Sections:

01 Essential Tools:

Item	Tool Description
01	Metal drill, dia. **3.8mm** (for pilot holes for self-tapping screws) ***SUPPLIED***
02	Driver Bit, **Phillips Head, PH2** (for driving the self-tapping screws) **NOT Pozidriv.** ***SUPPLIED***
03	51mm Holesaw.
04	10mm Socket (for tightening M6 Nyloc Nuts).
05	Ratchet Driver for 10mm socket (item 04).
06	Spirit Level.
07	Power Drill/Driver, Hammer Drill (ideally cordless).
08	13 Amp Extension cable.
09	Marker Pen.
10	Soft Lead pencil.
11	Robust Step Ladder(s).
12	Digging Equipment for Supporting Post foundation holes.
13	Hacksaw.

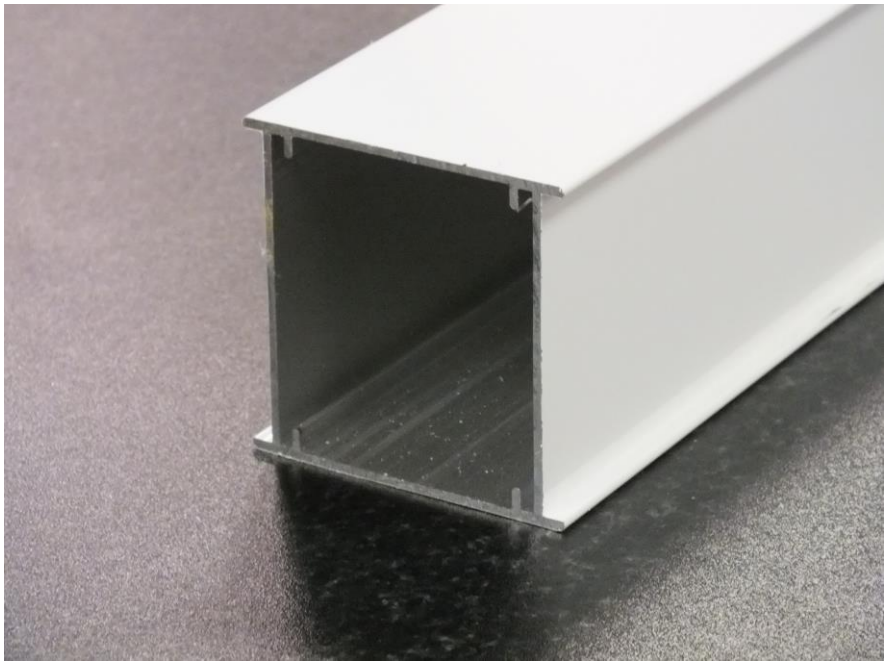
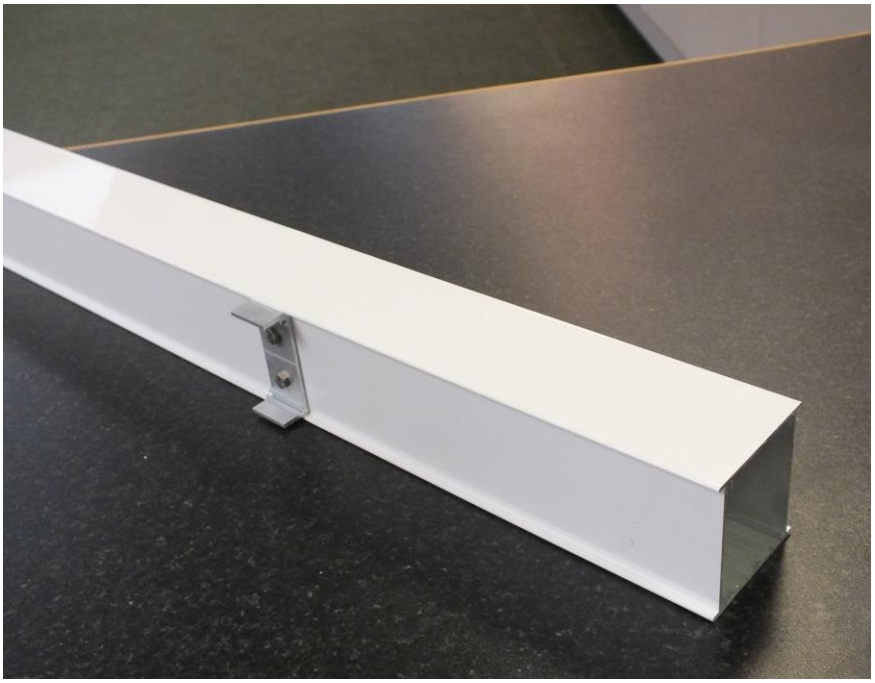
02 Tools that will make installation easier:

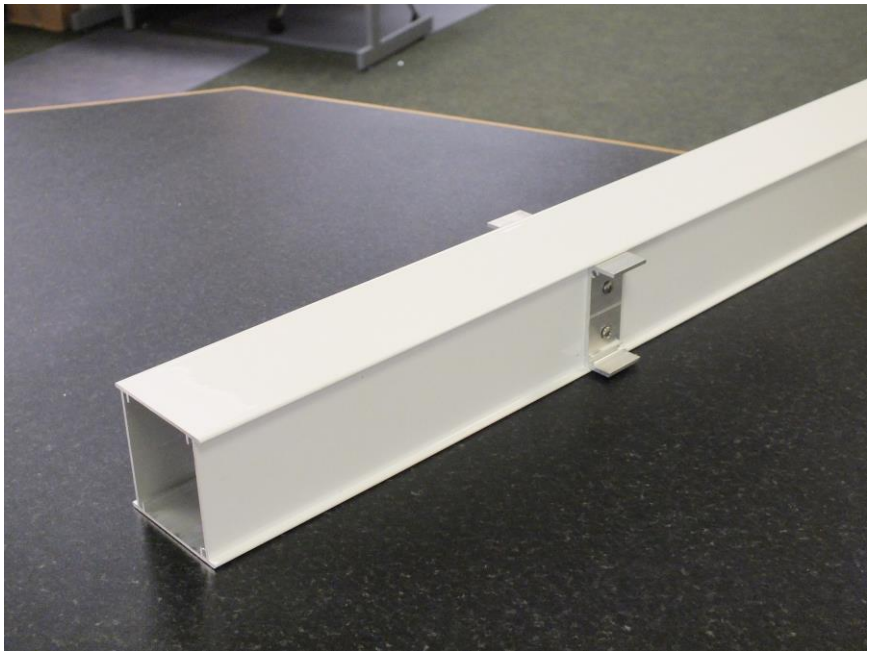
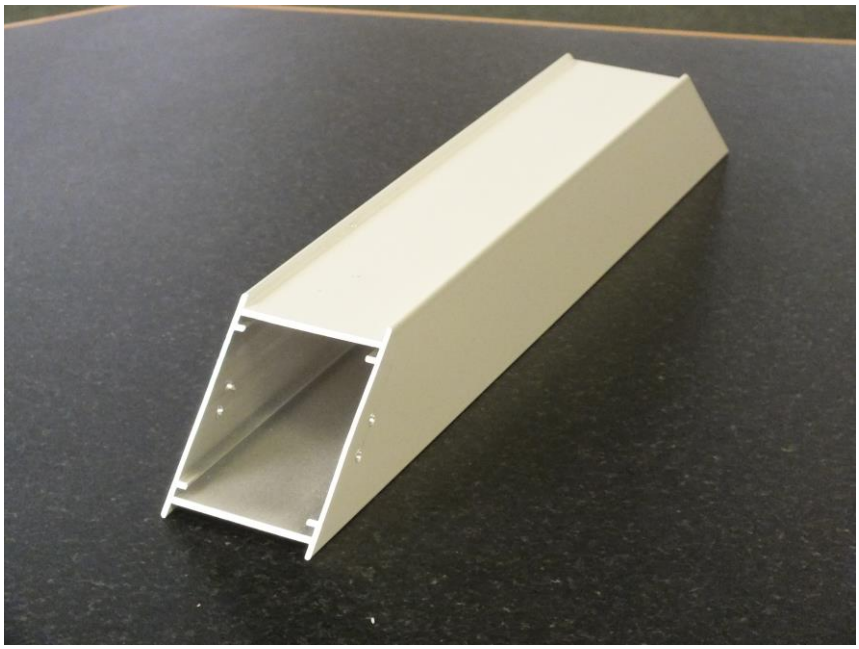
Item	Tool Description
01	Sliding Compound Mitre Saw, 250mm dia.
02	Mitre Saw Bench.
03	Power Drill/Driver, SDS Drill – cordless.
04	Folding Saw Horses/Trestles.
05	Cement Finishing Trowel.
06	Power Jig Saw – cordless.
07	White Rubber Mallet.
08	Variety of metal drills.
09	Variety of Masonry drills.
10	Metal File.

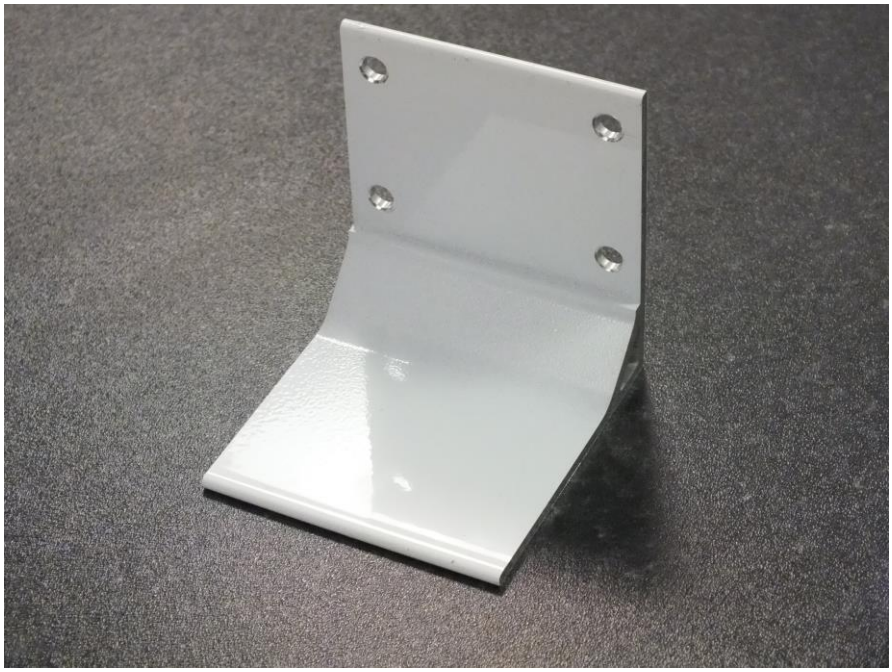
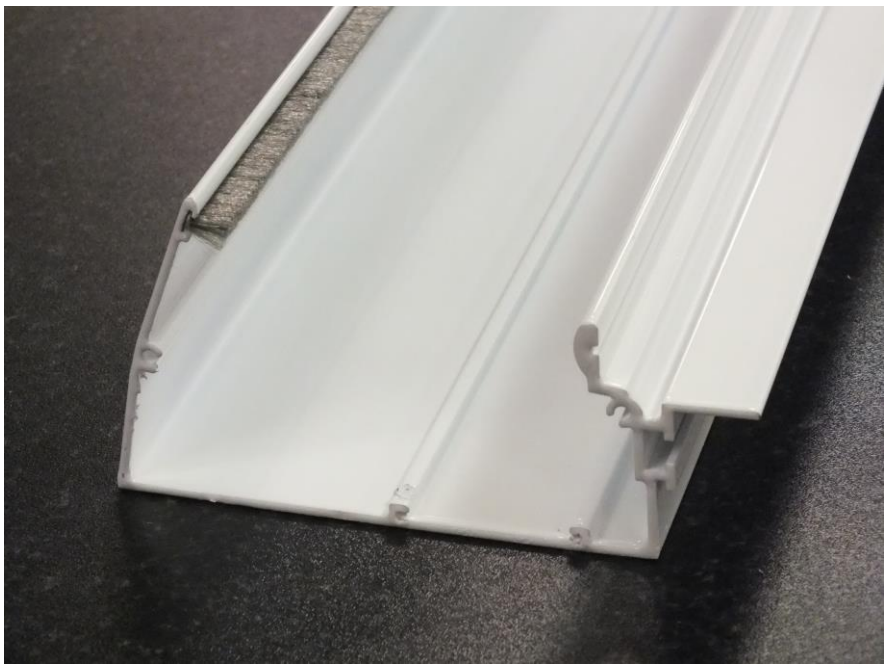
03 Items to be supplied by Installer

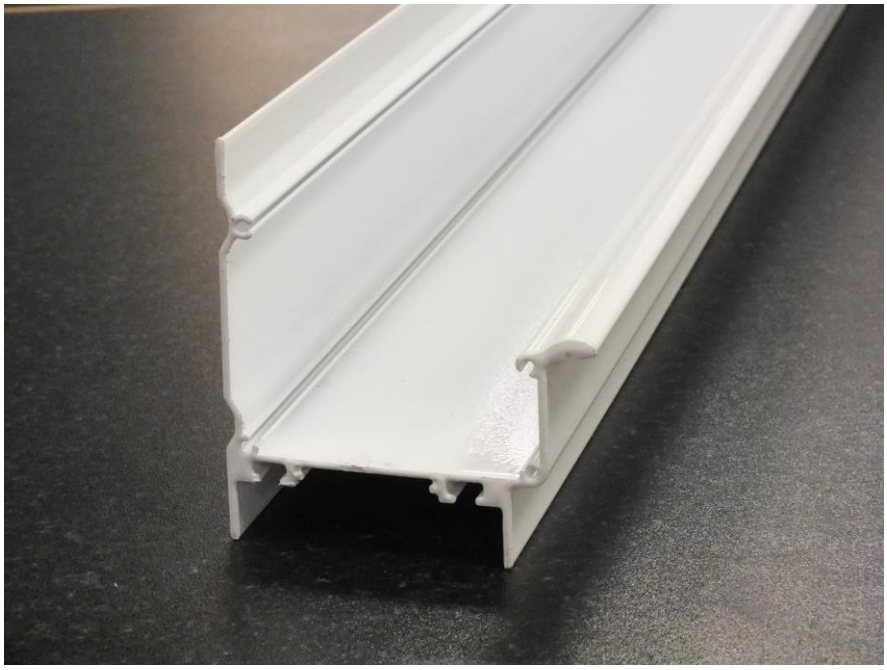
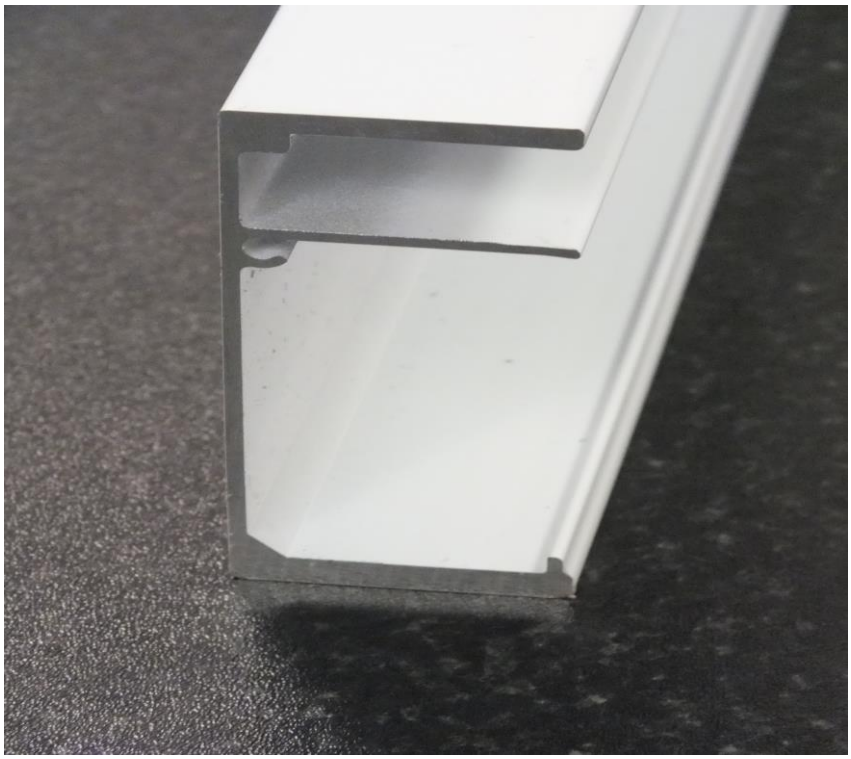
Item	Item Description
01	Fixings to secure Wall Plate – usually masonry fixings
02	Drill bits for fixings in 01
03	Fixings for securing Supporting Post Feet.
04	Drill bits for fixings in 02
05	Sand and cement/ post mix and water for supporting post foundations (if this is the foundation regime for the posts).

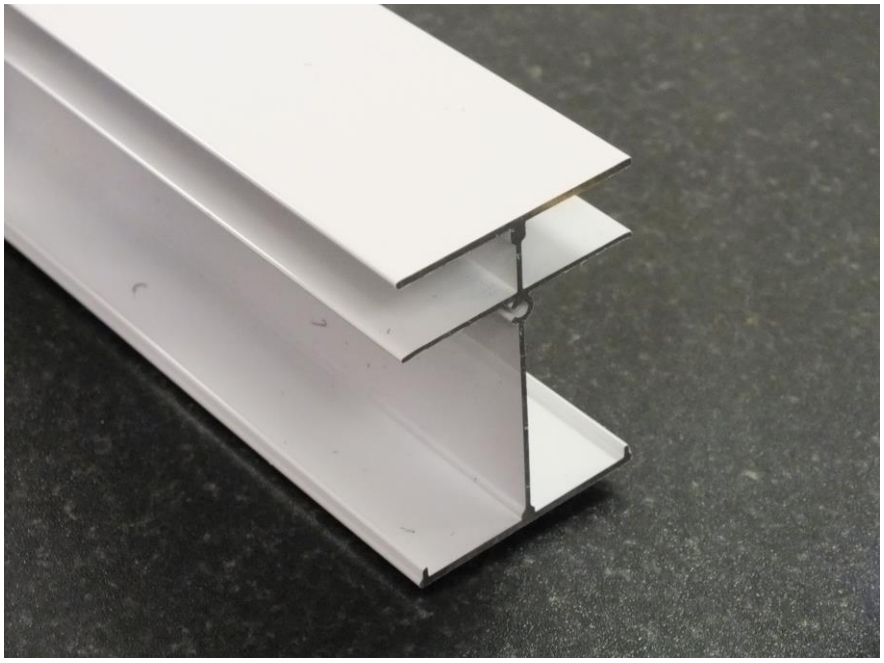
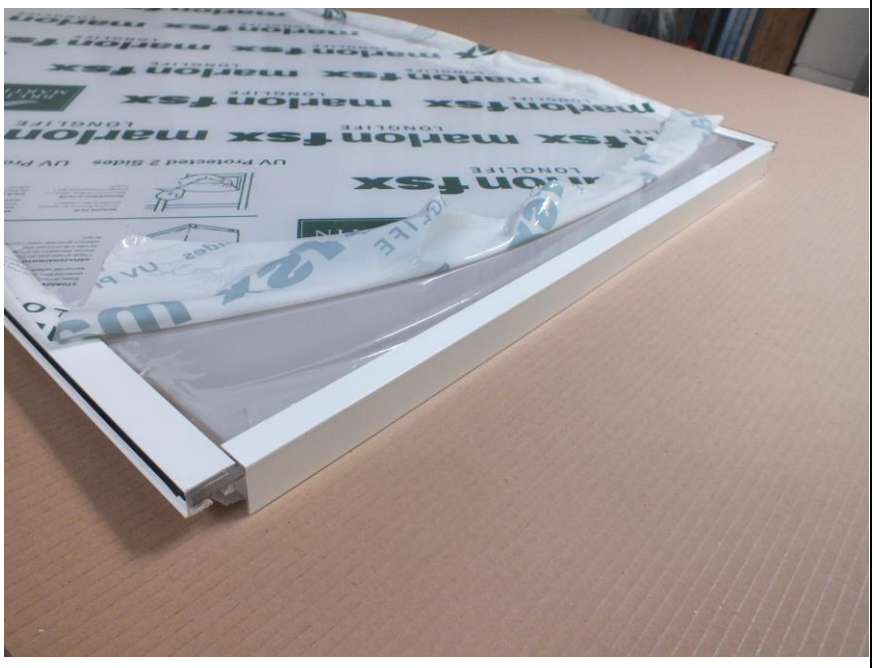
04 Canopy Main Components

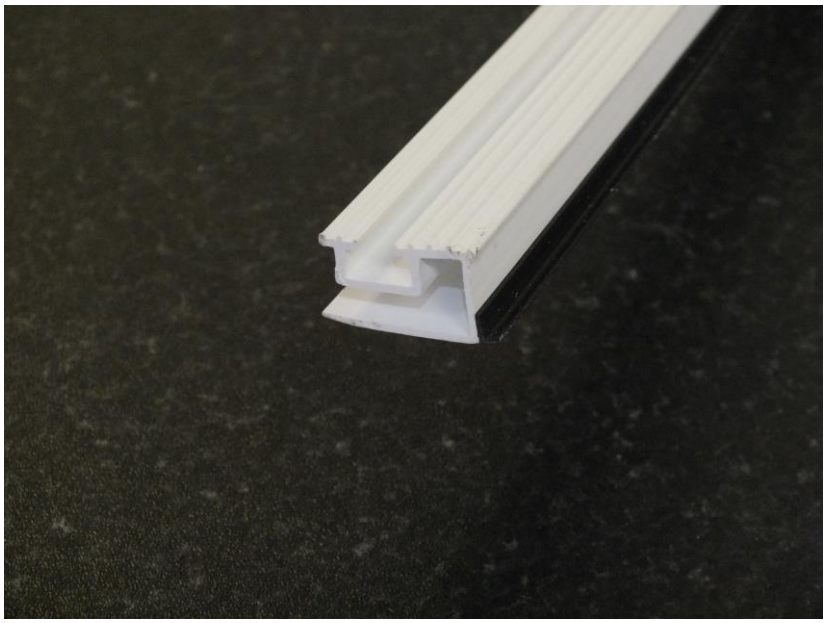
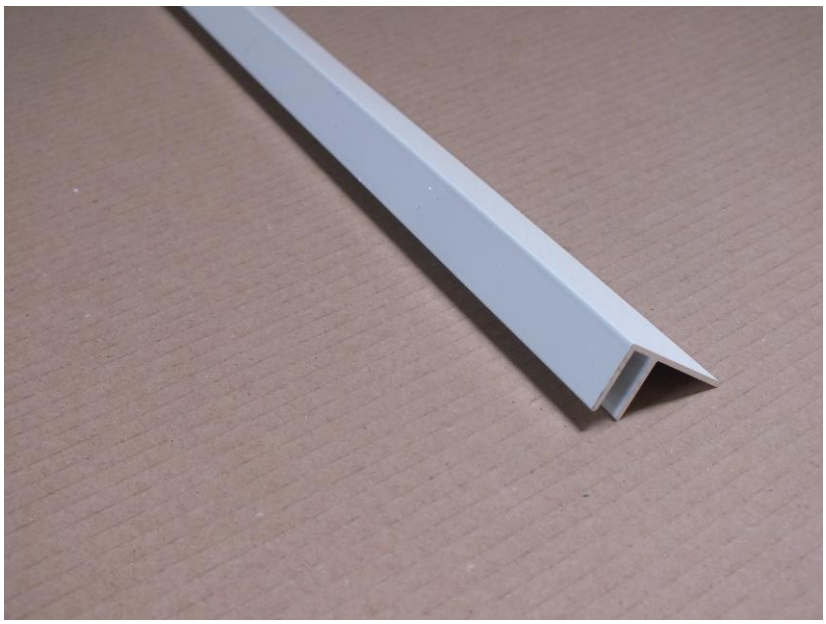
Canopy Component	
Supporting Post	
End Supporting Post/Knee Brace Bracket Assembly (only supplied with canopies with Knee Braces)	

Canopy Component	
Intermediate Supporting Post/Knee Brace Bracket Assembly (only supplied with canopies with Knee Braces)	
Knee Brace (only supplied with canopies with Knee Braces)	

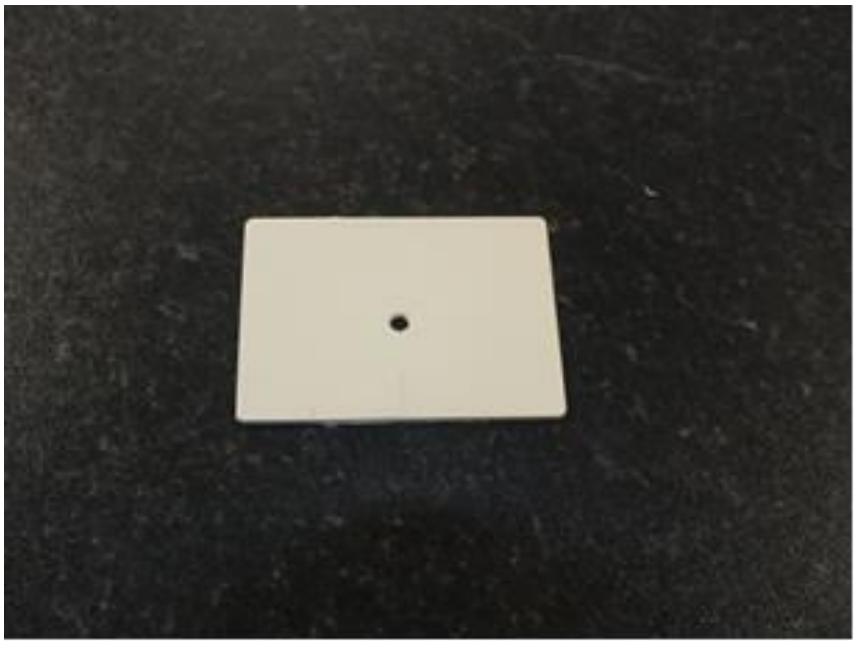
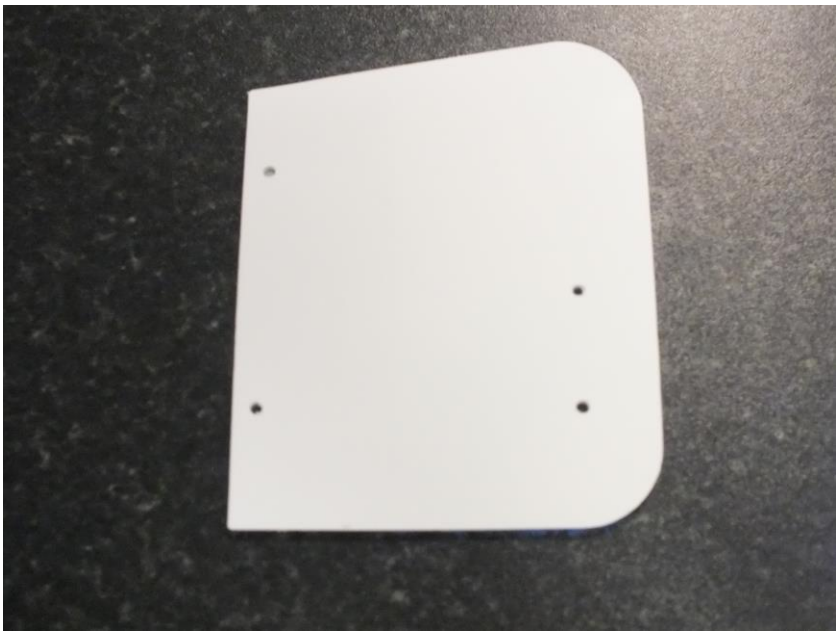
Canopy Component	
Post Foot/Bracket joining Eaves/Gutter and Supporting Post	
Wall-Plate	

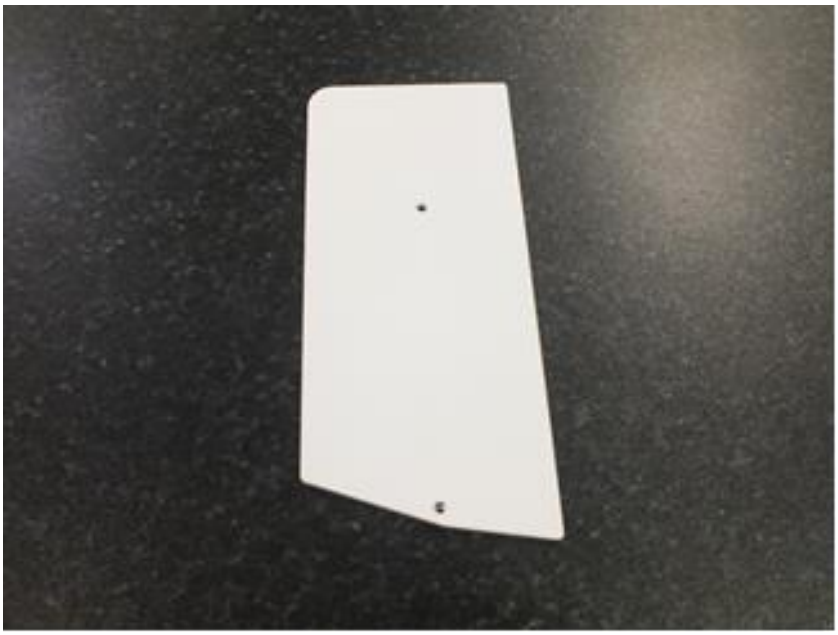
Canopy Component	
Eaves/ Gutter	
Edge Glazing Bar	

Canopy Component	
Main Glazing Bar	
6mm Plate Polycarbonate roof panel assembly (with and without protective film removed) NOTE: All roof panel assemblies must be assembled prior to installation into Canopy Roof.	

Canopy Component	
6mm Glazing Adaptor (For assembly to 6mm Plate Polycarbonate Glazing Panel – (2) Glazing panel adaptors per Glazing Panel).	
6mm F Section (fitted onto ends (wall-plate end and gutter end) of 6mm glazing panels. (For assembly to 6mm Plate Polycarbonate Glazing Panel – (2) ons per Glazing Panel). .	

Canopy Component	
Rainwater Adaptor	
End Cap for Edge Glazing Bar	

Canopy Component	
End Cap for Main Glazing Bar	
End Plate for Eaves/Gutter	

Canopy Component	
End Plate for Wall-Plate	

05 Overview of Installation Process (Main Stages):

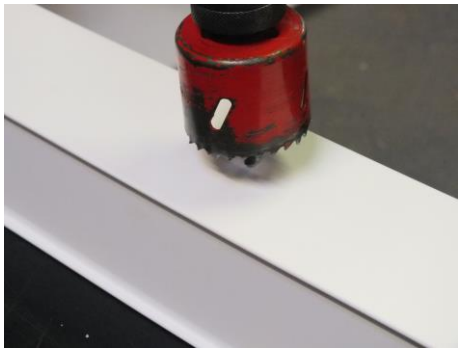
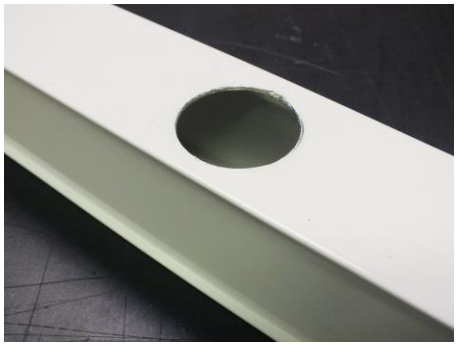
Stage	Stage Description
01	Set out and dig holes for foundations for supporting posts (or, mark out locations for supporting posts if posts to be fixed using masonry fixings to fix to base. Make hole(s) for egress of rainwater in Supporting Post(s) where this is required. (This is **not** required if Supporting Posts are **not** to be secured by burying them in a concrete foundation).
02	Prepare and fix wall-plate (Ensuring alignment with supporting post positions).
03	Prepare Eaves/gutter – insert set screws into channels on Eaves/Gutter, fit brackets (one per post at this stage) in required position. Make hole(s) for rainwater drainage in Eaves/Gutter immediately above and central to Supporting Post(s) where rainwater drainage is required
04	Install Eaves gutter onto supporting posts. Make sure that your levels are as required at this stage.
05	Install and secure both Edge Glazing Bar assemblies (Edge Glazing Bars with Edge Glazing Bar End Caps fitted) at either end of the canopy. This will provide the canopy framework. Final Check of levels. Secure all brackets at the supporting post and Eaves/Gutter Joints.
06	Assemble Glazed Panel Assemblies. 'Unstick' a perimeter of protective film from all 4 edges of both sides of the glazed panel. Push (2) 6mm Adaptors and (2) 6mm F Sections onto each Glazed panel.
07	Fit Roof Panel Assemblies and main Glazing Bar assemblies (Panels fitted with adaptor bars, Main Glazing Bars with Main Glazing Bar End caps fitted). Working from one end of the canopy fit one roof panel assembly followed by one Main Glazing Bar assembly alternatively until the last roof panel is to be fitted. Undo the self-tapping screw securing the Edge Glazing Bar at the Eaves/Gutter to enable the last roof panel to be fitted. Re-secure Edge Glazing Bar.
08	Fix Main Glazing Bars – so that the spacing between the Main Glazing Bars is correct.
09	Installing Knee Braces (if fitted) between Eaves/Gutter and Supporting posts.
10	Secure the Supporting Post feet in position by the means that you have chosen. The recommendation is that the supporting posts feet are buried in minimum 300mm cube of concrete.

06 Installation Process; Main Stages in Detail:

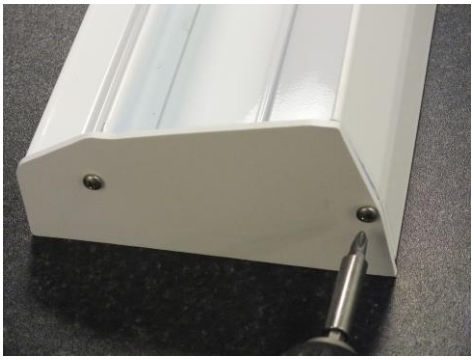
Process Step	Description
	<u>Stage 01: Set Out positions and prepare foundations for Supporting Posts</u>
01	Mark position of each Supporting Post. When undertaking this task be sure that you are aware of the position of the wall. In most cases, but, not all, the Supporting Posts will be evenly spaced along the length of the Eaves/Gutter with the (2) outside Supporting Posts aligned with either end of the Eaves/Gutter. **Setting Out Positions for Supporting Post Foundation Holes on Page 46.**
02	Dig holes for each Supporting Post. These holes should be a minimum of 300mm square x 400mm deep. 
03	Pour concrete mix into each hole to a depth of 100mm to provide footing for Supporting Post Feet. Concrete mix should ideally be: 1 part cement: 3.5 parts sand : 2.5 parts course aggregate. If using combined aggregate the mix should be: 1 part cement: 5 parts combined aggregate. Do not overwater as the mix needs to start 'skinning over' as soon as possible. *This can be accelerated by pouring a thin layer of cement onto the concrete footing once it has been levelled.* Level the footing using a Cement Finishing Trowel. 

04	Fit the Supporting Posts with the Supporting Post Feet. Each post has (2) Supporting Post Feet attached to one end. Set out the Supporting Post on trestles so that you are working at waist height. Insert a Post Foot into the inside of the Supporting Post. The Post Foot will slide into the channels on the inside of the Post. There is a step on the Post Foot. When the Foot is pushed home the Post Foot step will abut the end of the Post. 

05	Secure the Post Foot to the Supporting Post. With the Post Foot located in the Supporting Post drill (2) pilot holes using the 3.8mm drill, one above the other, (roughly on the centre-line of the Supporting Post) through the Supporting Post and through the Post Foot located inside the Supporting Post. When drilling the Pilot Hole, dot apply undue downward pressure as this will potentially break the drill. *As you will be drilling several Pilot Holes you will get used to the appropriate pressure to apply.* Secure the Post Foot in position using the Phillips Head Self-Tapping Screws using the PH2 Driver Bit. When driving the Self-Tapping Screw you will need to apply sufficient pressure so that the drill bit does not slip out of the screw head. *You will need a medium-to-high torque setting on your Drill/Driver in combination with applying pressure on the self-tapping screw.* *Again, this will be a technique that you will get used to and learn the correct settings that work for your installation.*  
06	Repeat Process Steps 04 – 05 for the other foot for the same Supporting Post.
07	Repeat Process Steps 04 -06 for each Supporting Post.

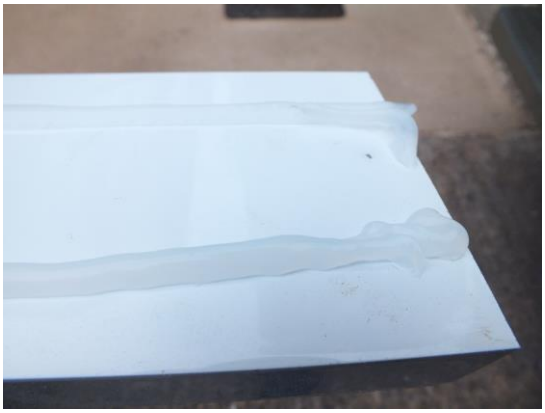
08	Cut rainwater drainage hole in Supporting Post(s). The hole is cut using a hole-cutter and Power Drill/Driver. Make sure that the hole is at the correct depth (the Supporting Post is being buried in concrete). Make sure that the hole is on the correct face of the Supporting Post(s) so that the rainwater flows out of the hole in the correct direction.  

	Stage 02: Prepare and Fix Wall-plate
09	Driil holes in the Wall-plate so that the fixings that are to be used to secure the wall-plate can be accommodated. This is most easily achieved with the wall-plate located on trestles to allow waist height working. We cannot be specific with regard to the fixings that you should use. The fixings that you use should be appropriate for the vertical surface/material against which the wall-plate is to be fixed. We recommend that the fixings should be spaced no more than 450mm apart. The vertical location of the fixings should be as close as possible to the top slot profile that runs the length of the wall-plate (if the fixing is to be fitted above this slot). This is probably the best position for the hole for the fixings as it allows the best access to the fixing when securing the fixings. If the fixing is to be installed below this slot the only consideration is the ease of access when installing the fixing. 

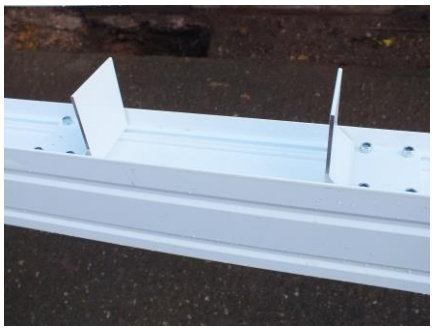
10	Install Wall-Plate End-Plates onto the ends of the Wall-Plate whilst Wall-Plate still resting on Trestles. Remove any protective film from the End-Plates. Using a Power Drill/Driver and PH2 Driver Bit screw the Self-Tapping Screws into the screw ports on the Wall-Plate to secure the End-Plate. The holes in the End-Plate align with the screw ports in the Wall-Plate: 
11 (11a-11d) 11a	***This process step is only required if the wall-plate is supplied in (2) sections.*** ***This will be the case for canopies that are 6.3m (and over) in width.*** The aim of this process step is to align (the) (2) wall-plates with each other. This is not always necessary as it is often possible to achieve good alignment without using the joining plate. Insert Joining Plate into joining plate slots on one of the wall-plates. This is most easily achieved with the wall-plate resting on trestles at waist height. The Joining Plate is 350mm in length and is designed to be a tight fit. To make fitting the joining plate easier the edges of the Joining Plate can be filed using a Metal File. The joining plate can also be cut down in length using a Hack Saw, again to make fitting eaiser. Use a White Rubber Mallet to tap in the Joining Plate into the joining plate slots to half its length. 

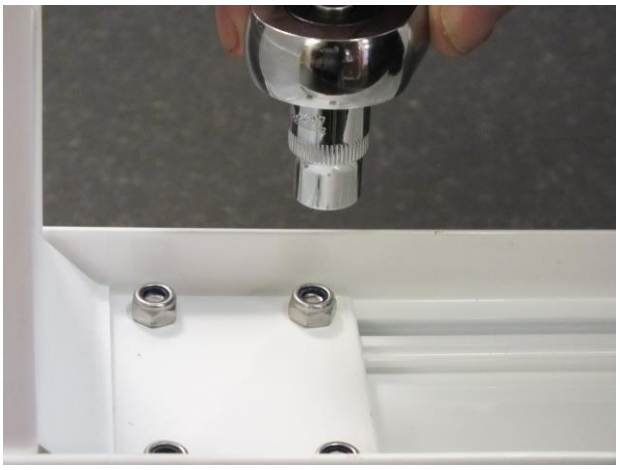
11b	Install the Wall-Plate with the inserted Joining Plate as in Process Steps 10 – 17.
11c	Install the other Wall-Plate. This will mean that this Wall-Plate will need to be presented to the Joining Plate and pushed onto the Joining Plate. This is achieved using (2) persons. One at the Joining Plate to ensure alignment and that the Joining Plate engages correctly with the joining plate slots in the 'new' Wall-Plate.  The other person is located at the other end of the Wall-Plate and can tap the Wall-Plate onto the Joining Plate using a White Rubber Mallet to tap the wall-Plate at this end.
11d	This Wall-Plate can now be fixed in position by following Process Steps 10 – 17.
12	Present the wall-plate to its fixing location. Mark the hole positions for the fixings using the holes drilled in the wall-plate. Ensure the wall-plate is level when marking the hole positions by using a spirit level.  This is most easily achieved as a 2-person activity.

13	Mark one of the (2) outermost hole positions first. Drill the fixing hole into the fixing surface using a Cordless Power drill/driver.
14	Fix the wall-plate using this first hole by partially fitting the first fixing.  Raise the wall-plate into a horizontal position (checking the spirit level) and mark the other outermost fixing position.
15	Fix the wall-plate in position by partially securing the fixing in this hole position.
16	Mark all the other hole positions.
17	Drill all the remaining fixing hole positions into the fixing surface. This will require that the wall-plate is completely removed to drill these holes.

18	Apply (2) thick (8mm) parallel beads along the length of the wall-plate. This is most easily achieved with the wall-plate resting on trestles at waist height.	
19		Re-present the wall-plate and fixing all required wall-plate fixings. This is a final fixing.

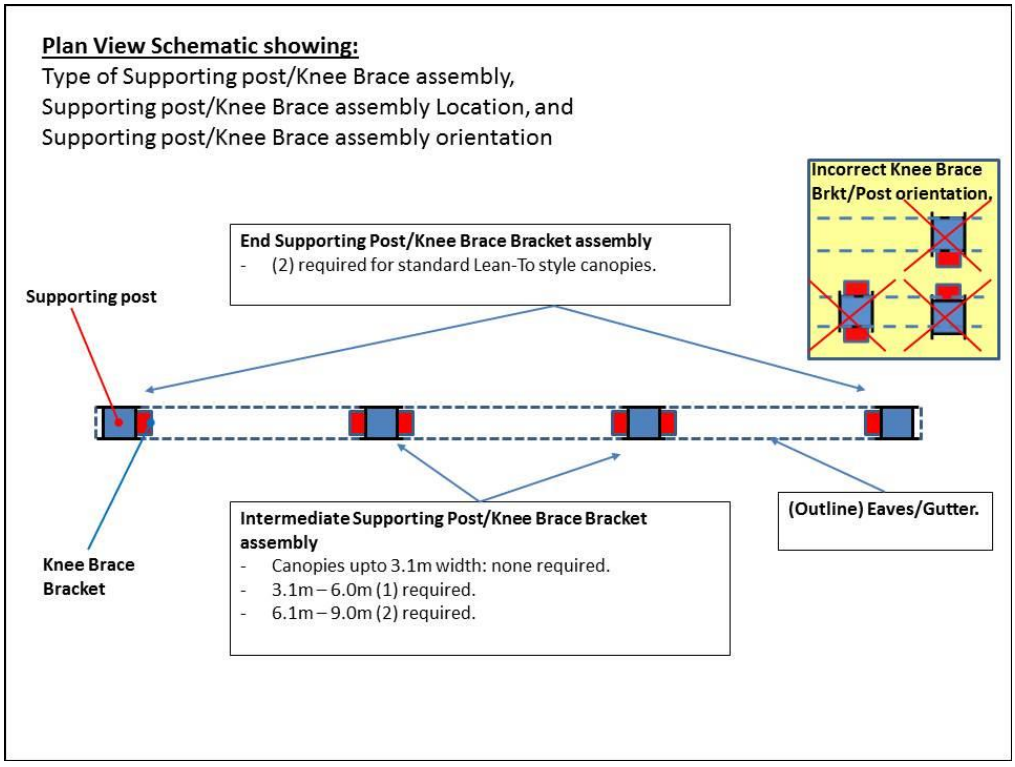
	Stage 03: Prepare Eaves/Gutter
20	Insert the required number of Set Screws into both Set Screw slots located on the underside of the Eaves/Gutter. This is most easily achieved with the Eaves/Gutter upside down on trestles. These are used to secure the Eaves/gutter to Supporting Post joint. Each bracket uses (4) Set Screws. The End Supporting Posts (at each end of the Eaves/Gutter employ (1) bracket. The intermediate Supporting Post(s) employ (2) brackets. Ensure that each Set Screw channel has the same quantity of Set Screws inserted and that this quantity is even.  

21	Install Supporting Post/Eaves Gutter Brackets into Eaves Gutter. This should be undertaken whilst the Eaves/Gutter is still located on the Trestles. The aim here is to secure one bracket in position for each Supporting Post. **Note that:** End Supporting Posts require only one Bracket and this is located on the inside face of the End Supporting Post(s). Intermediate Supporting Posts require (2) Brackets; (1) either side of the post along the Eaves/Gutter.   In order that (1) Bracket for each Supporting Post is secured in position you will need to measure where the Posts will be located along the Eaves/Gutter and mark these positions before securing these single Brackets in position on the Eaves/Gutter. The Brackets that are required for the intermediate Supporting Posts can be loosely secured so that they move freely along the Eaves/Gutter. (This allows the Supporting Posts to be easily fitted to the Eaves/Gutter and Brackets when this process step is undertaken). The Brackets are secured via the M6 Set Screws located in the Set Screw channels. Locate the Bracket in the Eaves/Gutter so that each of the (4) Set Screws is located through the (4) drill holes in the Bracket. (This can be a little fiddly!) 

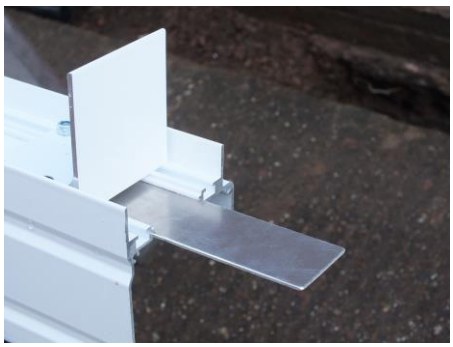
21. (Cont'd.)	Screw on the M6 Nyloc Nuts onto the M6 Set Screws so that the bracket is retained in the Eaves/Gutter, but is still loose.Those Brackets that are to be fixed in position must be moved into their final position along the Eaves/Gutter.  The Brackets to be finally fixed in position are secured by tightening up the M6 Nyloc Nuts using the M10 Socket and Ratchet Driver.

22	***This Process Step only applies if there are (2) Eaves/Gutter assembly sections to be installed.*** ***This will be the case for canopies that are 6.3m (and over) in width.*** The aim of this process step is to align the (2) Eaves/Gutters with each other. The aim of this process step is to align (the) (2) wall-plates with each other. This is not always necessary as it is often possible to achieve good alignment without using the joining plate. Insert Joining Plate into joining plate slots on one of the wall-plates. This is most easily achieved with the wall-plate resting on trestles at waist height. The Joining Plate is 350mm in length and is designed to be a tight fit. To make fitting the joining plate easier the edges of the Joining Plate can be filed using a Metal File. The joining plate can also be cut down in length using a Hack Saw, again to make fitting eaiser. Use a White Rubber Mallet to tap in the Joining Plate into the joining plate slots to half its length.  Inserting the Joining Plate can be quite difficult if there has been a build-up of the Powder-coat in the Joining Plate slots. To start the Joining Plate it may be necessary the clear some of the Powder-Coat using a thin blade screwdriver.

23	Fit End-Plate to each end of Eaves/Gutter. Again, undertake this activity whilst the Eaves/Gutter is located on the Trestles. Apply silicone sealant to the end profile of the Eaves/Gutter. If the end of the Eaves/Gutter is uneven because of the powder-coating it is sensible to file the end profile square and flat with a Metal File to provide a good surface for the joint.  Secure End-Plate to the end of the Eaves/Gutter by screwing in the (4) Self-Tapping Screws into the (4) screw ports in the Eaves/Gutter.  The (4) holes in the Eaves/Gutter End Plate align with the (4) screw ports in the Eaves/Gutter. When all (4) screws have been secured apply a bead of silicone sealant to the End Plate – Eaves/Gutter join on the inside of the Eaves/Gutter. You may want to 'smooth down' this bead of silicone sealant to ensure that the silicone seals all along the End-Plate/Eaves/gutter join.

	Stage 04: Secure Eaves/Gutter to Supporting Posts
24	This step applies for canopies fitted with Knee Braces. (if no Knee Braces (to be) fitted then this step can be bypassed) If the canopy has knee braces (fitted at the Eaves/supporting post joints) the correct type of supporting post assembly must be located in the correct location. There are (2) types of supporting post assemblies: 1. End Supporting post/Knee Brace Bracket assembly. 2. Intermediate Supporting Post/Knee Brace Bracket assembly. These must be located and oriented correctly. The schematic layout shows how to locate and orient these (2) types of supporting post.assemblies. 

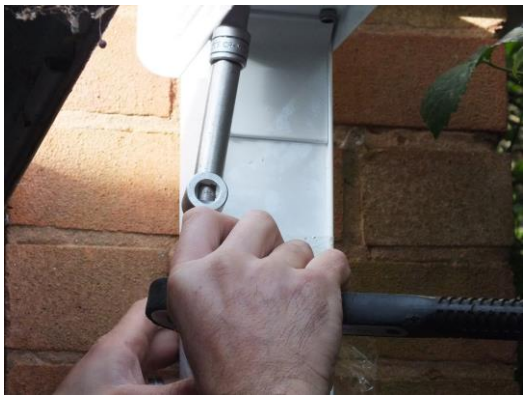
25	***(****If there are (2) Eaves/Gutter sections to install, this Process Step also applies for installing the first of (2) Eaves/Gutter sections****)*** Set the Eaves/Gutter assembly in position so that the Supporting Posts are located correctly in the Eaves/Gutter. At this stage make sure that your levels are correct, both for the Supporting Posts and the Eaves/Gutter. You may, at this point provide the Eaves/Gutter with a slight fall toward the position of the outlet in the Eaves/Gutter.    
26	***This Process Step only applies if there are (2) Eaves/Gutter assembly sections to be installed.*** ***This will be the case for canopies that are 6.3m (and over) in width.*** If there are (2) Eaves/Gutter sections to install the first Eaves/Gutter section has been installed in Process Step 23. This Process Step installs the second Eaves/Gutter Section. This will require (2) persons. Install the Eaves/Gutter over the Supporting Posts. Ensure that your required levels are correct. If you are applying a fall, then ensure that the fall is as required to suit your installation. Align the Joining Plate that has been inserted into the first



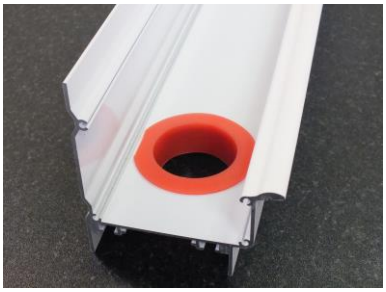
Eaves/Gutter with the Joining Plate slots on the second Eaves/Gutter.
Tap the (other) end of the Eaves/Gutter with a White Rubber Mallet whilst holding the first Eaves/Gutter.
Apply silicone sealant to the end profile of first Eaves/Gutter.
Tap the end of the second Eaves/Gutter until the (2) Eaves/Gutters abut each other.

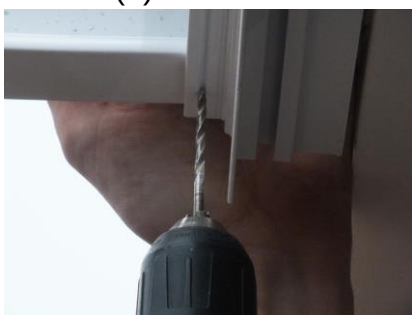
Smooth the sealant over the join of the (2) Eaves/Gutters o both the inside and outside of the join.

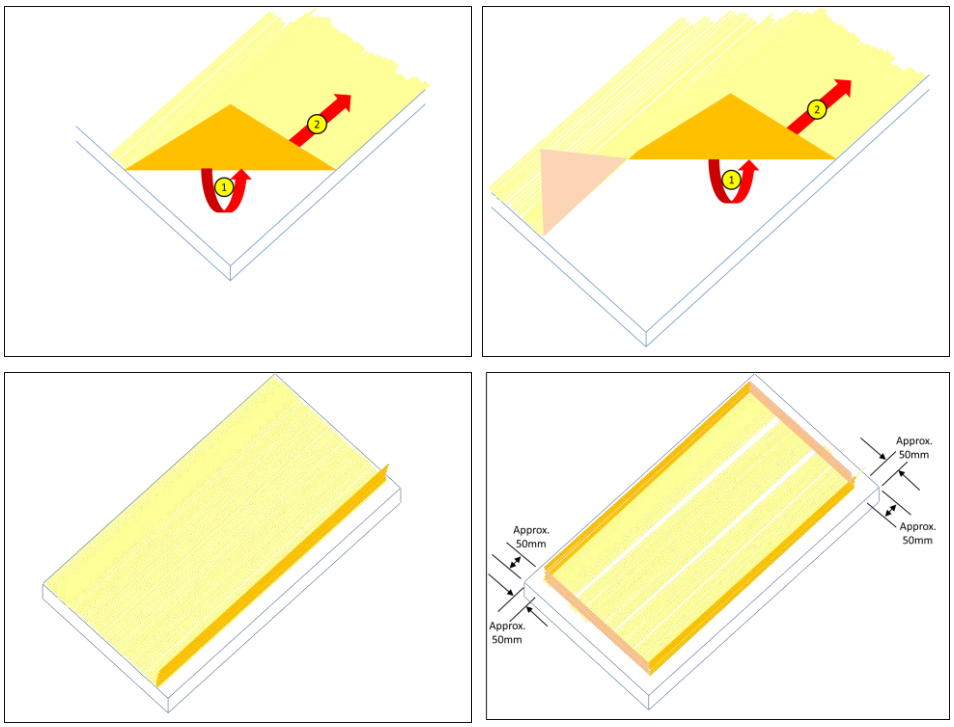
<u>This Process Step only applies if there are (2) Eaves/Gutter assembly sections to be installed.</u>
<u>This will be the case for canopies that are 6.3m (and over) in width.</u>
Apply Flashband to internal join of the (2) Eaves/Gutters.
This is to seal the join in the gutter.

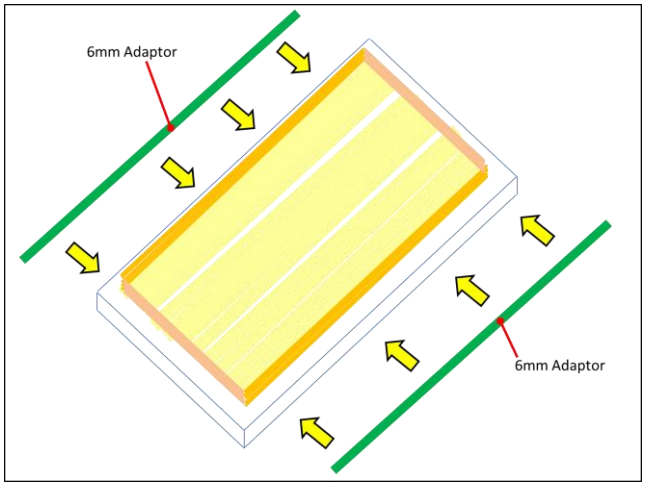
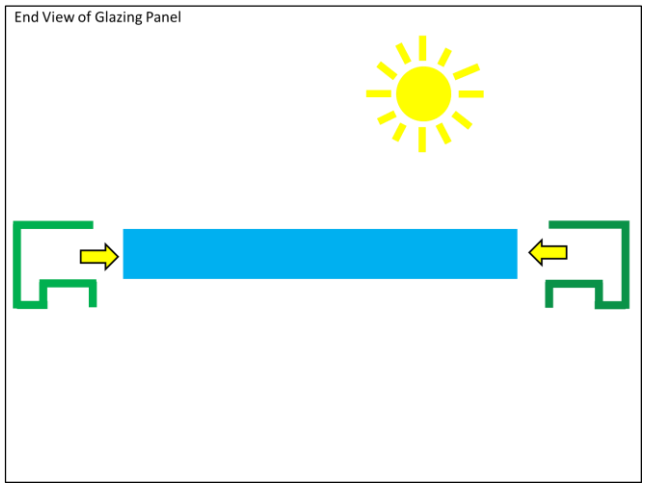
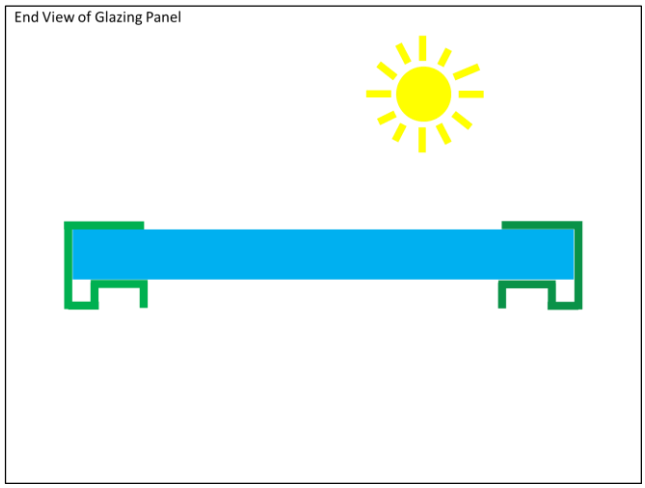
27	Secure the outside Supporting Posts. The outside Supporting Posts are fixed to the Eaves/Gutter using (4) Self-Tapping Screws – (2) on either side of the Eaves/Gutter.  
28	Secure all Brackets in position. Tighten up the M6 Nyloc Nuts using M10 Socket and Ratchet Driver. 

29	Secure Brackets to Supporting Posts. The Brackets are fixed to the Supporting Posts using the Self-Tapping Screws. Use (4) Self-Tapping Screws for each Bracket. It is useful to make a small cardboard template with the hole positions marked on it that can be used to mark the positions of the holes on the Brackets.    

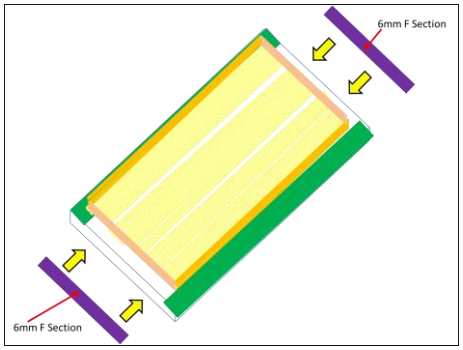
30	Cut Out Rainwater Drainage Hole in Eaves/Gutter. Use 1 51mm diameter HoleSaw and the Drill/Driver to cut the hole required in the Eaves/Gutter. You will need to be above the Eaves/Gutter to do this. Therefore you will need to use a secure and stable Stepladder. Make sure that the centre of the hole to be cut is immediately central to the Supporting Post (located below the Eaves/Gutter).  Please note that in this picture the Eaves/Gutter end-Plate has been removed to show the HoleSaw position.
31	Prepare and fit Rainwater adaptor. If necessary trim the flange of the Rainwater Adaptor so that it will sit flat on the bottom of the Eaves/Gutter. Apply bead of silicone to the lower surface of the flange of the Rainwater Adaptor. Insert Rainwater Adaptor into the hole cut with the 51mm dia. Hole saw. Ensure that the flange sits flat on the bottom of the Eaves/Gutter all around the Rainwater Adaptor. On larger canopies more than one rainwater outlet will be required. The quantity of Rainwater Adaptors supplied will indicate the number of rainwater outlets recommended.  

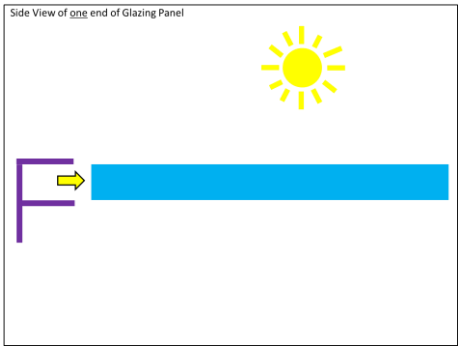
	Stage 05: Fit Edge Glazing Bars
32	Fit the Edge Glazing Bars; one to each end of the canopy. There is flexibility along the length of the Edge Glazing Bar in the exact position the Edge Glazing Bars are secured to the Wall-Plate at one end of the Edge Glazing Bar and the Eaves/Gutter at the other end. The Standard projections of the canopy are achieved with the position of the Self-Tapping Screw located: 18mm from the end of the Edge Glazing Bar at the Eaves/Gutter. 42mm from the end of the Edge Glazing Bar at the Wall-Plate. Please note that these are nominal positions and you do have flexibility in the exact positioning of the Self-Tapping Screw fixings on the Edge Glazing Bar. When you are happy with the position of the Self-Tapping Screw and have secured the Edge Glazing Bar in position you may want to make a small block (of wood) to act as a locating device for the other Edge Glazing Bar and the Main Glazing Bars. This block is referred to as the ***Glazing Bar Setting Block*** later in this Installation guide. This block would sit in the Eaves/Gutter abutting the inside edge of the Eaves/Gutter and the end of the Edge Glazing Bar. You may use another wood block for the Wall-Plate end of the Edge Glazing Bar. Check your levels again. Secure the Edge Glazing Bar in position using (2) Self-Tapping Screws; (1) at the Eaves/Gutter end and (1) at the Wall-Plate end  .   

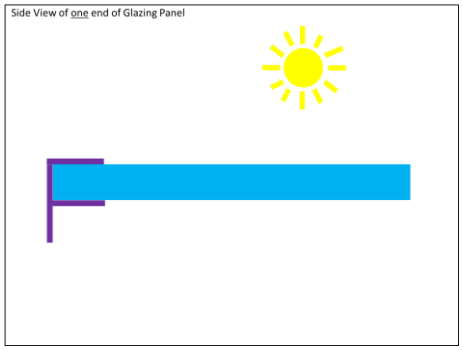
	Stage 06: Assemble Glazed Panel Assemblies
33	All Glazed panels assemblies should be assembled prior to installation into Canopy roof. Glazed Panel assemblies comprise: (2) 6mm Adaptors. (2) 6mm F Sections. (1) 6mm Plate Polycarbonate panel. This process is best undertaken with the panels located on a bench with access all around the bench. 'Unstick' protective film from both sides of the panel to a depth of 50mm from the panel edge. Unstick the protective film around all (4) edges of both sides of the panel. 

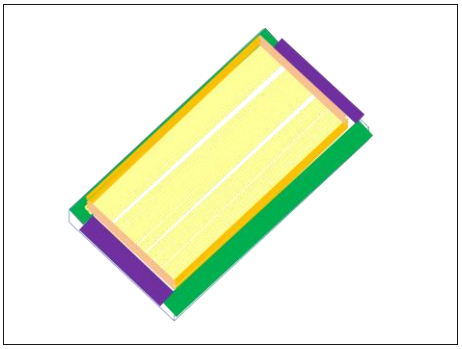
33 (Cont.d)	Push the 6mm adaptors onto the glazed panel. These components will ultimately be located in the Canopy Glazing Bars.   

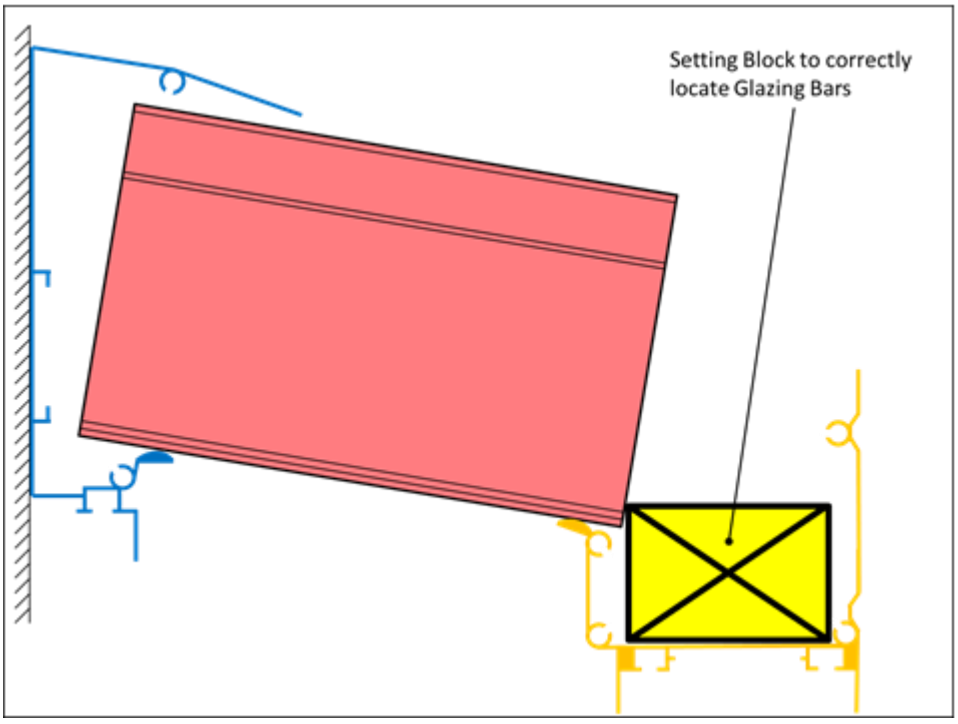
33 (Cont.d)	Push 6mm F Sections onto Glazed Panel. The F Sections will fit snugly between the 6mm Adaptors at both ends of the Glazed Panel.

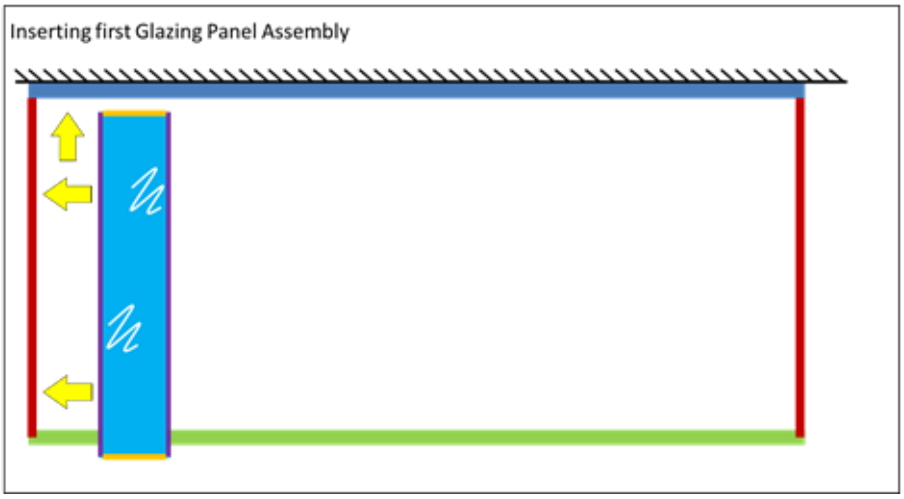






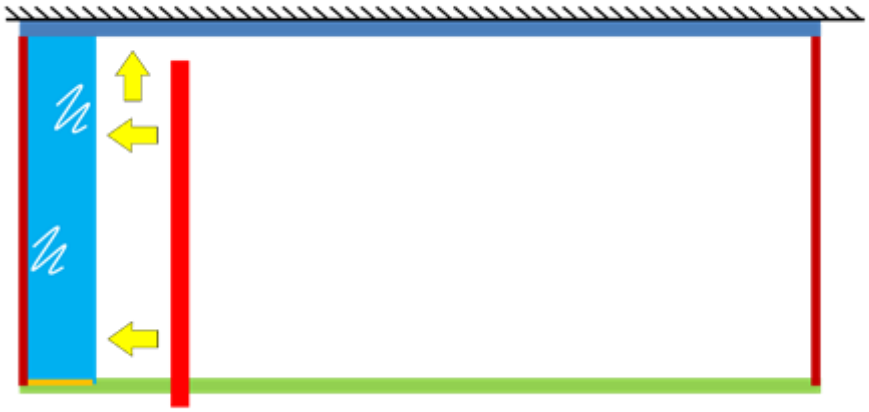


	Stage 07: Fit Roof Panels and Main Glazing Bars
34	Starting at one side of the canopy. Slide the panel assembly into the pocket of the Edge Glazing Bar. This is much more easily achieved using (2) people. Rest this Main Glazing Bar on the Eaves/Gutter and Wall-Plate. Locate the ***Glazing Bar Setting Block*** in the Eaves/Gutter at the end of the Main Glazing Bar so that the Main Glazing bar is in position and aligned with the Edge Glazing Bar. At this point the Roof Panel assemblies and the Main Glazing Bars are NOT to be fixed in position. Repeat this process, alternatively fitting Roof Panel Assemblies and Main Glazing Bars until the last Roof Panel Assembly is to be fitted. 

34 (Cont'd.)	At the Eaves/Gutter; the Glazed Panel Assembly is located by the F Section 'Butting-Up' to the Glazing Bar edges. At the Wall-Plate the location is achieved by measuring the Gap between the Glazing Bars. For standard width canopies use the 'Between Glazing Bar' Dimensions in Section 07 of this guide.# For Special Canopies; use the Installation Guide Special Addendum-Glazing Bar Spacing for the dimension between glazing bars. **<u>Process Steps for Installing Glazing Panel Assemblies and Main Glazing Bars</u>** 1. Starting at one end side of the canopy install the first Glazing Panel Assembly. 2. Then, install the first Main Glazing Bar. 3. Repeat 1. and 2. until the last Main Glazing Bar is installed. 4. Check and adjust positioning of Main Glazing Bars laterally at the Wall-Plate and Eaves/Gutter. 5. Check Last Glazing Bar position at The Eaves/Gutter using the Setting Block. 6. Secure Last Glazing Bar in position with 1 self-tapping screw at the wall-Plate and 1 the Eaves/Gutter. 7. Remove the self-tapping screw at the Eaves/Gutter of the Edge Glazing Bar and 'swing' the Edge Glazing Bar out (pivoting at the Wall-Plate). 8. Install the last Glazing Panel Assembly. 9. 'Re-screw' Edge Glazing Bar at Eaves/Gutter. 

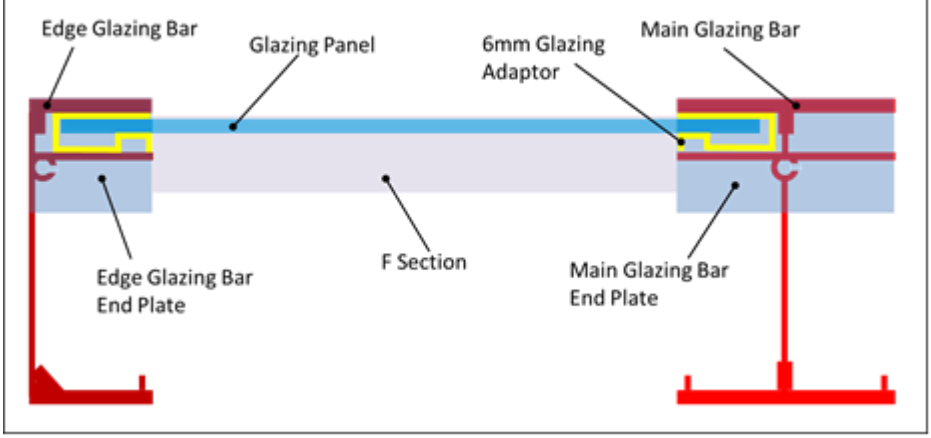
34
(Cont'd.)

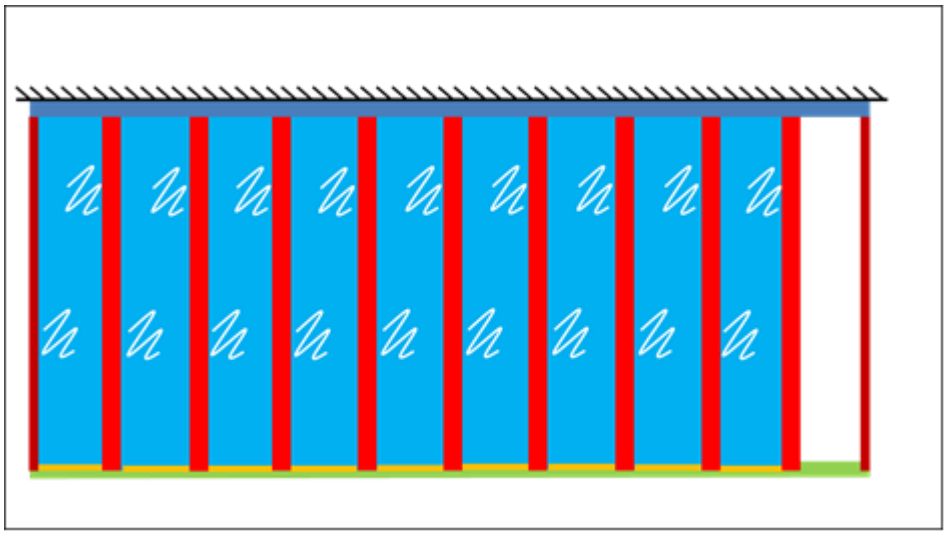
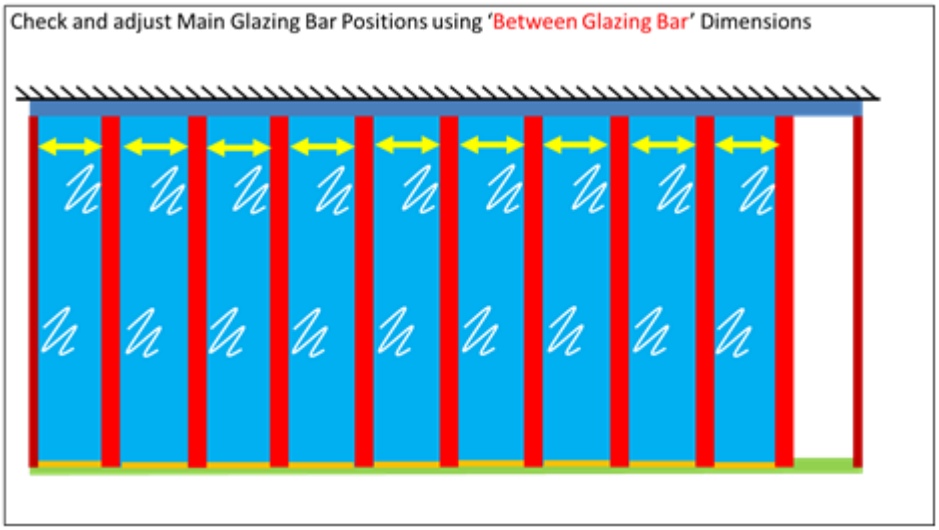
Installing first Main Glazing Bar onto Glazed Panel assembly
and locating in Wall-Plate and on Eaves/Gutter



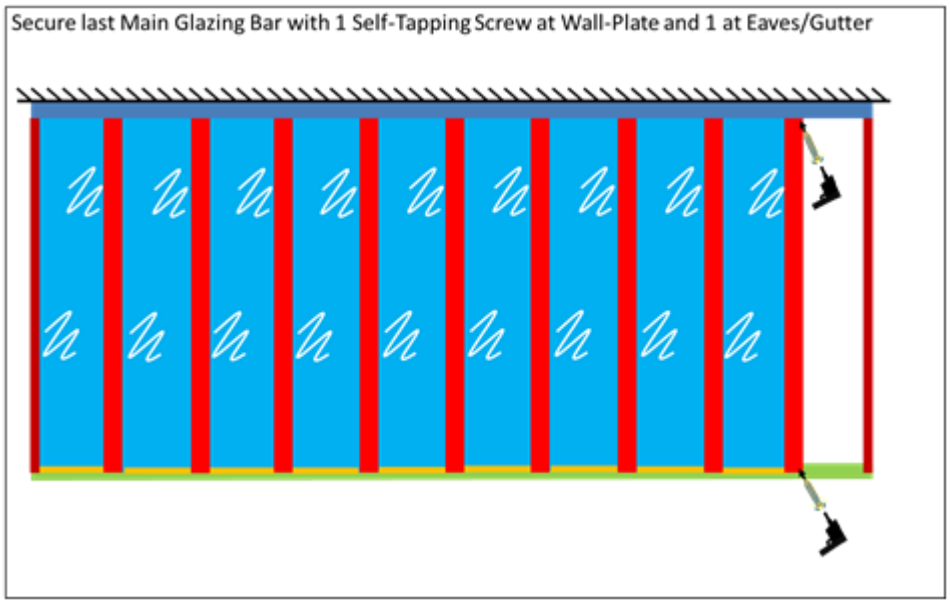
Inserting Next Glazing Panel Assembly

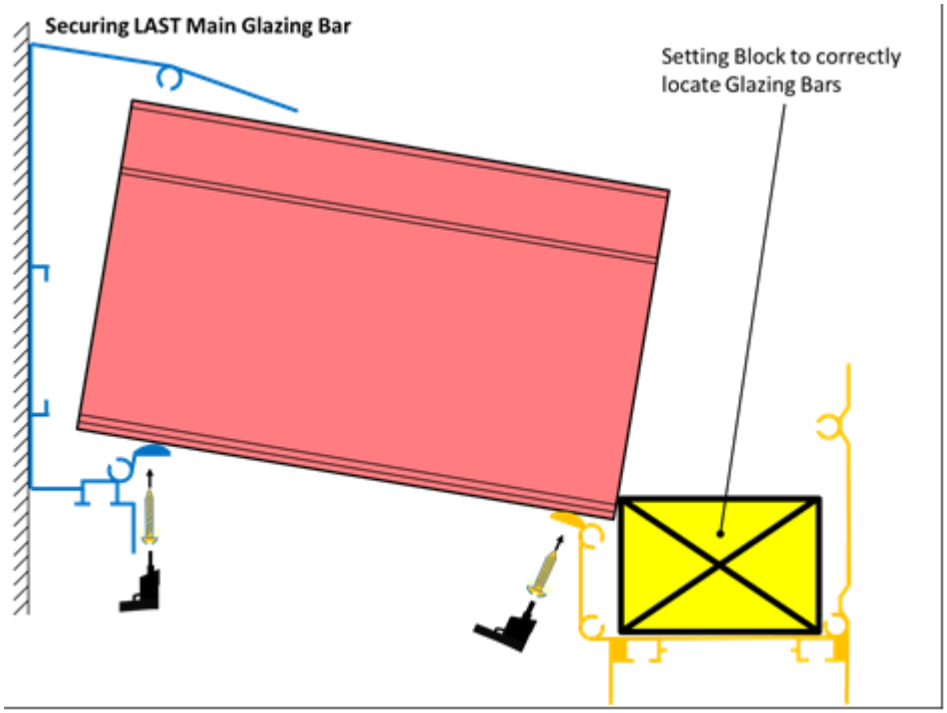
Schematic drawing showing Glazed Roof Panel Assembly installed

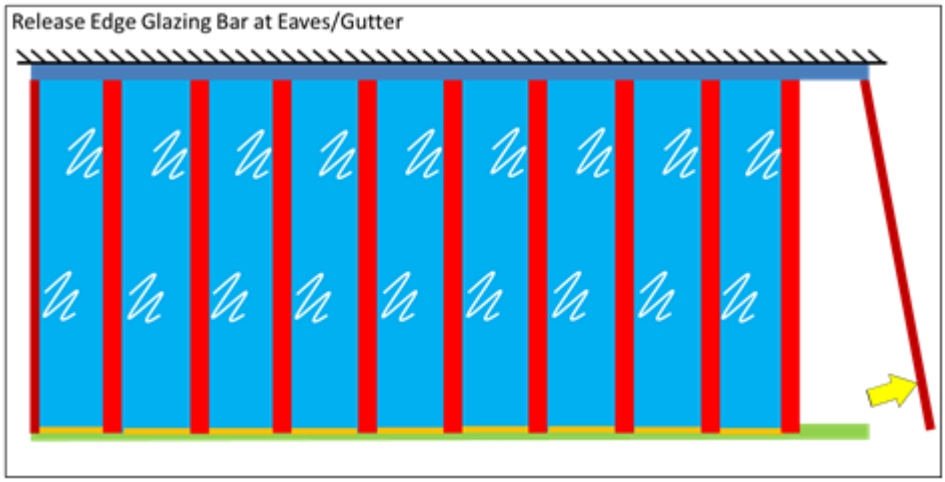
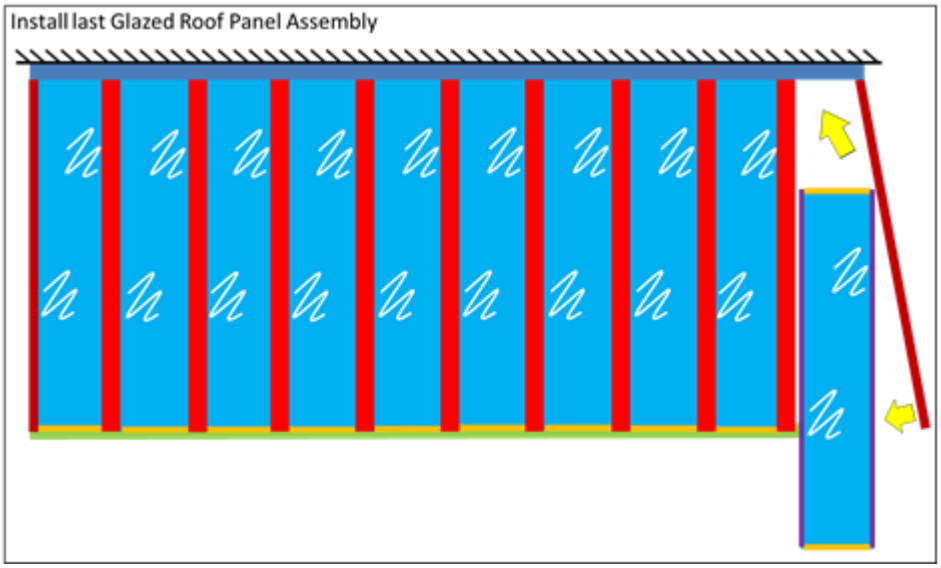
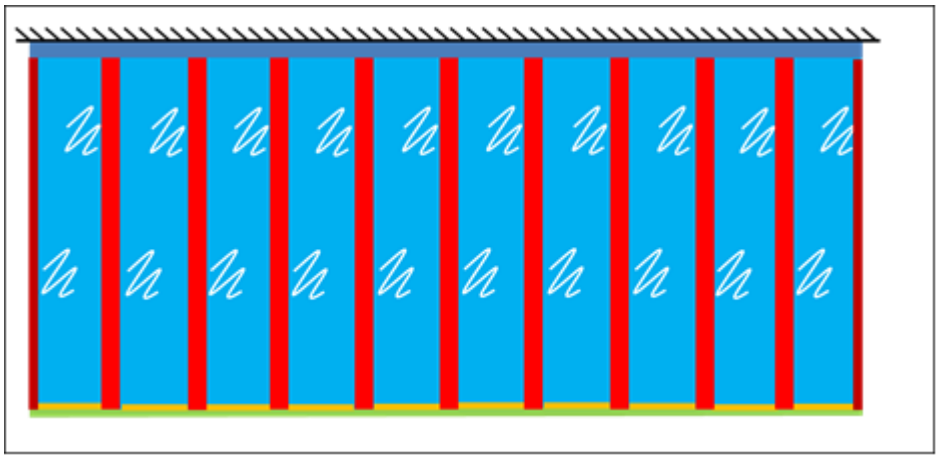


34 (Cont'd.)	 

34
(Cont'd.)

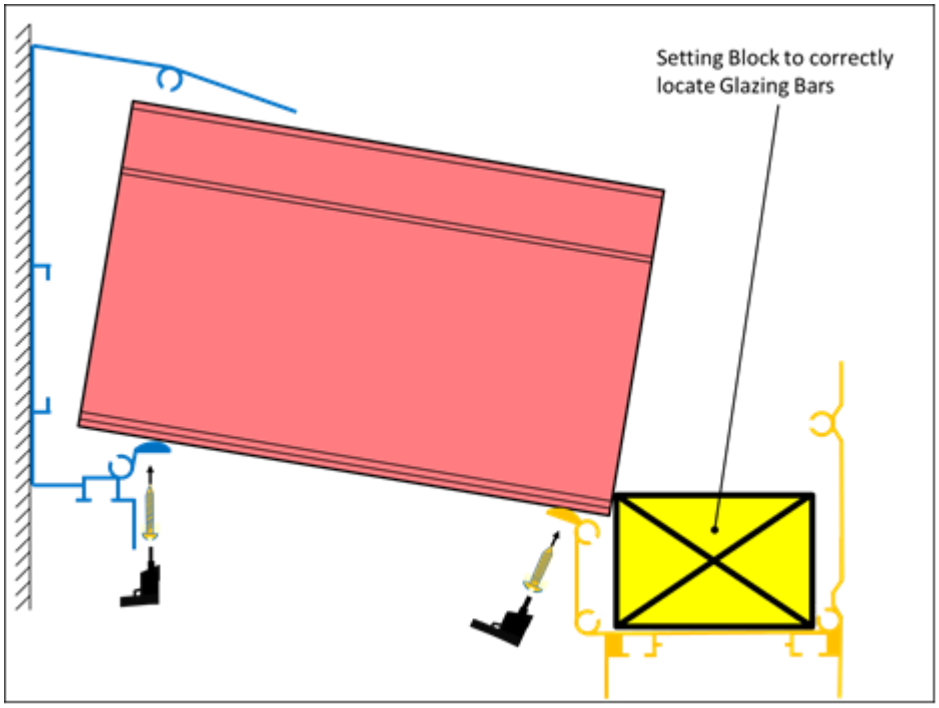

Secure last Main Glazing Bar with 1 Self-Tapping Screw at Wall-Plate and 1 at Eaves/Gutter

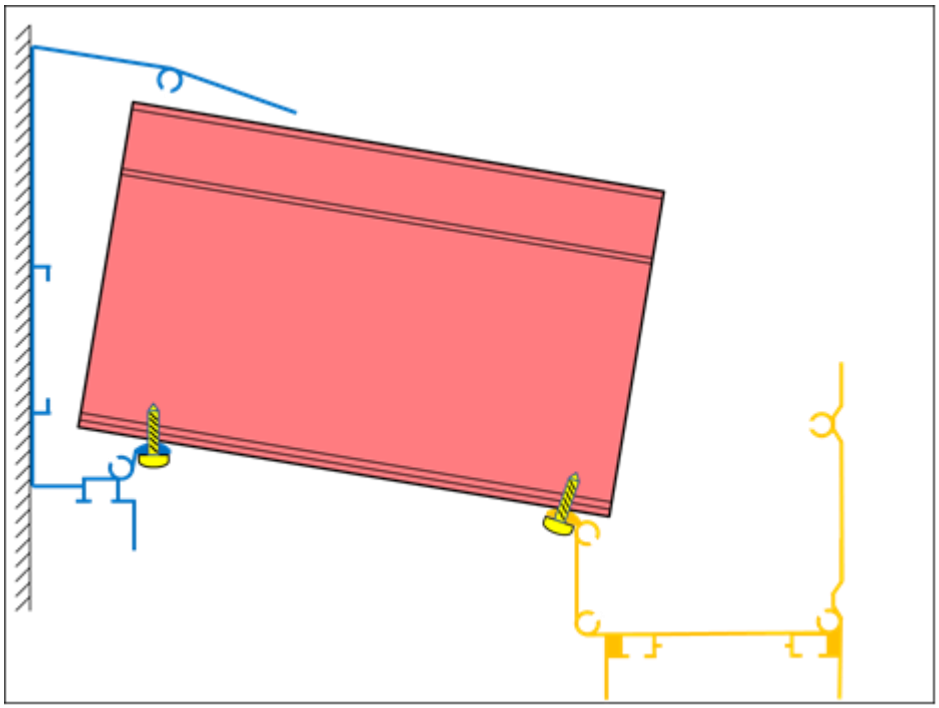

Securing LAST Main Glazing Bar
Setting Block to correctly locate Glazing Bars

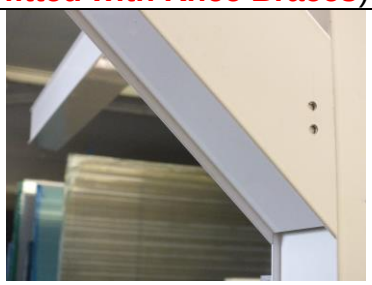
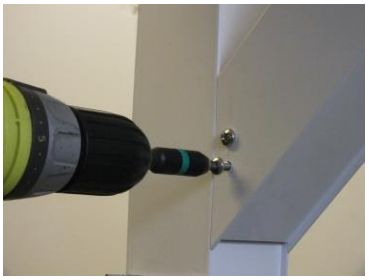
34 (Cont'd.)	  

	Stage 08: Fixing Main Glazing Bars
35	Check that the alignment of the Main Glazing Bars with The edge Glazing Bars is correct using the ***Glazing Bar Setting Block*** (described in Process Step 33).  Secure the Main Glazing Bars using (4) Self-Tapping Screws; (2) at the Wall-Plate end of the Main Glazing Bar and (2) at the Eaves/Gutter end. 

35
(Cont'd.)





	Stage 09: Fitting Knee Braces to Eaves/Supporting Posts (**This stage only required if canopy is fitted with Knee Braces**)
36	The assembly process here is the same for securing all Knee Braces in position.  Locate the Knee brace in position: Ensure that the knee brace sits within the (2) flange profiles on the Eaves/Gutter and also sits over the Knee Brace Bracket on the Supporting post.  The Knee Brace is supplied with the pilot holes for securing the Knee Brace to the Knee Brace Brackets pre-drilled. Before any drilling for pilot holes in the Eaves/gutter is undertaken ensure that the end of the Knee Brace with the pre-drilled pilot holes is located at the knee Brace Bracket.  Ensure that the Knee Brace is located so that both end of the Knee Brace are located flush to the Eaves/Gutter and the Supporting Post. Securing Knee Brace: **1.** Secure the Knee Brace in position by driving (1) Self-Tapping screw through one of the pre-drilled holes in the Knee Brace into the Knee Brace Bracket.  **2.** Next drill a pilot hole through the Eaves/Gutter into the Knee Brace and secure by driving a self-tapping screw into the Knee Brace.  **3.** Repeat these (2) steps on the other side of the Knee Brace. **4.** Drill remaining (2) pilot holes in the Eaves/Gutter.

36 (Cont'd.)	**5.** Drive remaining (4) self-tapping screws.  Repeat the entire process for all Knee Braces.

	Stage 10: Secure Supporting Post Feet in Foundations
37	Pour Concrete mix into Supporting Post Holes covering the Supporting Post Feet with recommended 300mm cube of concrete.  Make good surface as required.

07 Glazing Bars and Glazing Bar Spacing

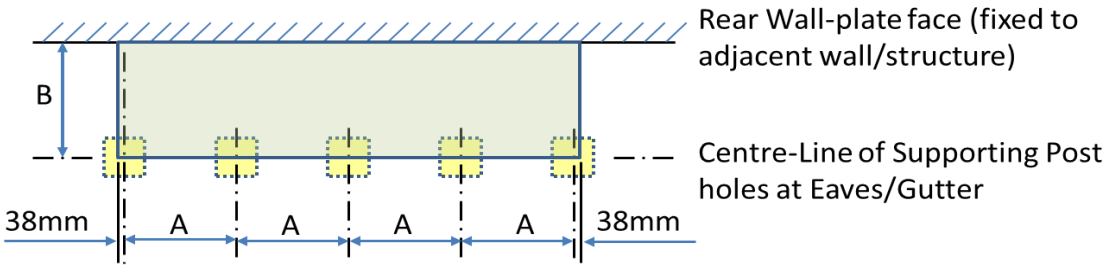
	Glazing Bars and Glazing Bar Spacing						
Canopy Size	Qty. Edge Bars	Qty. Main Bars	Qty. Panels	Panel Width (mm)	Edge Bar Base Width (mm)	Main Bar Base Width (mm)	Dim. Between Bars (mm)
2.1m W x 1.5m P	2	2	3	676	35	60	637
2.8m W x 1.5m P	2	3	4	677	35	60	638
3.5m W x 1.5m P	2	4	5	677	35	60	638
4.2m W x 1.5m P	2	5	6	678	35	60	638
4.9m W x 1.5m P	2	6	7	678	35	60	639
5.6m W x 1.5m P	2	7	8	678	35	60	639
6.3m W x 1.5mP	2	8	9	678	35	60	639
7.0m W x 1.5m P	2	9	10	678	35	60	639
7.7m W x 1.5m P	2	10	11	678	35	60	639
8.4m W x 1.5m P	2	11	12	678	35	60	639
9.1m W x 1.5m P	2	12	13	678	35	60	639
9.8m W x 1.5m P	2	13	14	678	35	60	639
10.5m W x 1.5m P	2	14	15	679	35	60	639
2.1m W x 2.0m P	2	2	3	676	35	60	637
2.8m W x 2.0m P	2	3	4	677	35	60	638
3.5m W x 2.0m P	2	4	5	677	35	60	638
4.2m W x 2.0m P	2	5	6	678	35	60	638
4.9m W x 2.0m P	2	6	7	678	35	60	639
5.6m W x 2.0m P	2	7	8	678	35	60	639
6.3m W x 2.0m P	2	8	9	678	35	60	639
7.0m W x 2.0m P	2	9	10	678	35	60	639
7.7m W x 2.0m P	2	10	11	678	35	60	639
8.4m W x 2.0m P	2	11	12	678	35	60	639
9.1m W x 2.0m P	2	12	13	678	35	60	639
9.8m W x 2.0m P	2	13	14	678	35	60	639
10.5m W x 2.0m P	2	14	15	679	35	60	639
2.1m W x 2.5m P	2	2	3	676	35	60	637
2.8m W x 2.5m P	2	3	4	677	35	60	638
3.5m W x 2.5m P	2	4	5	677	35	60	638
4.2m W x 2.5m P	2	5	6	678	35	60	638
4.9m W x 2.5m P	2	6	7	678	35	60	639
5.6m W x 2.5m P	2	7	8	678	35	60	639
6.3m W x 2.5m P	2	8	9	678	35	60	639
7.0m W x 2.5m P	2	9	10	678	35	60	639
7.7m W x 2.5m P	2	10	11	678	35	60	639
8.4m W x 2.5m P	2	11	12	678	35	60	639
9.1m W x 2.5m P	2	12	13	678	35	60	639
9.8m W x 2.5m P	2	13	14	678	35	60	639
10.5m W x 2.5m P	2	14	15	679	35	60	639

07 Glazing Bars and Glazing Bar Spacing

	Glazing Bars and Glazing Bar Spacing						
Canopy Size	Qty. Edge Bars	Qty. Main Bars	Qty. Panels	Panel Width (mm)	Edge Bar Base Width (mm)	Main Bar Base Width (mm)	Dim. Between Bars (mm)
2.1m W x 3.0m P	2	2	3	676	35	60	637
2.8m W x 3.0m P	2	3	4	677	35	60	638
3.5m W x 3.0m P	2	4	5	677	35	60	638
4.2m W x 3.0m P	2	5	6	678	35	60	638
4.9m W x 3.0m P	2	6	7	678	35	60	639
5.6m W x 3.0m P	2	7	8	678	35	60	639
6.3m W x 3.0m P	2	8	9	678	35	60	639
7.0m W x 3.0m P	2	9	10	678	35	60	639
7.7m W x 3.0m P	2	10	11	678	35	60	639
8.4m W x 3.0m P	2	11	12	678	35	60	639
9.1m W x 3.0m P	2	12	13	678	35	60	639
9.8m W x 3.0m P	2	13	14	678	35	60	639
10.5m W x 3.0m P	2	14	15	679	35	60	639
2.1m W x 3.5m P	2	2	3	676	35	60	637
2.8m W x 3.5m P	2	3	4	677	35	60	638
3.5m W x 3.5m P	2	4	5	677	35	60	638
4.2m W x 3.5m P	2	5	6	678	35	60	638
4.9m W x 3.5m P	2	6	7	678	35	60	639
5.6m W x 3.5m P	2	7	8	678	35	60	639
6.3m W x 3.5m P	2	8	9	678	35	60	639
7.0m W x 3.5m P	2	9	10	678	35	60	639
7.7m W x 3.5m P	2	10	11	678	35	60	639
8.4m W x 3.5m P	2	11	12	678	35	60	639
9.1m W x 3.5m P	2	12	13	678	35	60	639
9.8m W x 3.5m P	2	13	14	678	35	60	639
10.5m W x 3.5m P	2	14	15	679	35	60	639
3.1m W x 4.0m P	2	5	6	494	35	60	455
4.2m W x 4.0m P	2	7	8	503	35	60	464
5.2m W x 4.0m P	2	9	10	498	35	60	459
6.3m W x 4.0m P	2	11	12	503	35	60	464
7.4m W x 4.0m P	2	13	14	507	35	60	468
8.4m W x 4.0m P	2	15	16	504	35	60	464
9.0m W x 4.0m P	2	16	17	508	35	60	469
9.4m W x 4.0m P	2	17	18	501	35	60	462
10.0m W x 4.0m P	2	18	19	505	35	60	466

08 Setting Out Foundation Holes for Standard Range of Glass Clear Canopies

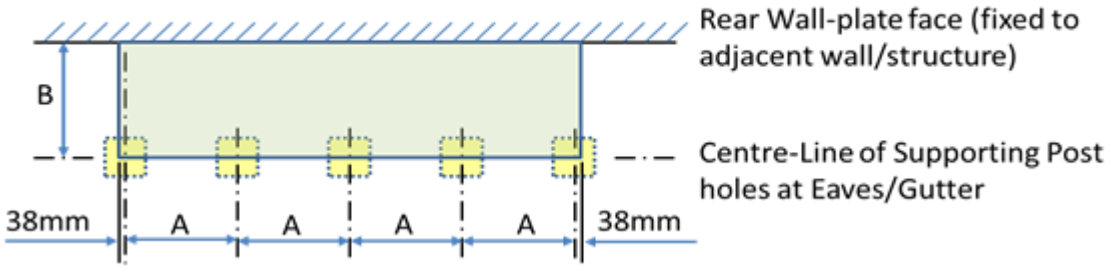
PLAN VIEW (from above canopy)



		Supporting Post and Foundation Hole Centres (mm)				
Canopy Size	**Qty. Posts**	**Dim. A**	**Dim. B @ 5 Degree Roof Pitch**	**Dim B @ 10 Degree Roof Pitch**	**Dim B @ 15 Degree Roof Pitch**	**Dim B @ 20 Degree Roof Pitch**
2.10m W x 1.5m P	2	2,025	1,541	1,524	1,496	1,457
2.80m W x 1.5m P	2	2,725	1,541	1,524	1,496	1,457
3.50m W x 1.5m P	3	1,713	1,541	1,524	1,496	1,457
4.20m W x 1.5m P	3	2,063	1,541	1,524	1,496	1,457
4.90m W x 1.5m P	3	2,413	1,541	1,524	1,496	1,457
5.60m W x 1.5m P	3	2,763	1,541	1,524	1,496	1,457
6.30m W x 1.5mP	4	2,075	1,541	1,524	1,496	1,457
7.00m W x 1.5m P	4	2,308	1,541	1,524	1,496	1,457
7.70m W x 1.5m P	4	2,542	1,541	1,524	1,496	1,457
8.40m W x 1.5m P	4	2,775	1,541	1,524	1,496	1,457
9.10m W x 1.5m P	5	2,256	1,541	1,524	1,496	1,457
9.80m W x 1.5m P	5	2,431	1,541	1,524	1,496	1,457
10.5m W x 1.5m P	5	2,606	1,541	1,524	1,496	1,457
2.10m W x 2.0m P	2	2,025	2,039	2,017	1,979	1,926
2.80m W x 2.0m P	2	2,725	2,039	2,017	1,979	1,926
3.50m W x 2.0m P	3	1,713	2,039	2,017	1,979	1,926
4.20m W x 2.0m P	3	2,063	2,039	2,017	1,979	1,926
4.90m W x 2.0m P	3	2,413	2,039	2,017	1,979	1,926
5.60m W x 2.0m P	3	2,763	2,039	2,017	1,979	1,926
6.30m W x 2.0m P	4	2,075	2,039	2,017	1,979	1,926
7.00m W x 2.0m P	4	2,308	2,039	2,017	1,979	1,926
7.70m W x 2.0m P	4	2,542	2,039	2,017	1,979	1,926
8.40m W x 2.0m P	4	2,775	2,039	2,017	1,979	1,926
9.10m W x 2.0m P	5	2,256	2,039	2,017	1,979	1,926
9.80m W x 2.0m P	5	2,431	2,039	2,017	1,979	1,926
10.5m W x 2.0m P	5	2,606	2,039	2,017	1,979	1,926

08 Setting Out Foundation Holes for Standard Range of Glass Clear Canopies

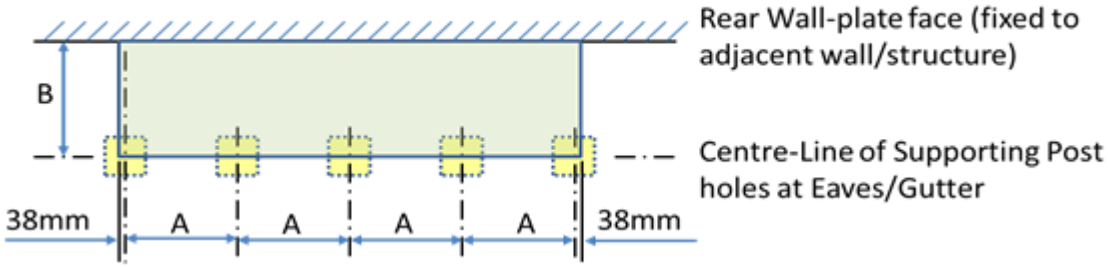
PLAN VIEW (from above canopy)



		Supporting Post and Foundation Hole Centres (mm)				
Canopy Size	Qty. Posts	Dim. A	Dim. B @ 5 Degree Roof Pitch	Dim B @ 10 Degree Roof Pitch	Dim B @ 15 Degree Roof Pitch	Dim B @ 20 Degree Roof Pitch
2.10m W x 2.5m P	2	2,025	2,537	2,509	2,462	2,396
2.80m W x 2.5m P	2	2,725	2,537	2,509	2,462	2,396
3.50m W x 2.5m P	3	1,713	2,537	2,509	2,462	2,396
4.20m W x 2.5m P	3	2,063	2,537	2,509	2,462	2,396
4.90m W x 2.5m P	3	2,413	2,537	2,509	2,462	2,396
5.60m W x 2.5m P	3	2,763	2,537	2,509	2,462	2,396
6.30m W x 2.5m P	4	2,075	2,537	2,509	2,462	2,396
7.00m W x 2.5m P	4	2,308	2,537	2,509	2,462	2,396
7.70m W x 2.5m P	4	2,542	2,537	2,509	2,462	2,396
8.40m W x 2.5m P	4	2,775	2,537	2,509	2,462	2,396
9.10m W x 2.5m P	5	2,256	2,537	2,509	2,462	2,396
9.80m W x 2.5m P	5	2,431	2,537	2,509	2,462	2,396
10.5m W x 2.5m P	5	2,606	2,537	2,509	2,462	2,396
2.10m W x 3.0m P	2	2,025	3,036	3,001	2,945	2,866
2.80m W x 3.0m P	2	2,725	3,036	3,001	2,945	2,866
3.50m W x 3.0m P	3	1,713	3,036	3,001	2,945	2,866
4.20m W x 3.0m P	3	2,063	3,036	3,001	2,945	2,866
4.90m W x 3.0m P	3	2,413	3,036	3,001	2,945	2,866
5.60m W x 3.0m P	3	2,763	3,036	3,001	2,945	2,866
6.30m W x 3.0m P	4	2,075	3,036	3,001	2,945	2,866
7.00m W x 3.0m P	4	2,308	3,036	3,001	2,945	2,866
7.70m W x 3.0m P	4	2,542	3,036	3,001	2,945	2,866
8.40m W x 3.0m P	4	2,775	3,036	3,001	2,945	2,866
9.10m W x 3.0m P	5	2,256	3,036	3,001	2,945	2,866
9.80m W x 3.0m P	5	2,431	3,036	3,001	2,945	2,866
10.5m W x 3.0m P	5	2,606	3,036	3,001	2,945	2,866

08 Setting Out Foundation Holes for Standard Range of Glass Clear Canopies

PLAN VIEW (from above canopy)



		Supporting Post and Foundation Hole Centres (mm)				
Canopy Size	Qty. Posts	Dim. A	Dim. B @ 5 Degree Roof Pitch	Dim B @ 10 Degree Roof Pitch	Dim B @ 15 Degree Roof Pitch	Dim B @ 20 Degree Roof Pitch
2.10m W x 3.5m P	2	2,025	3,534	3,494	3,428	3,336
2.80m W x 3.5m P	2	2,725	3,534	3,494	3,428	3,336
3.50m W x 3.5m P	3	1,713	3,534	3,494	3,428	3,336
4.20m W x 3.5m P	3	2,063	3,534	3,494	3,428	3,336
4.90m W x 3.5m P	3	2,413	3,534	3,494	3,428	3,336
5.60m W x 3.5m P	3	2,763	3,534	3,494	3,428	3,336
6.30m W x 3.5m P	4	2,075	3,534	3,494	3,428	3,336
7.00m W x 3.5m P	4	2,308	3,534	3,494	3,428	3,336
7.70m W x 3.5m P	4	2,542	3,534	3,494	3,428	3,336
8.40m W x 3.5m P	4	2,775	3,534	3,494	3,428	3,336
9.10m W x 3.5m P	5	2,256	3,534	3,494	3,428	3,336
9.80m W x 3.5m P	5	2,431	3,534	3,494	3,428	3,336
10.5m W x 3.5m P	5	2,606	3,534	3,494	3,428	3,336
3.10m W x 4.0m P	2	3,025	4,032	3,986	3,911	3,806
4.20m W x 4.0m P	3	2,063	4,032	3,986	3,911	3,806
5.20m W x 4.0m P	3	2,563	4,032	3,986	3,911	3,806
6.30m W x 4.0m P	4	2,075	4,032	3,986	3,911	3,806
7.40m W x 4.0m P	4	2,442	4,032	3,986	3,911	3,806
8.40m W x 4.0m P	4	2,775	4,032	3,986	3,911	3,806
9.00m W x 4.0m P	4	2,975	4,032	3,986	3,911	3,806
9.40m W x 4.0m P	5	2,331	4,032	3,986	3,911	3,806
10.0m W x 4.0m P	5	2,481	4,032	3,986	3,911	3,806

09 Care and Maintenance

Your canopy will require very little care and maintenance.

The metalwork is powder coated in polyester. This is very hard-wearing.
The roof panels are formed in polycarbonate. This is 200 times stronger than glass and is highly impact resistant.

Cleaning

1. The metalwork can be cleaned with a soft cloth and soapy water.
2. The (polycarbonate) roof panels can be cleaned:
    a. Gently wash sheet with a solution of mild soap and lukewarm water, using a soft, grid-free cloth or sponge to loosen any dirt or grime.
    b. Fresh paint splashes, grease and smeared glazing compounds can be removed easily before drying by rubbing lightly with a soft cloth using petroleum ether (BP65), hexane or heptane. Afterwards, wash the sheet using mild soap and lukewarm water.
    c. Scratches and minor abrasions can be minimised by using a mild automobile polish. Test on a small area of sheet before using on the entire sheet is recommended.
    d. Finally, thoroughly rinse with clean water to remove any cleaner residue and dry the surface with a soft cloth to prevent water spotting.

Other important instructions for (polycarbonate) roof panels:

1. Never use abrasive or highly alkaline cleaner on polycarbonate materials.
2. Never use aromatic or halogenated solvents like toluene, benzene, gasoline, acetone or carbon tetrachloride on polycarbonate materials.
3. Use of in with polycarbonate sheet can cause structural and/or surface damage.
4. Contact with harsh solvents such as methyl ethyl ketone (MEK) or hydrochloric acid can result in surface degradation and possible crazing of polycarbonate sheet.
5. Never scrub with brushes, steel wool or other abrasive materials.
6. Never use squeegees, razorblades or other sharp instruments to remove deposits or spots.
7. Do not clean polycarbonate in direct sunlight or at high temperatures as this can lead to staining.
8. For all mentioned chemicals consult the manufacturers' material safety data sheets for proper safety precautions.