EVOLUTION TWELVE

ALTON
Cedar Greenhouses

Instruction Manual

Includes Models: 12x6, 12x8, 12x10 & 12x12

12 x 8
example

Made in the United Kingdom

Please read all instructions before proceeding

12/23

12’ Wide Evolution Cedar Greenhouse Assembly Instructions

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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.

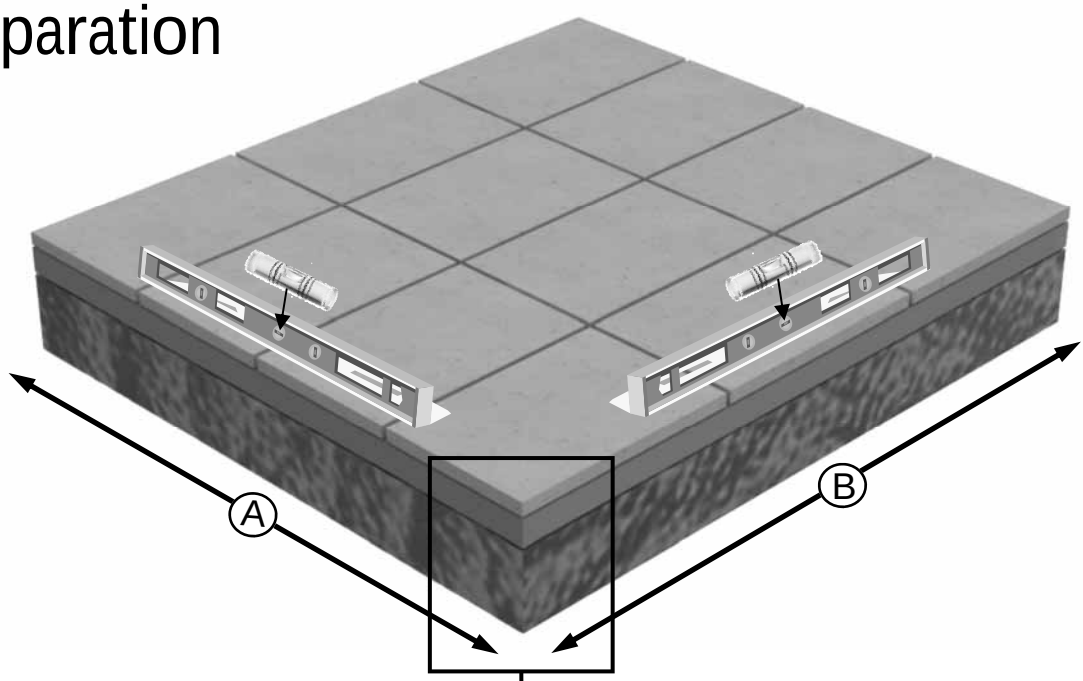
Site Preparation

- 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

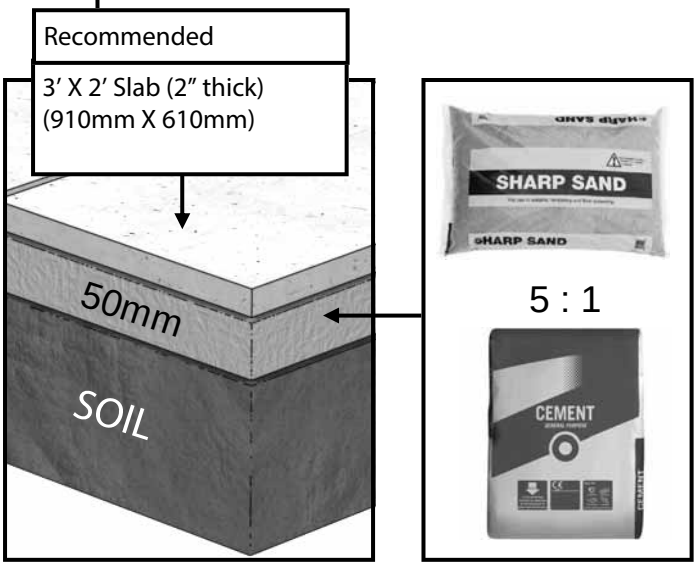
- Please bear in mind that assembling your greenhouse can be time consuming. You may need to spread the construction over two or more days. We recommend that you avoid leaving the building partially glazed. If you ever have to leave your greenhouse half assembled and not anchored down, weigh it down 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.
- Once installed your greenhouse requires little maintenance, but to maintain the smooth running of your door(s) WD40 or similar can be applied to the door wheels and lower door guides.
- Remember this is a natural un-treated product, the wood will soak up some water to start with and some staining may occur. This will settle down over time and the greenhouse will really blend with its surroundings. If you want to avoid this and give your greenhouse a more permanent finish you could apply an oil or spirit based product (it would be best to do this before glazing!).

Base Preparation



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)
12 ft - 3877mm	6 ft - 1976mm	4270	2700
12 ft - 3877mm	8 ft - 2606mm		3600
12 ft - 3877mm	10 ft - 3236mm		3600
12 ft - 3877mm	12 ft - 3866mm		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.

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.

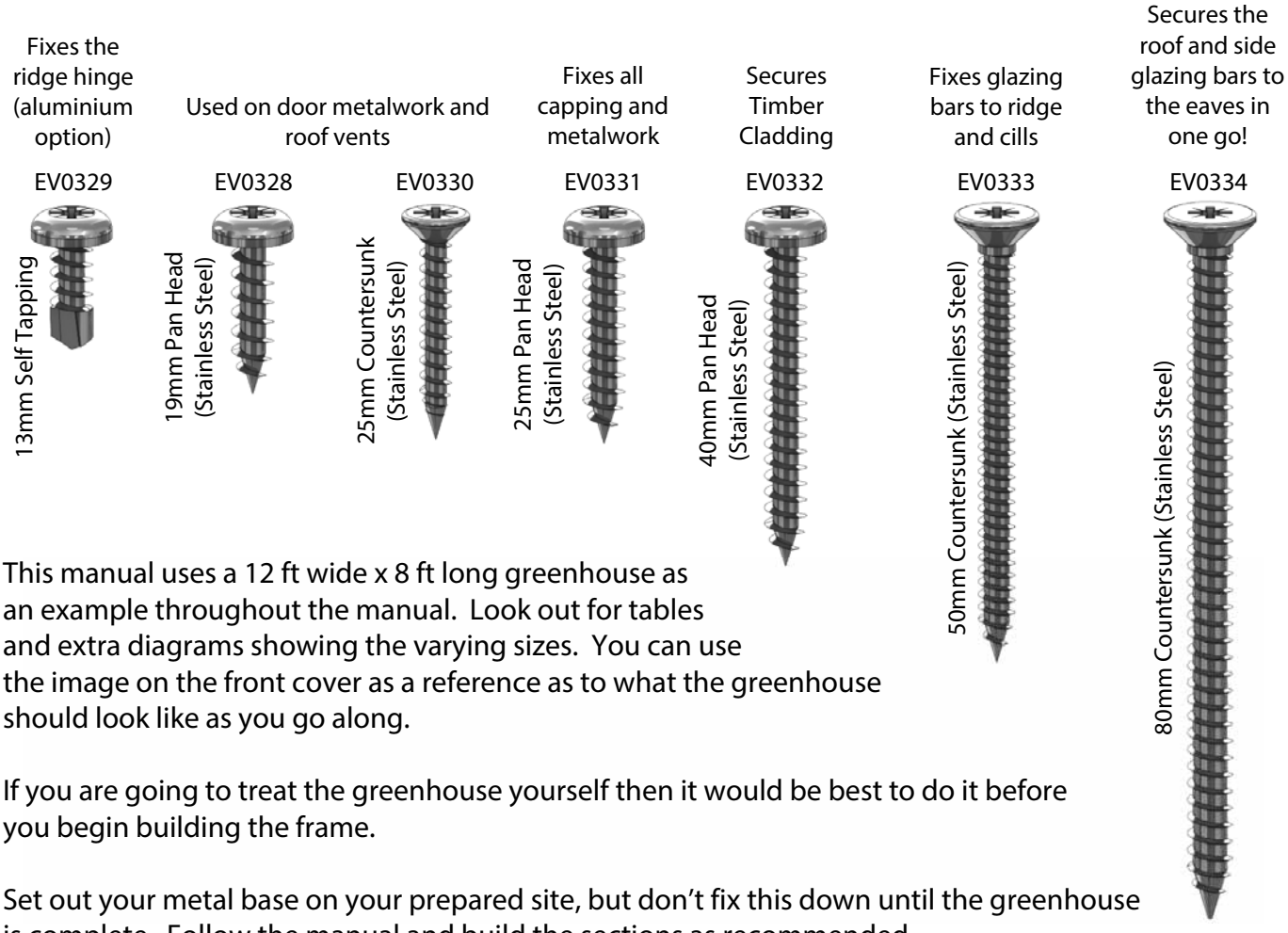
1

Overview

To build you 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 Dril	Hammer
Step ladders	

There are 7 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 12 ft wide x 8 ft long greenhouse as an example throughout the manual. 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 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. The rear gable is the next section to install, followed by the other side and then the front gable. 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 when handling the glass (this also helps to keep it clean). It is good practice to pre-load the 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.

Take time over fitting the door track and bottom runner as this will be most noticeable if you don't get it right. This is the one part of the building you will touch and use regularly.

Then fit the roof vent. 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 waterbutt when doing this.

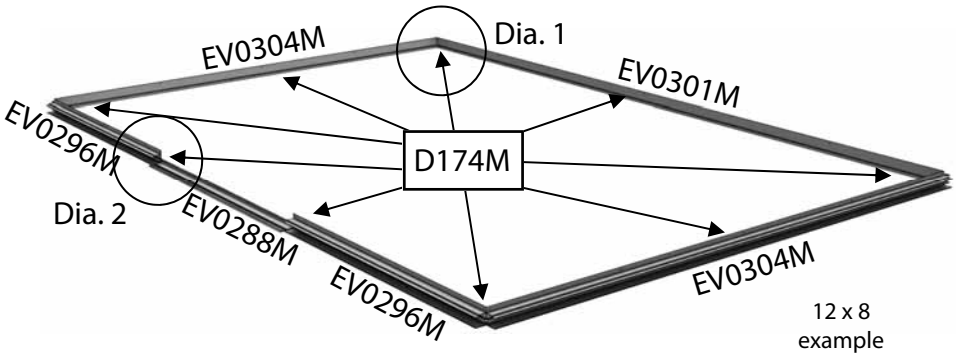
Extension and Partition instructions are in separate booklets. Be sure to follow these instructions at the correct time in the build. For an extension this will be during the initial stages before you build the front end. The partition can be added while constructing the roof. If you have a partition and an extension remember the partition can not be positioned at the join of your main building and the extension.

You can always add a Partition or an Extension at a later date so consider this when you are siting your greenhouse.

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



Lay out your aluminium base sections as the diagram shows. Insert bolts in the bolt channels for attaching the base brackets (HE300), 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 side cills are fixed to it. Also fit the front door cill with 2 plates (HE512M), diagram 2.

Look for the length of building you have in the table below to check what you should be using.

NB. For Extensions refer to separate manuals.

Diagram 1

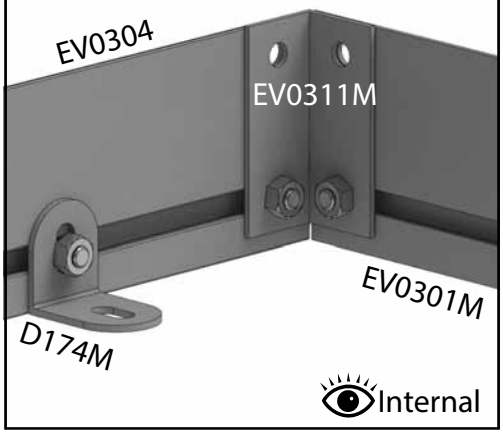
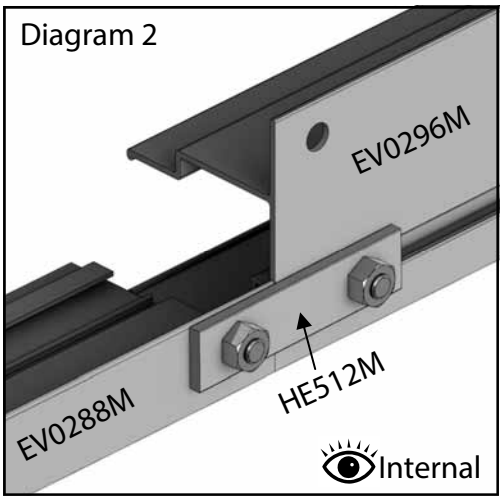


Diagram 2



6ft			
Part Name	Part Number	Size (mm)	Qty
Front	EV0296M	1283	2
Side	EV0303M	1846	2
Rear	EV0301M	3779	1
Door Cill	EV0288M	1216	1
Joining Bracket	EV0311M	-	4
Base Bracket	D174M	-	9
Plate	HE512M	-	2

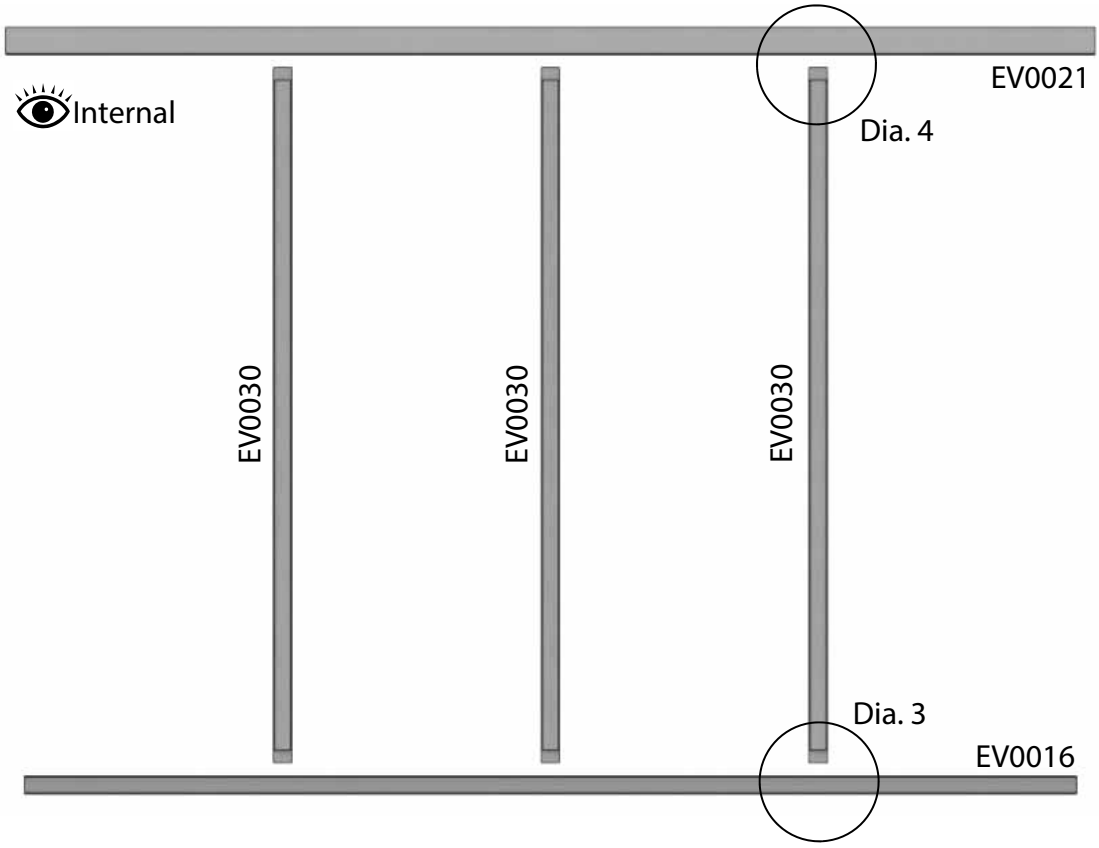
8ft example			
Part Name	Part Number	Size (mm)	Qty
Front	EV0296M	1283	2
Side	EV0304M	2476	2
Rear	EV0301M	3779	1
Door Cill	EV0288M	1216	1
Joining Bracket	EV0311M	-	4
Base Bracket	D174M	-	9
Plate	HE512M	-	2

10ft			
Part Name	Part Number	Size (mm)	Qty
Front	EV0296M	1283	2
Side	EV0305M	3106	2
Rear	EV0301M	3779	1
Door Cill	EV0288M	1216	1
Joining Bracket	EV0311M	-	4
Base Bracket	D174M	-	11
Plate	HE512M	-	2

12ft			
Part Name	Part Number	Size (mm)	Qty
Front	EV0296M	1283	2
Side	EV0306M	3736	2
Rear	EV0301M	3779	1
Door Cill	EV0288M	1216	1
Joining Bracket	EV0311M	-	4
Base Bracket	D174M	-	11
Plate	HE512M	-	2

Side Assembly

To start building your greenhouse begin by laying out the components for your sides flat on the ground like the diagram below. Use the tables below to identify your building length and 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 3, 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 (e.g. EV0021). There is no need to fix this yet as it is done at a later stage.



4ft			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0014	1216	2
Eaves Bar	EV0019	1304	2
Glazing Bar	EV0030	1624	2

6ft			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0015	1846	2
Eaves Bar	EV0020	1934	2
Glazing Bar	EV0030	1624	4

8ft example			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0016	2476	2
Eaves Bar	EV0021	2564	2
Glazing Bar	EV0030	1624	6

10ft			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0017	3106	2
Eaves Bar	EV0022	3194	2
Glazing Bar	EV0030	1624	8

12ft			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0018	3736	2
Eaves Bar	EV0023	3824	2
Glazing Bar	EV0030	1624	10

Side Assembly

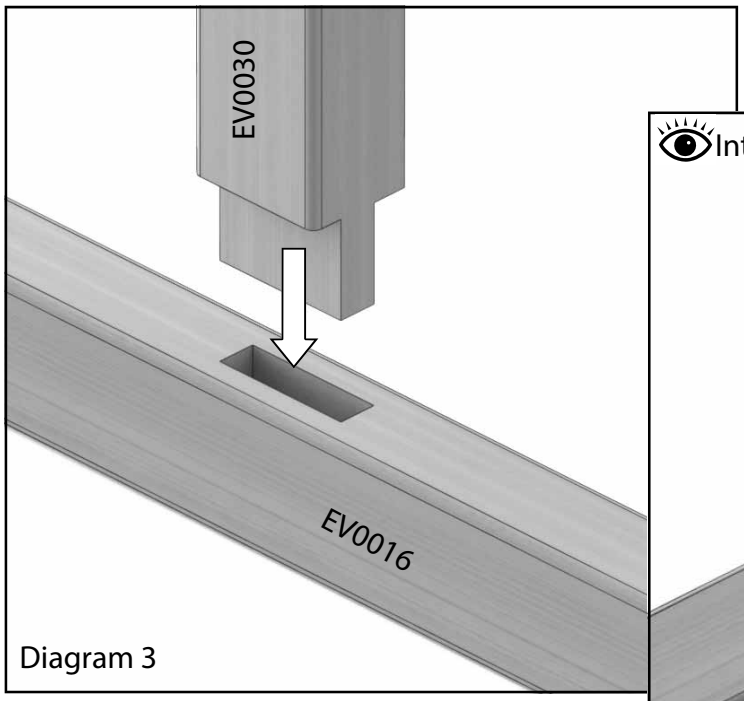
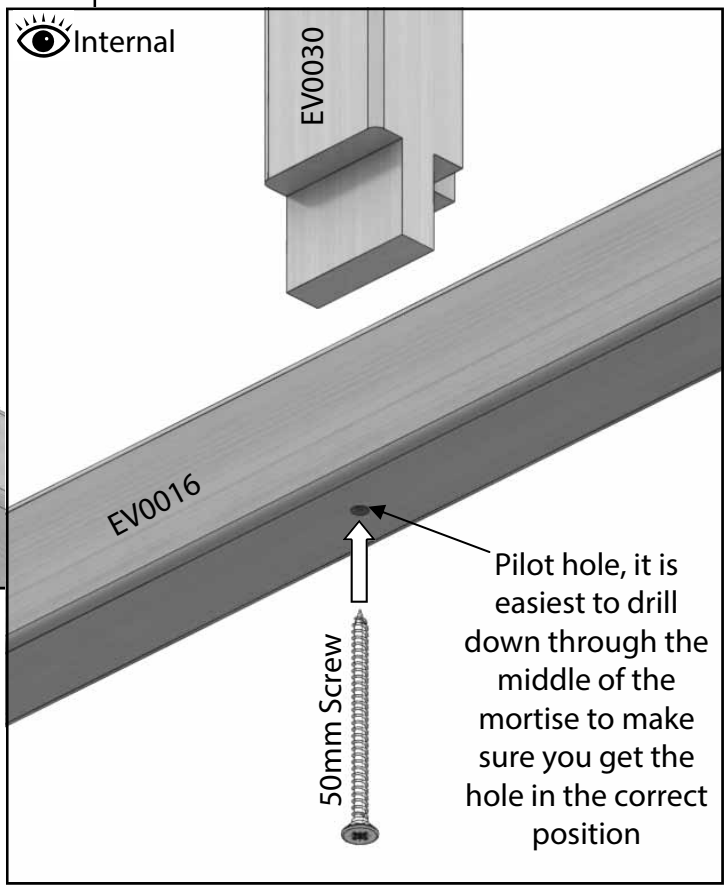


Diagram 3



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.)

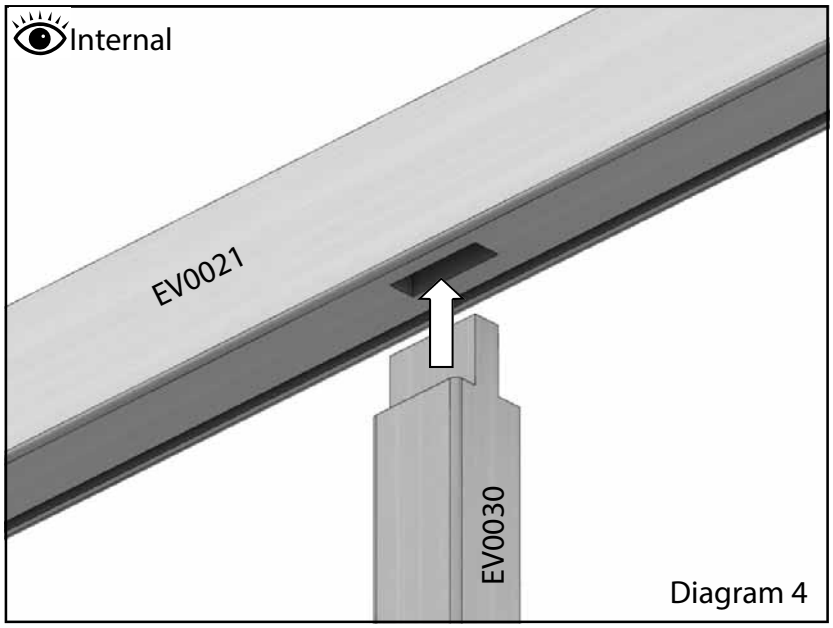
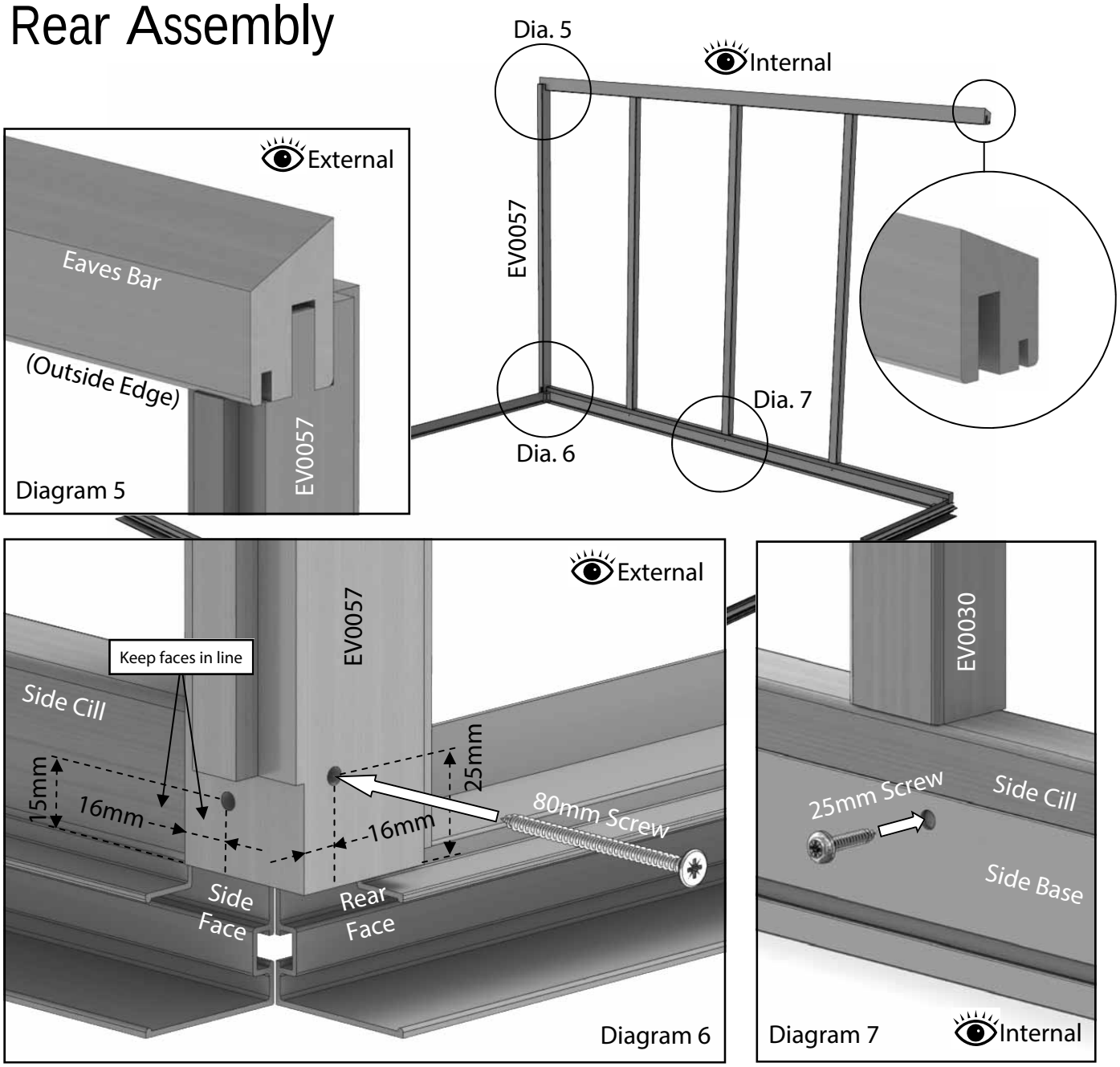


Diagram 4

Rear Assembly



To install this section you will need a helper to hold the side in position or strap it to a set of steps. Drill two pilot holes in the bottom of the side corner bar as in diagram 6. The height of these holes should be about 15mm on the side face and 25mm on the rear face measured from the end of the bar, try to keep these at different heights to each other so the screws don't intersect each other.

Now offer the side corner to the eaves bar slotting the tennon into the mortise shown in diagram 5, do not fix this joint as it will be done at a later stage. 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).

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 7).

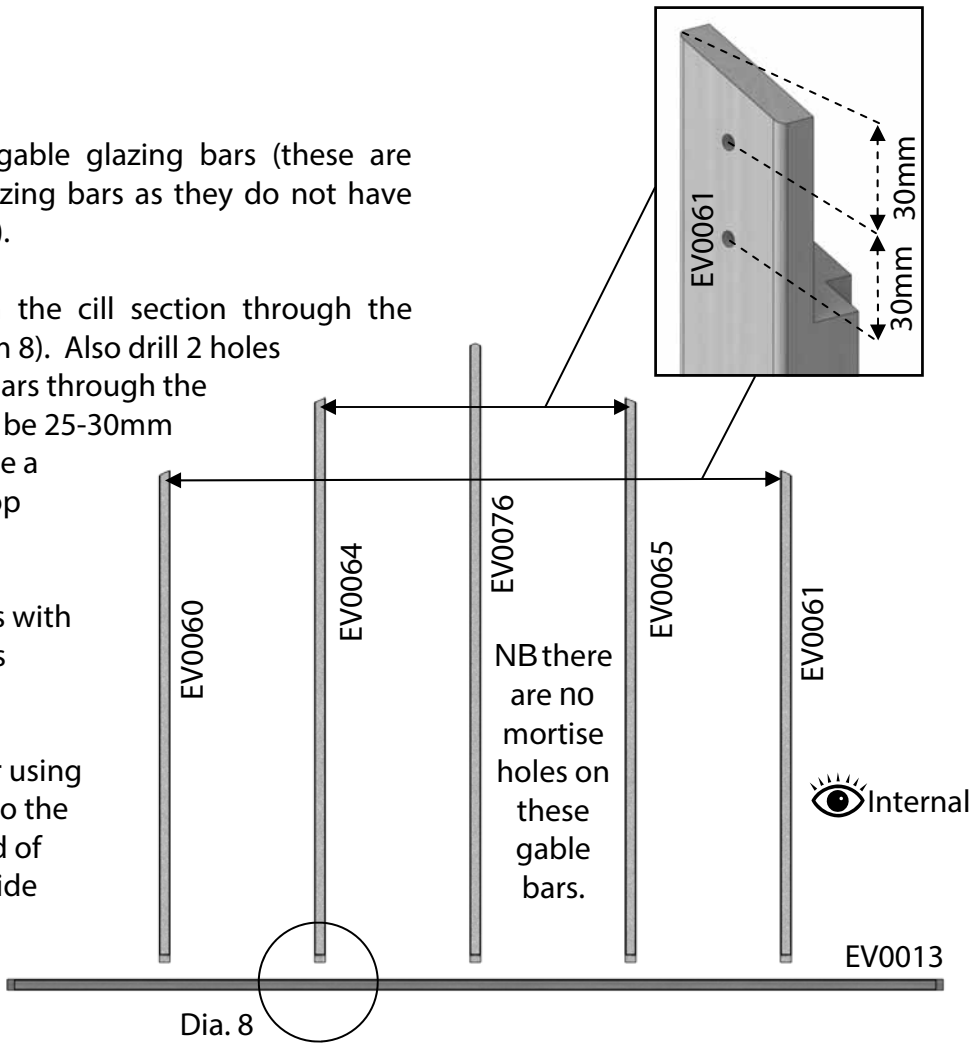
Rear Assembly

Locate the rear cill and rear gable glazing bars (these are different to the front gable glazing bars as they do not have the mortise for the door header).

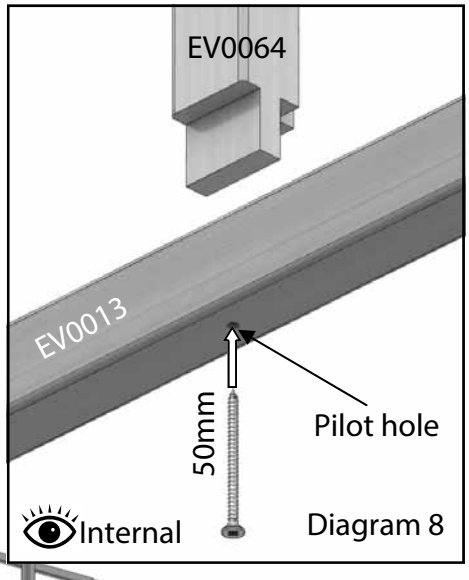
Start by drilling pilot holes in the cill section through the mortise holes as before (diagram 8). Also drill 2 holes in the top of the gable glazing bars through the lap joint location. These should be 25-30mm apart and the first hole should be a similar distance from the very top edge (see right)

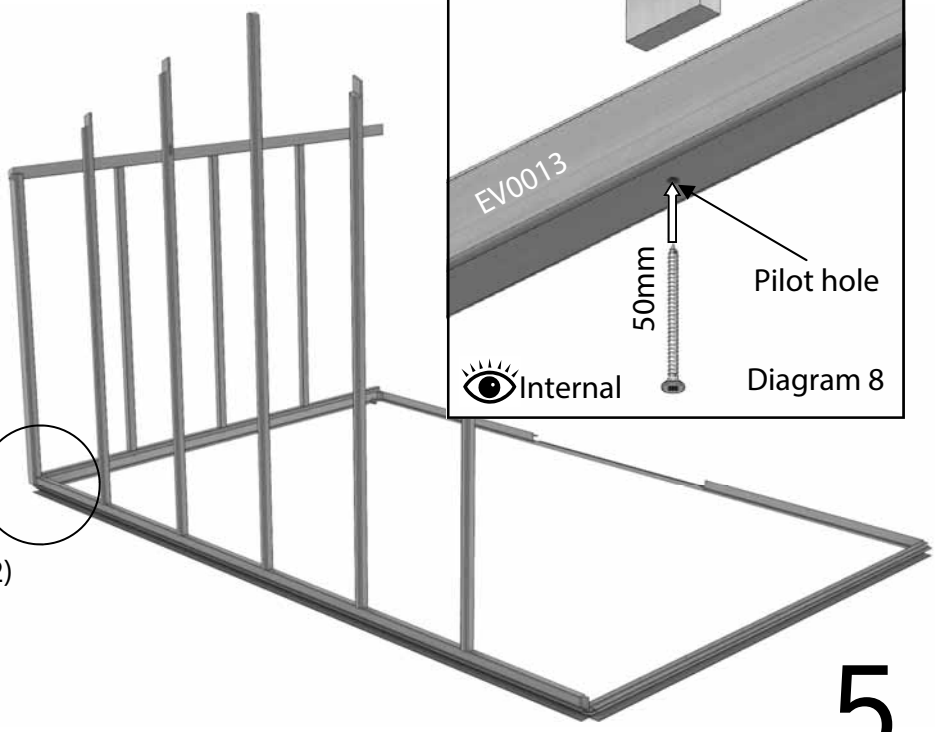
Assemble the gable glazing bars with the rear cill flat on the ground as you did with the side sections.

Again with the aid of a helper or using a prop position the rear end onto the aluminium base. Locate the end of the cill into the mortise on the side corner bar (diagram 9, page 12).



12ft Rear			
Part Name	Part Number	Size (mm)	Qty
Cill	EV0013	3796	1
Roof Corner R	EV0044	2153	1
Roof Corner L	EV0045	2153	1
Side Corner R	EV0056	1650	1
Side Corner L	EV0057	1650	1
Gable Bar R	EV0060	1994	1
Gable Bar L	EV0061	1994	1
Gable Bar R	EV0064	2288	1
Gable Bar L	EV0065	2288	1
Mid Gable Bar	EV0076	2502	1





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Rear Assembly

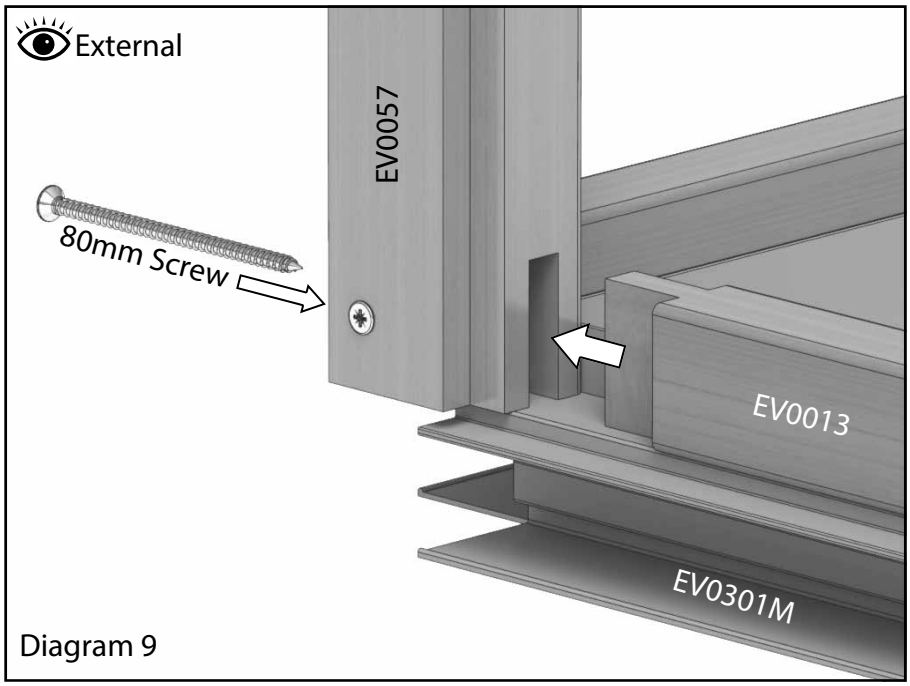
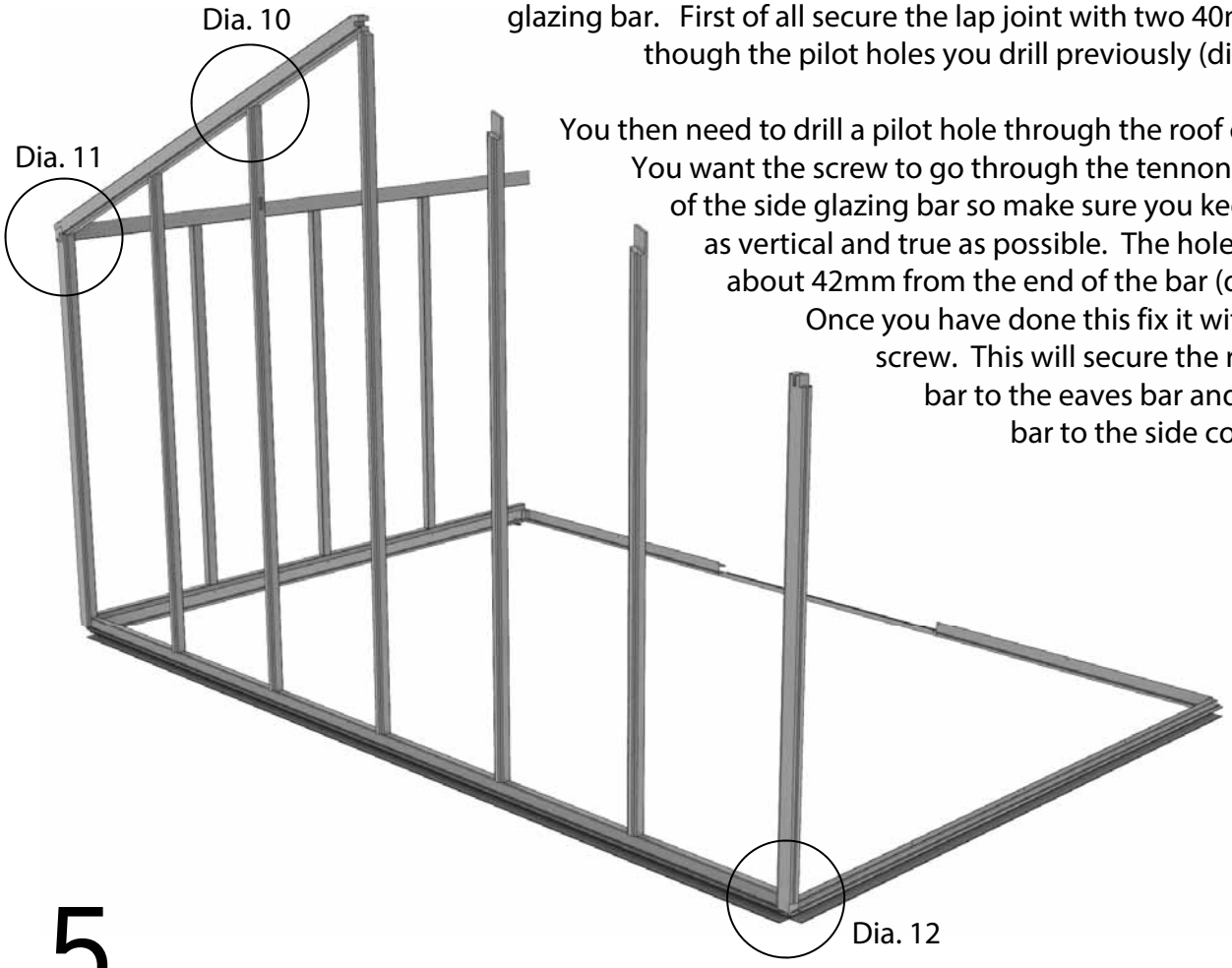


Diagram 9

Once you have fixed the joint with the 80mm screw (diagram 9) fix the rear cill to the aluminium base with 25mm screws.

You can now install the first roof corner bar. Position the notched end onto the eaves bar (diagram 11). Next locate the lap joint at the top of the gable glazing bar. First of all secure the lap joint with two 40mm screws though the pilot holes you drill previously (diagram 10).

You then need to drill a pilot hole through the roof corner bar. You want the screw to go through the tennon in the end of the side glazing bar so make sure you keep the drill as vertical and true as possible. The hole should be about 42mm from the end of the bar (diagram 9). Once you have done this fix it with a 80mm screw. This will secure the roof corner bar to the eaves bar and the eaves bar to the side corner bar in one go.



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Rear Assembly

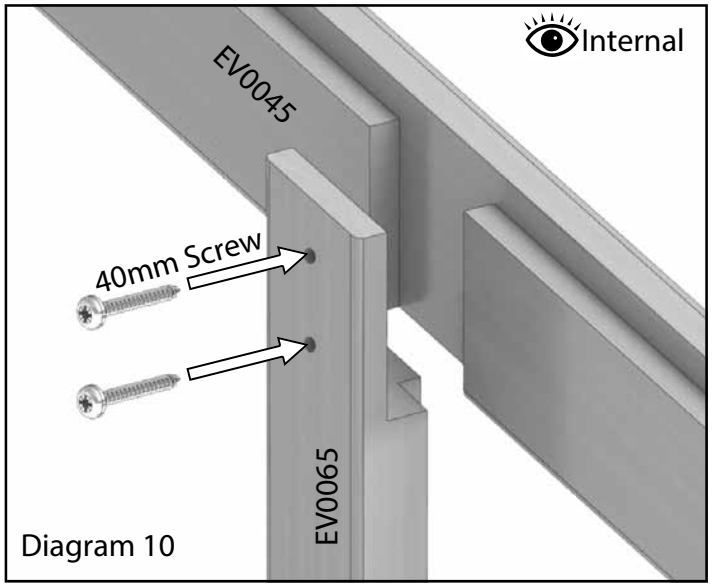


Diagram 10

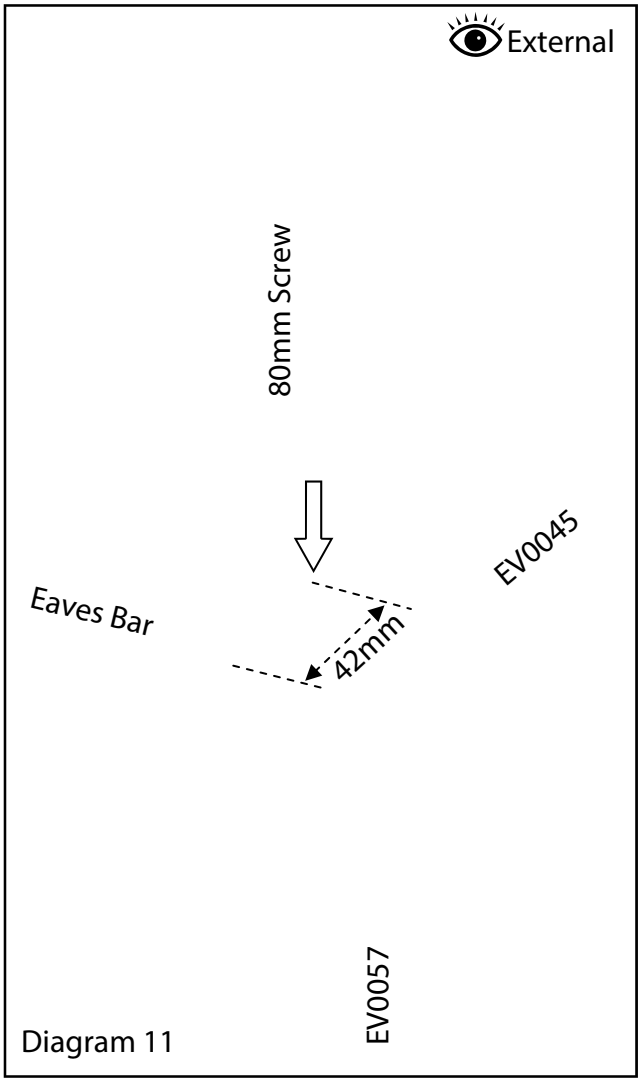


Diagram 11

Now fit the right hand corner bar. Drill 2 pilot holes in the bottom of the bar (diagram 12). See diagram 6 for the position of these holes. Fit the side bar over the tennon of the rear cill and fix it with the 80mm screw. You can then also screw the base to this with a 25mm screw.

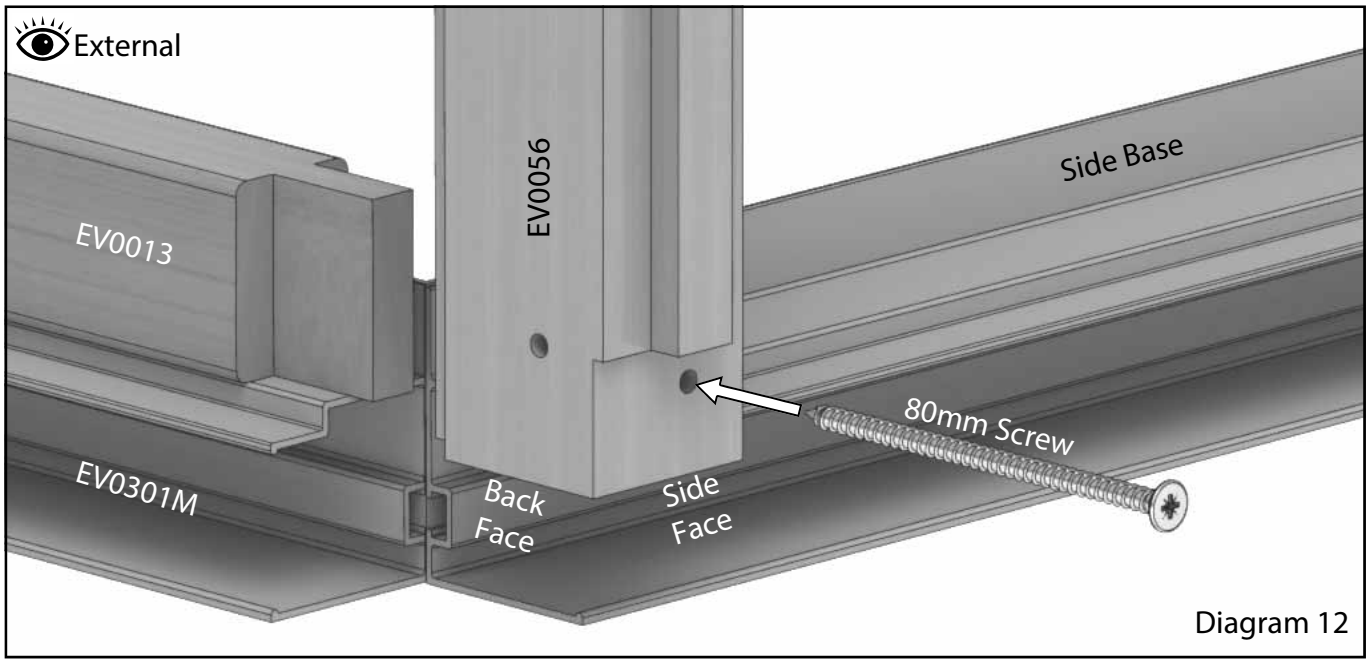
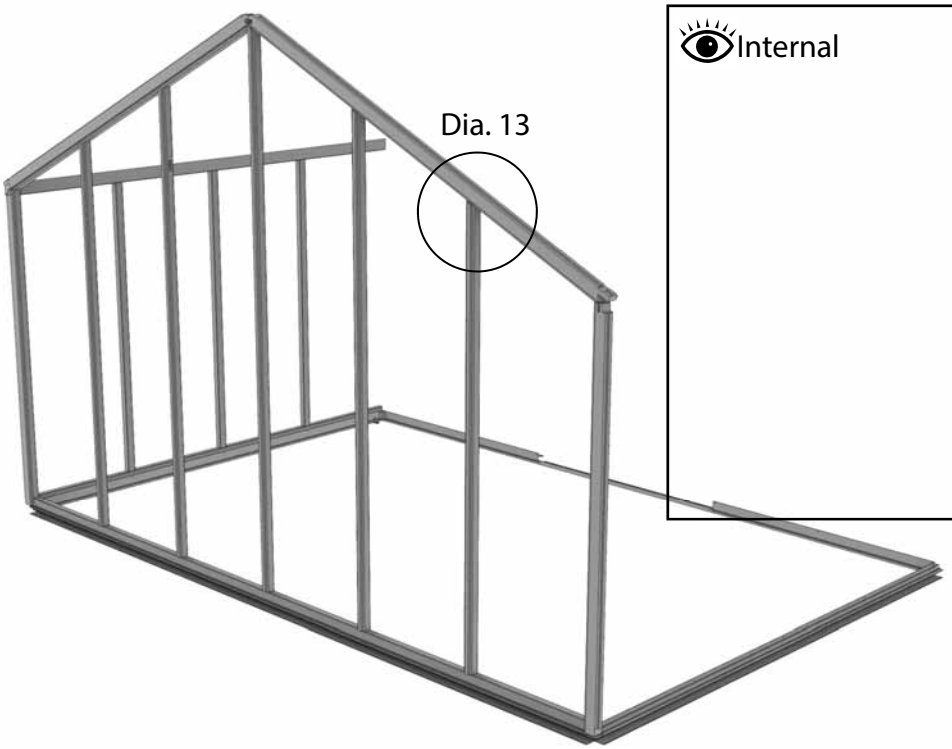


Diagram 12

Rear Assembly

Now fit the right hand roof corner bar to the gable glazing bar (diagram 13). Be careful of this part when you have fixed it to the gable bar as it is unsupported at either end. Once you have installed the side section it will firm up.



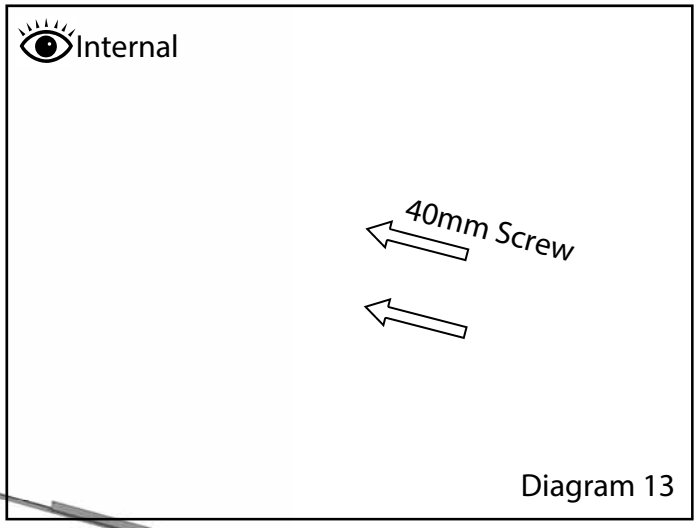
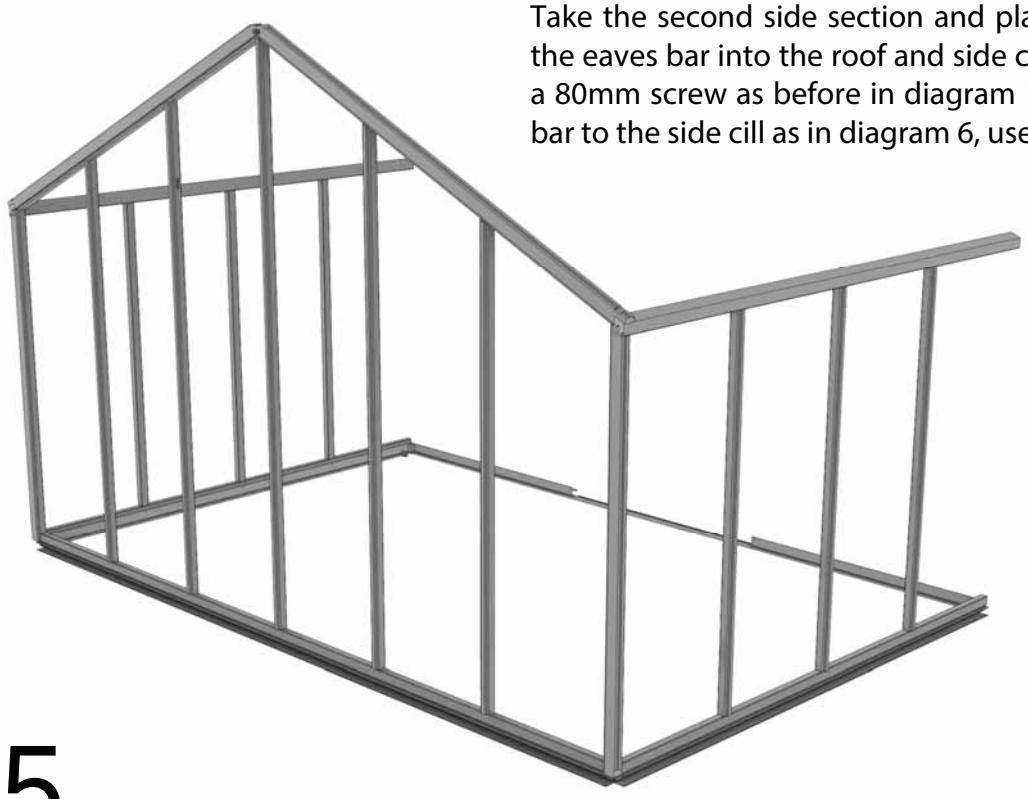


Diagram 13

Take the second side section and place it on the base. Slot the eaves bar into the roof and side corner bar. Fix this with a 80mm screw as before in diagram 11. Fix the Side corner bar to the side cill as in diagram 6, use a 80mm screw.



NB. If you have an extension refer to the separate manual at this stage.

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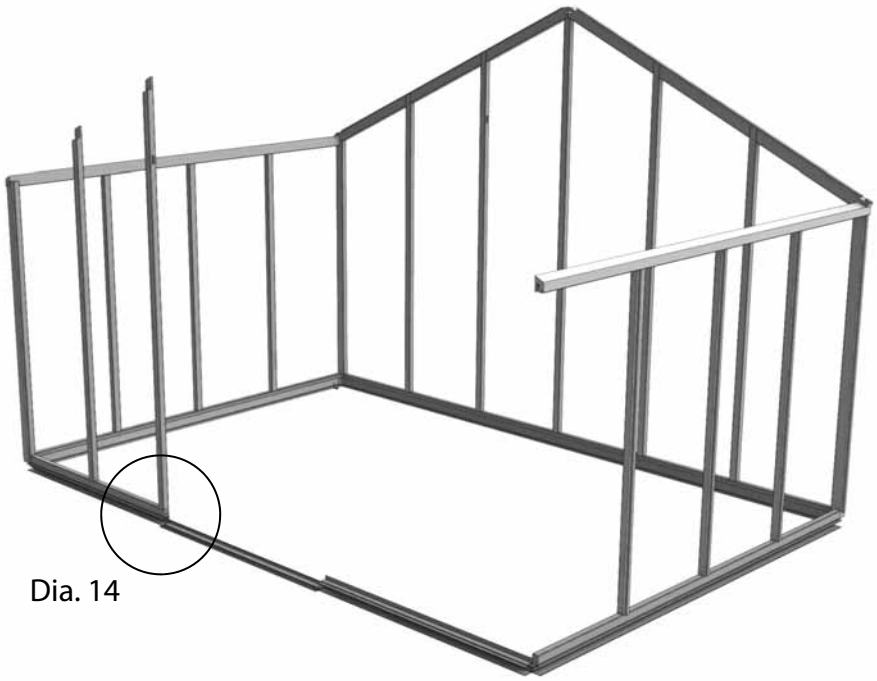
Front Assembly

12ft Front			
Part Name	Part Number	Size (mm)	Qty
Front Cill	EV0008	630	2
Roof Corner R	EV0044	1446	1
Roof Corner L	EV0045	1446	1
Side Corner R	EV0056	1650	1
Side Corner L	EV0057	1650	1
Gable Bar R	EV0060	1994	1
Gable Bar L	EV0061	1994	1
Gable Bar R	EV0072	2288	1
Gable Bar L	EV0073	2288	1
Above Door	EV0079	344	1
Door Header	EV0109	1276	1



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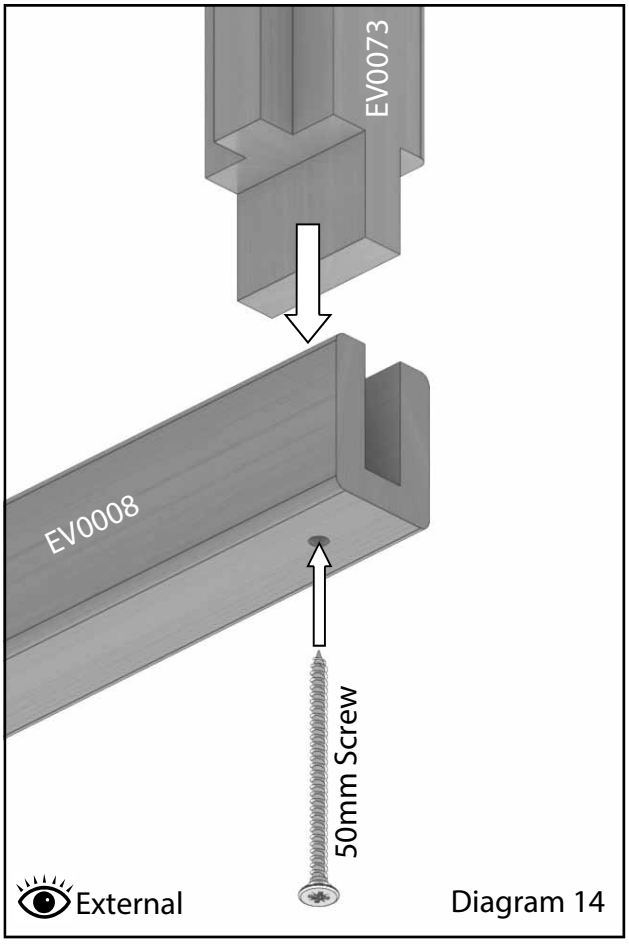


Diagram 14

With the parts flat on the ground drill the pilot holes through each mortise in the cills and as before through the lap joint on the gable bars. Also drill pilot holes through the mortise holes on the gable bars ready for the door header. Fix the front cill to the gable glazing bar using a 50mm screw.

Slot the tennon of the front cill into the side corner bar as before (diagram 9). Fix this with a 80mm screw. Also screw this to the base with 25mm screws. Keep the gable glazing bar supported while you get the next parts ready.

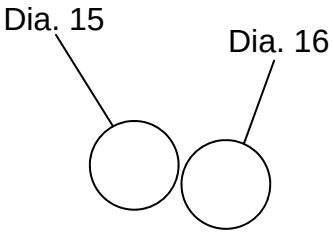
Front Assembly

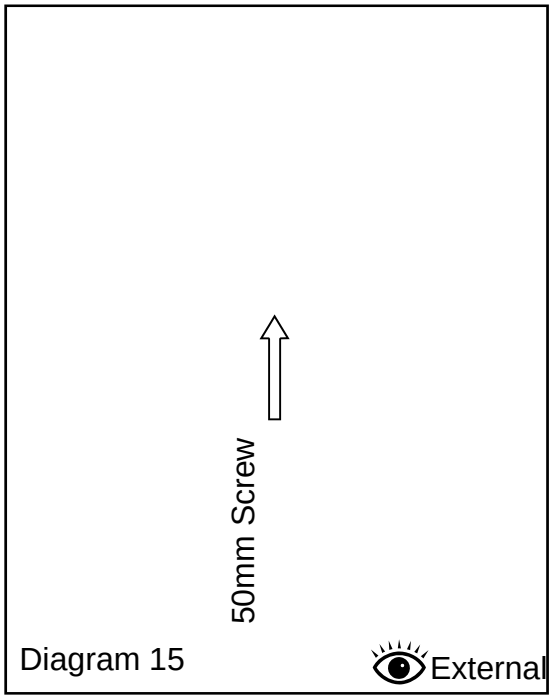
Fix the opposite gable bar and cill in the same way. Before you install the roof corner bars you need to fix the door header in place.

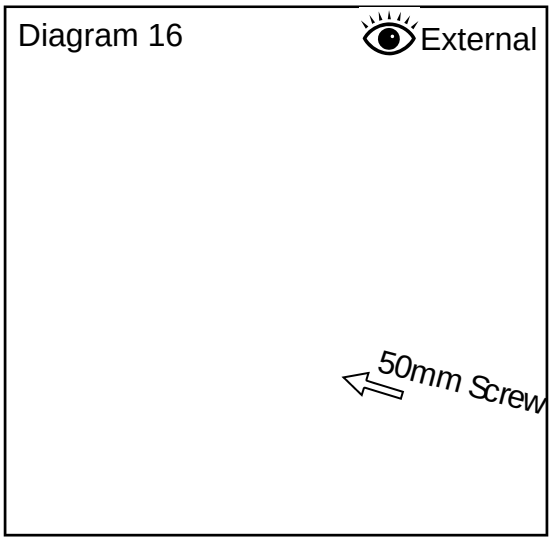
Slot the door header into the mortise holes and fix with a 50mm screw through each end (diagram 16).

Make sure thegable bars are well supported while doing this.

Drill through the bottom of the tennon in the door header (EV0109) then fix the glazing bar above the door with a 50mm countersunk screw.







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