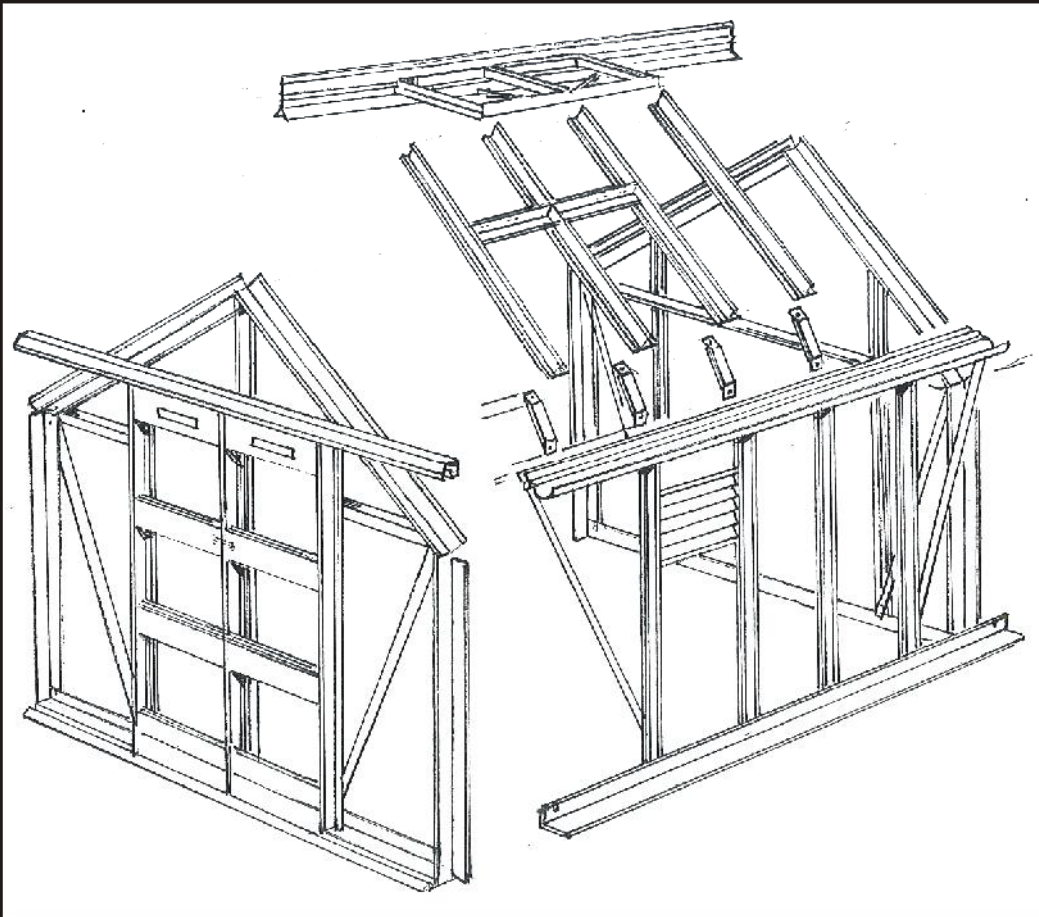




INSTRUCTIONS & ILLUSTRATIONS FOR THE
8'5" WIDE GX



ELITE GREENHOUSES LTD

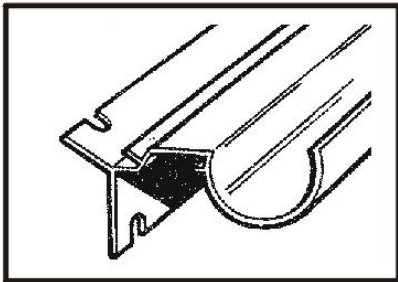
BENT SPUR ROAD, KEARSLEY, BOLTON BL4 8PD

TEL: 01204 791488 FAX: 01204 862412

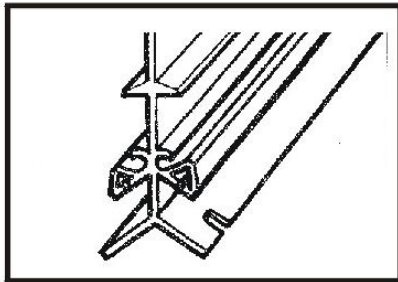
enquiries@elite-greenhouses.co.uk

www.elite-greenhouses.co.uk

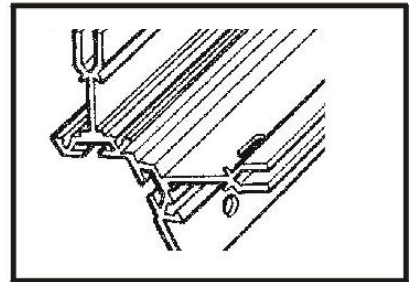
COMPONENT DRAWINGS (NOT TO SCALE)



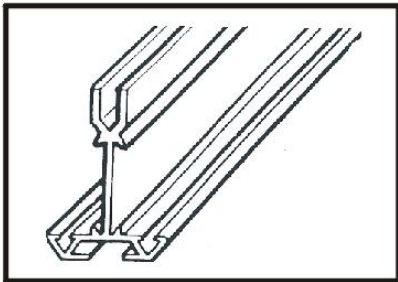
EAVES BAR/GUTTER



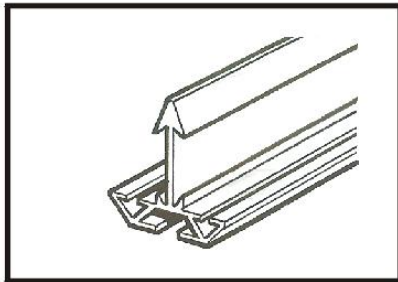
RIDGE



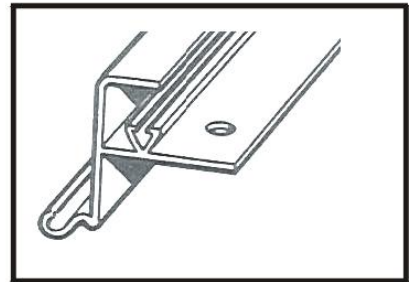
CORNER BAR



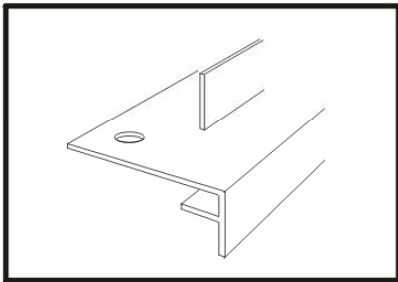
GLAZING BAR



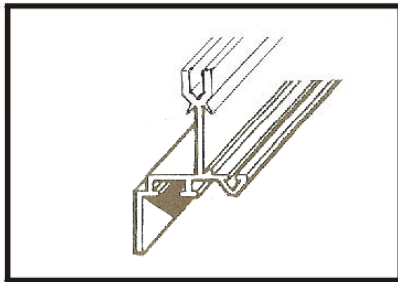
ARROW HEAD GLAZING BAR



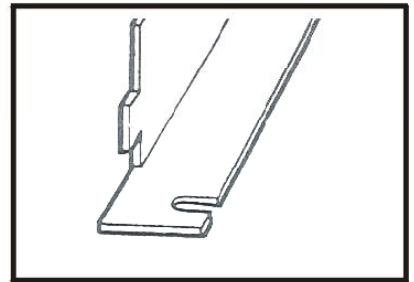
VENT TOP RAIL



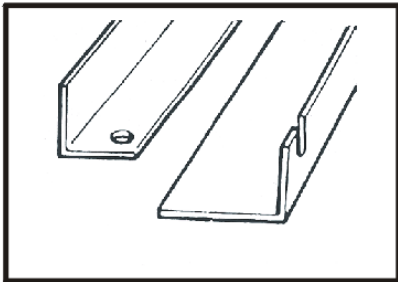
VENT BOTTOM RAIL



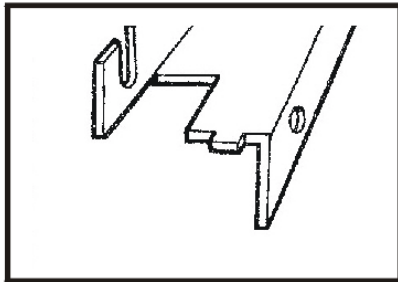
VENT SIDE RAIL



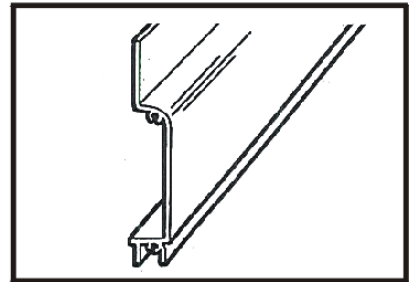
VENT SLAM BAR



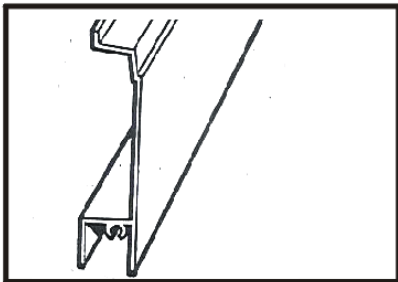
**BRACING ANGLE/SIDE +
REAR CILL HANGING BASKET RAIL**



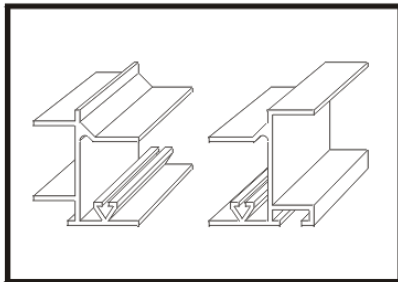
DOOR TRACK SUPPORT



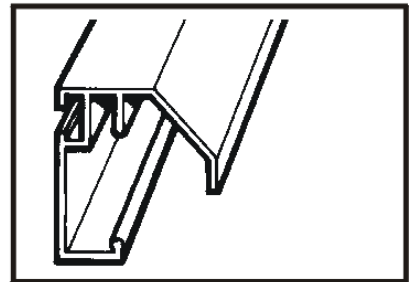
DOOR TOP/BOTTOM PANEL



DOOR INFILL PANEL

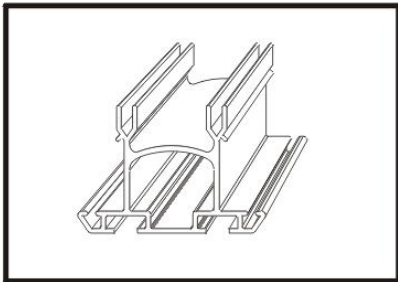


HANDED DOOR POSTS

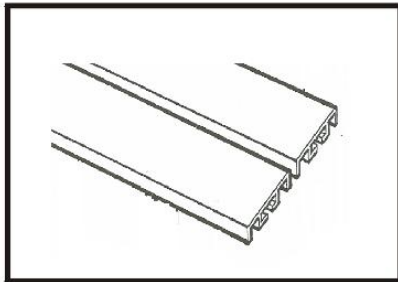


TOP DOOR TRACK

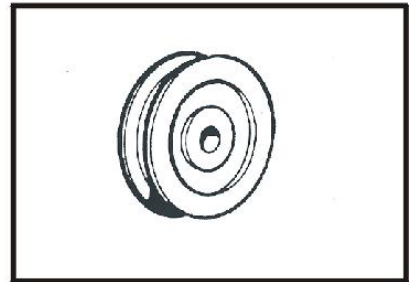
FITTINGS WITHIN THE KIT (NOT TO SCALE)



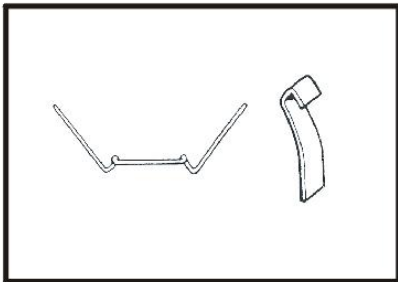
BLOCK GLAZING BAR



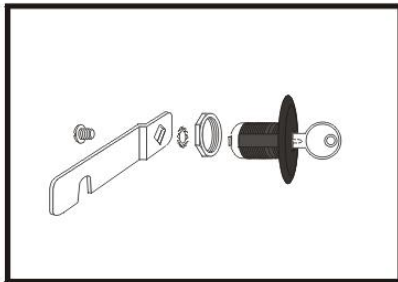
SHELF TOP SECTION



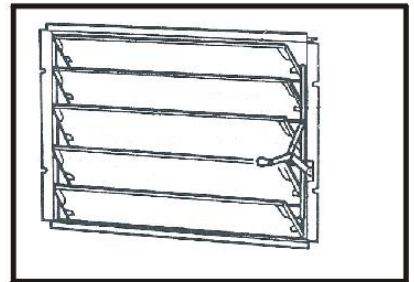
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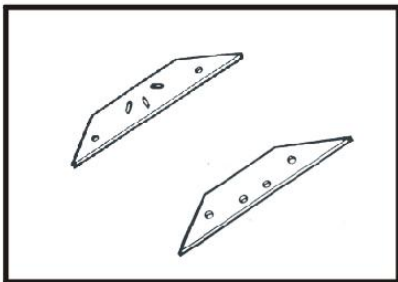
WIRE / OVERLAP CLIP



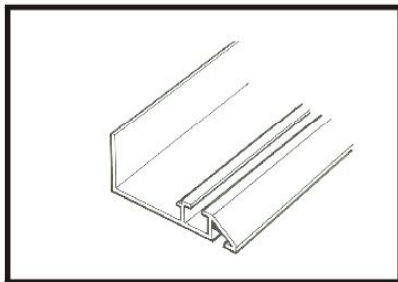
DOOR LOCK



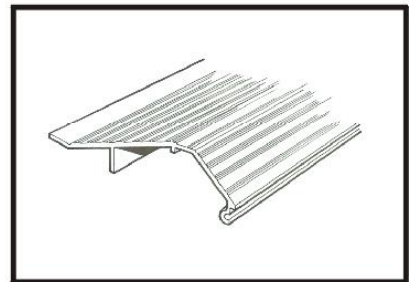
5 BLADE LOUVRE



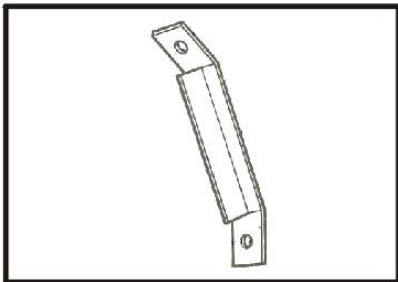
RIDGE/EAVE GUSSET PLATE



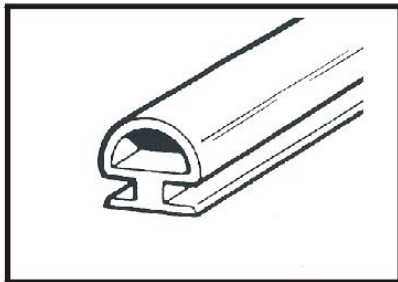
DOOR END CILL



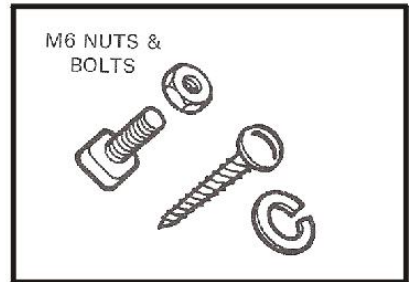
DOOR THRESHOLD CILL



CANTILEVER BRACE

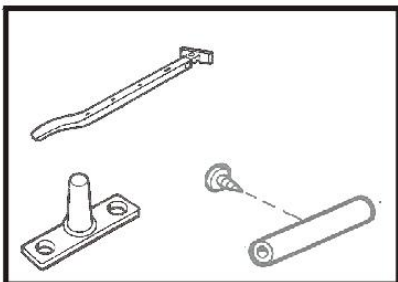


GLAZING BEADING

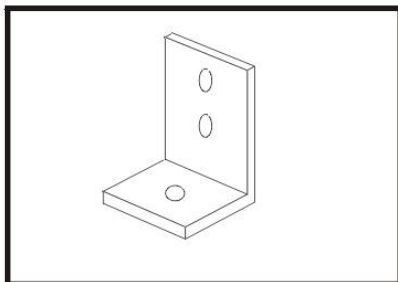


M6 NUTS &
BOLTS

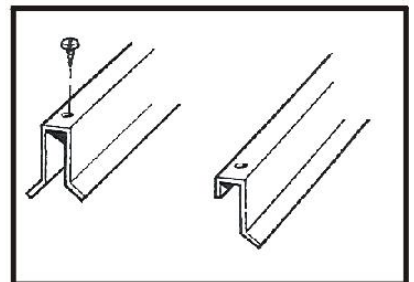
SELF TAPPING SCREWS
SPRING WASHER



CASEMENT STAY + PINS + VENT STOPPER



ANGLE BRACKETS



BAR CAPPING

Base Preparation

If you are constructing the greenhouse on a patio, flagged or concrete area you can utilise the angle brackets which are provided and illustrated later in this booklet under heading **securing down**

If you are building a concrete footing you would still anchor down as indicated above but would build your wall/footing to the following dimensions.

Nominal size	Width	Length	½
6x8	2.586	1.987	3.261
8x8	2.586	2.605	3.671
10x8	2.586	3.223	4.132
12x8	2.586	3.842	4.630
14x8	2.586	4.459	5.155
16x8	2.586	5.077	5.698
18x8	2.586	5.695	6.255
20x8	2.586	6.313	6.822

These are **exterior** measurements and the outside edge of the cill will be level with the outside of the brick.

If you are constructing on soft standing e.g. soil or lawn you will need to purchase special anchor brackets that you would concrete into the ground and bolt onto the cill and upright glazing bars. Concreting of these brackets into the ground is one of the last jobs of the construction process.

HELPFUL HINTS

- **Tools required:**
 - Spanners (M6 x M4 Bolts)
 - Screwdriver (posi drive)
 - Pliers
 - Drill
 - Hacksaw
 - Ladders
 - For Glazing . Gloves / Goggles/glasses
- 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 caused by the freezing and thawing process of the earth. **(Key point)**.

- 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 until the greenhouse is on a permanent foundation.
- Do not place your greenhouse in vulnerable locations such as under trees, playing areas etc.
- Children should not play near glass greenhouses.
- REMEMBER: Glass is fragile, handle with extreme care! **(Key point)**.
- Protective clothing such as gloves, strong outer clothing and eye glasses should be worn.
- Be careful when using agricultural chemicals such as fertilisers, fungicides and insecticide etc. in the greenhouse. Do not use chemicals that are for outside use only. Always read the labels very carefully.
- Do not push or lean on the glass panels.
- Use extra care when moving heavy or awkward objects such as tables, poles, internal frames etc. within or near the greenhouse.
- Do not latch the door when anybody is inside the greenhouse.
- Be aware of the increased temperature in a greenhouse on a sunny day.
- Do not keep pets or other animals in a greenhouse.
- When cleaning glass, do not exert too much pressure.
- If your greenhouse is painted there are a few 3mm holes in the ends of some bars. These are jig holes for the painting and have no bearing on the construction. **(Key point)**
- WHEN CONSTRUCTING A PAINTED MODEL PLEASE TAKE CARE NOT TO DAMAGE THE FINISH BY WORKING ON CONCRETE OR PATIOS.
- N.B. This plan covers the entire GX800 range. The only difference between a 6qlong and an 8qlong for example are a few extra pieces of alloy, glass, nuts and bolts etc. The constructions of the sub-frame assemblies are the same but for the purposes of this booklet we have used the 12 x 8 model as the benchmark. Therefore only one plan is needed.

DETAILED ASSEMBLY INSTRUCTIONS

The contents of these packages 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 before moving on to the next.

The frames to be constructed are as follows:

1. Side frames . two off
2. Rear end frame . one off
3. Door end frame . one off
4. Roof vent (quantity dependent upon length)
5. Door . two off 2 ϕ +wide
6. Additional parts such as the ridge, roof bars, eave ties, cantilevers etc. are put on loose and are not pre-constructed into an independent frame. The partition, if appropriate is constructed in situ and not as an independent frame, see page 28.

WE CAN NOW COMMENCE WITH THE ASSEMBLY

SIDE FRAME ASSEMBLY

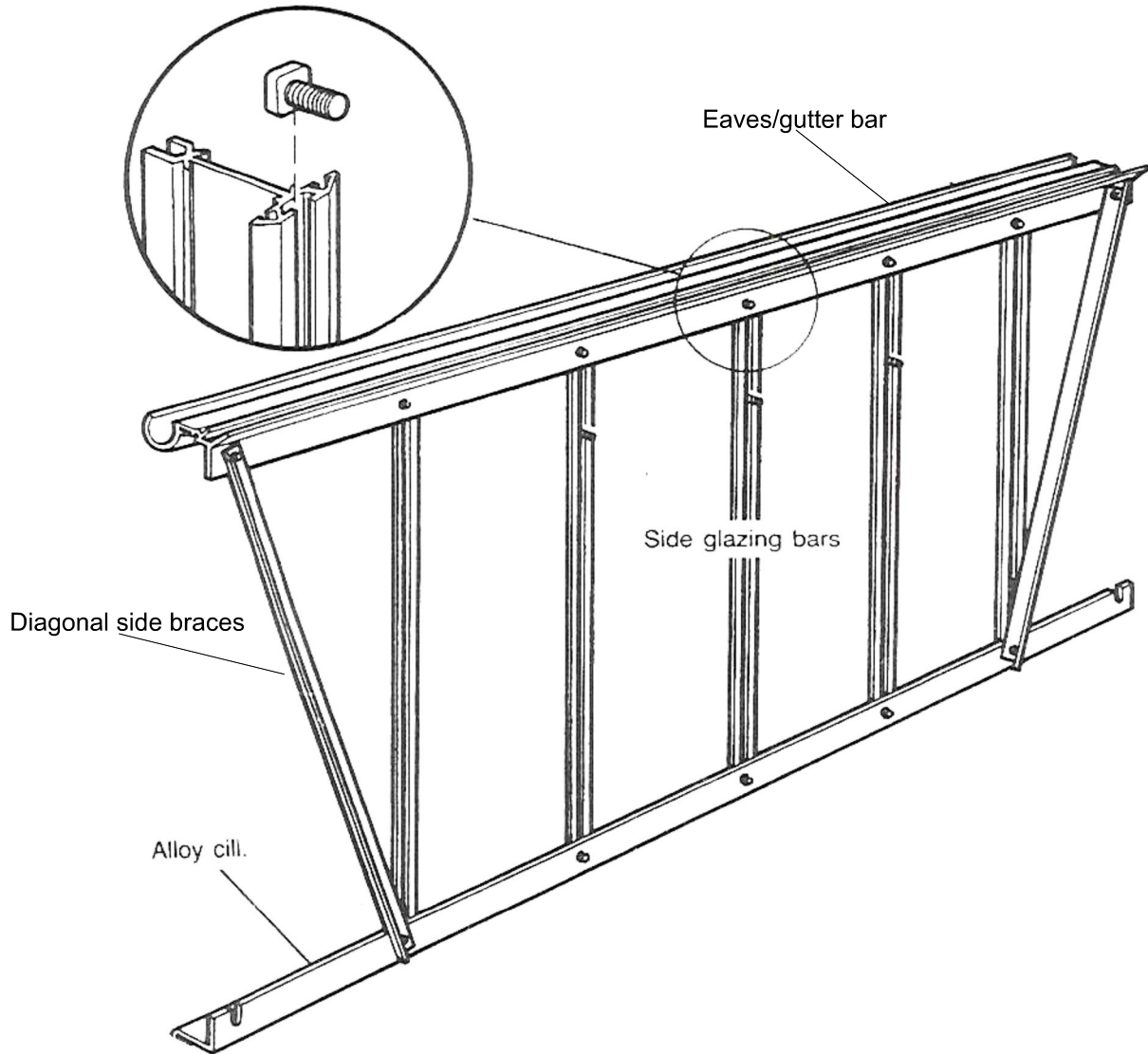
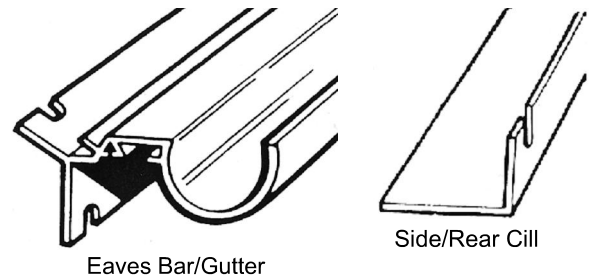
From the main box you require: pack of side glazing bars marked side bars pack of gutters, angles and cills marked side

From the pack of fittings you need: nuts and bolts and glazing beading.

PROCEDURE: For the point of this plan we have used a 12 x 8 side as an illustration. The procedure is identical for a 6 x 8 up to a 20 x 8 apart from an alteration of more or less side bars, nuts and bolts, glazing beading and longer or shorter gutters and cills. **(Key point).**

If you have purchased a **partition** with your greenhouse you will have 2 less roof and 2 less side glazing bars. These are replaced with an extra set of corner bars. You must decide where the partition is to be situated and at that point **leave out** one side bar on each of the side frames. **(Key point).** The partition is constructed when the greenhouse is fully erected prior to glazing. Full details of this procedure given later on pages 28 + 29 but for the time being, do nothing apart from the omission of the side bar. If you have not purchased a partition disregard this and future notes relating thereto.

You need for each side frame:
 1 gutter/eaves, 1 alloy cill, 2 diagonal angles
 and 5 side bars. For other sizes please refer to
 parts list at front of booklet for quantities.



Layout 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.

1. Slide the glazing beading into both sides of each side glazing bar taking care not to stretch the material. Trim off any surplus level with the ends of the glazing bars.



2. Lay the 9 components onto the floor as though you were standing inside the greenhouse i.e. with the gutter and cill facing downwards and the bolt slot of the glazing bar upwards. **(Key point)**. Remember for 14q 16qx 18q and 20q lengths there are extra glazing bars and angles.

3. Before assembling any sections, slide the required number of bolts into the glazing bars. You must decide the position of the louvre. The 2 standard louvres can be fitted on either side of the greenhouse (except where a side diagonal brace intersects the bay) or in the centre bay at the rear end. The louvre is fitted during glazing. Once decided, slide 4 bolts (2 per bar) into the glazing bars onto which the louvre will be attached. If you have ordered Diamond Staging to be fitted to the side of your greenhouse, you will need to insert 2 extra bolts into each glazing bar that the staging will cover. These bolts will be used later in the booklet. (See staging instruction).
4. In addition to louvre and staging bolt requirement, slide 3 bolts into each glazing bar, the middle bolt will be used later to attach the cantilever tee bars (remember louvre bolts). Fix the combined eaves and gutter bars to the glazing bars by pushing the bolt previously inserted through the holes in the lower flange of the eave and secure with a nut. Ensure that the glazing bar is pushed up under the gutter and is tight up against the inside shoulder of the eave. **(Key Point)**. Do the same with the rest of the glazing bars.
5. Fix the cill in a similar way to 3 above, but start with the middle glazing bars and work outwards.
6. The 2 outer glazing bars have the angle ties bolted to them. Before attaching the nuts, place the tie bar over the bolts so that they point outwards towards the end of the eaves bar. They must be arranged so that the inside of the angle, in each case, faces towards the middle of the house. Do not attach the angles to the eave/gutter bar at this stage.

N.B. For the 6q 8q 10q and 12q models there are 2 angle ties per side, for the 14q there are 3 and for the 16q 18q and 20q models there are 4 per side: the extra braces are centrally positioned (diagonally like the 2 end ones) for additional strength.

7. Ensure that the glazing bars are tight up against the cill and inside shoulder of the eave, tighten all the nuts. The nuts and bolts are high tensile and are much stronger than other ordinary alloy bolts. **(Key point)**.
8. Do exactly the same with the other side frame. The pre-inserted bolts for cantilevers and louvre if required will be utilised later in this booklet.

REAR END ASSEMBLY

For the construction of this frame you require from the main box: 1 pack of corner bars marked rear end corner bars, 1 rear end pack of glazing bars marked rear end and 1 rear end horizontal brace marked rear end. The standard shelf can be fitted afterwards but make sure you slide 2 bolts down the bolt channels of each glazing bar and rear end corner bars. (See step 4).

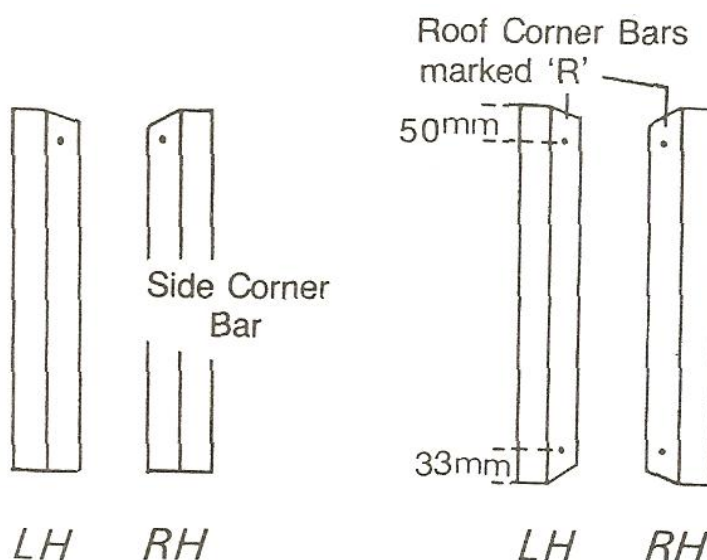
From the pack of fittings you need: nuts and bolts, glazing beading and gusset plates. 1 large (ridge plate) 2 small (eave plates). These plates are taped up with the casement stays elsewhere in the box.

PROCEDURE:

1. Starting with the pack of corner bars split the tape holding them together and first identify the 2 roof bars from the 2 side bars. Side corner bars are longer than roof. The side bars have one hole and one mitre, both at one end. The other end has no hole and is square cut. The roof bars have 5 holes in the flange and are mitred at both ends and in addition have a letter R written at the apex on the **outside** of the bar.

N.B. If your greenhouse is a painted one, the roof corner bars will not be marked with a letter R. They can be identified from the side bars as outlined below. **(Key point)**.

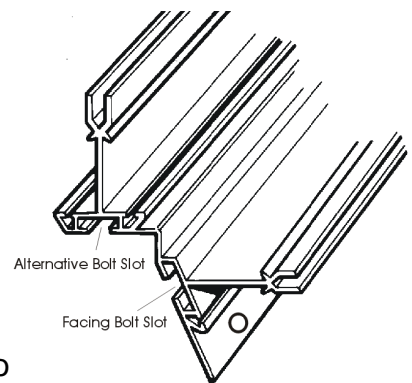
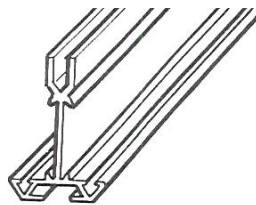
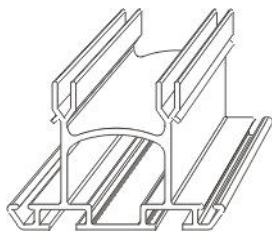
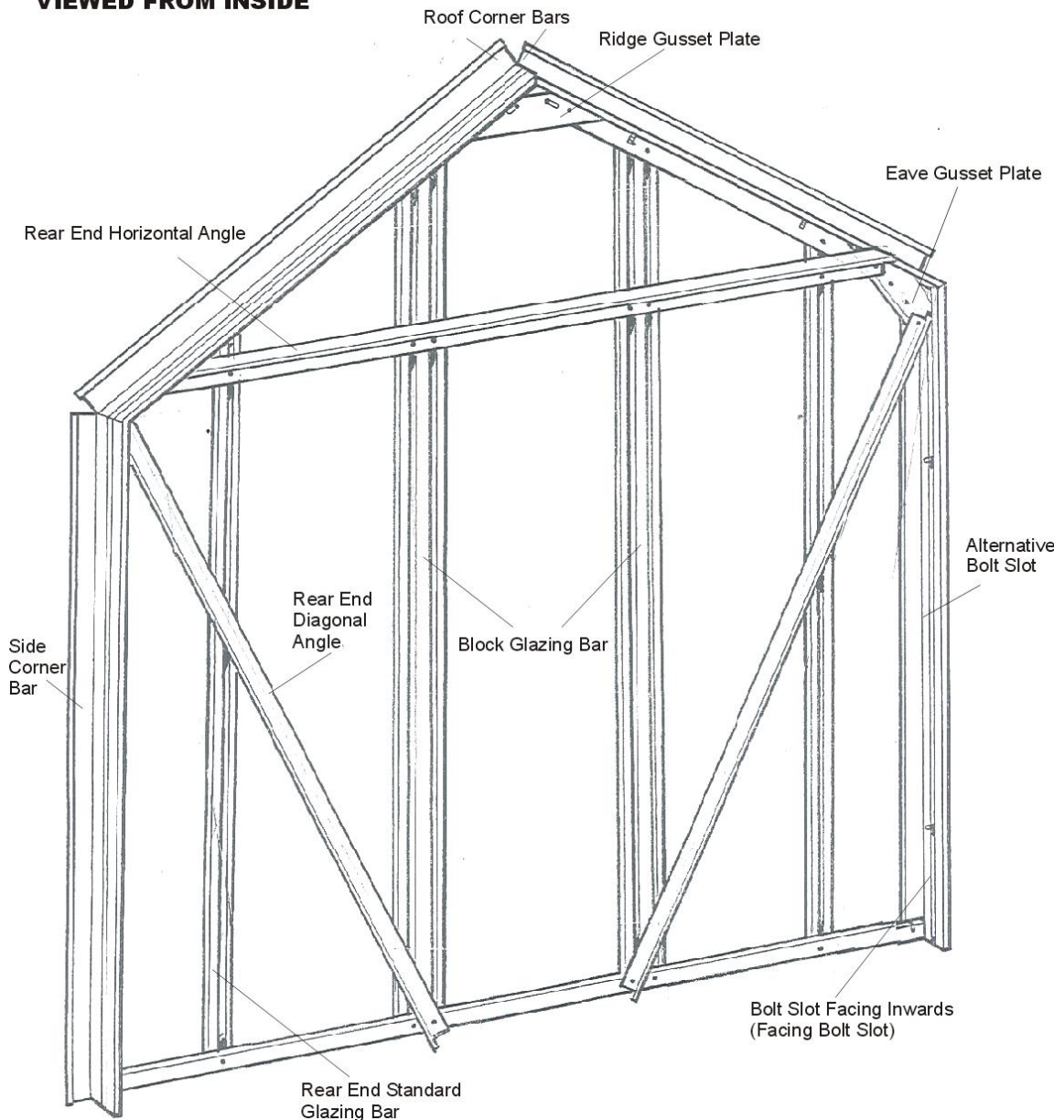
The bars are also handed so you must identify the left and right hand. Standing up, hold one **side bar** vertically in your left hand, the other in your right, rotate the bars so that the 2 bolt slots are facing in towards you with the mitres at the top (inside view). Viewed this way the 2 mitres should run down to each other. The



roof bars can be handed similarly, keeping the bolt slots facing inwards and the letter R to the top. With the painted model, the top can be identified by observing the 5 holes in the flange. The two holes nearest the end are at 50mm and 33mm centres. The 50mm end is the top i.e. nearest the ridge. On the outside you can identify them by ensuring that the R's (indicating ridge) are at the top, the mitres will then run into each other.

2. Slide the glazing beading into the beading channels of the 4 vertical glazing bars and the 4 corner bars, taking care not to stretch the material. Trim off any surplus level with the end of the bars. N.B. The corner bars have 3 grooves to receive the glazing bead; do not put any in the middle one. **(Key point)**.

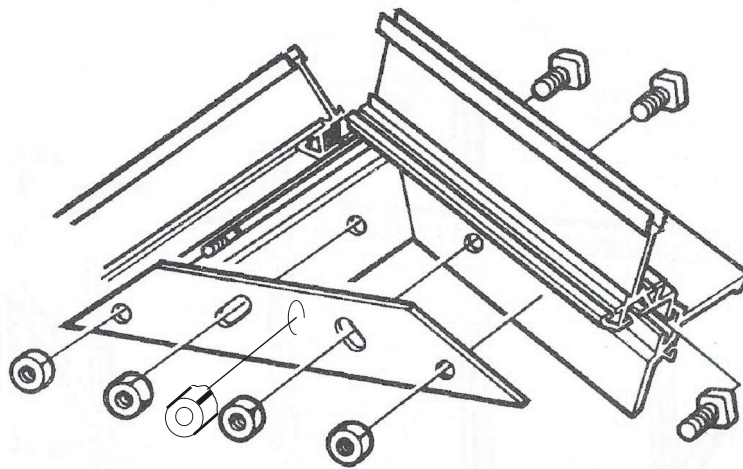
VIEWED FROM INSIDE



3. Slide 2 bolts into the alternative bolt slot of both side corner bars (see diagram for details). 1 bolt at the top and 1 at the bottom. Put a nut on and lightly tighten leaving each bolt approx. 50mm from each end of the bar. Slide 3 bolts into each roof corner bar (1 top, 1 bottom and 1 middle of each roof bar). These bolts will be used later in general assembly.

4. Lay out the components of the frame on the ground as though you were standing on the inside i.e. with the bolt slots uppermost. Ensure that, having correctly identified the roof from the side corner bars, left and right hands (see previous text) you have the roof bars with the letter Rq(indicating ridge) at the top on the outside i.e. towards the ground. **(Key point)**.

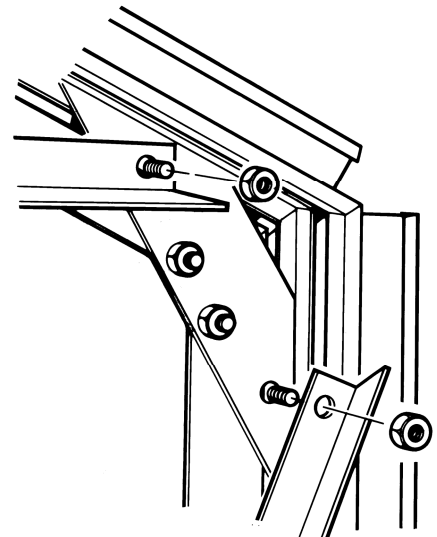
5. Starting at the apex (2 corner bars opposite each other marked \mathbb{R}) slide 1 bolt into the facing bolt slot i.e. the one that is facing upwards is set at 90° to the other . 4 above. **(Key point)**.



6. Place the hole in the **Ridge** gusset plate (larger of the 2 types) over the bolt, slide the plate left or right until the slotted hole in the plate lines up with the locating hole in the flange nearest to the end of the corner bar. Put nuts on both bolts, i.e. flange and plate, leave loose at this point.

7. Do exactly the same with the other roof corner bar ensuring that the two bars are pressed tight up together behind the **Ridge** gusset plate. **(Key point)**. N.B. Leave nuts loose at this point.

8. Now moving to the other end of the roof corner bar to the eave gusset assembly, sliding one bolt into the facing bolt slot (the one that is facing upwards and is at 90° to 4 above). Place the eave gusset plate (smaller of the 2 types) onto the bolt and move it left or right until the next hole in the plate lines up with the locating hole in the top of the side corner bar. Place a bolt through the hole and put a nut on finger tip tight only. **(Key point)**. At this stage do not put a nut on the first bolt.



9. Attach the top of the side corner bar to the eaves gusset plate in the same way as above ensuring that both corner bars are tight up against each other behind the eave plate.

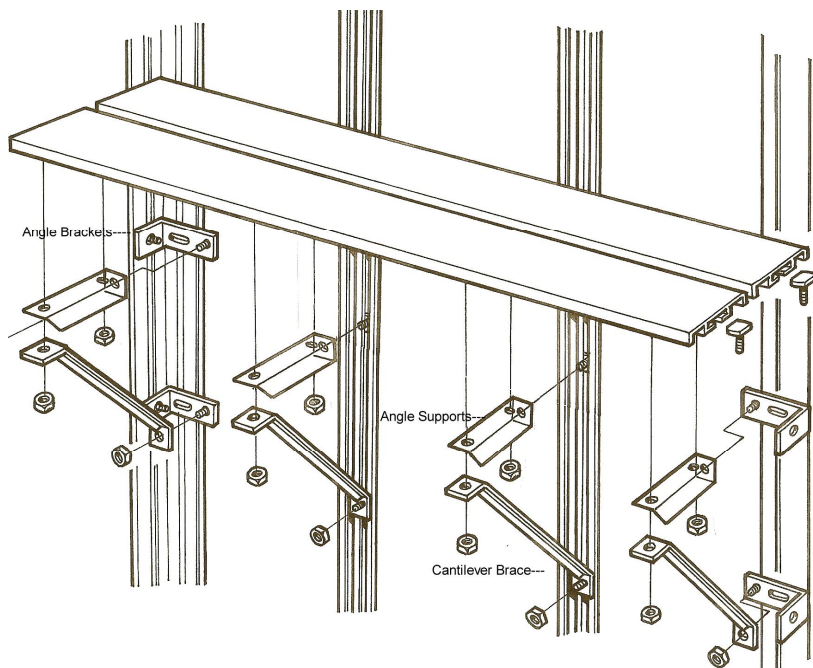
10. Repeat steps 8 and 9 at the other corner with another eave gusset plate on the opposite side of the rear end assembly. N.B. Leave nuts loose at this point.
11. Insert 4 bolts into the bolt channel of all 4 rear end glazing and block glazing bar. The bottom 2 bolts in the block bars will be used to fit the shelf at a later point. (See shelf instruction) If you are to fit a louvre to the rear end, insert another 2 bolts into the **inner bolt slot** of each block glazing bar (i.e. the slots nearest the middle). **(Key point)**.
12. Attach the 4 vertical glazing bars to the roof/corner bars. Slide the last bolt in each bar you inserted in 11 above to the end of each bar and insert them through the holes in the flange of the roof corner bar, place the nuts on and finger tip tighten.
13. Attach the bottom cill, marked **rear end** in the box, to the left and right hand side corner bars by inserting a bolt into the facing bolt slot. Line the bolts up with the slotted hole at each end of the cill, put nuts on and tighten up ensuring that the corner bars are pushed right down into the angle of the cill. **(Key point)**.
14. Slide a bolt into the bolt channel of all 4 glazing bars and attach the 4 vertical glazing bars to the bottom cill in a similar manner to 11 above, the two longer heavy duty bars to the middle holes, and the shorter ones to the outer holes. Before attaching the nuts to the longer bars place the diagonal angles onto **inside** bottom bolt of the block bar nearest the middle and put a nut on finger tip tight only. Ensure angle is bolted to inside of double bolt on angle cill. See diagram on page 11. Attach the other end of the angle brace to the **bottom bolt** of the eave gusset plate, put on the nut and leave loose. **(Key point)**. Do the same with the other diagonal brace.
15. Now you can attach the long angle horizontal brace marked **rear end** in the box to the **top bolts** of the eave gusset plates. The angle should be facing upwards, put the nuts on and finger tip tighten.
16. Now attach the horizontal brace to the 4 upright glazing bars utilising the last bolts you inserted in each vertical bar. Put the nuts on and leave loose. **(Key point)**.
17. The rear end is now almost complete. Before tightening all nuts check the corners to ensure they are tightly up against each other and that all the vertical bars are tight up against the angle of the rear end cill and corner bar. Tighten all nuts.

SHELF FITTING

The Diamond shelf is intended to fit on the rear gable end of the greenhouse. Not only is it very functional, but it adds lots of strength to the greenhouse.

The parts required for the shelf are:-

- 2 Shelf top sections
- Various numbers of the following dependent on shelf length:
 - 10+ cantilever braces
 - Angle brackets
 - Angle supports with 45° mitre at one end.
 - Nuts/bolts

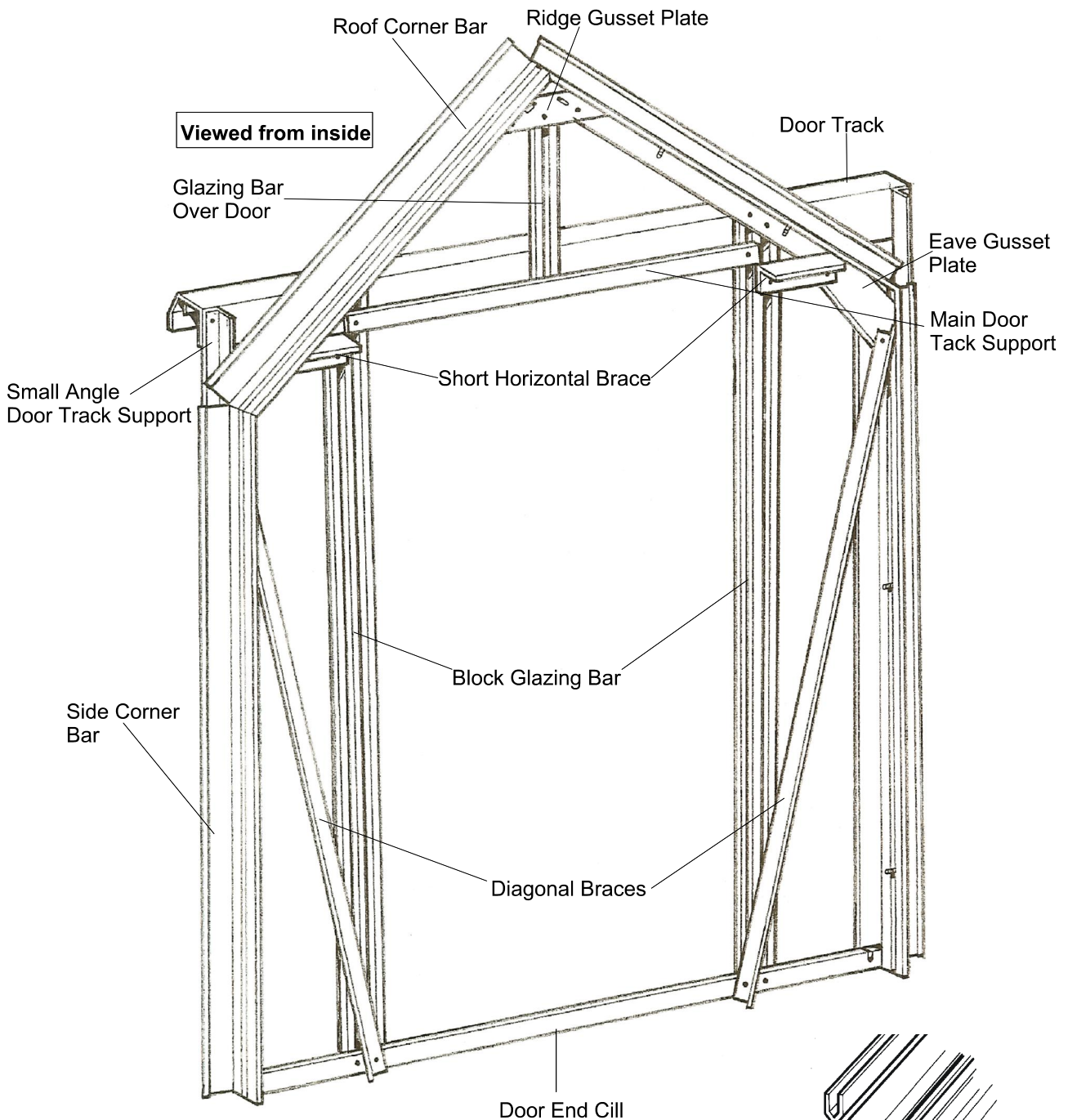


You must decide the height you want your shelf to be fitted. Fix one of the small angle supports to each vertical glazing bar at the desired height utilising the pre-inserted bolts (with the square edge against the greenhouse wall, mitred edge sticking out). The angle supports must be exactly the same height. The longer edge of the bracket should come along the back of the greenhouse towards the block glazing bar as illustrated. The GX 800 model shelf, fitted to the rear end is bolted on to the 4 vertical glazing and block bars only, not the corner bars. You do not require the 4 small angle brackets for the GX800, only needed for the GX600.

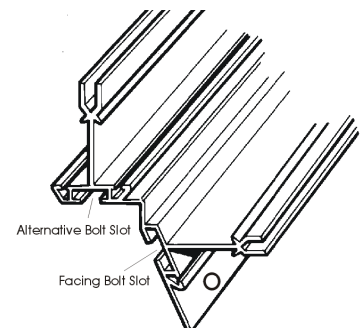
Attach a cantilever brace to mitred edge of the angle support, and bolt the vacant end of the cantilever to the bolt channel of the glazing bar onto which the angle bracket is fitted. To fit the cantilever to the extremes of the shelf you attach to the shelf as already mentioned. Attach an angle bracket in the same way as the corner bar bracket (longest edge) to come across the greenhouse (as above). The vacant end of the cantilever is fitted to the angle bracket. Tighten all nuts. (GX600 only).

The shelf runners are fitted to the angle supports utilising the bolt slot on the underside of the shelf. Insert a bolt into the bolt slot of the shelf. Move into position where it will line up with the pre-drilled hole in the angle support. Put a nut on and tighten. Do the same with all of the angle supports for both shelf runners. You will notice that the shelf is approx. ½+ from the back wall. This is to enable the diagonal angles to remain in position. Your shelf is now complete.

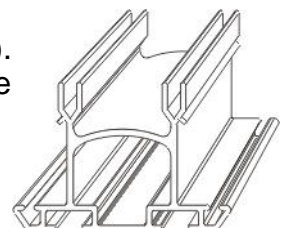
DOOR END ASSEMBLY



For the construction of this frame you require from the box:
 1 Pack of Corner Bars . marked $\text{corner bars} \text{ door end}$
 1 Door End Pack . marked door end
 1 Door End Cill . marked door end



From the main bag of fittings you need: nuts and bolts, glazing beading and gusset plates . 1 large (ridge plate) 2 small (eave plates). Remember, these are **not** in the pack but are taped together with the casement stays elsewhere in the box!



PROCEDURE: The format for the door end is similar to the rear end assembly up to and including step 12 except that there are 2 vertical block glazing bars for the door end, and non of the standard glazing bars, so please refer to those instructions in the previous pages. Items for this section are marked \neq door end \neq

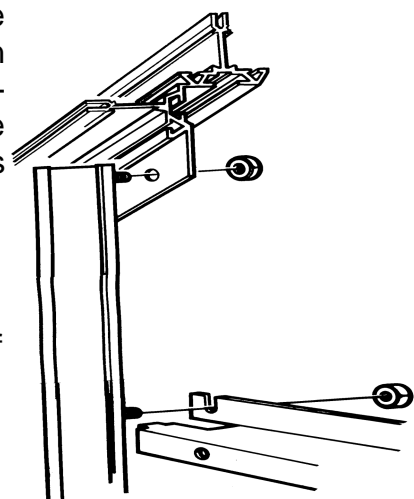
You will need . double door corner bars + double door end.

1. For step 13 Slide 3 bolts into both bolt channels of each vertical glazing bar into both bolt channels, 2 at the top and 1 at the bottom.
2. The long horizontal brace (in step 14) is replaced by 2 shorter ones that attach to the upper bolt of the gusset plate but stop at the vertical glazing bars to facilitate the doorway. It can sometimes aid the construction of the door end, if the rear end horizontal brace is temporarily inserted instead of the two shorter braces whilst the end is being squared up.
3. Now attach the 2 vertical block glazing bars to the roof corner bars. Slide the last bolt you inserted in both channels of both bars to the top of each bar, and insert them through the holes in the flange of the corner bar. Place nuts on and finger tip tighten.
4. The **main door track** support can now be fitted at a point half way between the horizontal angle and the corner bar. It is important to note the 2 slotted holes at the extremes of this section are facing **upwards** as illustrated and not **downwards**. (**Key point**) Do not fit the top door track at this stage.
5. Check that all joints are tight and all braces are in position, then tighten up all nuts. The end is now complete.

PROCEDURE: Having fitted the main door track support, you **must not** fit the short glazing bar that goes above it at this stage. (**Key point**). This will be fitted later when the doors have been installed (see later text). **Do not fit the top door track or small angle door track supports at this stage. (See page 29).**

You have now completed the 4 main frames of the structure which can now be joined together. You need to do this on any flat surface near the greenhouse site. If your base is prepared however, you can carry out the assembly there to save lifting it on later. But before this we construct the vents, doors and louvres.

NB. Because there is no long horizontal brace on the door end (only the rear end has this) There can sometimes be \neq spread \neq between the two corner gussets making the fitting of the main door track support and the two horizontal braces difficult. If this happens, then a useful tip is to temporarily fix the rear end long horizontal angle to the door end so as to achieve the correct angles.



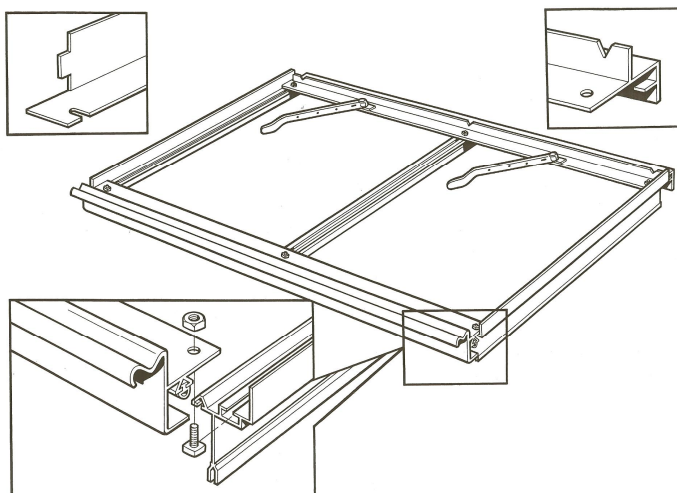
ROOF VENT ASSEMBLY

The roof vent has 6 pieces of aluminium (made up of 2 side rails, 1 top rail, 1 bottom rail, 1 slam bar, and 1 intermediate glazing bar). The glazing bar below and behind vent will be found with the roof bars. From the main box of fittings you require glazing beading, nuts and bolts, 4 casement stay pins, 2 casement stays and M4 stainless steel nuts and bolts.

PROCEDURE:



1. Identify the slam bar and attach the 4 stay pins to the outer side of the angle using M4 stainless steel nuts and bolts and the pre-fabricated holes.
2. Lay the other 5 pieces of the vent on a level surface as though you were on the inside of the vent (with the bolt slots of the side bars uppermost and the bolt 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 the nuts.
5. Now attach the intermediate glazing bar to the holes in the top and bottom rail by utilising the bolt slot of the glazing bar.
6. Fit the casement stays 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.

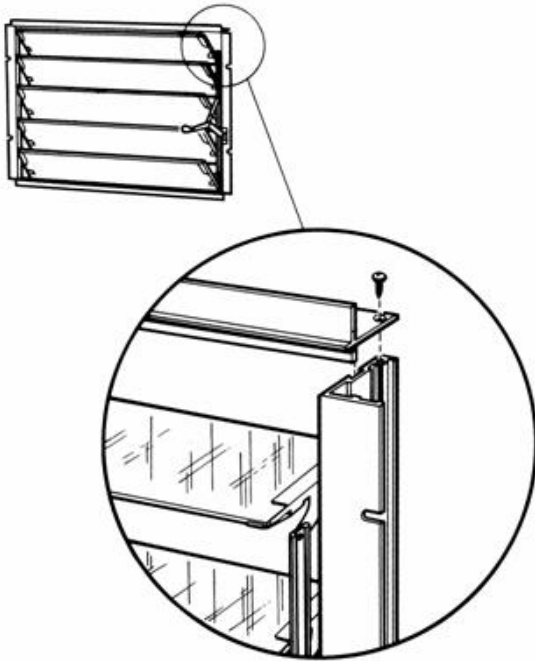


The vents can be positioned onto the ridge after general assembly by sliding them along the ridge from the end and locating them to the desired position. Do not fit the vents at this stage. (See page 31).

5 BLADE LOUVRE

For the louvre assembly you will need.

1 top cill, 1 bottom cill, 2 side jambs (one with handle), 4 small vent screws, 4 ½ headed nuts and bolts and glass blades.



PROCEDURE:

Place top cill into position on side jamb of louvre and secure with self tapping screws.

Do same on the other top corner.

Do same with bottom cill.

Please note that the handle is on the right hand side. The diagrams are viewed from inside.

You attach the louvre to the frame during the glazing of the greenhouse.

INSTALLATION OF LOUVRE TO THE STRUCTURE

The louvre is fitted after the unit is assembled fully and during glazing.

The louvre is fitted to the vertical glazing/wall or corner bar utilising either 4 unoccupied bolts previously inserted, or the 4 half head bolts supplied with the louvre kit.

The louvre is fitted from inside the structure with the angle jambs fitting around the vertical greenhouse bars concerned.

The louvre handle is on the inside of the greenhouse and is fitted to the right of the louvre (as viewed from the inside).

To determine the height, place the relevant piece of glass below the louvre position. This position will vary (see greenhouse glazing plan). Do not glaze at this stage.

Offer the louvre frame to the bolts, add a nut to each bolt and fingertip tighten.

Slide the louvre frame to the top of the pane of glass so that the bottom cill of the louvre rests on the glass.

Tighten all nuts.

Louvre frame installation is now complete.

GLAZING THE LOUVRE

The louvre must be glazed after it has been installed to the structure.

Open the louvre using the handle.

Slide each individual blade of glass between the jambs into the aluminium holders.

The glass will come to rest in the holder at the bottom of the jambs.

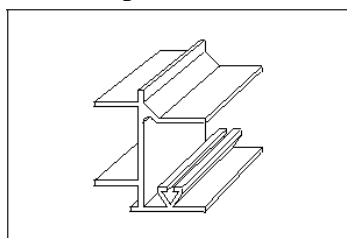
DOOR FRAME ASSEMBLY

Each Door consists of:

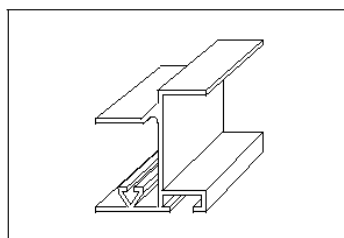
- 1 unhandeD door post
- 1 handed door post (handed post for left door is different profile to the handed right hand door post)
- 3 infill panels (1 with pre fabricated lock hole for right hand door only) for lock barrel
- 1 top and bottom door panels
- 3 panels of glass which must be fitted during door assembly. **It is not possible to fit glass after the door is built.**

From the main bag of fittings you require;

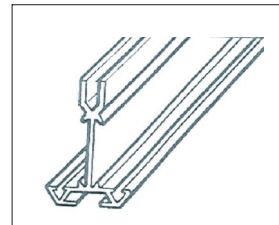
- 2 door wheels
- 1 clip on nylon door skid (this might already be fitted to the bottom door panel)
- 2 lengths of black brush draught excluder with PVC carrier
- Door lock, self tapping screws and spring washers
- 12Ø glazing beading
- Door handles
- 3 PVC Glass strips



HANDED DOOR POST
RIGHT HAND DOOR



HANDED DOOR POST
LEFT HAND DOOR



UNHANDED
DOOR POST

Left hand Door (viewed from outside)

Identify the correct door posts. The handed door post for the left hand door has a bolt channel, whereas the handed door post for the right hand door post does not. **(Key point).**

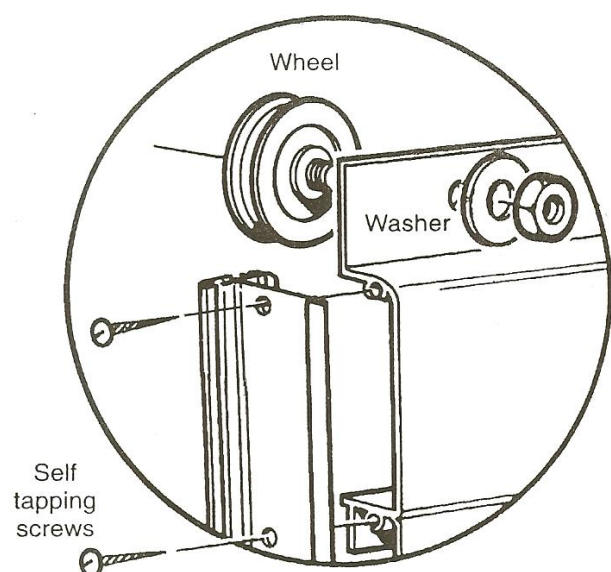
1. Place one unhandeD post and the handed post for left hand door on a level surface roughly two feet apart with the bolt slots facing downwards. (UnhandeD door post on the left, handed door post on the right). The top of each side post has two screw holes in it, the bottom has three. **(Key point).** Slide the glazing beading into the groove of each bar i.e. only one length of glazing beading per bar.
-
2. Place the top, bottom and 3 infill panels in position as shown by the position of the screw holes in the side pieces and the panels. The top panel has the greenhouse name on it. The bottom panel has the edge for the door skid to fit on. The lower infill panel locks on to the bottom panel. The infill panel for the left hand door **does not** have a pre fabricated hole for the lock barrel.
 3. Fix the left hand door post to the door panels by screwing through the door side pieces into the holes provided in the edge of the panels with the self tapping screws. The screws will go in more easily and with out 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. **GLASS MUST BE FITTED TO EACH DOOR BEFORE THE 2ND DOOR POST IS FITTED. (KEY POINT).**

5. Before fitting the unhandled door post, offer the glass panels to the door (see glazing plan in booklet for glass size guide on door), slide them in from the side. Carefully attach the unhandled door post in the same way as before, ensuring the glass is sitting in the correct position (sitting on the beading channels of the door posts) before tightening the screws.
6. Make sure all angles are square and tighten all screws. Now insert 2 glazing clips to the glass on the unhandled door post.
The other side of the door is clipped using a pvc glass strip (or clip cap). Cut the strip to the correct length and push into the cavity between the glass and the handed door post. The cap when fitted acts as a wedge to prevent movement of the glass. Metal clips are not fitted to this bar.
7. 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 normal nuts in general assembly. The wheel will revolve freely because it has ball bearings in it. **The wheel has a collar protruding from the centre, this collar goes against the inside face of the top door panel. (See picture below).**
8. Slip the nylon door skids on each of the bottom panels. This may already have been done prior to delivery. After fitting the doors (see later in the booklet), you may need to lower the door skid so that it engages with the bottom door cill to allow smooth movement of the door. Lower the skid on each door and insert a self tapping screw at each end of the skid to reinforce the position.
9. Build the right hand door using the remaining handed and unhandled door post. Viewed from the outside, the handed door post will be on the left of the door, while the unhandled door post will be on the right. At this point you must decide the height you would like your door lock. The hole to take the door lock is on the left hand side of the infill panel. You can decide to fit this panel to the 2nd or 3rd panel down. **Make sure you fit the glass before final fixing of the door.** See glazing plan towards the back of this booklet.
10. Thread the stainless steel backed brush extruder into the PVC carrier. This may already have been done prior to delivery.

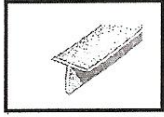
11. Turn the doors over and insert the black brush draught excluder in the groove (bolt slot) in the unhandled door posts. Insert a nut and bolt at the bottom of each unhandled door post and tighten so that the brush will not slip down when the door is in its upright position. Cut off the surplus brush and carrier at the top of the bar.

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

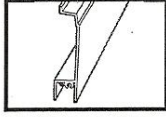
13. Door handles can now be fitted.



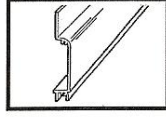
DOOR FRAME ASSEMBLY AMENDMENT



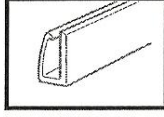
DRAUGHT EXCLUDER



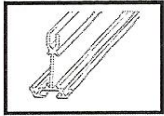
DOOR INFIL PANEL



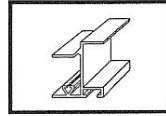
DOOR TOP/
BOTTOM PANEL



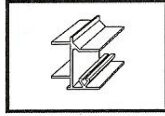
DOOR SKID



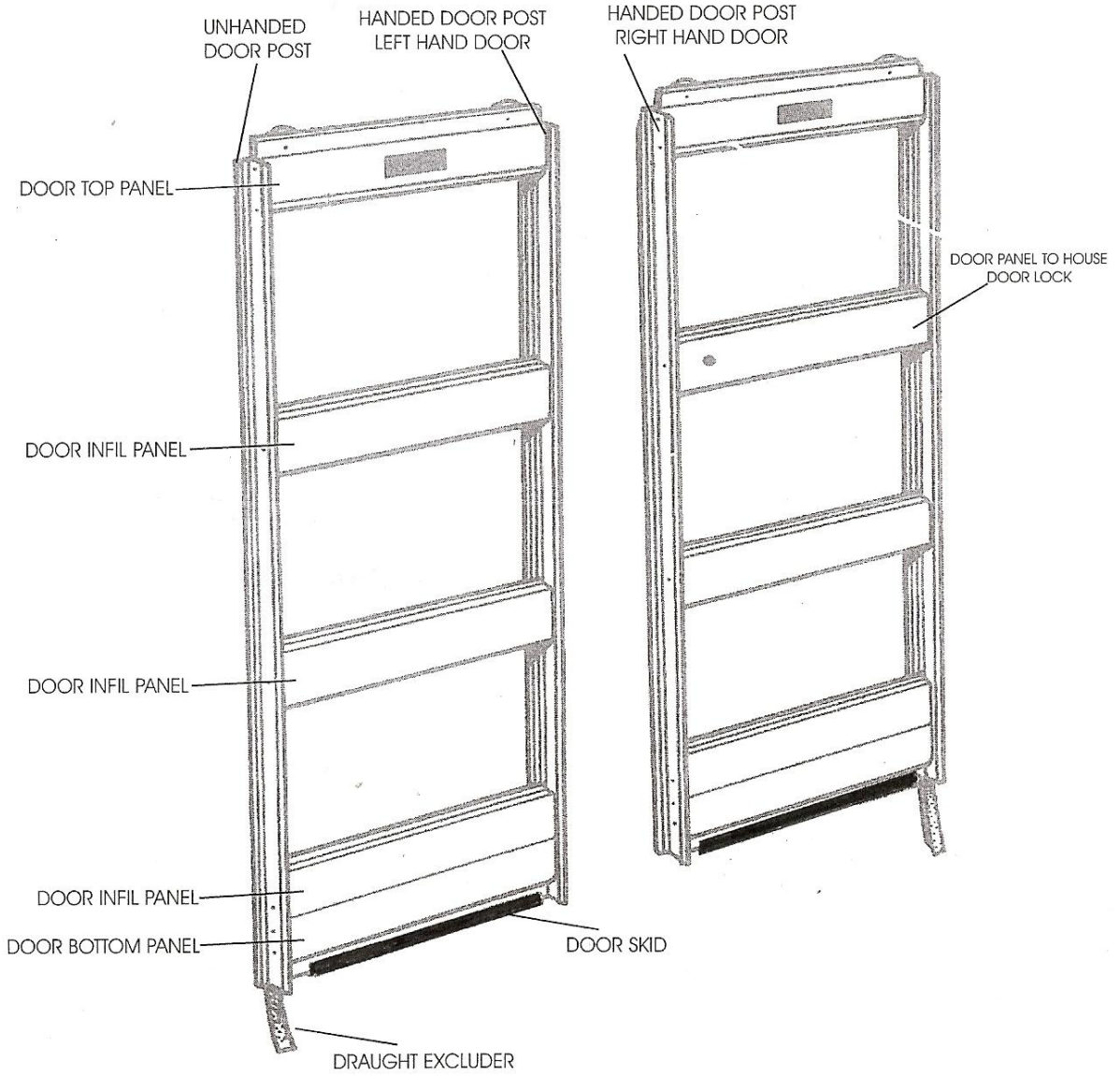
UNHANDED
DOOR POST



HANDED DOOR POST
LEFT HAND DOOR

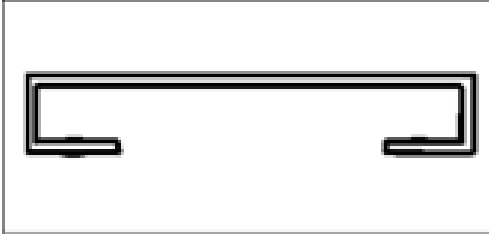


HANDED DOOR POST
RIGHT HAND DOOR



FITTING THE DOOR HANDLES

The handles are fitted to the infill panel on each door (choose between 1st or 2nd panel down). Position the handle centrally, and mark the hole position. Drill 7mm diameter holes (2 holes per door), then fit the handles, and secure with a nut and bolt.

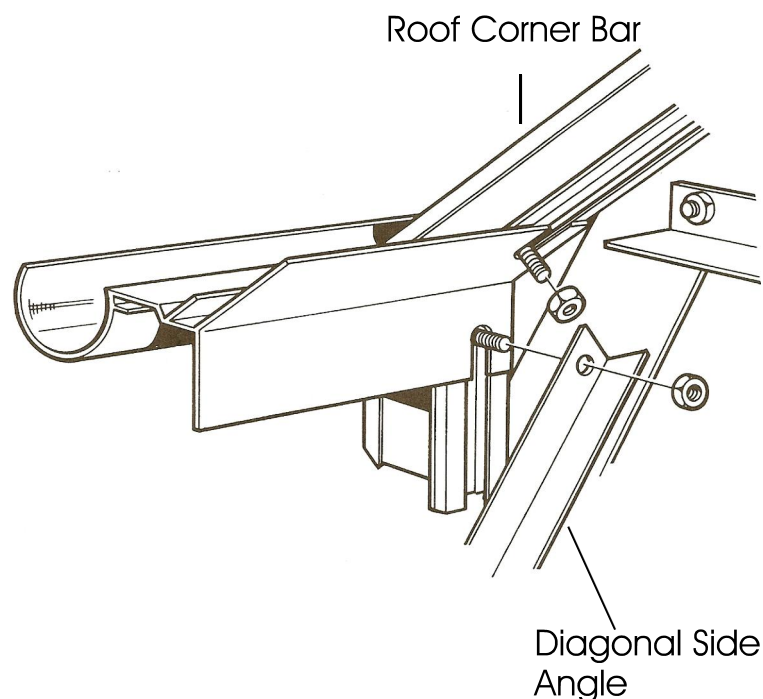


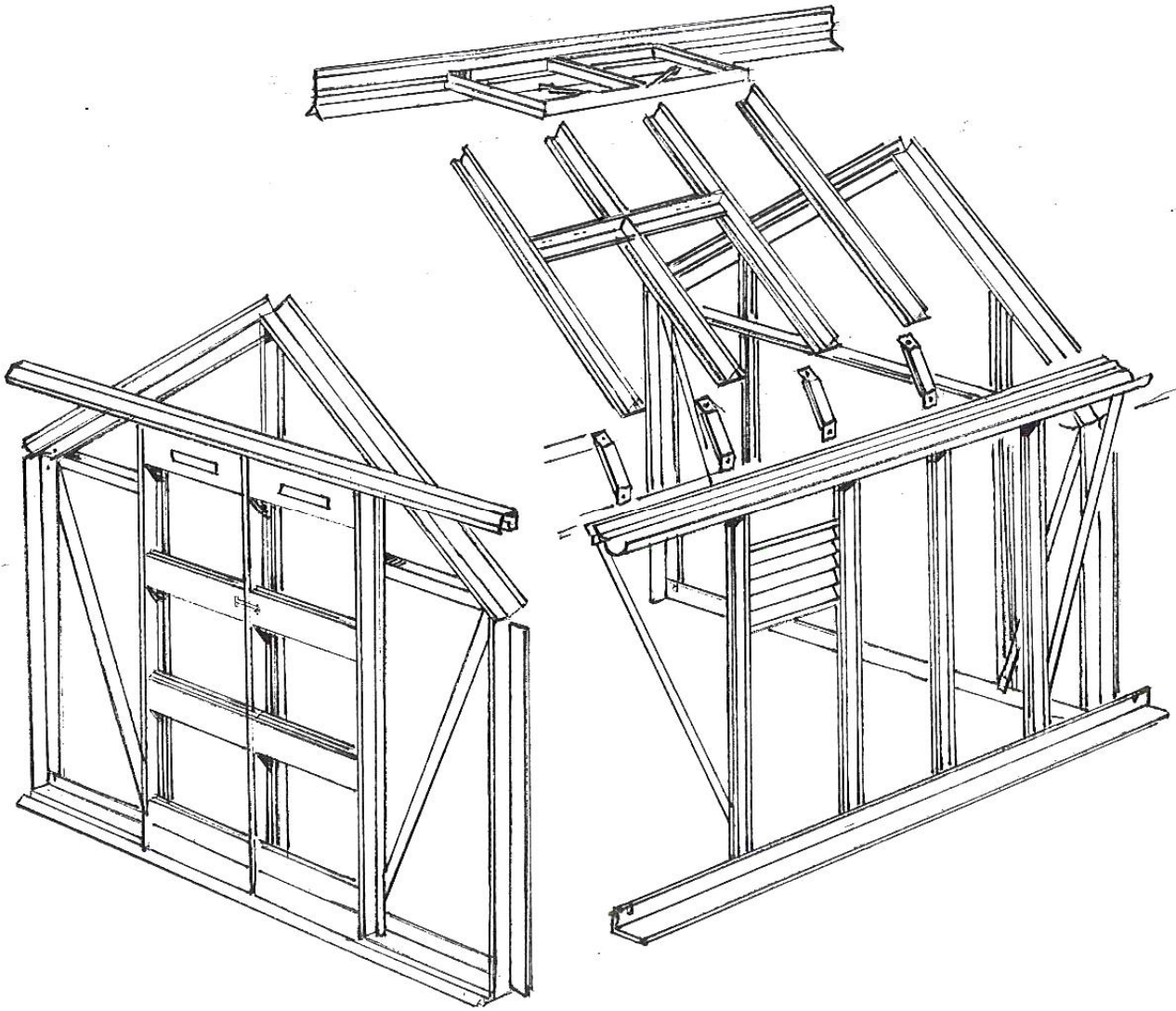
DOOR HANDLE

ASSEMBLY OF THE GREENHOUSE UNIT

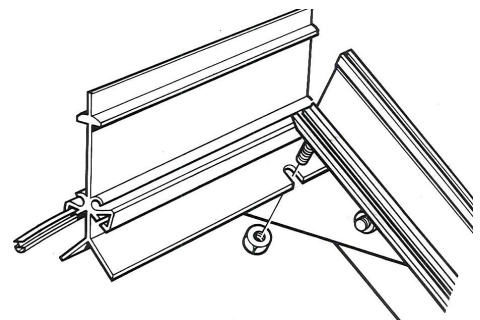
PROCEDURE:

1. With the help of a willing assistant, stand up the rear gable and one of the sides. Standing on the inside of the structure with the gutter facing away from you, insert the eave/gutter bars into the gap between the corner bars, so that the inside flanges which form the angle of roof and side, line up with the bolt slots in the corner bars. **(Key point)** as illustrated.
2. Undo the nuts holding the 2 bolts you inserted in the corner bars, during door end and rear end assembly, and slide them into the slotted holes in the flanges of the eaves/gutter. Put a nut on the top bolt, put the side diagonal brace on the bottom bolt and then the nut, and tighten up.
3. Now stand up the door end assembly and repeat the above procedure.
4. Stand up the other side frame and repeat the operation outlined in 1 and 2 above at both corners.
5. The bottom cill of the sides attaches to the corner bars in a similar way. Undo the nuts and bolts inserted in the gable end assembly, (page 12 item 4) move the cill under the corner bar so that the elongated hole in the vertical flange of the side cill lines up with the bolt slot in the corner bar. Move the bolts down the slot into the slotted hole, put a nut on and tighten up, ensuring that the corner bar is pushed right down into the angle of the cill. Do the same at the other 3 bottom corners.



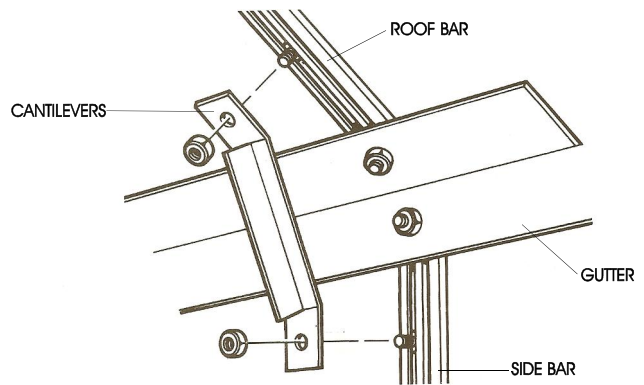


6. The ridge bar is fitted next, but first you must thread the glazing beading into the 2 grooves on the ridge. **(Key Point)**. Lift the ridge bar up to the apex and standing on a pair of sturdy and safely placed step ladders push the ridge into the small gap between the roof corners so that the 2 flanges which form the angle of roof are tight up against the inside edge of the corner bars (as illustrated). The vertical part of the ridge is outside and pointing skywards. Undo the nuts and bolts previously inserted into the corner bars during gable end assembly and push them upwards into the slotted holes of the ridge. Tighten the nuts. Do the same at the other end of the ridge bar.



7. The roof bars can now be attached to the structure but first you must slide the glazing beading into the bars and trim to suit. **(Key point)**. Attach the bars firstly at the ridge, sliding a bolt into the bolt slot of the roof bars and placing the bolt through the holes in the flanges of the ridge. Put a nut on and immediately prior to tightening ensure that the roof bars is pushed up hard against the ridge. Do not attach the bottom of the bars to the eave until all the roof bars are bolted to the ridge. **(Key point)**. Do not yet attach the glazing bar behind or under the roof vent centre at this stage.

8. You will need to insert extra bolts into each glazing bar that has a vent opening and a cantilever tee-bar brace, see details below. Cantilevers are fitted on every bar between side and roof glazing bars, and roof to roof glazing bars. (See main picture). You must remember to insert one extra bolt per cantilever T-bar brace and one per vent per bar. You must also insert 1 bolt per roof bar to enable the fixing of the hanging basket rail. **(Key point)**. In addition one extra bolt would be needed on the bar next to the middle where you require the vent to go. To



summarise . after attaching the roof bars to the ridge insert 3 extra bolts in all roof glazing bars and 4 into the bars that the vent closes onto, before the final bolt at the eave. Now attach the bottom of the roof bars to the eave/gutter bar into the holes in the upper flange. A full-length roof glazing bar is not required where it would have intersected the middle of a double vent. Start with the middle bars either side of the ridge. If you have purchased a partition with your greenhouse you will be 2 roof bars short of a full pack. Omit one each side of the ridge at the point where the partition is to be situated i.e. at the same place where you omitted the side glazing bars (see later text for partition details). Before tightening the nuts that hold the roof bar to the eave you must ensure that the roof bar is tight up against the small flange immediately above the gutter. **(Key point)**. Failure to observe this point and the previous one of keeping the roof bar tight up to the ridge could result in a slight outward bow of the gutters and a slight downward dip of the ridge.

9. At this point you will need to lift the structure onto a firm footing if you haven't already done so.

10. You can now attach the T-bar cantilevers which bolt to the side bars and roof bars as indicated in point 8. Before tightening these cantilevers up make sure there is no sag in the ridge or outward bow in the eave. **(Key Point)**. If you do have this problem you must straighten it out before tightening the cantilevers up. A bow or sag can easily be removed with two people pushing the gutters towards each other until straight, hold it in position whilst a third person tightens up the cantilevers. Alternatively, if you put a rope across from gutter to gutter and with a short piece of wood in the middle, wind the rope thus reducing its length and bringing the gutters nearer to each other therefore lifting the ridge. Then attach the cantilevers.

11. At this point you must fit the hanging basket rail to each side of the roof utilising the middle unoccupied bolts in the roof glazing and corner bars. The exact position is down to your preference. The hanging basket rails are the same length as the gutters, (except where partition is present) and they are fitted parallel to the gutter attaching to all the roof glazing and corner bars. If you have a partition you will need to cut the basket rail to enable fitting on both sides of the partition, unless you have previously notified us of the exact position of the partition, in which case the cut and fabrication will be pre-done at our factory.

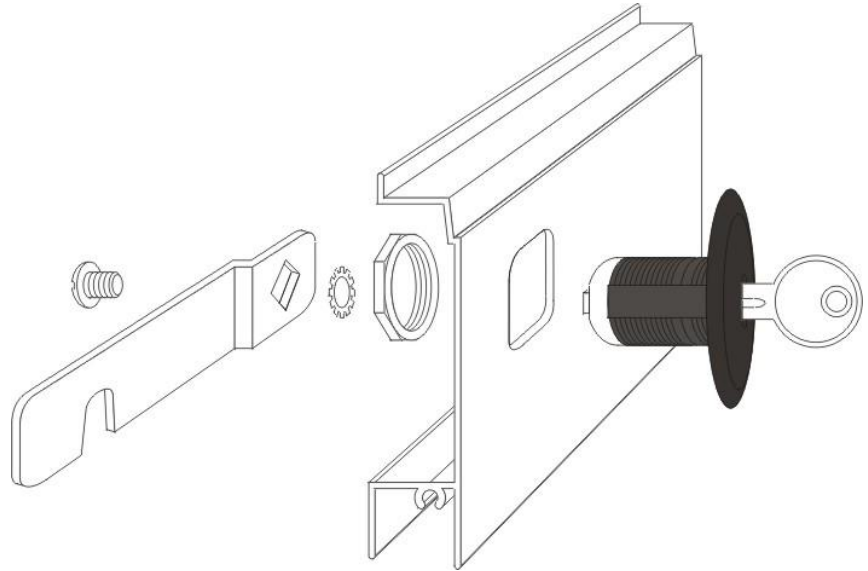
The main structure is now complete and it must now be anchored down onto its permanent position.

FITTING THE DOOR LOCK

The door lock must be fitted after the doors are in position (**Key Point**). Undo the ring bolt from the door lock, and insert the barrel through the hole in the panel from the outside. Re-attach the ring bolt to the barrel on the inside, and tighten.

Now attach the cam lever, washer and screw to the door lock from the inside position of the door. The lock will turn through 90 degrees both ways, so you must ensure the cam (when fitted) is pointing skywards (unlock position) and horizontal (locked position).

Now using a cropped head bolt, attach the domed pin to the bolt channel of the handed door post on the left hand door (viewed from outside). Move the pin up or down in the channel so that the notch on the cam locates comfortably when horizontal. Tighten all components.



FINISHING OFF

To prevent the door from sliding past its opening, you must fix 2 angle brackets to the door end assembly. Insert a cropped head bolt into the bolt channel at the top of the left hand glazing bar (viewed from the inside) and fix an angle bracket as shown in the picture below.

The bracket must be fitted at the same height as the door panel so that, as the door moves left or right, the bracket prevents the door from moving too far along the top door track.

Repeat at the bottom of the door.

Repeat for the 2nd door.

To facilitate smooth running of the door, fit 1 flat bar at each end of the top door track.

The flat bar has 2 holes of different size.

Loosely fix the larger hole to the bolt channel at the back of the top door track using a short bolt and allow the flat bar to hang vertically down.

Move the flat bar along the top door track until the small hole in the flat bar meets the self tapping screw groove in the roof corner bar.

Fix the small hole in the flat bar to the corner bar using a self tapping screw.



SECURING DOWN

For securing to a concrete/flagged area you will need to utilise the angle brackets (found in the bag of fittings). **You must ensure that the greenhouse is level and square prior to anchoring down, failure to observe this point could lead to problems when glazing the roof.**

The securing is done on the inside of the greenhouse, utilising the pre-drilled holes in the 4 bottom cill sections. The pre-drilled holes are already currently in use with the attachment of all the vertical bars on the greenhouse.

You must remove the nut from the bolts in the bottom cill, and then place the angle bracket over the bolt before returning the nut to position.

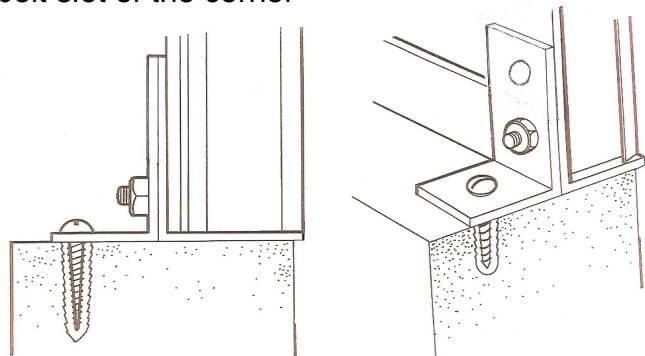
When all the angle brackets have been attached you can drill the concrete/flagged area to suit. Insert the plastic plug, then screw down.

For securing to a soft area (grass, soil etc.) you must utilise extra anchors (purchased separately). These anchors are approx. 14+long. One anchor must be positioned in each corner of the greenhouse and at least every 2nd glazing bar thereafter. You must use the angle with 4 holes at one end to attach to the bolt slot of the corner bar, (you will need to use ½ headed nuts and bolts) and also the holes in the cill which attach to the corner bars.

You will see that a large proportion of the angle is lower than the cill of the greenhouse. You must dig small holes in which the surplus aluminium can be buried underground.

When you are happy that the greenhouse is square and you have glazed the building to satisfaction, (see glazing plan later) you must concrete the anchors into the ground.

In the kit of fittings you will find a number of cropped head or half head bolts. Insert a cropped head bolt into the glazing channel of each vertical bar onto which a securing bracket is mounted. Line up the bolt with the 2nd unoccupied hole in the angle bracket. Put a nut on and tighten.



PARTITION

If you have purchased a partition it is at this point that you construct the frame in situ. In the box you will find packs marked:

Partition corner bars
Partition door end cill
Partition door track
Partition door panels
Partition door posts

You will also require a number of fittings from the box:

2 eave gusset plates
1 ridge gusset plate
Glazing beading
Nuts and bolts

PROCEDURE:

1. Starting with the corner bars, identify the roof and side, left and right hands as you did earlier. For roof bars there are no double holes. The roof corner bar is similar to the rear end roof corner bar except that it has a single hole where the rear end bar has a double hole near the apex.

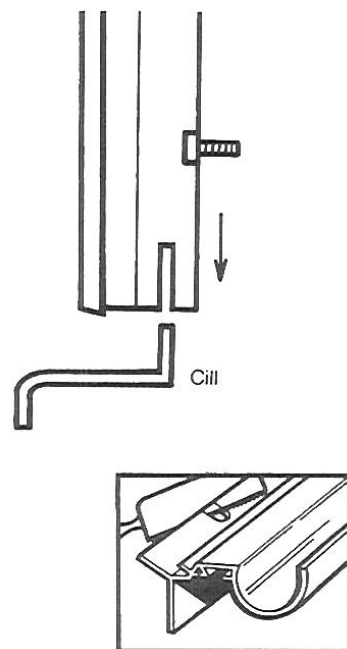
2. Each bar has a saw cut approx. 20mm into the bar from each end, but apart from that they are identical. Insert glazing beading as before . but this time into all 3 grooves of the corner bar. **(Key point)**.

3. Having established where the partition is going you will need to make the holes in the gutter, ridge and cill into slots. Do this by carefully hack sawing down into the hole to form the slot, as illustrated.

4. Take the left hand side bar, insert 2 bolts into each of the 2 bolt slots, and then offer it up to the eave/gutter and cill so that the flange of the cill and the eave are inserted into the saw cut. **(Key point)**.

5. Slide the 2 bolts into the bolt slot facing inwards, to the holes in the cill and eave/gusset. Put a nut on and finger tip tighten. Do the same with the left hand roof corner bar, having first inserted 2 bolts into each bolt slot. (Don't forget to ensure that the ~~R~~qis at ridge and **not** at the eave) now do the same with the other side and roof corner bars.

6. Next offer the gusset plates to the corner bar at the point where they meet. Slide the bolts in the alternative bolt slot towards the gusset plates and line up the holes in the gusset plate with the bolts in the alternative bolt slot and in the flange of the corner bar. Insert 2 bolts through the gusset plate and flange (middle 2 holes), put a nut on . finger tip tight. Do not put the nuts on the upper and lower bolts of the eave gusset plates at this stage. **(Key point)**.



7. The cill can now be attached to the facing bolt slot of the partition corner bar (in the same way you did during the original door end assembly).
8. Now attach the 4 vertical glazing bars.
9. Thread the glazing beading into the channels and trim to suit. Put 3 bolts into each bolt slot, attach to the bottom cill by inserting another bolt into the slot and pushing it through the hole in the bottom cill. Moving to the top of the bar insert another bolt into the bolt slot and put through the hole in the roof corner bar. Put a nut on finger tip tight. Do the same with the other 3 glazing bars.
10. Utilising the extra 3 bolts inserted into each bar, attach the horizontal and diagonal bracing bars in the same way as the original door end. Likewise with the door track support (to be found with the door panels) attach as before. The door in a partition is a little shorter than a standard door to facilitate full opening. It is assembled and hung in the same way.

For both double door and partition door you can now fit the upper door track.

EXTERIOR DOOR TRACK

This top door track has no holes in, but 1 continuous bolt slot. Insert 3 bolts into the bolt slot and line them up with the 3 holes in the door track support, put the nuts on and tighten up. To position the door track into the correct position fit the doors onto the track and by slightly releasing the 2 nuts holding the door track support you can move the door up and down until it is correctly into the bottom guide. Having achieved the correct position of the doors you can now attach the small angle door track supports to the right hand and left hand side of the door track. The top has 2 fabricated holes. The lower end of the small angle support is to be attached to the self tapping screw groove of the side corner bar. You need to fix this support to the corner bar in 2 locations 1 at the top (near the top of the side corner bar) and 1 near the end of the angle support. There are no holes in the bottom of the angle so 2 small holes need to be drilled.

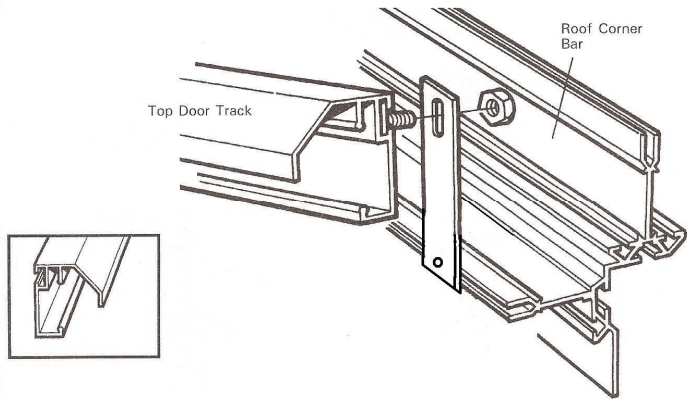
Attach the short vertical glazing bar to the centre slot of the main door track support and the centre hole on the ridge gusset plate.

The doors should now run smoothly. If not you can fine-tune its operation by re-adjusting the bolts up and down slightly.

PARTITION DOOR TRACK

This fits in exactly the same way as the exterior door. However it has 1 flat bar door track support.

N.B. The flat bar door track support is to be fitted pointing **downwards** for the partition (the opposite way to the illustration). (**Key point**).



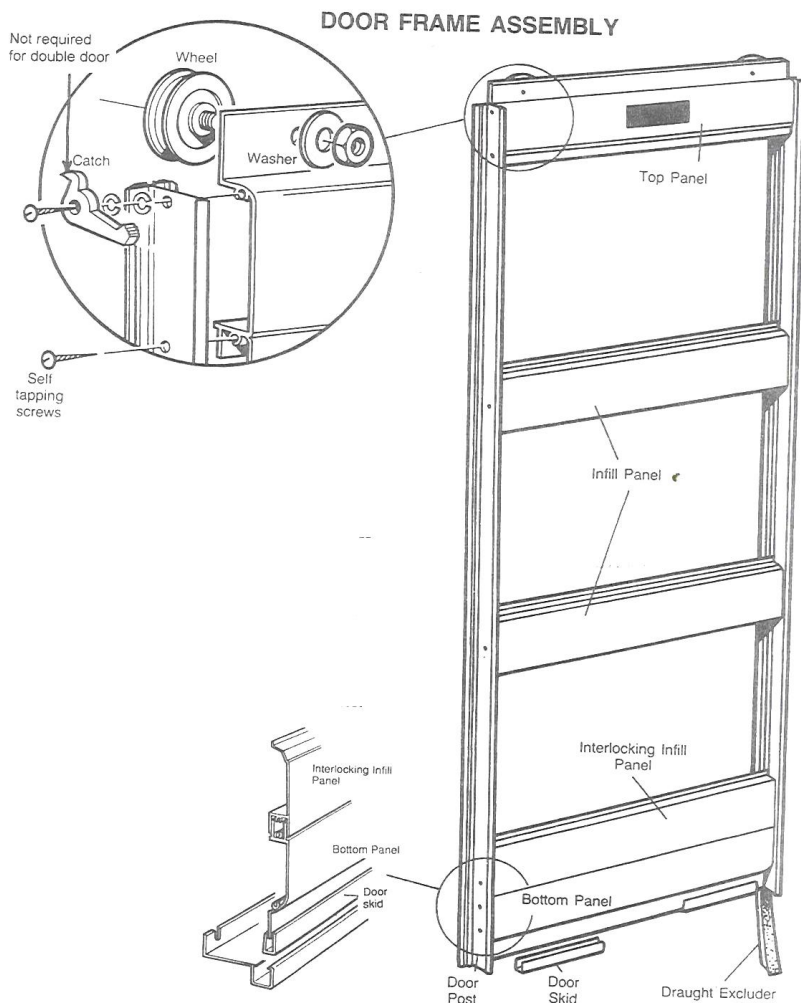
PARTITION DOOR ASSEMBLY

Partition door is fitted together in the same way as the other doors except both doors posts are unhandled. **Glass does not need to be inserted prior to assembly of the single door.**

FITTING THE DOOR TO THE STRUCTURE

The door slide onto the frame from the right hand sides. Put the door bottom rail into the bottom door track and slide, feed the first wheel into the upper door track and move further along until the door post butts up to the end glazing bars. Carefully ease the door past the glazing bar and feed in the second wheel. Push further until the draught excluder is butting up to the left hand glazing bar.

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 smooth running (**Key point**).



FITTING THE KEEP FOR THE LOCK

The cam on the lock must locate onto a door keep which is fitted to the left hand glazing bar (when viewed from outside) of the door gable end.

The keep has 2 horizontal slots on one face. Insert 2 cropped head bolts into the bolt channel of the left hand glazing bar and line up with the slots in the keep.

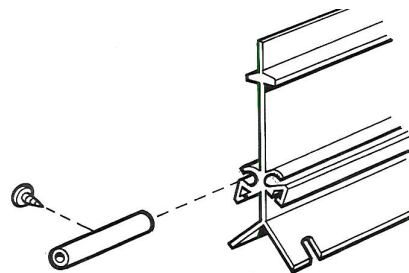
Close the door to the keep and adjust the height of the keep until the cam on the lock locates in the long oval slot.

The picture shown is viewing the keep from the inside.

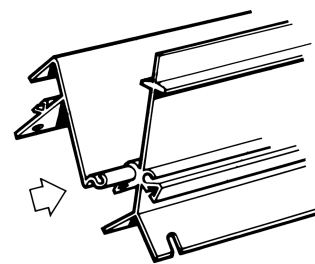


NOW YOU CAN FIT THE VENT TO THE RIDGE

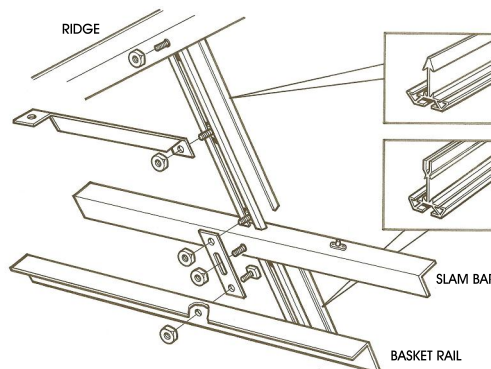
Before sliding the vent into the ridge, slide a piece of black tube into the vent hinge socket. Slide the vent into position; insert a small self tapping screw into the tube approximately $\frac{1}{2}$ way along and then tighten the screw. The tube will expand and lock into position thus preventing sideways movement of the vent. N.B. There is no hole for the screw but it will easily push into the tube and screw up. **(Key point).**



Having slid the vents from the end on the ridge to the desired position, you can now fit the slam bars to the 3 glazing bars. Utilise the bolts you inserted during general assembly and position the slam bars just under the vent allowing the casement stay to effectively close. The slam bar can be adjusted later to facilitate good opening and closing of the vent. When you have fitted the slam bar, you can now fit the glazing bar underneath the slam bar. They are fitted in the same way as the other roof bars. You must make sure it is tight down to the gutter/eave and bottom of slam bar. The glazing bar behind the vent can also be fitted to the ridge and top of slam bar. This bar is a different profile to the standard glazing bar . see picture. **(Key point).**

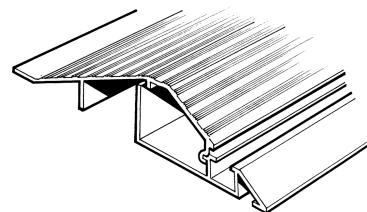


To join the 2 glazing bars either side of the slam bar, you must use the flat plate with 3 holes as illustrated.



DOOR THRESHOLD CILL

The door threshold cill is slotted onto the door end cill from inside the greenhouse as illustrated. You can secure the threshold cill by drilling holes in it and screwing to the floor.



If you have purchased Diamond staging it is best to fit this accessory before glazing.

GLAZING THE STRUCTURE

BAR CAPPING

For the fitting of the bar capping please refer to the separate sheet enclosed with the bar capping before starting to glaze.

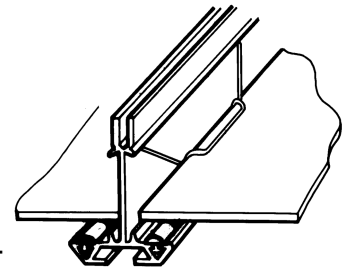
Always handle glass with extreme care as failure to do so can result in injury.

There is a choice of glazing.

3mm horticultural glass in standard panes . multi sheet overlapping

3mm toughened glass in larger panes . full length panes

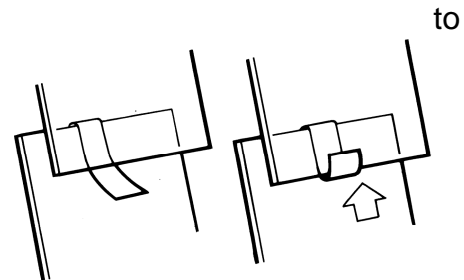
6mm Polycarbonate in larger panes . full length panes. Polycarbonate glazing is the same as single sheet toughened glass apart from the shapes, which are apart of the larger rectangle below them, i.e. one single sheet, top to bottom, so there are no P.V.C. muntins required.



HORTICULTURAL GLASS

(See glazing plan)

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 wire clips in the middle of the glass at the sides. Use 4 clips per pane on 610mm x 610mm and 2 per pane for smaller sizes. N.B. with multi-sheet overlapping glass, always start with the bottom pane in any section.



If you have purchased kick plates for your greenhouse then the kick plates become the bottom pane of glazing. (See page 38.) In this case you may have surplus glass.

Hook **one** overlap clip on the middle of the pane of glass. (**Key point**). The glass should overlap approx. 15mm.

Offer the next pane of glass to the glazing bars. 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. When you have successfully clipped in two sections of glass i.e. two full bays (4) you can insert capping if you have ordered this option. Please note that for multi-sheet glass, the capping needs to be cut to the length of each pane of glass, thus reducing the pressure on the overlap clip glaze the next panel and then cap the previous bar. Continue in this manner for the rest of the glazing.

Repeat this all along this side of the house, and then repeat it for the roof of this side.

Repeat on the other side of the house.

Following this, glaze the rear end in a similar fashion.

Proceed to the door end and glaze in a similar manner. (**Key point**)

Finally glaze the door.

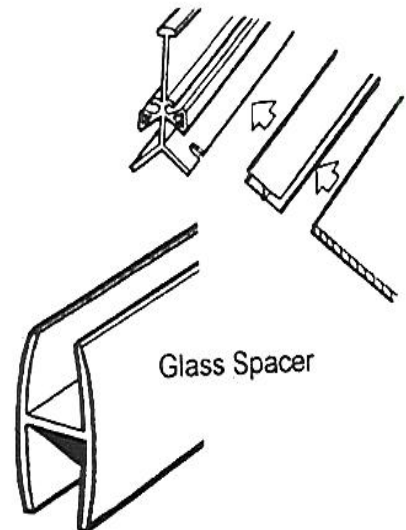
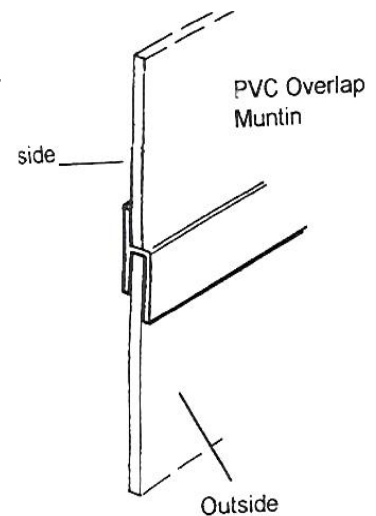
FULL SHEET TOUGHENED GLASS

For large panes of toughened glass (over 610mm long) use 6 wire clips per pane, for smaller panes (under 610mm long) use 4 and for very small panes use 2 clips per pane.

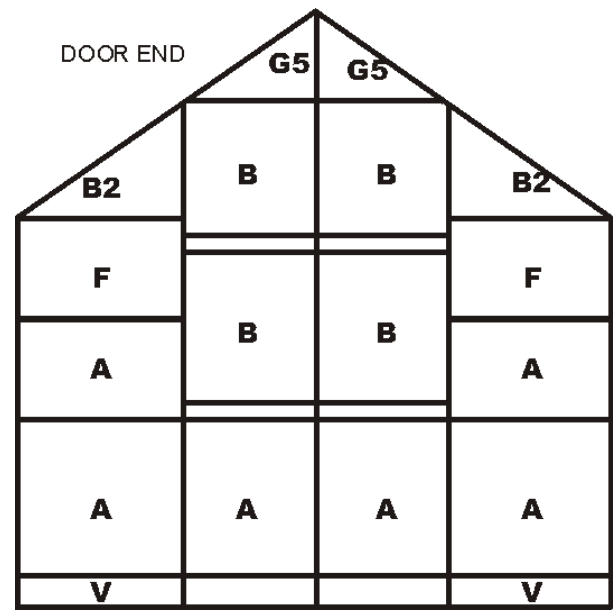
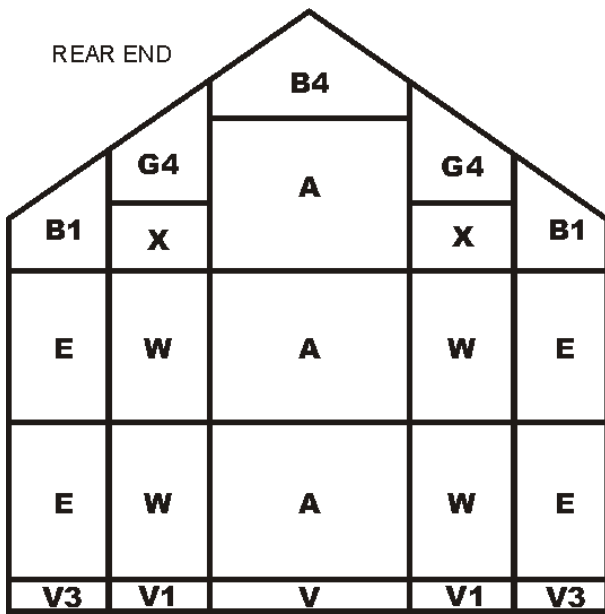
With full sheet toughened glass the traditional overlap system used with horticultural glass on the gable ends is replaced by a rigid P.V.C. muntin. Position the muntin on top of the lower pane of glass taking care to have the inside and outside as indicated in the diagram. Put the next pane on top of the muntin (into the rebate) and clip the glass in, as previously described. There are enough stainless wire clips in your kit for 6 clips per large pane of toughened glass. (Sizes over 610mm x 610mm).

See glazing plan for glass positions. **(Key point)**. Some sizes of glass are similar to others so be sure you are fitting the correct panel.

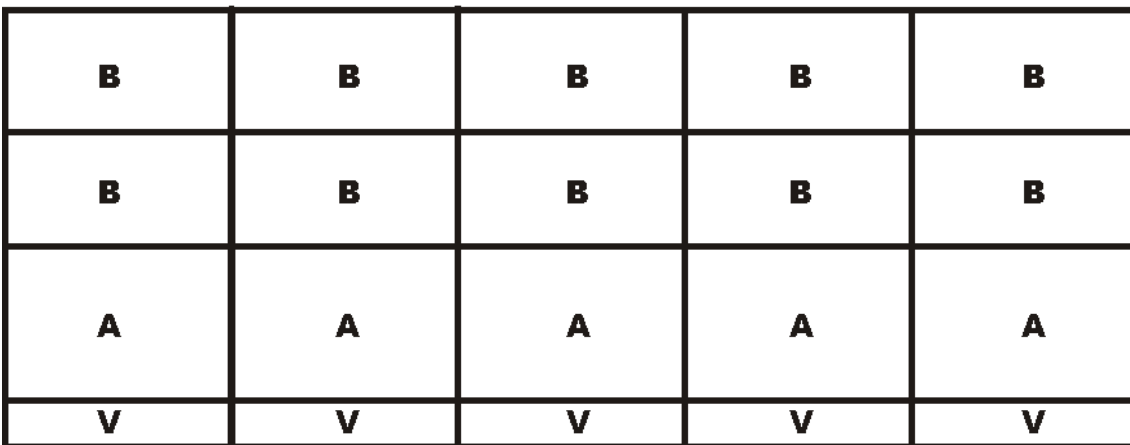
When fitting the roof glass, you must utilise the P.V.C. roof spacer (610mm long). This is fitted to the top edge of the glass and pushed under the ridge flange (see diagram). **The P.V.C. muntins and roof spacers can be found in the cut shape glass packs, and quantities of each will be marked on your delivery note.**



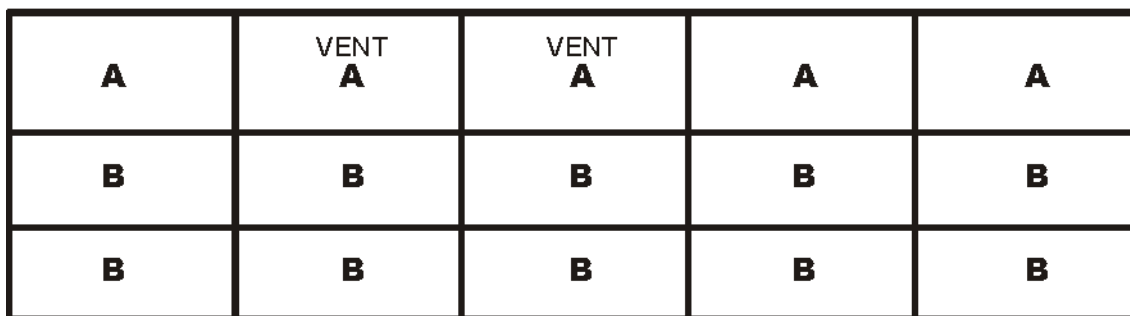
HORTICULTURAL MULTI -PANE GLASS



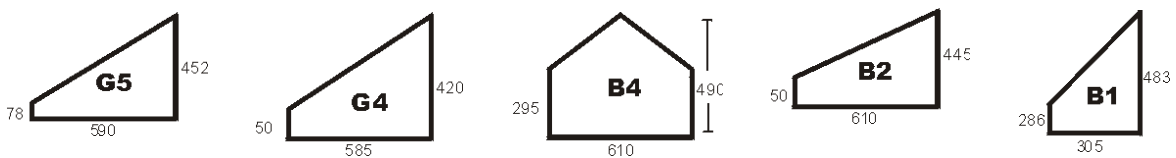
SIDE



ROOF



SHAPES



HORTICULTURAL MULTI -PANE GLASS

SIZE	A	B	B1	B2	B4	E	F	G4	G5	P	Q	V	V1	V3	W	X
6 X 8	21	28	2	2	1	4	2	2	2	2	10	9	2	2	4	2
8 X 8	25	36	2	2	1	4	2	2	2	2	10	11	2	2	4	2
10 X 8	29	44	2	2	1	4	2	2	2	2	10	13	2	2	4	2
12 X 8	33	52	2	2	1	4	2	2	2	2	10	15	2	2	4	2
14 X 8	37	60	2	2	1	4	2	2	2	2	10	17	2	2	4	2
16 X 8	41	68	2	2	1	4	2	2	2	2	10	19	2	2	4	2
18 X 8	45	76	2	2	1	4	2	2	2	2	10	21	2	2	4	2
20 X 8	49	84	2	2	1	4	2	2	2	2	10	23	2	2	4	2

For louvre fitting - Louvre + P replace A pane. (Key point).

A = 610 x 610

B = 610 x 457

E = 610 x 305

F = 610 x 267

W = 585 x 610

X = 585 x 457

V = 610 x 155

V1 = 585 x 155

V3 = 305 x 155



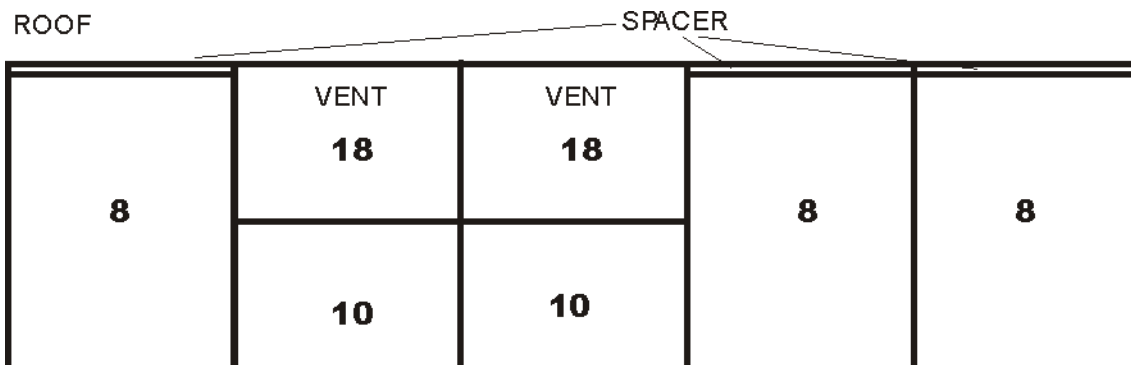
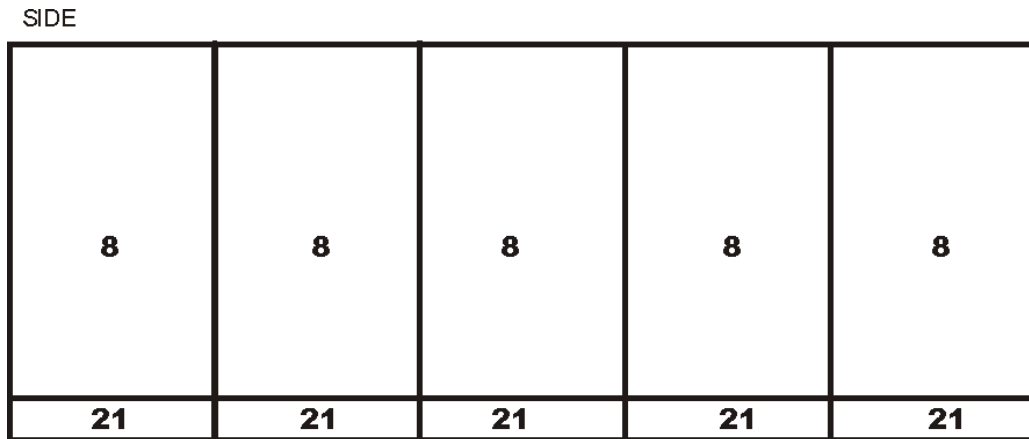
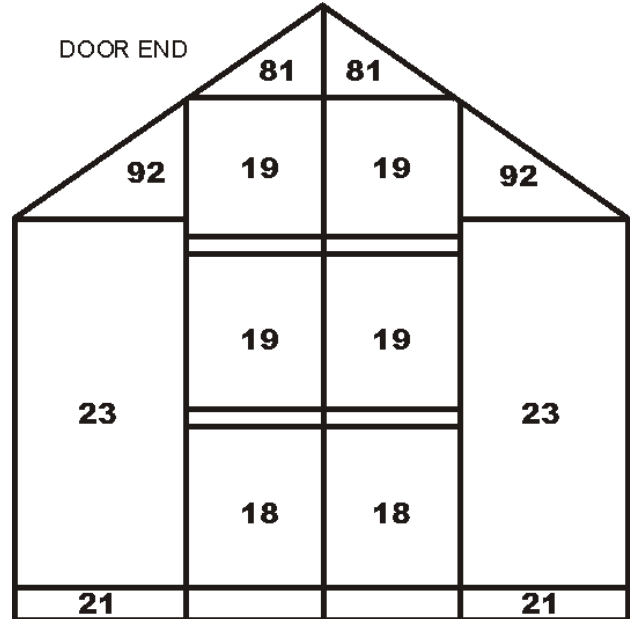
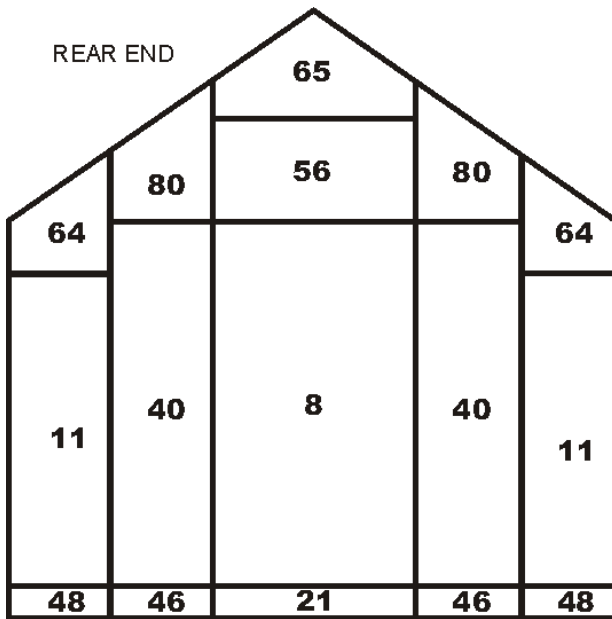
Can be replaced with kick plates if ordered (see page 38).

P = 610 x 140

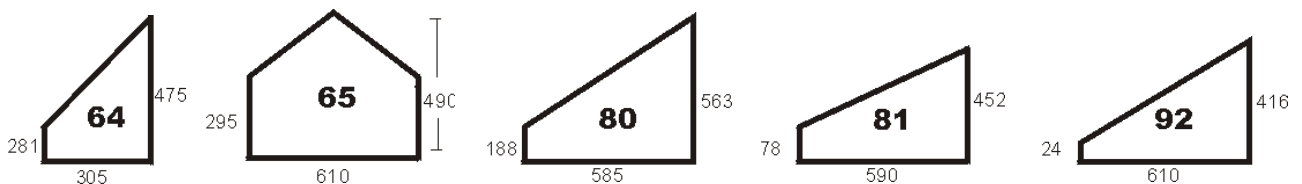
Q = 573 x 100 . louvre blades

TOUGHENED GLASS FULL SHEET

Key point: Some panels of glass are very similar in size to another. Please ensure correct sizes are positioned correctly.

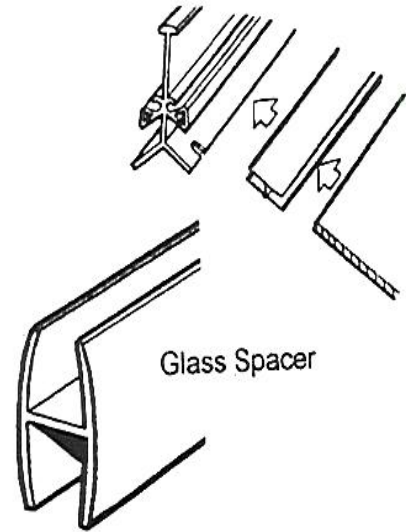


SHAPES



GLASS SPACER:

Place the glass spacer onto the top of the roof pane (thus increasing the overall length of the glass). Offer the glass to the glazing bars pushing it upwards towards the ridge. In order to fit the spacer end of the glass under the beading in the ridge, you need to lift the glass up from the bottom whilst simultaneously pushing upwards until the spacer is firmly inside and touching the ridge.



SIZE	8	10	11	18	19	21	22	23	40	46	48	56	64	65	80	81	92
6 X 8	9	4	2	4	4	11	10	2	2	2	2	1	2	1	2	2	2
8 X 8	11	6	2	6	4	13	10	2	2	2	2	1	2	1	2	2	2
10 X 8	15	6	2	6	4	15	10	2	2	2	2	1	2	1	2	2	2
12 X 8	19	6	2	6	4	17	10	2	2	2	2	1	2	1	2	2	2
14 X 8	19	10	2	10	4	19	10	2	2	2	2	1	2	1	2	2	2
16 X 8	23	10	2	10	4	21	10	2	2	2	2	1	2	1	2	2	2
18 X 8	23	14	2	14	4	23	10	2	2	2	2	1	2	1	2	2	2
20 X 8	27	14	2	14	4	25	10	2	2	2	2	1	2	1	2	2	2

For louvre fitting - Louvre + 21 + 10 replace 8 pane. (Key point)

- 8 = 610 x 1489
- 10 = 610 x 904
- 11 = 305 x 1197
- 18 = 610 x 610
- 19 = 610 x 457
- 21 = 610 x 140
- 22 = 573 x 100 . louvre blades
- 23 = 610 x 1456
- 40 = 585 x 1489
- 46 = 585 x 140
- 48 = 305 x 140
- 56 = 610 x 290

KICK PLATES

The kick plates can only be fitted at the bottom of each vertical bay of glass (excludes door section).

The kick plate has a 90° fold at the bottom and is fitted on to the bottom cill with the point of the fold, hard against the corner of the bottom cill.

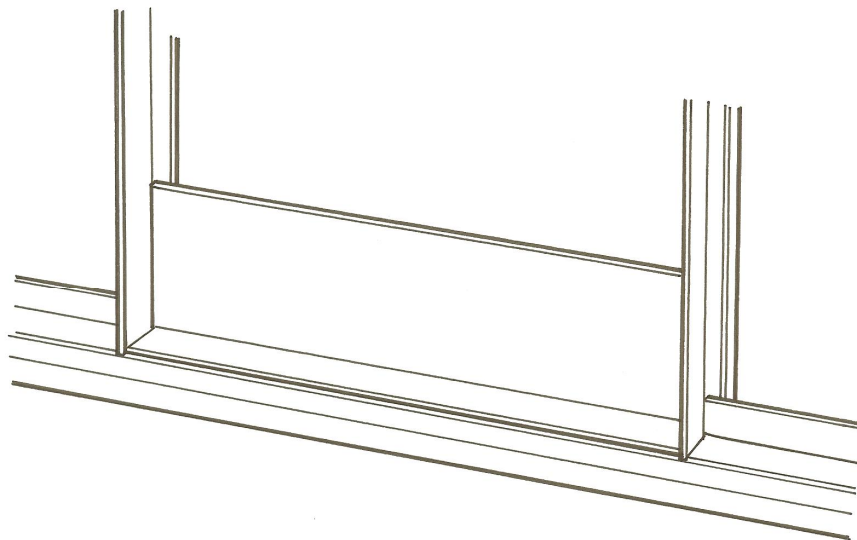
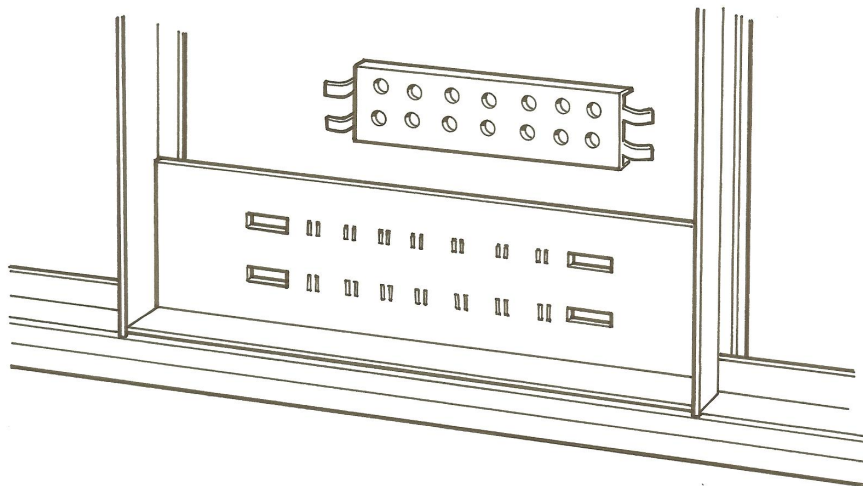
The kick plate is clipped and capped into position in exactly the same way as glass (mentioned earlier). A muntin is placed over the top of the kick plate for toughened glass glazing, while horticultural glass an overlap clip is used.

The information is correct for a vented or un-vented kick plate.

To fit the vent in the vented kick plate, the tabs are inserted into the plate in all 4 positions. When this has been done, the tabs need to be bent manually to ensure the vent cannot fall out of the plate. The vent will now slide to allow ventilation.

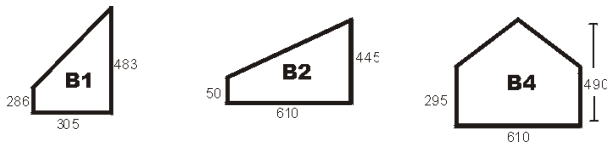
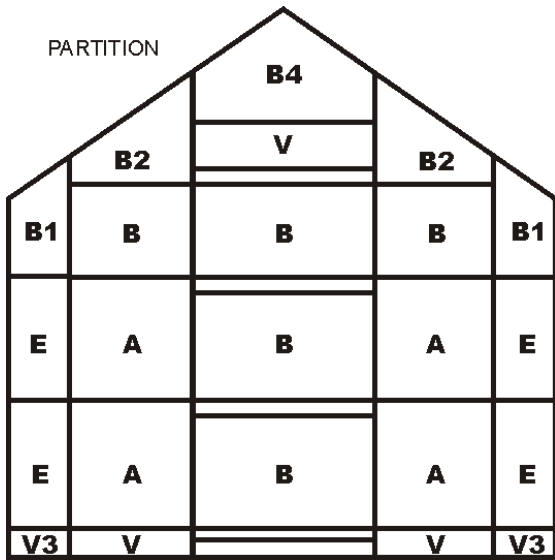
To fit horticultural glass above a kick plate, use the overlap clips provided in exactly the same way as if you were fitting glass above glass

For toughened glass, use the pvc muntin provided in exactly the same way as if you were fitting glass above glass.



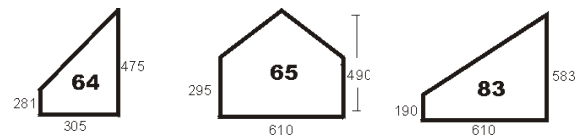
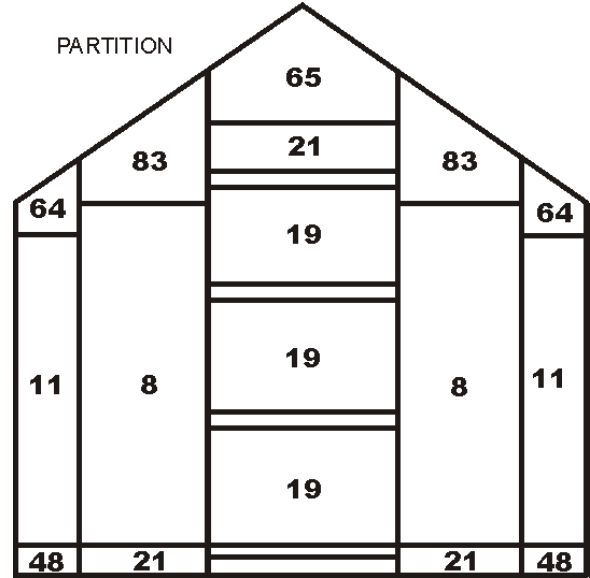
PARTITION WITH DOOR

Horticultural Glass



A	610 X 610	4
B	610 X 457	5
E	610 X 305	4
V	610 X 155	3
V3	305 X 155	2
	SHAPES	5

Toughened Glass



8	610 X 1489	2
11	305 X 1197	2
19	610 X 457	3
21	610 X 140	3
48	305 X 140	2
	SHAPES	5

YOUR GREENHOUSE IS NOW COMPLETE.

If you have purchased any accessories such as staging, auto vents, rainwater kits etc. they will have their own detailed instructions in their packaging.

ELITE 1411