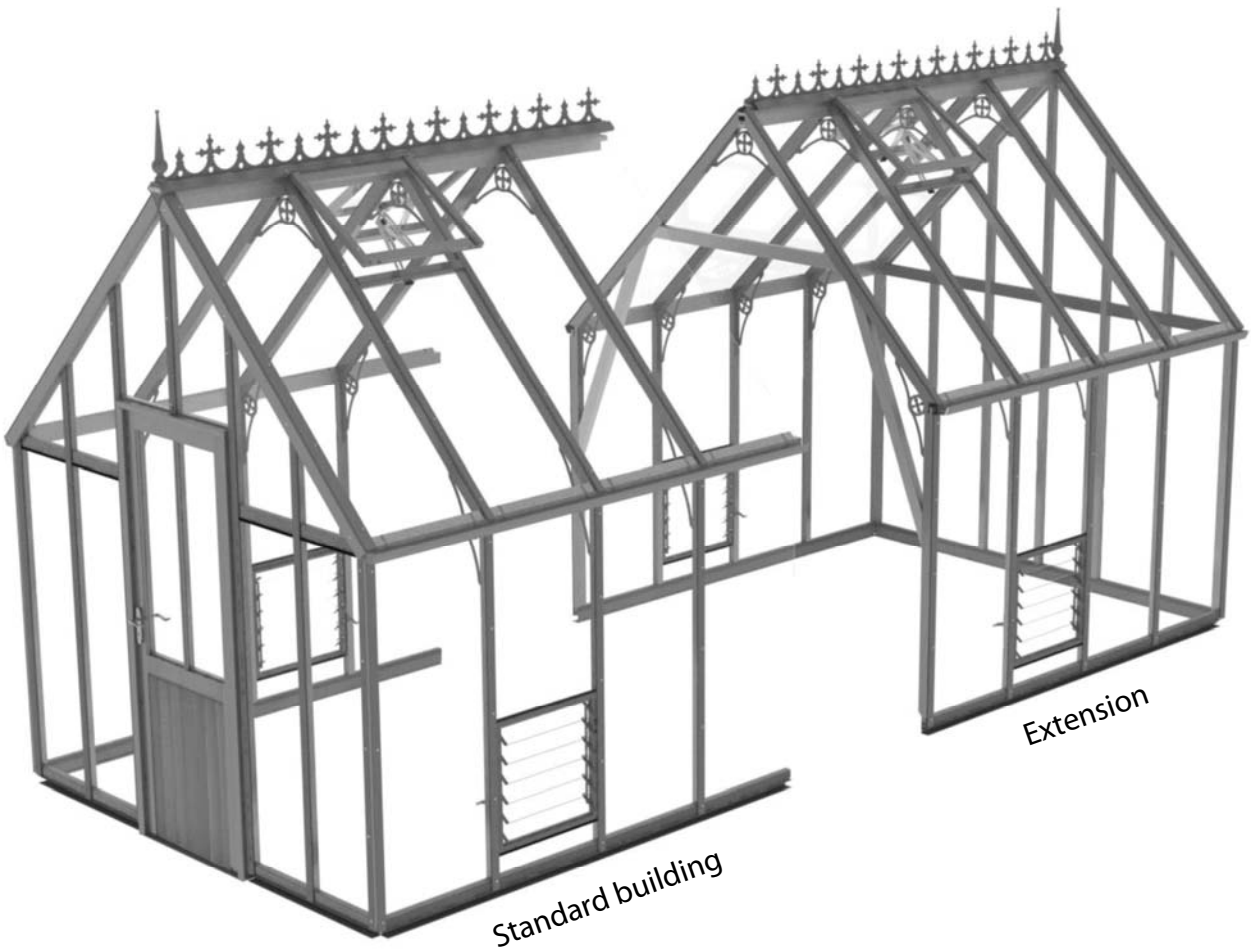
VICTORIAN HARROW

ALTON

Glass to Ground Extension Instruction Manual

Includes Models: 8x14+



Please read all instructions before proceeding

8' Wide Victorian Cedar Greenhouse Extension Assembly Instructions

Contents:

Introduction

Thank you for purchasing your new Alton greenhouse. We recommend you familiarise yourself with the instructions and read all safety information before you commence assembly. This instruction manual is also available online at www.greenhousepeople.co.uk in the technical help section should you need to reprint it. Should you require any additional advice you can always call us on 01782 385409.

Safety Warning

- Glass, aluminium and timber can potentially cause injury. Please ensure you wear protective goggles, gloves, headgear and suitable footwear when assembling and glazing the building.
- Please remember that glass is fragile and should be handled with extreme care. Always clear up and dispose of any breakages immediately.
- Do not assemble the greenhouse in high winds.
- For safety reasons and ease of assembly, we recommend that this greenhouse is assembled by a minimum of two people.
- Please clear all lying snow from the greenhouse roof as it can cause the roof to buckle or collapse.

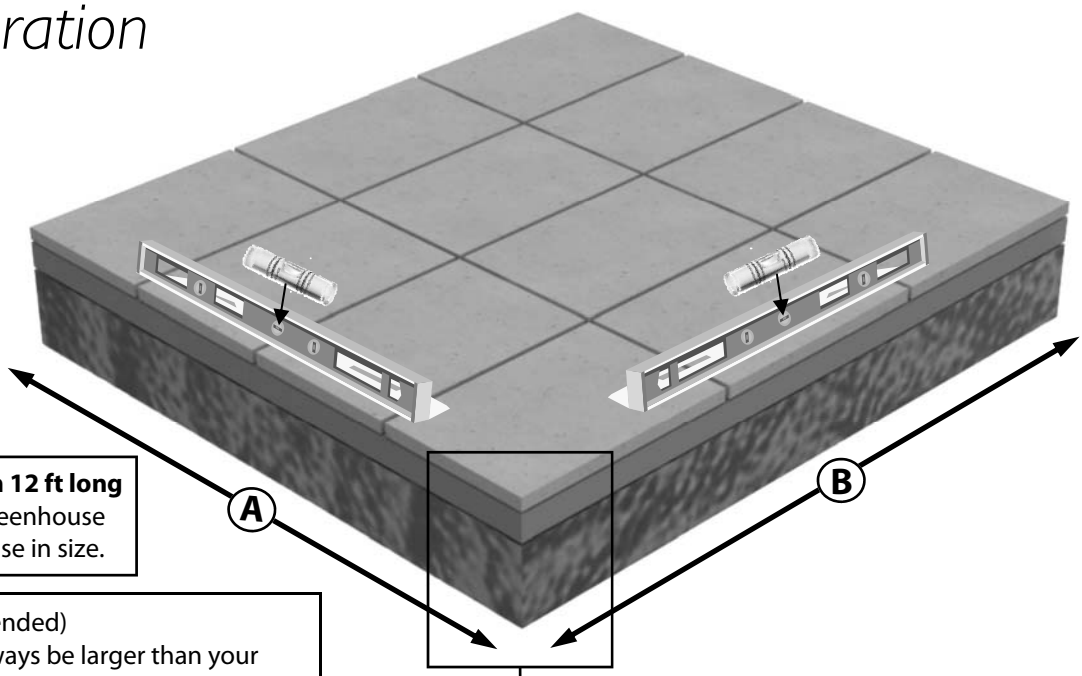
Site Preparation

- When selecting a site for your greenhouse, it is vital that you choose as flat and level an area as possible.
- A concrete or slabbed base will provide the most solid foundation for your greenhouse. A slabbed base would be our preferred choice as this helps with drainage.
- Avoid placing your greenhouse under trees or in other vulnerable locations.
- To minimise the risk of wind damage, try to select as sheltered a site as possible, e.g. beside a hedgerow or garden fence.

Additional Considerations

- Please bear in mind that assembling your greenhouse can be time consuming. You may need to spread the construction over two or more days. We recommend that you avoid leaving the building partially glazed. If you ever have to leave your greenhouse half assembled and not anchored down, weigh it down with slabs or bags of sand to stop the wind moving it.
- You will find it helpful to prepare a large, clean and clear area in which to work in. A garage floor or flat lawn area is ideal.
- If you have arranged for someone to install your greenhouse for you, please check that all components are included. Most parts are numbered and can be identified by a stamp or removable label. Alternatively, the components can be identified by lengths detailed in the packing list in your main cardboard box.
- Remember this is a natural timber product, the wood may soak up some water and some staining may occur. Your Evolution greenhouse is factory dipped in a clear spirit based preservative. We recommend that you re-apply some clear treatment annually particularly on the most exposed areas. If you want to avoid this and give your greenhouse a more permanent finish you could apply an oil based product (refer to manufacturers recommendations for recoating).

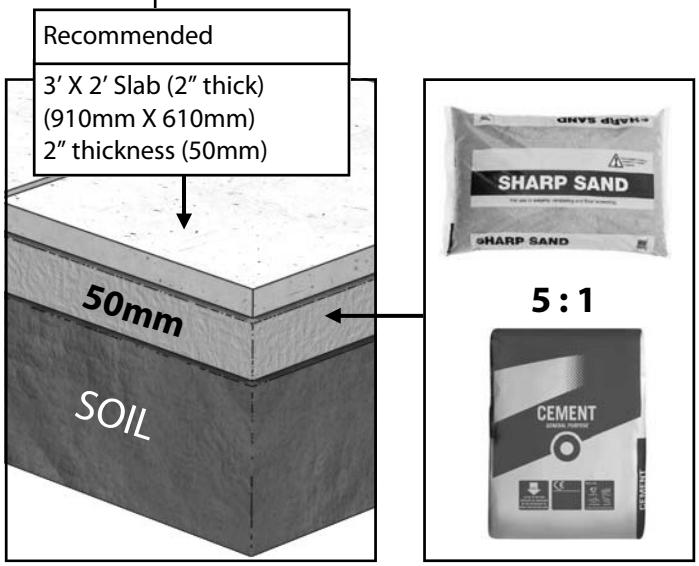
Base Preparation



For buildings larger than 12 ft long just add **630mm** to the greenhouse length for every 2 ft increase in size.

Slab Base Size (Recommended)
Note: The base should always be larger than your building.
The measurements given in 'A' and 'B' should only be used as a guide.

Greenhouse Width	Greenhouse Length	A (mm)	B (mm)
8 ft - 2650mm	**6 ft -** 1956mm	3600	2700
8 ft - 2650mm	**8 ft -** 2586mm		3600
8 ft - 2650mm	**10 ft -** 3216mm		3600
8 ft - 2650mm	**12 ft -** 3846mm		4500



It is necessary to leave sufficient working room around your greenhouse when you're putting it up and also to allow for the possible need to replace a piece of glass in the future. If possible try and leave a space of 2ft/610mm around the greenhouse.

Note that the door opens inwards so you should not have any higher ground or obstacles inside the front of the greenhouse.

Locate the greenhouse where there is maximum amount of sunlight and avoid if possible any shade from trees, fences or other buildings. Over-hanging branches can be a particular nuisance and should be avoided.

Choose a site where the greenhouse is relatively easy to get to and convenient to bring water to and possibly a supply of electricity.

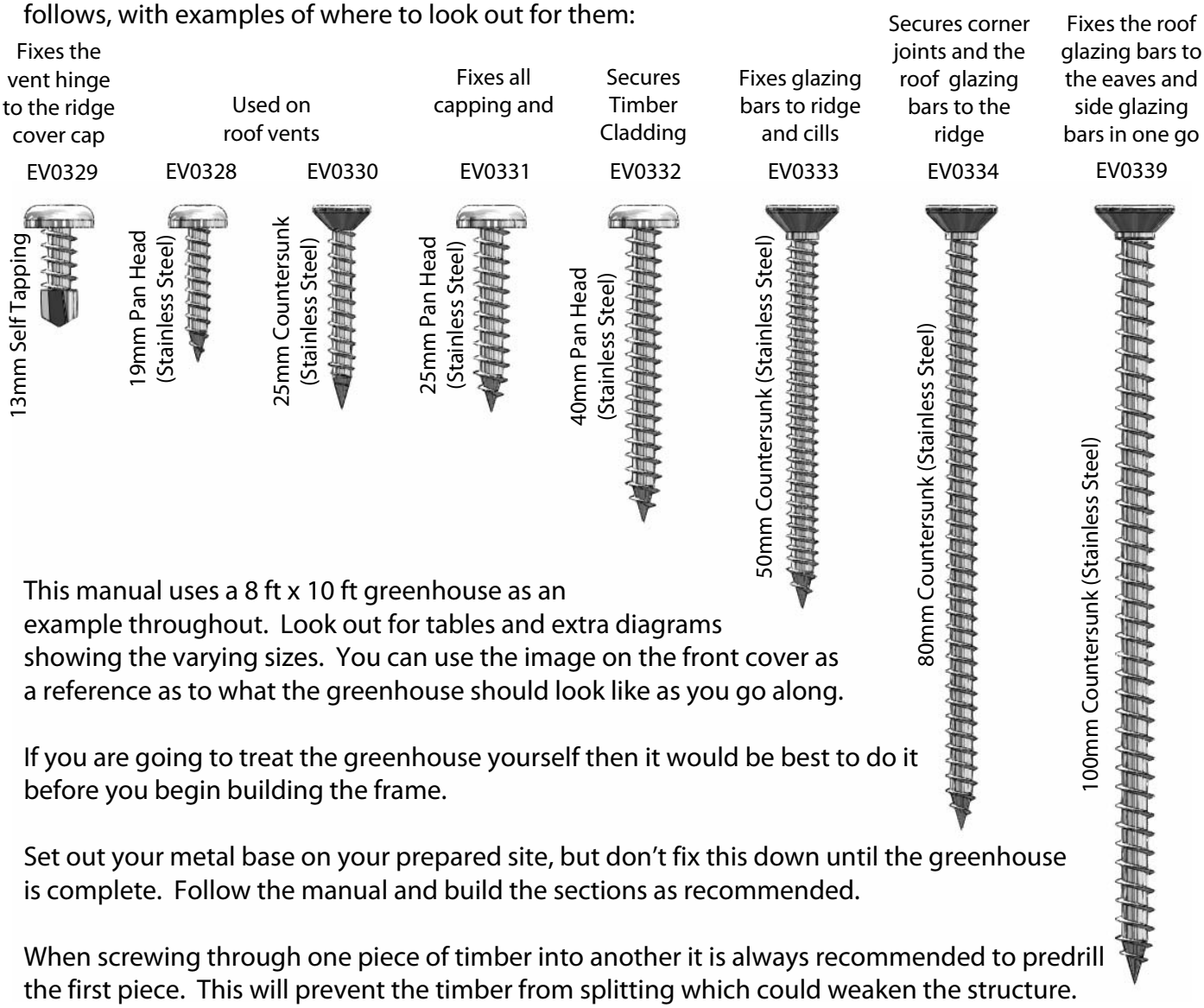
Finally, and most importantly, choose a site where your Alton Greenhouse will look right so that it will complement your garden.

Overview

To build your new greenhouse you will need the following tools:

Spirit Level	Pencil
PZ2 Screwdriver Bit	Cordless Screwdriver (2 would be ideal, 1 to drill and 1 to screw)
4mm Drill Bit	7mm Masonry Bit
Hammer Drill	Hammer
Wooden/Rubber Mallet	Tall step ladders x 2

There are 8 different types of screws used in the construction of the greenhouse. These are as follows, with examples of where to look out for them:



This manual uses a 8 ft x 10 ft greenhouse as an example throughout. Look out for tables and extra diagrams showing the varying sizes. You can use the image on the front cover as a reference as to what the greenhouse should look like as you go along.

If you are going to treat the greenhouse yourself then it would be best to do it before you begin building the frame.

Set out your metal base on your prepared site, but don't fix this down until the greenhouse is complete. Follow the manual and build the sections as recommended.

When screwing through one piece of timber into another it is always recommended to predrill the first piece. This will prevent the timber from splitting which could weaken the structure.

You can build the sides and gables flat on the ground and then with help or using a prop position the first one ready for installation. You then work your way around the greenhouse connecting each section. Once you have completed the gables and sides you can install the ridge and the roof.

Overview

Glazing the structure is very simple but be very careful of the edges of the glass as the pane will break into tiny peaces if you catch an edge on a hard surface such as concrete. You should also wear suitable gloves and goggles when handling the glass (this also helps to keep it clean). It is good practice to pre-load the cedar bar capping with screws and position this around the greenhouse ready for you when you arrive with the glass.

During glazing you will also need to fit the louvre vents so make sure you have these built and ready to slot in. These fit between 2 pieces of glass and are held in place by the capping system.

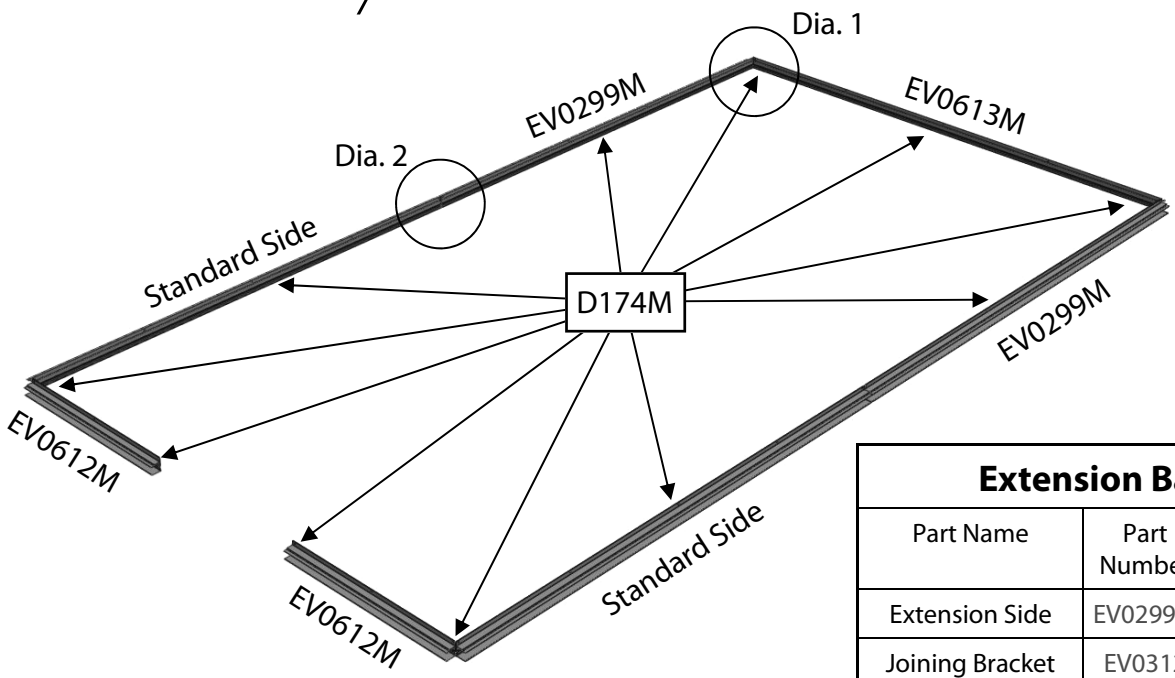
Then fit the roof vents. This is done from the inside, gain access through the opening on a set of steps.

All you have left to do now is fit the gutter and downpipes, think about where you might site a water butt when doing this.

Option of gluing joints. This is not required for strength but you may do it if you wish. However bare in mind if you ever intend to move or adapt the greenhouse in the future this would make it very difficult. The best glue for this would be Poly Urethane Wood Adhesive. Take care when applying this, you only need a very small amount as the glue expands to fill the joint. If you use too much it may seep out of the joint and could be unsightly! Try a test piece before you start.

Read through the rest of this manual before starting, you are less likely to miss something doing this and you will have a better understanding of how it all works.

Base Assembly



Extension Base			
Part Name	Part Number	Size (mm)	Qty
Extension Side	EV0299M	2519	2
Joining Bracket	EV0312	-	2
Base Bracket	D174M	-	4

Lay out your aluminium base sections as the diagram shows. Insert bolts in the bolt channels for attaching the base brackets (D174M), diagram 1. The base brackets should always be positioned either side of the door, in the corners, in the middle of the rear and equally spaced down the sides. Use the joining bracket in each corner to join the sections (diagram 1). The top holes will take a 25mm screw when the cills are fixed to it.

Use the larger plates at an extension point (EV0312M), diagram 2. Don't fix any of the base brackets to the ground until the building is complete.

Diagram 1

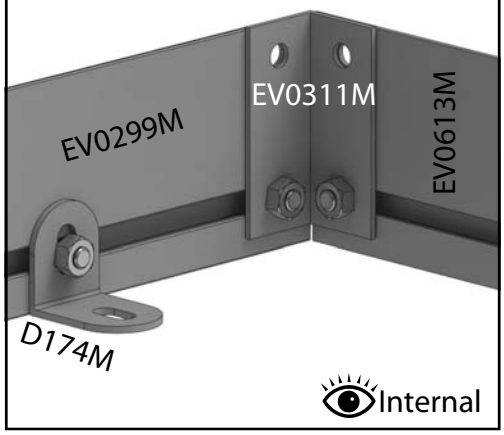
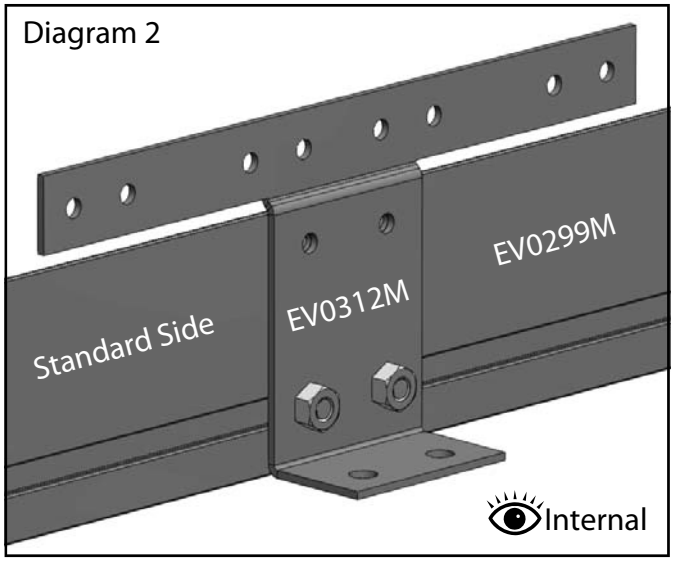


Diagram 2

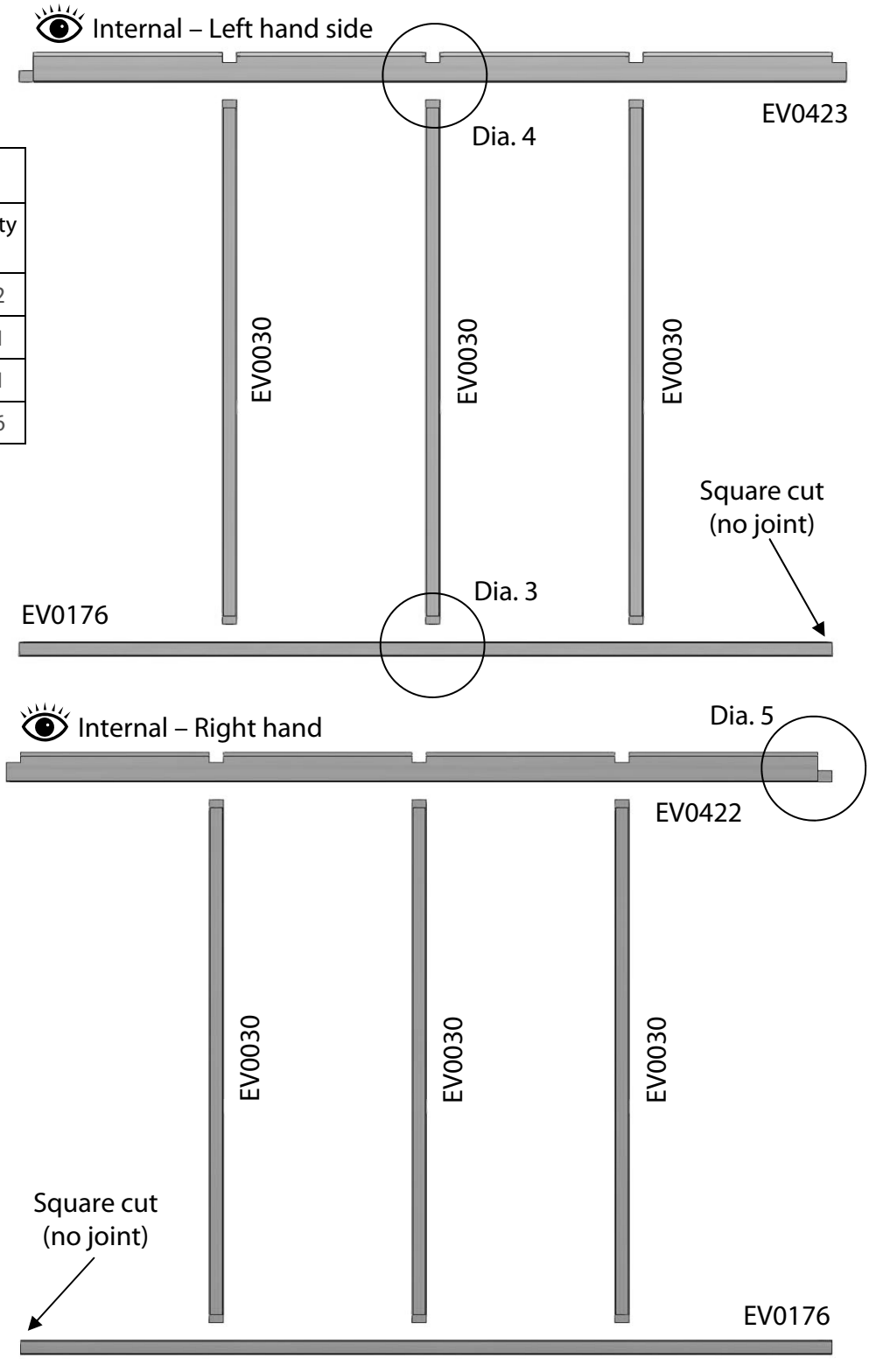


3

Side Assembly

Begin by laying out the components for your 2 extension sides flat on the ground as the diagram below shows. Use the table below to help identify the components with the part numbers and sizes. First of all drill pilot holes through the bottom of each mortise on the cill section (diagram 4, page 9). Then slot each glazing bar into the mortise holes. These are designed as a tight fit so you may need help with this or maybe use a solid object to push against. Once firmly in position fix with the 50mm screw. Now slot the eaves rail into position. There is no need to fix this yet as it is done at a later stage.

8ft Extension			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0176	2520	2
Eaves Bar R	EV0422	2564	1
Eaves Bar L	EV0423	2564	1
Glazing Bar	EV0030	1588	6



4

Side Assembly

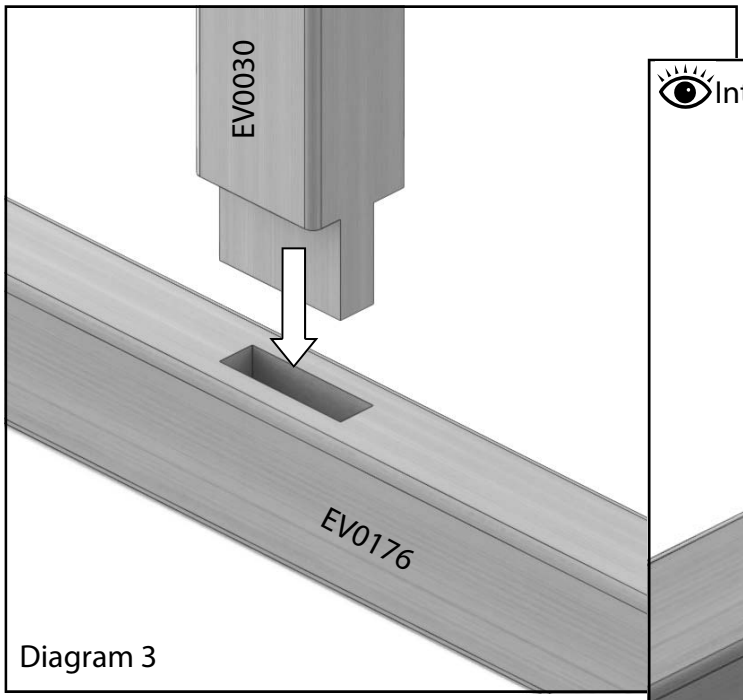
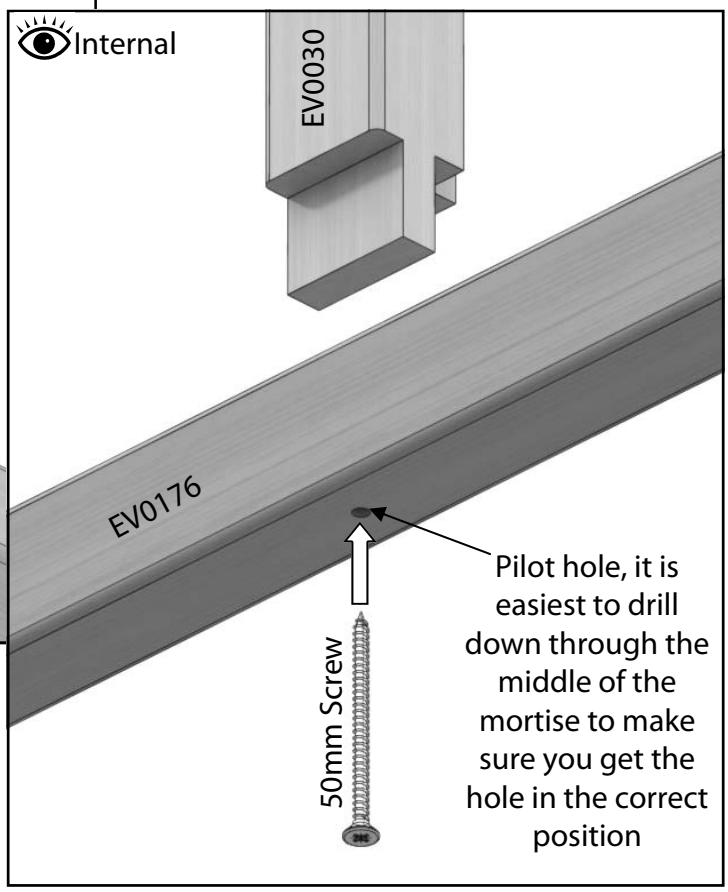


Diagram 3



Make sure the side bars are pushed all the way in, you may find they need a light tap with a wooden mallet or something similar.

(If you are going to glue your joints this is the first point you would do this.)

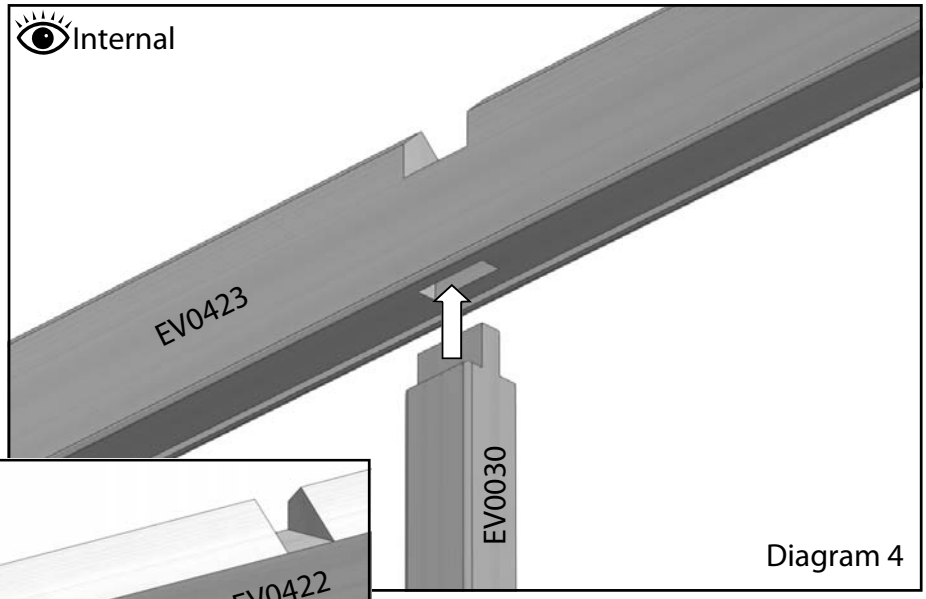


Diagram 4

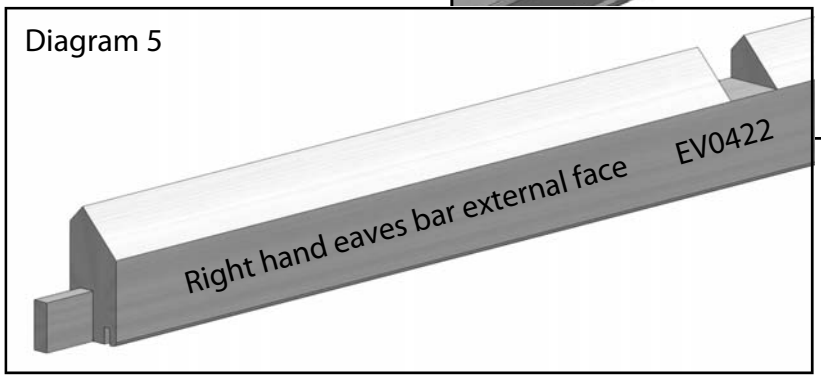


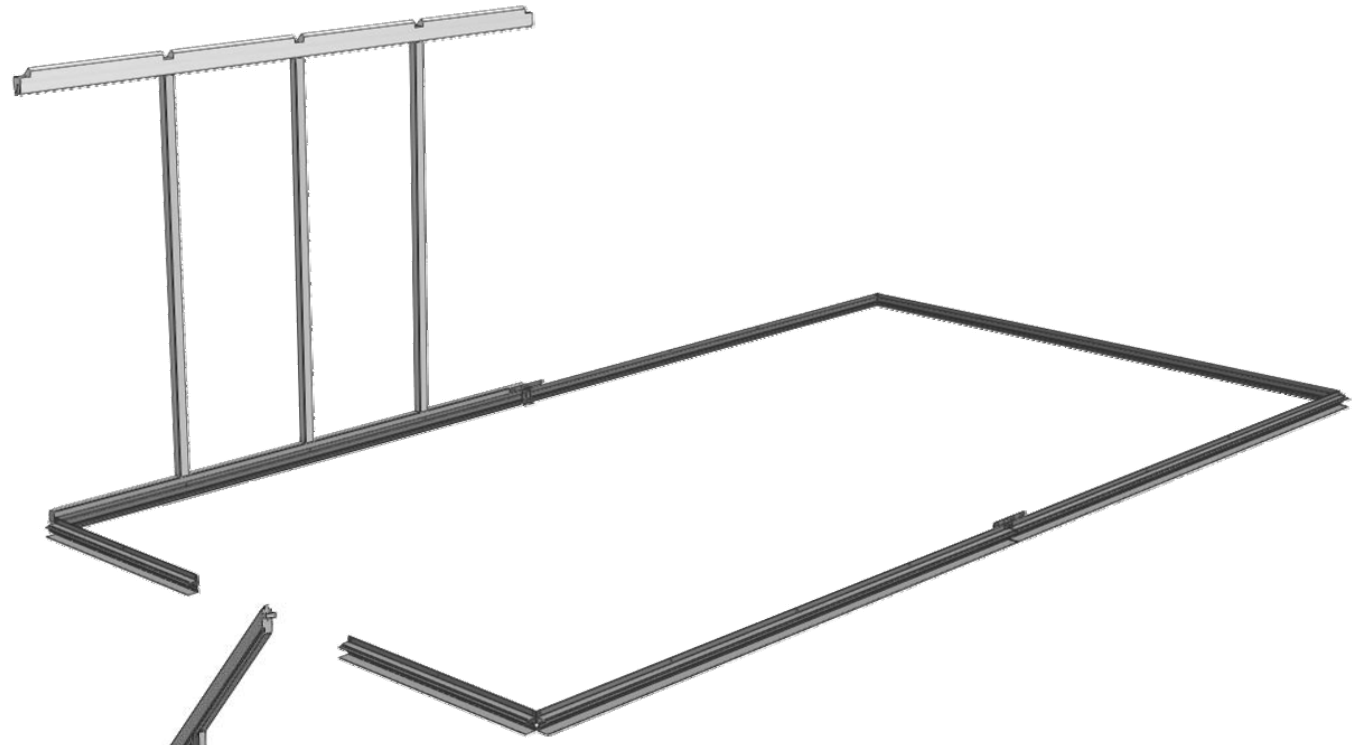
Diagram 5

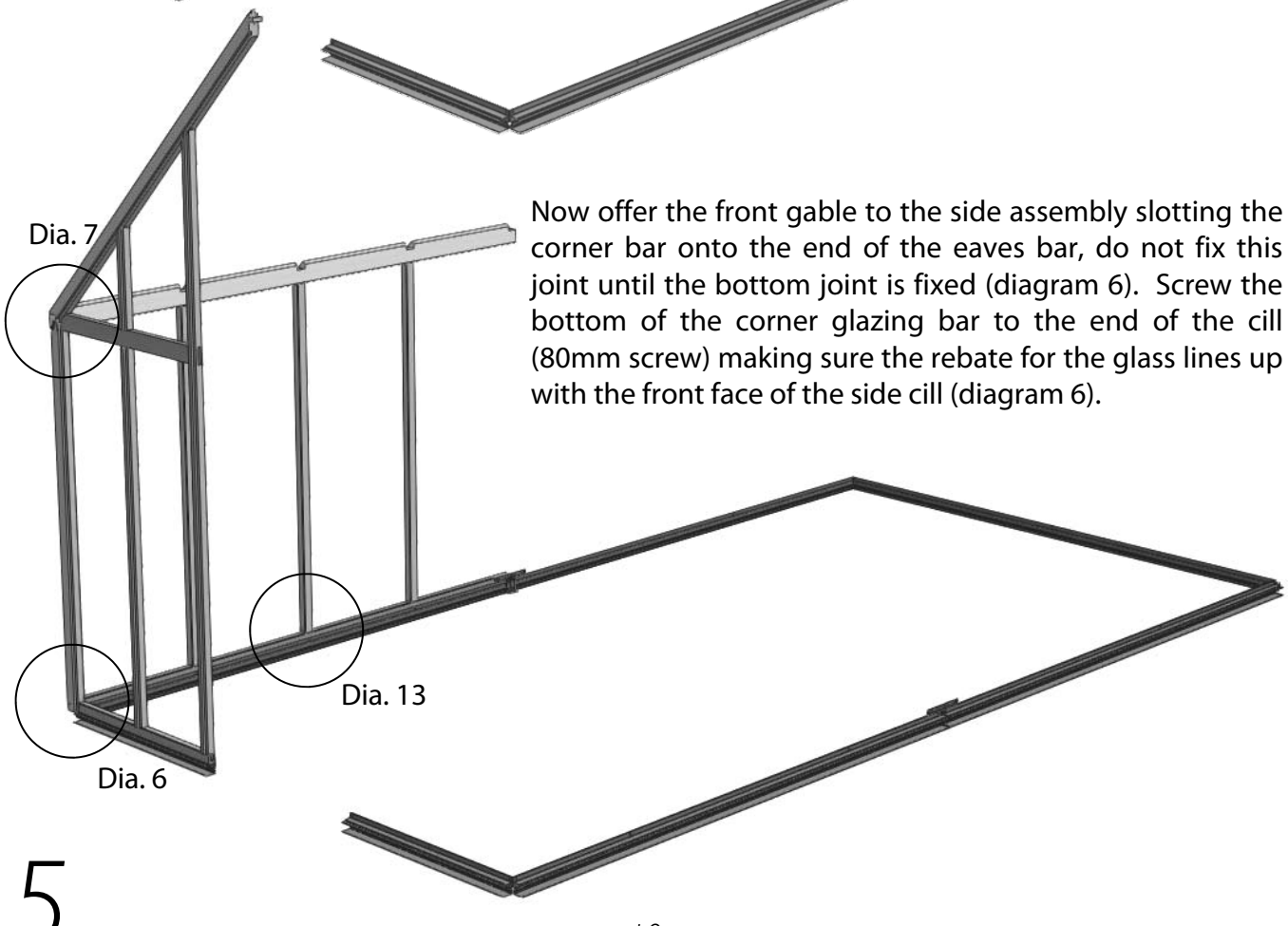
4

Frame Assembly

Before you position your side section onto the aluminium base you should drill the pilot holes in the bottom of the side corner bars shown in diagram 6. The position of this hole should be about 19mm from the side face and 30mm measured from the bottom of the bar.

You can now position the side section on the aluminium base, you will need a helper to hold this in place or simply strap it to a set of steps.





Now offer the front gable to the side assembly slotting the corner bar onto the end of the eaves bar, do not fix this joint until the bottom joint is fixed (diagram 6). Screw the bottom of the corner glazing bar to the end of the cill (80mm screw) making sure the rebate for the glass lines up with the front face of the side cill (diagram 6).

5

Frame Assembly

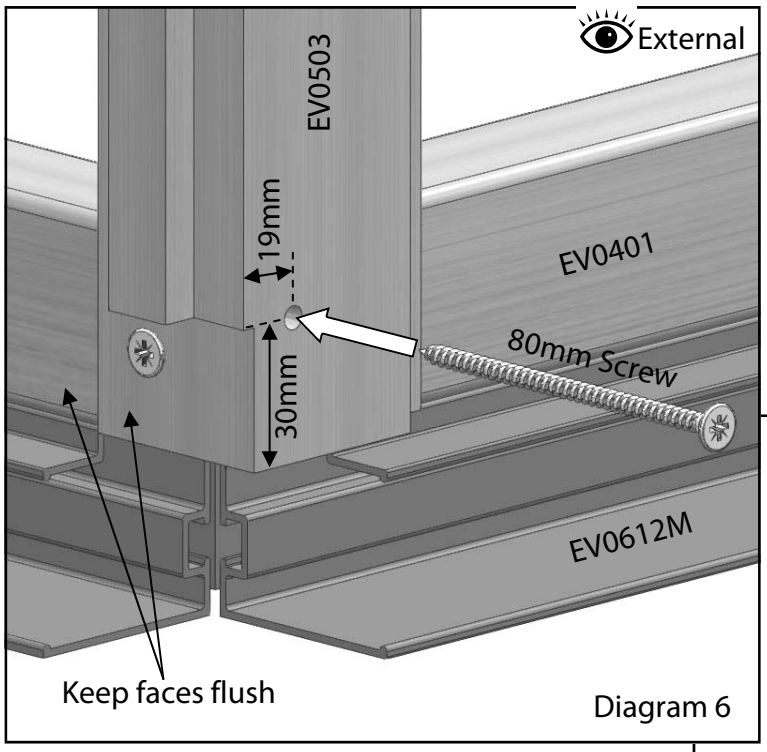


Diagram 6

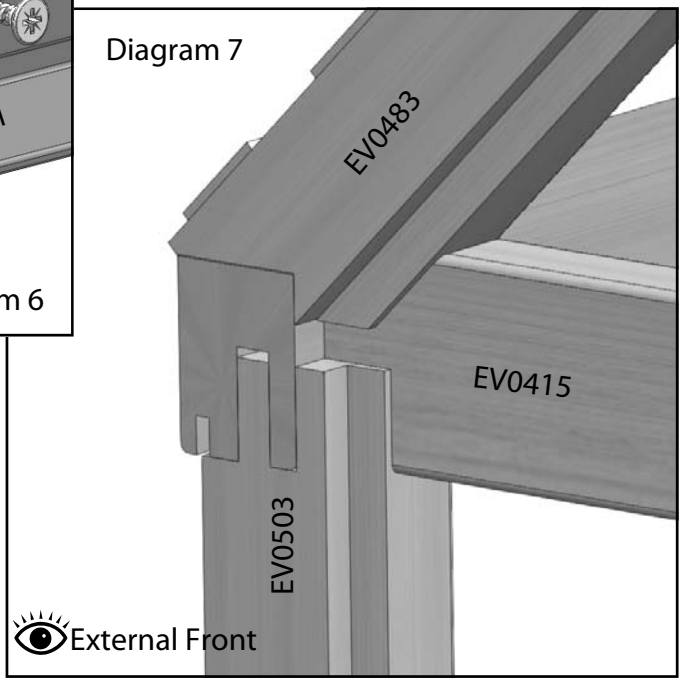


Diagram 7

Make sure the side corner bar is located correctly and the front face is flush with the end of the eaves bar, mark out the pilot hole positions shown in diagram 8 and 9. Diagram 11 and 12 on the next page show the direction the holes should be drilled in.

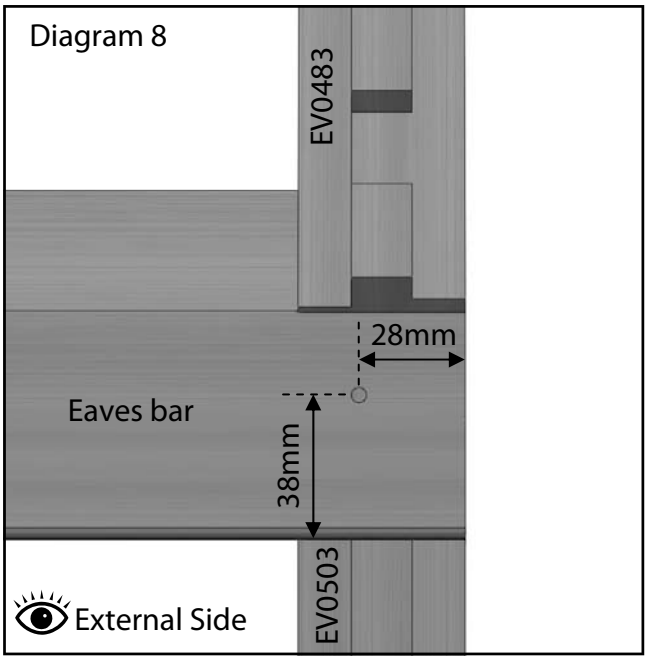


Diagram 8

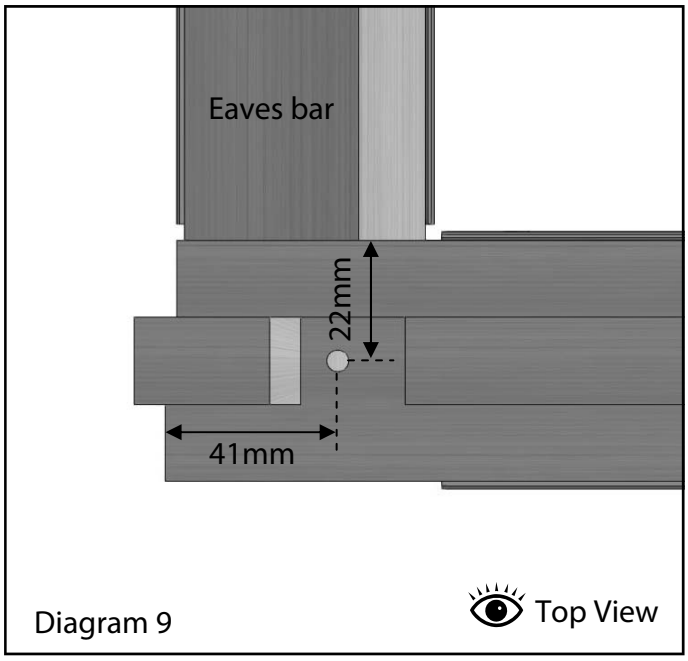
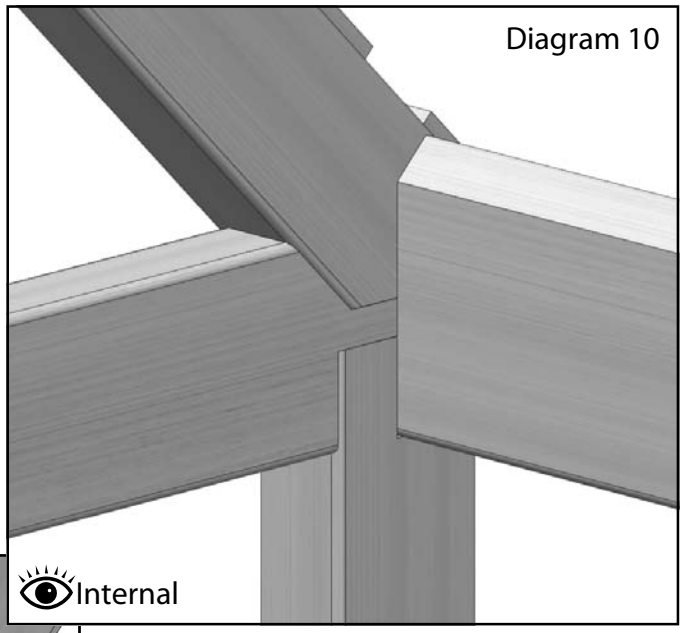
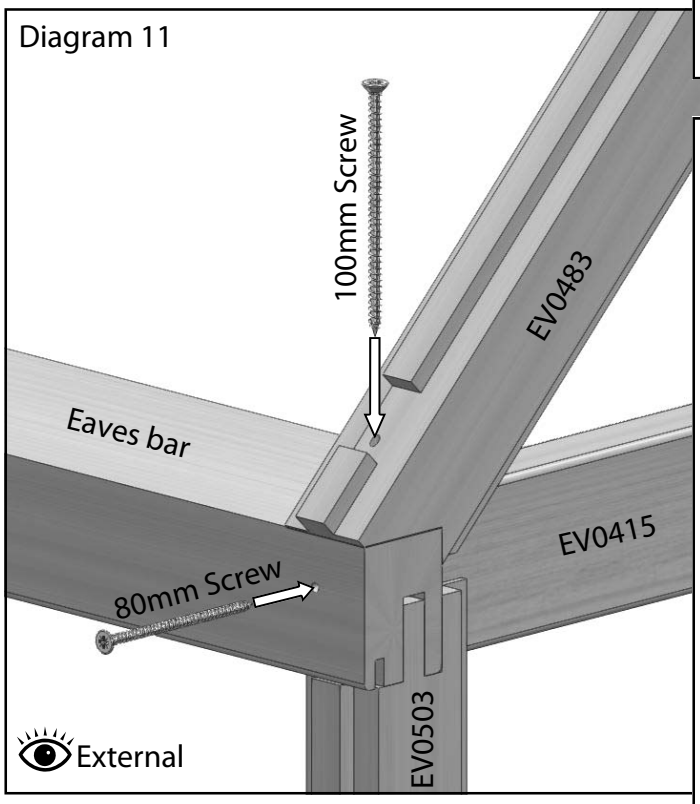


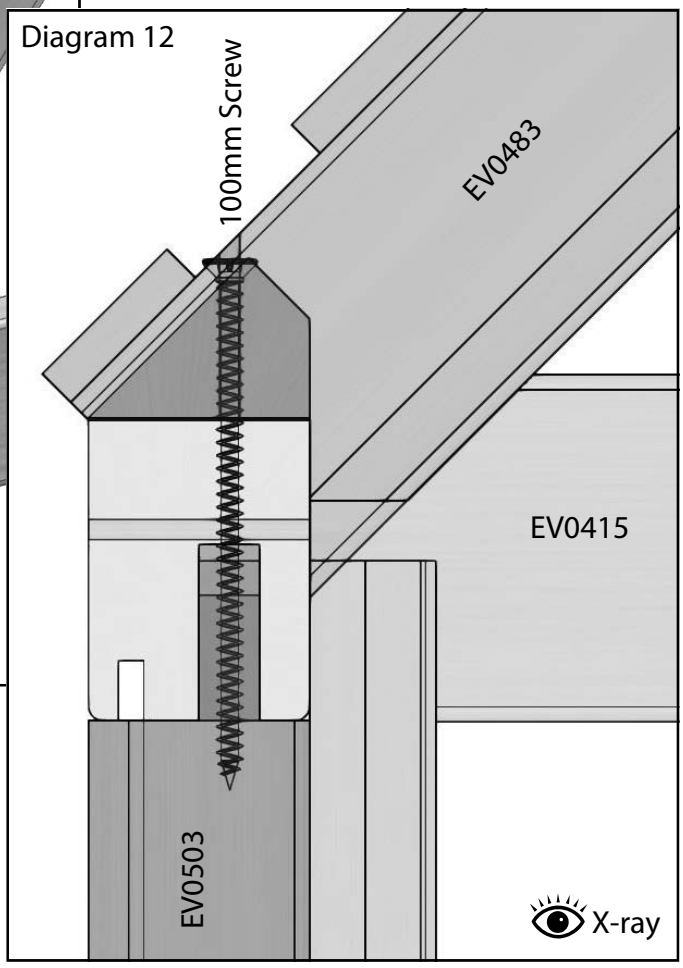
Diagram 9

Frame Assembly

Before fixing this corner make sure the inside faces are all flush (diagram 10). When you are happy that the purling is located correctly (it is normal that the purling is set back slightly from the glass rebate on the front of the building) start by inserting the 80mm screw through the side of the eaves bar into the tenon on the end of the purling.
Next insert the 100mm screw vertically down through the roof corner bar into the eaves bar and finally securing the side corner bar (diagram 12).







Frame Assembly

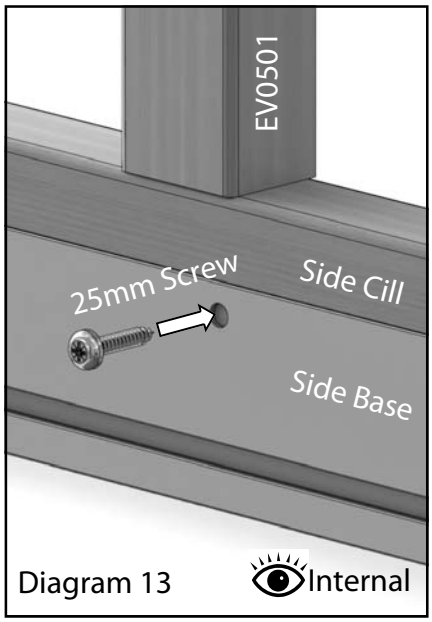
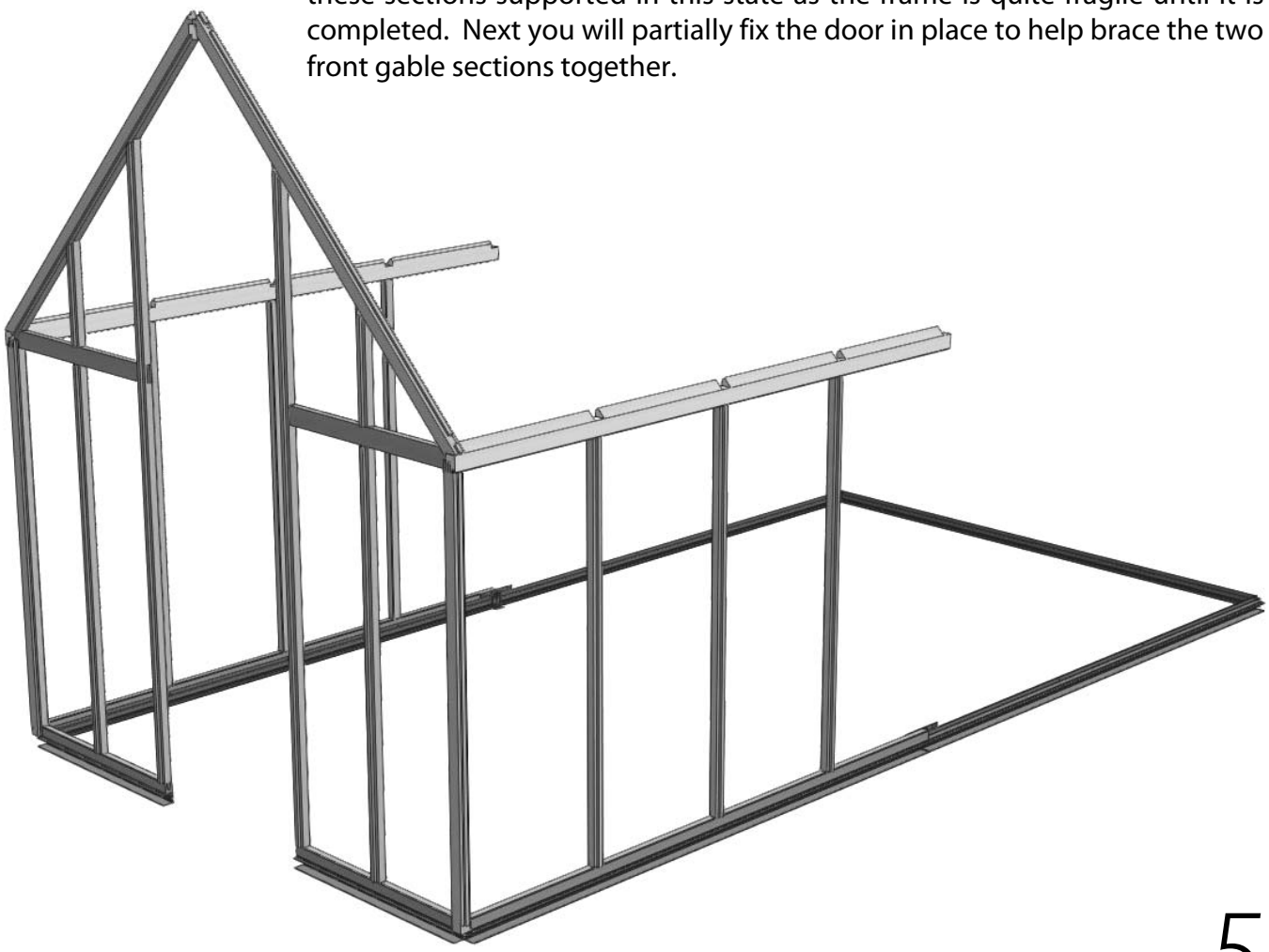


Diagram 13

Once the side corner bar is in place this will give you the correct position on the aluminium base and you can fix the base to the side cill with 25mm screws (diagram 13).

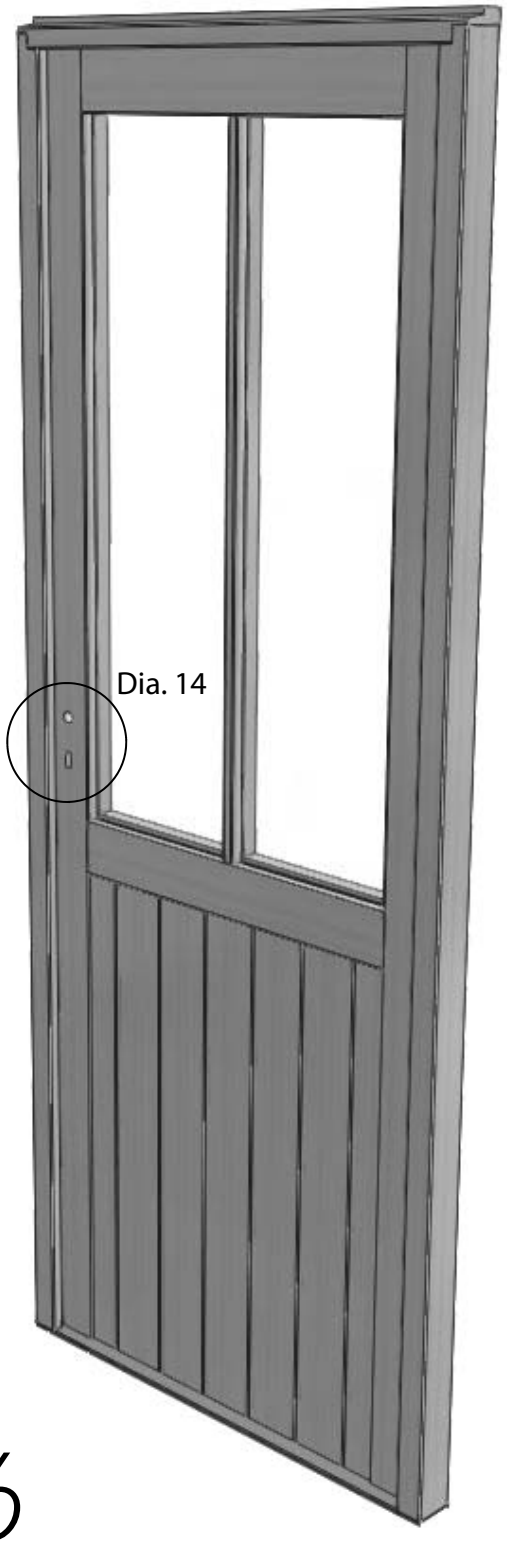
Repeat the last few steps to install the right hand side of the frame. Keep these sections supported in this state as the frame is quite fragile until it is completed. Next you will partially fix the door in place to help brace the two front gable sections together.



Door Installation

Your door will arrive already installed in the frame with the lock and lock plate attached. All you need to do is attach the door handle to install this to the building.

Start by sliding the spindle through the top hole in the door (diagram 14), then locate one of the door handles on this and fix with the screws provided. Repeat this on the other side of the door (diagram 15).



External Views

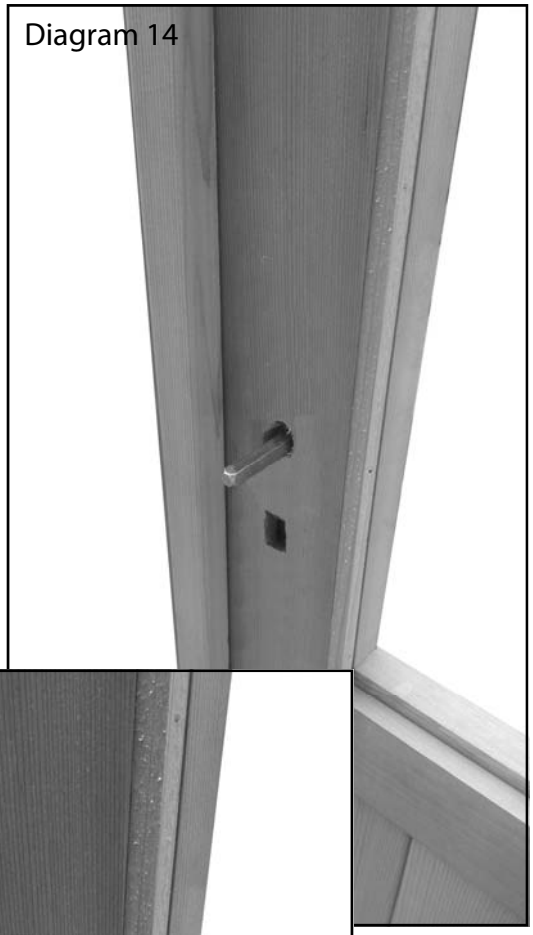


Diagram 14


Diagram 15

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Door Installation

Take the door to the greenhouse frame assembly and slide it into place. Unlock and open the door so that it is 90 degrees to the frame as shown in the illustration on the opposite page.

You will need to pack the outside edge of the open door, ideally with a wedge so you have some adjustment or simply with some scrap cardboard from the packaging. This will help you get the frame in the correct position for fixing.

To start with you only need to put 4 fixings in the frame, 1 on either side at the top and the same at the bottom. The 50mm screws should go through the same face that the strike plate is mounted on and where the hinges are mounted on the other side. The back of the frame should line up with the inside face of the gable glazing bar, this should then also mean that the glass rebate on the frame header will line up with the rebate on the gable glazing bars (diagram 17).

When you are happy with the position of the frame fix it with the 50mm screws as shown on the opposite page. This is only an initial fix and adjustments can be made later.

Diagram 16

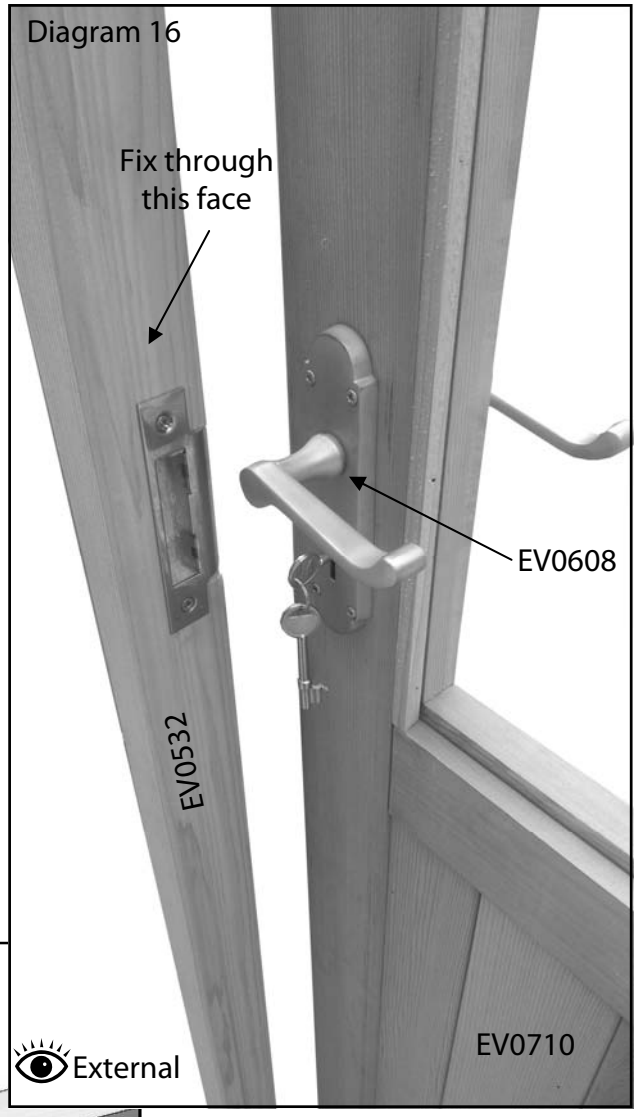
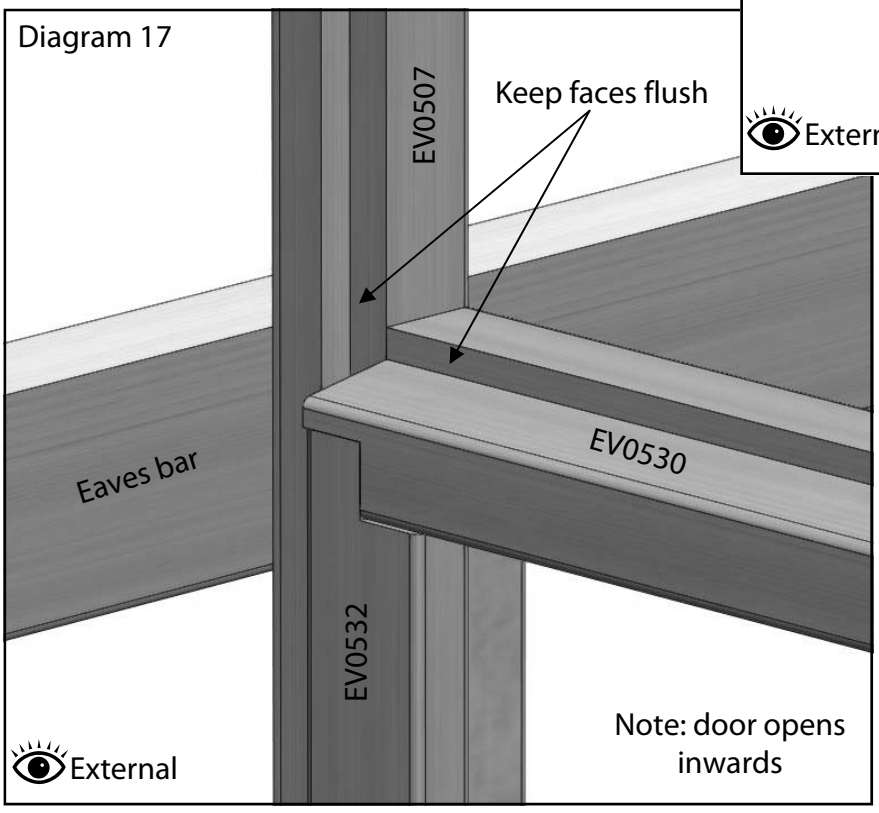
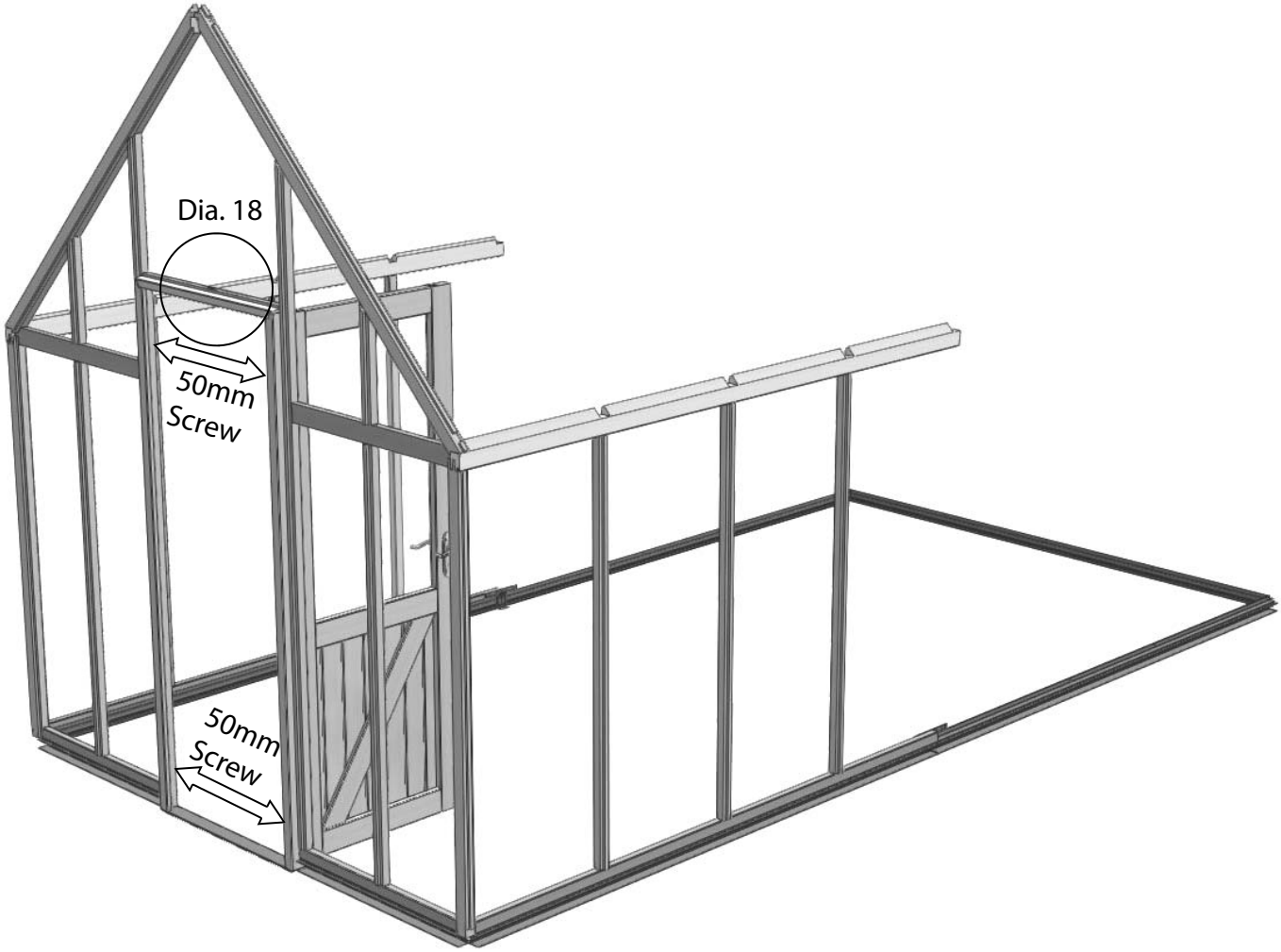


Diagram 17



Door Parts		
Part Name	Part Number	Qty
Door Lock	EV0606	1
4" Hinges	EV0607	3
Door Handle Set	EV0608	1
Single Door	EV0710	1

Door Installation



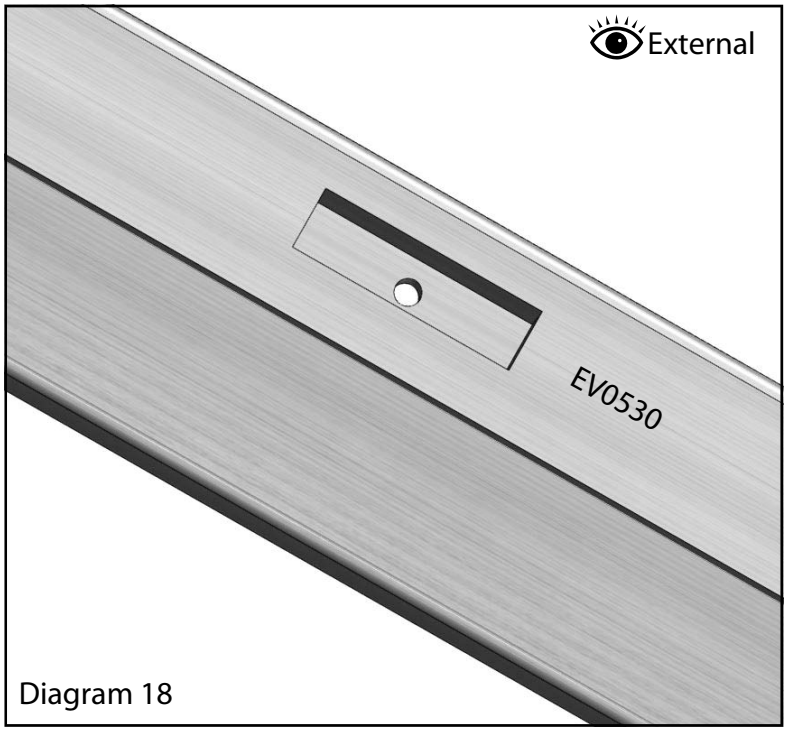
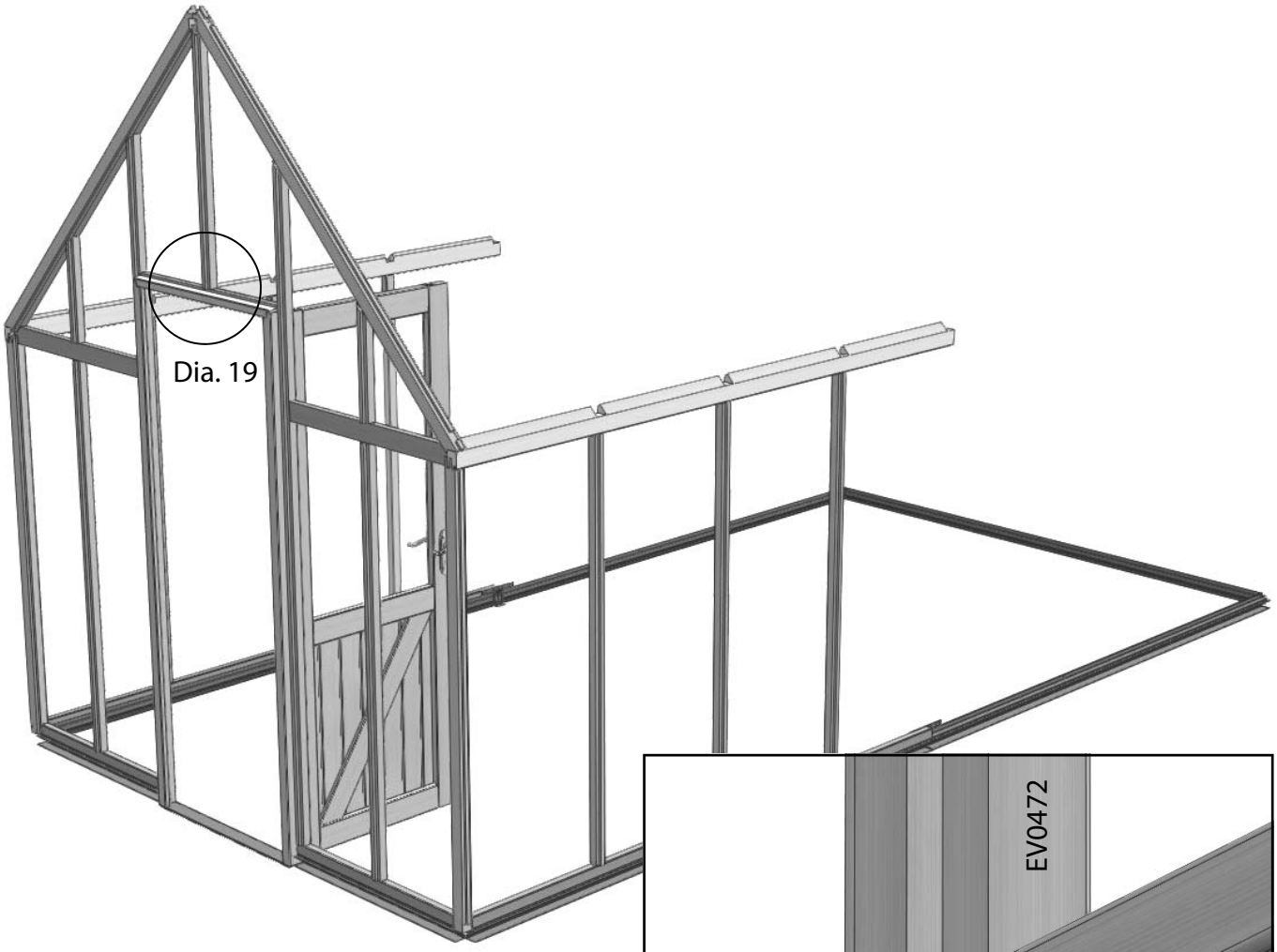


Diagram 18

Once the frame is secure drill a pilot hole through the mortise slot in the door frame header (diagram 18).

6

Door Installation



Slot the above door glazing bar into the mortise slot in the door frame header and secure it with a 50mm screw.

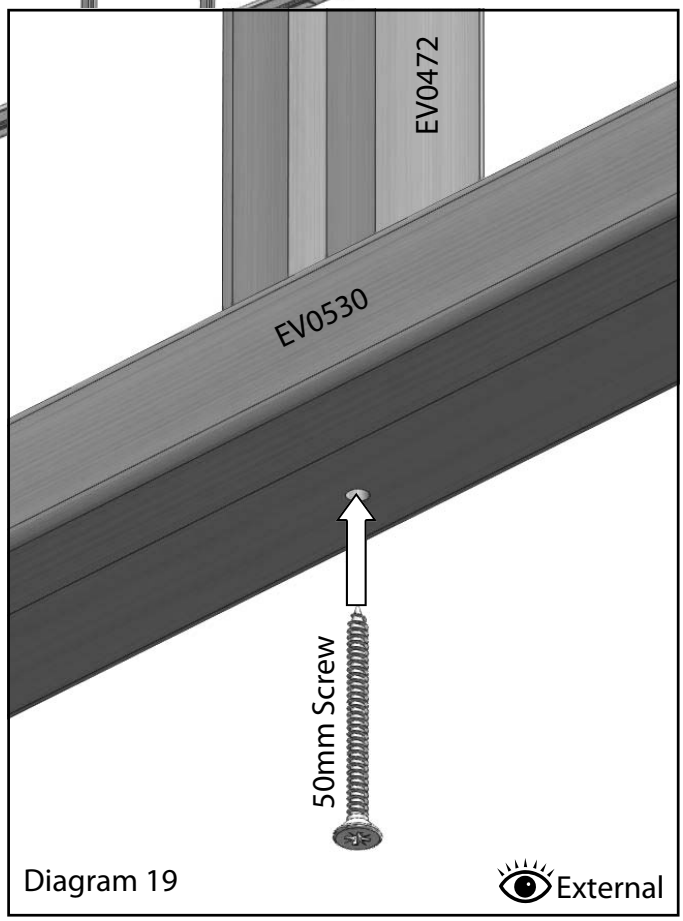
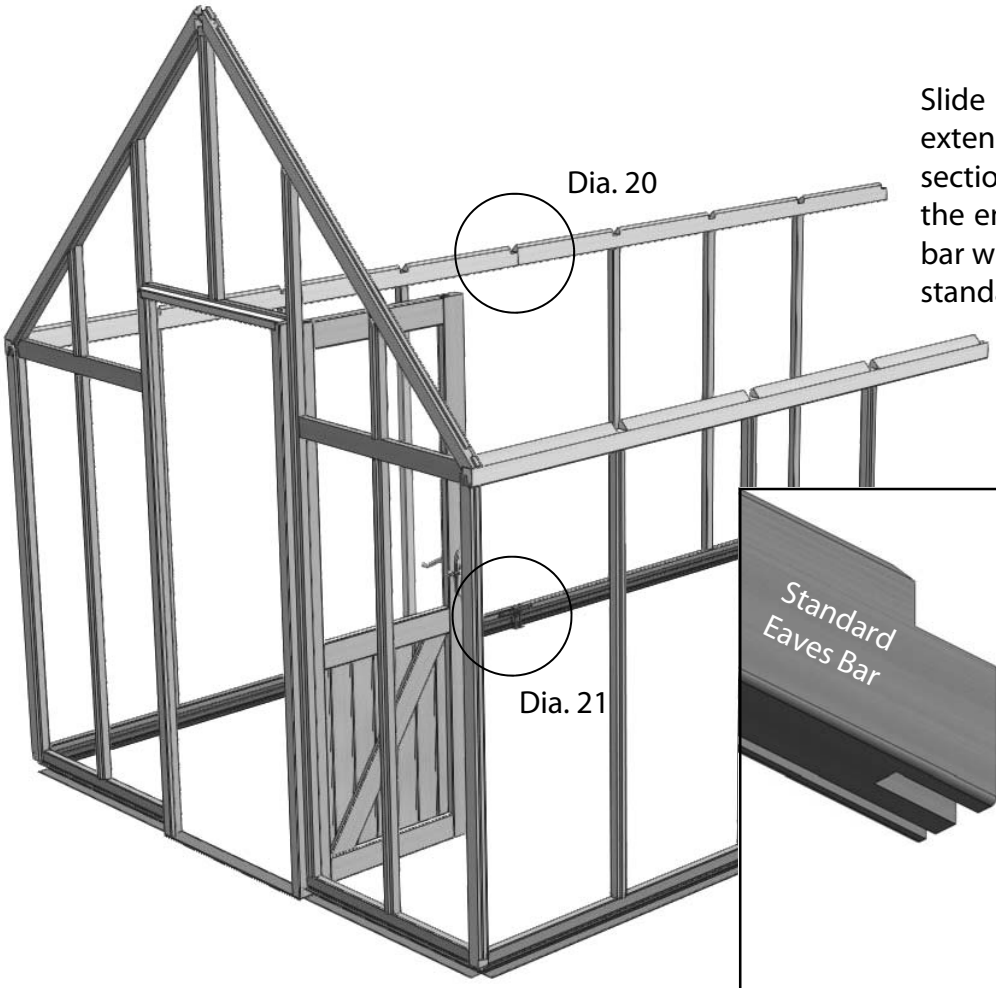


Diagram 19

Extension Assembly



Slide the left hand side extension up to the first side section. Locate the tenon on the end of the eaves extension bar with the mortise slot on the standard eaves bar.

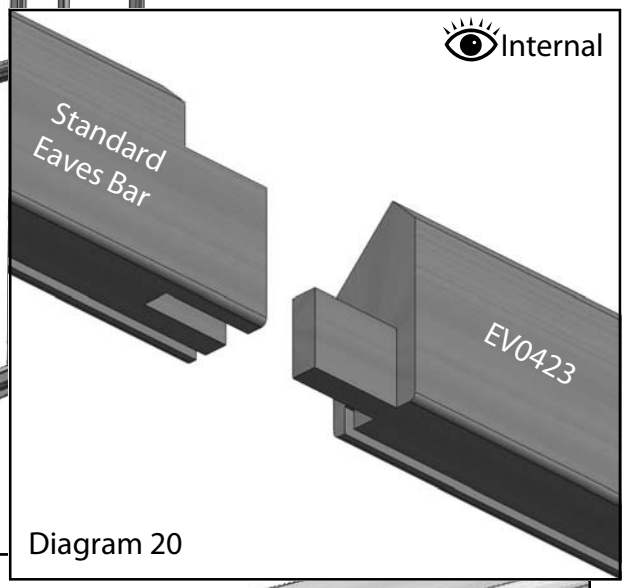


Diagram 20

Using eight 25mm screws secure the two cills to the aluminium base. Leave out the two screws at the mortise joint until you have installed the side extension glazing bar.

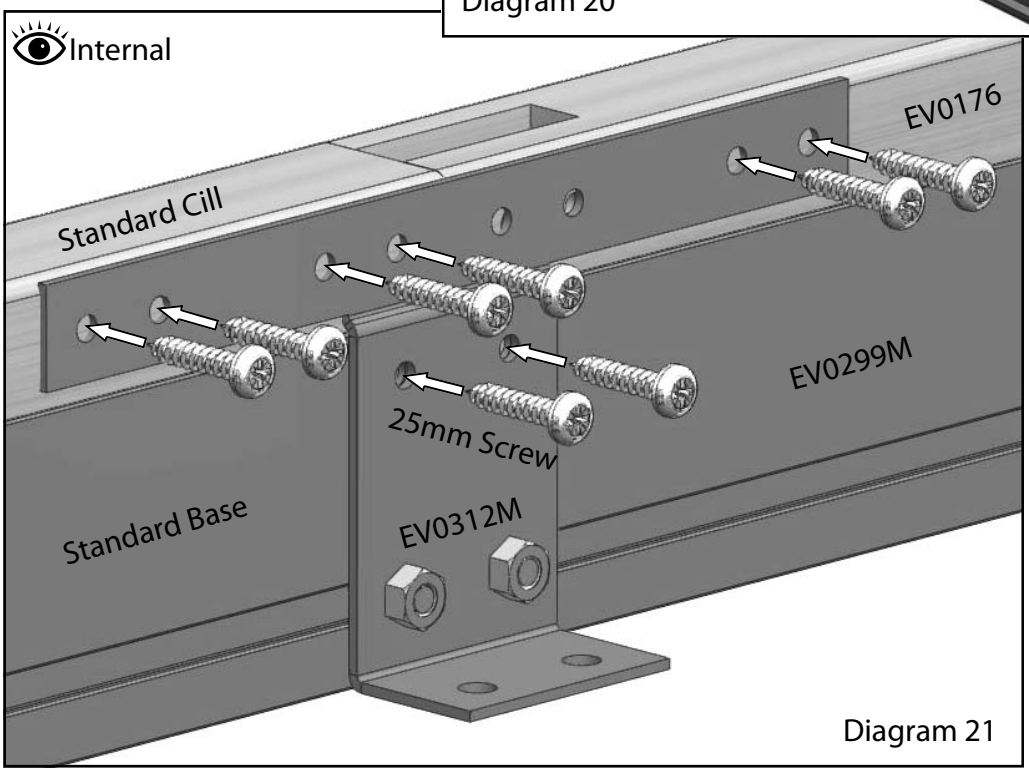


Diagram 21

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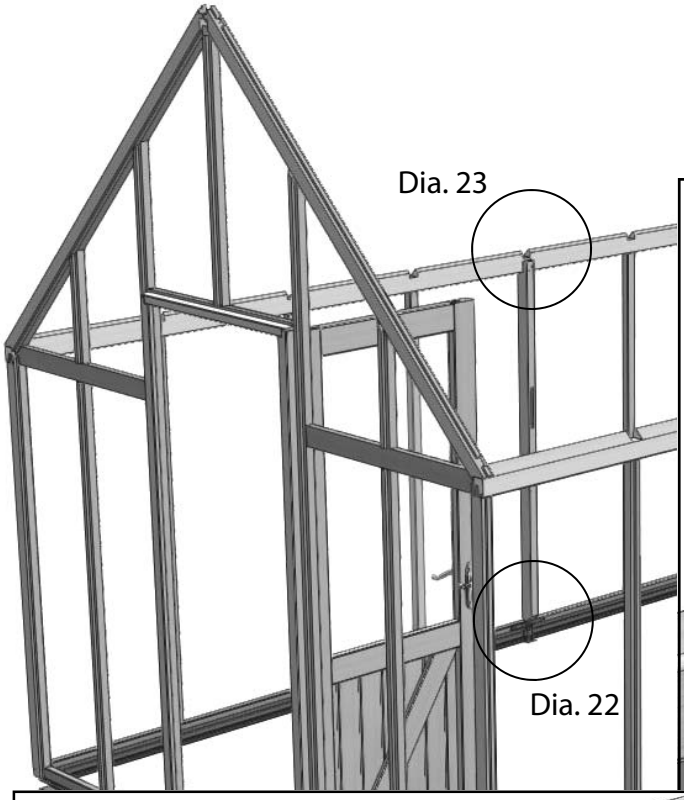
Extension Assembly



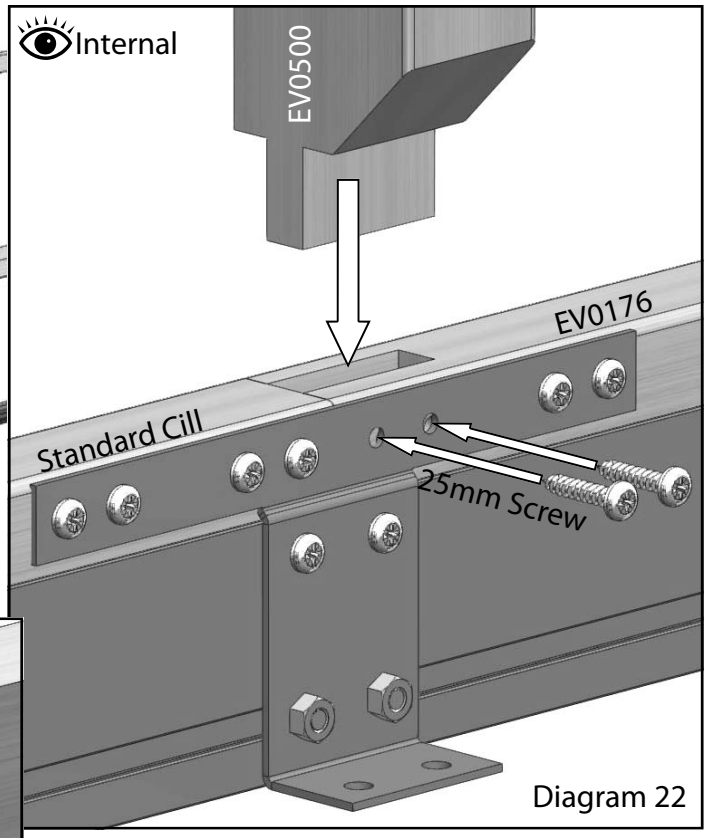
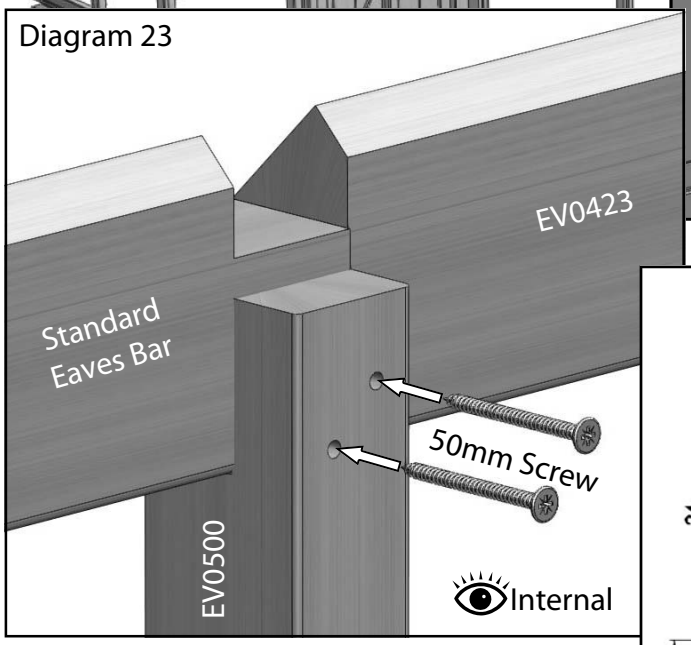


Diagram 22

Diagram 23



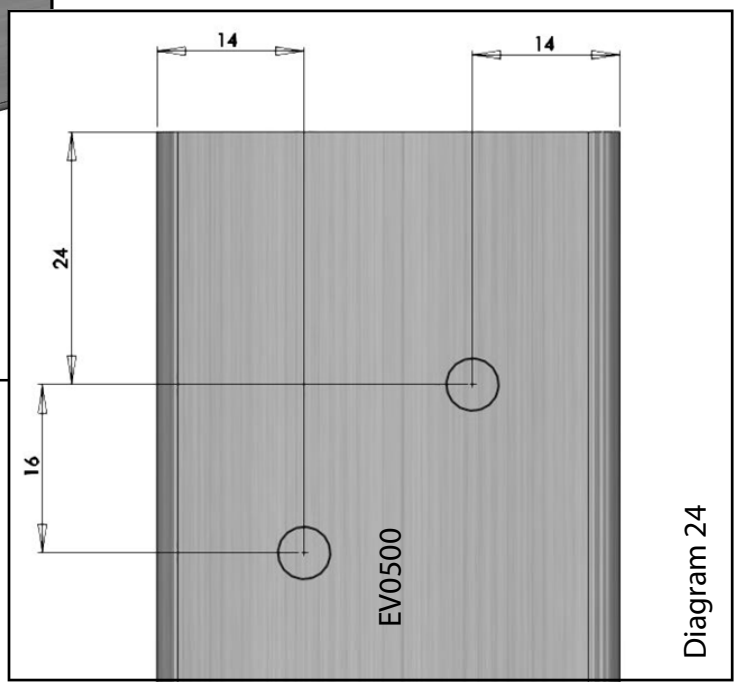
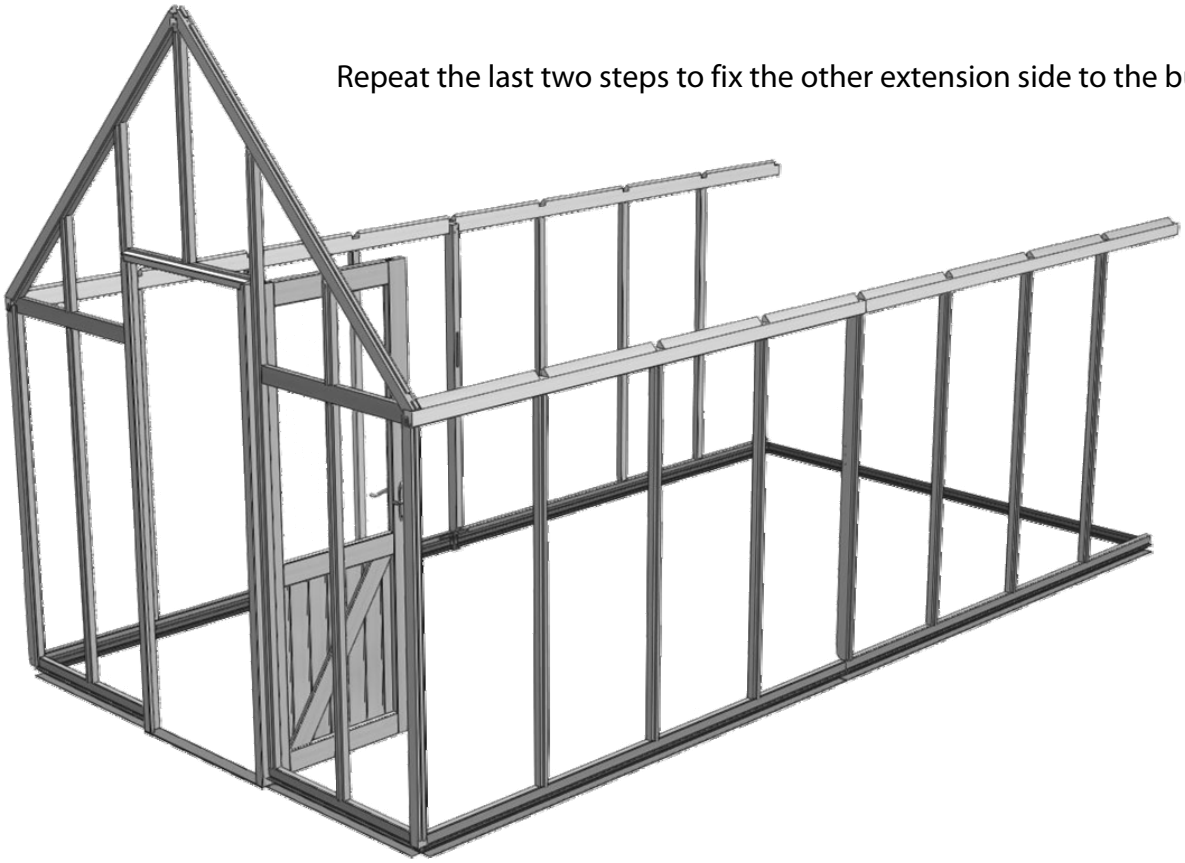


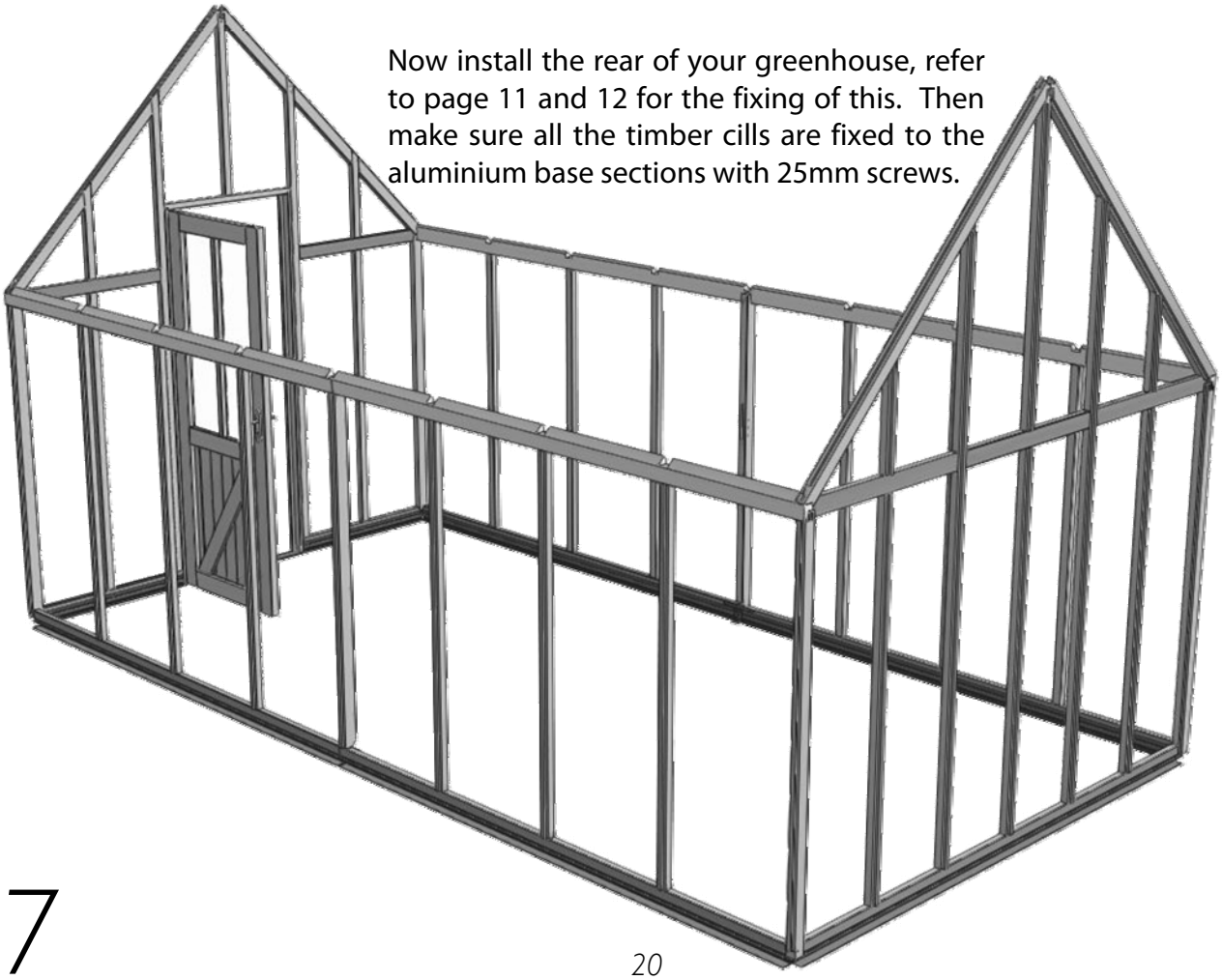
Diagram 24

Next fit the side extension bar, first slot the tenon on the end of the bar into the mortise in the cill. Slot the top into position, lining the edge of the bar up with the joint of the two eaves bars. Secure this with a two 50mm screw and the secure the bottom with two 25mm screw., remember to drill a pilot hole first.

Extension Assembly



Repeat the last two steps to fix the other extension side to the building.

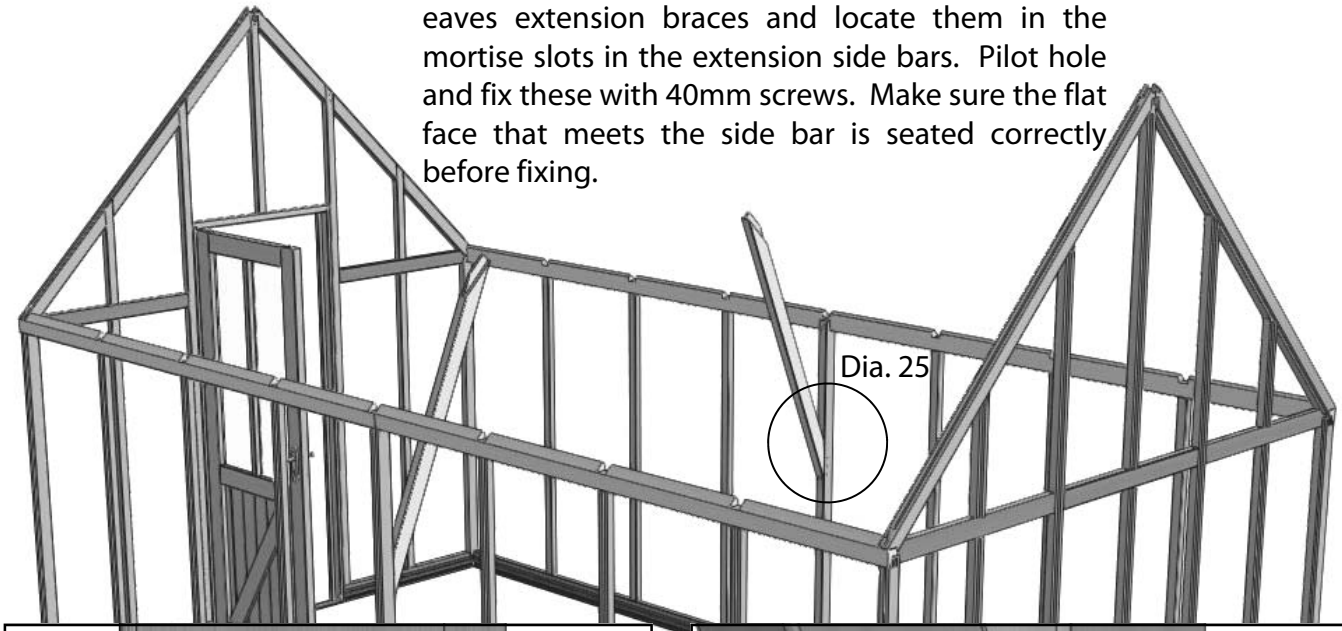


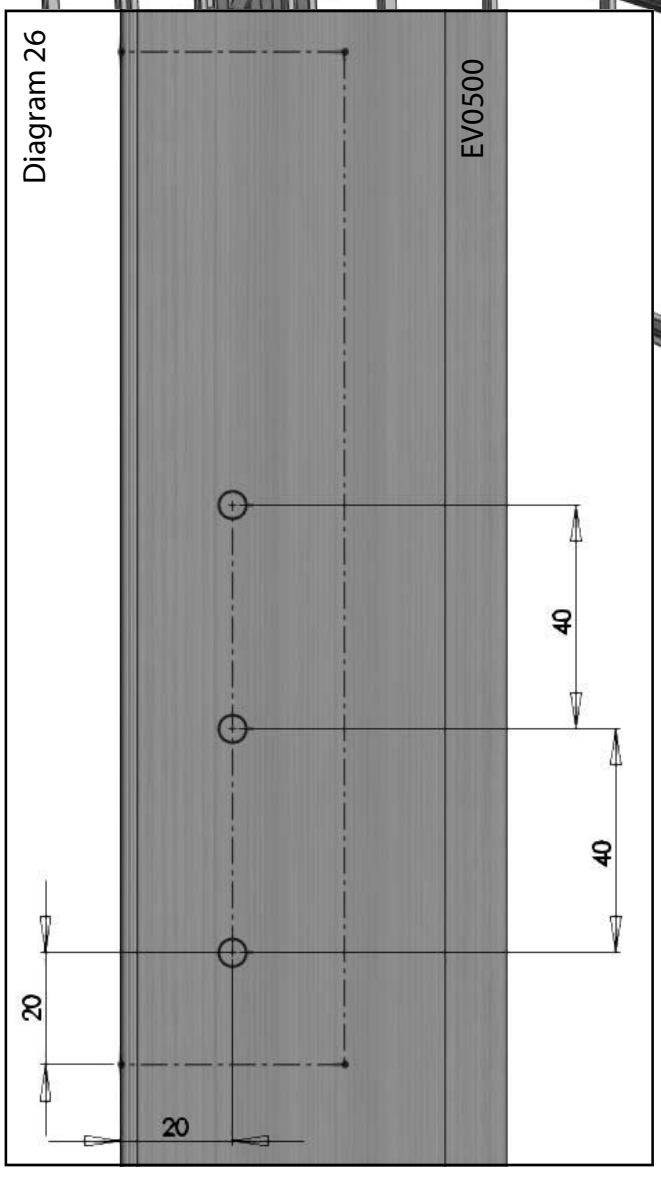
Now install the rear of your greenhouse, refer to page 11 and 12 for the fixing of this. Then make sure all the timber cills are fixed to the aluminium base sections with 25mm screws.

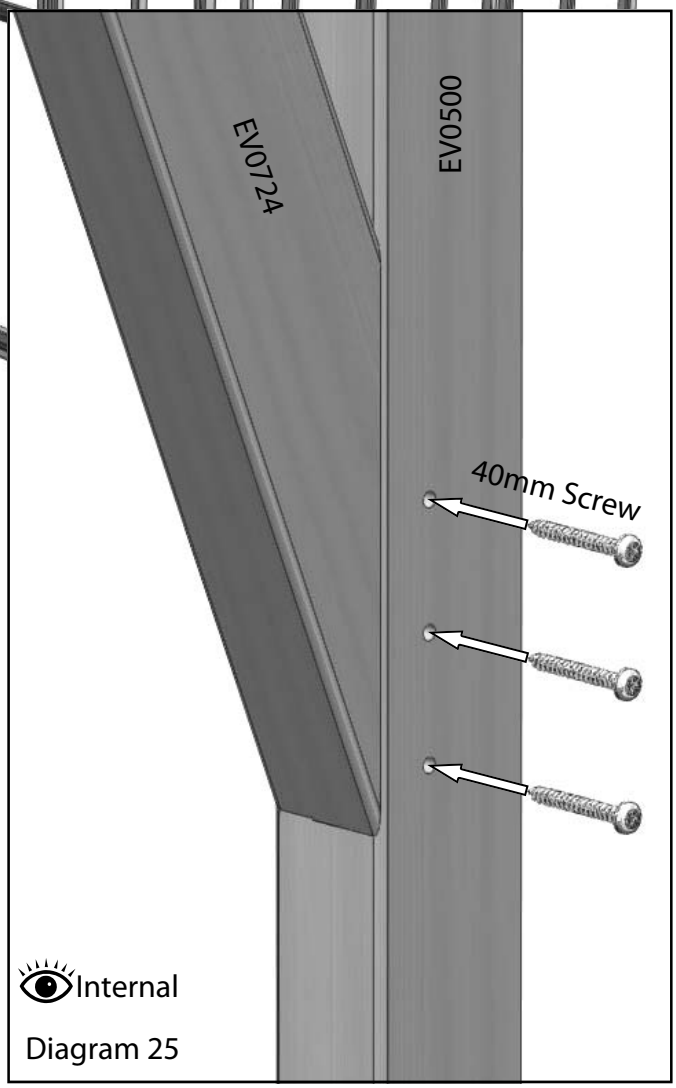
7

A-frame Assembly

You can start building the A-frame next. Take the eaves extension braces and locate them in the mortise slots in the extension side bars. Pilot hole and fix these with 40mm screws. Make sure the flat face that meets the side bar is seated correctly before fixing.

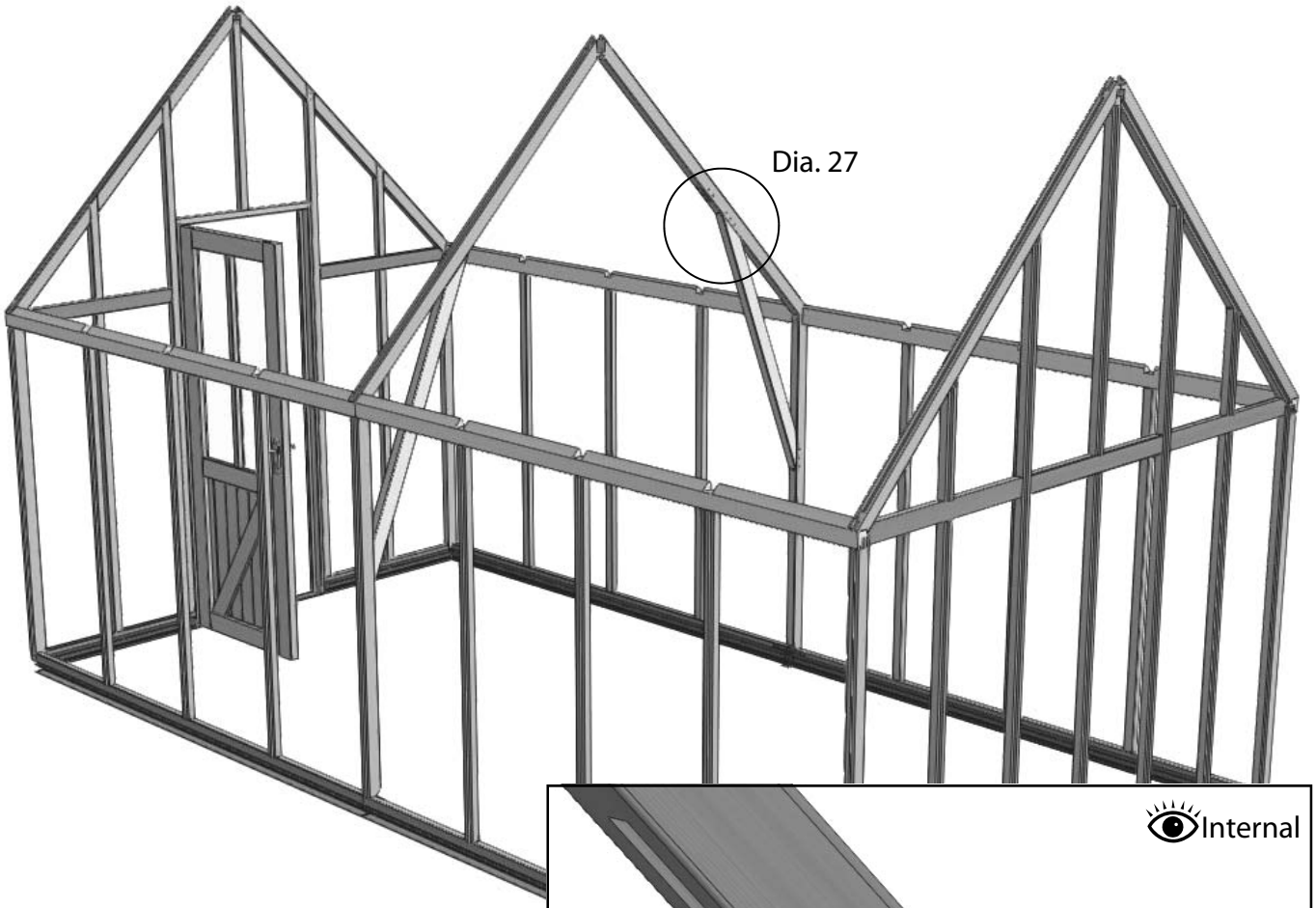






8

A-frame Assembly



Now slot the extension roof bars into place, these are easy to identify as they have mortise slots cut into them. Don't fix them at this point as you will need some flexibility for when you install the A-frame brace.

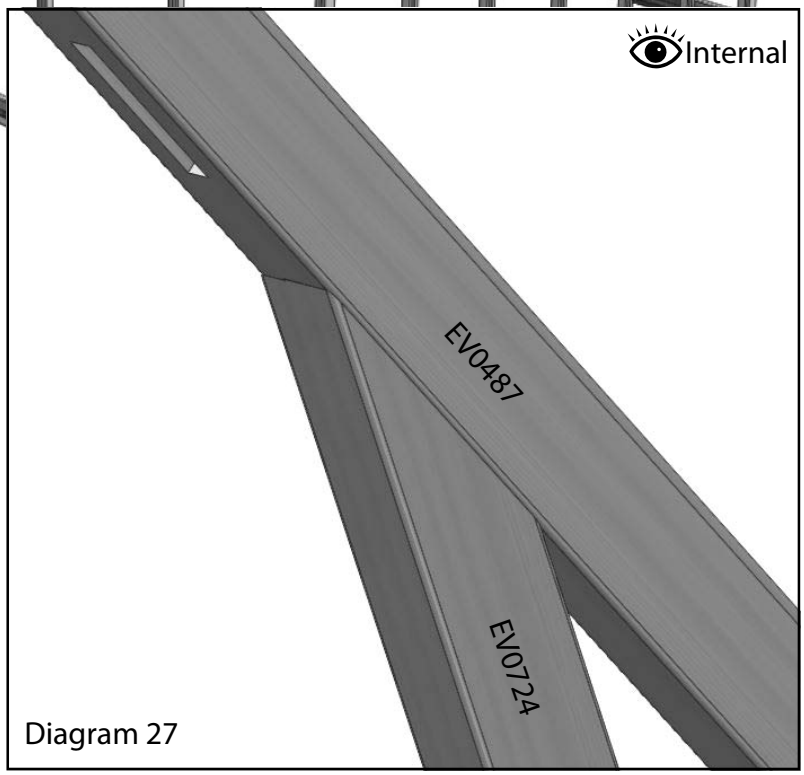
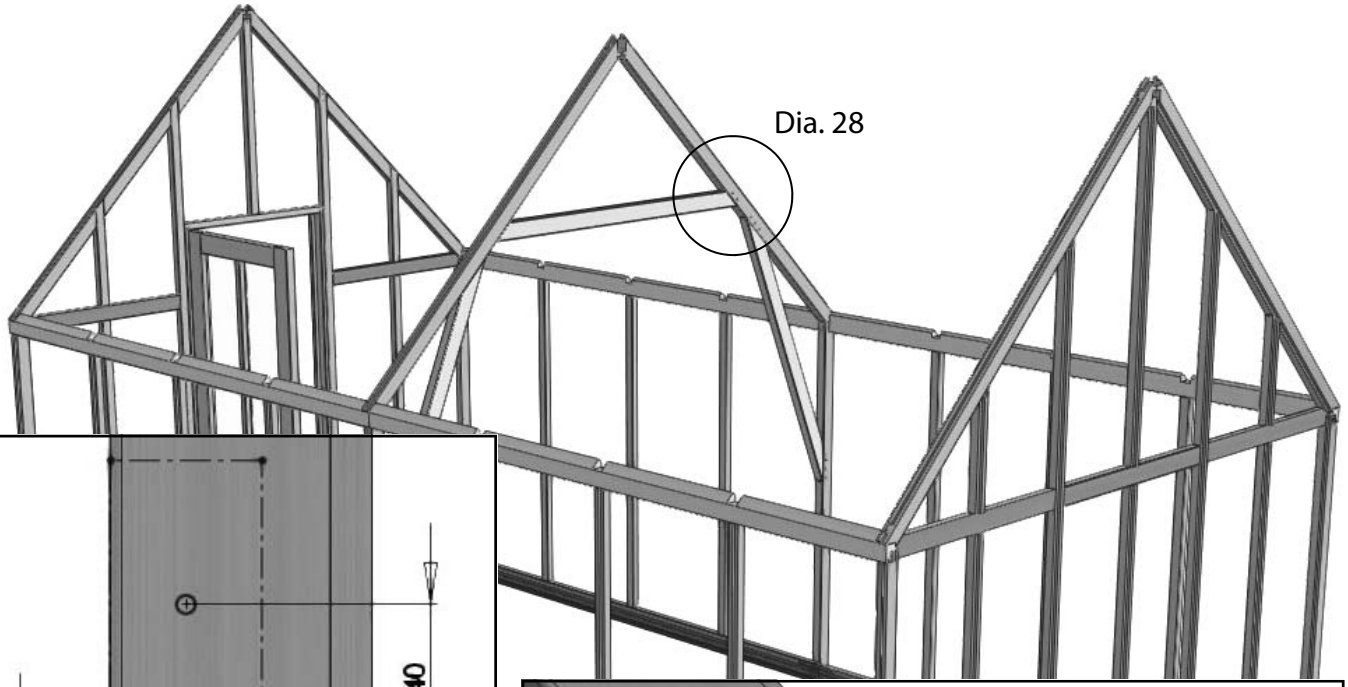


Diagram 27

8

A-frame Assembly



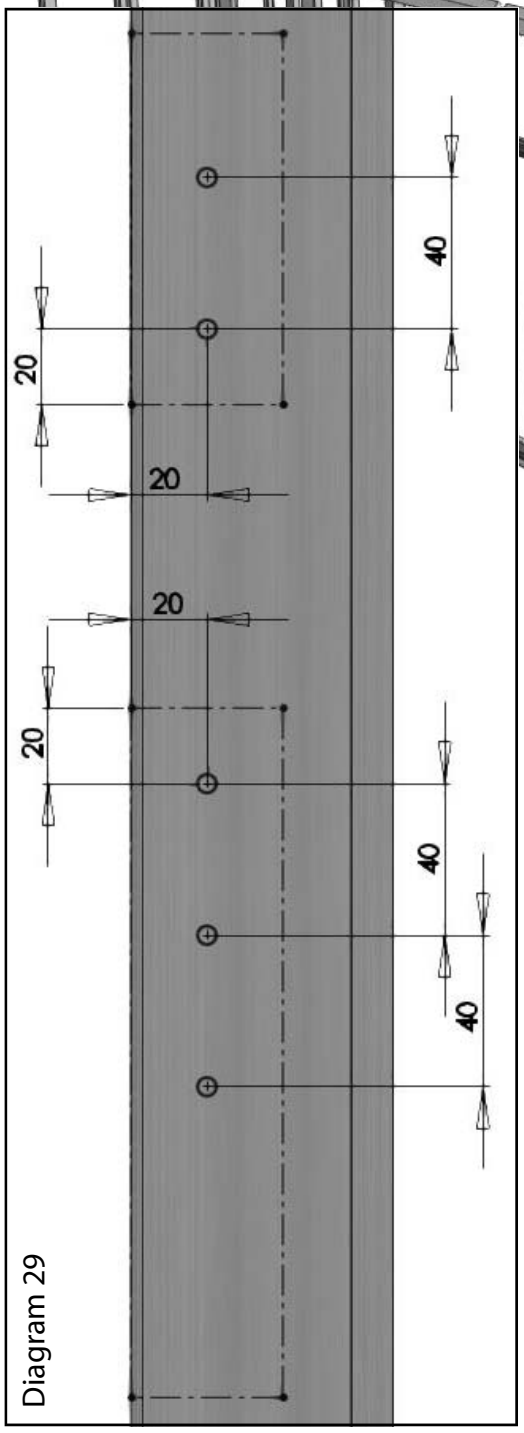


Diagram 29

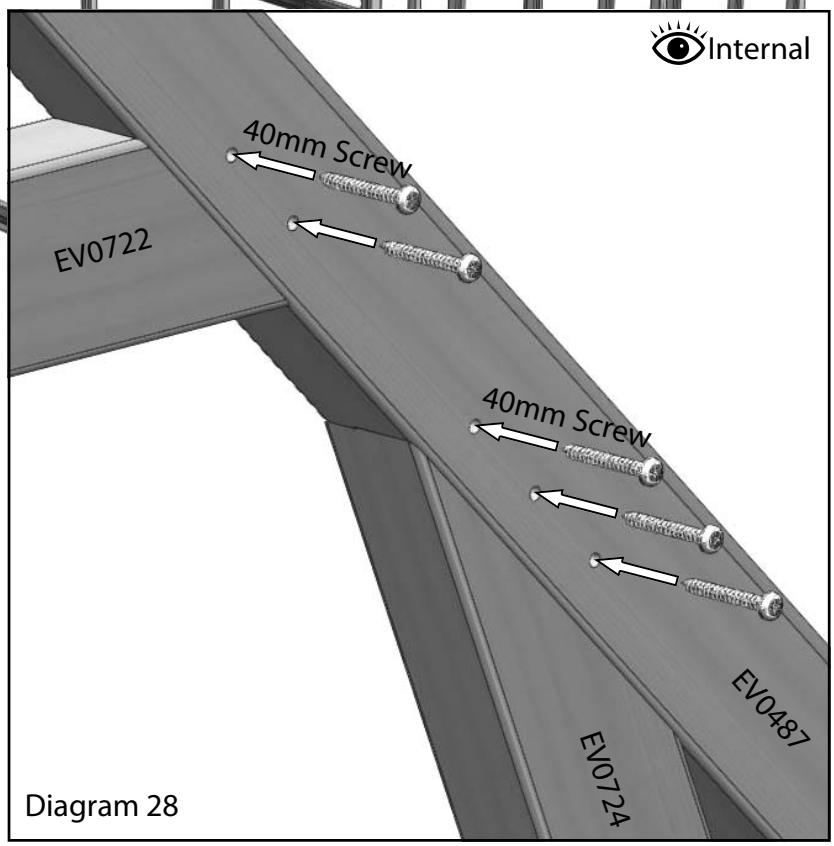
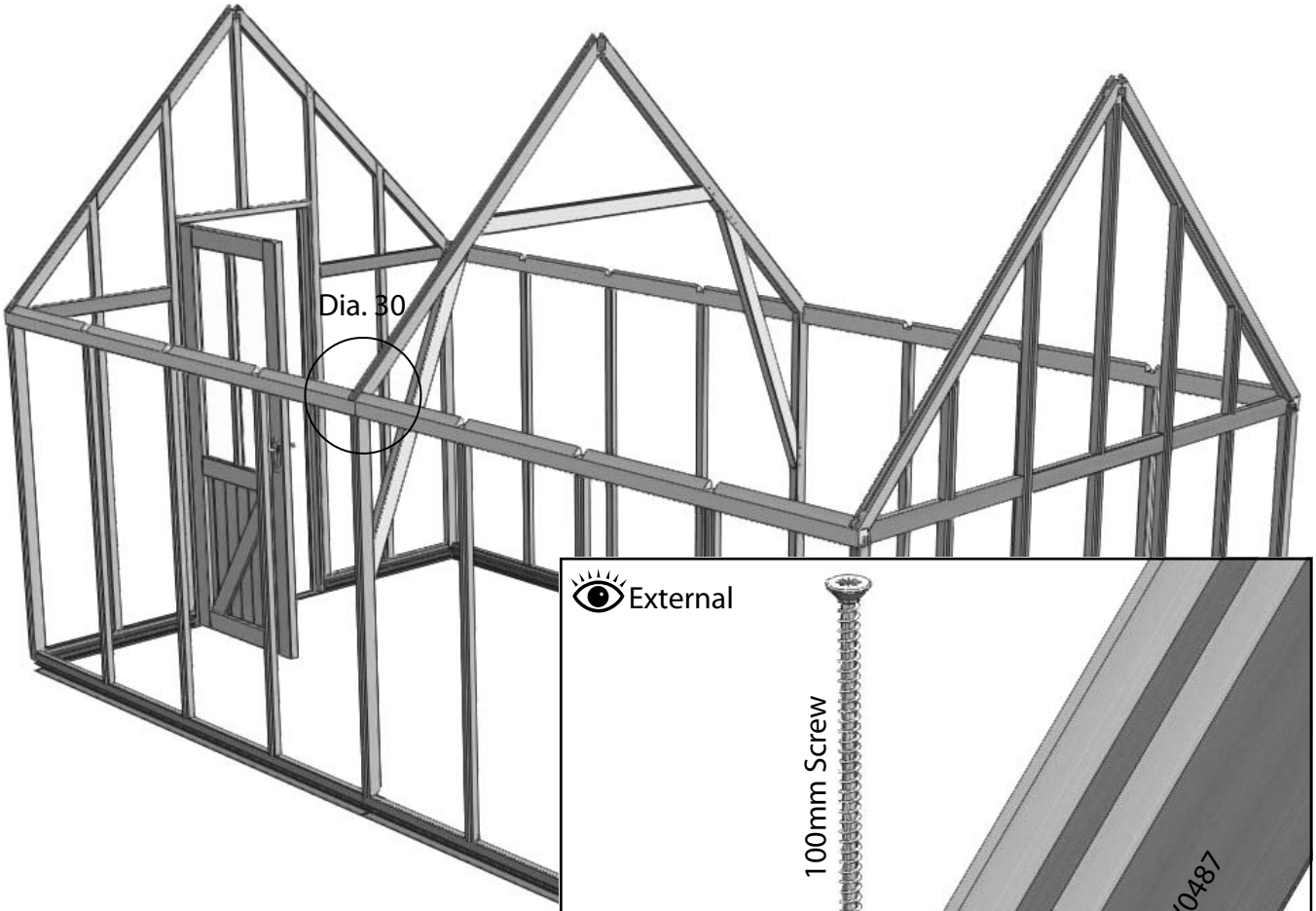


Diagram 28

Now install the A-frame brace (EV0722), you may find you need to move/adjust the extension roof bars to angle these in. Once in place drill pilot holes as shown in diagram 29. Then fix with 40mm screws (diagram 28). Make sure all the bracing bars are pulled in tight to the roof bars before fixing, you don't want any gaps showing.

A-frame Assembly



Now the A-frame bracings are in place and secured drill a pilot hole down through the roof bar (EV0487) into the eaves bar and fix with a 100mm screw. When you do this make sure the roof bar is pulled in tight to the eaves bar.

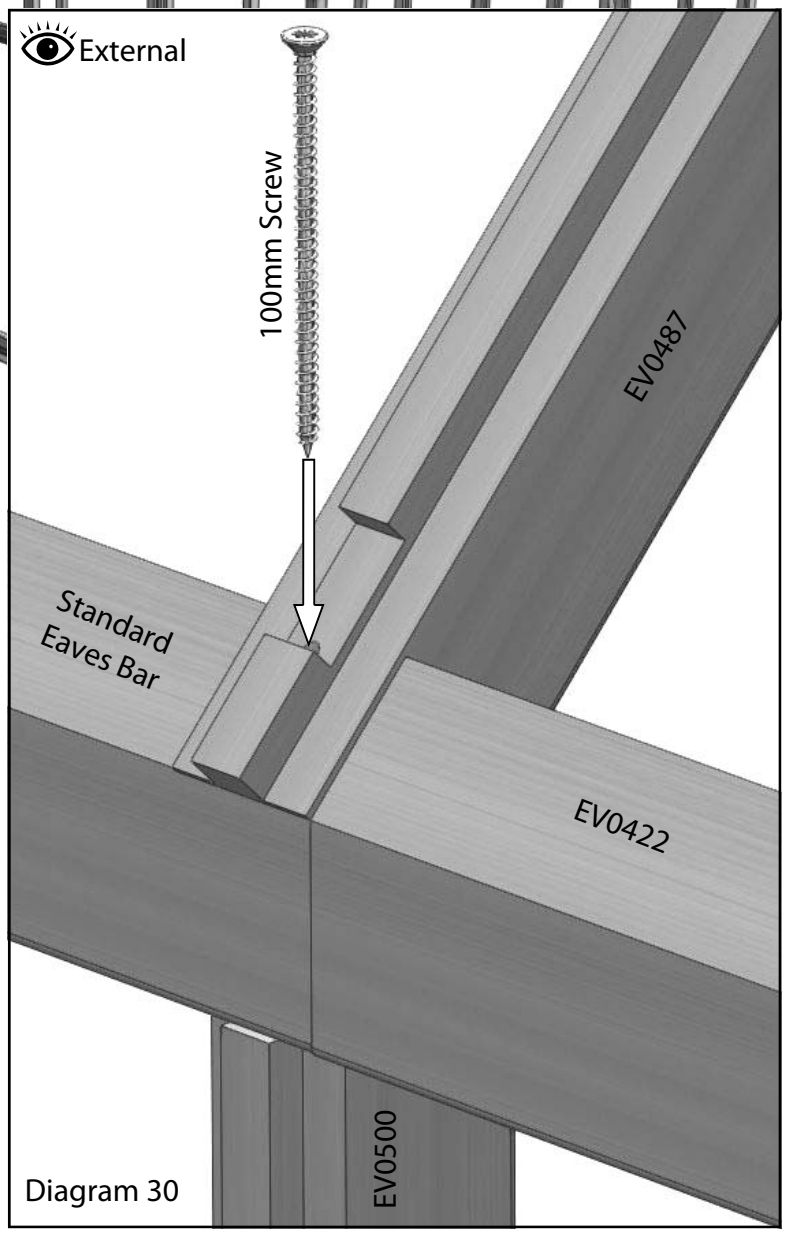


Diagram 30

8

Roof Assembly

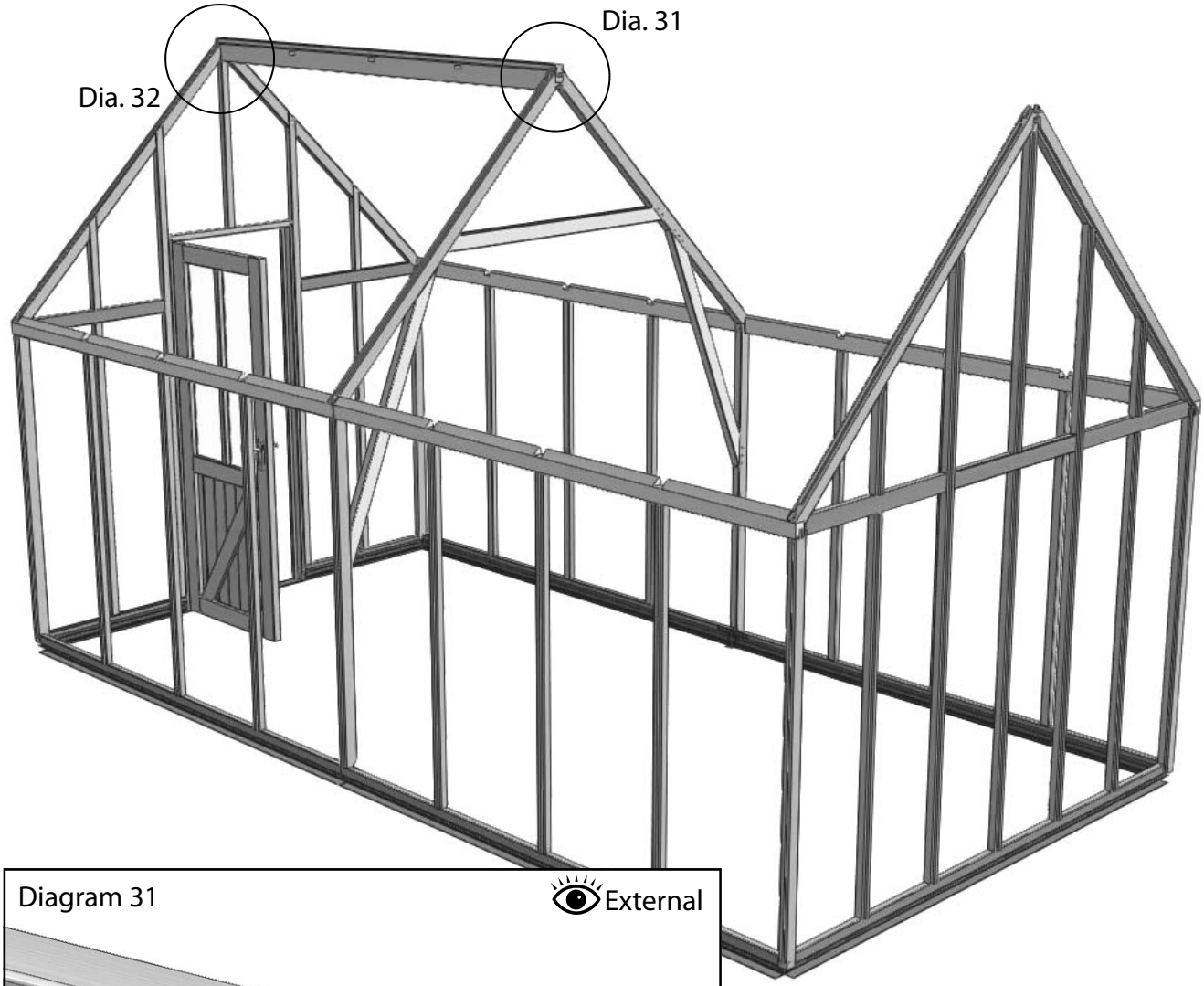
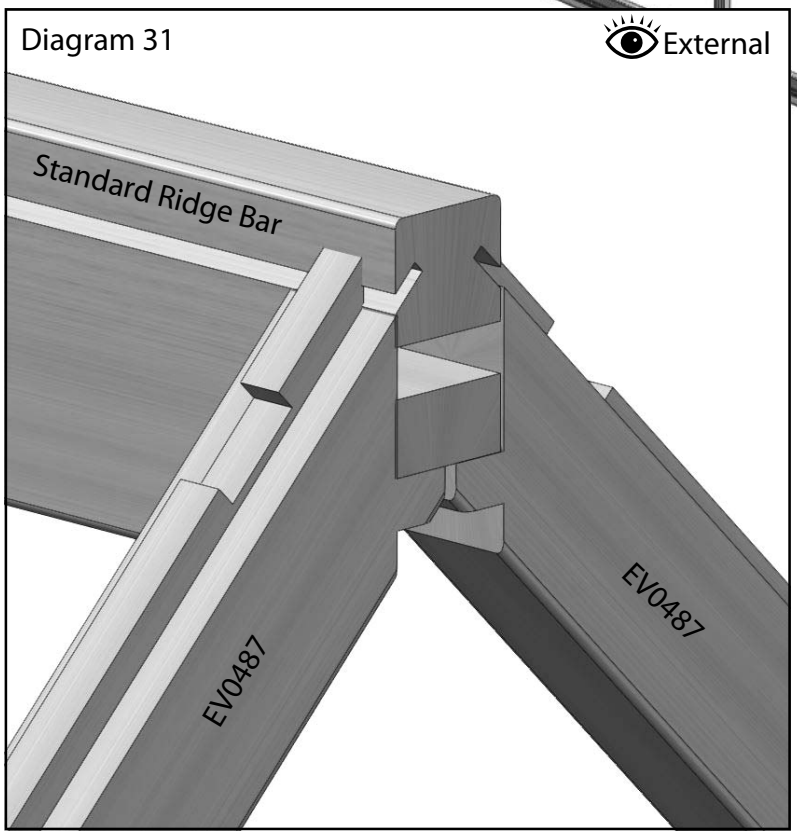


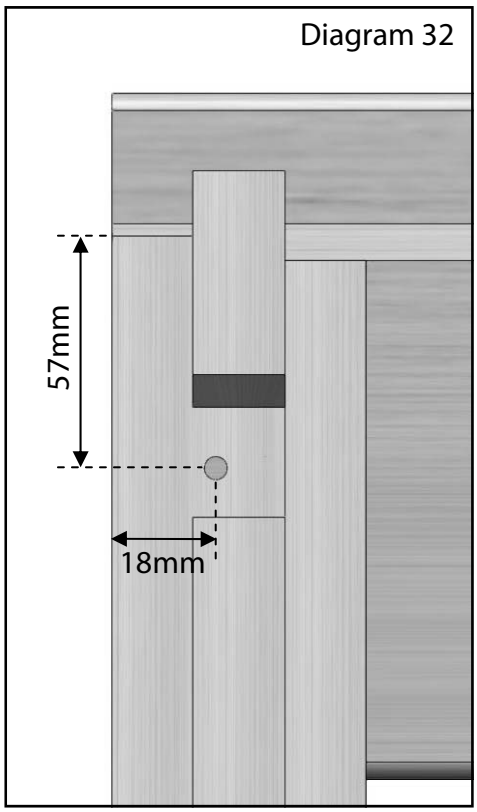
Diagram 31

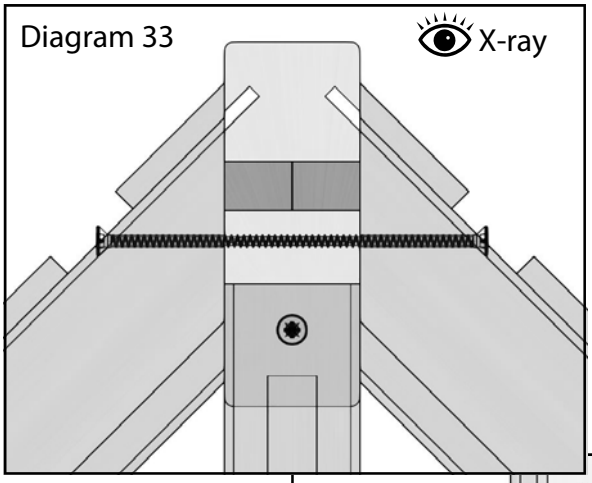


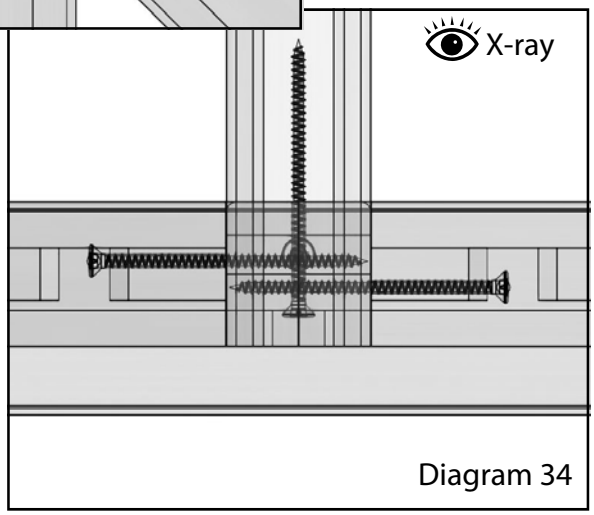
You will need two sets of step ladders at this point and a helper. Slot the ridge bar onto the tenons of the roof corner bars at both ends of the ridge. The central glazing bar on the front gable should locate with the ridge bar below the joint with the roof bars (diagram 35). Once in place still with your helper securing one end drill the roof corner glazing bars as shown in diagram 32 to 35. The pilot holes should be drilled horizontally and off centre as shown so that the screw on the other side misses this screw. If you always drill the holes for the roof bars 18mm from the left hand side of the bar this will prevent any interference problems. Fix the roof bars with 80mm screws (diagram 35).

9

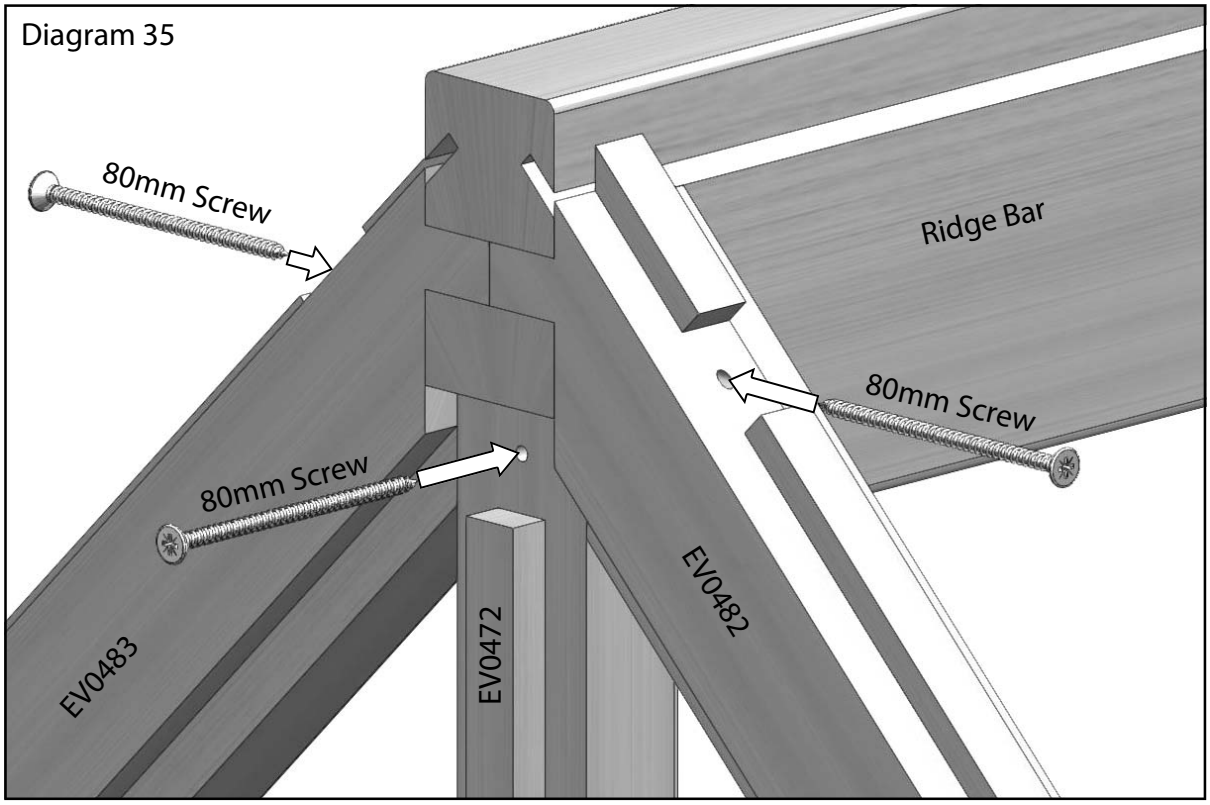
Roof Assembly







The central glazing bars should also have a pilot hole drilled and be fixed to the ridge bar with an 80mm screw (diagram 35).



9

Roof Assembly

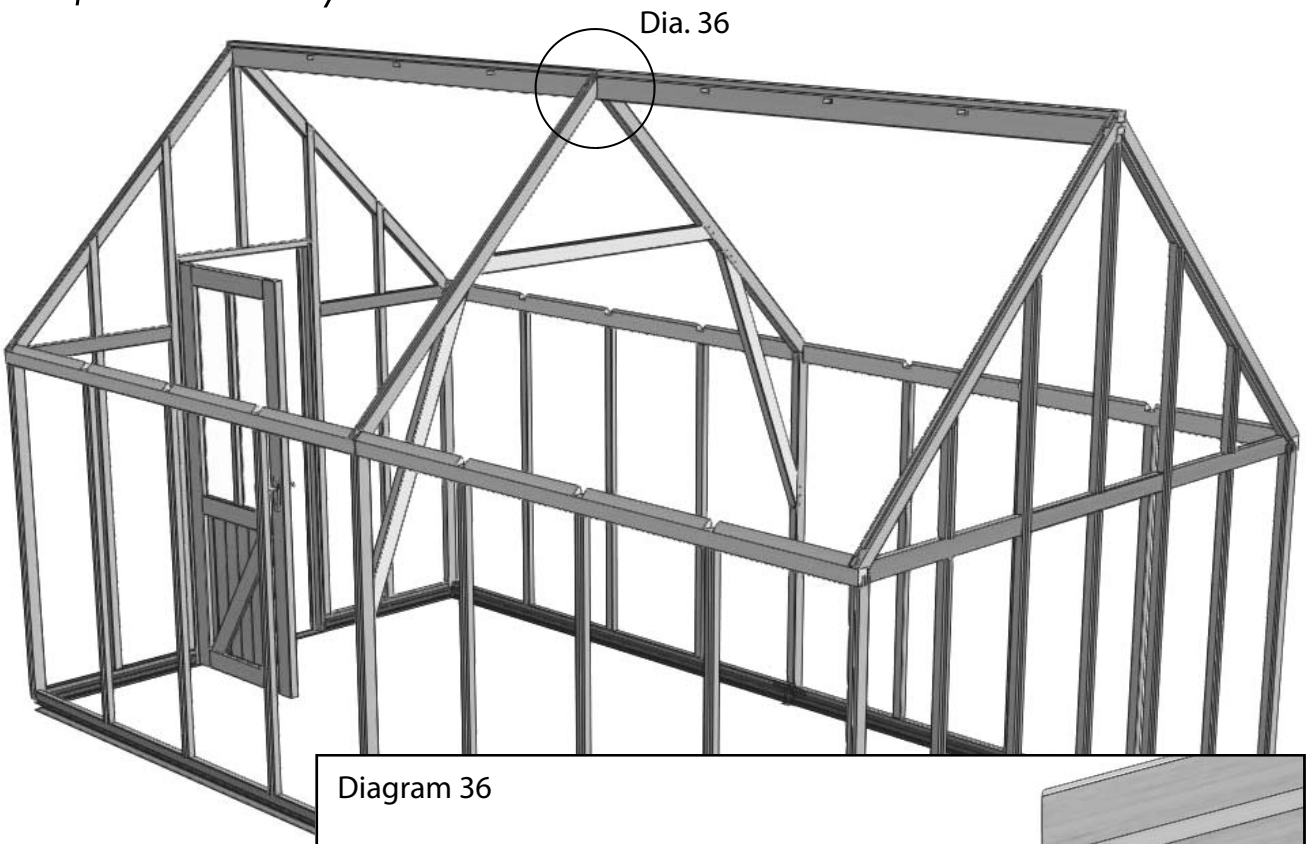
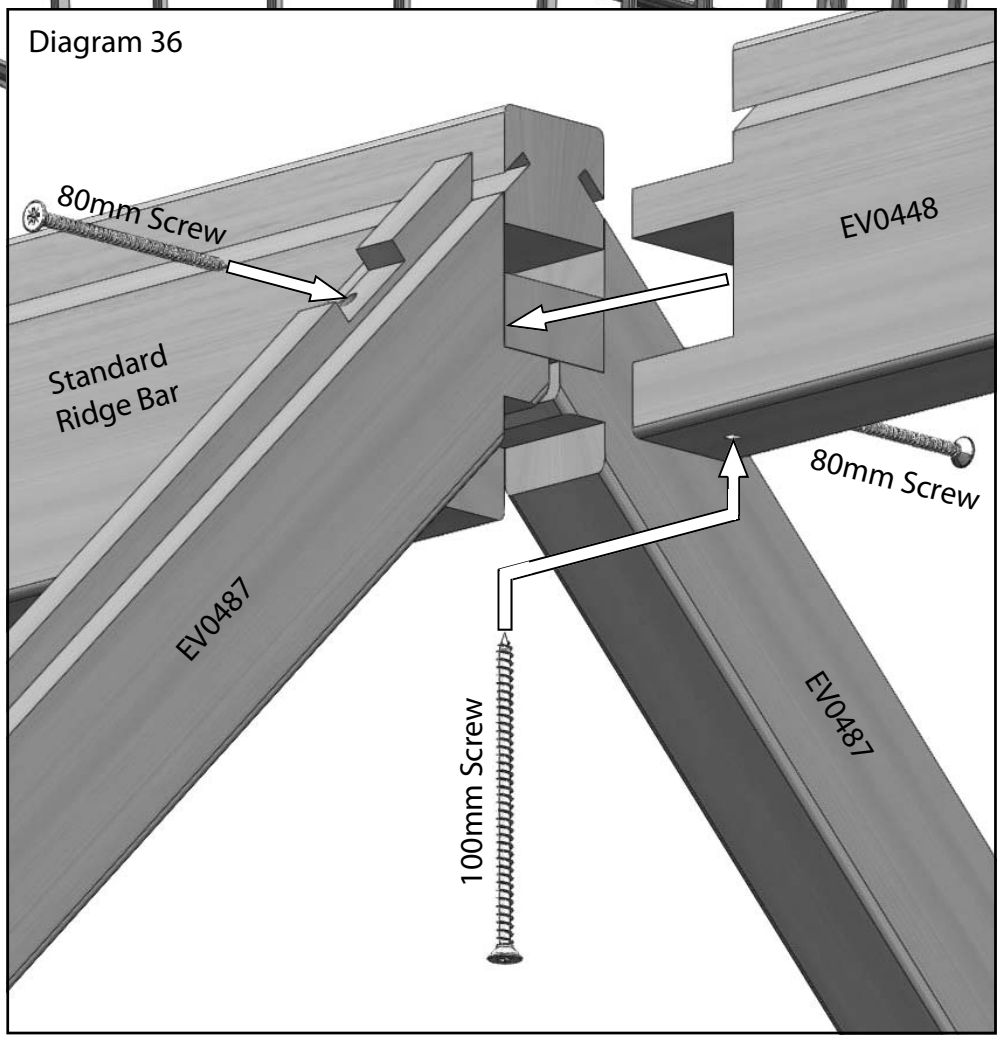


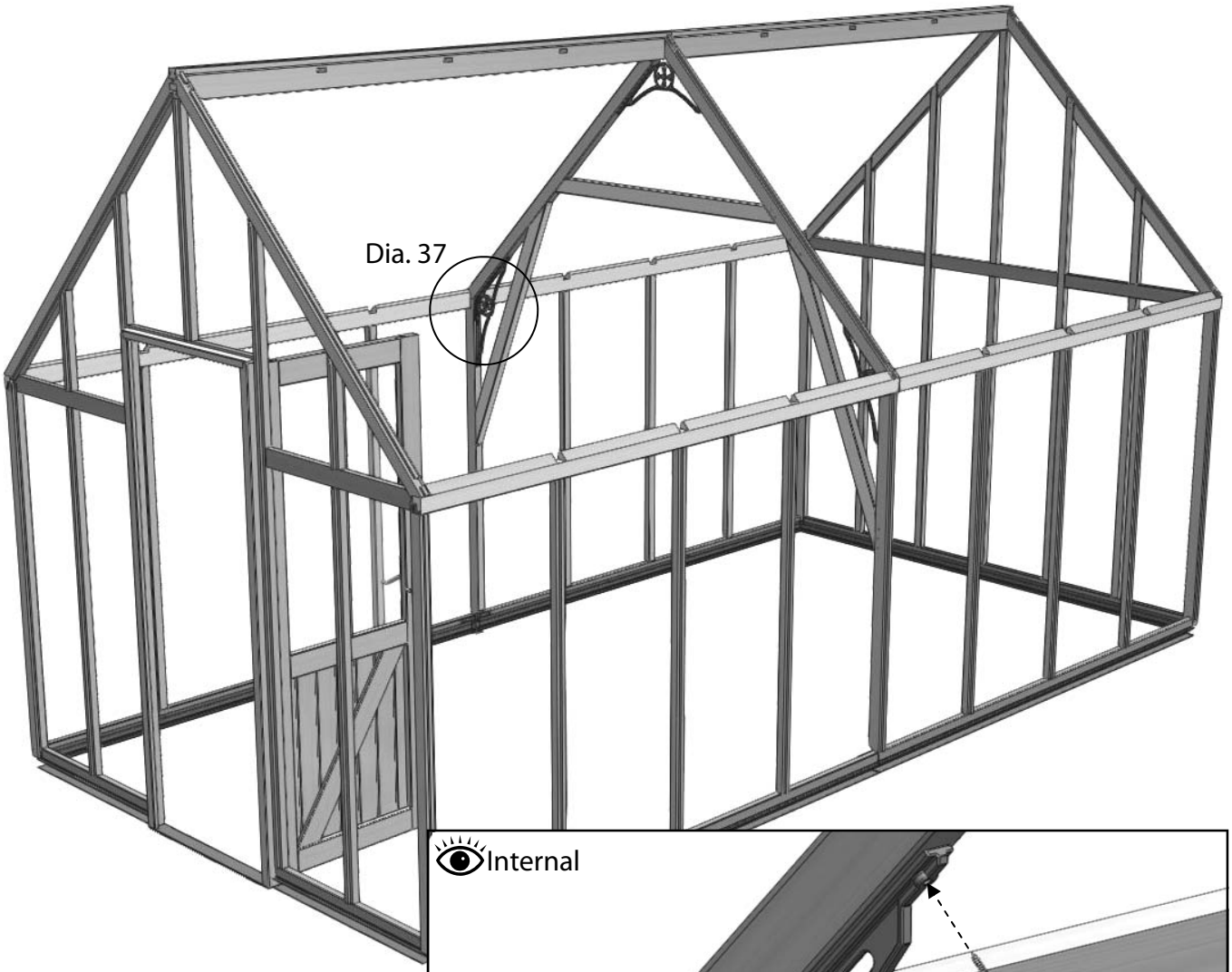
Diagram 36



Again with a helper supporting the other end of the ridge, locate the extension end of the ridge to the end of the first ridge, then do the same at the other end with the rear gable.

Drill a pilot hole through the bottom tenon of the extension ridge and through the roof bars. Fix the roof bars first with 80mm screws, pulling them in tight to the ridge. Then fix the ridge joint with a 100mm screw, this will go all the way through to the top of the first ridge section making sure this can't be pulled out.

Roof Assembly



Now that the A-frame is complete and the ridge sections are in place it's a good idea to fit the aluminium ridge and eaves braces. Use 40mm screws to fix these in place. (it looks better if you have the manufacturing marks facing to the rear of the building).

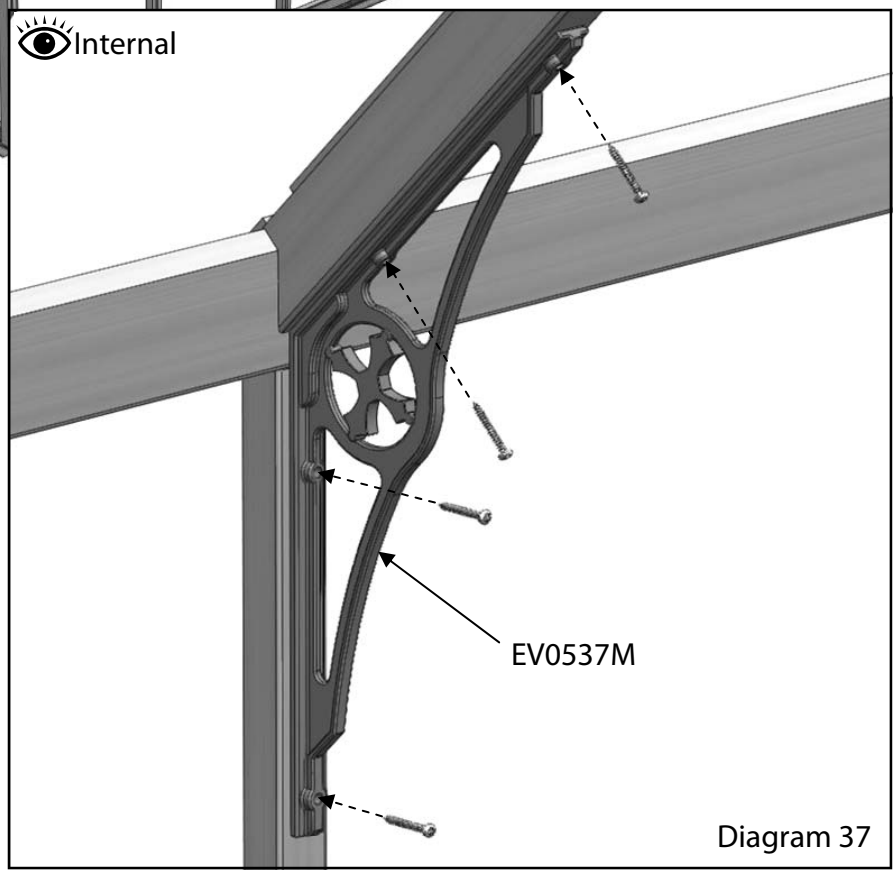


Diagram 37

9

Roof Assembly

You can now return to page 31 of your main manual to finish off the roof assembly.

Parts List

Part Code	Description	Quantity
EV0313M	Glass Stop EV0313 **MOSS**	16
EV0537M	ALU Bracing Eaves EV0537 675mm **MOSS**	6
EV0538M	ALU Bracing Ridge EV0538 751mm **MOSS**	3
EV0325	Evolution louvre kit incl glass ***MOSS*** EV0325	2
EVVICPACVENT	Victorian Vent bundle	2
BAXLAU	BAYLISS XL AUTO VENT	2
EVSMA03X	Evolutions smalls bag for extension No 3	1
EV0030	Glazing Bar Side EV0030 1588mm	6
EV0176	Cill Side Extention R EV0176 2520mm	1
EV0422	Eaves Bar 8ft long Extension R EV0422 2564mm	1
EV0423	Eaves Bar 8ft long Extension L EV0423 2564mm	1
EV0448	Vic Ridge Bar 8ft long Extension EV0448 2564mm	1
EV0452	Glazing Bar Side Extension EV0452 1648mm *GG*	2
EV0477	Glazing Bar Roof 8ft wide EV0477 1853mm	6
EV0487	Glazing Bar Roof 8ft wide Extension EV0487 1853mm	2
EV0722	A-frame brace 8ft wide EV0722 1410mm	1
EV0724	A-frame Eaves Brace EV0724 1393mm	2
EV0299M	ALU Rear/Ext Base 8ft wide EV0299 2519mm **MOSS**	1
EV0625M	ALU Vic Gutter 8ft long Extension EV0625 2520mm **MOSS**	2
EV0631M	ALU Vic Ridge Cap 8ft long Extension EV0631M 2520mm **MOSS**	1
ROSEPS	Glass separators 4mm black	2
EV0741	Gutter Extension Joint EV0741 45mm	2

Notes...