



# Urban Glasshouses



Instructions & Illustrations for Glasshouse  
1.92m x 2.56m or 1.92m x 3.2

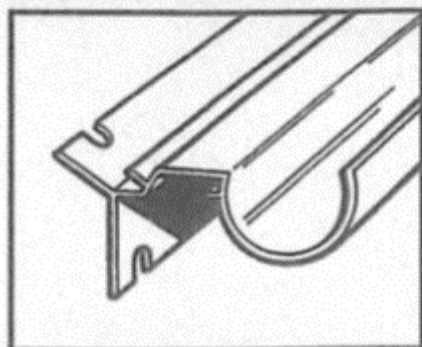
16 Bounty Place, Kelvin Grove, Palmerston North 4414

Freephone: 0508 733 728

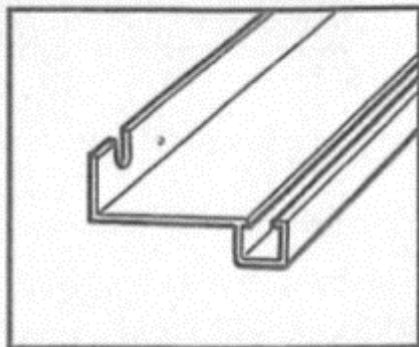
[www.redpath.co.nz](http://www.redpath.co.nz)

PLEASE TAKE CARE WHEN HANDLING GLASS DURING ASSEMBLY OR USING  
THIS GLASSHOUSE – GLASS CAN BREAK FROM IMPACT OR STORM  
DAMAGE, STAY OUTSIDE OF THE GLASSHOUSE IN HIGH WIND OR STORM  
CONDITIONS

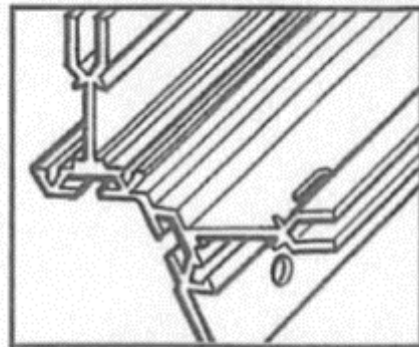
# COMPONENT DRAWINGS (Not to scale)



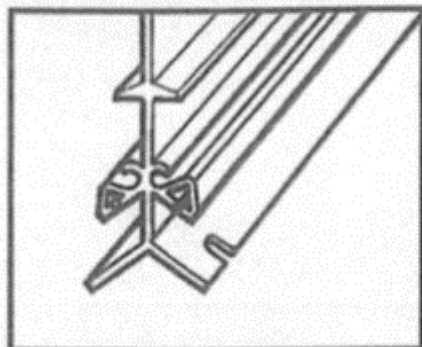
EAVES BAR/GUTTER



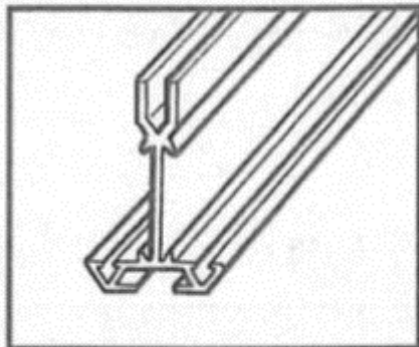
DOOR END CILL



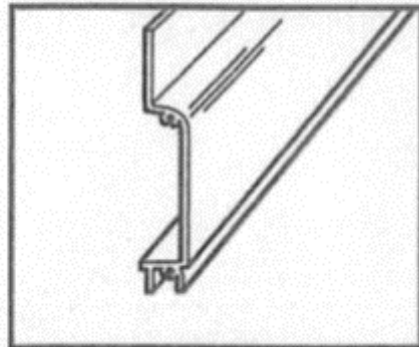
CORNER BAR



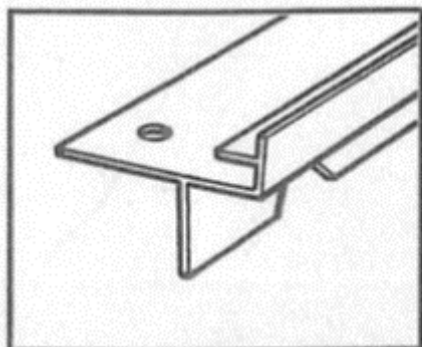
RIDGE



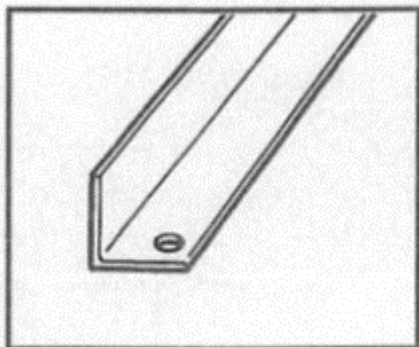
GLAZING BAR



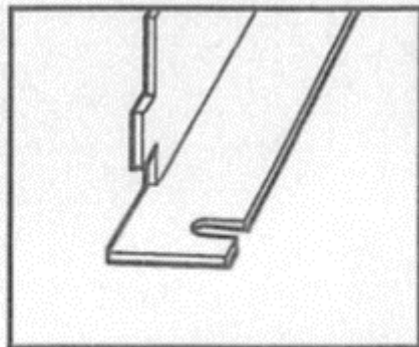
DOOR TOP/BOTTOM PANEL



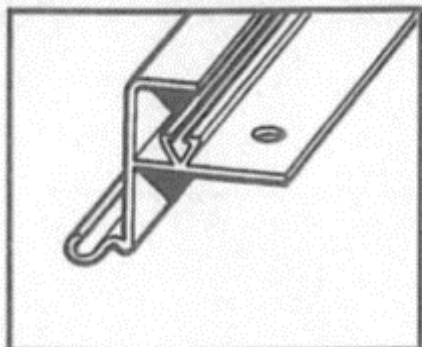
VENT BOTTOM RAIL



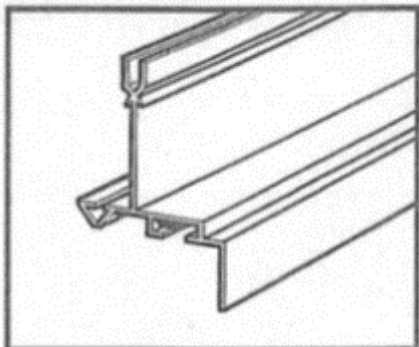
BRACING ANGLE



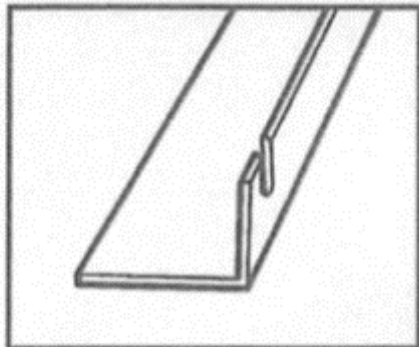
VENT SLAM BAR



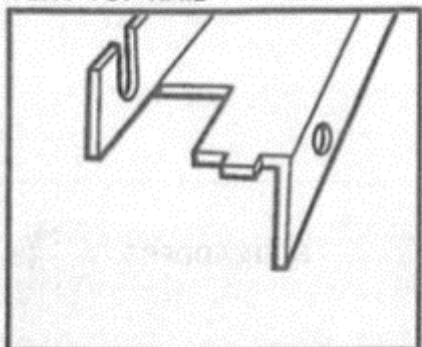
VENT TOP RAIL



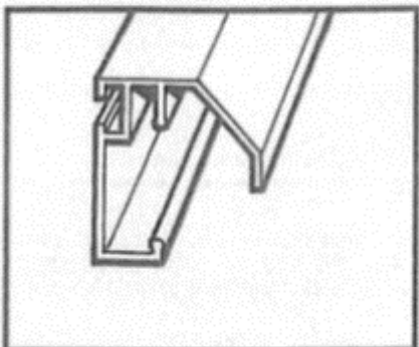
VENT SIDE RAIL



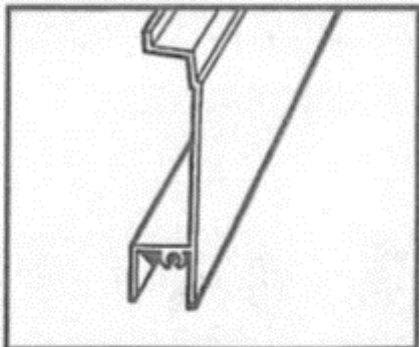
SIDE/REAR CILL



DOOR TRACK SUPPORT

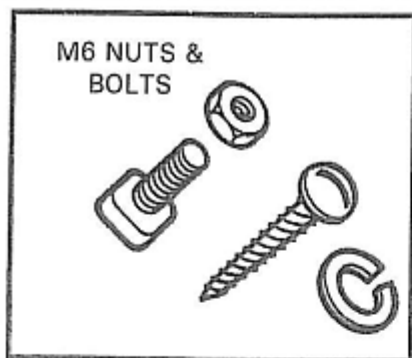


TOP DOOR TRACK

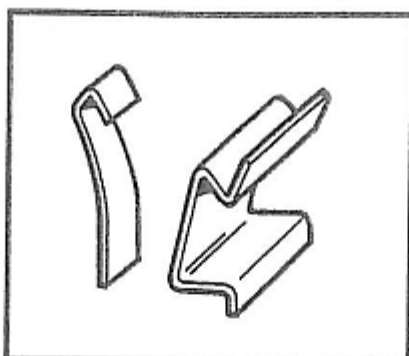


DOOR INFIL PANEL

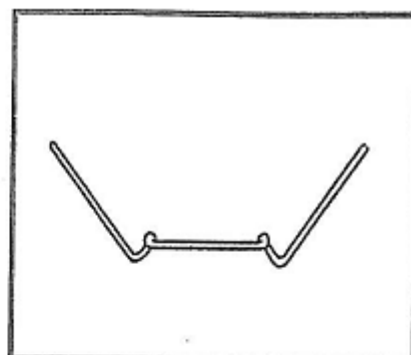
## FITTINGS WITHIN THE KIT (Not to scale)



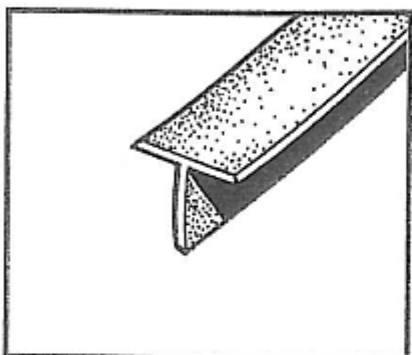
M6 NUTS & BOLTS  
SELF TAPPING SCREWS SPRING WASHER



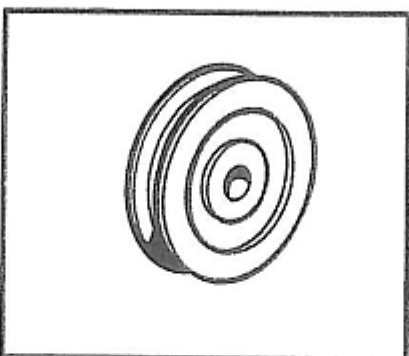
OVERLAP CLIP STAINLESS GLAZING CLIP



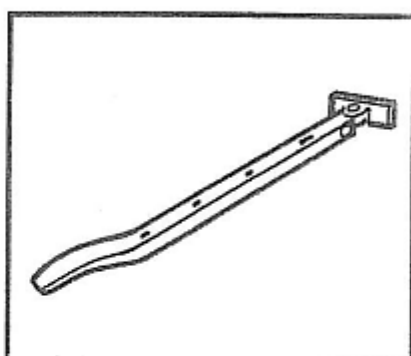
STAINLESS WIRE CLIP



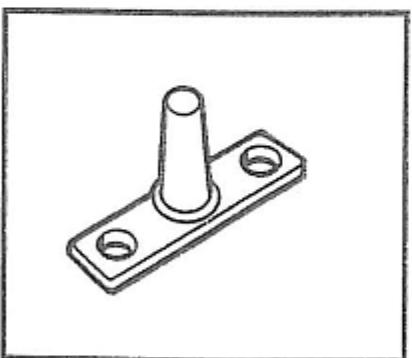
BLACK DRAUGHT EXCLUDER



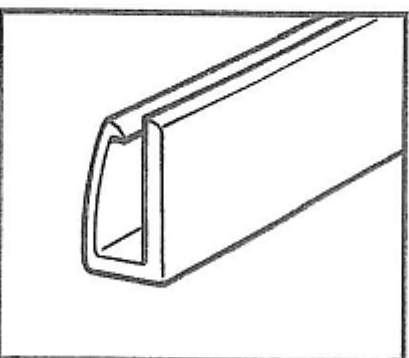
DOOR WHEEL



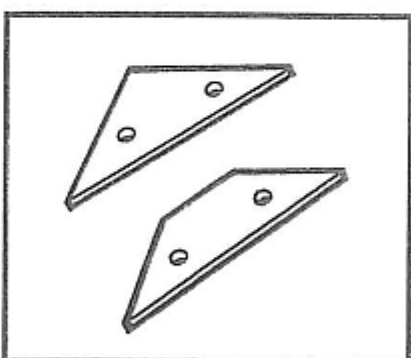
CASEMENT STAY



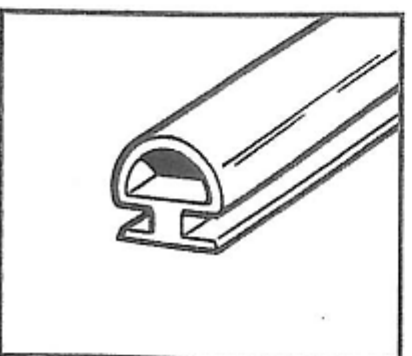
STAY PINS



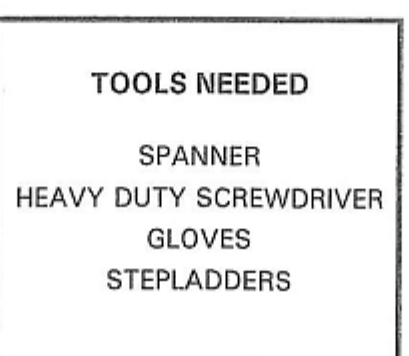
BLACK DOOR SKID



APEX & EAVE GUSSETS



NEOPRENE BEADING



### TOOLS NEEDED

SPANNER  
HEAVY DUTY SCREWDRIVER  
GLOVES  
STEPLADDERS

## PARTS LIST – FOR GLASSHOUSE SERIES

	1.92m x 2.56m	1.92m 3.20m
1. Nuts and Bolts M6	89	107
2. Band Clips	236	272
3. Wire Clips	14	14
4. Overlap clips	39	45
5. Casement Stay	1	1
6. Stay Pins	2	2

7. Pins, Nuts and Bolts M4	6	6
8. Door Catch	1	1
9. Short Self-tapping Screw	13	13
10. Long Self-tapping Screw	1	1

11. Spring Washer	2	2
12. Glazing Beading	236	247
13. Door Guides	2	2
14. Eave plates	(Taped together with one Casement Stay)	4
15. Ridge plates		2
16. Door Wheels & Fittings	2	2
17. Ridge	Taped together and Marked "Side"	1
18. Gutter/Eave		2
19. Cill/Side		2
20. Side Braces		4
21. Door End Cill	1	1
22. Top Door Track	1	1

23. Top Door Panel	(With Name Plate Taped together and marked "Door")	1	1
24. Bottom Door Panel		1	1
25. Middle Door Panel		3	3
26. Door Track Support		1	1
27. Door Posts		2	2

28. Side Glazing Bar	6	8
29. Roof Glazing Bar	6	8
30. Vent (in Packs)	1	2
31. Door End Glazing Bars	2	2
32. Door End Horizontal Angle	2	2
33. Door End Diagonal Angle	2	2
34. Small Door Track Support	1	1
35. Rear End Cill	1	1

36. Rear End Glazing Bars	2	2
37. Rear End Horizontal Angle	1	1
38. Rear End Diagonal Angle	2	2
39. Corner Bars in Two Packs	8	8
40. Cantilever	2	4
41. Black Rubber Draught Excluder	2	2
42. Black Door Skid	1	1

Packs of Glass Made up of:

610 x 610mm	A	29	35
610 x 457mm	B	30	34
Corners	C	4	4
Door Apex	N	1	1
Rear Apex	D	1	1



## HELPFUL HINTS

- Please do take your time and be sure to **READ ALL INSTRUCTIONS** carefully before assembling.
- Do not assemble frame in high winds.
- The greenhouse frame should be anchored to a permanent foundation. This will not only help secure it against powerful winds, but will help prevent breakage of the glass by the freezing and thawing process of the earth.
- Locate the glasshouse in a sheltered or semi-sheltered position. Glass is a fragile product and strong winds, or flying debris could potentially damage the glass sheeting. Secure the roof vents in a closed position, close doors & windows if very windy. A shelter belt should be considered to protect the glasshouse and plants within in windy locations.
- When building your own brick/concrete foundations ensure that they are level and square otherwise your frame will not be correct and the glass will not fit.
- Be sure all four corners of the constructed greenhouse are square before installing glass, and do not install the glass till the greenhouse is on a permanent foundation.
- When inserting the neoprene beading, wetting the rubber or frame with mild soapy water will ease its installation.
- Do not place your greenhouse in vulnerable locations such as under trees, playing areas etc.
- Children should not play near glass greenhouses. Do not occupy the glasshouse in times of high wind or poor weather (hail etc)
- REMEMBER: Glass is fragile, handle with care!. Beware that flying glass from strong wind can/will travel some distance and can be a dangerous hazard for property and persons surrounding the glasshouse
- Gloves should be worn. Protective eyeglasses should be worn.
- If your greenhouse is a painted one, there are a few 1/8" holes in the ends of some bars. These are jig holes for powder coating and have no bearing on construction. **(Key point).**
- WHEN CONSTRUCTING A PAINTED MODEL PLEASE TAKE CARE NOT TO DAMAGE THE FINISH BY WORKING ON CONCRETE OR PATIOS.

## INSTALLATION INSTRUCTIONS 1.92m MODEL RANGE

The contents of this carton are divided into the different frame assemblies that collectively make up the completed greenhouse framework.

It is recommended that each frame assembly is fully completed moving on to the next.

The contents are as follows:

- 1) Two side frames.
- 2) Rear end frame.
- 3) Door end frame.
- 4) Roof Vent.
- 5) Door.
- 6) Bag of Fittings containing:
  - a. Nuts & bolts for general assembly.
  - b. Overlap clips for glass.
  - c. Spring clips for glass.
  - d. Casement stay
  - e. Casement stay nuts and bolts.
  - f. Four eave plates (not in the main bag but taped up with the casement stay).
  - g. Two ridge plates.
  - h. Two door wheels.
  - i. Two door guides.
  - j. Small self-tapping screws.
  - k. 1 Large self-tapping screw.
  - l. 1 Spring washer
  - m. 1 Door catch.
- 7) Roof bars.
- 8) Coil of glazing beading
- 9) One length of ridge
- 10) Two black rubber draught excluders.



For clear identification of parts and the number required please carefully refer to the earlier pages of component drawings and parts lists.

## REDPATH GLASSHOUSE BASE DIMENSIONS

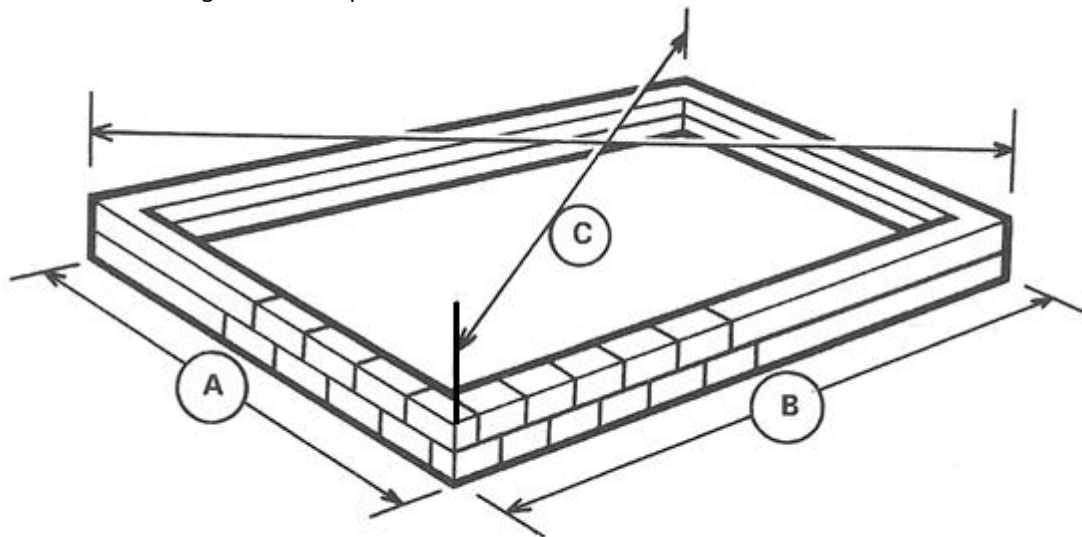
### For Brick, Block, Concrete or Timber

The dimensions given below may be used to locate the position for your Greenhouse or to lay corner footings if they are needed.

If a brick, concrete or timber base is to be laid, construct it as shown ensuring that dimensions A & B are not exceeded as these are precise outside measurements enabling the cill to overhang the edges.

ENSURE that the base is square by measuring across the corners, only when equal is it square.

Check the level using a builder's spirit level.



MODEL	A (actual base size width)	B (actual base size length)	C (actual base size Diagonal)
2.56m length	1.912m	2.564m	3.198m
3.2m length	1.912m	3.182m	3.712m

**Note: Please check with your local council whether a building permit is required for your glasshouse before construction commences**

## SIDE FRAME ASSEMBLY

When you come to the greenhouse itself start by assembling the side frames first.

The construction of the built in base side is identical to the separate base side except that the base and cill are one piece and it attaches to the bottom of the side glazing bars in a similar manner to the separate base cill.

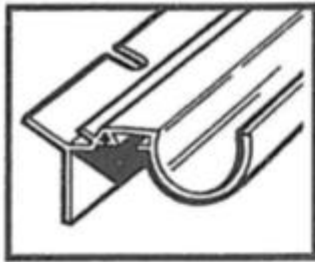
1. Lay out the pieces on the ground as though you were standing inside the house, i.e. with the gutter and cill facing downwards, and the bolt channels of the glazing bars upwards. (Key point). Slide the glazing beading into the V grooves of the glazing bars.
2. Slide a bolt into each end of each glazing bar. (If you have bought a shelf to go in your greenhouse and you intend to fit it on a sidewall, use the ½" headed bolts provided with the shelf fittings).

3. Fix the combined eaves bar and gutter to the glazing bars by pushing the bolts through the holes in the eaves bar and securing with a nut. You do not need to tighten the nuts too much at this stage, but they need to be tight enough to stop the bolts slipping out of the glazing bar.
4. Fix the cill to the middle glazing bar by pushing the bolt through the hole in the cill unit and tightening as before.
5. Correctly position the cill on the outermost glazing bars by pushing the bolts through the holes in the cill, but do not put the nuts on yet.
6. Place the angled tie bar over these bolts so that they point outwards towards the ends of the eaves bar. They must be so arranged that the flat bit of the angle in each case face towards the middle of the house (i.e. the elongated slit will be by the eaves in one case and by the cill in the other). (Key point).
7. Put the nuts on the bottom bolts and lightly tighten.
8. Do the same with the other side frame assembly.
9. Make sure that the glazing bars reach both the cill and the eaves in each case. Tighten all nuts.
10. With the built in base model, slide a bolt into the bolt slot in the built in base section, one at each end. Attach the base leg (anchor bracket) so that it is pointing downwards. If you are on a patio, you will need to cut the leg off level with the bottom of the built in base. If you are on soil, the leg will go into the ground at general assembly.

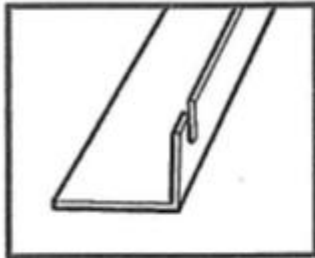
Before assembling any sections slide the required number of bolts into the glazing bars.

## **SIDE FRAME ASSEMBLY**

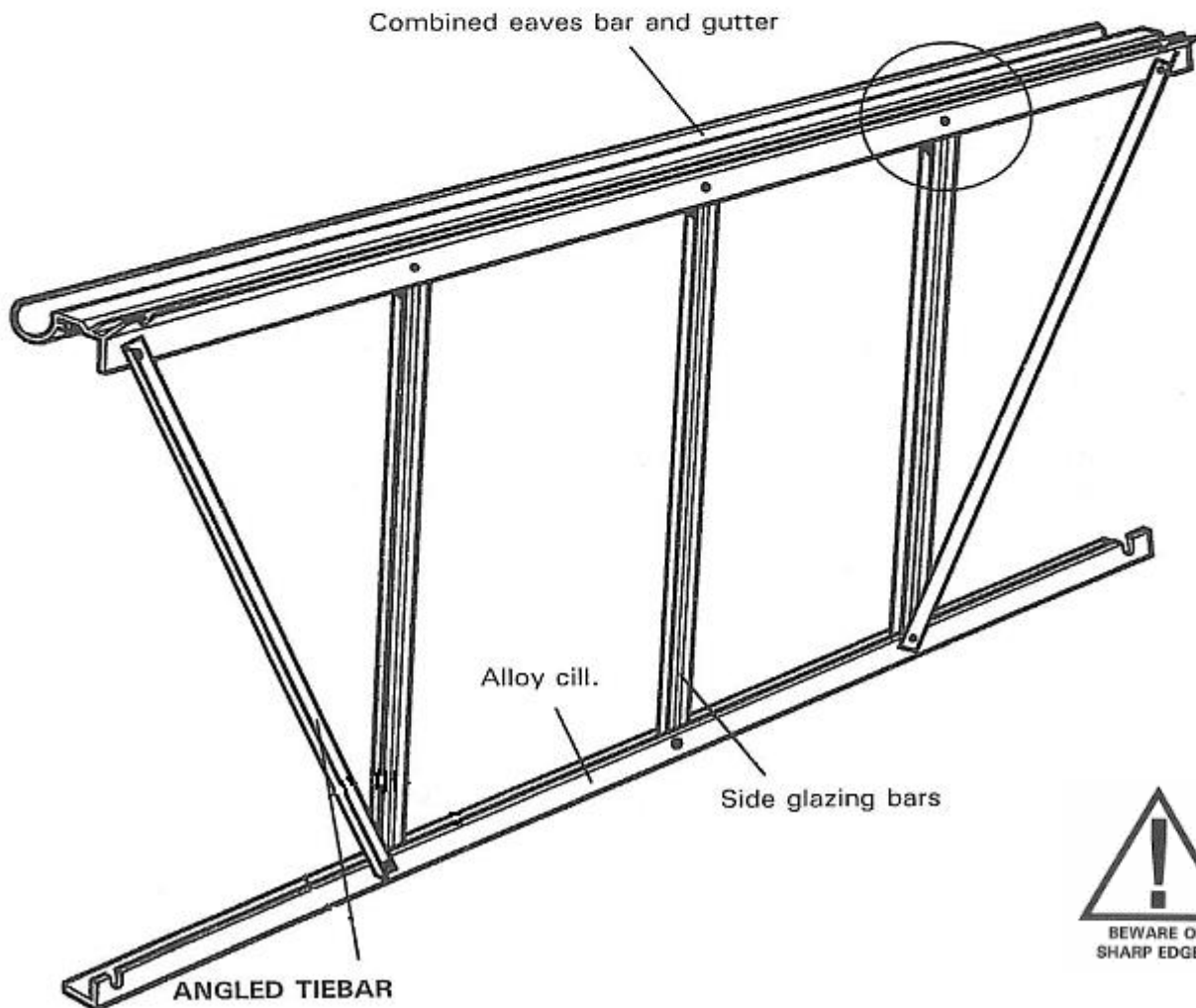
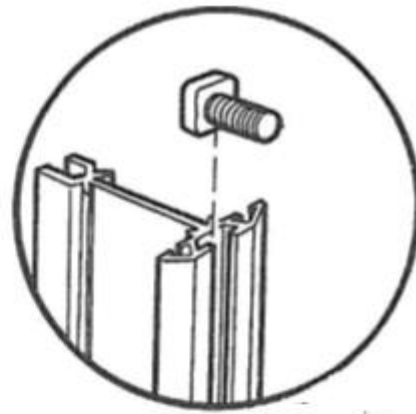
Lay out the component parts on the ground as though you were standing on the inside of a completed greenhouse i.e. with the bolt slots uppermost.



EAVES BAR/GUTTER



SIDE/REAR CILL



## REAR END ASSEMBLY

Components: 1x alloy Cill or Built in Base; 2x Glazing Bars; 2x Roof Corner Bars (marked "R" at the apex); 2x Side Corner Bars (unmarked); 2x Diagonal Cross Ties; 1x Heavy Angle Brace.  
From the main bag of fittings you will require the nuts and bolts.

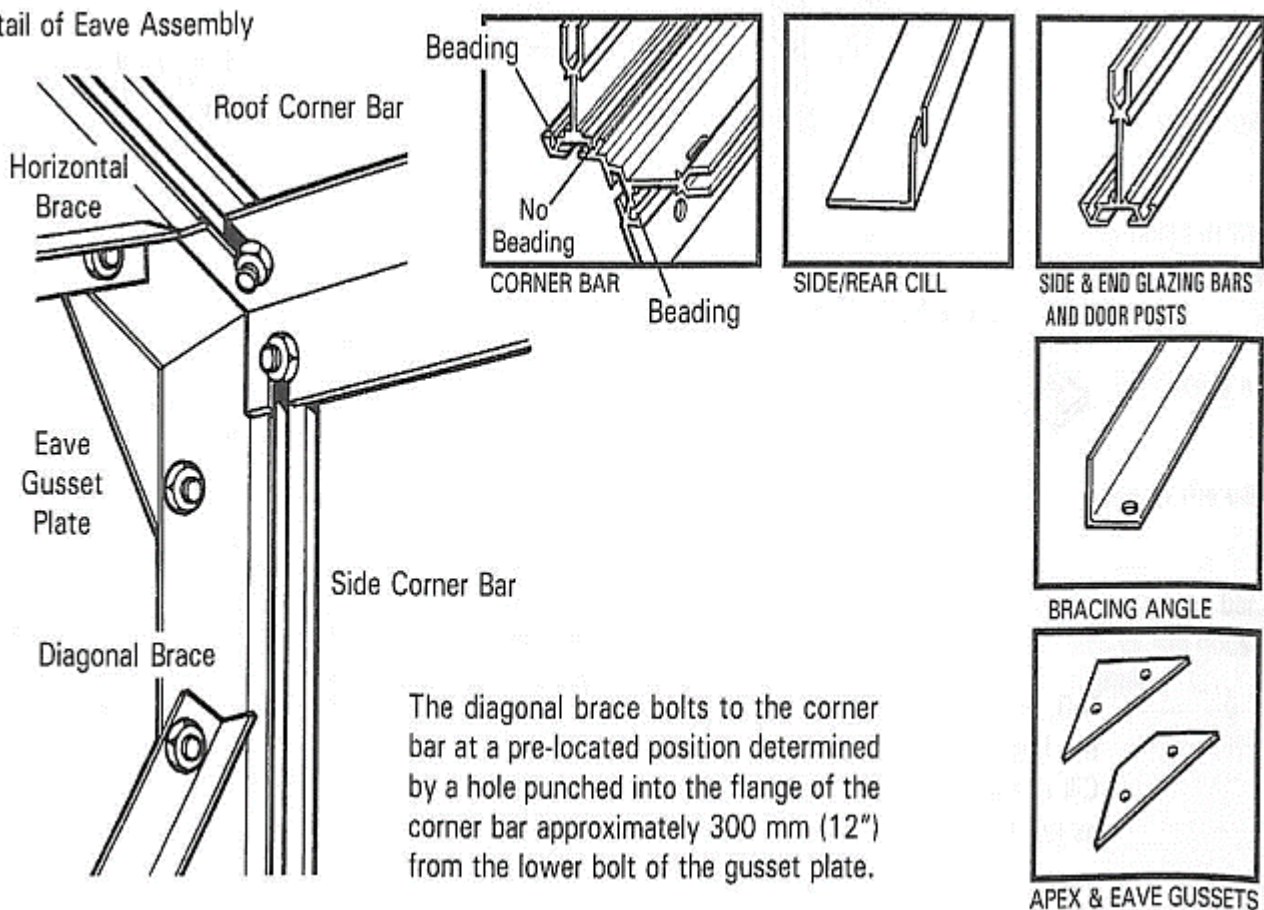


You will also require 2x Eave plates and 1x Ridge plate. These are packed with the Casement Stays and are separate from the main bag of fittings.

## INSTRUCTIONS

1. Lay out the frame as though you were standing on the inside i.e. with the volt slot uppermost. Roof corners marked "R" at the apex, opposite each other, facing downwards (i.e. "R" on outside). Roof corner bars are mitred at both ends where as the side corner bars are mitred at one end only **(Key Point)**. The bolt slot is on the inside and faces inwards during initial construction. If you have a painted greenhouse there is not letter "R" on the corner bar. You must ensure that the "middle" hole is nearer to the ridge plate than the eaves plate **(Key point)**. Slide the glazing beading into the "V" groove of the glazing bar and the corner bars. (Do not put beading into the middle slot).
2. Slide two bolts into the bolt channels of each corner bar. These will later be used in the general assembly for fixing the ridge, eave and cill to the ends. Now secure the ridge Gusset Plate and Eaves Gusset Plates by inserting bolts through the 'plates' and into the holes punched in the flange of the corner bar, at the apex and eave.
3. Attach the bottom cill or built in base to the side corner bars by inserting a bolt through the hole in the flange of the corner bar and into the slot in the cill. (Make sure the angle cill is facing downwards). **(Key point)**.
4. Attach the vertical glazing bars to the cill or built in base by inserting a bolt into the bolt channel of the glazing bars and locating it with the punched holes in the cill. Before securing the nuts attach the diagonal angle ties to the same bolts as illustrated. The top of the diagonal angle tie now attaches to the prefabricated holes in the side corner bar.
5. Slide two bolts into the bolt channel at the top of the two vertical glazing bars and secure the second one to the roof corner bars by inserting the bolt through the punched hole in the flange.
6. You can now attach the horizontal angle brace to the top bolt of the gusset plates and to the other bolts in the glazing bars you inserted in 5, above.
7. Check that all angles between the cill or built in base and the vertical members are at right angles and that the glazing bars are right into the angle cill at the bottom. **(Key point)**.

### Detail of Eave Assembly

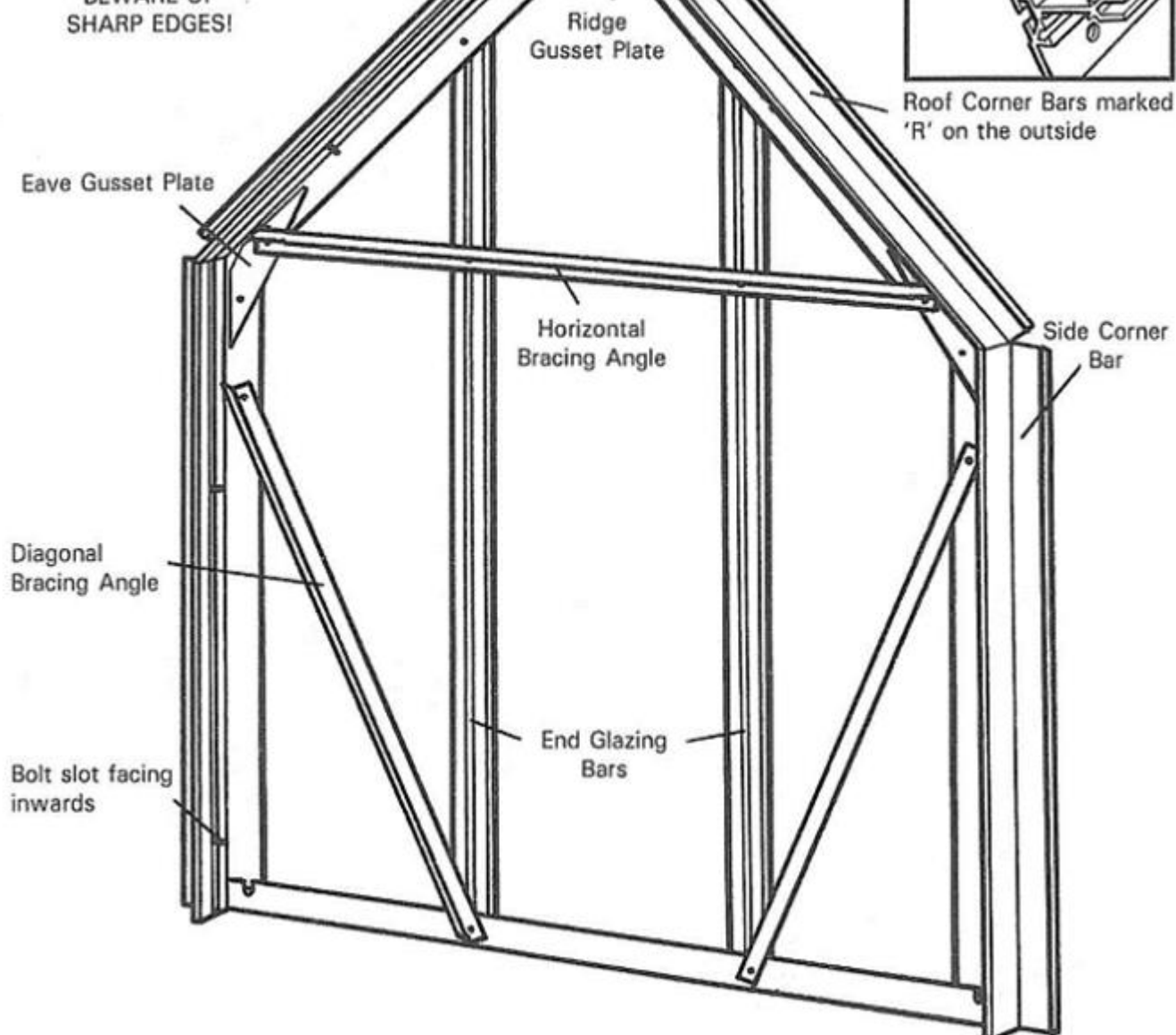


## REAR END ASSEMBLY

Viewed from inside.



BEWARE OF  
SHARP EDGES!



N.B. The roof corner bars are marked "R" on the outside, which indicates that they meet at the ridge. They are also mitred at both ends.

If you have a painted greenhouse there is no letter "R" on the corner bar. You must ensure that the "middle" hole is nearer to the ridge plate than the eaves plate. **(Key Point).**

## DOOR END ASSEMBLY

Components: 1x Door End Cill or Built in Base; 2x Glazing Bars; 2x Short Horizontal Braces; 2x Roof Corner Bars (marked 'R'); 2x Side Corner Bars (unmarked); 1x Door Track Support; 1x Door Track (top); 1x Door Track Angle Stay, (Small Door Track Support).

From the main bag of fittings you will require the nuts and bolts.

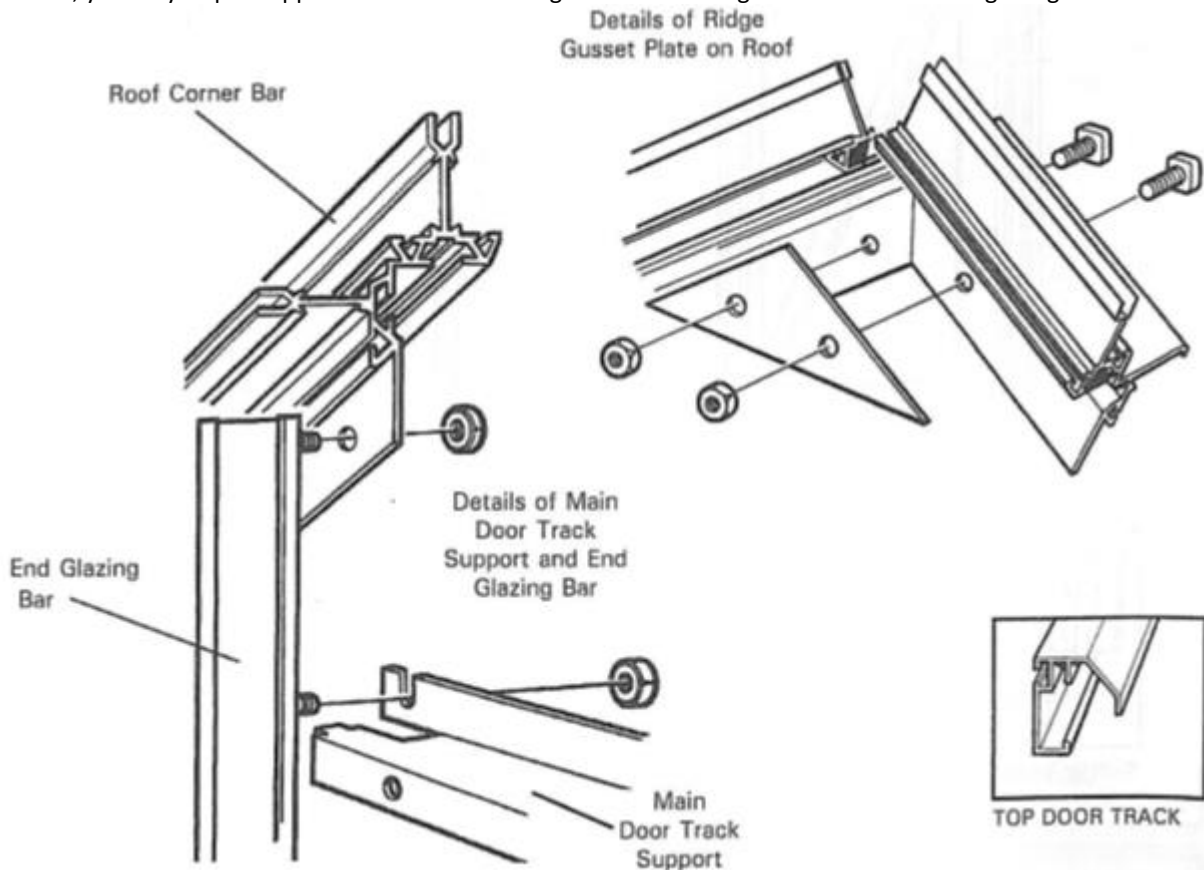
You will also require 2x Eave Plates and 1x Ridge Plate. These are packed with the casement stay and are separate from the main bag of fittings.

### INSTRUCTIONS

1. Assemble the frame in exactly the same way as the rear end, up to and including stage 5 of the rear end, but add one extra bolt into each bolt slot of the end glazing bars.

2. Attach the main door track support (shaped like a letter 'Z' to be found with the door panels) to the two glazing bars around 6" down the bar as shown. This 'Z' shaped bar must be fitted with the two outside slots facing upwards (as illustrated) **not** downwards.
3. The two short horizontal braces attach to the **top bolt** in the gusset plate and the vertical glazing bars.
4. Stand the frame up and fix the small angle door track support to the right hand side corner bar (viewed from outside). See front of assembly.
5. Bolt the door track to the main door track support and the door track support angle stay by inserting 4 bolts into the bolt slot of the door track. Position these through the 3 holes in the door track support above the door opening and the upper hole of the small angle door track support. When this has been achieved tighten all nuts.

Please note, you only require approx. 200mm of beading in the inside 'v' groove of the two end glazing bars.



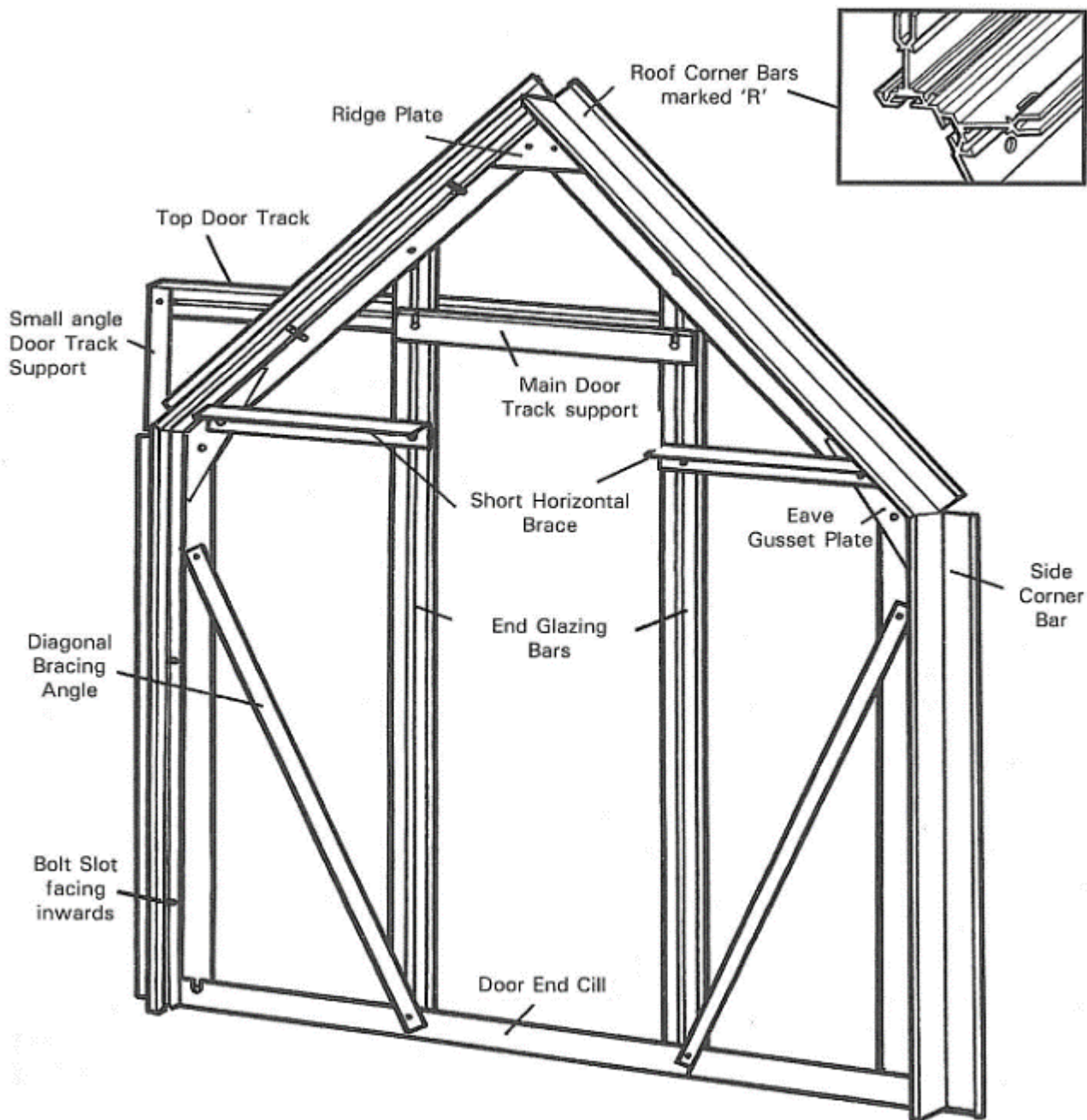
N.B. Please note carefully the correct position of the main door track support.

**The slotted holes at either end are facing skywards not downwards.**

At a later stage, when the top door track has been attached, the precise height and position of the track and support can be established.

## DOOR END ASSEMBLY

Viewed from inside.



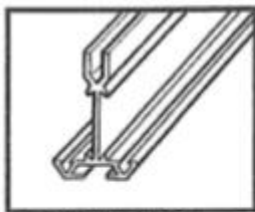
## DOOR FRAME ASSEMBLY

Components consist of:      2x door glazing bars (1x handed, 1x unhanded)  
                                          3x infill panels  
                                          2x top & bottom door panels

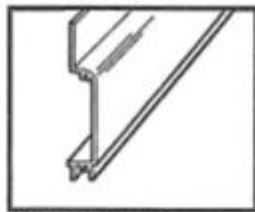
From the main bag of fittings you require:      2x door wheels  
                                          2x clip on nylon door skids  
                                          2x lengths of black rubber draught excluder  
                                          Self-tapping screws and spring washers.

1. Place the two sidebars on a level surface roughly two feet apart with the bolt slots facing downwards. The top of each sidepiece has two screw holes in it, the bottom has three (**Key point**). Slide the glazing beading into the V grooves that face inwards toward the door panels. (Not in the outside V groove).
2. Place the top, bottom and three infill panels in position as shown by the position of the screw holes in the sidepieces and the panels. The top panel has the greenhouse name on it. The bottom panel has the edge for the door skids to fit on. The lower infill panel locks on to the bottom panel.

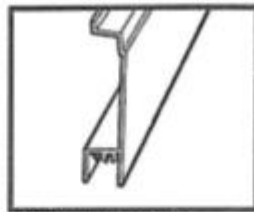
3. Fix the door together by screwing through the sidepieces into the holes provided in the edge of the panels with the No.8 half-inch self-tapping screws. Do NOT fix the top left hand side screw yet. The screws will go in more easily and without danger of trying to go crooked if you can put a small amount of grease on the screw before assembling the doors. Alternatively, you could insert the screws into the screw eyes of the door panels before assembling the door; this would have the effect of pre-self tapping the panels prior to assembly making assembly easier.
4. Fix the top left hand side with the longer screw provided. Put the screw through the door catch so that the serrated part is facing outwards and upwards. Next slip tow spring washers on to the screw, and then fix the screw through the side of the door and into the top panel. **(Key point).**
5. Make sure all the angles are square and tighten all screws.
6. Fix each door wheel into position by pushing the bolt provided through the centre of the wheel and then through the hole in the top door panel from underneath (i.e. from the inside of the door). Put the washer over the bolt and secure with the nut provided, tightening until there is no movement on the bolt. The nuts are lock nuts and are harder to put on than the normal nuts in general assembly. The wheel will revolve freely because it has ball bearings in it.
7. Slip the nylon door skids on each end of the bottom panel.
8. Turn the door over and insert the black rubber draught excluders in the groove 9bolt slot) in each sidepiece of the door. Push up to the top of the door and trim off the surplus as the bottom. With a pair of pliers squeeze the groove together at the bottom so that the rubber will not slip down when the door is in its upright position.
9. Do not fit the door at this stage.



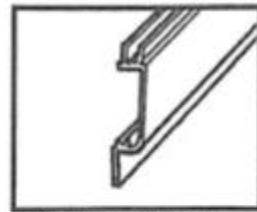
END GLAZING BARS  
AND DOOR POSTS



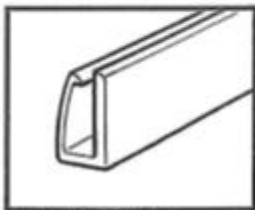
DOOR TOP PANEL



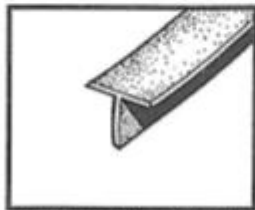
DOOR INFILL PANEL



DOOR BOTTOM PANEL



BLACK DOOR SKID

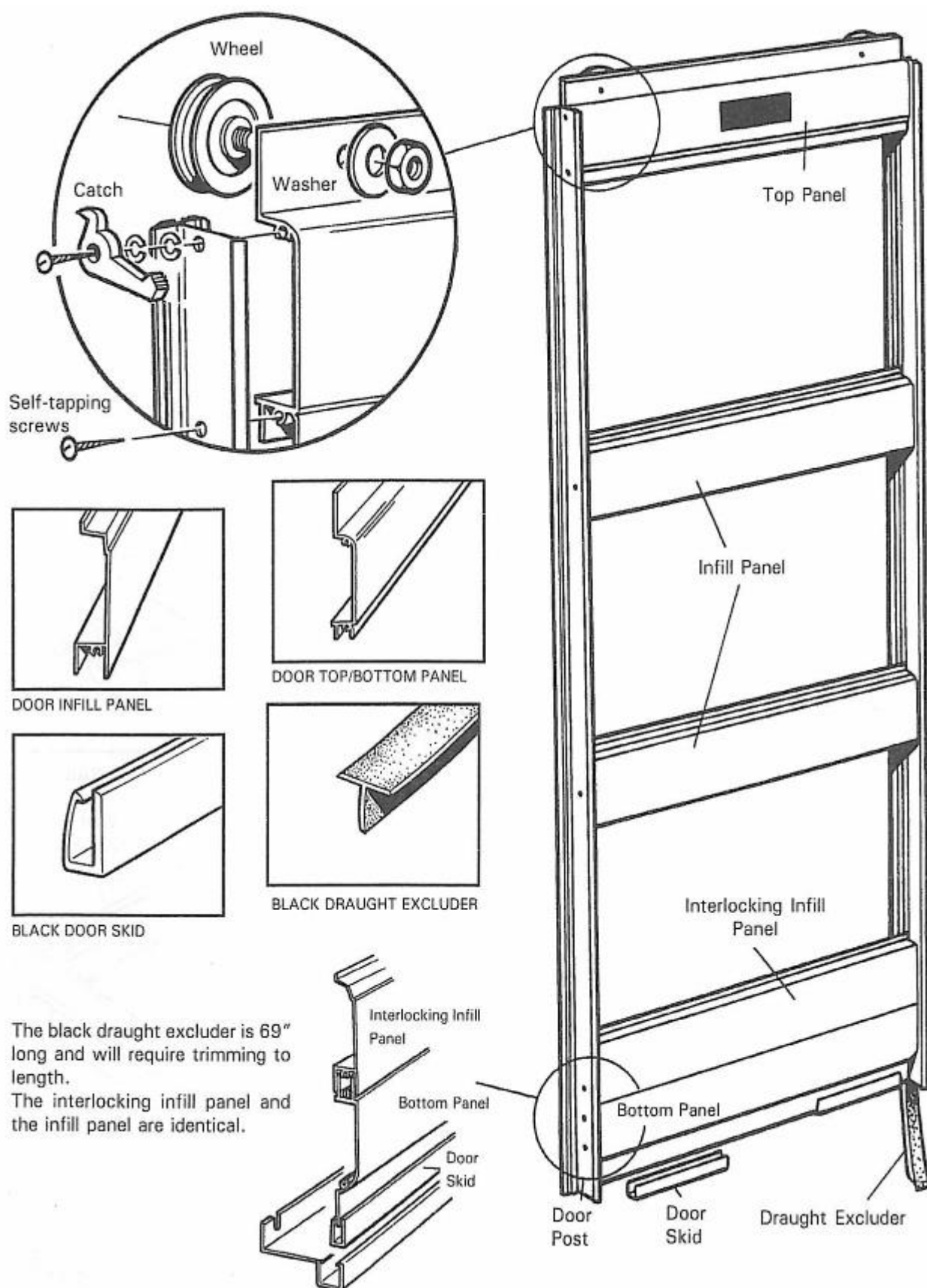


BLACK DRAUGHT EXCLUDER



BEWARE OF  
SHARP EDGES!

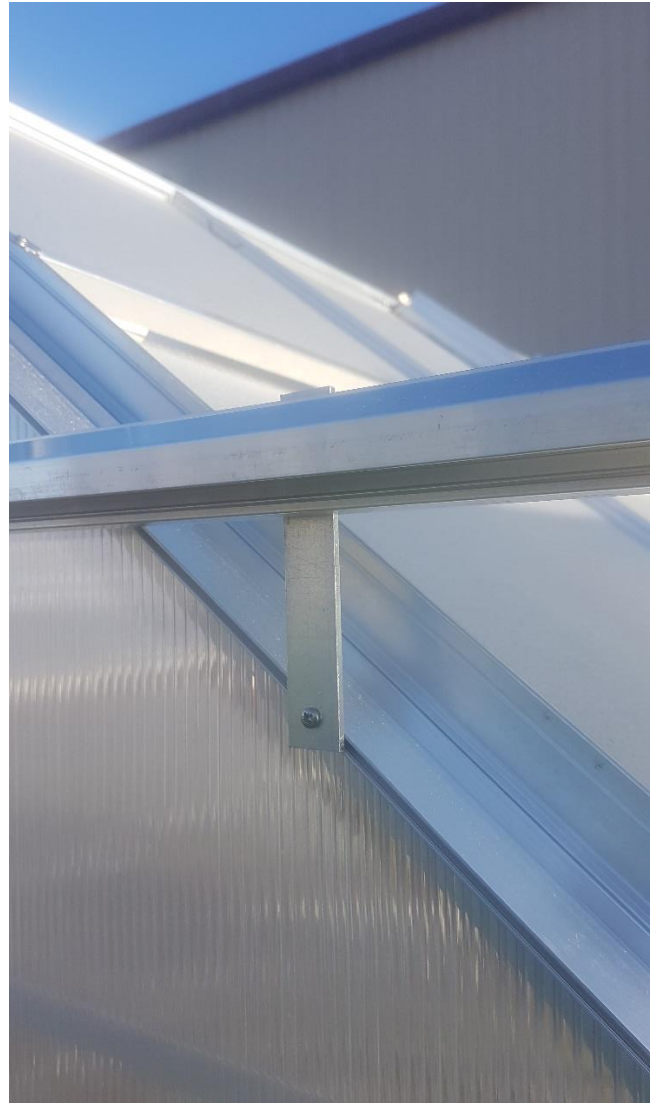
## DOOR FRAME ASSEMBLY



Do not fit the door to the gable at this stage – wait until the structure is fully assembled prior to glazing.



**Door stay strap is located to support the door track if required**



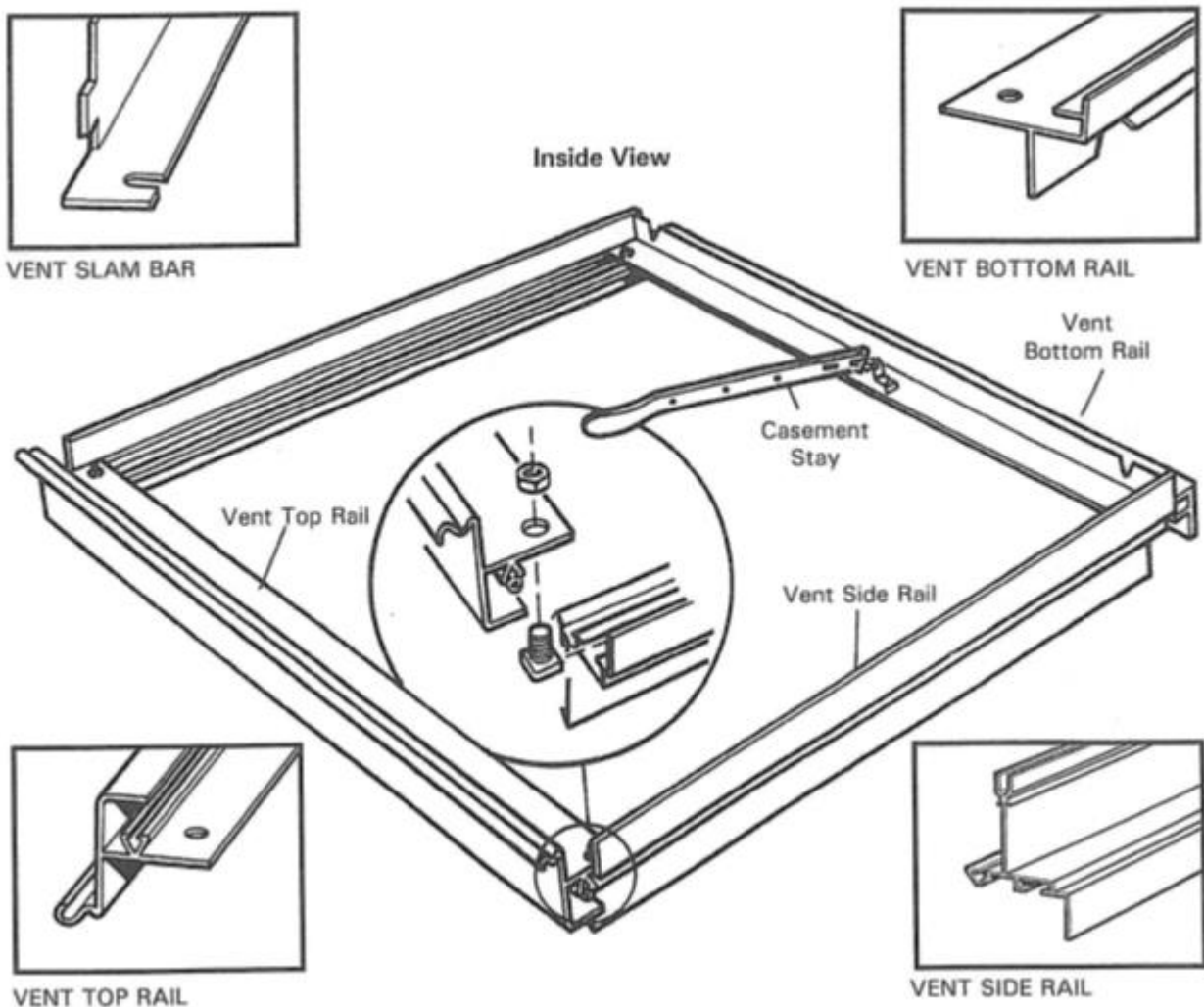
## ROOF VENT ASSEMBLY

The roof vent pack has 5 pieces of aluminium: and from the main box of fittings you require 1.83m of glazing beading, 4x nuts and bolts, 2x casement stay pins, 1x casement stay and 6x M4 stainless steel nuts and bolts.

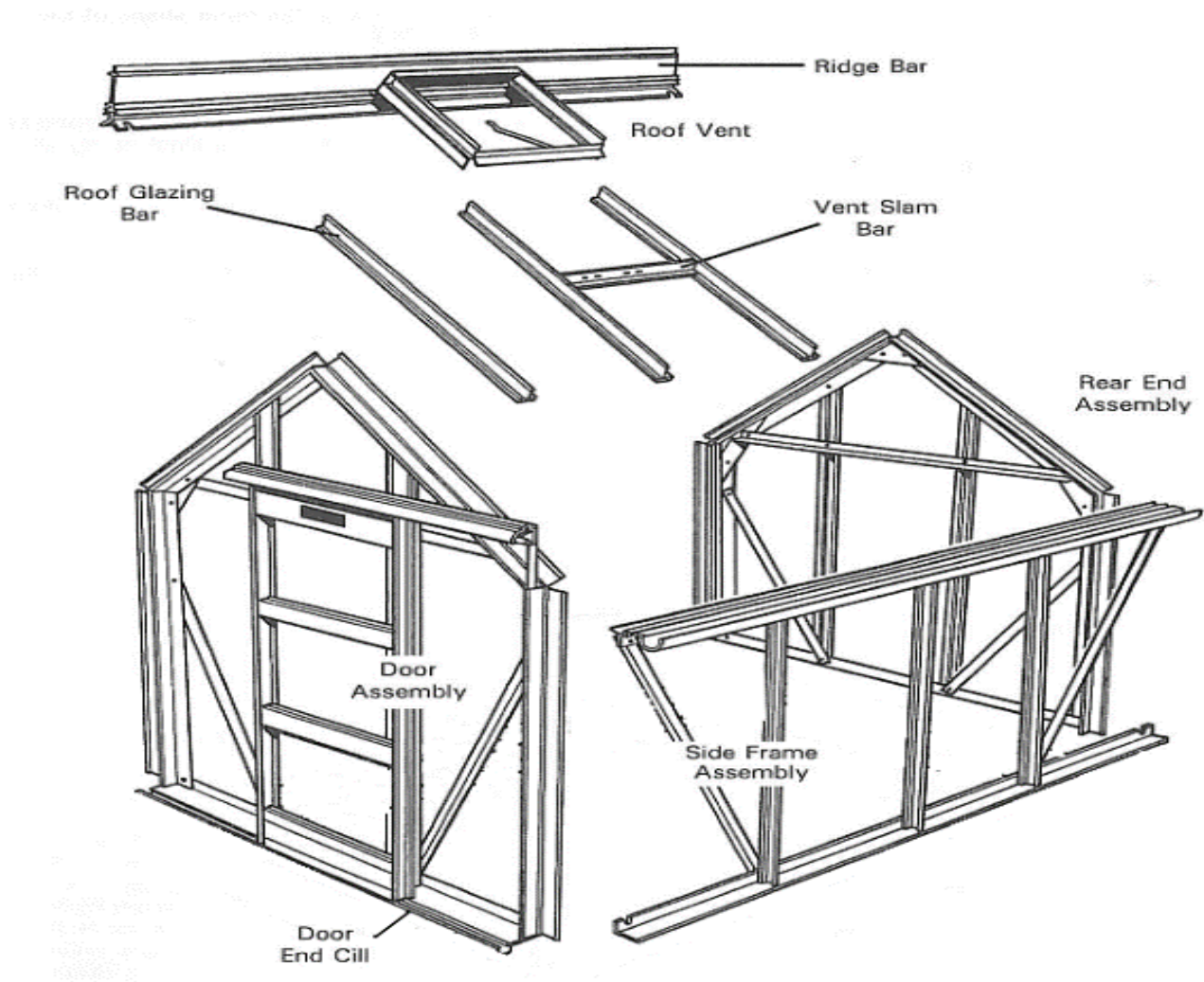
### PROCEDURE:

1. Identify the slam bar and attach the 2 stay pins to the outer side of the angle using the M4 stainless steel nuts and bolts.
2. Lay the 4 edge pieces of the vent on a level surface as though you were on the inside of the vent (with the bolt slots of the sidebars uppermost and the 'v' slots of the bottom rail uppermost). The top rail is arranged in such a way that the squared off end is to the bottom and the hooked hinge uppermost).
3. Slide the glazing beading into the slots in the side and top rails and trim to suit.
4. Insert a bolt into each end of the side rail bolt slots, put these bolts through the holes in the top and bottom rails, add nuts and lightly tighten. Check that all joints are secure and that the vent is square, and then tighten up the nuts.
5. Fit the casement stay using the M4 stainless steel nuts and bolts, putting the bolts through the holes in the saddle of the stay and through the 2 elongated holes in the bottom rail. Hold the nuts in place and tighten the bolts with a screwdriver.

Do the same with the other vents.

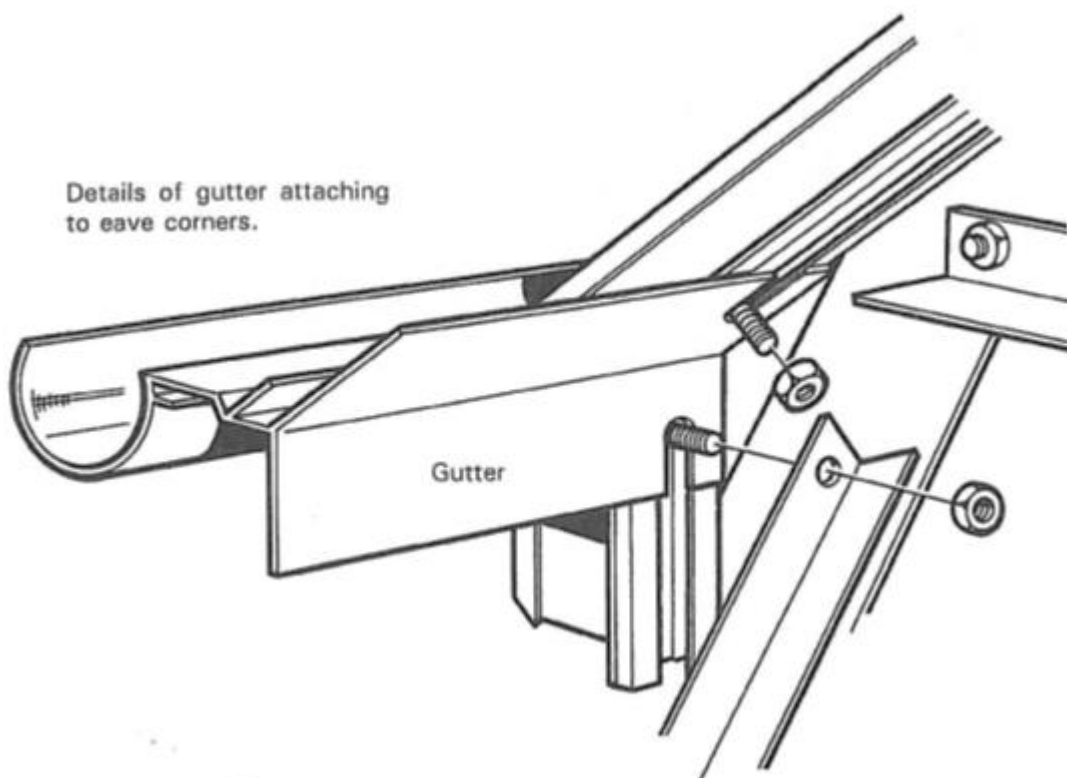


## ASSEMBLY OF GREENHOUSE UNIT MAIN PARTS



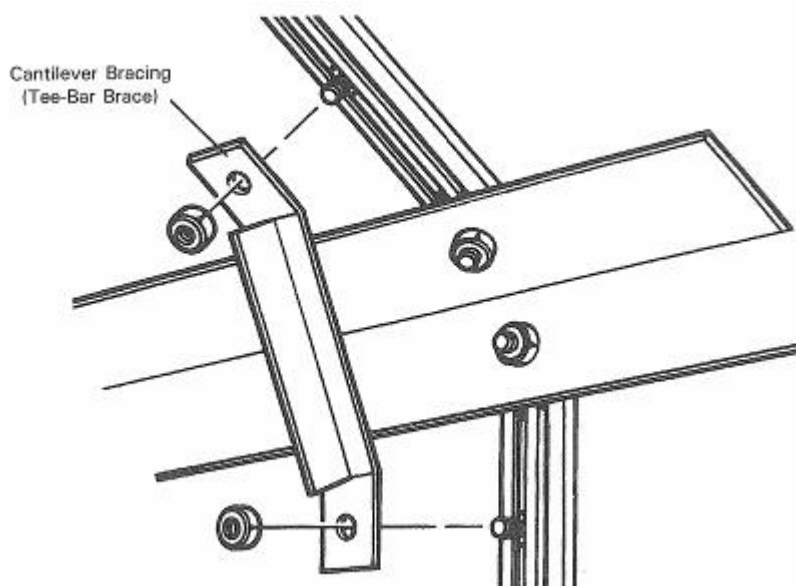
The first operation is to connect the two side frames to the two end frames to form the outer shape of the completed structure. Another pair of willing hands would be useful at this stage.

1. Lift the first side frame into its position by the rear end.
2. Slot the eaves bar into the small space between the roof and side corner bar so that the gutter is outside the end frame and the two flanges that form the angle of the roof and side are inside and tight up against the bolt slots of the roof and side corner bar. **(Key point).**
3. The extra bolts that were inserted in the bolt slots during the gable end assembly can now be used.
4. Line up the elongated holes in the flanges of the eaves with the bolt slots and slide the bolts into them. Put a nut on the top bolt and tighten up. Place the diagonal side angle onto the bottom bolt, put a nut on and tighten up. **(Key point).**
5. The bottom cill or build in base attaches to the inside of the corner bar. The bolt placed in the corner bar bolt slot at gable end assembly will slide down into the slotted hole at the end of the cill. For the built in base model the base leg attached at frame assembly can now be attached to the gable end, in a similar way to its attachment to the side frame.
6. Do the same at the other three corners.



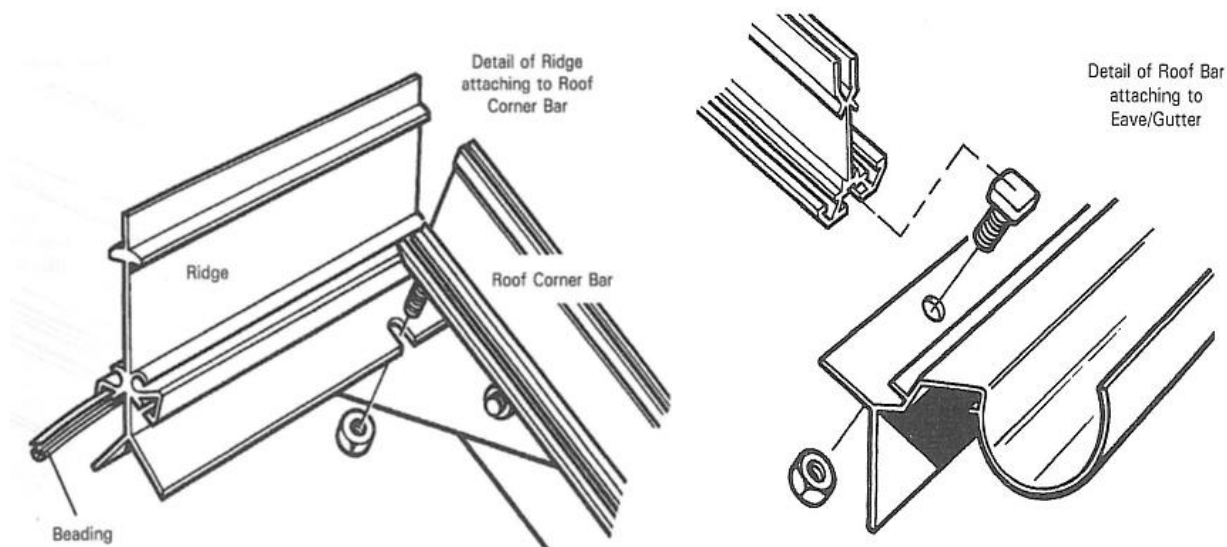
7. Slide the beading into the ridge into the two V slots, and then attach the ridge to the roof corner bars by inserting the end of the ridge through the small gap in the corner bars at the top. The vertical part of the ridge will be outside and pointing skywards and the two flanges that form the angle of the roof will be inside, tight up against the bolt slots of the roof corner bars.
8. Line up the slotted holes at the end of the ridge with the bolt slots, in the corner bars and push the two bolts, previously inserted during gable end assembly, into the slots. Put on nut and tighten.

You can now attach the T-Bar cantilevers, which bolt into the sidebars and roof as indicated.



9. Slide the glazing beading into the V groove of the roof glazing bars. They can now be attached to the ridge and gutter. Attach them to the ridge first by sliding a bolt into the bolt slot of the glazing bar, inserting it through the hole in the flange of the ridge. Put a nut on and tighten up. Do the same with the rest of the roof bar.

N.B. remember to omit two roof bars if you have a partition, one each side.



10. Before bolting the bottom of the roof bar to the flange of the eave bar, insert extra bolts as follows: Then attach the final nut and bolt to the eave bar as illustrated.

Where the vent is to be positioned put an extra one bolt per bar i.e. the vent covers two glazing bars so two extra bolts per vent. **(Key Point)**. One each bar.

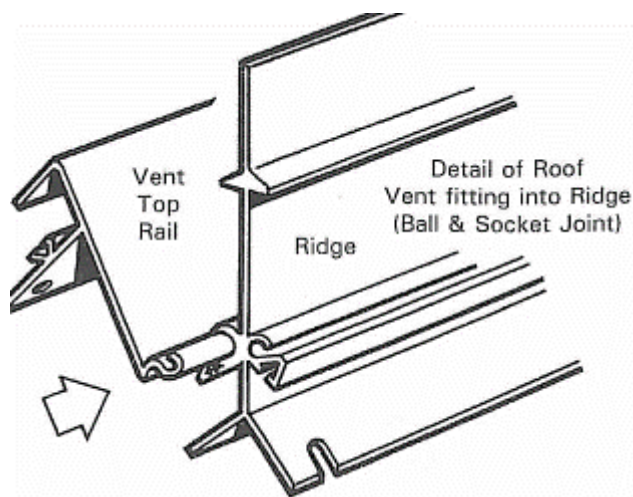
Secure the Tee Bar cantilever bracket to the middle bar of the 2.438m (2 cantilevers)

11. Before sliding the vent into the ridge, slide a piece of black tube into the vent hinge socket. Slide the vent onto the ridge from either end and into the desired position.

The hinge is a ball and socket joint, the ball being on the top of the vent, the socket on either side of the ridge running the full length of the structure. (Key point).

The vent can go in any position (except adjacent to either side of the ridge). Fit the slam bar immediately under the vent bottom rail & secure with the bolts previously inserted in the roof bars. The precise position of the slam bar can be determined by inserting a pane of glass ref A under the vent and moving the slam bar down to touch the glass.

12. Do not fit the door at this stage.



13. The greenhouse is now ready for lifting on to its permanent base.

Where the vent is to be positioned put an extra one bolt per bar i.e. the vent covers two glazing bars so two extra bolts per vent. **(Key point)**. One each bar.

Secure the Tee Bar cantilever bracket to the middle bar of the 2.438m (2 cantilevers)



# SECURING GREENHOUSE TO BASE

## BRICK BASE, TIMBER OR CONCRETE

Having built your base level and square and to the outside measurements, sit the greenhouse onto the brick base. The 4 cills will lip over the edge of the base and will protrude approx. 7mm all the way round.

Drill through the cill and into the timber/brickwork; screw through the hole using a treated screw and washer. Create an anchor point every 610mm i.e. at each glazing bar.



### Angle Brackets

The aluminium angle brackets are bolted to the cill and then with the use of screws are secured to the base. Timber screws are available on request.

## 14. PATIO FLOOR

You must make sure that the structure is level and square. Put one pane of glass in each corner of the roof, each pane must be level with the small glass retaining lip just above the gutter and be running parallel with the roof glazing bars. Each corner must be the same. If one corner is out the corner diagonally opposite will also be out. By carefully pushing and pulling each corner diagonally you will be able to see the frame move in and out of square with the glass. Having established the square of the greenhouse, drill the patio or concrete in the required positions, fit plastic plugs and screw the brackets firmly to the ground using 35mm x 8mm round head screws.

### SOIL FLOOR

Determine the square of the greenhouse as described above, make a mix of concrete and put a couple of shovelfuls around the base of each stake. When the concrete has gone off back fill with the soil excavated earlier on.

### BRICK BASE

When anchoring the frame to a brick base you need to drill through the cill and into the brick. Insert a timber or plastic plug into the hole in the brick and screw the cill down using a treated screw. Position the hole in the cill as near to the angle corner as possible so that when you glaze, the screw is on the inside of the glass.

## 15. FITTING THE DOOR TO THE STRUCTURE

The door slides onto the frame from the left hand side.

Put the door bottom rail into the bottom door track and slide to the right, feed the first wheel into the upper door track and move further to the right until the black draught excluder butts up to the end glazing bars. Carefully ease the door past the glazing bar and feed in the second wheel. Push further to the right until both draught excluders are butting up to both end-glazing bars. Carefully ease the door past the two glazing bars. The door will now run quite freely. To square up the door with the spacing, undo the upper bolts holding the door track. There is a little play to facilitate "fine tuning" of the door. N.B. Sometimes the door can be a little stiff prior to glazing but once the glass has been inserted (the last job of the construction) the extra weight will make for smooth running. **(Key point).**



# GLAZING THE STRUCTURE

PLEASE NOTE: DIAGRAMS BELOW SOME MODELS MAY BE SUPPLIED WITH OPTION 1 AND/OR OPTION 2

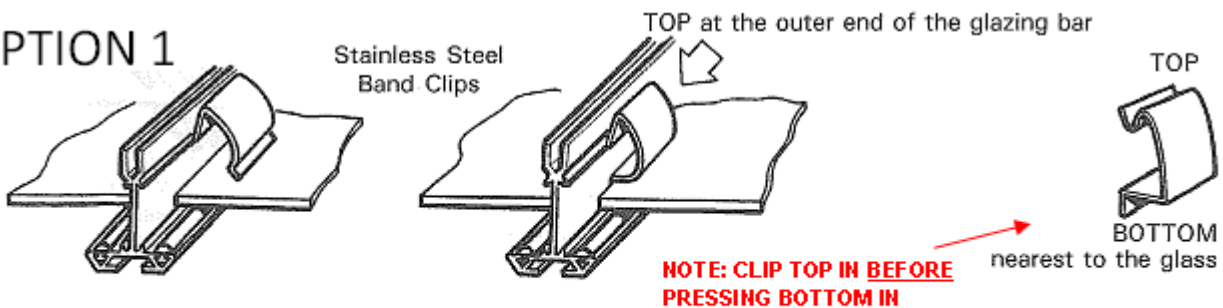
Always handle glass with extreme care as failure to do so can result in injury



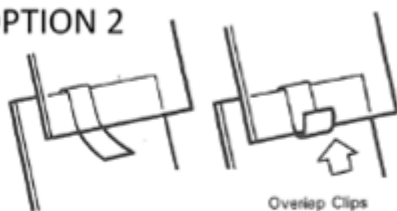
## HORTICULTURAL GLASS

1. Starting with the bottom pane of one side, offer the pane to the glazing bars. Hold it in place by inserting two of the stainless steel clips six inches from the bottom of the glass. Fit the curved lip under the glazing bar and then rotate it so that the other lip clips over the edge of the glass. **(Key point).**
2. Secure the glass by inserting another two clips in the same way half an inch from the top edge of the glass. N.B. The side panels will require a larger overlap of approx 20mm.
3. Hook one overlap clip on the middle of the pane of glass. **(Key point).**
4. Offer the top pane of glass to the glazing bars, resting it on the two clips of the bottom pane. Insert two clips to hold it six inches from the bottom of the pane. Bend the middle overlap clip upwards to support the glass. Secure the pane by inserting another two clips four inches from the top of the pane.
5. Repeat this all along this side of the house, then repeat it for the roof of this side, but note that you have to use two of the steel wire clips on the sides of the panes nearest to the roof vent so that the vent will close correctly. (See illustration for the correct way to fit these). **(Key point).**
6. Repeat points 3 to 5 on the other side of the house.
7. Following this, glaze the rear end in a similar fashion.
8. Proceed to the door end and glaze that, but use wire clips on the left hand edges of the panes to the right hand side of the door opening, so that the door slides open correctly. **(Key point).**
9. There are a small number of stainless steel wire clips in your pack. These are used behind the door (as the door slides to the right) and under the vents. Because the wire clip hugs the profile of the glazing bar the door and vents will move more freely.
10. Finally, glaze the door.

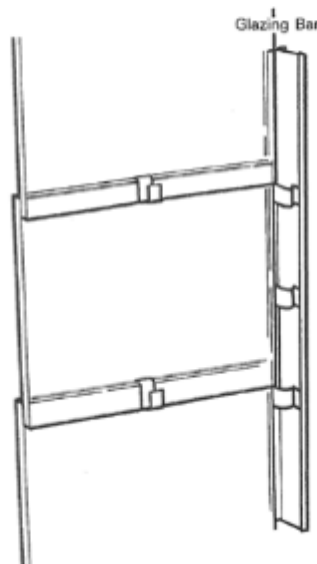
### OPTION 1



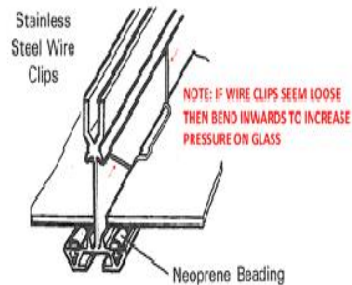
### OPTION 2



N.B. there are a small number of wire clips which you use behind the door and under the vents instead of the band clips.

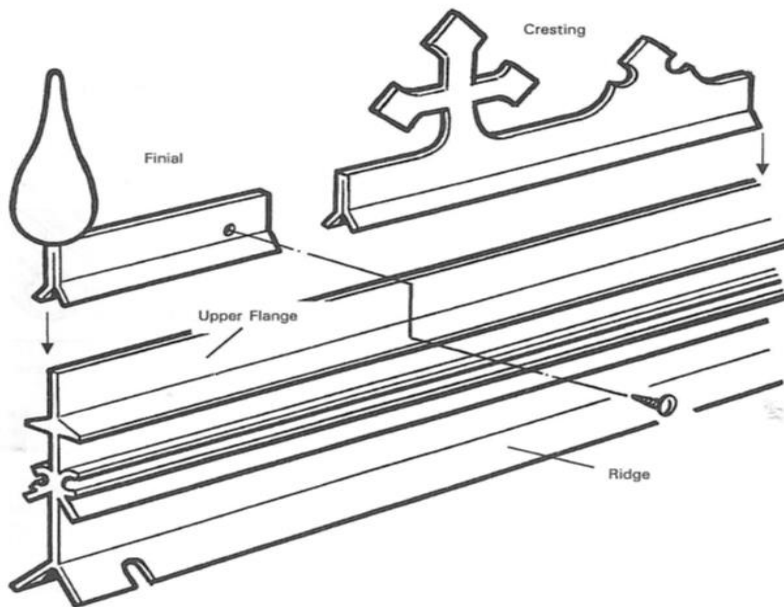


## Images of wire butterfly clips option to hold cladding:



## OPTIONAL EXTRAS FINIAL AND CRESTINGS DETAIL

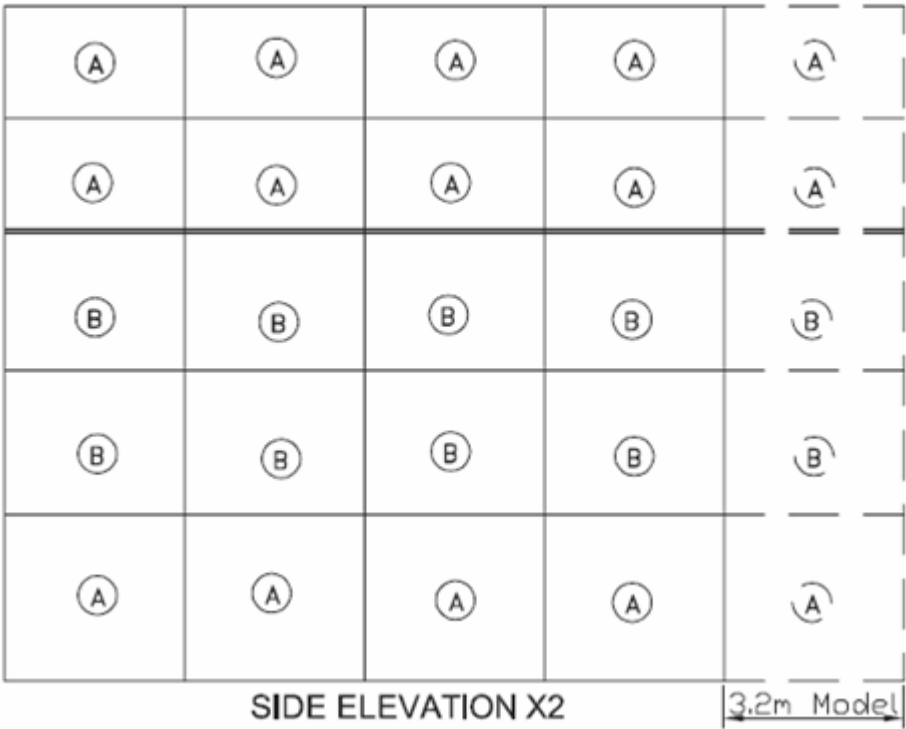
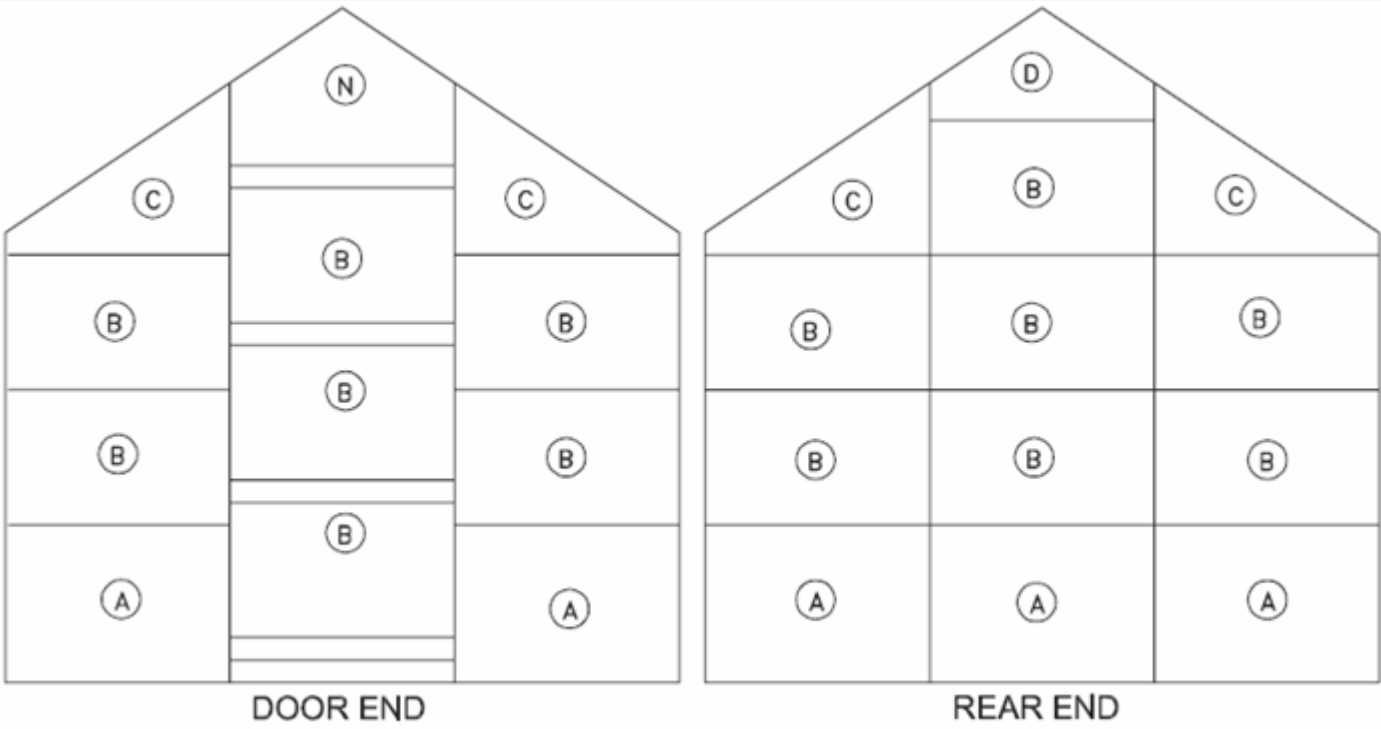
Place the finial onto the upper flange, level with the end of the ridge. The slot in the lower part of the finial sits on top of the upper flange. Do likewise with the ridge cresting.



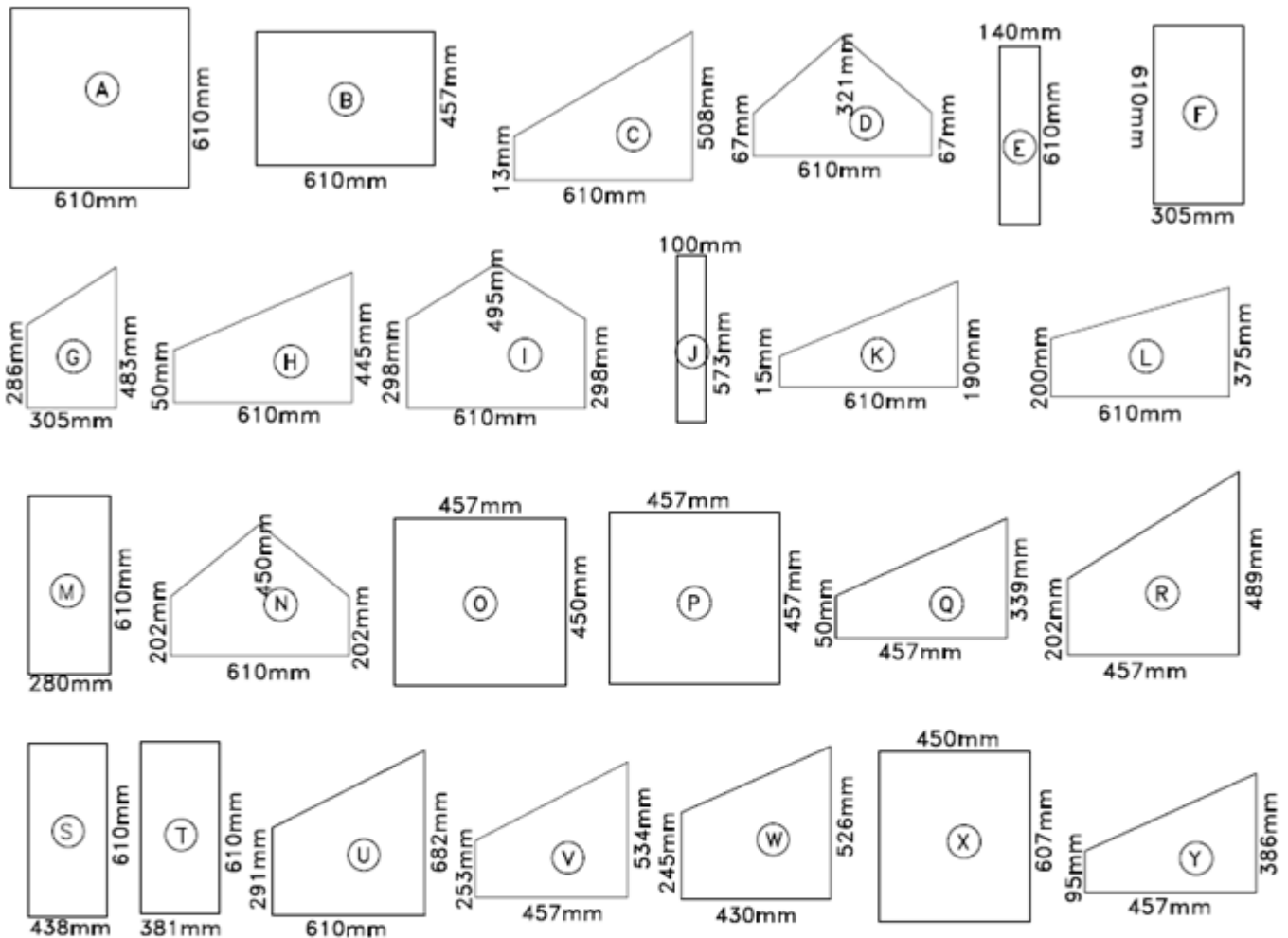
The other end of the ridge has the 2<sup>nd</sup> finial fitted in a similar manner to the 1<sup>st</sup>. If this 2<sup>nd</sup> finial overhangs the ridge by up to 25mm you can move the 1<sup>st</sup> finial and crestings so there is an equal overhang of 12.5mm. Insert the small self-tapping screw into the pre-drilled holes of the two end finials and tighten until the screw butts up to the upper flange of the ridge, locking the finial in place.

If the overhang of the 2<sup>nd</sup> finial is greater than 25mm you can easily trim the end down with a hacksaw to make a flush finish at the end of the ridge.

# GLASSHOUSE GLASS



# GLASS SIZES



REDPATH GLASSHOUSES																									
PRODUCT CODE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
2.56m High Eave	29	30	4	1										1											
3.20m High Eave	35	34	4	1										1											
3.80m Belmont + (SD) or (DD)	31	50				4	2	2	1																
5.04m Belmont + (SD) or (DD)	39	66				4	2	2	1																
(SD) Single Door	4	5				4	2	2	1																
(DD) Double Door		4				4	2								6	2	2	2							
4.43m Supreme	36	64								10					4	8			2	14	4	4	2	2	2
5.66m Supreme	44	80								10					4	8			2	18	4	4	2	2	2
Louvre					1					5															

Glass is supplied from your local merchant. (The glass IS NOT freighted with the glasshouse due to the high likelihood of the glass being damaged in transit). Redpath will advise your local merchant's for delivery.

**PLEASE TAKE CARE WHEN HANDLING GLASS DURING ASSEMBLY OR USING THIS GLASSHOUSE – GLASS CAN BREAK FROM IMPACT OR STORM DAMAGE, STAY OUTSIDE OF THE GLASSHOUSE IN HIGH WIND OR STORM CONDITIONS**

## Redpath Glasshouses

### 10 year Warranty Conditions

The supplier (Redpath Pacific Ltd) offers the above warranty on a Pro-rata basis.

The warranty “warrants” that the goods are supplied without manufacturing fault & are designed to provide a minimum useful service life of ten years.

The warranty conditions:

1. The Pro-Rata warranty applies from invoice date of goods
  2. The pro rata warranty is for the buildings framework, nuts, bolts, brackets only and does not include those parts that are beneath the ground or any flexible cladding, fastening systems, or other non metal parts.
  3. The pro rata warranty does not cover those items that may be judged to be damaged or caused by “fair wear and tear” during the daily use of the building.
  4. The pro rata frame warranty does not cover damage from storm, accident damage, unstable or loose ground, in any form that may affect the buildings integrity.
  5. The buildings frame & parts includes various coatings for improved resistance to corrosion. These include hot dipped galvanized parts, zinc coatings, powder coating, and paint coatings anodized surfaces, mill finish alloy surfaces. The warranty offers that these coatings will meet the suppliers specification for the building. The warranty does not cover corrosion that exceeds the expected “typical” protection that these coatings are able to offer. This might include damage from chemical sprays or paints, excessive humidity etc.
  6. The warranty is not transferable and only applies to new building sales.
  7. This pro rata warranty requires that basic maintenance completed by the customer E.G regular cleaning, avoidance of poor operating conditions.
  8. Any warranty claim must be advised in writing to Redpath Pacific Ltd immediately upon its discovery. Damaged parts are to be kept and returned to the supplier at the suppliers cost on request.
  9. Any warranty for any parts or labour supplied may not be honored if payment for the building is incomplete or not made as per the payment schedule contract.
  10. The warranty does not cover any consequential losses or claims of the customer
  11. The suppliers’ liability shall be at minimum the pro-rata cost of the material value only (not labour) of the parts that are claimed to be faulty under the warranty.
  12. The warranty assumes that the glasshouse has been located in a suitable site that is protected from strong winds. Open plain sites, exposed hill tops, locations with natural wind funneling from buildings or landforms etc should be avoided.
  13. The glass cladding IS NOT included in the ten year warranty. Unless the glass cladding exhibits a manufacturing fault or is damaged prior to use.
- This warranty does not remove any rights that the customer might have under New Zealand Law



