

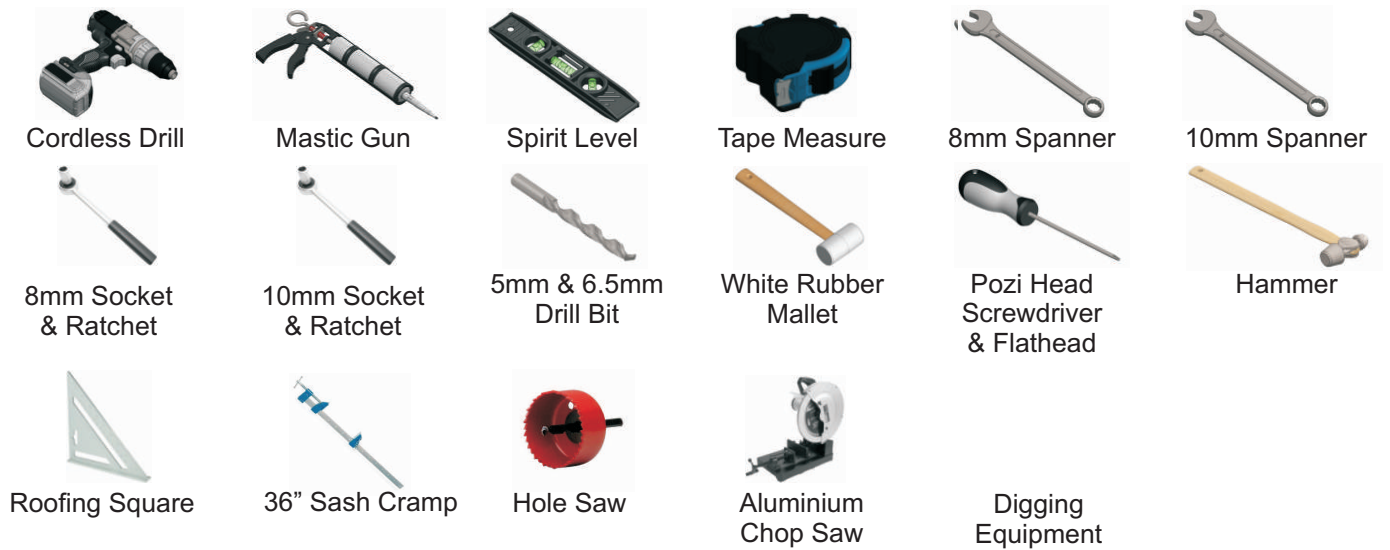


Installation Guide

Simplicity Apex

Tools Required

Below is a list of tools that you will require to install the Simplicity Apex Canopy or Carport.

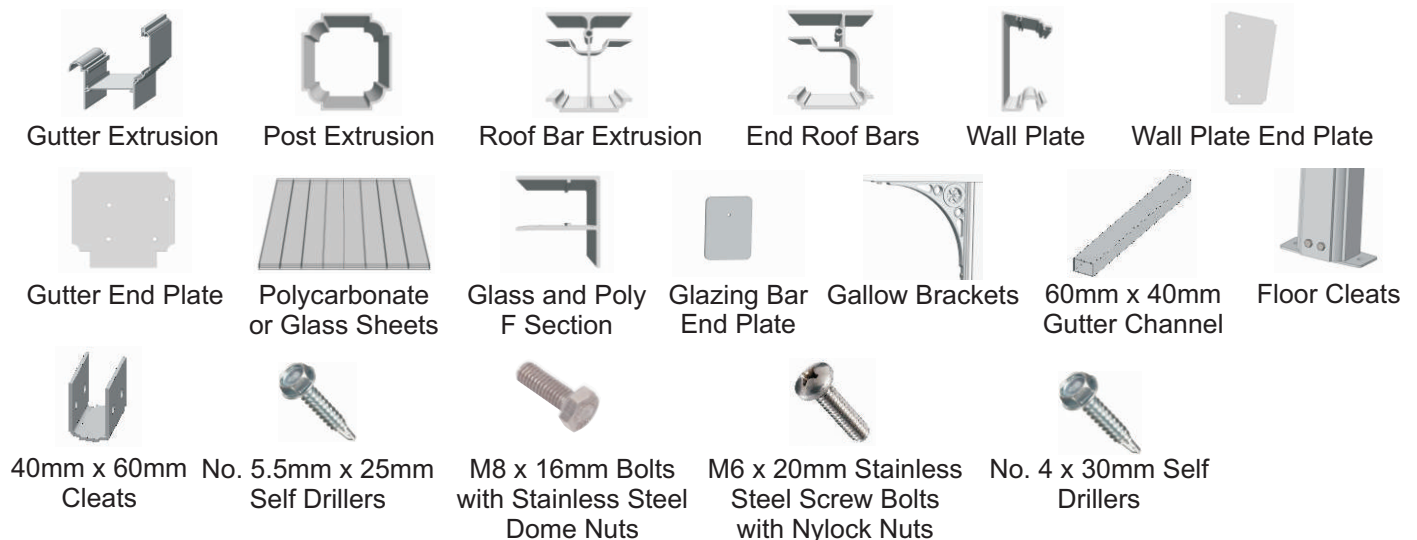


Materials **NOT** supplied with your system:

- Wall Plate Fixings ▪Bolt Down Post Fixings ▪Concrete or Material for 'making good' ▪Lead Flashing
- Patination Oil ▪Electrical Cable for LED Lighting connection ▪Cleaning Materials

Parts Supplied

Below is a list of the parts supplied with your new canopy. Please check that all parts are present before commencing the installation process.



*Please refer to your CAD drawing for each individual order as this will show the roof bar spacing as per your order. This installation guide is generic and the centre's spacing is given as a guide example only.

Preliminary Stages and Planning

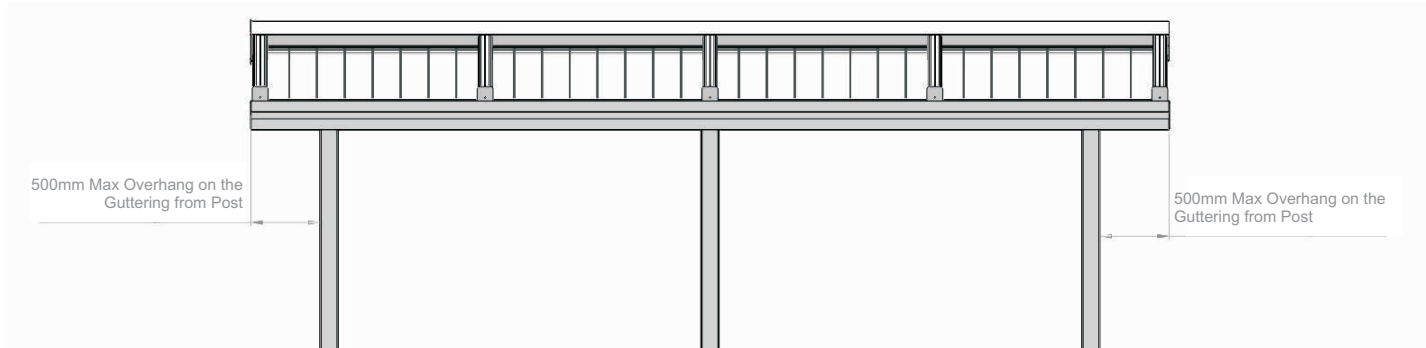
Before starting your install please check all components for quantity and damage.

Below is a roof span chart which you MUST refer to in order to establish the maximum centre to centre dimensions of your roof bars and posts.

SPAN Chart Roof Bars	Up to 3.1m Projection
Simplicity Apex	600mm Roof Bar Spacings

POST SPACINGS	Up to & Including 3.1m Projection
Simplicity Apex	3m Post Spacings

PLEASE NOTE – A MAXIMUM OF 500MM OVERHANG ON THE GUTTER IS ALLOWED



Before starting your installation please check all components for damage and ensure the parts are provided in the correct quantity.

You are now ready to start installing the structure, please turn the page and follow all steps within this guide.

STEP 1

Foundation Hole Positions for Posts

Establish the position of the canopy and mark out the post positions according to the size of the canopy that has been ordered and excavate the correct amount of foundations. The height at the edge (lowest point) must be above 2.1m to meet the minimum legal head height requirement, foundations should be approximately 600mm deep. So allow for the length into the ground plus any fall on the ground.



IMPORTANT: Use roofing square to ensure the holes are square to each other.

STEP 2

Digging of Holes

Holes must be 300mm x 300mm x 600mm deep. This is only a guide. Please consult a structural engineer for verification

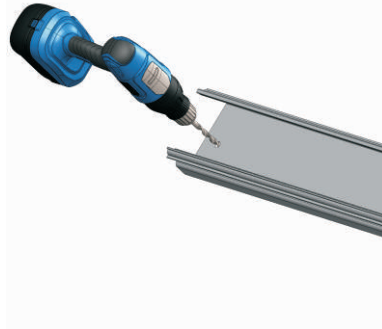
Ensure the bottom of the holes are level to each other to maintain a level front beam.



STEP 3

Fitting of Wall Plate to the Wall

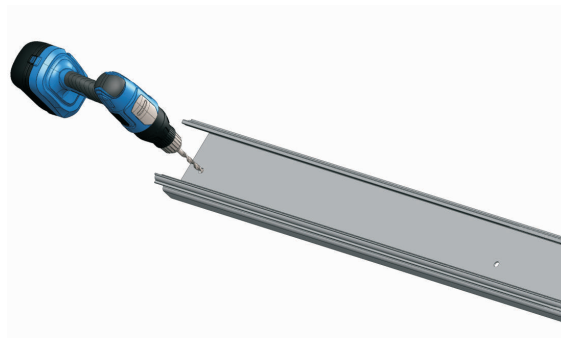
Measure 25mm in from one end of the Wall plate and approx 55mm down from the top of the inside profile and mark before you drill. Drill the wall plate using the 8.5mm drill bit, repeat every 600mm along the wall plate. Once this is done repeat on the other wallplate. Continue to drill holes in the wall plate at approx. 55mm down and at approx. 600mm centres.



STEP 4

Sealing and bolting the wall plate.

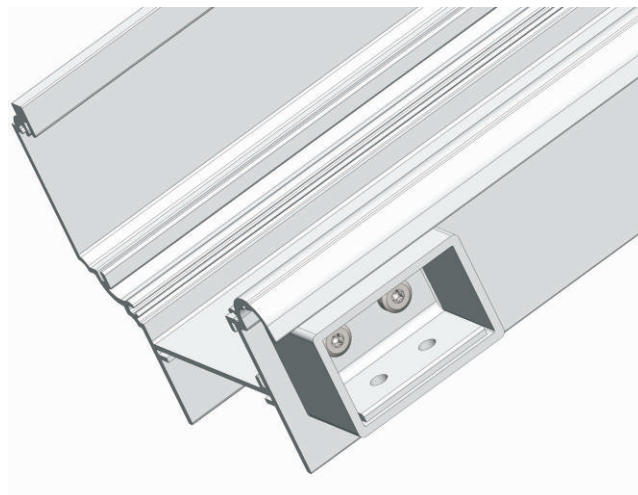
Next using the Soudaflex Crystal Clear Silicon, apply an 8mm continuous bead of silicon along the back of the wall plate and bolt the two wall plates together using the M8 x 16mm bolts supplied.



STEP 5

Fitting the cross bars to the gutter sections

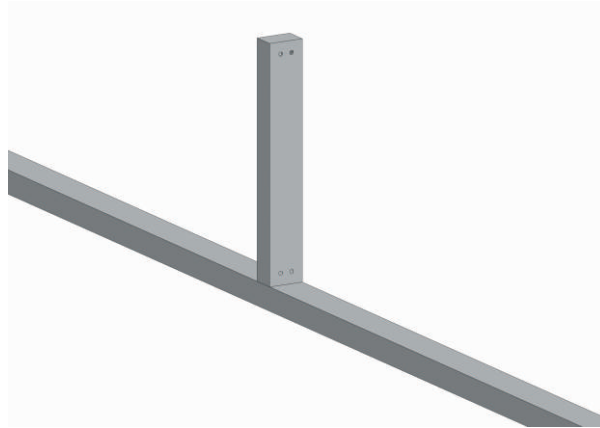
Using 4 trestles to support the 2 gutter eaves beams, lay the 2 opposite each other at the correct width apart and connect all 40mm x 60mm cross braces to the insides of the eaves beams.



STEP 6

Fitting of upstands to the cross braces

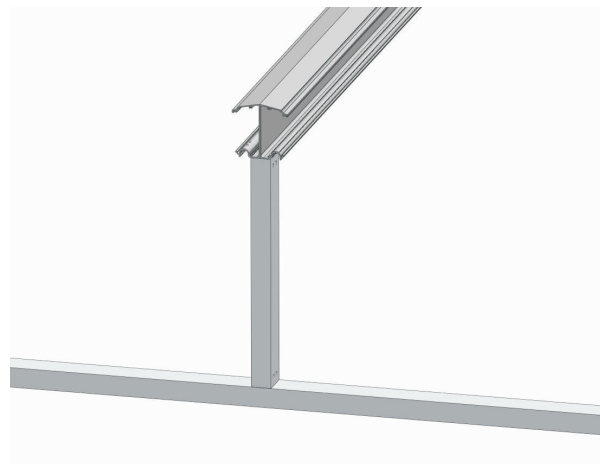
Now fit the upstands to the cross braces



STEP 7

Fitting of the two back to back wallplates

Now fix the 40mm x 60mm cleats in the adjacent position underneath the wall plate to correspond with the upstand positions and bolt them into position using the m6 domes head screw bolts supplied. Then bolt the upstands into the cleats in the wallplates and fix using 5.5mm x 25mm self-drilling screws (supplied).



STEP 8

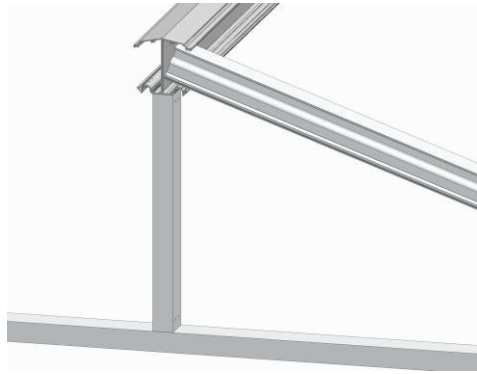
Fitting of the Glazing Bars

Pre-drill the glazing bar that is going to fit into the gutter section. 15mm in from the edge and 30mm from the end of the bar drill your 6.5mm hole. Do this on both sides of the bar. This will allow the glazing bar to overhang the gutter section.

Starting with the End Glazing Bar, push this bar into the wall plate so that it is pushed back as far as possible and ensure the outside profile lines up with the edge of the wall plate. Rest the other end of the glazing bar on the radius inner section of the gutter section.

Using a 6.5mm drill bit, drill 1 No. hole through the bottom radius profile of the wall plate ensuring this also goes through the flat section of the glazing bar. Locate a 6mm x 16mm bolt through the hole and apply nut. Using an 8mm ratchet and screw driver tighten up.

Repeat this process on the other side of the glazing bar. Please see the image below:



Make sure the glazing bar is in line with the gutter beam, then using the same fixing method as the wall plate secure the glazing bar to the gutter section. Your pre-drilled holes will determine where you drill through on the radius of the gutter section.

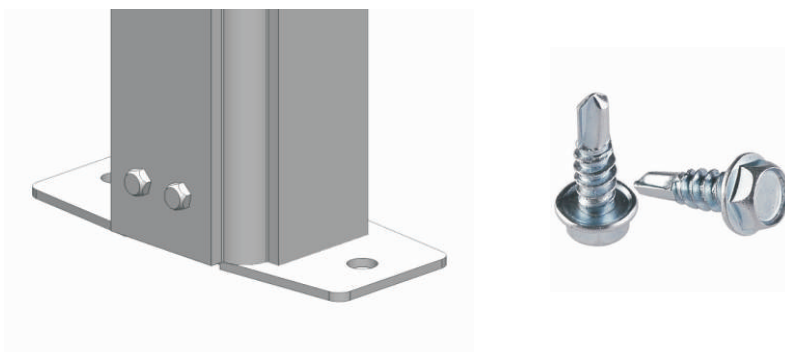
Repeat the above with the last glazing bar at the other end of the wall plate and gutter beam to stabilise the wall plate and gutter beam.

Now look at the glazing supplied and make sure the bar allows for expansion of the material you are using to glaze the canopy, only fix the top of the bars on the rest of the bars you are installing as you need to move the bottom section of the glass across to enable you to slide the glass in. Repeat to all glazing bars.

STEP 9

Fitting of Post Feet to Posts

Centralise the post foot to the post and attach using 2 x No. 12 x 1 ¼" self drill screws (Note this post foot is only suitable for surface mounting the posts. If your posts need to be concreted into the ground please use the square larger post foot supplied)



STEP 10

Cutting the Posts

Measure the height of the canopy at the edge (min 2.1m) and add to this dimension the depth of post that will be going into the ground, allowing for the fall on the ground. The total of this is the length at which your posts need to be cut.

STEP 11

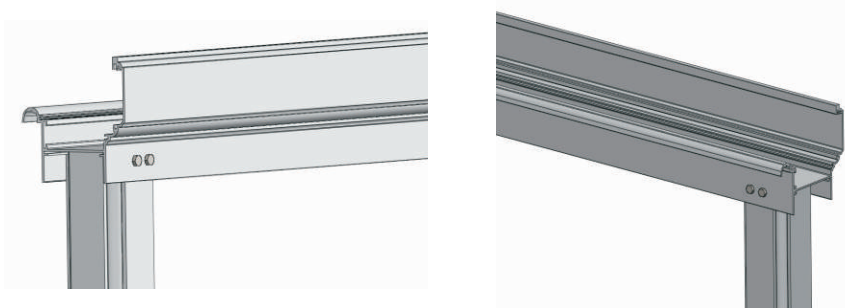
Fitting the Victorian castings to the bottom of the posts.

If you have Victorian castings on the bottom of your posts then you need to slide these onto the bottom of your posts prior to bolting the posts to the eaves beams, you can do this by sliding them onto the post and securing them underneath with a self-drilling screw.

STEP 12

Fitting of Post to Gutter Section

Using suitable lifting equipment lift the assembled frame up to the height it is needed and position the gutter section over the posts and ensure they are in the correct position and are spaced in accordance with the foundations. Ensure the post is square to the gutter section using a roofing square. Using 2 x No. 12 x 1 ¼" drill screws, secure through the front profile of the gutter into the post. Repeat on the inner side so that 4 screws in total are used to secure the post.



STEP 13

If the posts are to be surface mounted, please secure the posts ensuring they are plum and square.

STEP 14

Fitting gallows brackets supports for Victorian castings

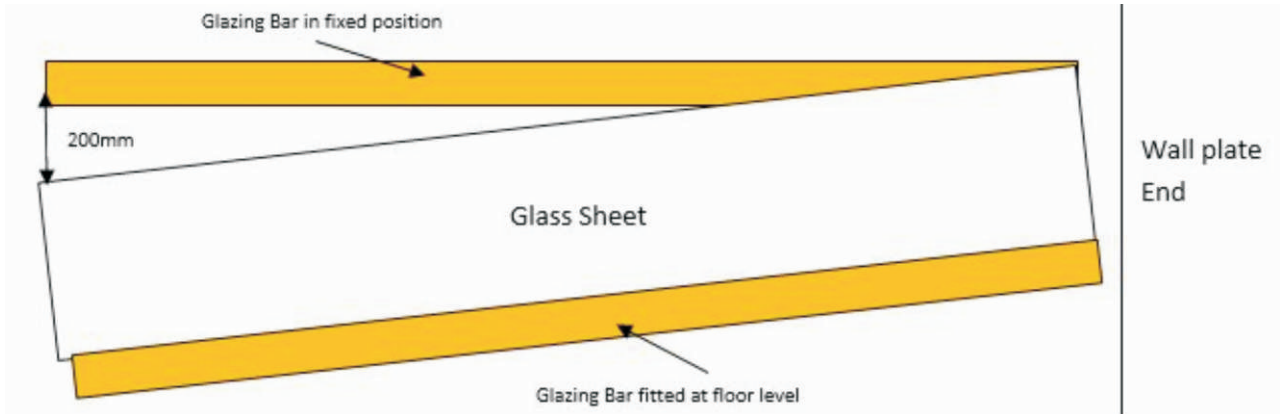
You now need to fit the 40mm x 60mm aluminium gallows bracket supports into the underside of the gutter to enable you to fit the gallows brackets into place

Attach all gallows brackets to the posts to hold the structure square and plumb.

Using the support channel, provided, fix this channel underneath the gutter section using 2 x No12 x 1 ¼". You only need to fix this on the outside face of the gutter channel. With this channel in place you can now fix the Gallows Bracket in place.

Using 2 x No12 x 1 ¼" drill screws fix the Gallows brackets directly into the post and then into the support channel you have previously fitted. See photo below. Using caps provided cap off all screw heads.

When you are fitting the glass sheet into the fixed glazing bar (with the next bar attached) it is recommended that you locate the top corner into position first with the other end about 200mm away from the finished position. When the glass is located in this position it is recommended that you use a Sach Cramp or ratchet straps to ensure the glass stays within the glazing bar and does not spring out while you are pushing the glass into the bar. Then working from that top corner you steadily work along pushing the glass into the glazing bar which reduces the gap until the full length of glass is located into the glazing bar. See illustration below



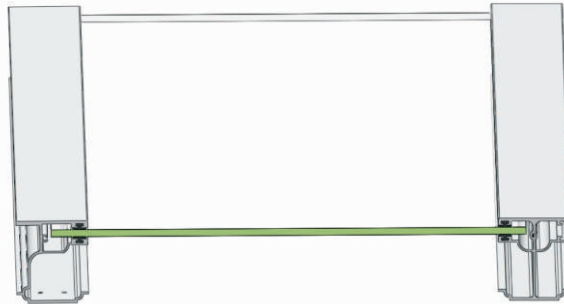
Secure the glazing bar in place as shown in STEP 8

STEP 15

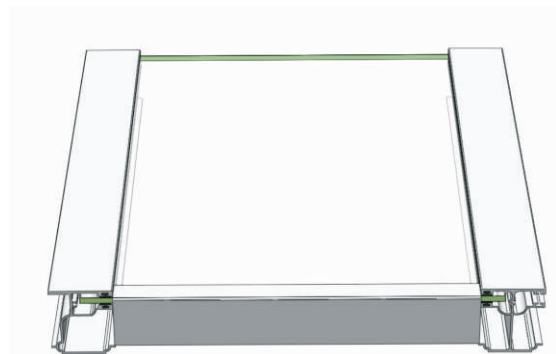
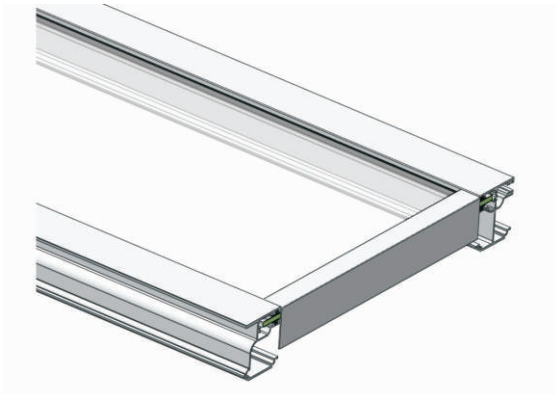
Fitting of the 'F' - Section

Secure the glazing bar to the gutter section using M6 X 16MM Pan Pozi Bolts and M6 Nuts.

Ensure the end of the glass is fitting flush with the edge of the glazing bars as shown below



Cut the 'f'-section the same width as the distance between the inner edge of the two glazing bars. See the image below.



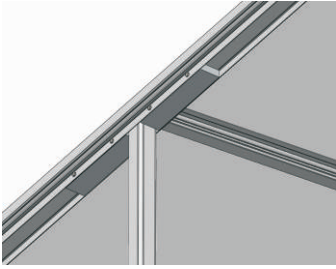
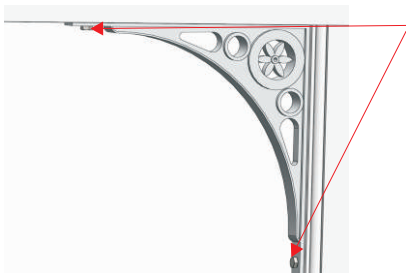


Image shows gutter channel fitted.



Image shows gallow brackets fitted to gutter channel and post.



Please see the position of the fixings.

(If glazing with glass follow next step or if polycarbonate go to step 17)

Glass Sheets

The glass sheet comes with a protective film fitted on the coated face. This needs to be removed prior to fitting. The side with the film needs to be fitted facing the sunlight.

Glazing the Canopy

The glass will be supplied cut to the correct dimensions needed for the installation. You need to measure the width of glass and then work out your bar centres to ensure your last piece of glass fits correctly and is not too big or too small. **DO NOT** attempt to glaze the canopy until you have done this calculation.

When you push the glazing bar into the wall plate the gasket will have a tendency to fold back. You need to flick the rubber gasket out so it lips over the glazing bar and glass.

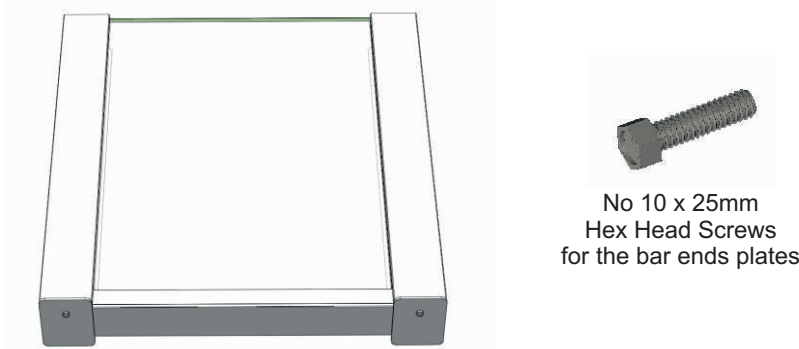
The glass into the glazing should be a nice, tight fit. You will need to apply a suitable lubricant to the top and bottom gasket prior to inserting the glass. (Not supplied) We suggest fairy liquid.

Always fit the glass into the next glazing bar at floor level before you lift and position into the fixed bar on the frame.

STEP 16

Fitting of Bar End Plates

Secure the bar end plate into the end of the glazing bar using a No. 10 x 25 hexagon headed screw (supplied). Please see the image below.



(If installing the structure with 16mm polycarbonate follow step 17 to 24)

STEP 17

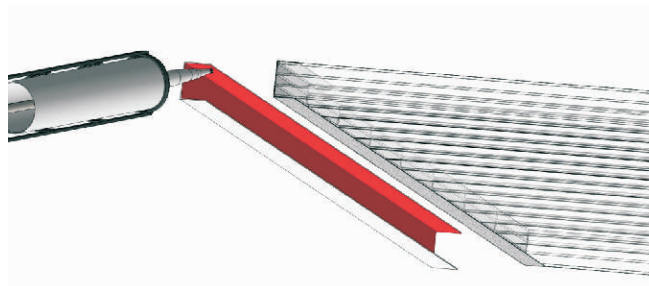
Polycarbonate Sheets

The polycarbonate sheet comes with a protective film fitted to both sides. This needs to be removed prior to fitting. The film with the writing on is the TOP face due to it's coextruded UV coating and therefore needs to be fitted facing the sunlight. The Polycarbonate sheet also has 1 foiled edge which must be fitted at the Gutter section end.

STEP 18

Fitting the Polycarbonate Sheet Capping

Cut the polysheet capping to the width of your polycarbonate sheet, minus 60mm to allow for the sheet fitting into the glazing bar so that the capping is only fitted on the exposed edge. This capping is fitted into the Wall Plate end first and attach using Soudel Crystal Clear Bonding Silicone agent. See product reference. Apply a bead of this silicone along the top of the inside face of the capping only.



The capping can then be knocked onto the sheet using a white rubber mallet.

STEP 19

Prior to fitting. The film with the writing on is the TOP face due to it's coextruded UV coating and therefore needs to be fitted facing the sunlight. The Polycarbonate sheet also has 1 foiled edge which must be fitted at the Gutter section end.

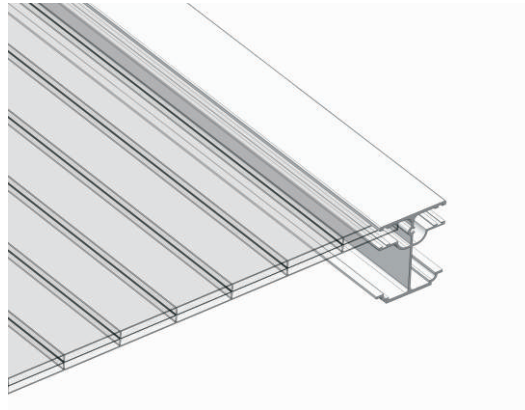
STEP 20

Glazing the Canopy/Carport

If your Canopy/Carport is fitted against a wall at one end you must start the glazing process from the wall end and work progressively across to the open end.

Run a bead of silicone along the entire length of the glazing bar. This needs to be applied on the inside of the top profile prior to pushing the polycarbonate sheet into place. If any silicone leaks out onto the sheet wipe off with a cloth.

Push the polycarbonate sheet that has the polysheet capping on the end firmly into the wall plate and into the channel of the end glazing bar. Make sure this is firmly in place. This should leave the polycarbonate 10mm short of the glazing bar at the gutter end.



Place your next glazing bar into the polycarbonate sheet and push firmly into the channel. Please see diagram below. Fix the glazing bar onto the wall plate and gutter section, as previously described in step 8

STEP 21

Fitting of Polysheet End Closure on the Front end of the Sheets

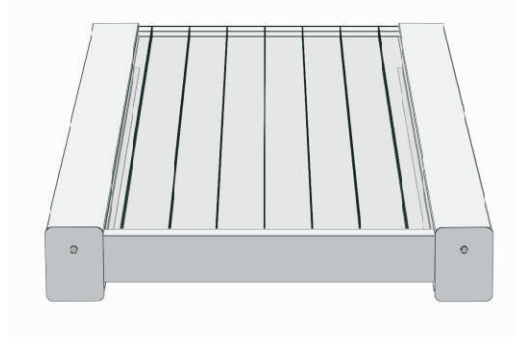
The end closure needs to fit the width of the polycarbonate sheet between the 2 glazing bars. See Image below



STEP 22

Fitting of bar end plates

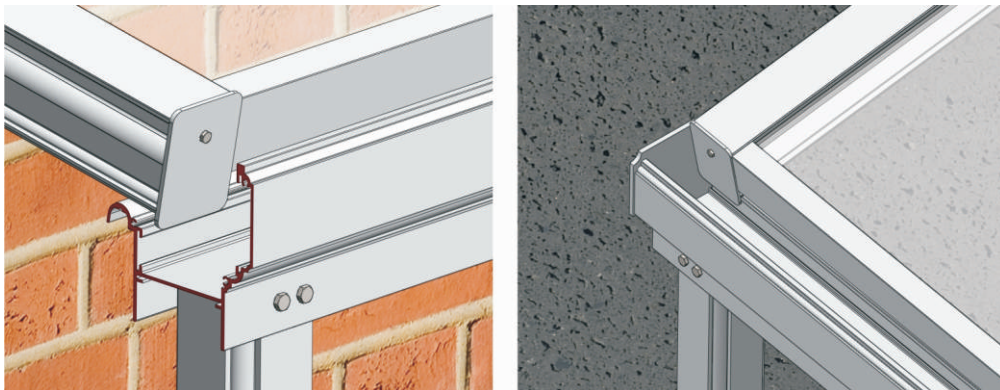
Please note that the End Bar has a different End Plate to the Main Bars. The End Bar plate has a hole that is off set (not on the centre of the plate). These are fitted using a No. 10 x 25 mm Hexagon Headed Screw that is supplied. See Image below.



STEP 23

Fitting of Gutter End Caps

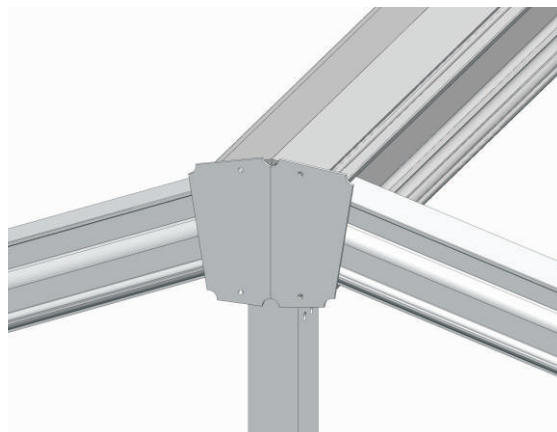
Ensure the gutter is completely dry, then apply a continuous bead of Sudaflex around the end of the gutter extrusion, then line up the 4 holes on the gutter end plate with the port holes on the end of the gutter section and using 4 No. x 5/8" self tapping screws secure in place. Finally using a dobbing stick or finger with disposable gloves apply a bead around the internal gutter section at the end. Repeat at the other end. Please see diagrams below:



STEP 24

Fitting of Wall Plate End Caps

Line up the 2 No. holes on the wall plate end plate with the port holes on the end of the wall plate section and using 2 No. x 5/8" self-tapping screws secure in place. Repeat at the other end.



STEP 25

Make Sure Your Canopy is Square

To ensure the carport is square, using the roofing square, attach one edge of the square to the wall plate and the other edge will need to continuously touch the other edge of the square. This will ensure the gutter beam is perpendicular to the wall plate.

STEP 26

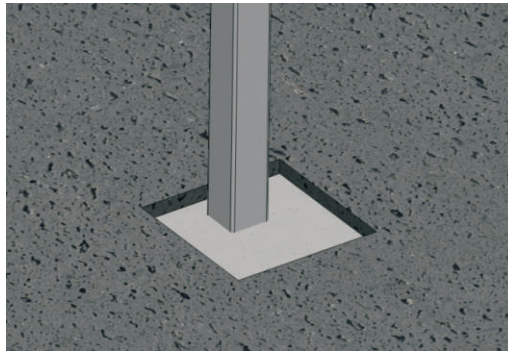
Ensuring your Canopy is Level

Using a spirit level ensure the front beam is completely level and your posts are plumb.

STEP 27

Concrete around the Posts

Using the correct aggregate apply to the excavated holes and make good.

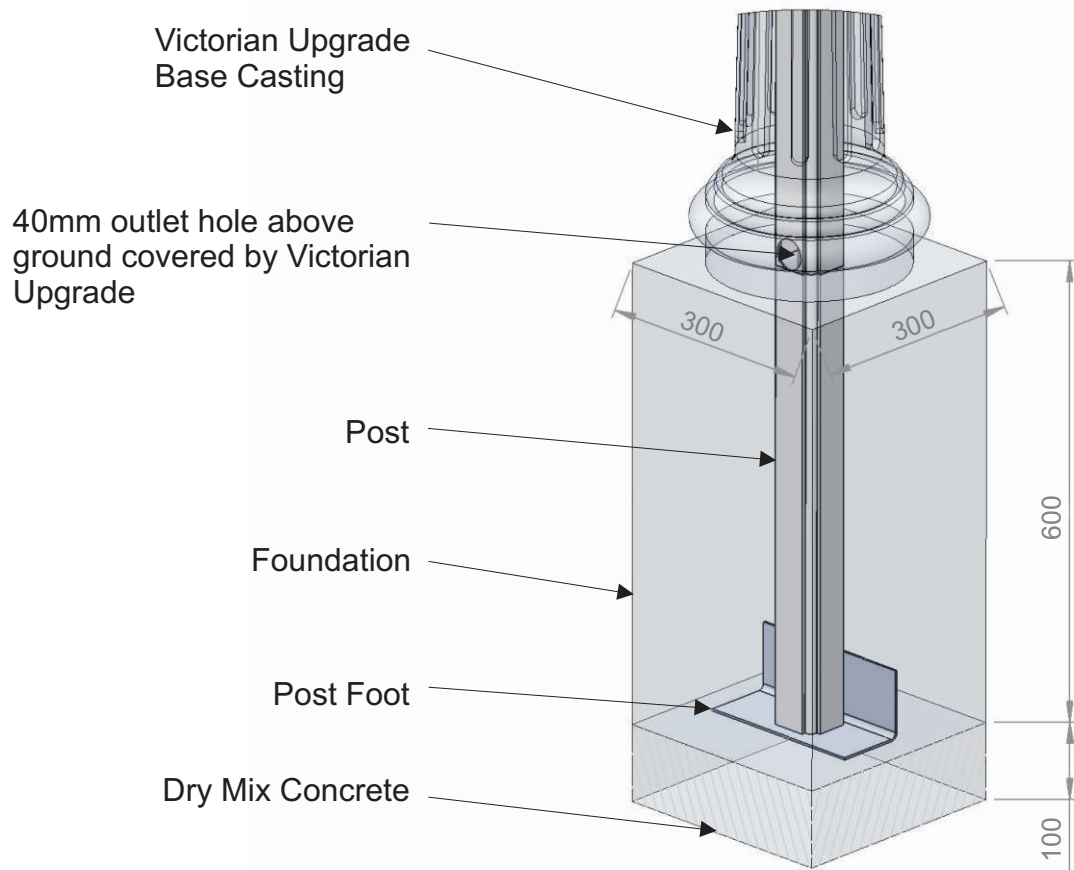


STEP 28

Victorian Upgrade Drainage System

If you are not installing the Victorian Upgrade, please skip this step and move onto step 18a.

Drill a hole no more than 40mm diameter in the gutter section where your post is to be located. Push the post in to the gutter section below the hole. Please see diagram overleaf.



Note:

1. You must ensure the bottom of the hole has at least 100mm of dry mix concrete under the post to prevent subsidence of the post, and that is compacted hard.
2. Ensure as you fill the 300 x 300 x 600 foundation, that you fill the centre of the post level to the bottom of the 40mm hole to prevent rainwater going into the bottom of the post.
3. We recommend that when installing above ground outlets, you perform this procedure on every post to minimise puddles.

Disclaimer: We cannot be held liable for puddles of excess rainwater around the column base.

STEP 29

Standard Drainage System

Drill a hole no more than 40mm diameter in the gutter section where your downpipe is to be located, you will need to use the 40mm hole saw to do this. Push the downpipe in to the gutter section below the hole. Using the downpipe clips provided secure to one of the posts.

STEP 30

Capping off the Fixings

Using the supplied caps, ensure the fixings have been capped off and the structure has been cleaned.

If your canopy or carport is longer than 6m, you may need to join the gutter sections as follows:

Joining Gutter Sections

You will need the following to join every gutter beam:

3No. flat aluminium joining plates: 1No. 300mm x 24.5mm, 1No. 300mm x 70mm, 1No. 300mm x 47mm x 8mm thick

1No tube of Sudaflex marine grade sealer

1No roll of masking tape

8No. M6 x 20mm hex headed bolts

8No. M6 self locking nuts

1No. 6.5mm drill bit

1No mastic gun

1No drill with 8mm self driller attachment

Industrial wipes

uPVC cleaner

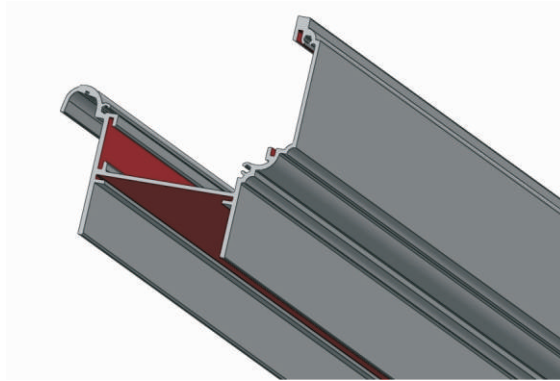
Roll of industrial tissue paper

1. Make sure you only use **Sudaflex**; normal silicon sealer will not do.
2. Now apply a liberal amount of Sudaflex to both sides of the eaves beam on the internal vertical sections and the underside of the gutter where the plate fits into this will enable you to bond the four joining plates.

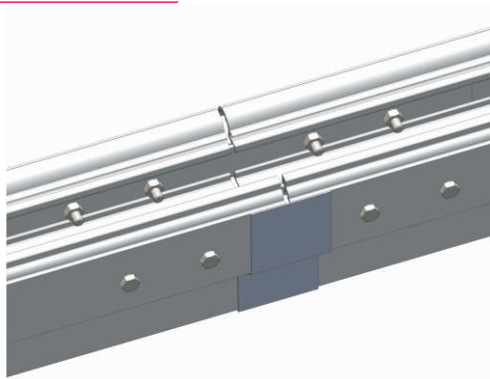


3. Flatten any excess Sudaflex with the spatula and apply a generous amount of sealer around every edge of both plates. Then insert all plates half way in to one half of the join.
4. Apply ample amounts of Sudaflex across all corresponding areas of the opposite eaves beam

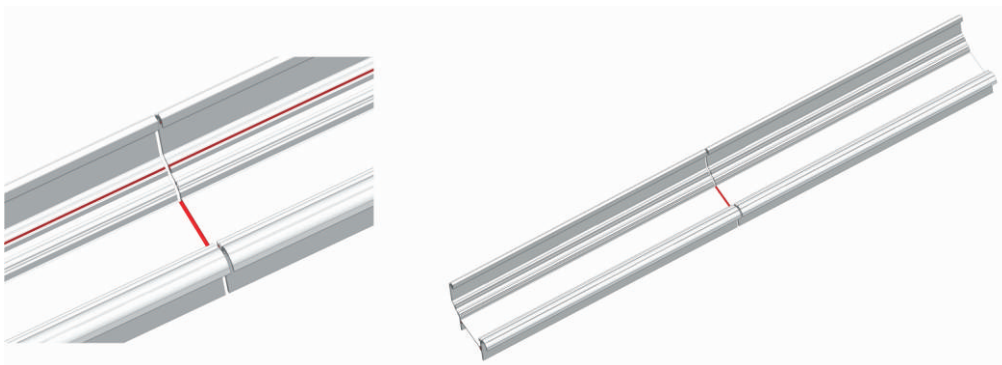
5. You are now ready to marry the two eaves beams together but you must ensure they are flat and level to each other.



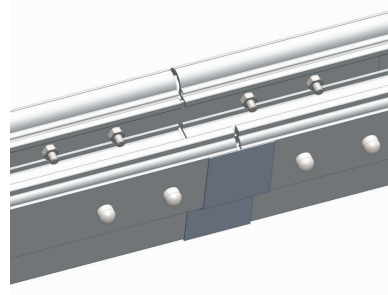
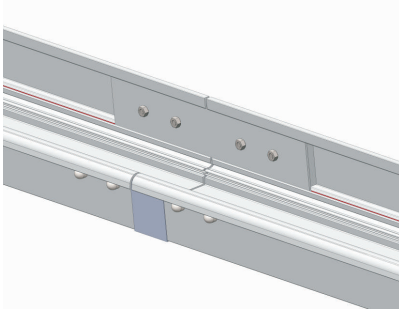
6. Once you have married the two beams together you must leave at least a **3mm gap between the two but no greater than 5mm**



- 6a. Drill 2 No. x 6.5mm holes through the gutter channel and joining plates at 50mm and 100mm either side of the join line at the front and back of the Gutter Channel. Using the 6mm Hex Headed Bolts and Nuts supplied bolt through the gutter channel and joining plates and tighten up. See image above.
7. After around 15 to 20 minutes, stand the Eaves Beam with legs attached up, and attach the bars as described in the above procedure.
8. Once your canopy is glazed, your legs are plumb and your eaves beam is level up and down, left and right, and front to back, ensure your gutter is dry and the surface temperature is at least 4 degrees. If you are installing in the winter, you may need to use a heat gun.
9. Then you will need to apply the final amount of Sudaflex into the bottom of the Eaves Beam, please see diagrams below:



10. Apply a generous amount around the edges of the flat plates inside the gutter and ensure all gaps are filled with Sudaflex internally.
11. Fit the external gutter cover plates.



12. Fit the cover plate centrally over the gutter join line, these plates are fixed using Sikaflex.
13. Fit the nut covers and colour code if required.

End.

