

# EVOLUTION FOUR LT



## Instruction Manual

Includes Models: 4x4, 4x6, 4x8,  
4x10 & 4x12



Made in the United Kingdom

Please read all instructions before proceeding

09/20



## 4' Deep Evolution Cedar Lean-to 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.**

**Should you require any additional advice, you can always call us on 0049 5152 8093 497.**

## **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**

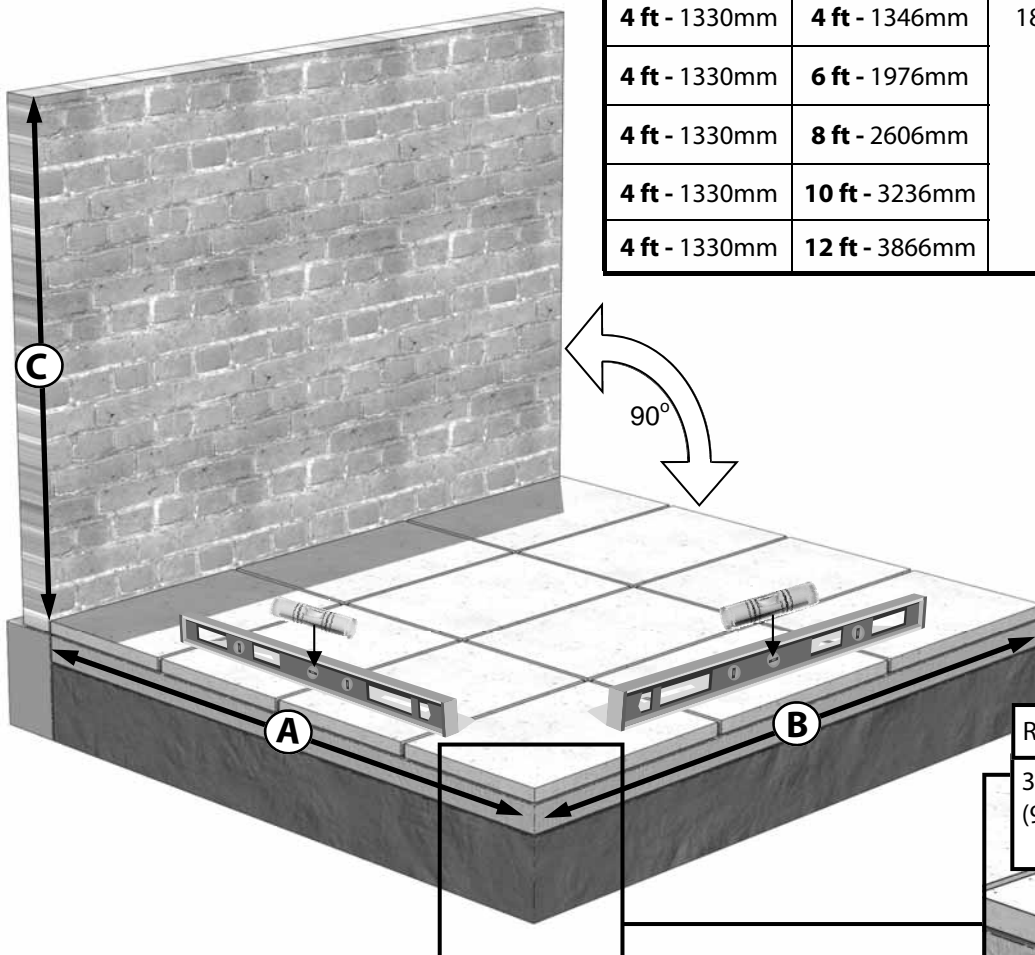
- Please bear in mind that assembling your greenhouse can be time consuming. You may need to spread the construction over two or more days. We recommend that you avoid leaving the building partially glazed. If you ever have to leave your greenhouse half assembled and not anchored down, weigh it down 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.

# Base Preparation

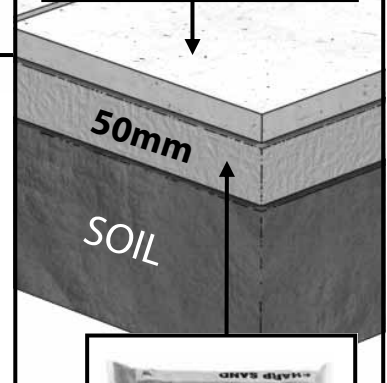
## Slab Base Size (Recommended)

**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)	C (mm)
4 ft - 1330mm	4 ft - 1346mm	1800	1800	2400
4 ft - 1330mm	6 ft - 1976mm		2700	2400
4 ft - 1330mm	8 ft - 2606mm		3600	2400
4 ft - 1330mm	10 ft - 3236mm		3600	2400
4 ft - 1330mm	12 ft - 3866mm		4500	2400



Recommended  
3' X 2' Slab (2" thick)  
(910mm X 610mm)



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

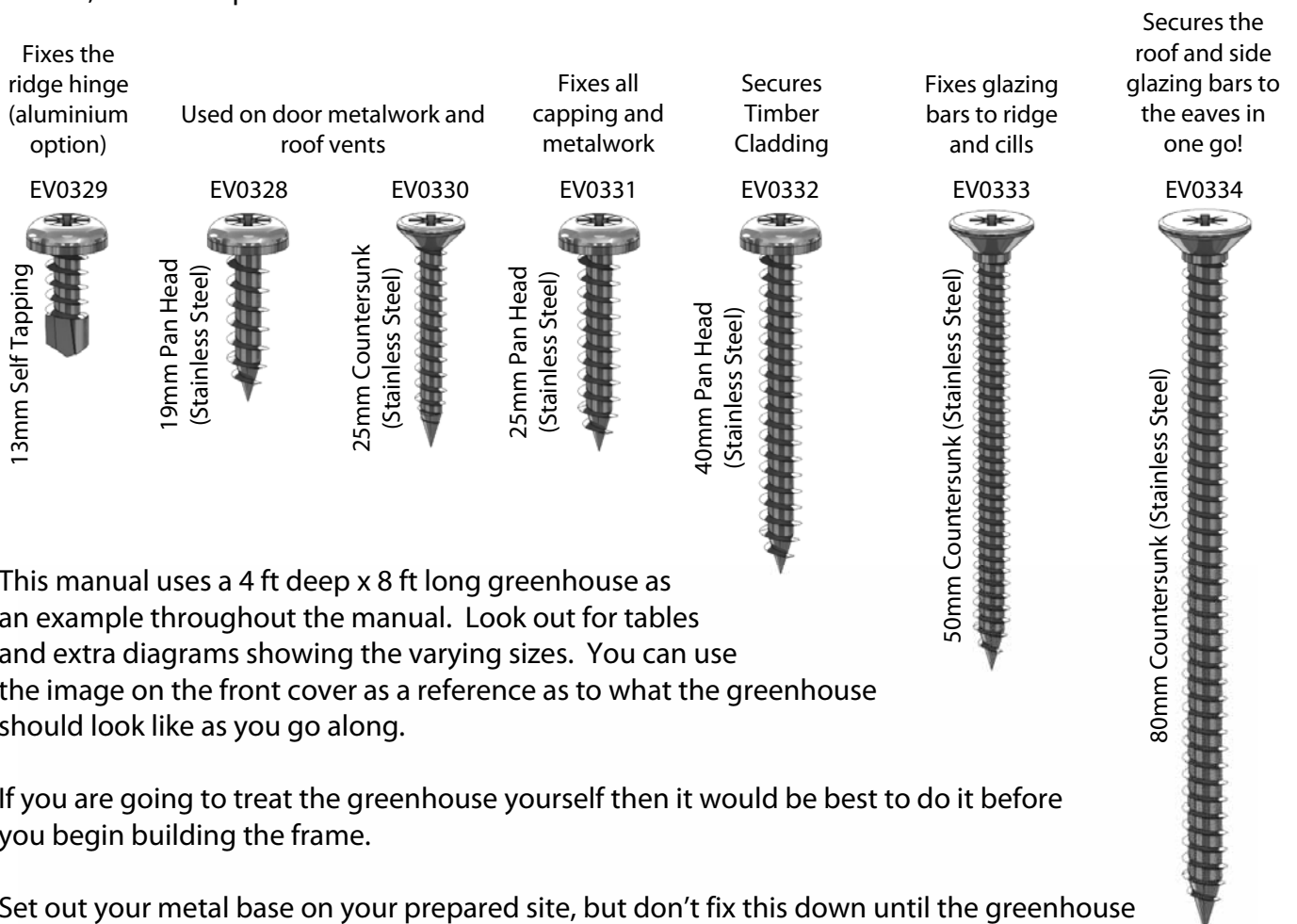


# Overview

To build 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  |
| 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 4 ft deep 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.

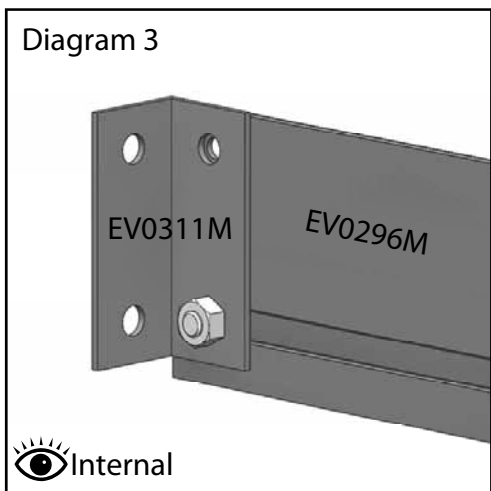
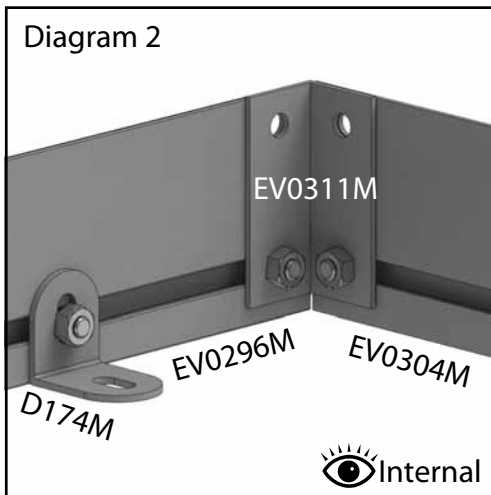
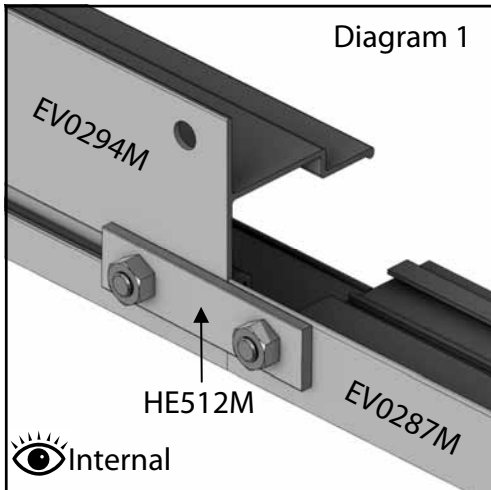
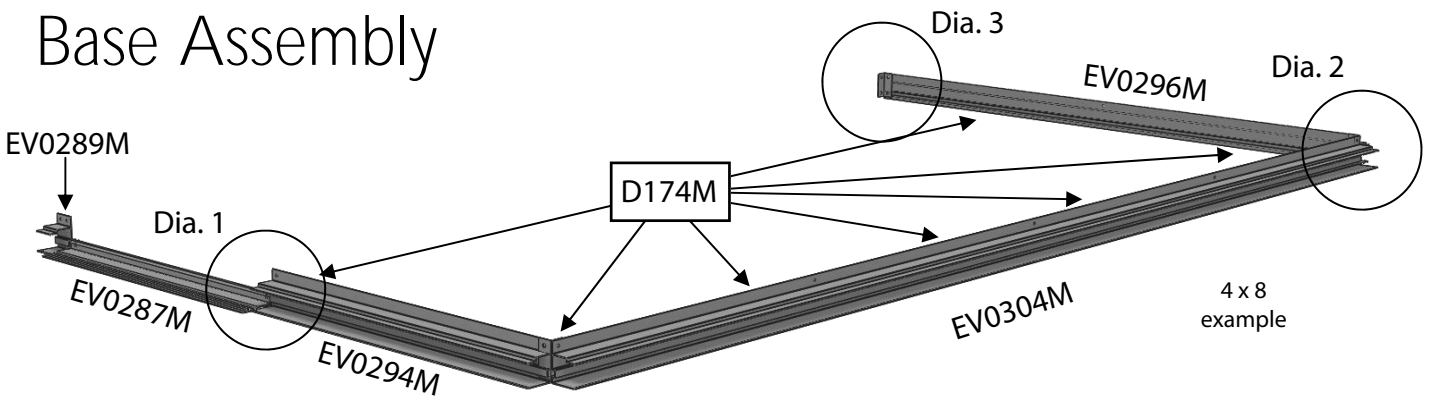
Extension and Partition instructions are in separate booklets. Be sure to follow these instructions at the correct time in the build. For an extension this will be during the initial stages before you build the front end. The partition can be added while constructing the roof. If you have a partition 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. Use the joining bracket in each corner to join the sections (diagram 2). The top holes will take a 25mm screw when the side cills are fixed to it. Also attach a joining bracket to the plain gable base section closest to the wall (diagram 3). Next fit the front door cill with 2 plates (HE512M), diagram 1. Part EV0289M can be bolted to the door cill with one of the plates, this might seem odd to start with but once the wall bar is attached and fixed to the wall it will all firm up.

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

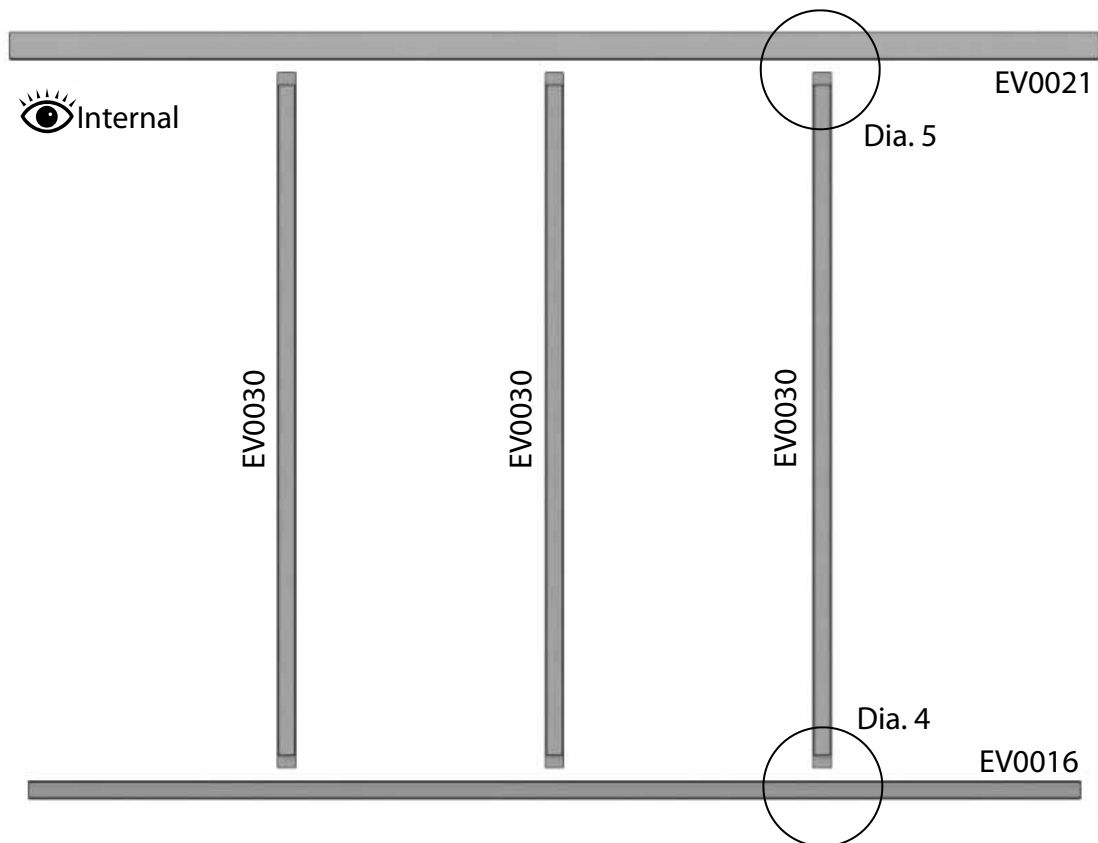
Use the crop-head bolts along the bolt channels for attaching the base brackets (D174M), diagram 2.

**NB. For Extensions refer to a separate manual.**

Base Parts						
Part Name	Part Number	Qty	Qty	Qty	Qty	Qty
Front Base:		4ft	6ft	8ft	10ft	12ft
4ft long	EV0302M	1				
6ft long	EV0303M		1			
8ft long	EV0304M			1		
10ft long	EV0305M				1	
12ft long	EV0306M					1
Plain Gable	EV0296M	1	1	1	1	1
Door Gable	EV0294M	2	2	2	2	2
Wall Bar Base	EV0289M	1	1	1	1	1
Door Cill	EV0287M	1	1	1	1	1
Joining Bracket	EV0311M	3	3	3	3	3
Base Bracket	D174M	6	7	8	8	8
Cill Plate	HE512M	2	2	2	2	2

# Front Assembly

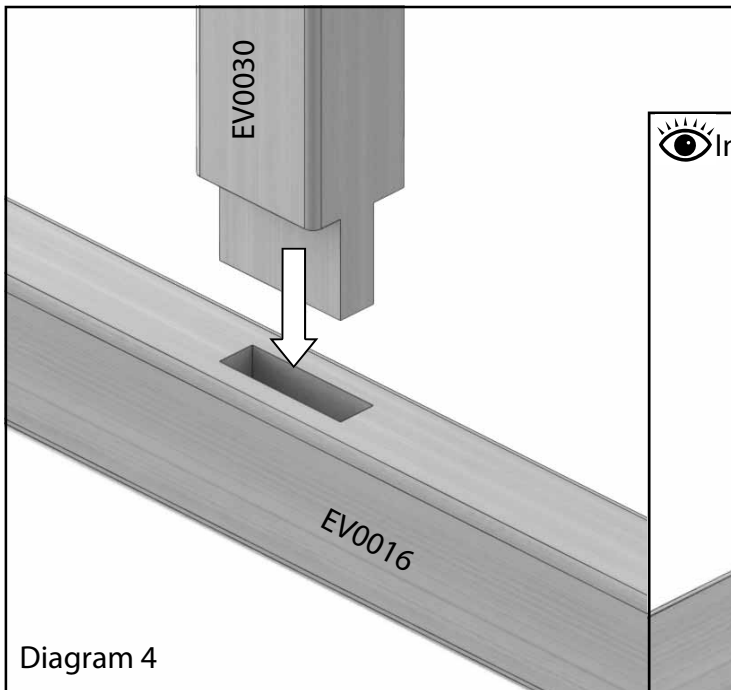
To start building your greenhouse begin by laying out the components for the front of your building flat on the ground like the diagram below. Use the tables at the bottom of the page, identify your building length and this will give you your components with the part numbers and sizes. First of all drill 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 (e.g. EV0021). There is no need to fix this yet as it is done at a later stage.



4ft				6ft				8ft example			
Part Name	Part Number	Size (mm)	Qty	Part Name	Part Number	Size (mm)	Qty	Part Name	Part Number	Size (mm)	Qty
Cill	EV0014	1216	1	Cill	EV0015	1846	1	Cill	EV0016	2476	1
Eaves Bar	EV0019	1304	1	Eaves Bar	EV0020	1934	1	Eaves Bar	EV0021	2564	1
Glazing Bar	EV0030	1588	1	Glazing Bar	EV0030	1588	2	Glazing Bar	EV0030	1588	3

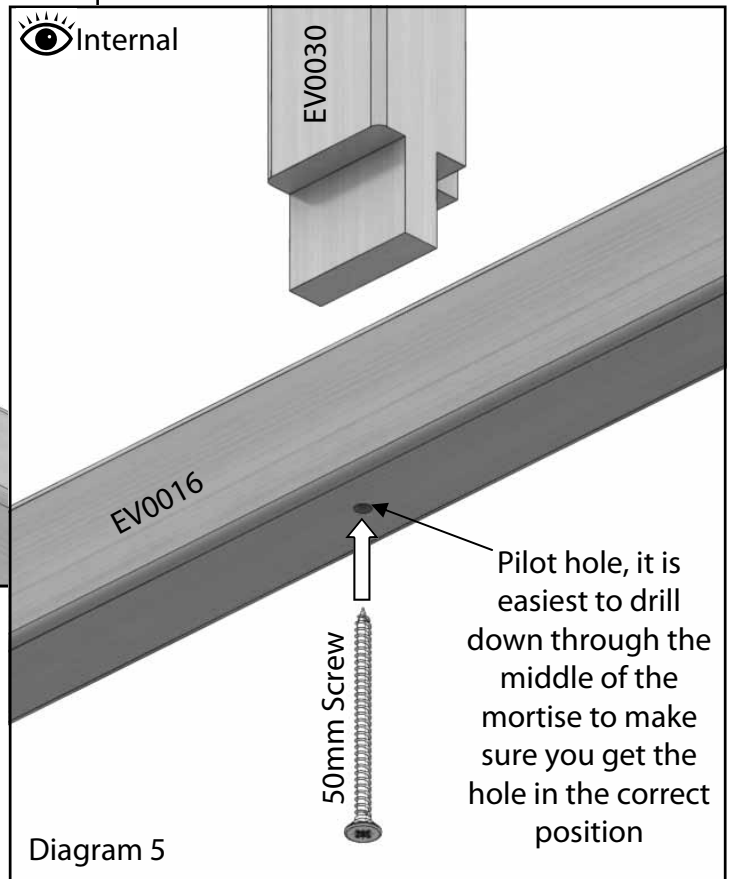
10ft				12ft			
Part Name	Part Number	Size (mm)	Qty	Part Name	Part Number	Size (mm)	Qty
Cill	EV0017	3106	1	Cill	EV0018	3736	1
Eaves Bar	EV0022	3194	1	Eaves Bar	EV0023	3824	1
Glazing Bar	EV0030	1588	4	Glazing Bar	EV0030	1588	5

# Front Assembly

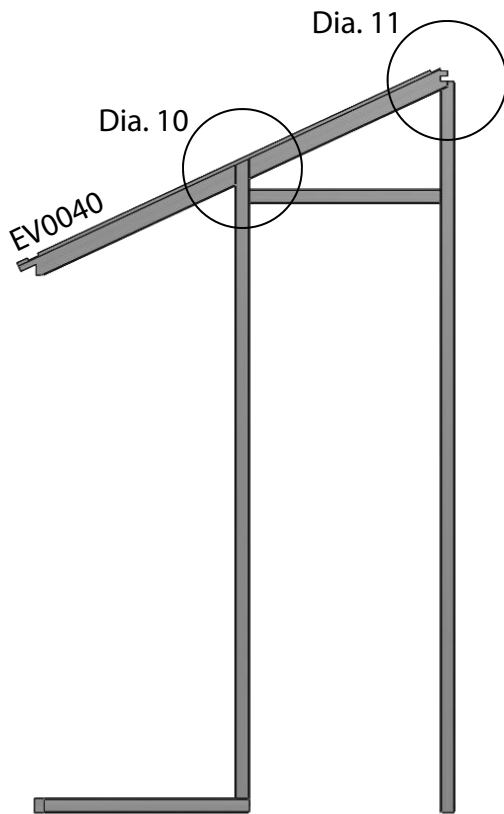
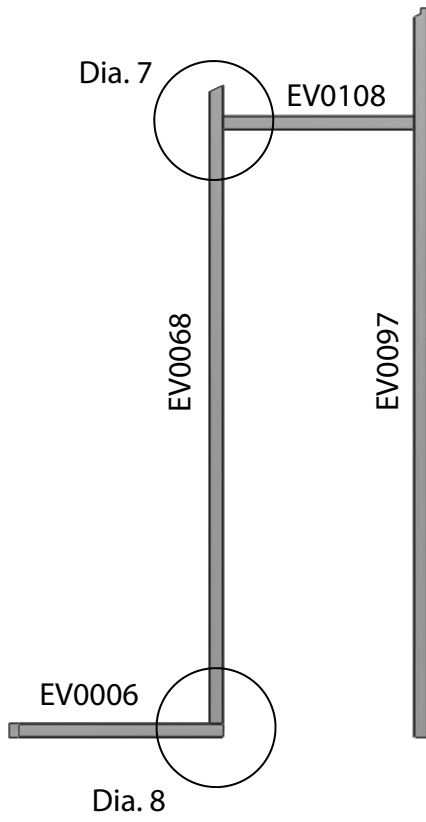


Make sure the side bars are pushed all the way in, you may find they need a light tap with a wooden mallet or something similar.

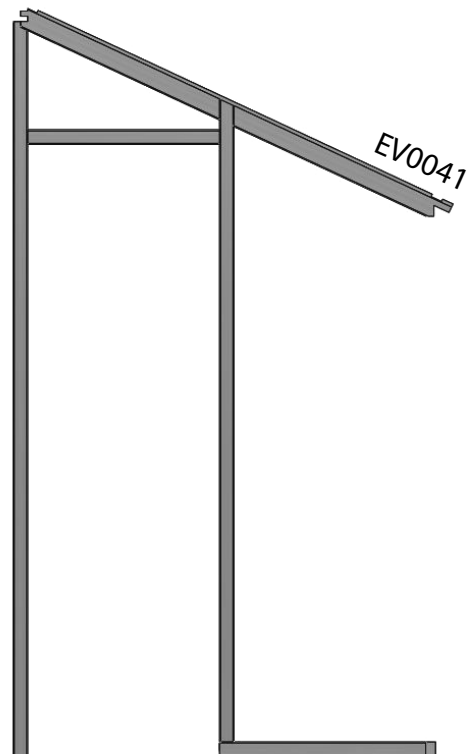
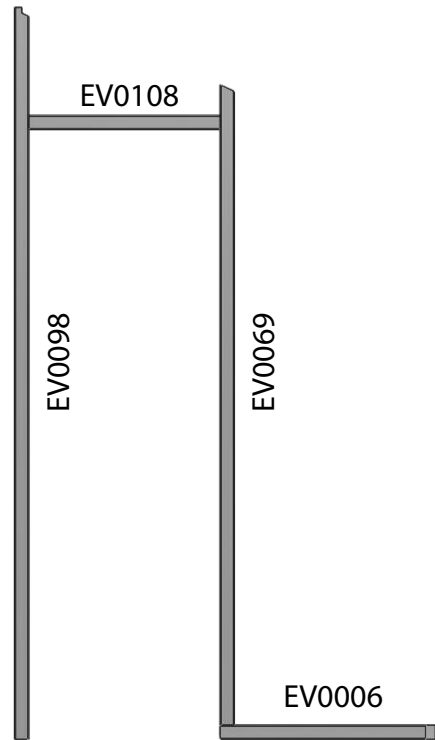
(If you are going to glue your joints this is the first point you would do this.)



# Left Hand Door Gable Assembly



# Right Hand Door Gable Assembly

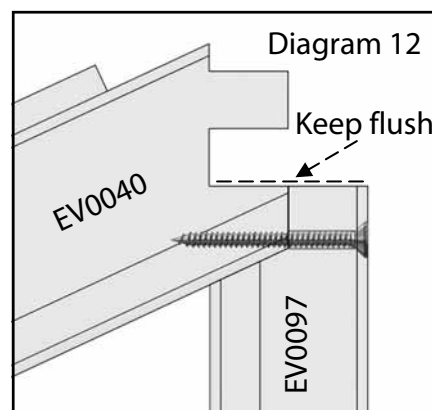
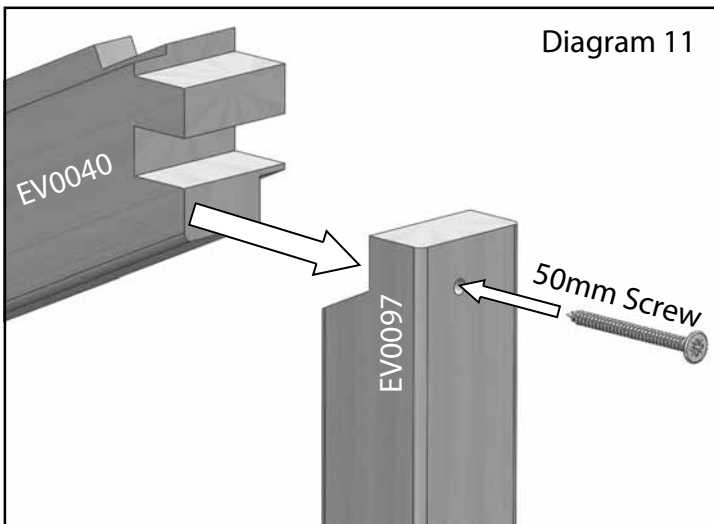
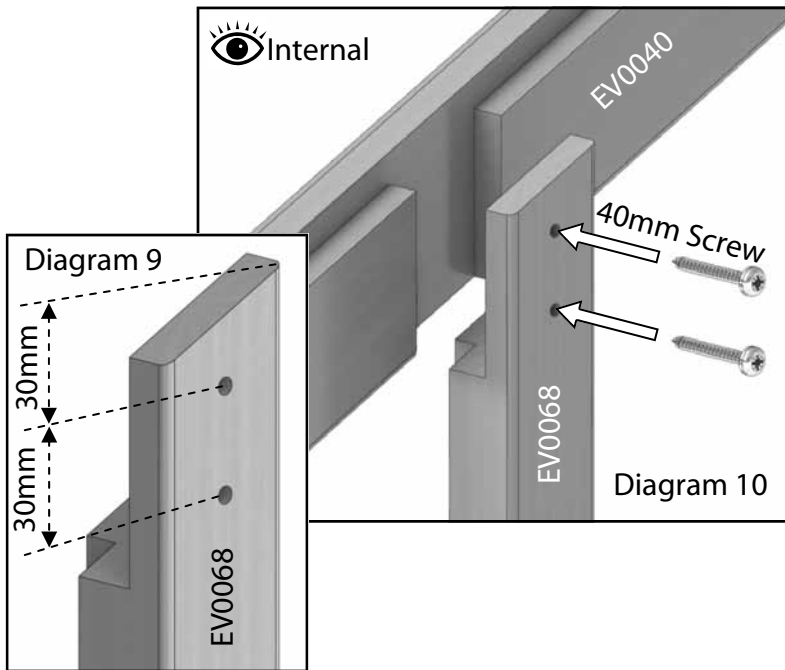
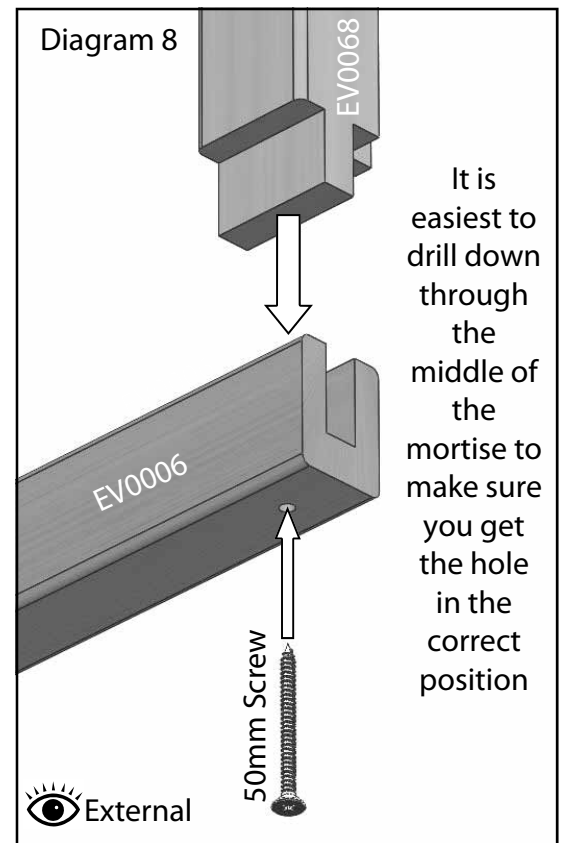
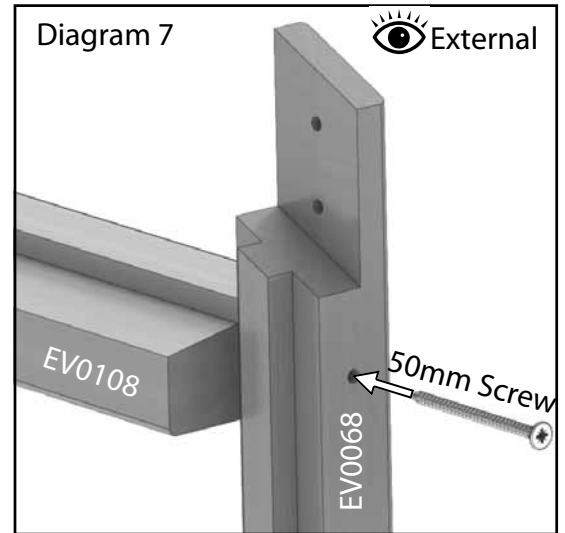


# Door Gable Assembly

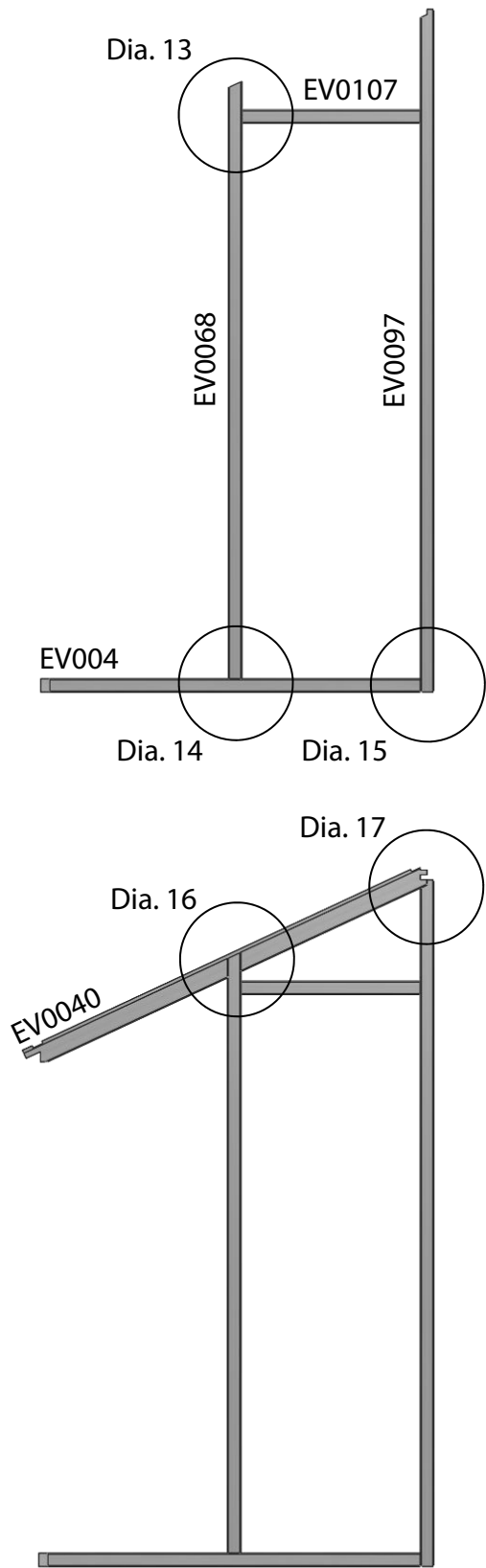
If you have decided to have your door on the left hand gable refer to the left hand door gable assembly and vice versa.

As you did with the front assembly lay out the relevant parts face down on a flat area. Again you should drill through the centre of any mortise holes with the drill bit supplied (diagram 7 and 8). First slot the door header (EV0108) onto the gable bars and fix with 50mm screws.

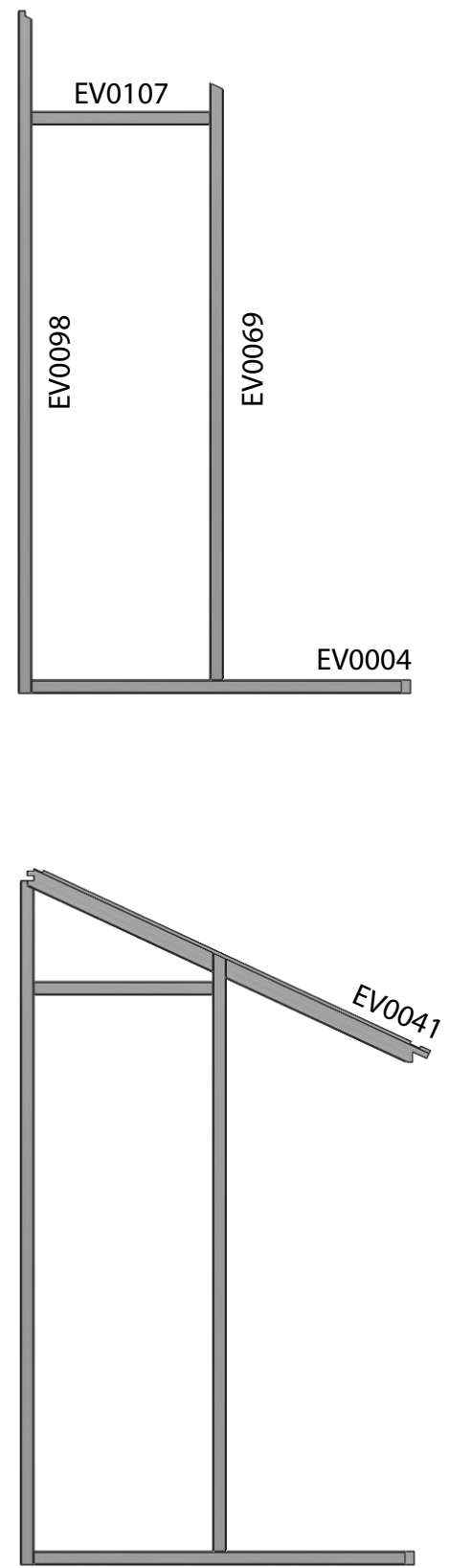
Then do the same with the cills. Next drill through the gable bars at the lap joint (diagram 9), fix with 40mm pan head screws. Finally drill through the top of the wall bar as shown in diagram 11). When fixing with a 50mm screw make sure the top of the wall bar is flush with the tenon on the roof bar, diagram 12.



# Left Hand Plain Gable Assembly

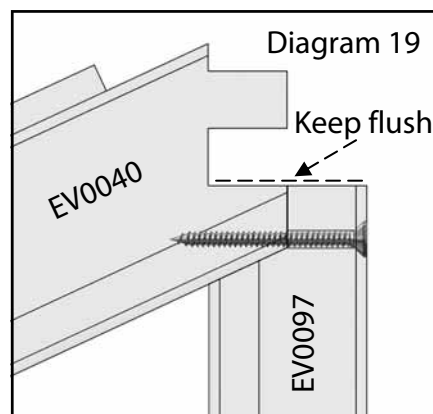
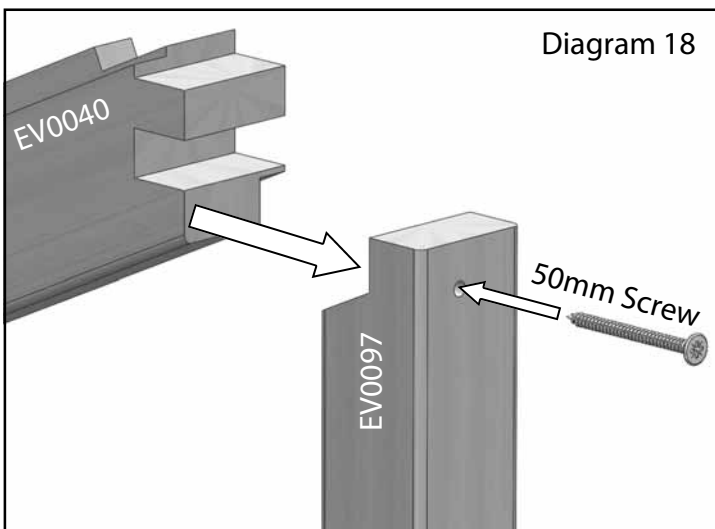
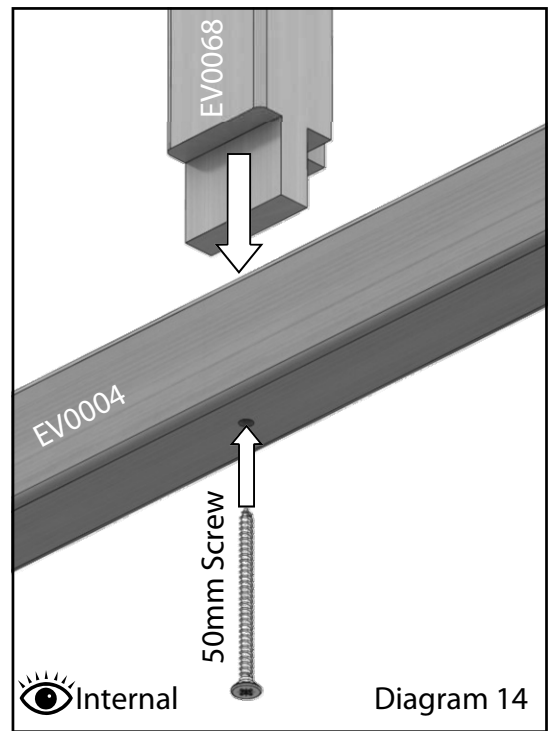
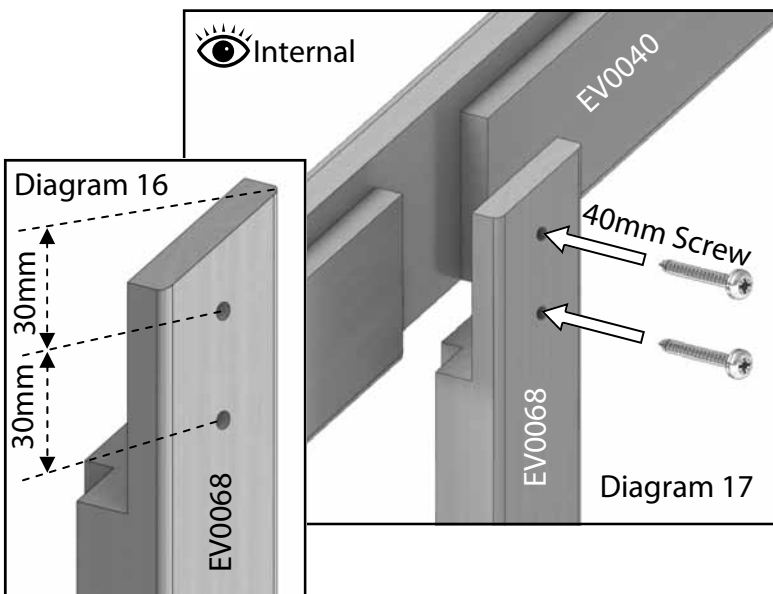
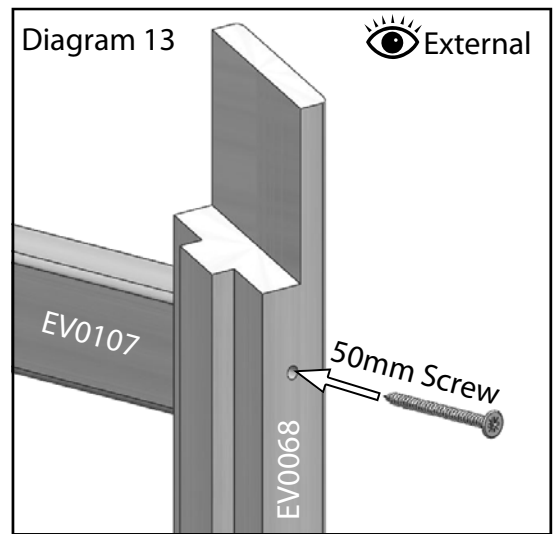
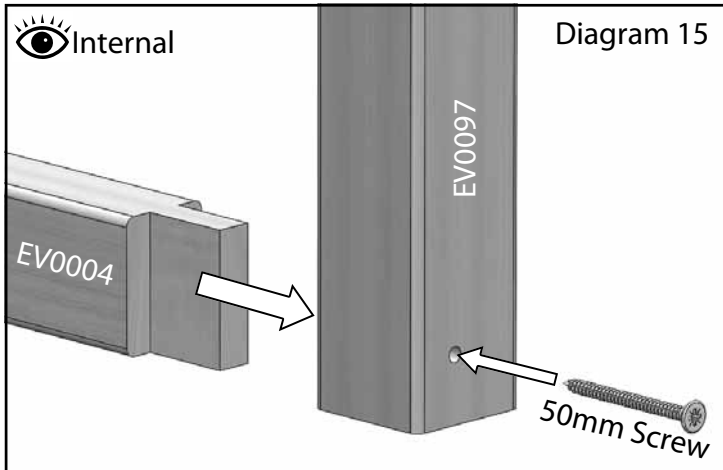


# Right Hand Plain Gable Assembly



# Plain Gable Assembly

Lay the parts out flat on the floor again, as you did with the door gable. Drill and fix the parts in the same way as before but this time use the door header insert (EV0107) in the top mortise holes of the gable bars, diagram 13. You will also use the full length 4ft cill (EV0004).

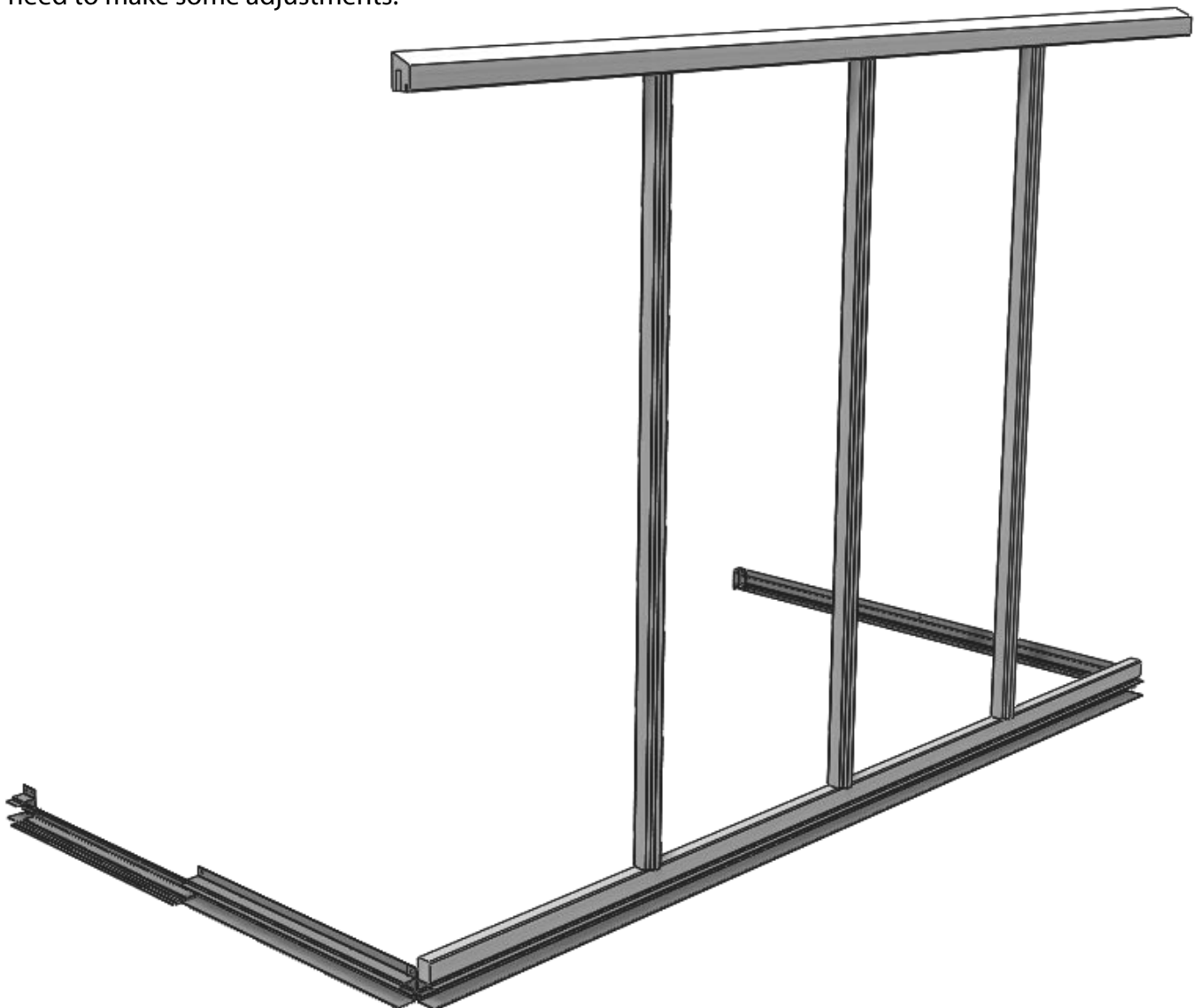


# Frame Assembly

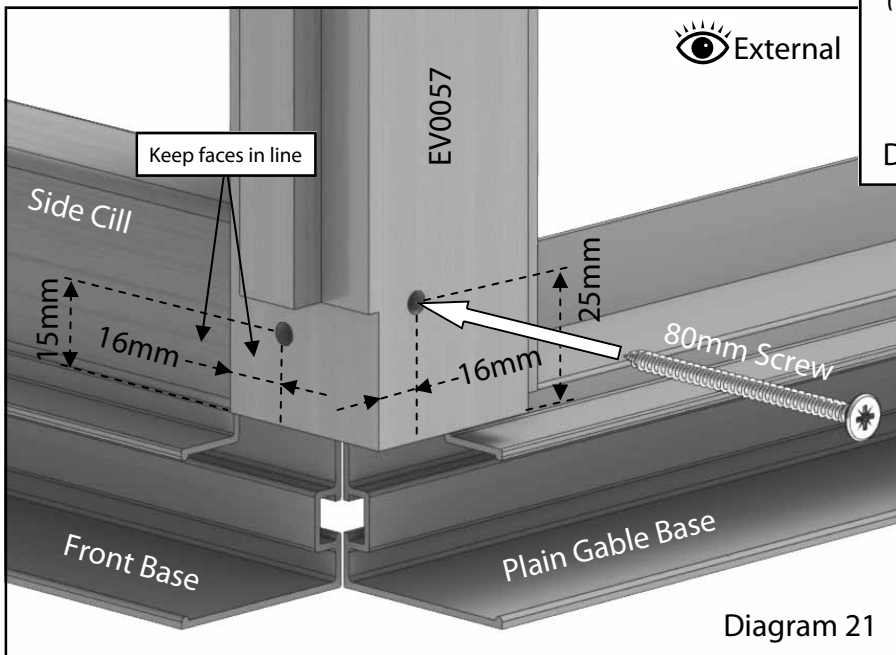
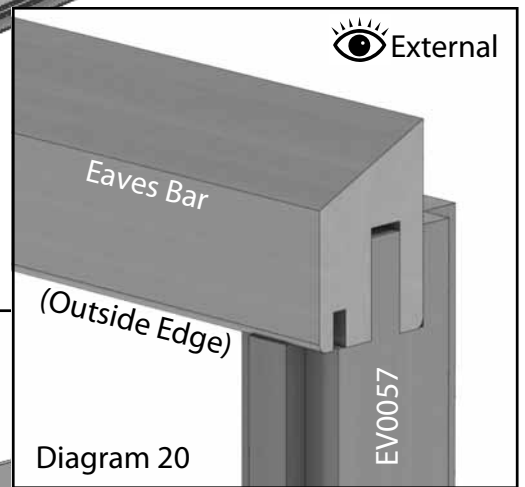
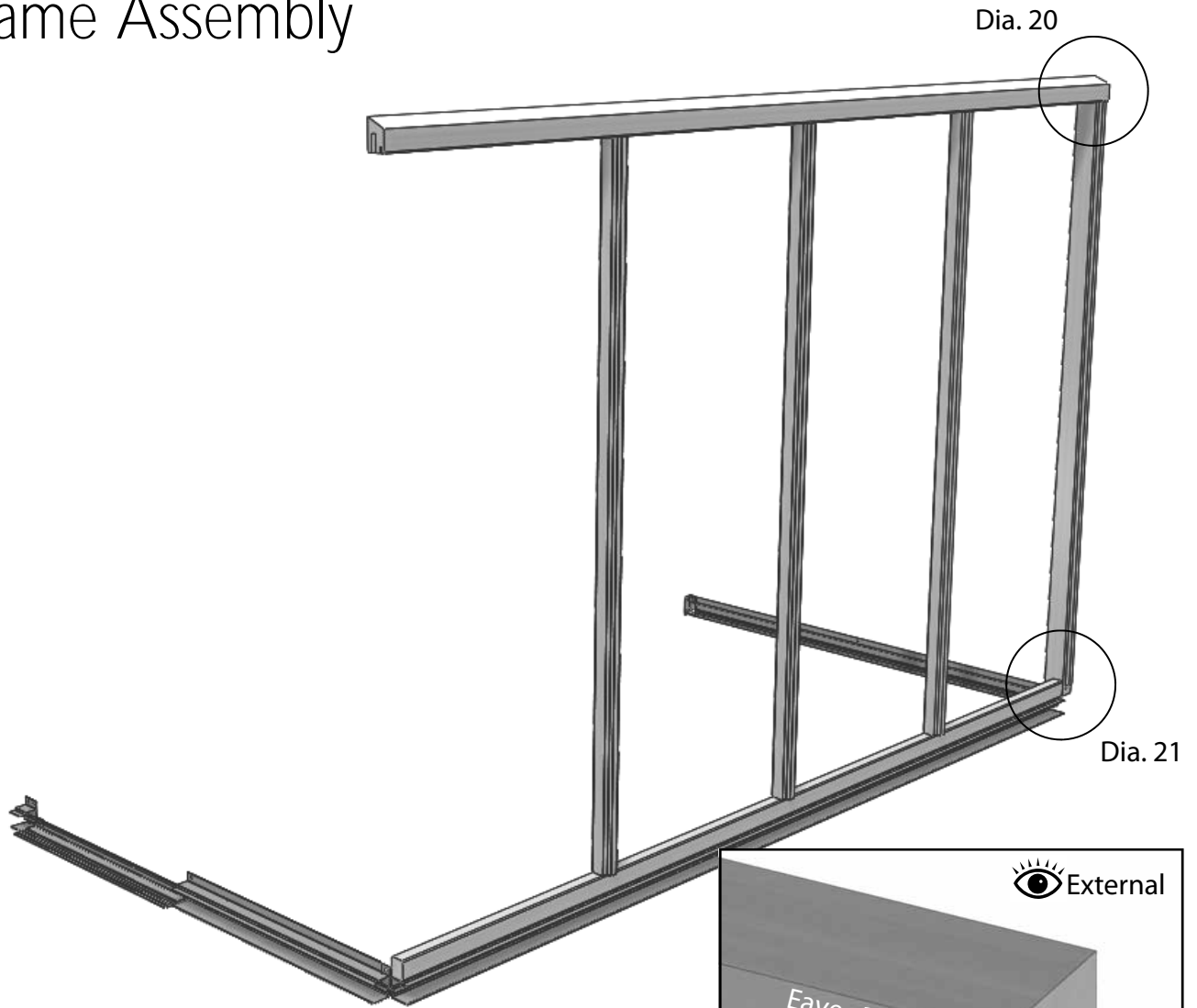
To begin the frame assembly you will need a helper to hold the front in position or strap it to a set of steps. Drill two pilot holes in the bottom of the side corner bar as in diagram 21. The height of these holes should be about 15mm on the front face and 25mm on the gable face measured from the end 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 bar (EV0057) to the eaves bar slotting the tenon into the mortise shown in diagram 20, 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 21).

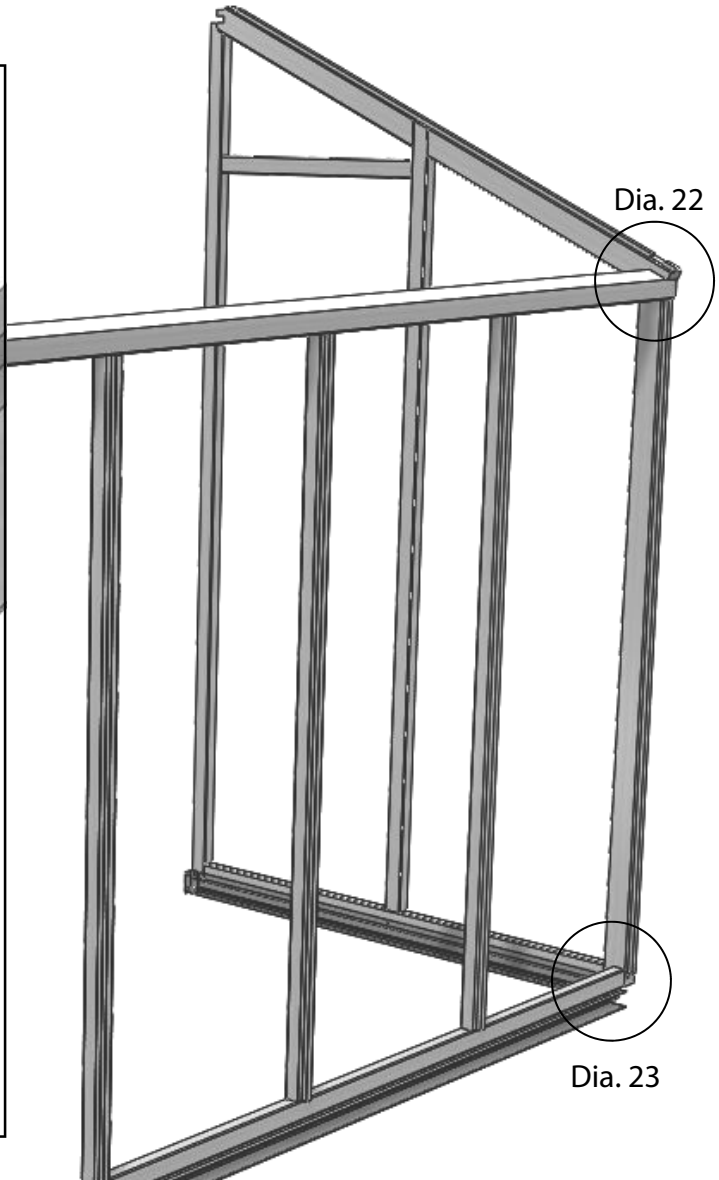
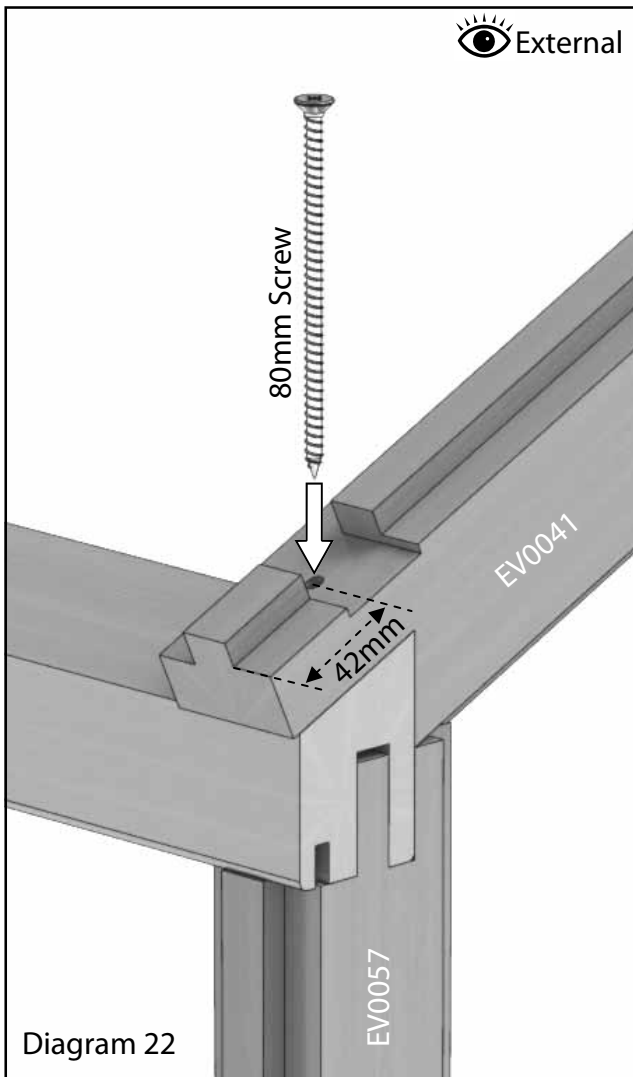
Don't fix the front section to the base yet, wait until you have the gable ends in place as you may need to make some adjustments.



# Frame Assembly

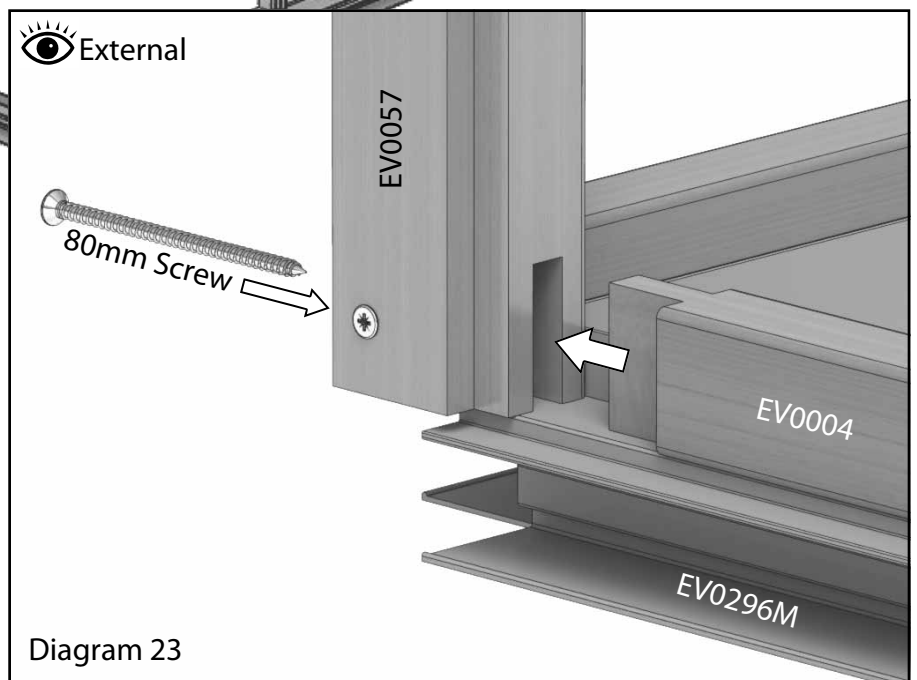


# Frame Assembly

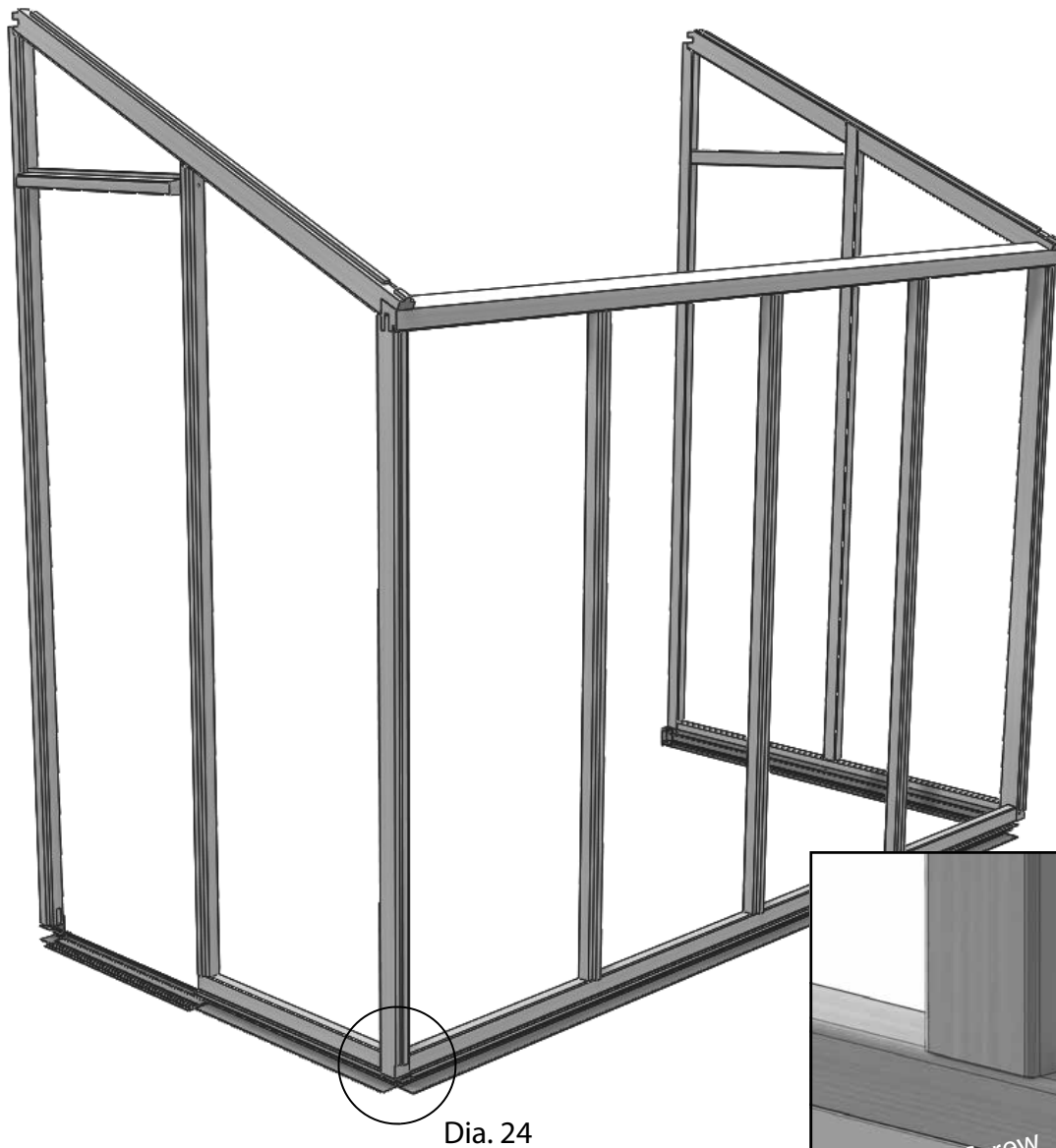


Now offer up the first gable end, this could be the plain gable or the door gable (plain gable shown in this example).

Slot the cill section into the side corner bar and locate the roof corner bar with the eaves bar. Fix them both with 80mm screws as shown in diagrams 22 and 23.

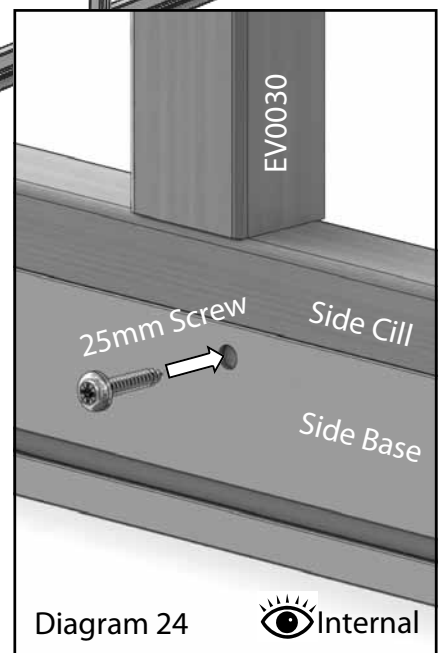


# Frame Assembly



You can then install the opposite gable. Again fix this as shown in diagram 22 and 23.

You may need to adjust the base corner brackets to make sure the base fits well with the cill sections. When you are happy with this screw the cill to the aluminium base using 25mm screws, diagram 24.



# Frame Assembly

Dia. 25

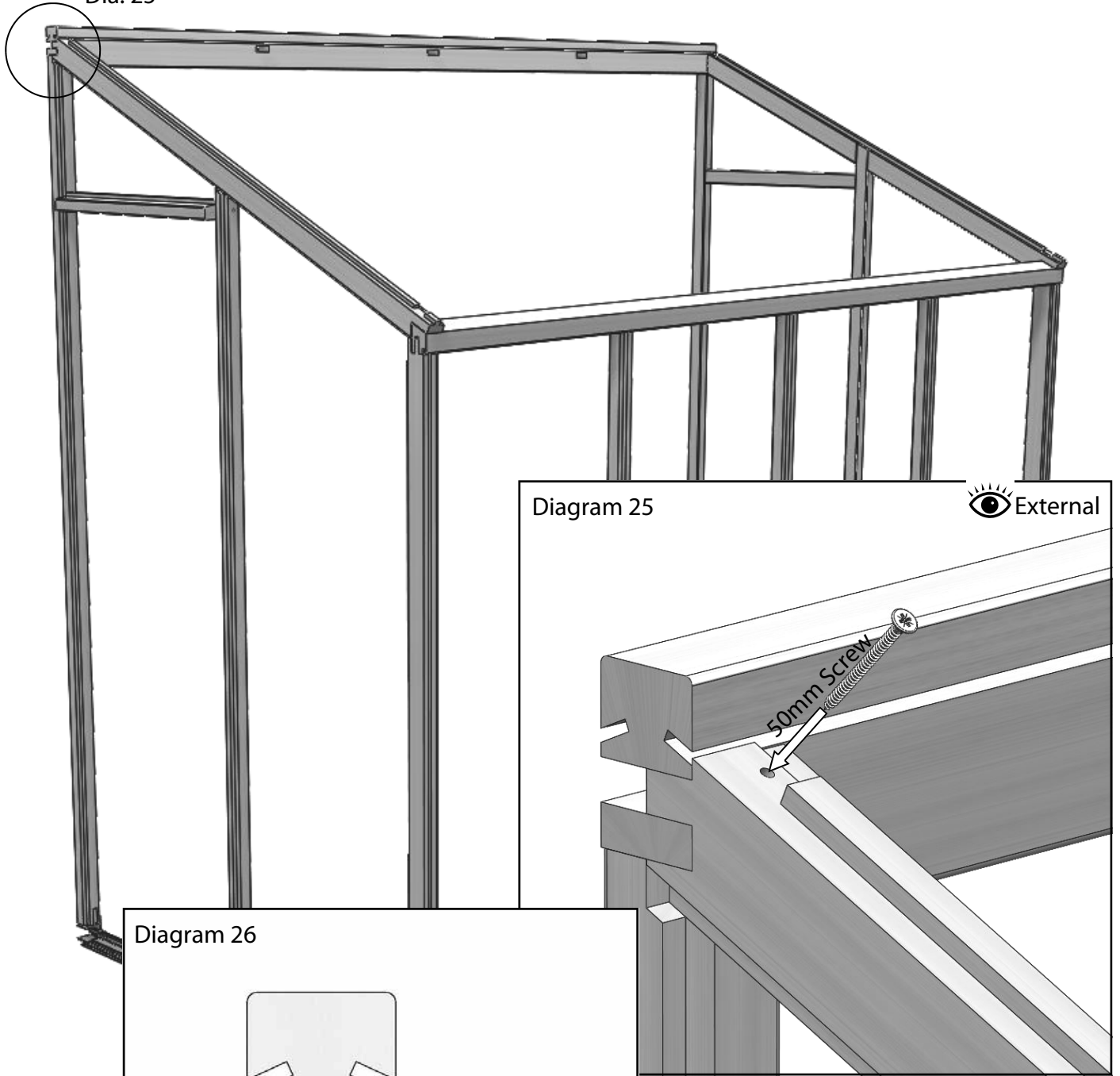


Diagram 25

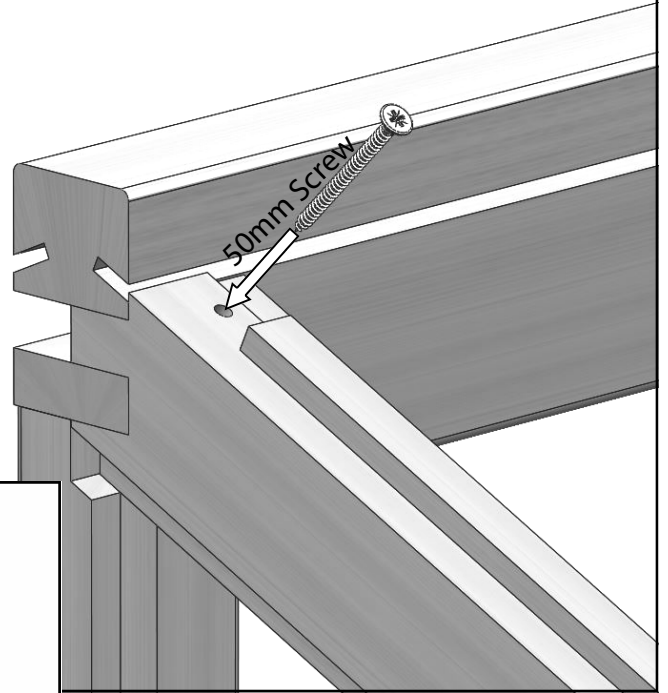
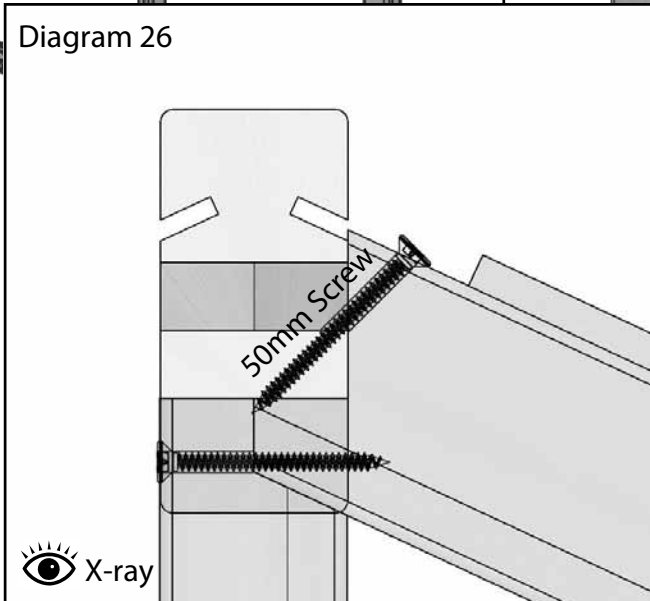


Diagram 26



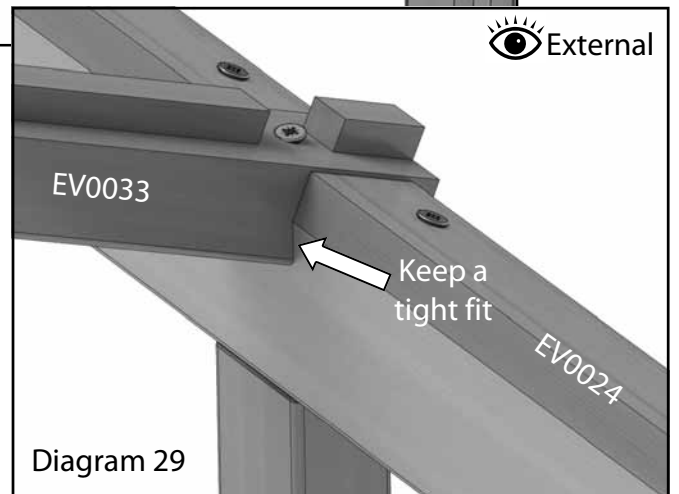
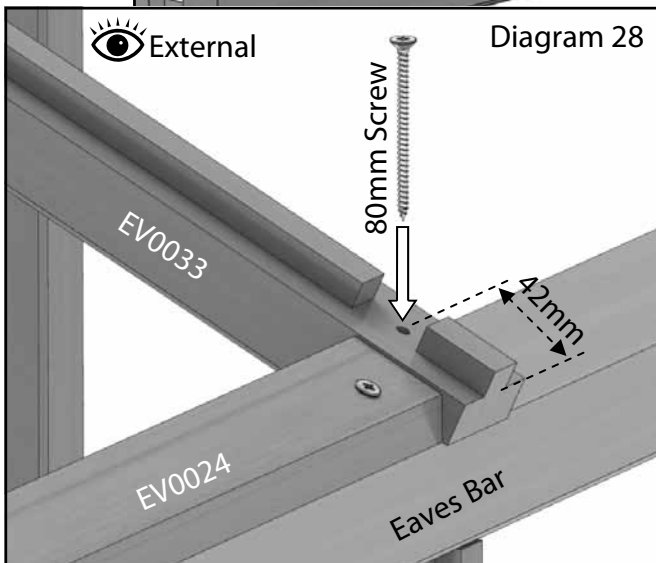
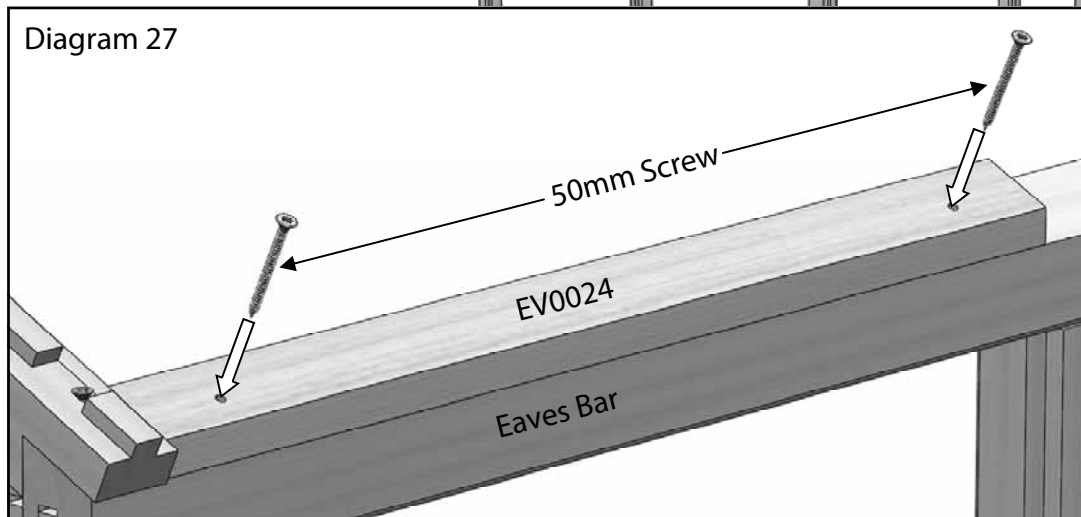
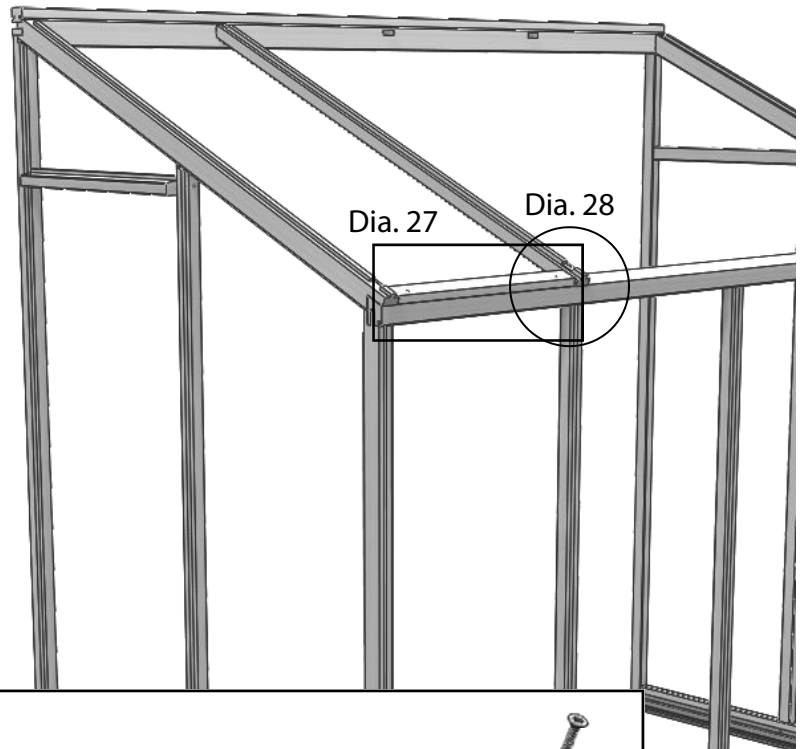
With help, slot the ridge into the two gable ends (diagram 25). Drill a pilot hole in the roof corner bar at an angle similar to the 50mm screw shown in diagram 26, fix this at both ends.

# Frame Assembly

With the ridge bar in place you can start installing the roof bars.

First you should install an eaves spacer (EV0024), diagram 27. Make sure this is pushed all the way up to the roof corner bar and fix this with two 50mm screws in the pre-drilled holes.

Now slot a roof bar into the ridge and lower it onto the eaves bar. Drill vertically down as before through the roof bar (diagram 28) and fix with an 80mm screw. Secure the top in the same way as the roof corner bar, diagram 25 and 26.



# Frame Assembly

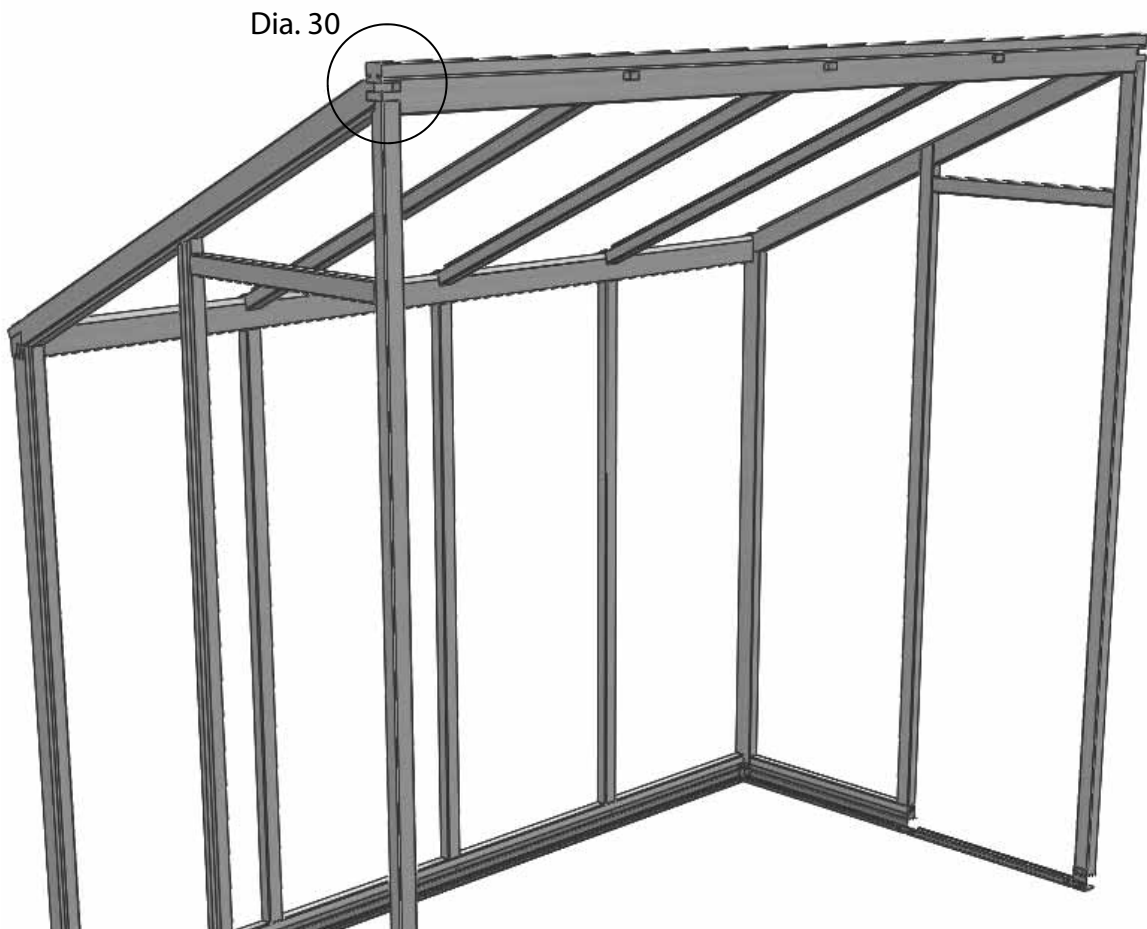
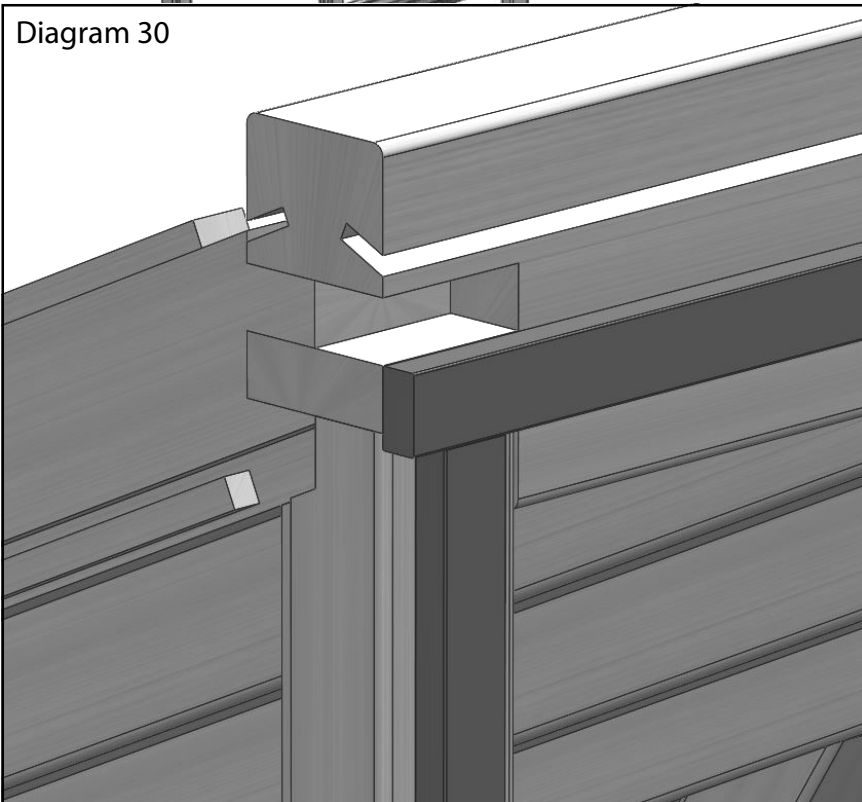


Diagram 30

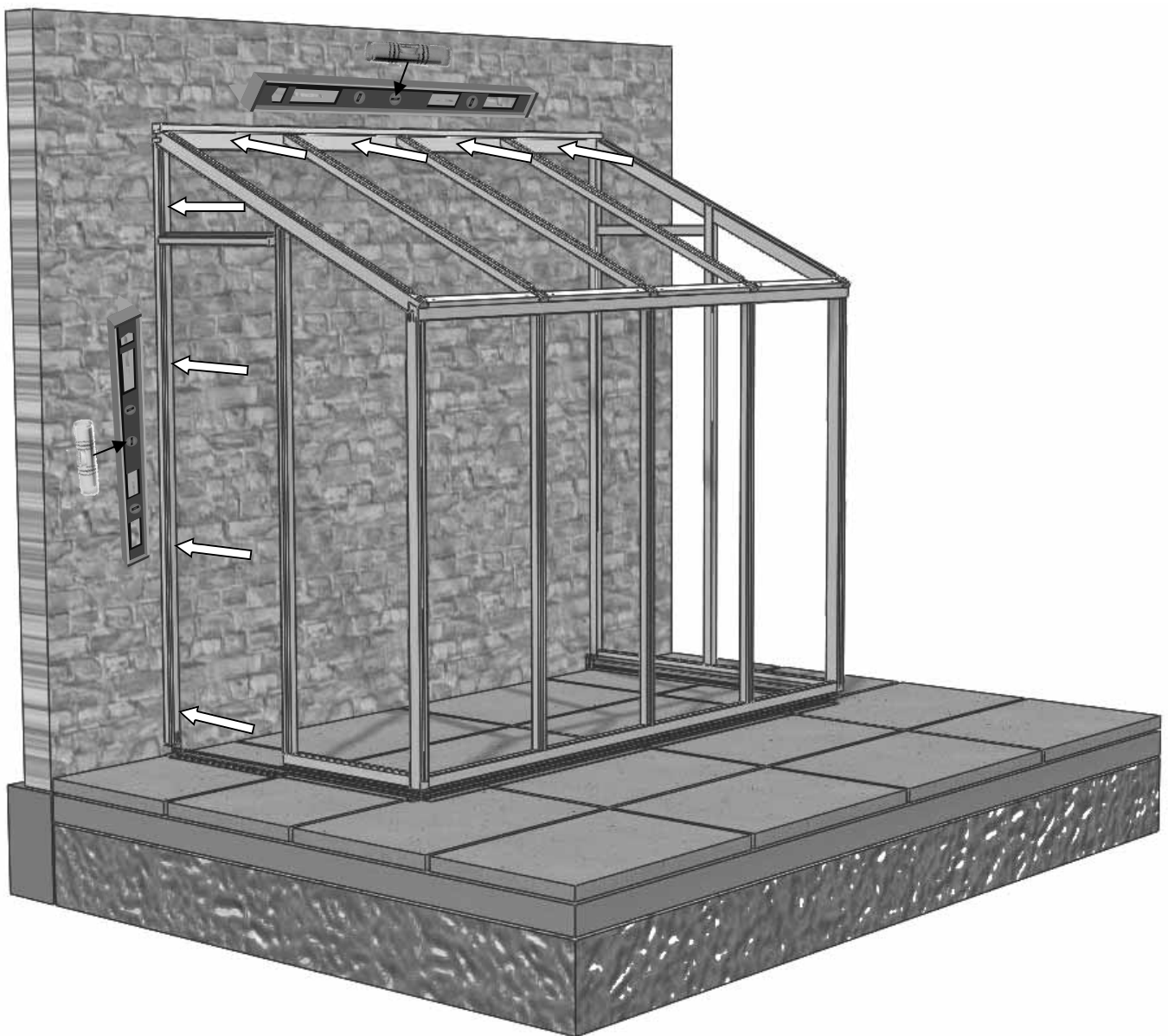


Once all the roof bars are in place slide the building away from the wall enough to stick the foam strip to the ridge and wall bars, diagram 30. This comes in 7 meter rolls. If you have a slightly uneven wall this will act as a draft excluder.

# Frame Assembly

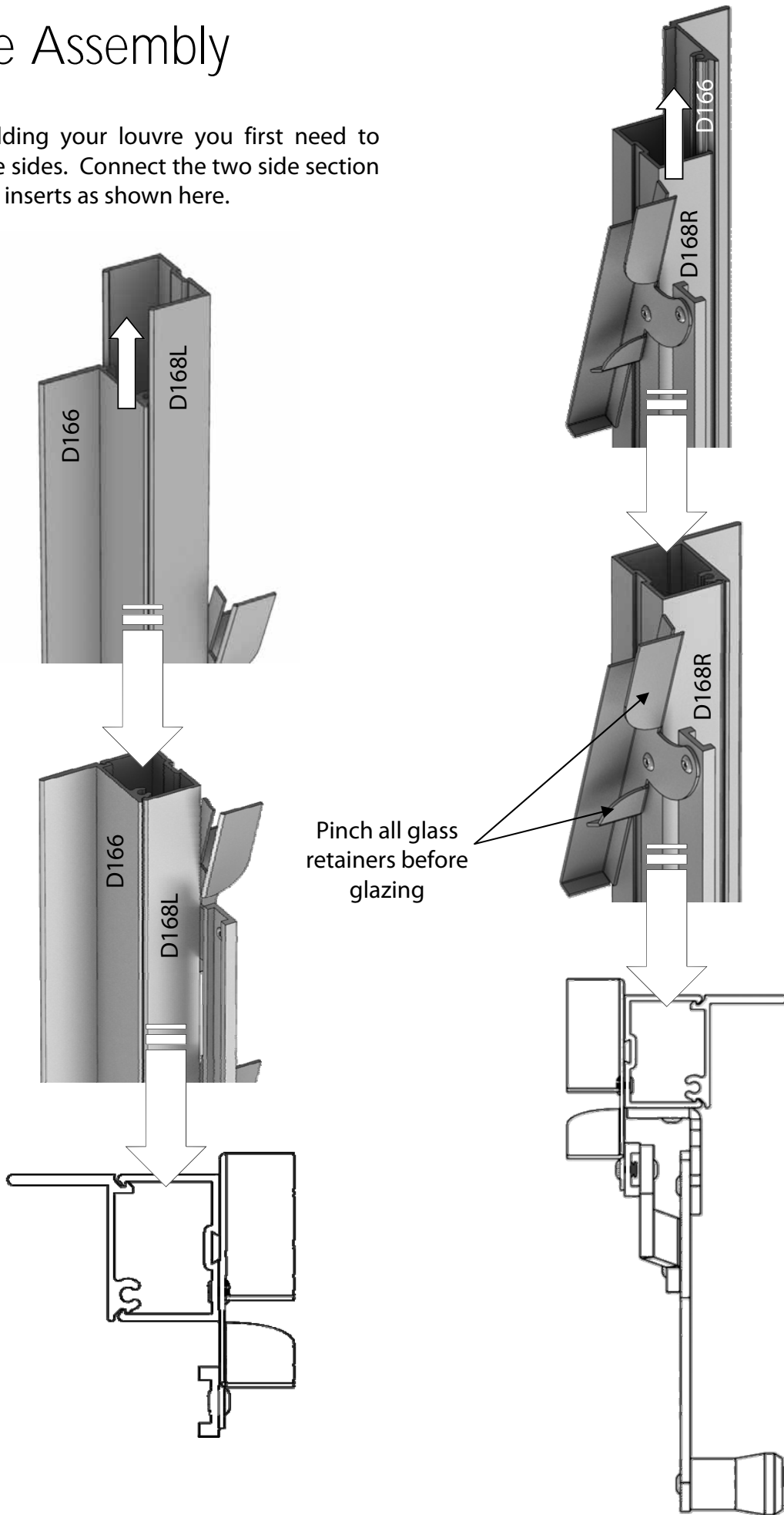
Slide the building back to the wall, using a spirit level make sure the wall bars are vertical and the ridge bar is horizontal. If you have to pack the base to get the ridge level you may find you will have to do the same for the front of the building to get the eaves level. It is important that the ridge and eaves are parallel as any twist in the building will make glazing difficult.

When you are happy with the position of the frame, drill through the wall bars and ridge and fix with 50mm screws and rawl plugs. Below is an example of how many fixings you might use and where to place them, this is dependent on the donor wall so adjust the positions to suite.



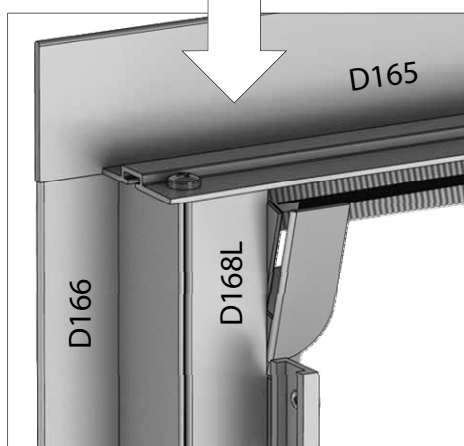
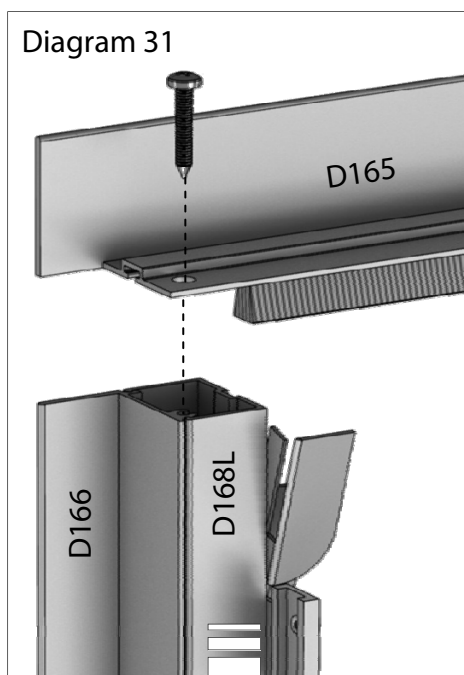
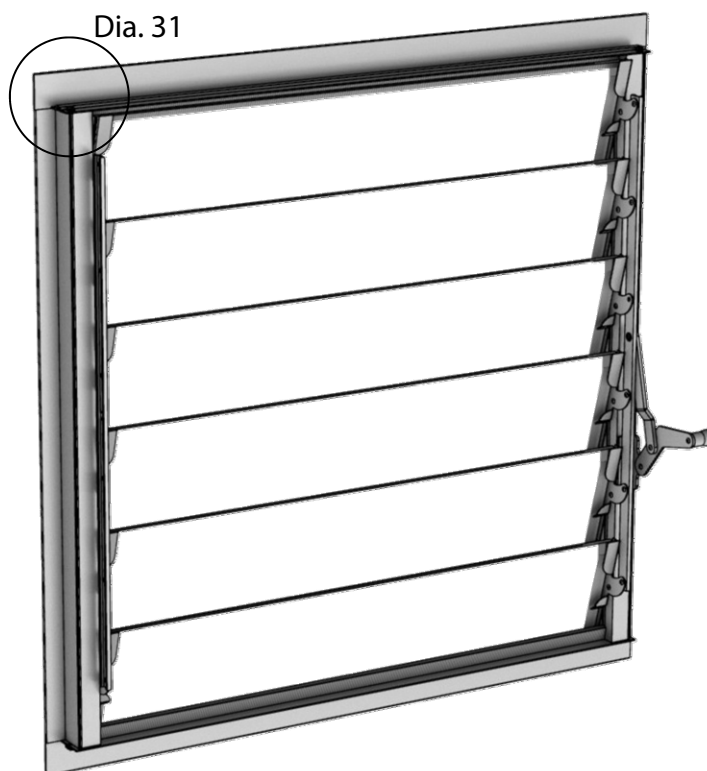
# Louvre Assembly

To start building your louvre you first need to assemble the sides. Connect the two side section with the two inserts as shown here.



# Louvre Assembly

Louvre			
Part Name	Part Number	Size (mm)	Qty
Louvre Top/Bottom	D165	612	2
Louvre Side Insert	D166	552	2
Louvre Side	D168L	552	1
Louvre Side (handle)	D168R	552	1
Assembly Screw	FS6013	12	4
Louvre Glass	D729TG	100 x 525	6



Now you have assembled the side trim the rubber seal flush with the ends. Attach the top and bottom of the louvre with the 12mm assembly screws. In each end. This locates with a screw channel in the side sections. Makes sure you pinch the glass retainers as this helps secure the glass when in place. You will find your louvre glass in the box with the louvre. You can install this now but it is easier to do so when the louvre is in the frame of the greenhouse.

# Glazing

There are 2 types of capping available on this range of greenhouses. The standard cedar capping or the upgrade aluminium capping.

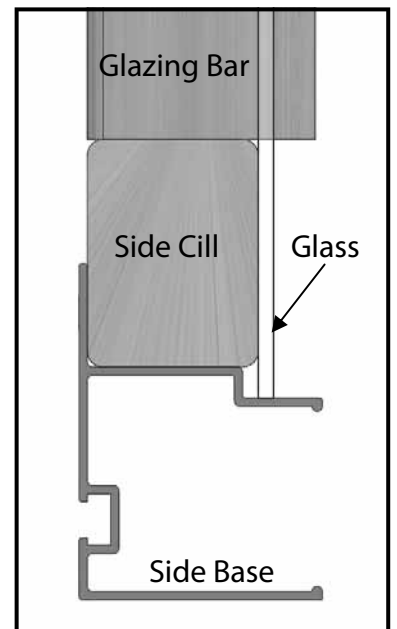
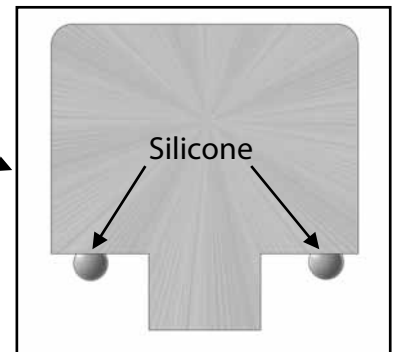
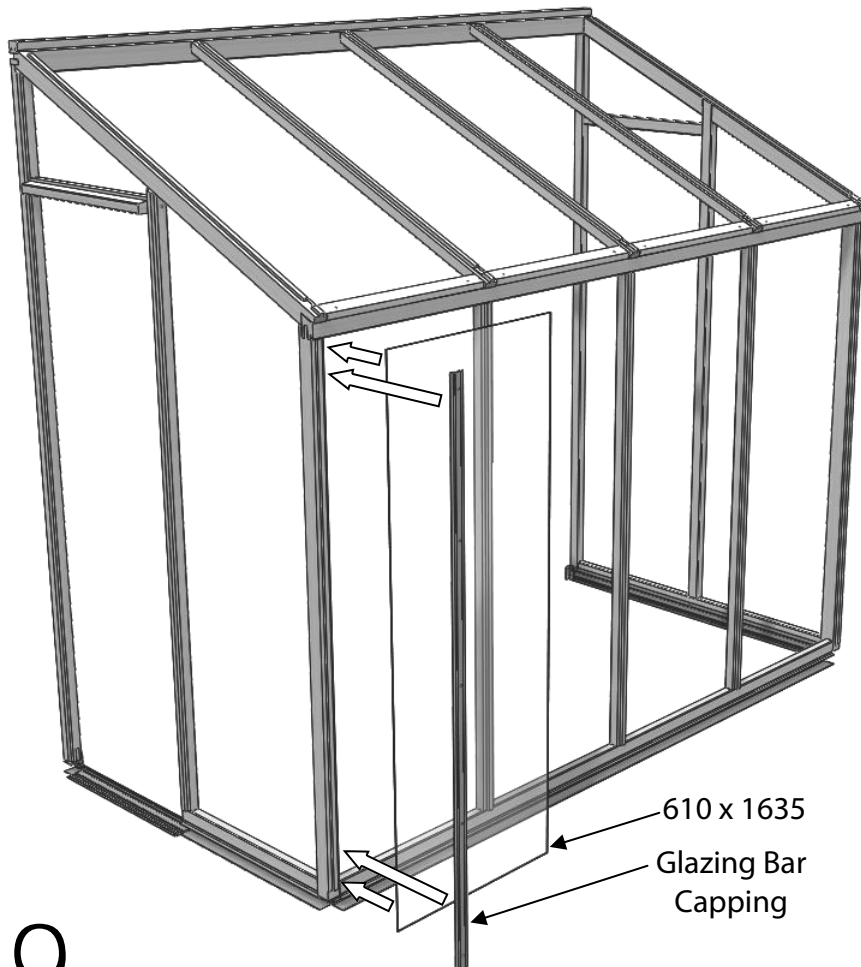
If you have the Aluminium capping you need to slide the glazing rubber into channels on the back of the capping. Use a Stanley knife or scissors to cut to length, it is best to use a complete length per side.



If you have the cedar capping you need to pre load each strip with the 25mm screws. Also before you install each pane you need to run a thin bead of silicon up each glazing bar (no greater than 5mm is needed).

All of the capping is pre-cut to length, so sort through it placing the capping around the building close to where you can reach it. Start by glazing the first side section. Make sure you have the first piece of capping to hand.

Glass Size	64	66	68	610	612
<b>A</b>	2	2	2	2	4
<b>B</b>	1	1	1	1	1
<b>C</b>	1	1	1	1	1
<b>610x1635</b>	6	7	8	8	9
<b>610x1456</b>	1	2	3	3	4
<b>610x868</b>	1	1	1	2	2
<b>610x153</b>	1	1	1	2	2
<b>525x100</b>	6	6	6	12	12
<b>610x610</b>	1	1	1	2	2
<b>610x824</b>	1	1	1	2	2
<b>558x997</b>	1	1	1	1	1

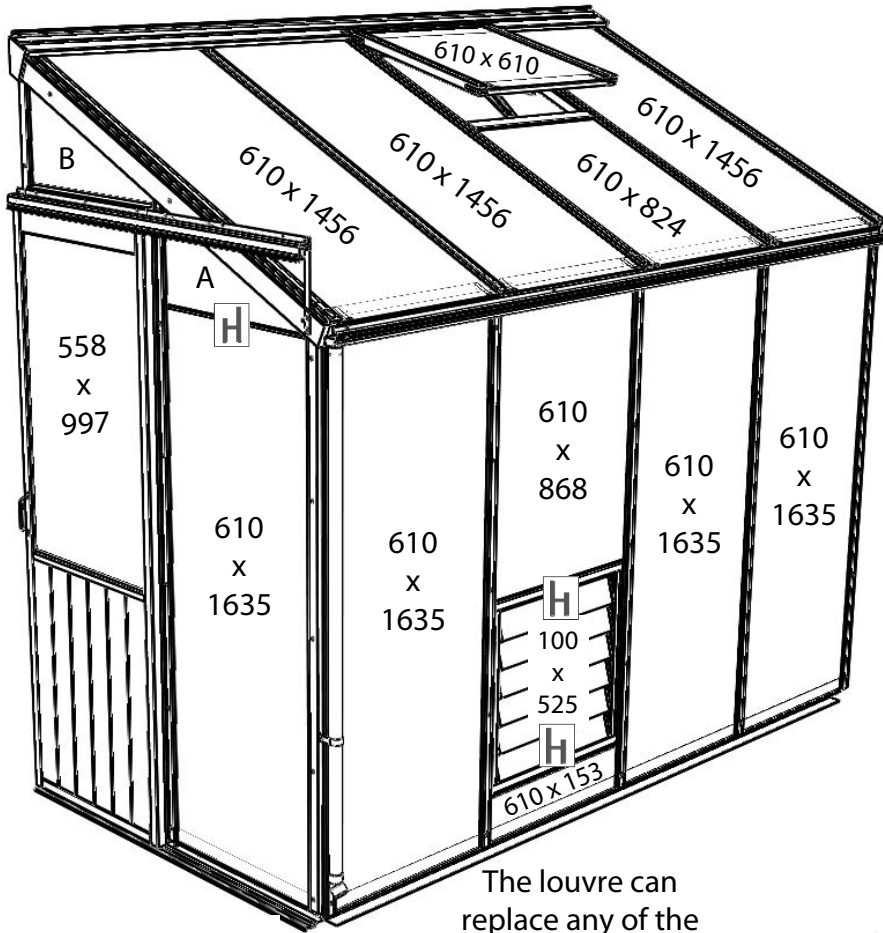


Slide the glass into the rebate of the eaves bar and rest it on the aluminium base as above.

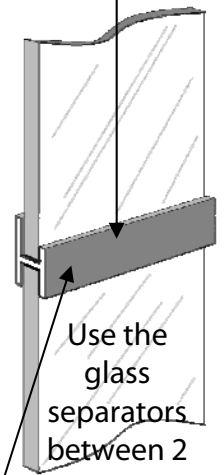
# Glazing

**Note:**

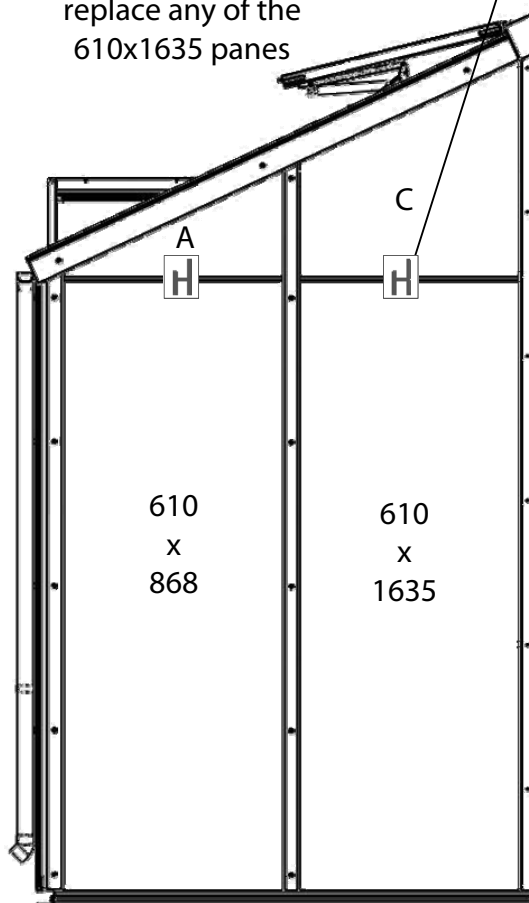
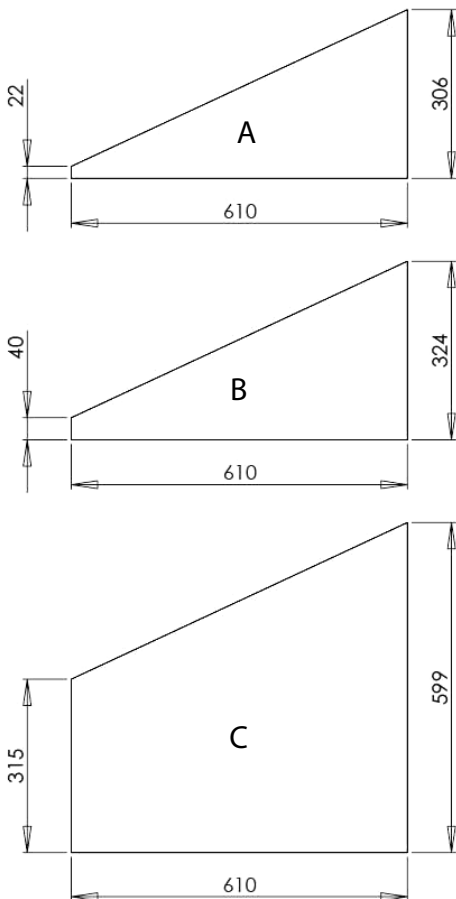
All channels in the aluminium capping should have rubber inserted, even if it is going onto the timber.



Keep the short flange pointing upwards on the outside.

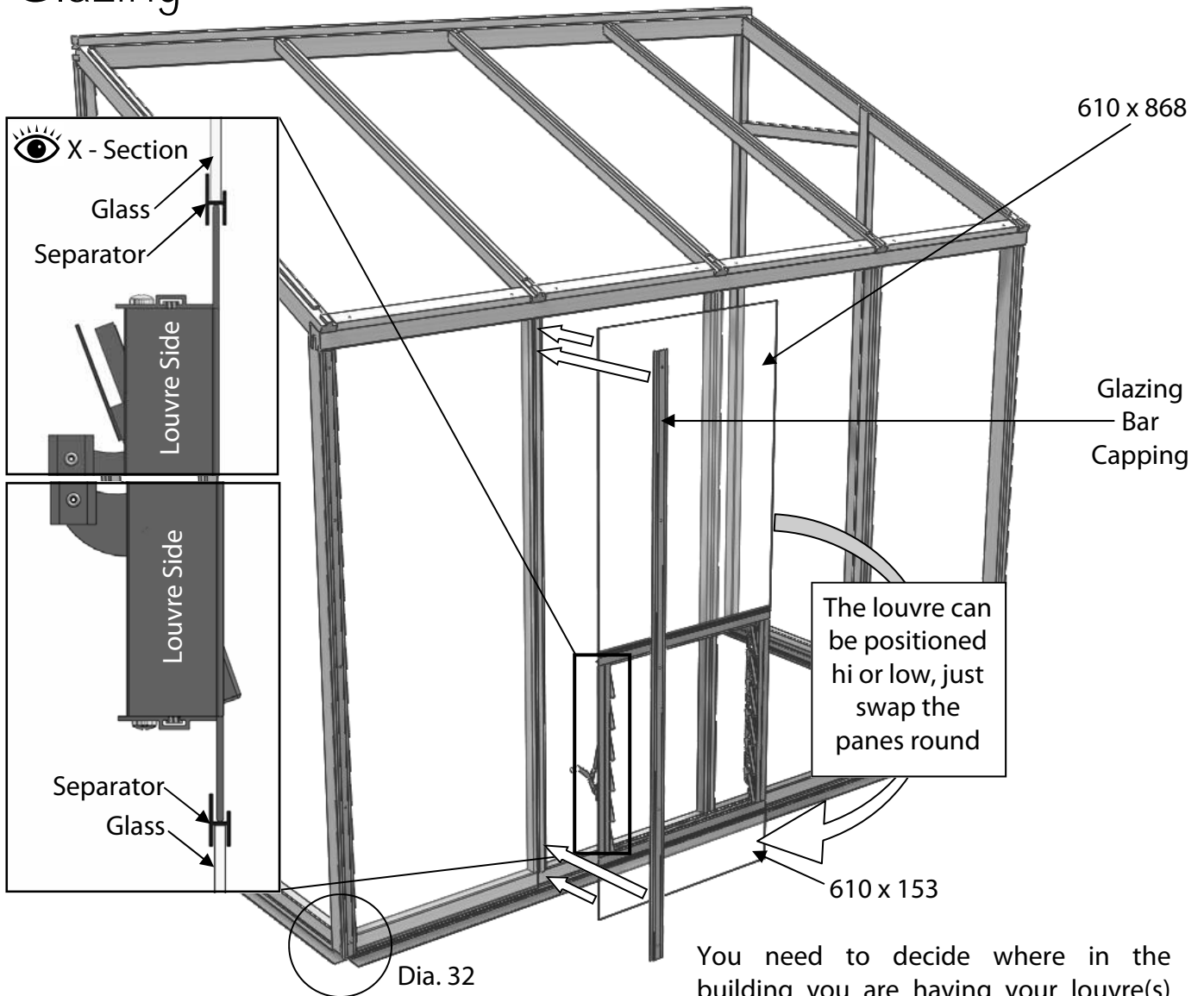


The louvre can replace any of the 610x1635 panes



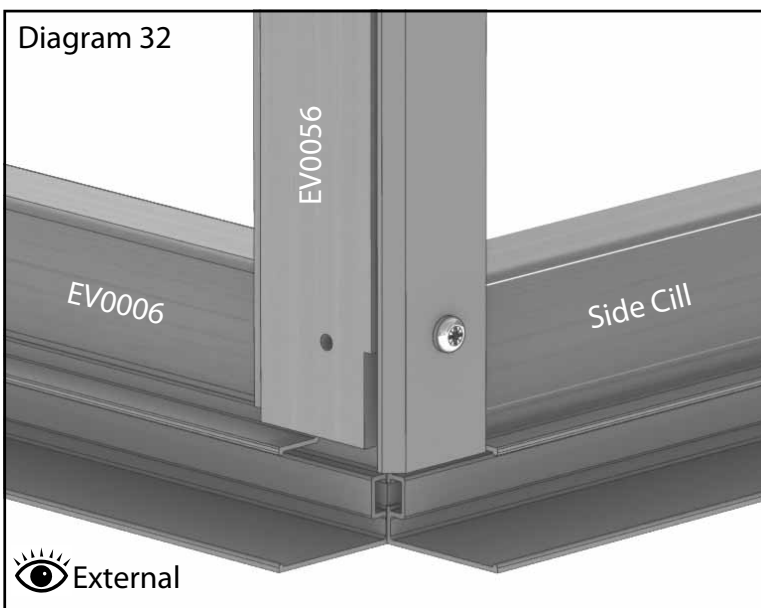
Plain Gable

# Glazing

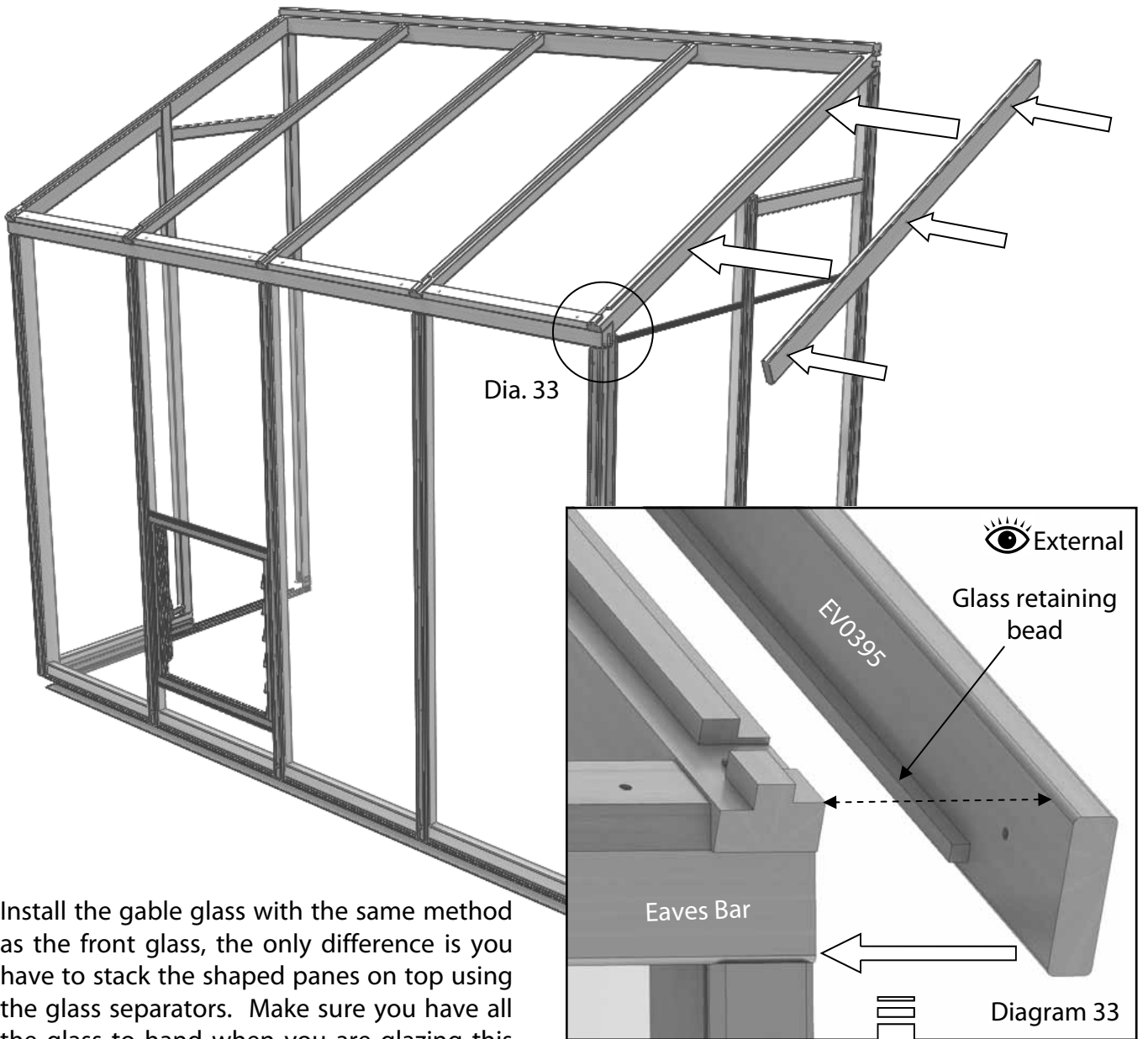


You need to decide where in the building you are having your louvre(s) Above is an example of how it might be fitted. The louvre can replace any of the 610 x 1635 panes, but make sure the handle operates and that there is no interference with the glass in the location that you choose. Make sure you fit it the right way up (the handle is always on the right standing on the inside). Once in position fix the next piece of capping. This has now fully secured the previous pane and partially secured the current one.

Keep working round the building in the same direction, fitting louvres when needed. If you are right handed it is easiest to work left to right and vice versa!

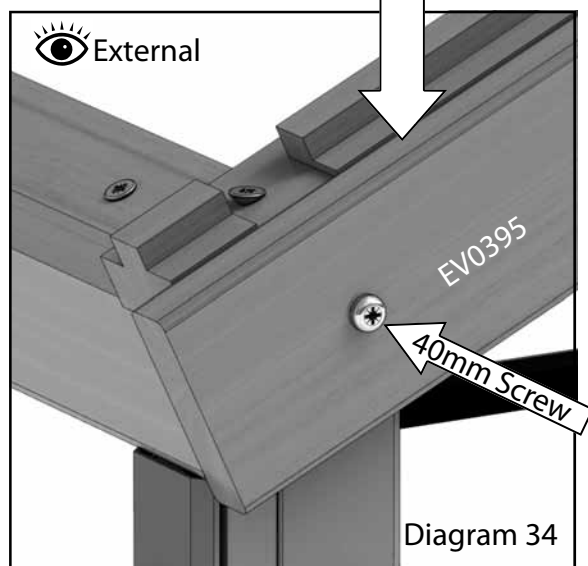


# Glazing

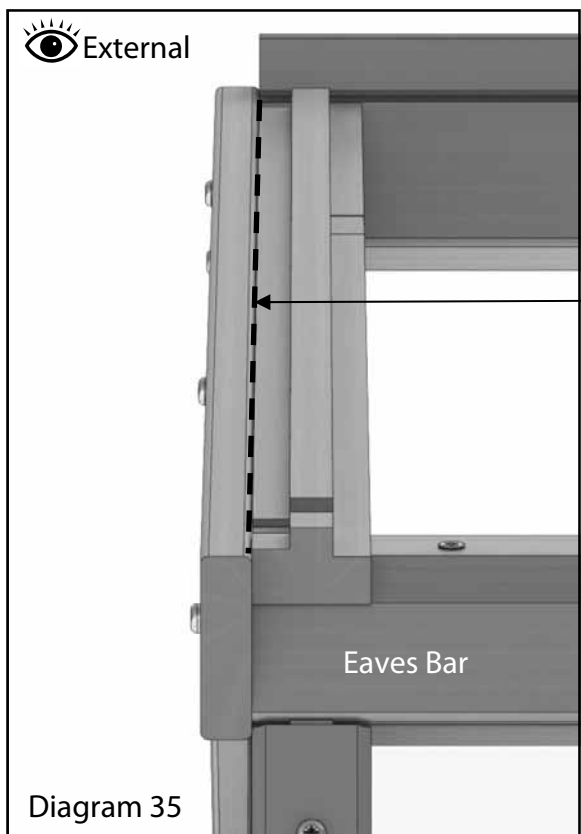
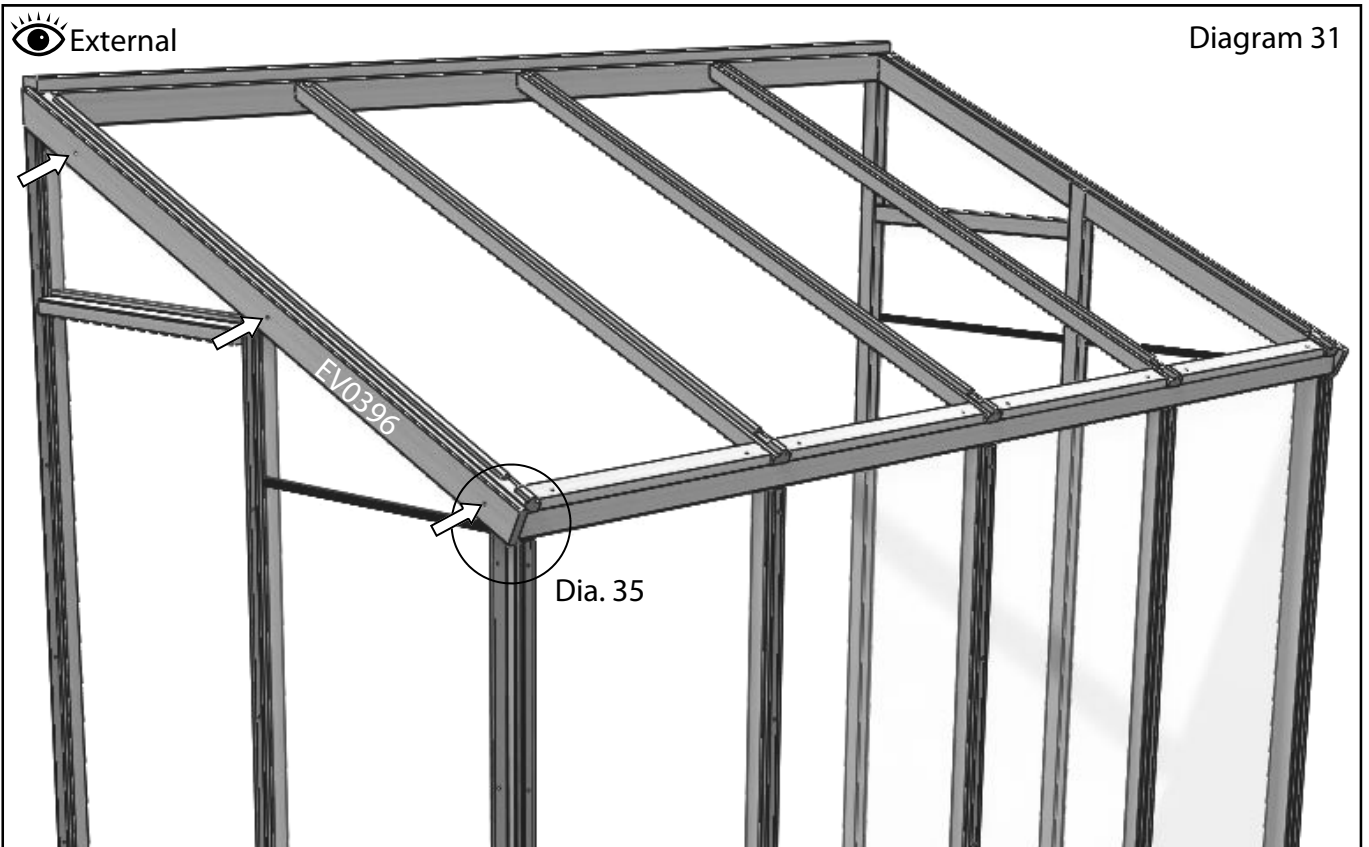


Install the gable glass with the same method as the front glass, the only difference is you have to stack the shaped panes on top using the glass separators. Make sure you have all the glass to hand when you are glazing this section. It is also a good idea to have an extra pair of hands to hold glass in place while you get the next section of glass in place. Always keep the glazing capping flush to the aluminium base level with the bottom of the glass.

Once the vertical capping is on you can fit the roof corner cloaking strips. These are handed as they have glazing beads already attached to them to secure the shaped panes along the top edge, so make sure you have the correct one (see page 28 for a guide).



# Glazing



Once the roof corner cloaking strips have been installed run a bead of silicone all the way down the joint between itself and the roof corner bars (diagram 35).

Next you need to decide on the location of your roof vents. These can NOT be fitted side by side. Once you have decided this start by installing the glass that goes underneath the vent. Use 2 of the glass stops per pane (it is best to locate these over the screw heads in the eaves spacers) see diagram 32.

# Glazing

There are 2 grooves in the slam rail, the one nearest the edge should be used for the aluminium capping and the one nearer the middle for the cedar capping.

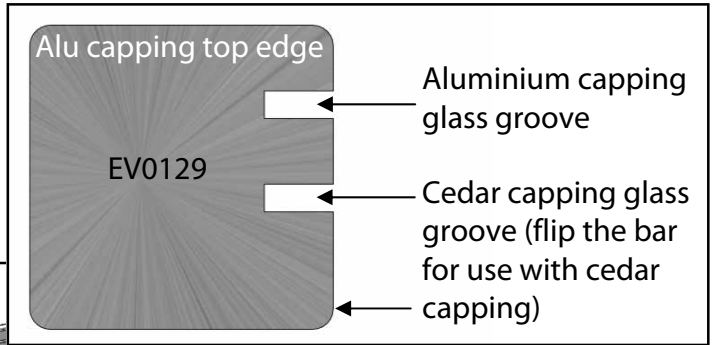
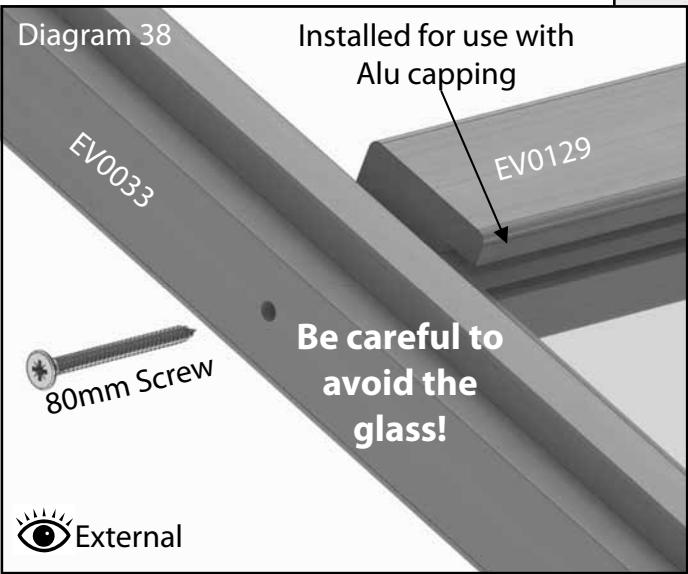
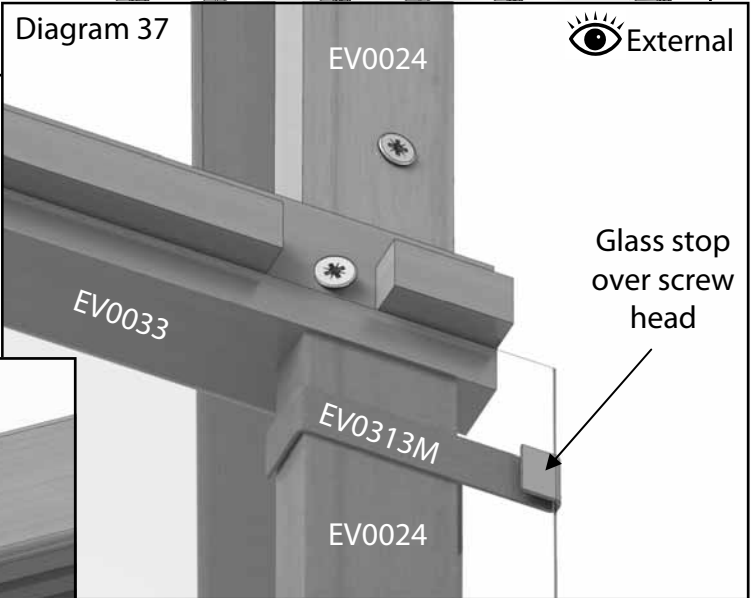
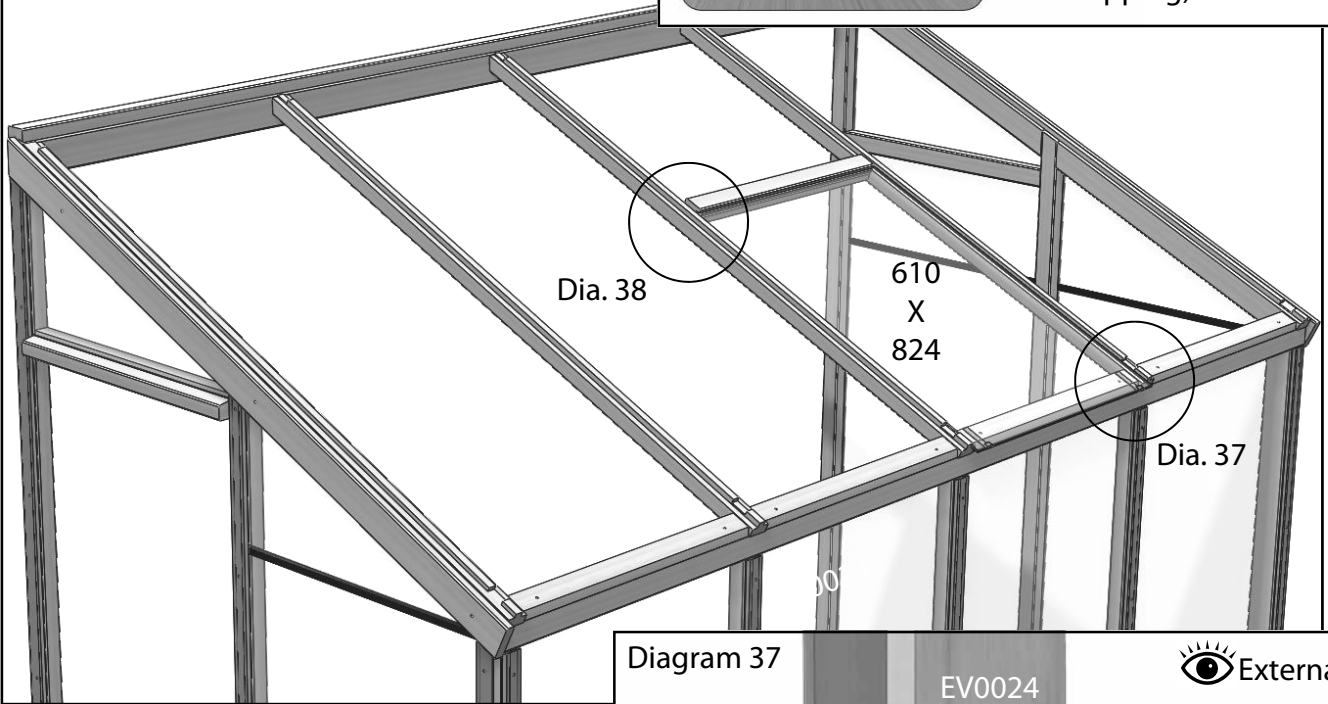


Diagram 36  External

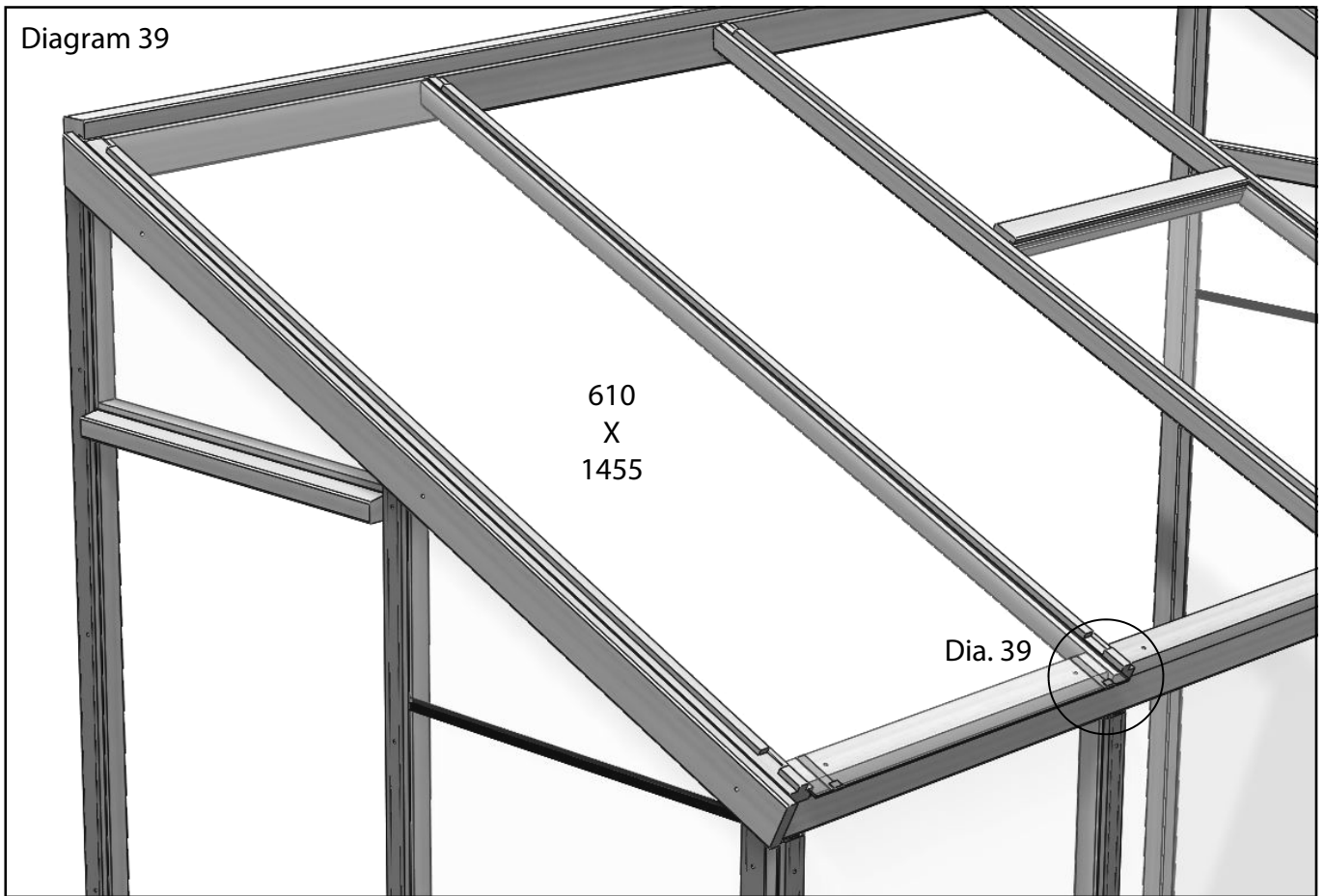


Then position the slam rail (EV0129) on top of this pane of glass. This should be fixed with a 80mm screw through the side of the glazing bar (remember to pilot drill first), sink the head slightly into the timber for a neat finish.

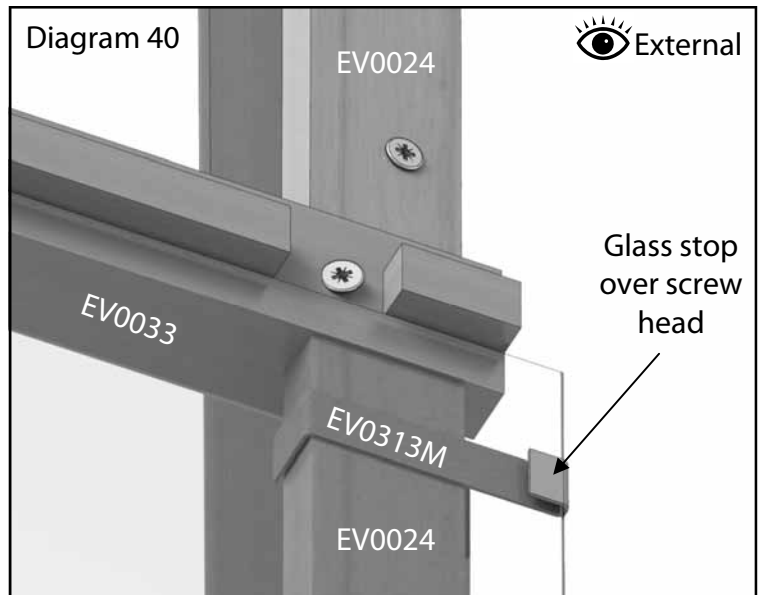
 External

# Glazing

Diagram 39

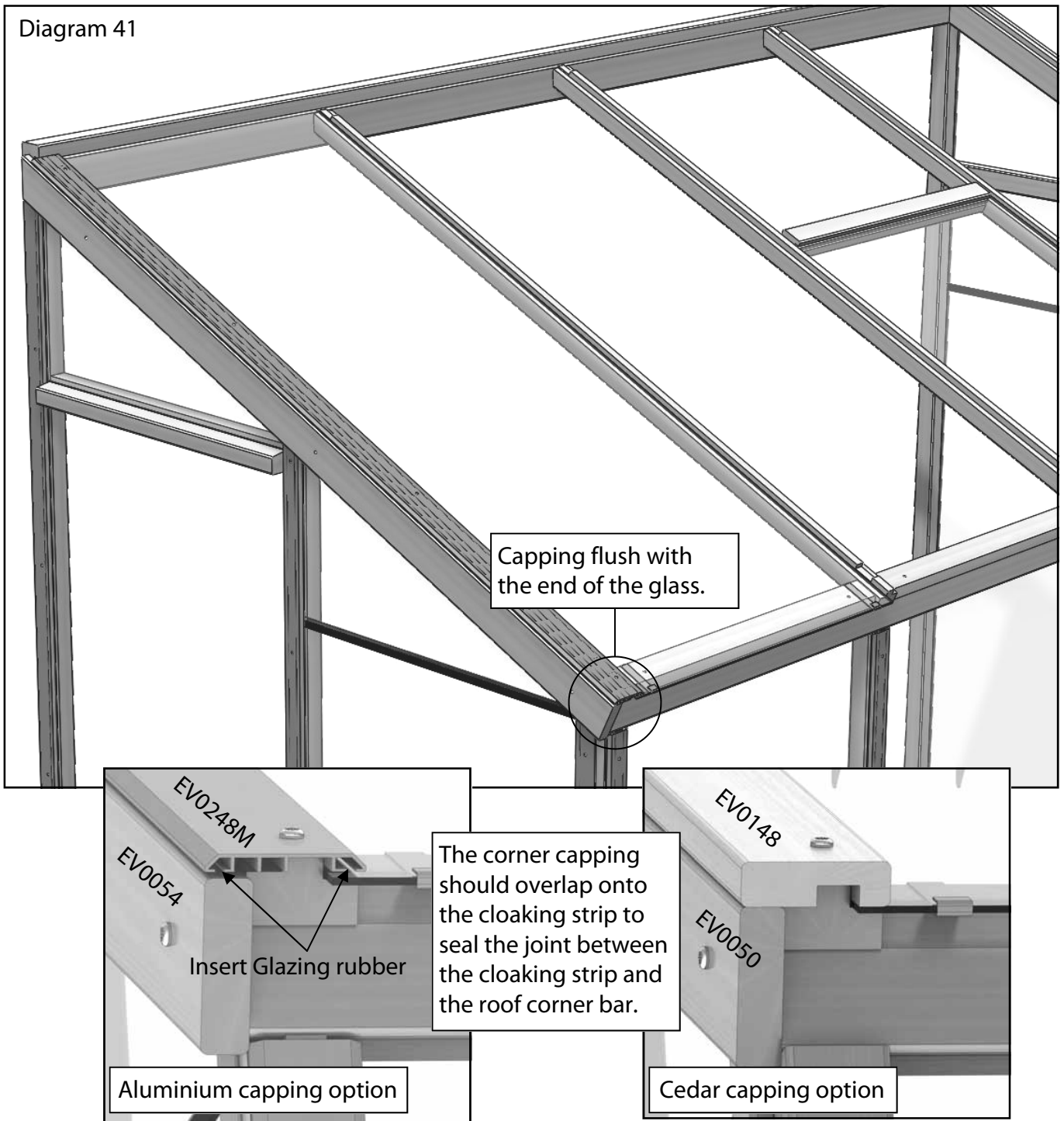


Now complete the glazing by fitting the roof panes. Slot 2 of the glass stops (diagram 40) on the 610 x 1455 pane and lower the pane down onto the eaves bar. This will now support itself while you attach the capping.



# Glazing

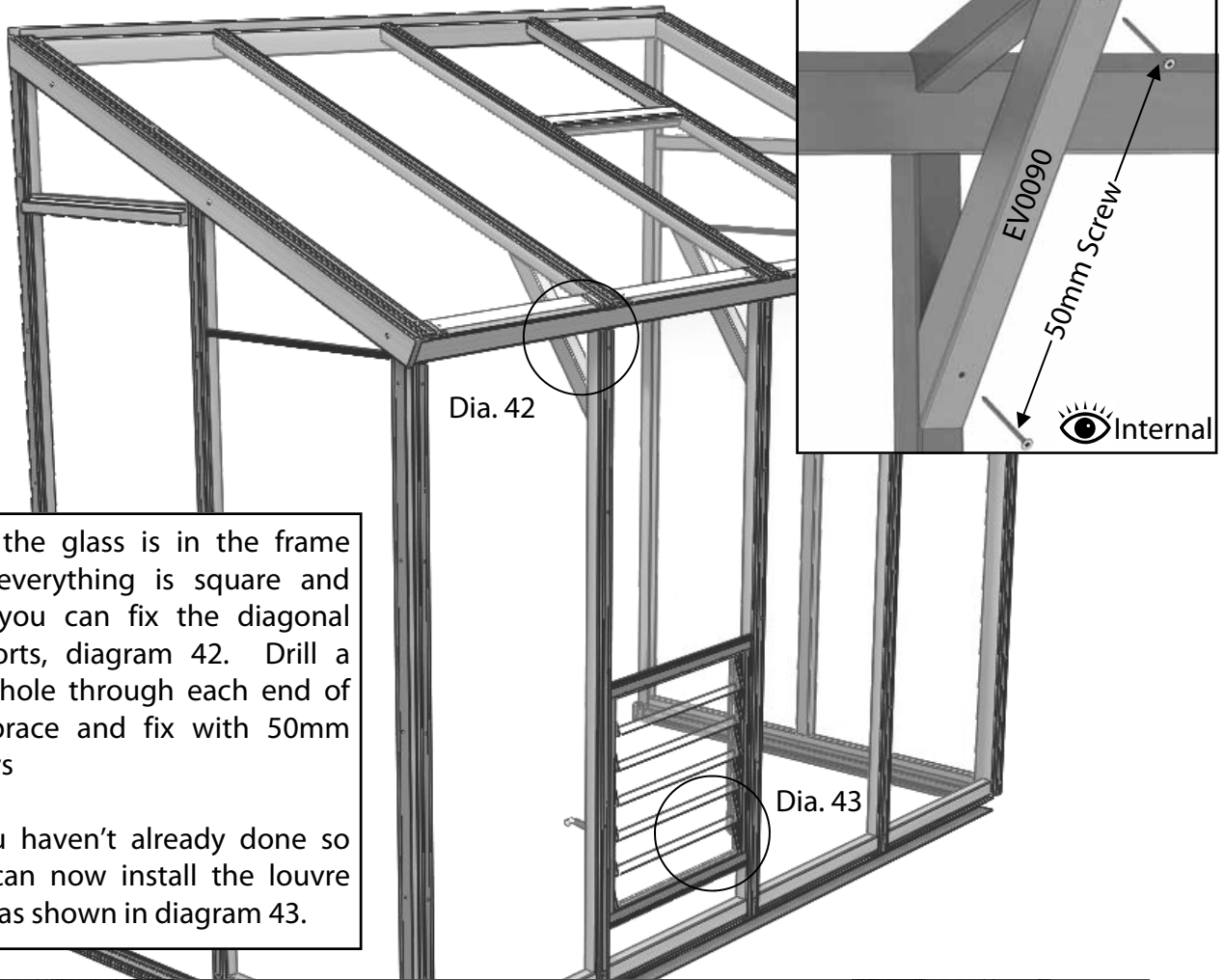
Diagram 41



The capping for the roof corners is wider than normal to cover the join of the cover strip to the roof corner glazing bar. The capping should also be fitted flush with the bottom edge of the glass at the eaves.

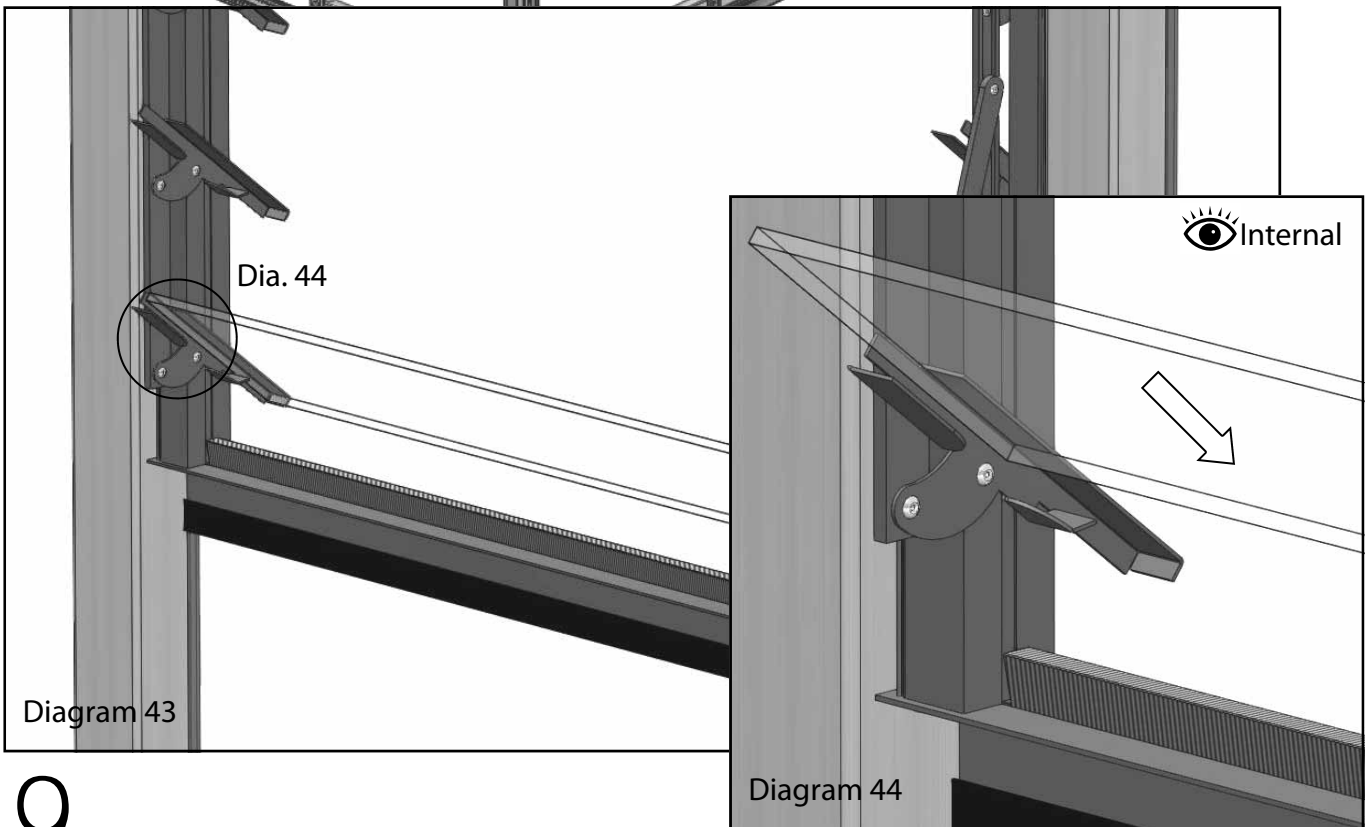
**Note:** Use the 19mm countersunk screws where a vent is to be used so the head of the screw doesn't prevent the vent from closing properly.

# Glazing



Now the glass is in the frame and everything is square and true you can fix the diagonal supports, diagram 42. Drill a pilot hole through each end of the brace and fix with 50mm screws

If you haven't already done so you can now install the louvre glass as shown in diagram 43.

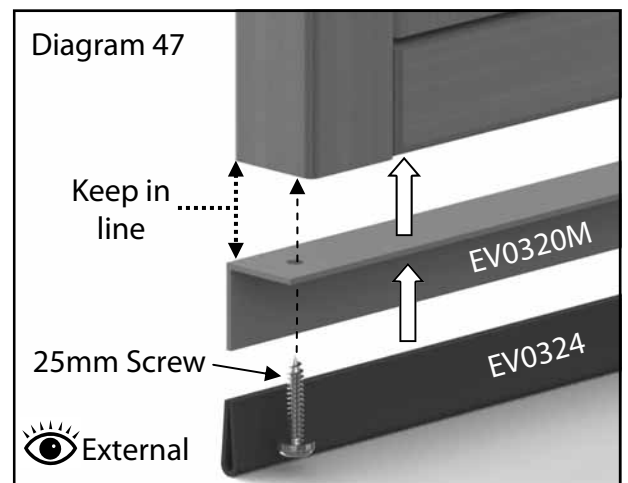
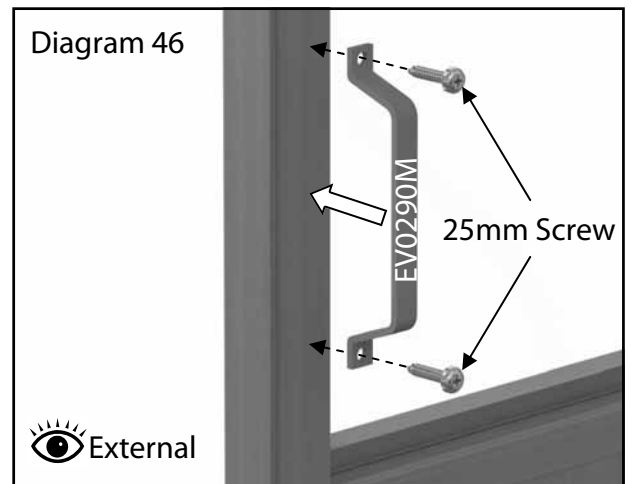
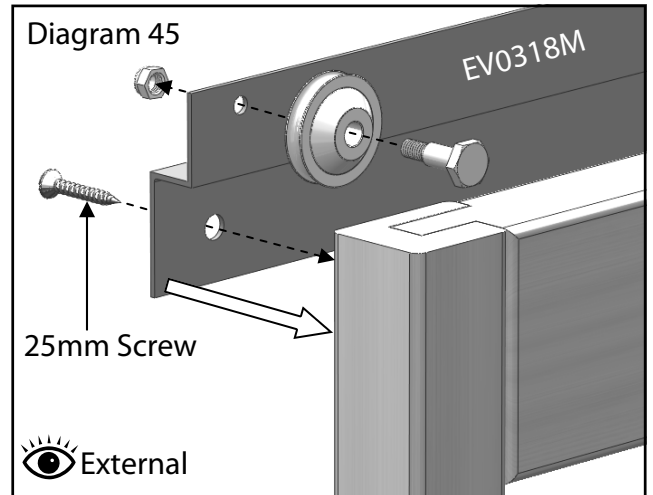
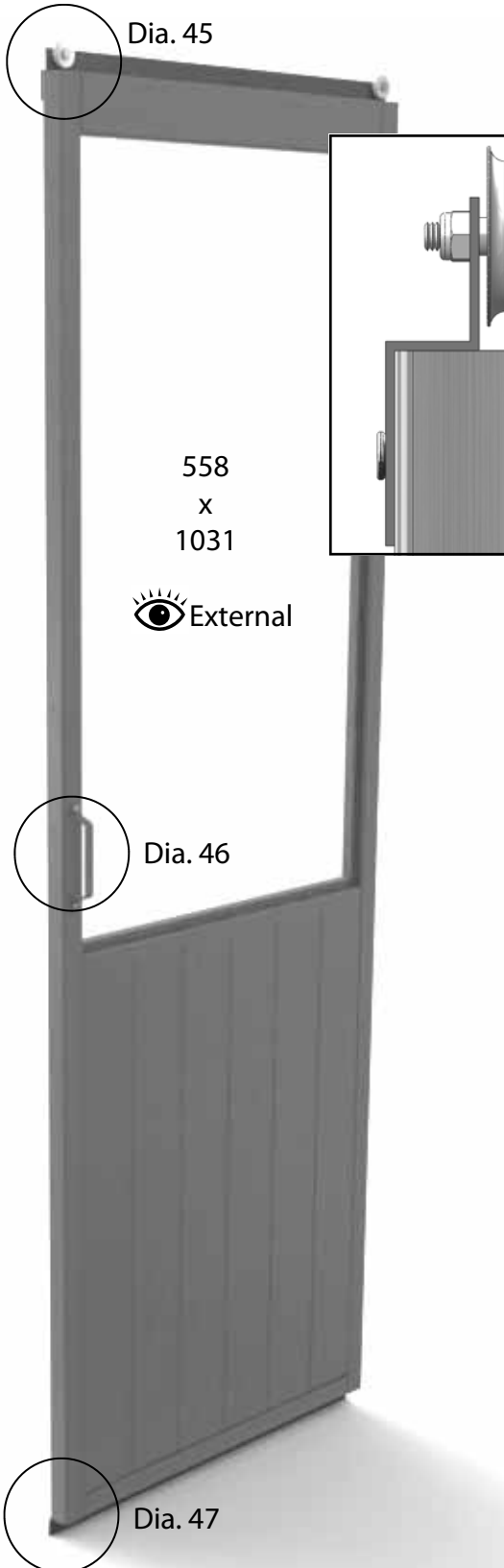


# Door Installation

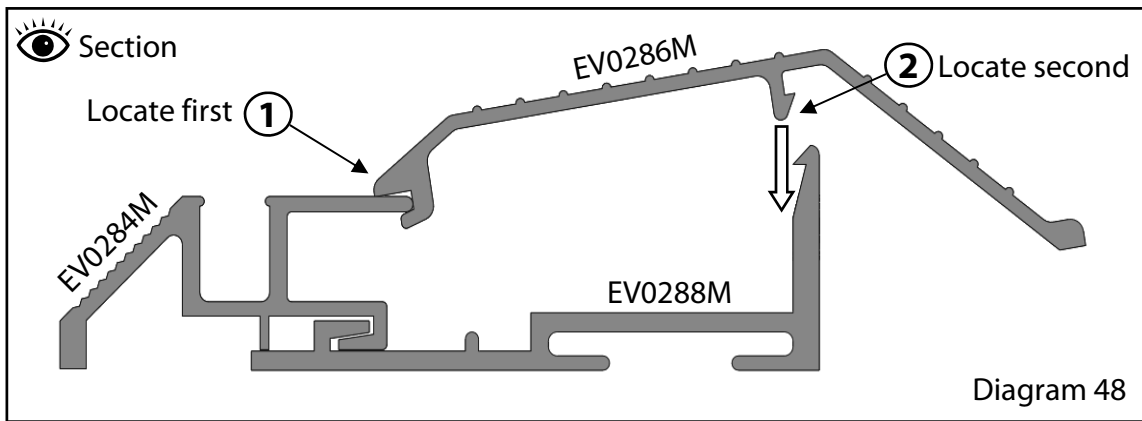
Before installing the door you need to fit the running gear. Start by assembling the door wheels onto the door top bracket, diagram 45. Once assembled fit the bracket to the top of the door using 25mm countersunk screws.

Now fit the door handle with 25mm round head screws, diagram 46.

Slide the door glide onto the door guide bracket and then fix to the bottom of the door. Keep the down leg of the guide in line with the inside edge of the door, diagram 47.

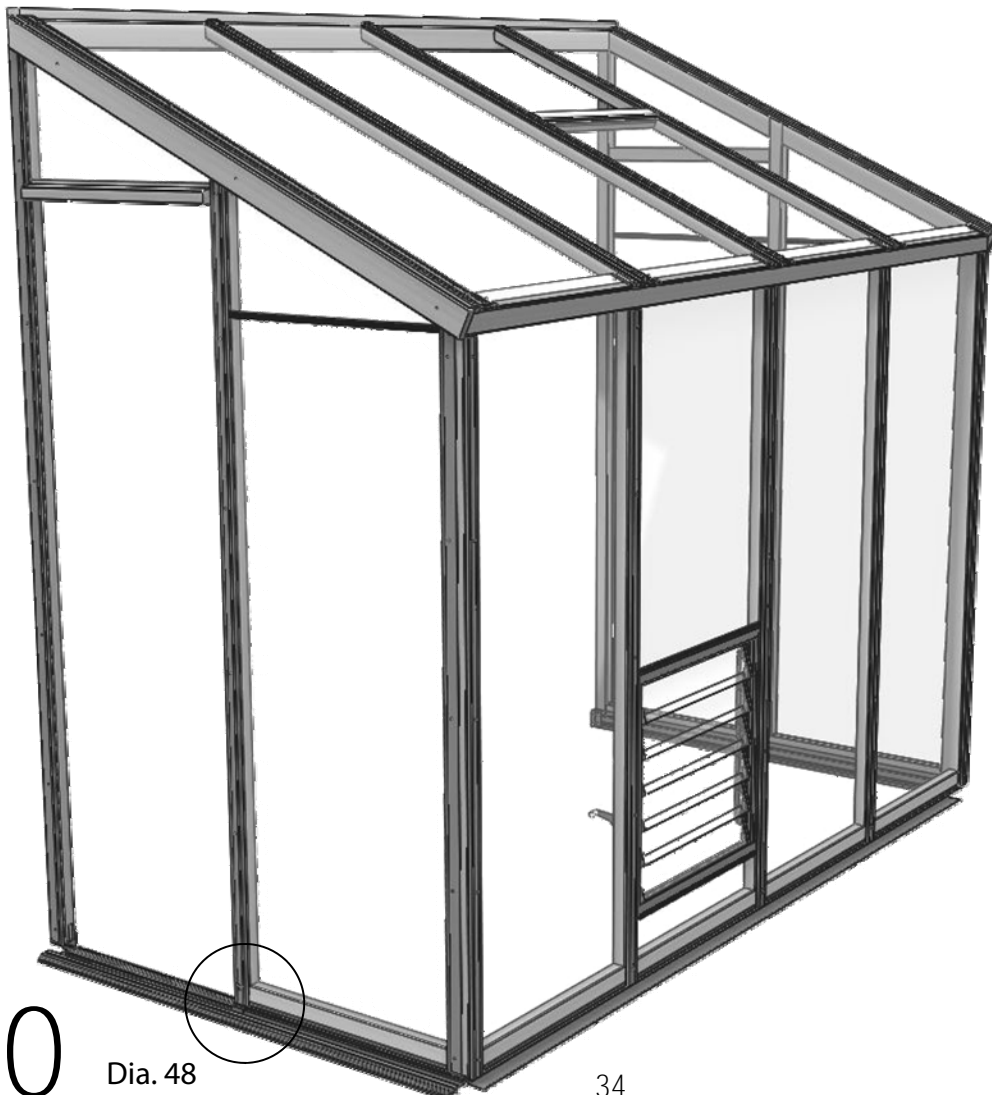


# Door Installation



Next install the bottom door guide (EV0284M) onto the door cill (EV0288M) shown in diagram 48. Make sure the channels are free from grit and that this locates properly as you may find the next stage difficult if this is not the case.

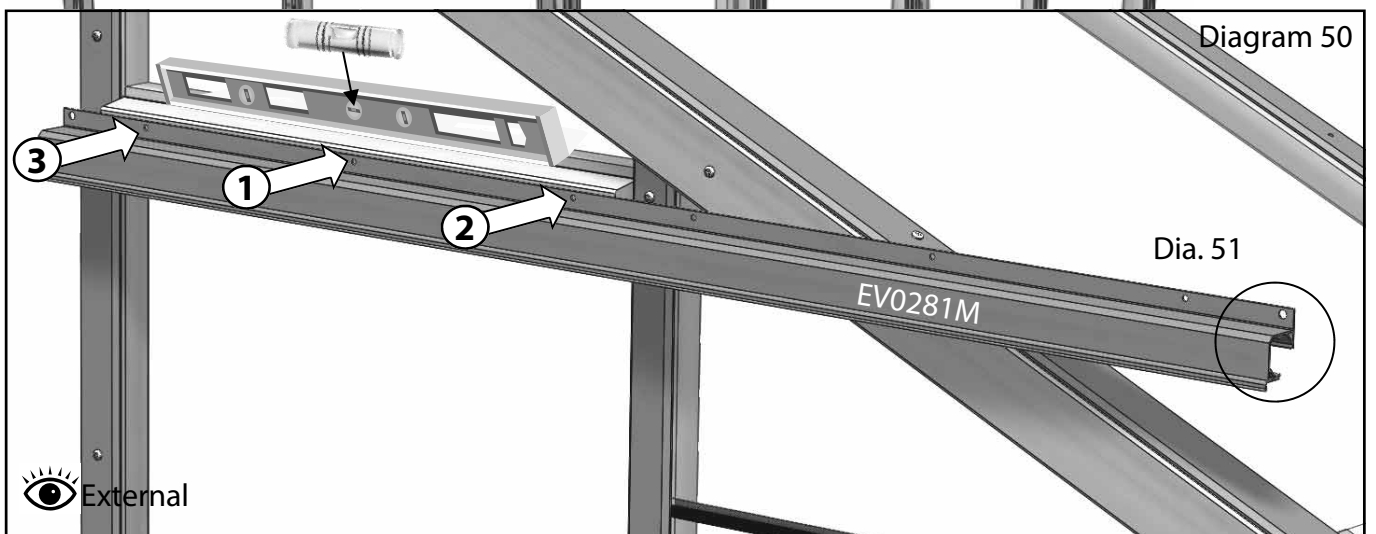
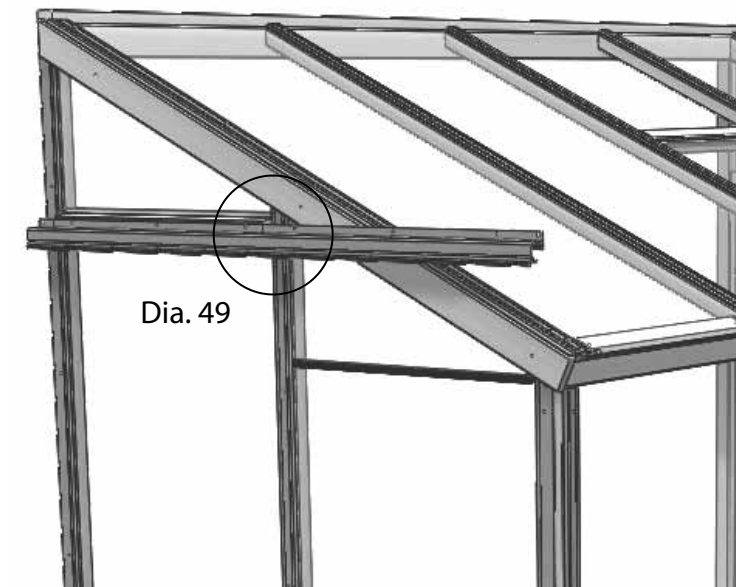
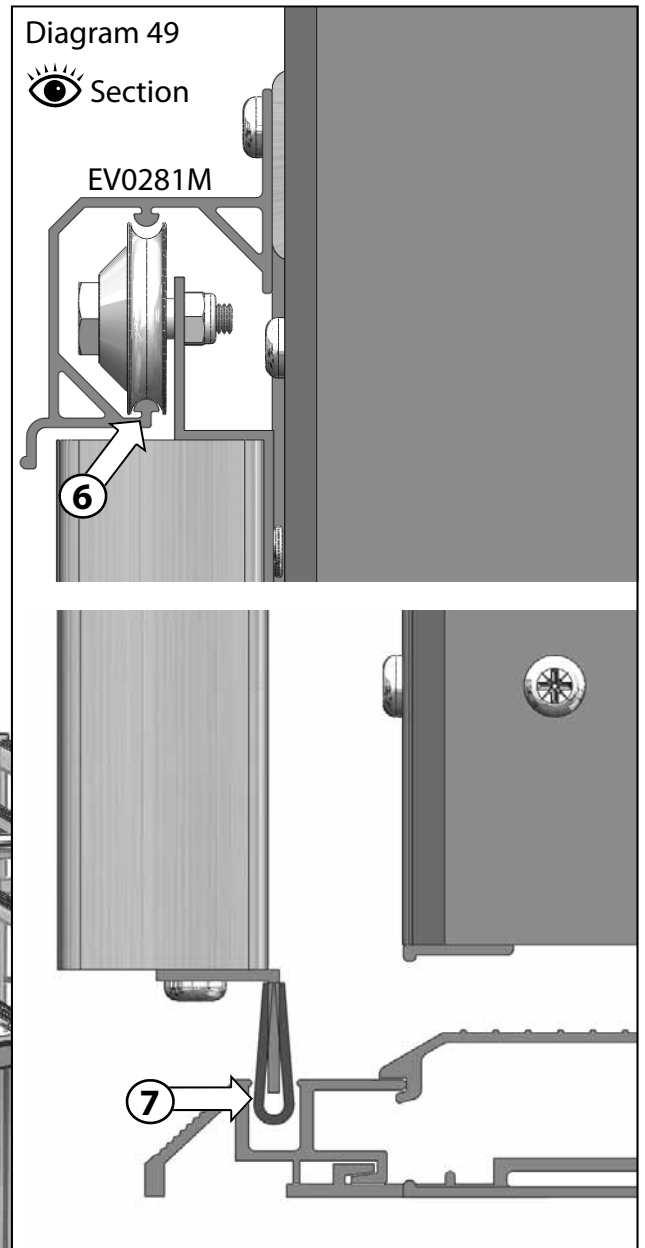
Now fit the threshold section (EV0286M) in the middle of the door way. Locate the bottom edge of the threshold on the top lip of the door runner (point 1) and force the threshold down until it locks into place (point 2). You may find it easier to stand on this and walk along it or if you have a rubber mallet this is also a good tool for the job.



# Door Installation

You can now fit the top door track to your building. One end can be pushed right up to the wall. With help slide the door onto the track from the open end making sure the door wheels locate with the door track EV0281M as shown in diagram 49. At the same time you need to locate the door guide with the door runner, point 7.

Holding the door up from the runner below so that it is just located in the runner (diagram 49, point 7) fix the track with the first 25mm screw at point 1 in diagram 50. The top edge of the door track should be close to the top edge of the door header (NOT above as this may cause water to pool).



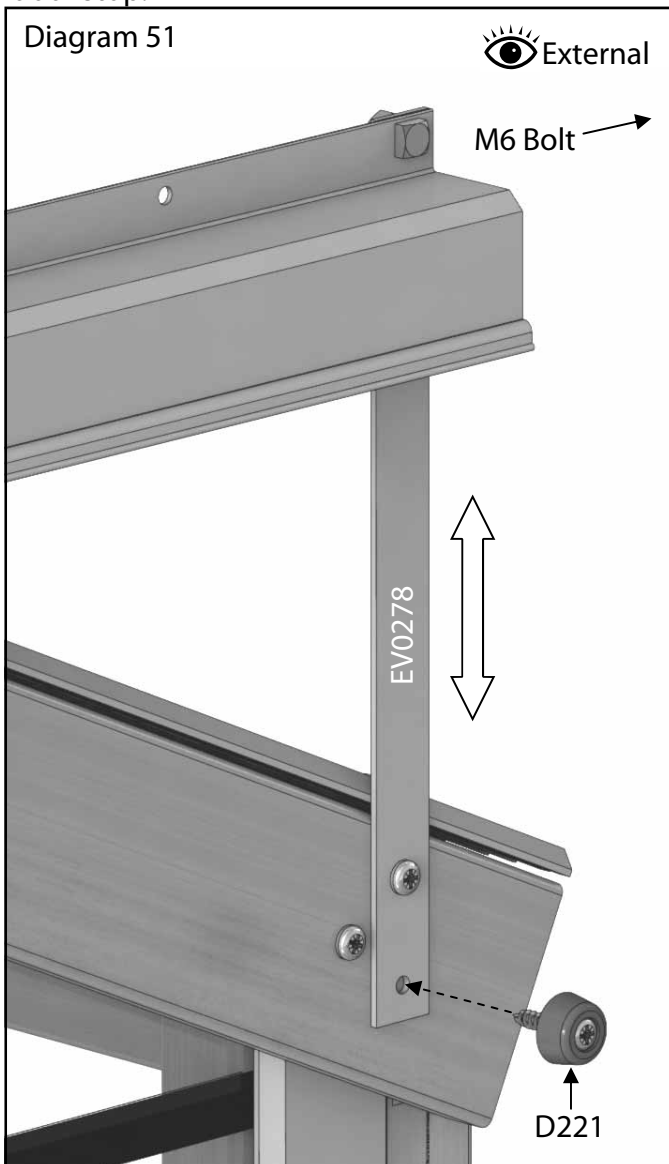
# Door Installation

You may find that the door height may need adjusting slightly. Do this by taking out the first screws you installed and reposition the track slightly, then re-fix.

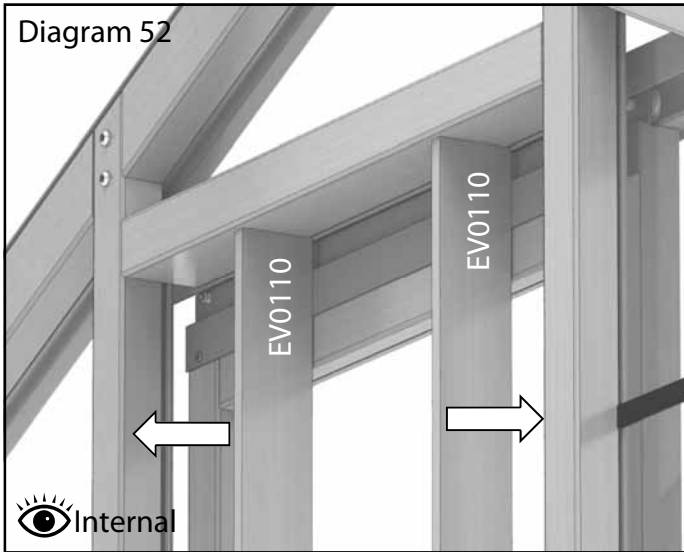
If you are happy with the first screw position fix point 2. If you do need to make any adjustments, to avoid existing holes just simply move the track left or right by a few millimetres which will then give you a clean section to screw into.

Once you are happy with the position of your track and the door is running freely fix the final screw to the track at point 3.

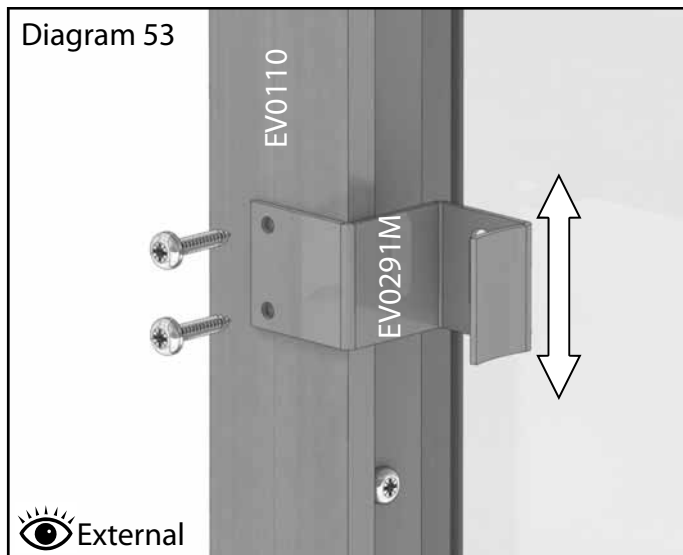
When fixing the end of the track (diagram 51) you will need to fix the vertical support to the track with an M6 nut and bolt. Then adjust the height of the track until you are happy with how the door runs. Fix with 2 x 40mm screws, use 1 x D221 on the lower fixing of the vertical support to act as a door stop.



# Door Installation

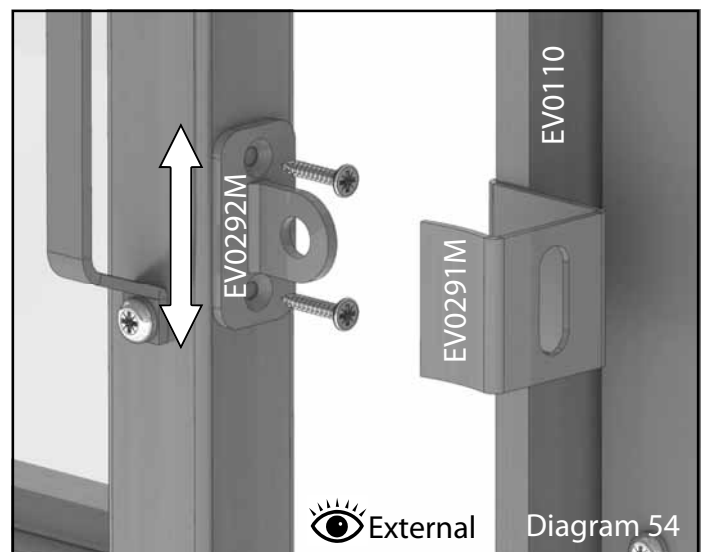


Standing on the inside of the greenhouse, with the door in the closed position you can install the door frame sides (diagram 52). Secure these with four 40mm screws per side. These should be fitted as close to the door as possible while still allowing it to pass by freely.



Once the door frame sides are installed you can fit the hasp and staple. First of all fit the hasp (EV0291M) to the door frame side that the door closes to (diagram 53). Choose a position that best suites your reach, keep it clear of the handle fixings as this may prevent it from closing correctly. Fix this with two 25mm screws.

Now offer up the staple (EV0292M) to the door and close the door until it locates correctly with the hasp. Holding the staple in this position open the door again and fix with two 25mm screws (diagram 54).

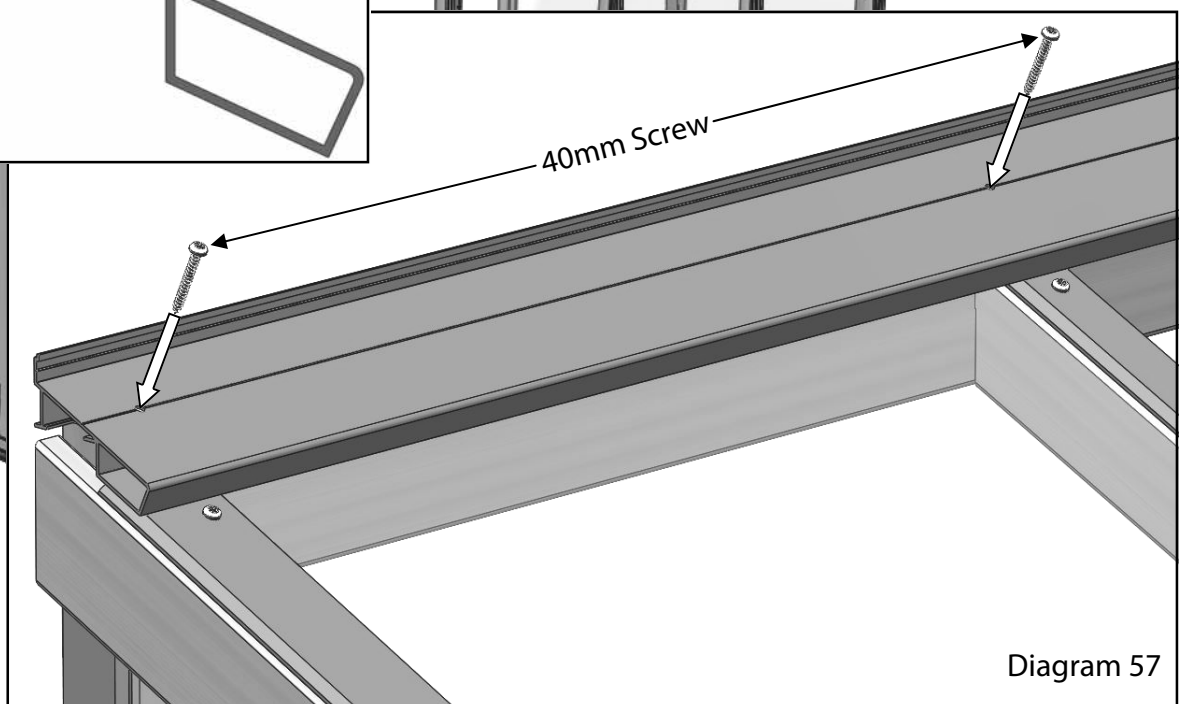
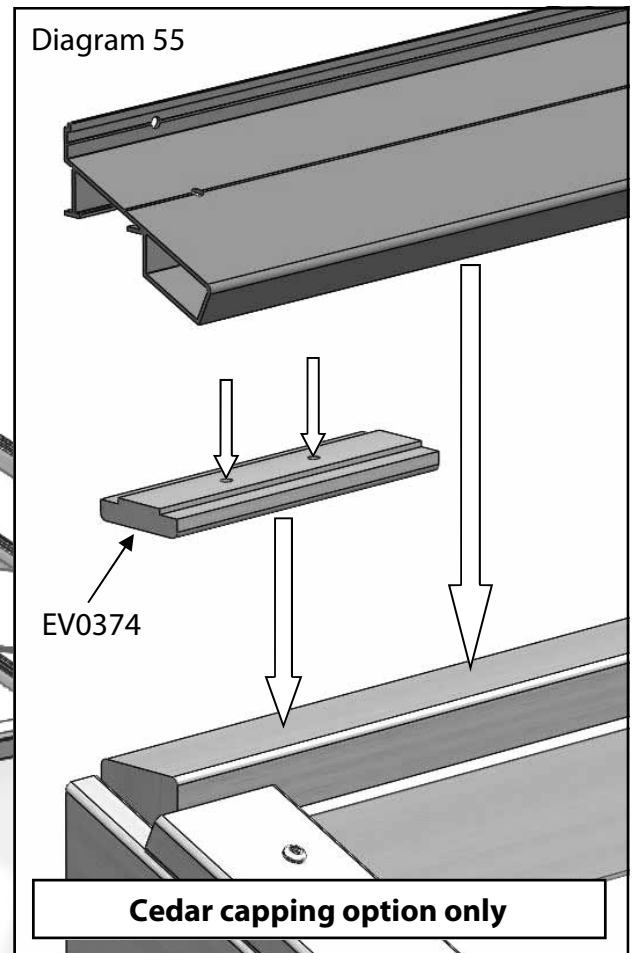
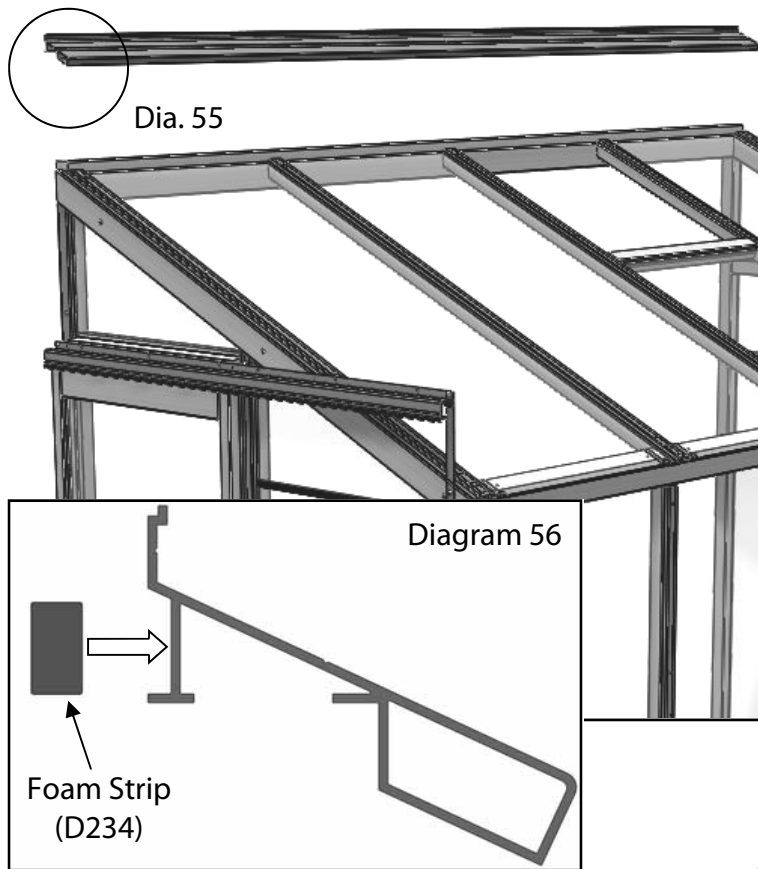


# Ridge Cover Cap Installation

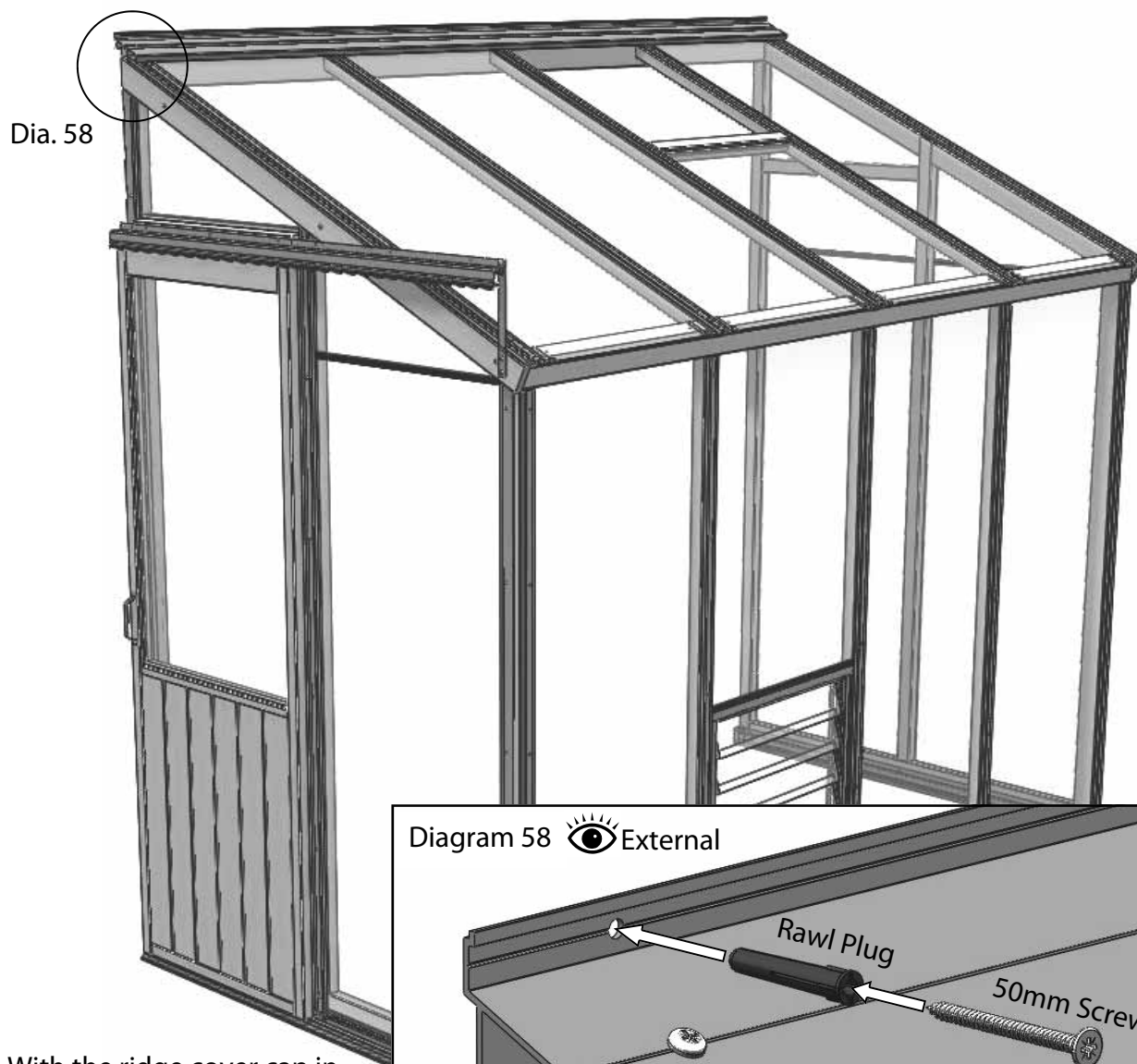
You need to stick the foam strip to the back of the ridge cap first, this should go all the way from one end to the other.

If you have cedar capping you need to use the ridge cap spacer (EV0374), place one at the top of every roof bar along the ridge. Fix these with 40mm screws, diagram 55.

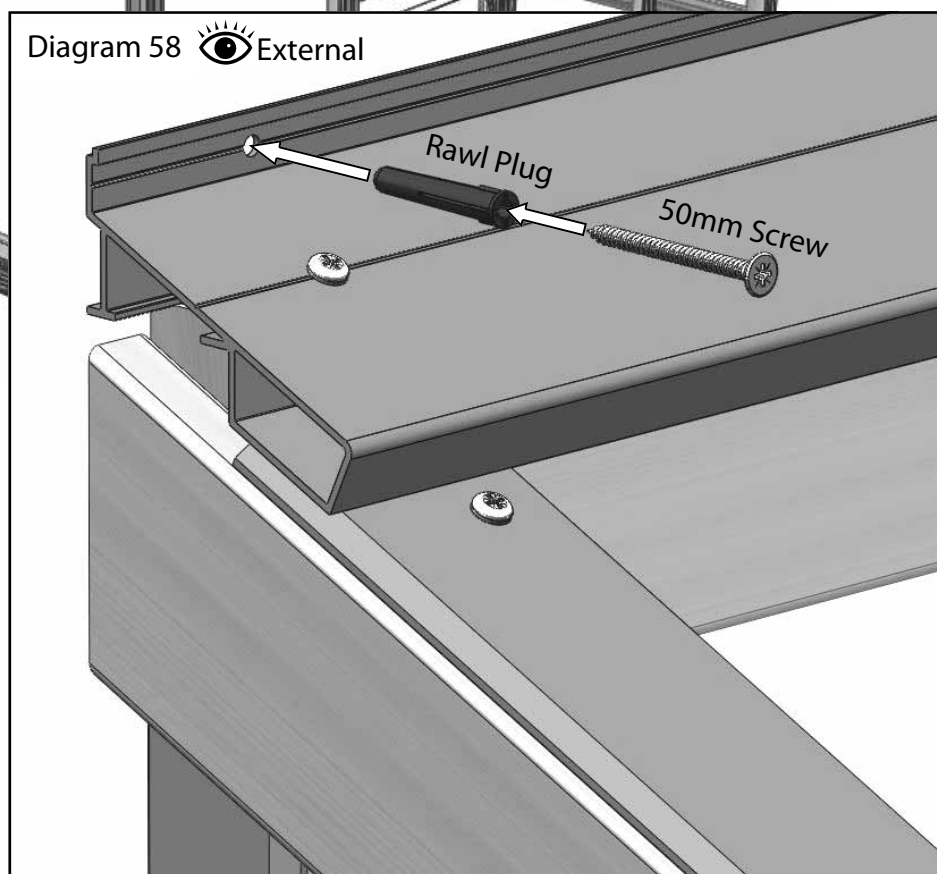
Place the ridge cover cap on top of the ridge, push it hard up against the wall and fix it with 40mm screws.



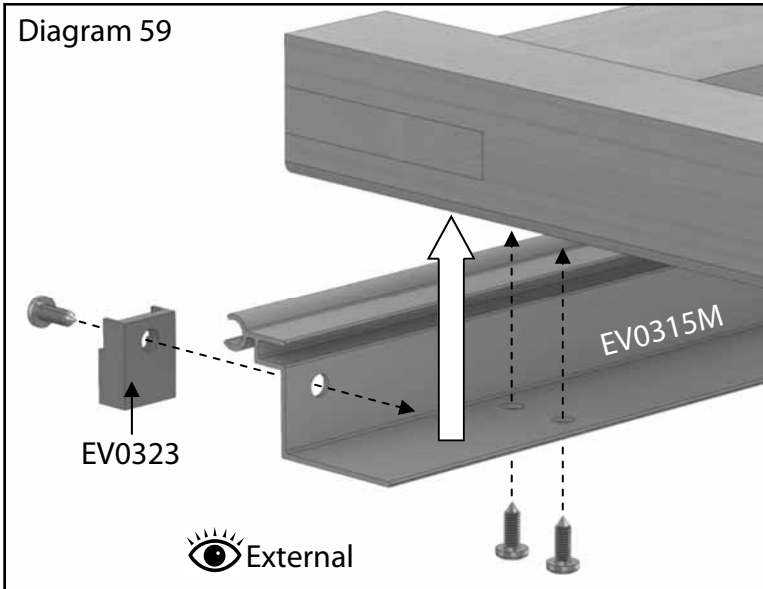
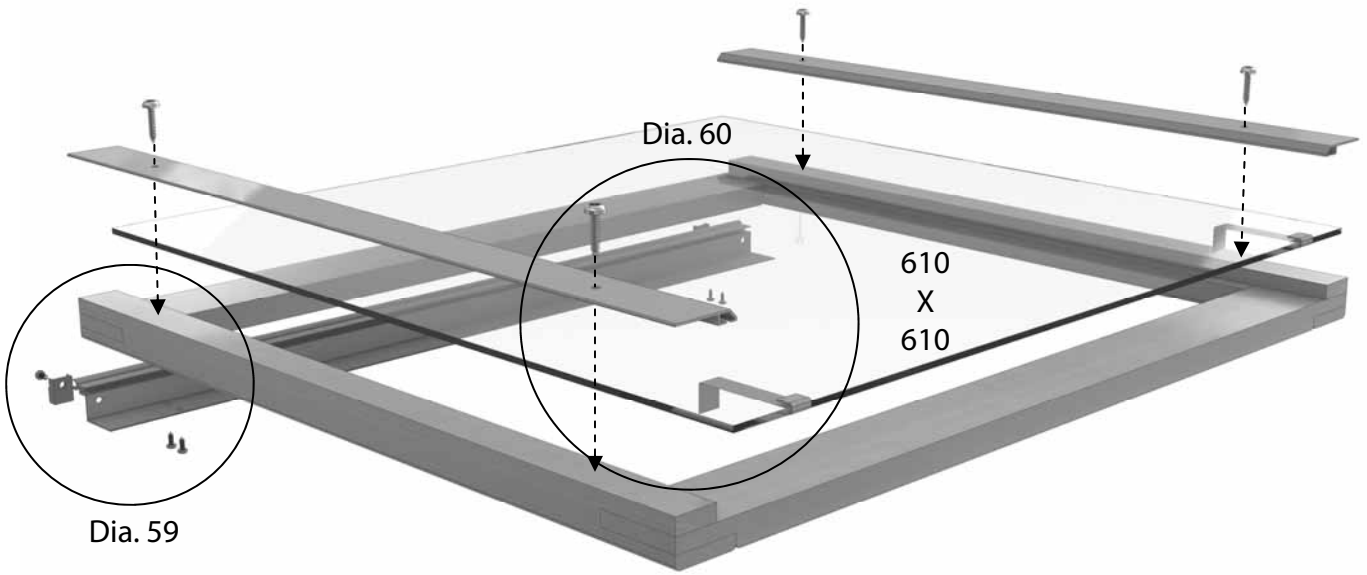
# Ridge Cover Cap Installation



With the ridge cover cap in place drill through the vertical flange into the wall and fix it with a 50mm screw and rawl plug. The location of the fixing point is entirely dependant on the donor wall, look for the best place to get a secure fixing. You can run a bead of silicone along the top edge of the aluminium to help seal it against the wall. However ideally you would use a form of flashing to overlap onto the ridge cover cap.



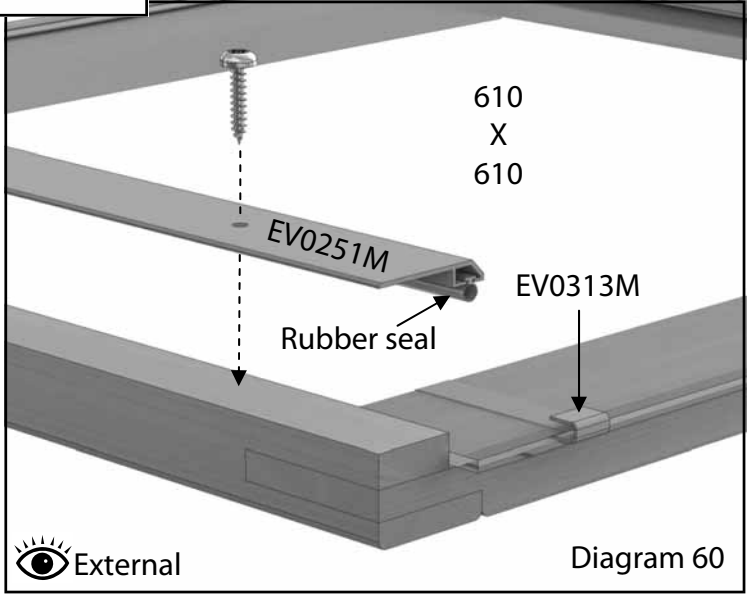
# Roof Vent Installation



Take the vent frame that is ready assembled and fix the vent hinge to one end through the 4 pre drilled holes using the 19mm screws, diagram 59. Once this is in place fix the plastic vent filler (EV0323) also with a 19mm screw, its is **important** to make a pilot hole before fixing the plastic filler to prevent splitting.

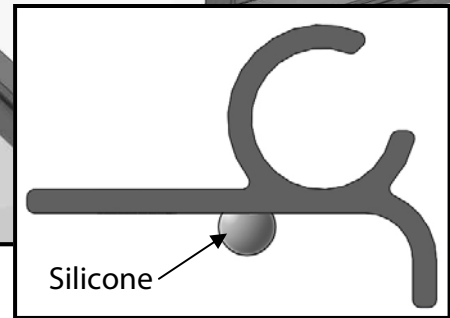
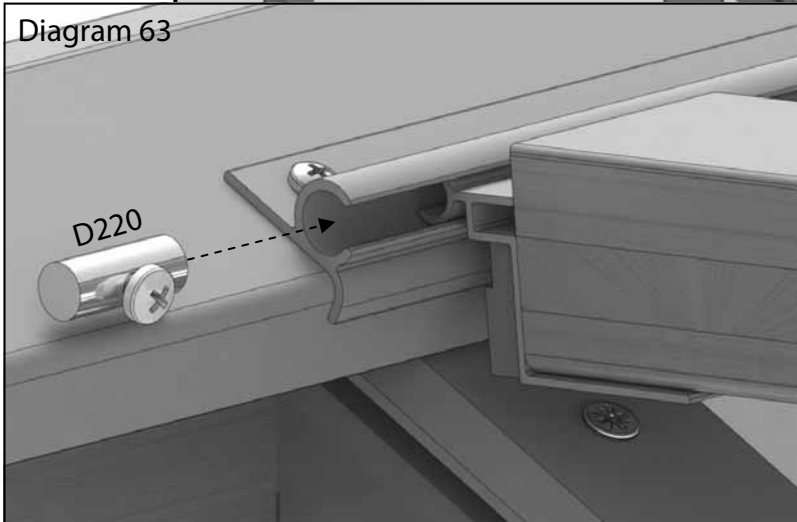
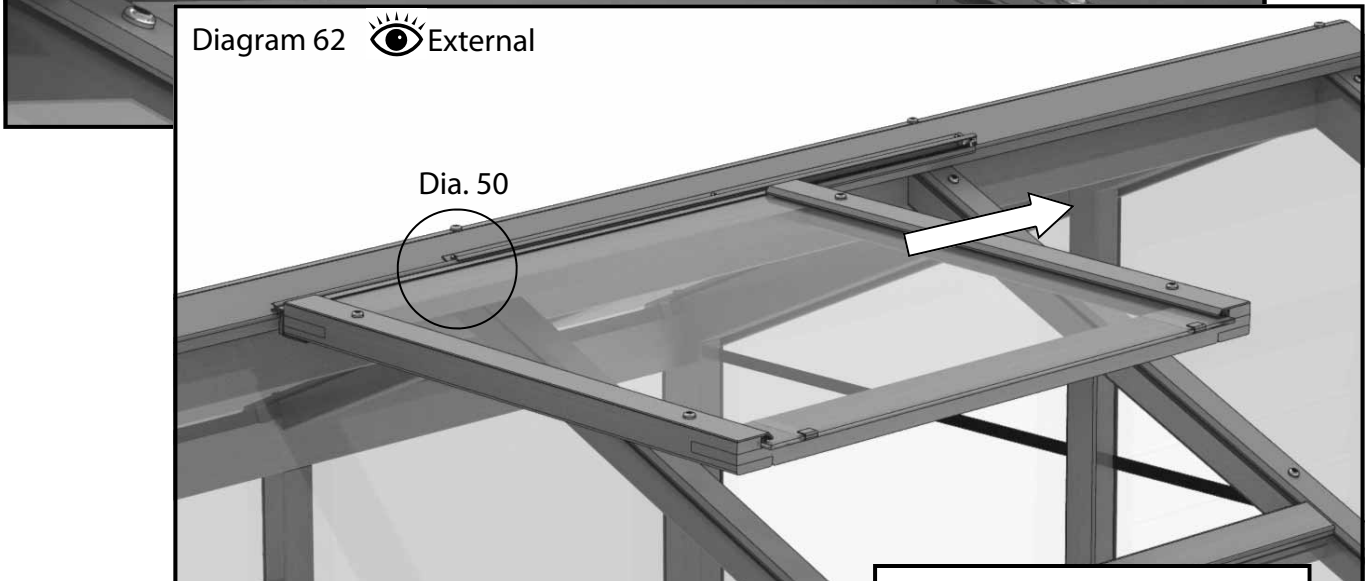
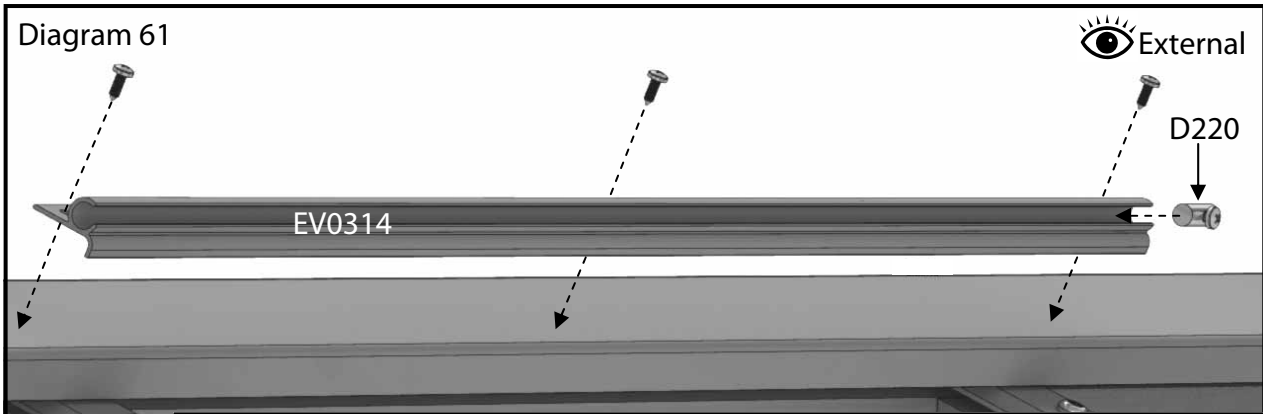
Now take a 610mm x 610mm pane of glass and locate this in the vent hinge. Before lowering this down completely slot the glass stops onto the open edge.

When in position you can fix the glass in place with the vent capping (either cedar or aluminium) using the 25mm screws, diagram 60. Remember if you are using the aluminium capping system you will need to insert the rubber seal before fixing it in place.



(Cedar capping part number: EV0151)

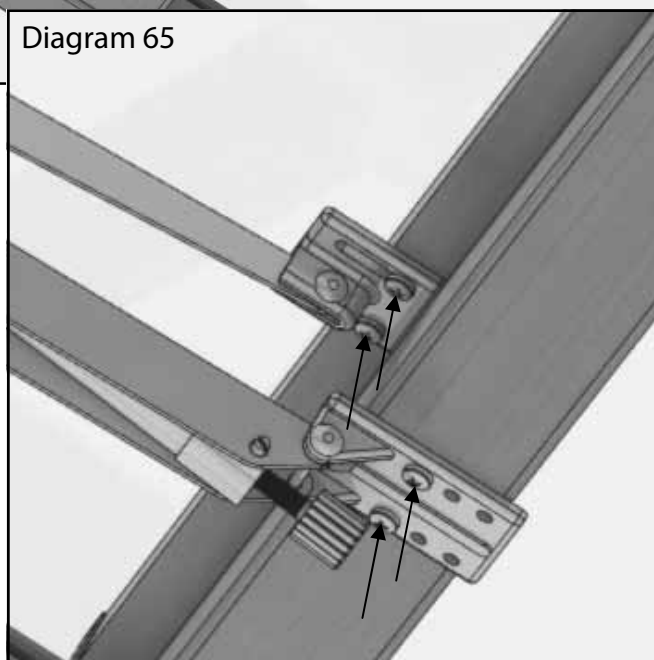
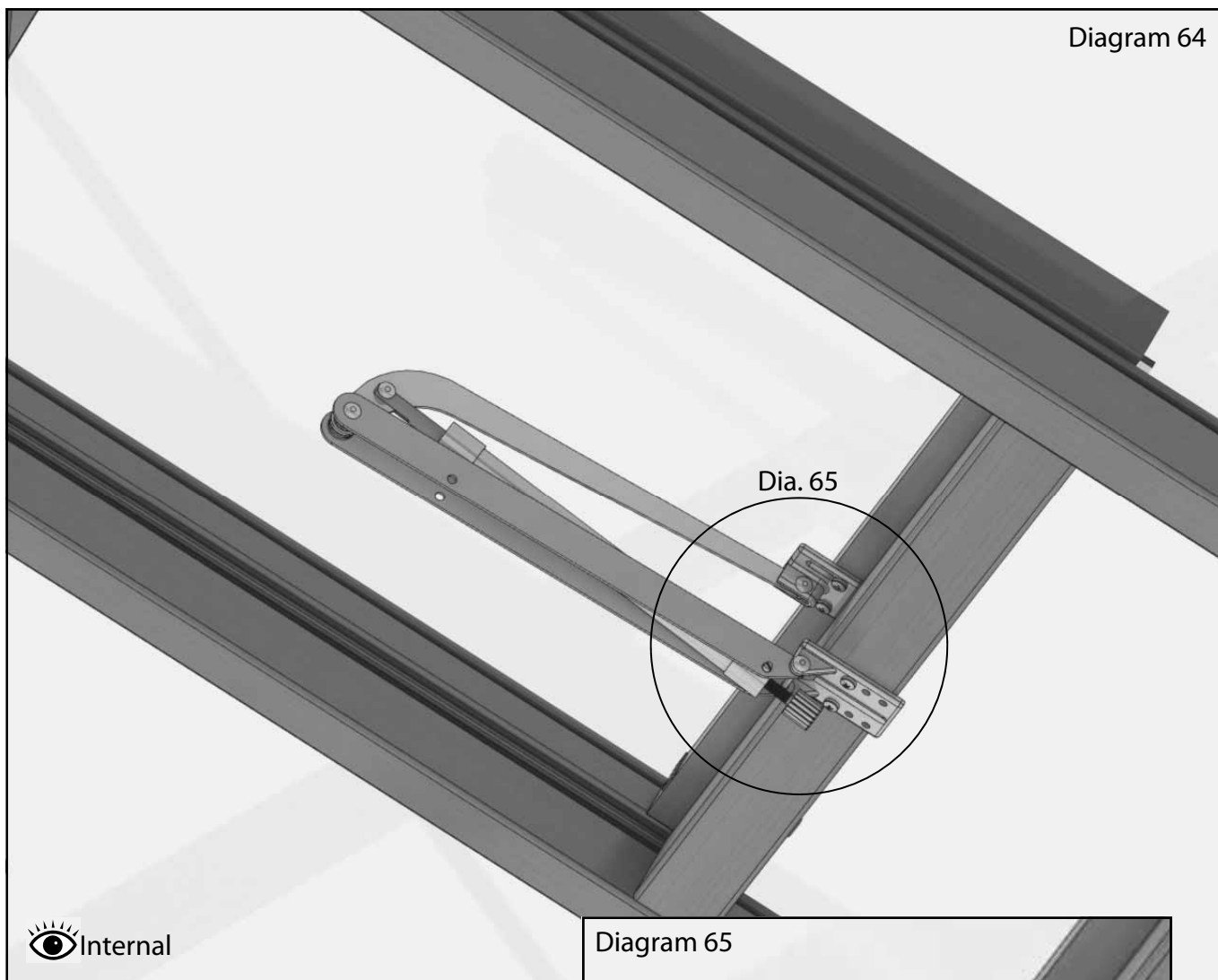
# Roof Vent Installation



Once you have assembled the roof vents you can now install them to your building. Prepare the ridge hinge (EV0314) by running a bead of silicone along the back edge.

Then position this spaced equally over the opening in the roof. If you have the aluminium ridge cover then use the 13mm self tapping screws, if it is the cedar ridge cover just use the standard 19mm screws. Secure one of the vent stops (D220) at one end of the ridge hinge channel. Next slide the roof vent along the channel of the ridge hinge and secure with another vent stop, diagram 62 and 63. You can now lower the vent until it rests on the roof bars.

# Roof Vent Installation

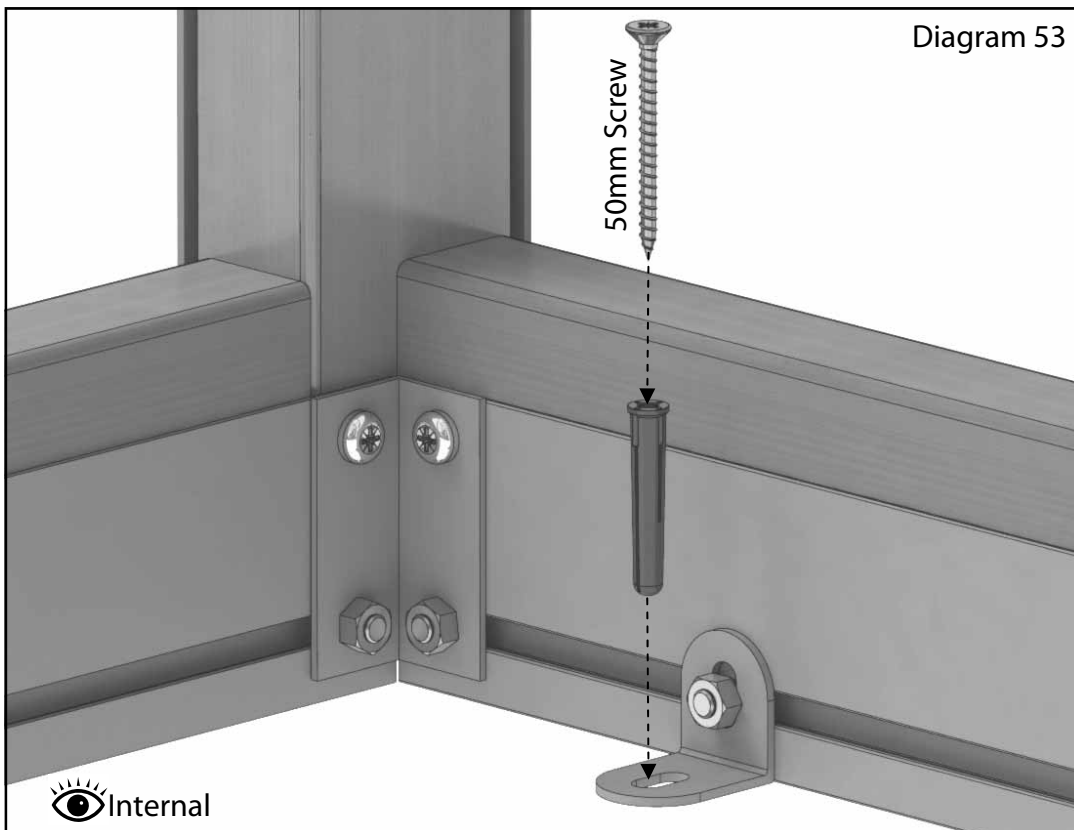
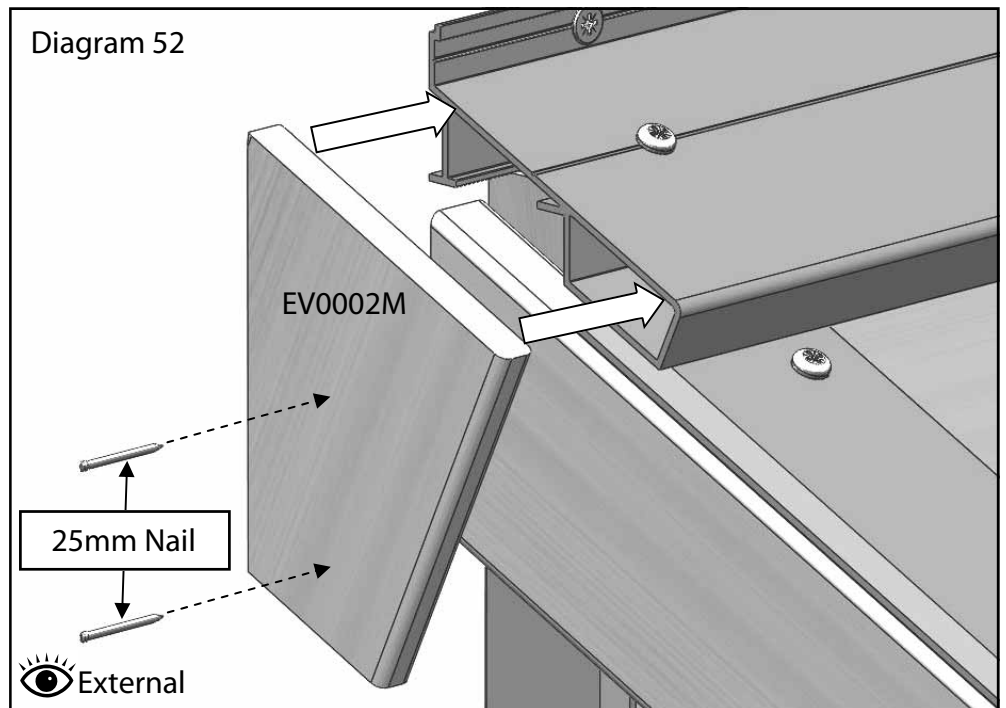


Now fit your autovents to the slam rail and to the bottom of the roof vents, diagram 65. Use 19mm screws to secure the top arm of the autovent to the roof vent, do this with the roof vent in the closed position so that you get the bracket in the correct position.

Adjust the lower arm on the slam rail until the arms of the autovent are as inline with the roof as possible, then fix with 25mm screws.

# Frame Finishing

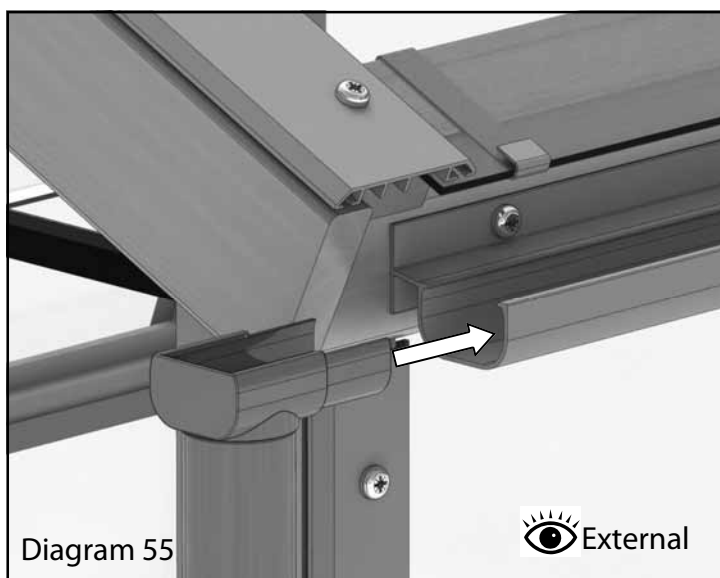
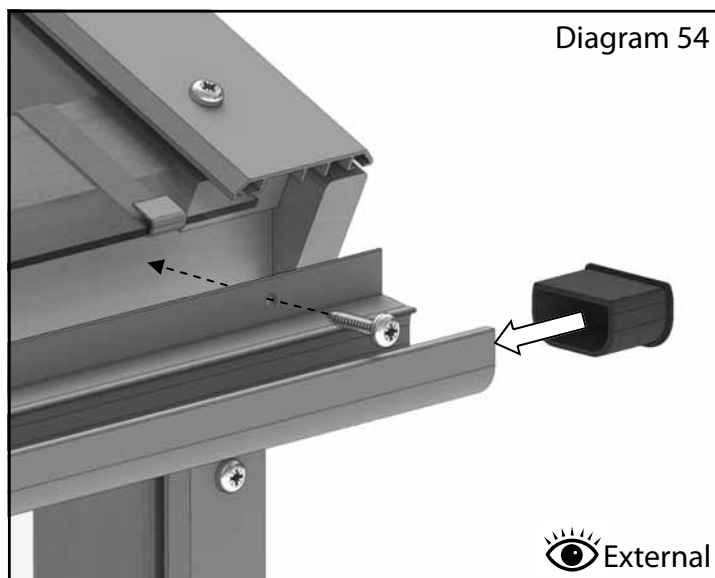
Fit the ridge end caps to your greenhouse with the four 25mm nails provided. Line this up with the top edges of the ridge cover cap. The nails should secure in the cloaking strip (diagram 52).



When you are happy with the final position of your greenhouse and all the sides are vertical and square you can fix the greenhouse to the ground. Use brown rawl plugs and 50mm screws to secure it through the base brackets previously attached (diagram 53).

# Gutter and Downpipe Installation

Start installing your gutter by inserting the stop end in one end. It is a good idea to secure this with a clear silicone. With help or the aid of a prop take the gutter to the greenhouse and fix the end with the stop end in, using a 25mm screw. This should be installed as high as possible on the side of the greenhouse to allow for a good fall when fixing the other end (diagram 54).



Now fix the other end of the gutter slightly lower than the first end. If you place a spirit level in the gutter it would ideally be just over the tip of the bubble.

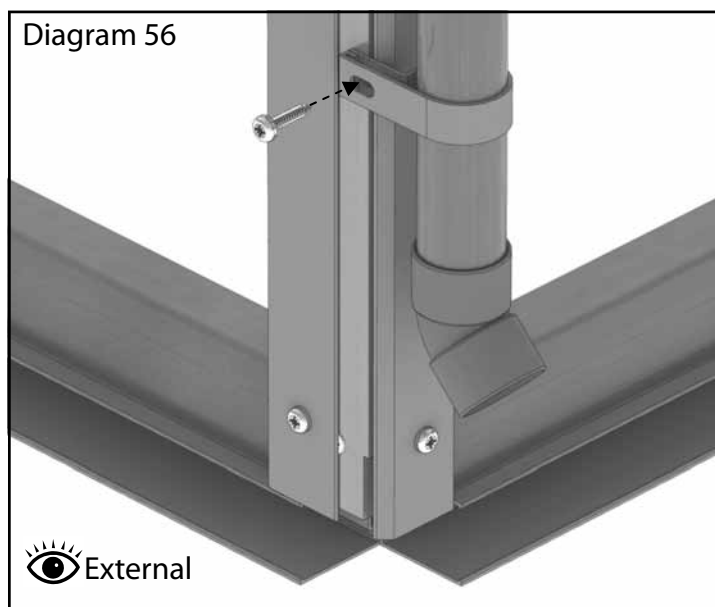
Once this is fixed you can now secure the gutter through the other fixing points.

Fit the gutter outlet to the downpipe and then to the gutter, again using clear silicone if necessary.

It is a good idea to support the downpipe once you have fitted it to the outlet as it is likely to drop off before you fit the downpipe bracket.

The downpipe bracket can be fitted at any point up and down the side corner bar to suite your situation, use a 25mm screw to fix this. Attach the 45 degree bend at the bottom of the downpipe to direct the water away from the greenhouse.

If you are installing a water butt simply cut the downpipe above the level of the water butt and attach the 45 degree bend and some of the off cut to direct the water into the butt.



Finished assembly



# Auto Louvre (Optional)

Once the louvre is installed in the greenhouse you can replace the manual handle with the automatic unit.

First of all remove the screw to release the arm (diagram 57).

Next Remove the handle from the frame of the louvre (diagram 58).

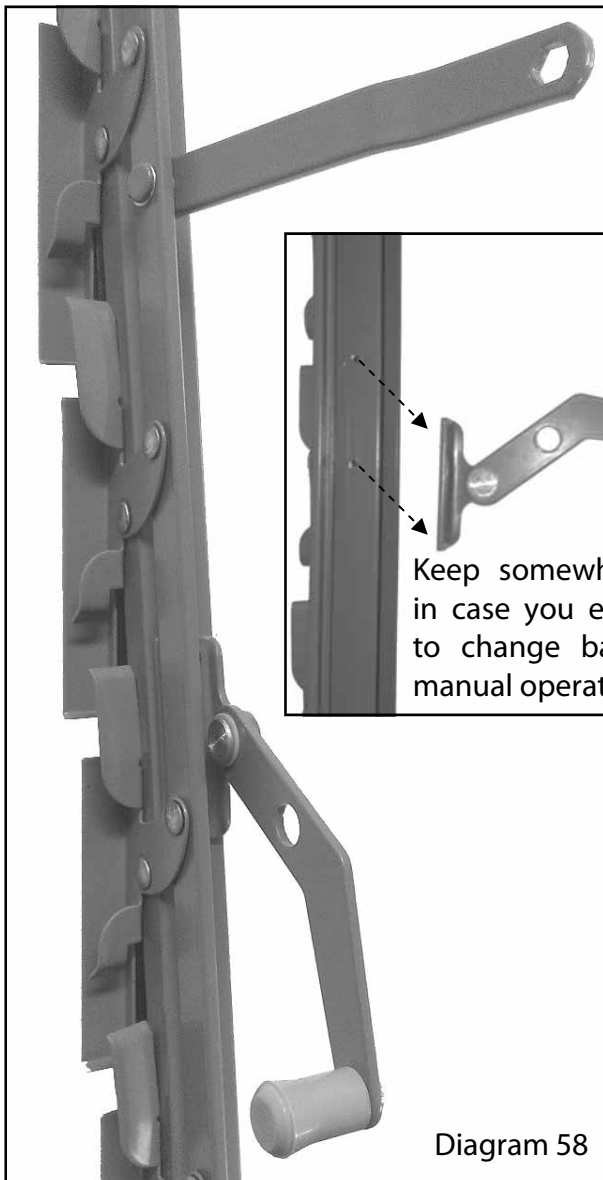
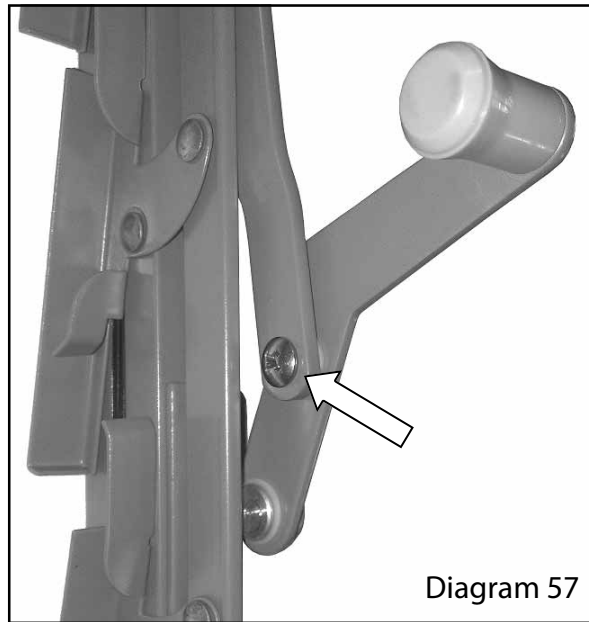
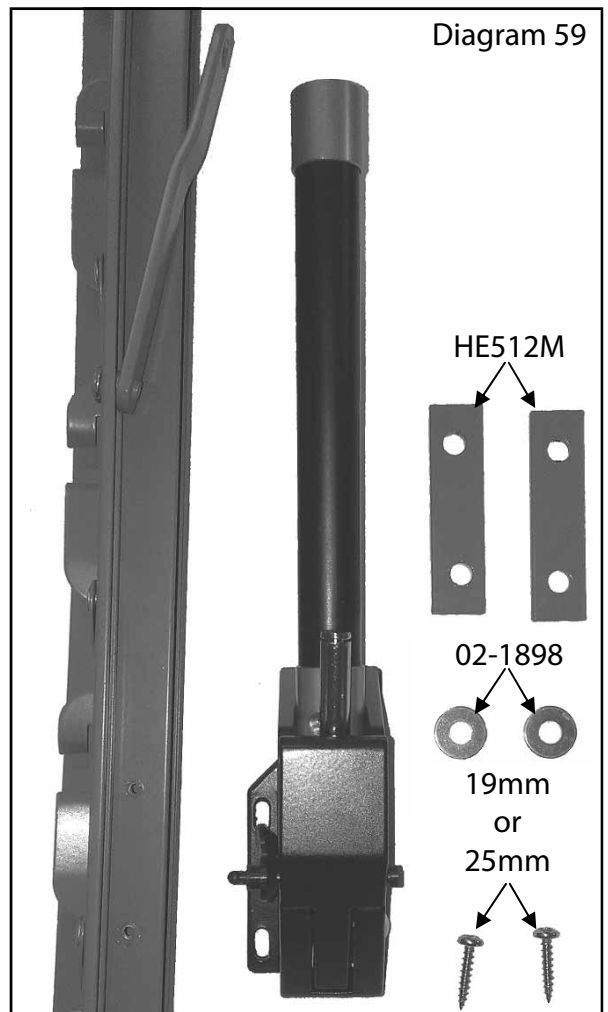


Diagram 59 shows the parts you need to attach the auto opener.



# Auto Louvre (Optional)

You now need to mark the frame to drill the 2 holes, use a 2.5mm drill bit for this.

Offer the opener up to the frame with the plates and washers and slide the louvre arm into position. This now gives you the correct location for the opener (diagram 60). Once you have marked the frame remove the opener to drill the holes.

Now fix the opener to the frame using the 2 plates and 2 washers (diagram 61). You should have either 19mm or 25mm screws spare from the greenhouse frame for this.

Once fixed in place attached the louvre arm to the opener and hold in place with the plastic pop-on cap (diagram 62).

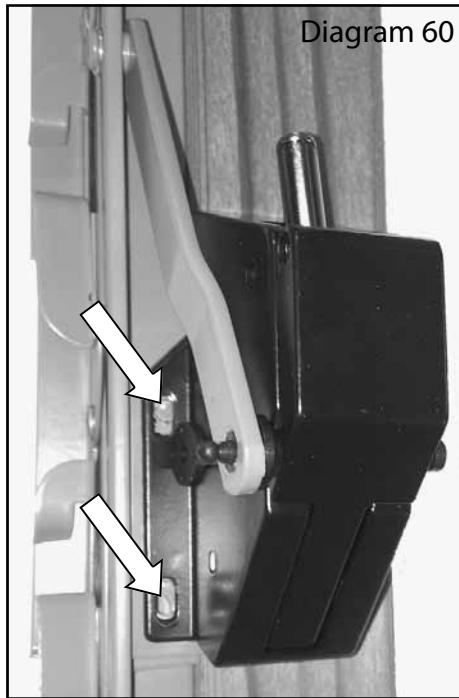


Diagram 60

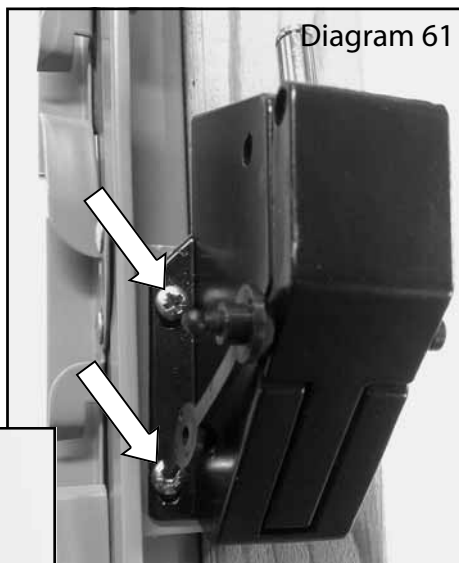


Diagram 61

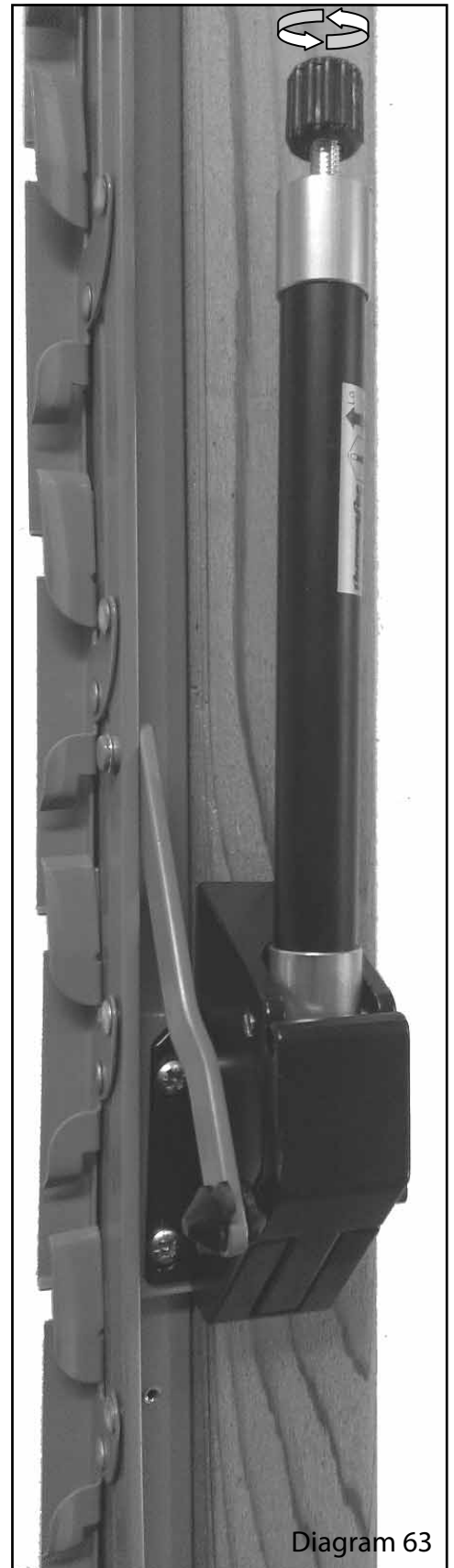


Diagram 63

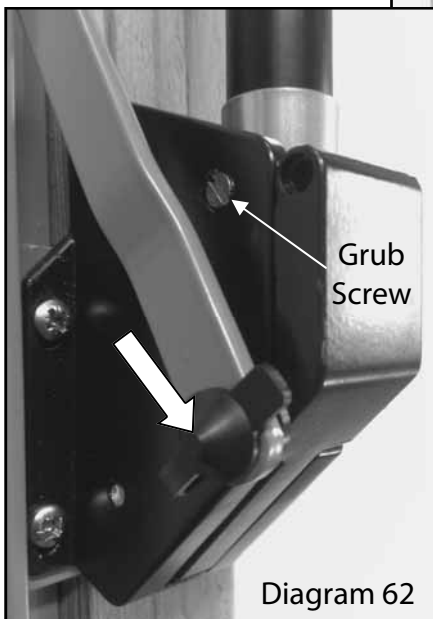


Diagram 62

Now slide the cylinder onto the shaft attached to the body of the opener, secure this in place with 2 grub screws (diagram 62). Finally fit the thumb screw to the end of the cylinder, adjust this to get the desired amount of ventilation (diagram 63).

# Parts Lists

Description: Alton Evolution FOUR Lean-to House Box						
Product Code	Description	EVFOULT 44	EVFOULT 46	EVFOULT 48	EVFOULT 410	EVFOULT4 12
<b>EV0024</b>	Eaves Spacer EV0024 586mm	2	3	4	5	6
<b>EV0033</b>	Glazing Bar Roof 8ft wide EV0033 1444mm	1	2	3	4	5
<b>EV0289M</b>	LT4 Wall bar base EV0289M 44mm	1	1	1	1	1
<b>EV0294M</b>	ALU Front Base 6ft wide EV0294 650mm **MOSS**	1	1	1	1	1
<b>EV0296M</b>	ALU Front Base 12ft wide EV0296 1283mm **MOSS**	1	1	1	1	1
<b>EV0313M</b>	Glass Stop EV0313 **MOSS**	4	6	8	10	12
<b>EVPAC-SIXDOOM</b>	Door bundle for Evo SIX single door **MOSS**	1	1	1	1	1
<b>EVPACVENT</b>	Vent pack bundle for Evo	1	1	1	2	2
<b>EVSM A01</b>	SMALLS PACK NO 01 FOR EVOLUTION	1	1	1	1	1
<b>EVSM ASD</b>	EVOLUTION SINGLE DOOR SMALLS PACK	1	1	1	1	1
<b>ROSEPS</b>	Glass separators 4mm black	3	3	3	3	3
<b>THAUTO</b>	CLASSIC AUTO-VENT	1	1	1	2	2
<b>EV0375</b>	LT Ridge End Cap EV0375 97mm	2	2	2	2	2

Description: Alton Evolution FOUR Lean-to Gable Box		
Product Code	Description	Quantity
EV0006	Cill Front Gable 6ft + 8ft wide EV0006 660mm	1
EV0004	Cill Rear Gable 4ft wide EV0004 1276mm	1
EV0040	Glazing Bar Roof Corner R 8ft wide EV0040 1445mm	1
EV0041	Glazing Bar Roof Corner L 8ft wide EV0041 1445mm	1
EV0395	LT4 Roof Corner Cloaking Assembly LH	1
EV0396	LT4 Roof Corner Cloaking Assembly RH	1
EV0056	Glazing Bar Side Corner R EV0056 1650mm	1
EV0057	Glazing Bar Side Corner L EV0057 1650mm	1
EV0068	Glazing Bar Door Gable R 6ft wide EV0068 1994mm	1
EV0069	Glazing Bar Door Gable L 6ft wide EV0069 1994mm	1
EV0108	Door Header Single EV0108 646mm	1
EV0107	Door Header Insert EV0107 676mm	1
EV0110	Door Frame Side EV0110 1890mm	2
EV0098	Glazing Bar Right Gable Wall Bar LT4 EV0098 2245mm	1
EV0097	Glazing Bar Left Gable Wall Bar LT4 EV0097 2245mm	1
D234	Lean-to Foam 20wide x10.5 high x 7000mm black	2

# Parts Lists

Description: Alton Evolution Lean-to Common length box						
Product Code	Description	EVCL04LT	EVCL06LT	EVCL08LT	EVCL10LT	EVCL12LT
<b>EV0025</b>	Ridge Bar 4ft long 1304mm	1				
EV0026	Ridge Bar 6ft long 1934mm		1			
<b>EV0027</b>	Ridge Bar 8ft long 2564mm			1		
<b>EV0028</b>	Ridge Bar 10ft long 3194mm				1	
<b>EV0029</b>	Ridge Bar 12ft long 3824mm					1
<b>EV0019</b>	Eaves Bar 4ft long 1304mm	1				
EV0020	Eaves Bar 6ft long 1934mm		1			
<b>EV0021</b>	Eaves Bar 8ft long 2564mm			1		
<b>EV0022</b>	Eaves Bar 10ft long 3194mm				1	
<b>EV0023</b>	Eaves Bar 12ft long 3824mm					1
<b>EV0014</b>	Cill Side 4ft long 1216mm	1				
EV0015	Cill Side 6ft long 1846mm		1			
<b>EV0016</b>	Cill Side 8ft long 2476mm			1		
<b>EV0017</b>	Cill Side 10ft long 3106mm				1	
<b>EV0018</b>	Cill Side 12ft long 3736mm					1
<b>EV0234M</b>	ALU Gutter 4ft 1270mm **MOSS**	1				
<b>EV0235M</b>	ALU Gutter 6ft 1900mm **MOSS**		1			
<b>EV0236M</b>	ALU Gutter 8ft 2530mm **MOSS**			1		
<b>EV0237M</b>	ALU Gutter 10ft 3160mm **MOSS**				1	
<b>EV0238M</b>	ALU Gutter 12ft 3790mm **MOSS**					1
<b>EV0302M</b>	ALU Side Base 4ft 1214mm **MOSS**	1				
<b>EV0303M</b>	ALU Side Base 6ft 1844mm **MOSS**		1			
<b>EV0304M</b>	ALU Side Base 8ft 2474mm **MOSS**			1		
<b>EV0305M</b>	ALU Side Base 10ft 3104mm **MOSS**				1	
<b>EV0306M</b>	ALU Side Base 12ft 3734mm **MOSS**					1
<b>EV0368M</b>	LT Ridge Cover Cap 4ft 1342mm **MOSS**	1				
<b>EV0369M</b>	LT Ridge Cover Cap 6ft 1972mm **MOSS**		1			
<b>EV0370M</b>	LT Ridge Cover Cap 8ft 2602mm **MOSS**			1		
<b>EV0371M</b>	LT Ridge Cover Cap 10ft 3232mm **MOSS**				1	
<b>EV0372M</b>	LT Ridge Cover Cap 12ft 3862mm **MOSS**					1
<b>EV0030</b>	Glazing Bar Side 1588mm	1	2	3	4	5
<b>EVRWK</b>	Rainwater kit for Alton Evolution	1	1	1	2	2
<b>EV0325</b>	Evolution louvre kit ***MOSS***	1	1	1	1	1
<b>ROSEPS</b>	Glass separators 4mm black	1	1	1	2	2

# Parts Lists

Description:		Alton Evolution FOUR Lean-to Cedar Capping				
Product Code	Description	EVFOULT-CAPC44	EVFOULT-CAPC46	EVFOULT-CAPC48	EVFOULT-CAPC410	EVFOULT-CAPC412
EV0140	Side Capping EV0140 1622mm	3	4	5	6	7
EV0143	Roof Capping 8ft wide EV0143 1446mm	1	2	3	4	5
EV0148	Roof Corner Capping 8ft wide EV0148 1446mm	2	2	2	2	2
EV0151	Roof Vent Capping EV0151 596mm	2	2	2	4	4
EV0152	Gable Corner Capping R EV0152 1647mm	1	1	1	1	1
EV0153	Gable Corner Capping L EV0153 1647mm	1	1	1	1	1
EV0156	Gable 6 Capping R EV0156 1940mm	1	1	1	1	1
EV0157	Gable 6 Capping L EV0157 1940mm	1	1	1	1	1
EV0374	LT Ridge Cap Spacer EV0374 150mm	3	4	5	6	7
EV0378	LT4 Left gable wall bar capping EV0378 2235mm	1	1	1	1	1
EV0379	LT4 Right gable wall bar capping EV0379 2235mm	1	1	1	1	1
02-1356	Clear silicone	2	3	3	4	4

Description:		Alton Evolution FOUR Lean-to Aluminium Capping				
Product Code	Description	EVFOULT-CAPA44	EVFOULT-CAPA46	EVFOULT-CAPA48	EVFOULT-CAPA410	EVFOULT-CAPA412
EV0231	100m roll of glazing PVC 1729D101P	1	1	1	1	1
EV0240M	ALU Side Capping EV0240 1622mm **MOSS**	3	4	5	6	7
EV0243M	ALU Roof Capping 8ft wide EV0243 1446mm **MOSS**	1	2	3	4	5
EV0248M	ALU Roof Corner Capping 8ft wide EV0248 1446mm **MOSS**	2	2	2	2	2
EV0251M	ALU Roof Vent Capping EV0251 596mm **MOSS**	2	2	2	4	4
EV0252M	ALU Gable Corner Capping R EV0252 1647mm **MOSS**	1	1	1	1	1
EV0253M	ALU Gable Corner Capping L EV0253 1647mm **MOSS**	1	1	1	1	1
EV0256M	ALU Gable 6 Capping R EV0256 1940mm **MOSS**	1	1	1	1	1
EV0257M	ALU Gable 6 Capping L EV0257 1940mm **MOSS**	1	1	1	1	1
EV0388M	LT4 Left gable wall bar capping EV0388M 2235mm **MOSS**	1	1	1	1	1
EV0389M	LT4 Right gable wall bar capping EV0389M 2235mm **MOSS**	1	1	1	1	1

Notes...



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