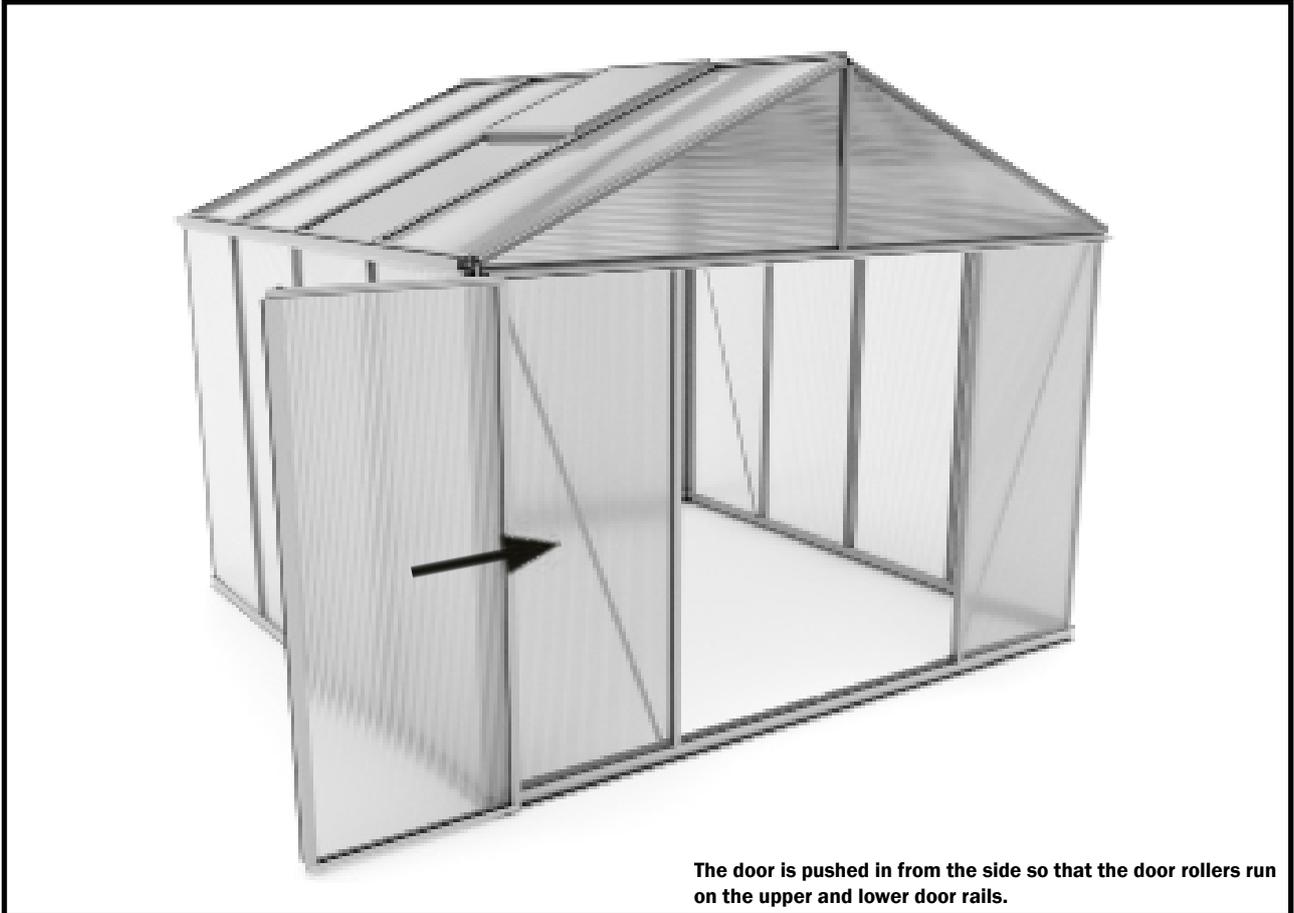
Step 17 – Assembling and installing the door



Step 17 – Assembling and installing the door



Step 17 - Assembling and installing the door



Step 17 – Assembling and installing the door

Installing the door handles

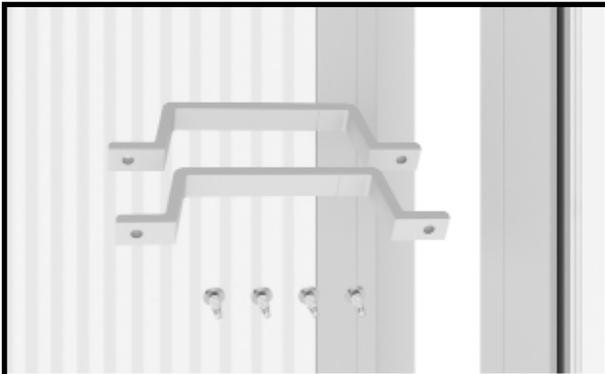
Note:

When installing the door handles, pre-drill, even though drilling screws are used.

Use a drill with a diameter of 4 mm.

Note:

Assemble the door handles vertically and centrally on the door casement.



Prepare the door handles and 4.8x13 mm self-drilling screws.



Pre-drill holes with a 4 mm drill bit.



Attach the door handles with the 4.8x13 mm drilling screws

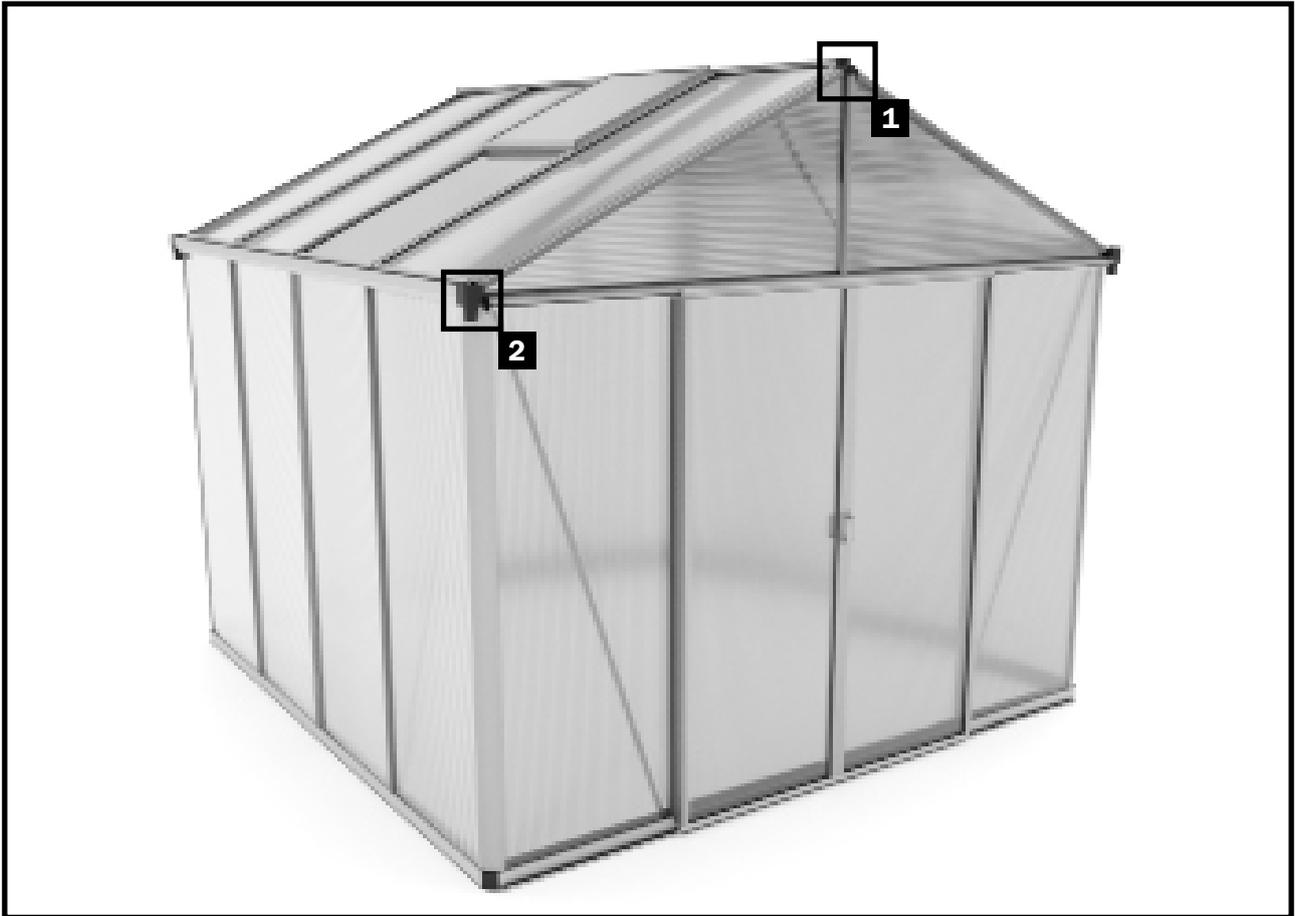


Assemble the door handles on the inside of the greenhouse in the same way.



The installation of the door is completed after fixing the door handles inside and outside.

Step 18 – Final work



Step 16 – Final work

Finally the ridge covering cap and the left and right drain down pipes need to be attached.

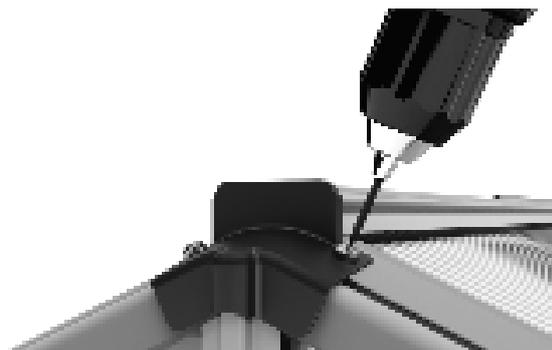
Note: The drain down pipes are delivered closed – but they are formed in such a way that the centrepiece can be pushed gently with a screwdriver to drain the water.

1a



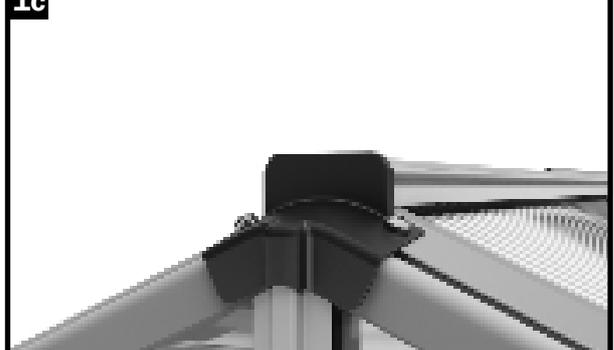
Prepare the ridge covering cap and 4.8 x 13 mm self-drilling screws for assembly.

1b

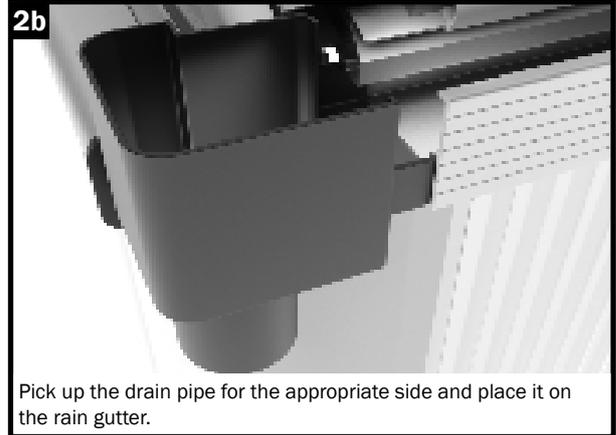


Attach the covering cap to the ridge using the 4.8x13 mm drilling screws.

1c



The covering cap is now firmly attached.



**You're finished!
Congratulations!**