MILWOOD GROUP

Canopy, Carport and Veranda Systems

Installation Guide

Simplicity 35

Tools Required

Below is a list of tools that you will require to install your the Simplicity 35 Canopy or Carport.


Cordless Drill


Mastic Gun


Spirit Level


Tape Measure


8mm Spanner


13mm Spanner


13mm Socket & Ratchet


10mm Socket & Ratchet


8.5mm Drill Bit


White Rubber Mallet


Pozi Head Screwdriver & Flathead


Hammer


Roofing Square

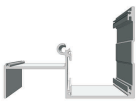

68mm Hole Saw


Aluminium Chop Saw

Digging Equipment

Parts Supplied

Below is a list of the parts supplied with your new Simplicity Canopy. Please check that all parts are present before.


Gutter Extrusion


Post Extrusion

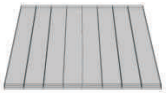

Roof Bar Extrusion


Wall Plate Extrusion


Pitch Strip


Roof Bar Top Cap


Roof Bar Top End Cap


Polycarbonate Sheets


Poly End Enclosures

Roof Bar End Plate


Post Cleat

Wall Plate Cover


Cleat Jig

Preliminary Stages and Planning

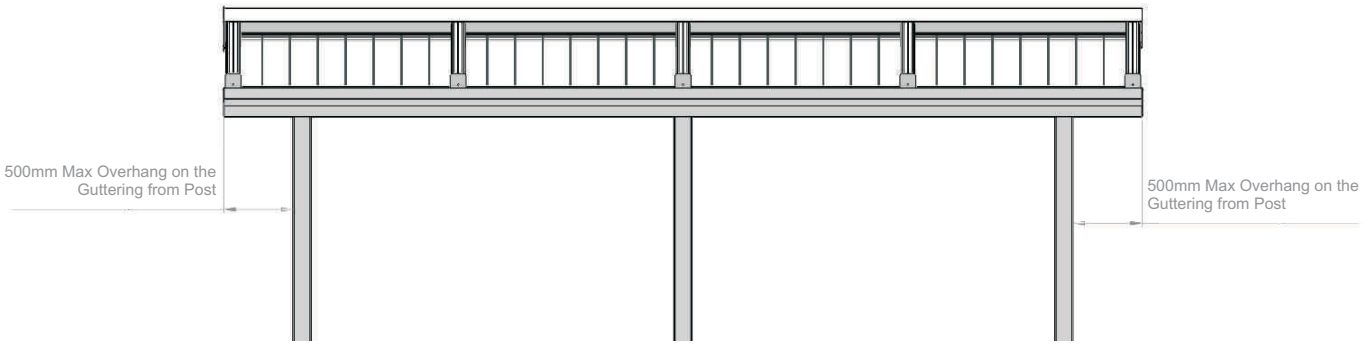
Before starting your install please check all components for quantity and damage.

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	Up to 3.5m Projection	Up to & Including 4.5m Projection	Up to & Including 5.3m Projection	Up to & Including 6m Projection
System 35	1m Roof Spacing's	1m Roof Spacing's	700mm Roof Spacing's	500mm Roof Spacing's

POST SPACINGS	Up to & Including 3.5m Projection	Up to & Including 4m Projection	4.1m - 6m Projection
System 35	3.5m Post Spacing's	3.5m Post Spacing's	3m Post Spacing's

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.

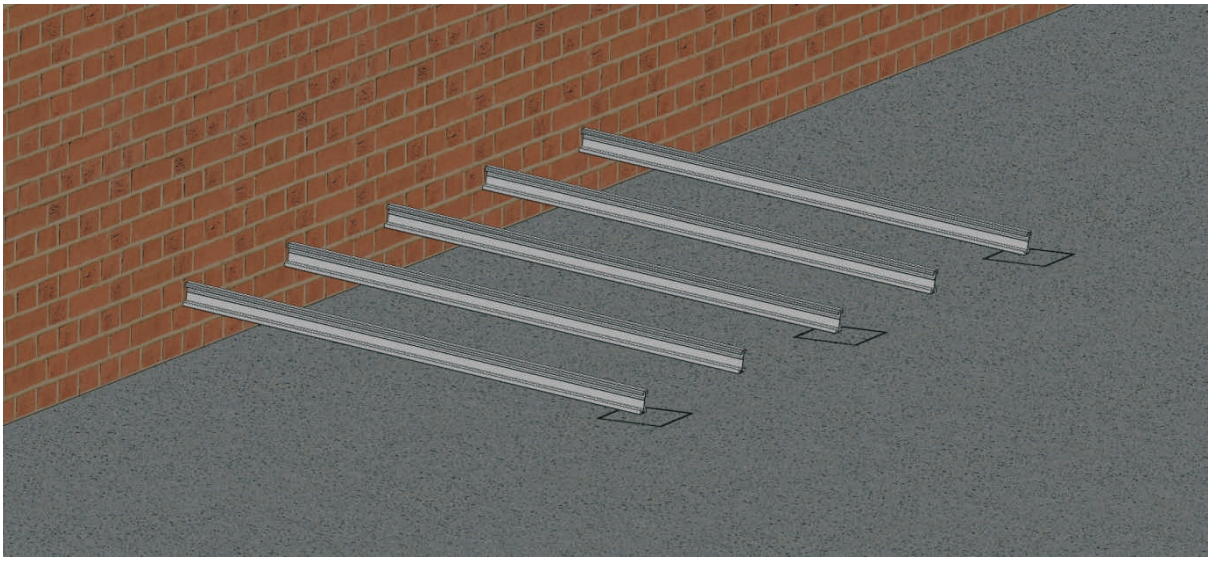
You are now ready to start installing the structure, please turn the page and follow steps 1 - 23 within this guide.

STEP 1

Foundation Hole Positions for Posts

Establish the height of the canopy/carport at the back (wall edge) and the height of the canopy at the front. The height at the front must be above 2.1m to meet the minimum legal head height requirement.

Once you have established your height at the front and back, deduct the height at the front from the height at the back to give you “The Fall” (x). Measure distance 'x' up the wall and position your roof bar at this height on the wall. Let the other end touch the ground and where that touches will be the centre of your hole for the foundation.



IMPORTANT: Use Roofing Square to ensure the bar used is held square to the wall.

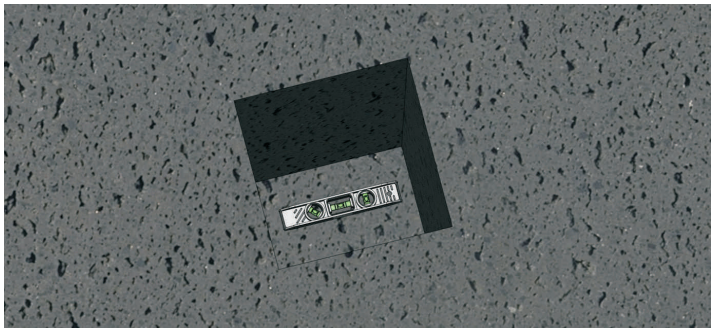
STEP 2

Digging of Holes

Please refer to the chart below to determine the size of the holes that need to be dug.
Please note the following are for guidance only and will need to be verified by a structural engineer.

Up to 4M Projection (Depending on wind loadings)	Over 4M Projection (Depending on wind loading)
300mm x 300mm x 600mm deep	600mm x 600mm x 600mm deep

Ensure where the holes are dug that the base of the holes is level with each other.



STEP 3

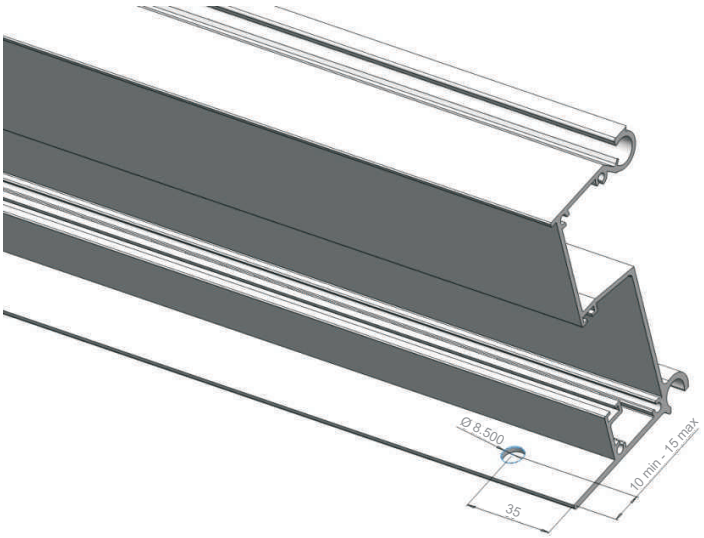
Fitting of Pitching Strip to the Wall

Attach the pitching strip to the wall using suitable fixings (not supplied). Recommended spacing for these fixings is 200mm.
You must ensure the pitching strip is not twisted or bowed as this will prevent the wall plate from being fitted. Use a spirit level to make sure the pitching strip is fitted level.

STEP 4

Preparation of the Wall Plate

Measure 35mm in from one end of the Wall plate and mark before you drill. Ensure the 8.5mm hole is no less than 10mm and no more than 15mm from the outside edge. Once this is done drill an 8.5mm hole.

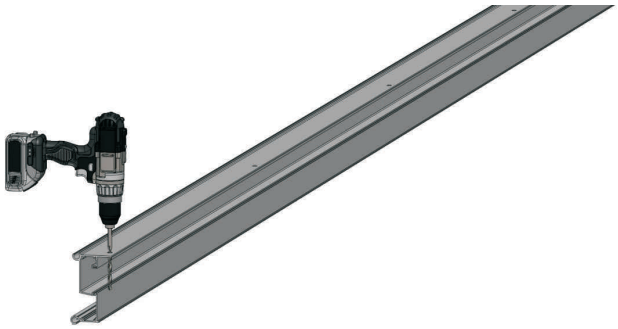


REPEAT THIS PROCESS AT THE OTHER END OF THE WALL PLATE
You now need to calculate your bar spacing before drilling your next hole. See Chart below.

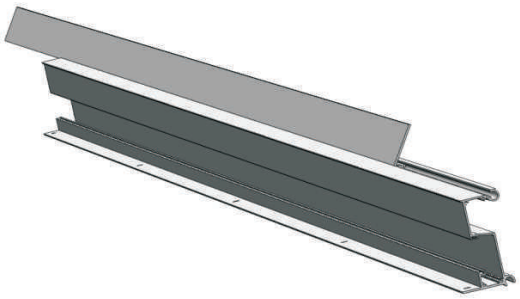
Up to 4.5M Projection	4.5M Projection to 5.3M Projection	5.3M Projection to 6M Projection
1m Glazing Bar Spacing	700mm Glazing Bar Spacing	500mm Glazing Bar Spacing

Now that you know your bar spacings, add 15mm to this dimension. Then measure from the centre of your first 8.5mm hole, that is already drilled, the distance of your bar spacing + 15mm. Mark and drill a 8.5mm hole and ensure you follow the spacing rule: ***No less than 10mm and no more than 15mm from the outside edge***

Repeat the above process all the way along your wall plate.



Slide flashing strip into wall plate



STEP 5

Drilling of Holes in Flashing Strip on the Gutter Section

Measure 35mm from the inside of the end plate and mark. Then drill an 8.5mm hole in the centre of this section. Repeat this process at the other end.

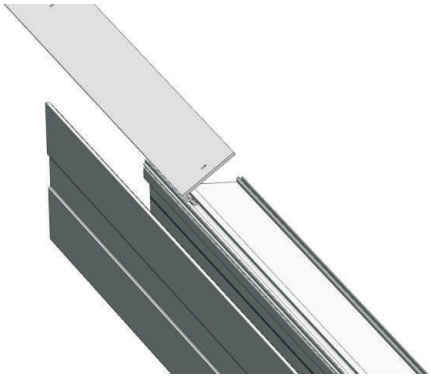
Now that you know your bar spacing's add 15mm to this dimension. Then measure from the centre of your first 8.5mm hole, that is already drilled, the distance of your bar spacing + 15mm. Mark and drill another 8.5mm hole and ensure you follow the spacing rule: ***No less than 10mm and no more than 15mm from the outside edge***

Repeat the above process all the way along your flashing strip Section.

STEP 6

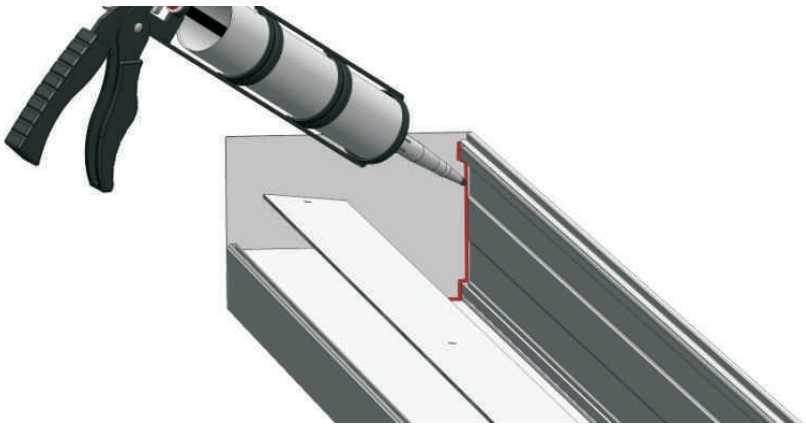
Preparation of the Gutter Section

If Gutter section needs to be joined first see Step 22 for this process
Slide the flashing strip along the full length of the gutter section



Apply Soudaflex around the outside profile on the end of the gutter section. Secure the end plate with 4No 4mmx 40mm domed headed self drilling screws.

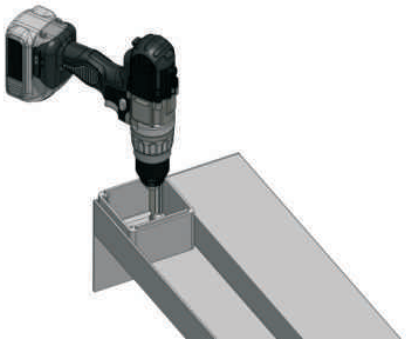
Apply a continuous bead of Soudaflex around the entire inside profile and ensure the 2 screw ports are filled with Soudaflex. Repeat this process at the other end.

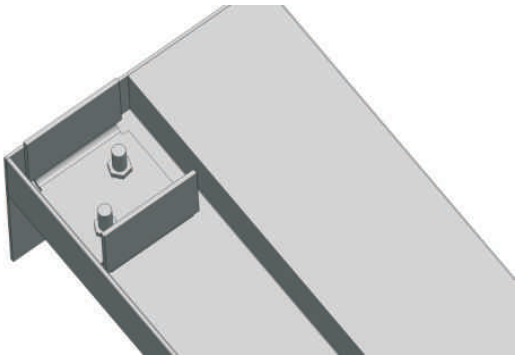


STEP 7

Fitting of Cleats to Gutter Section

Using the Jig supplied, place the jig in the corner of the gutter section (if no overhang) and drill one 13mm hole. Remove the jig. Using **Bolt (M8 x 30mm), Washer (M8) and Nut (M8)** secure post cleat to gutter section. Drill 2nd 13mm hole through post cleat and secure using the same nut,





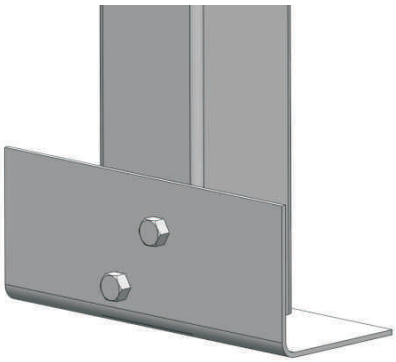
Repeat this process at the other end.

If other posts are to be fitted then repeat this process of fitting the post cleat to the gutter section in the correct positions that you have calculated for your hole positions.

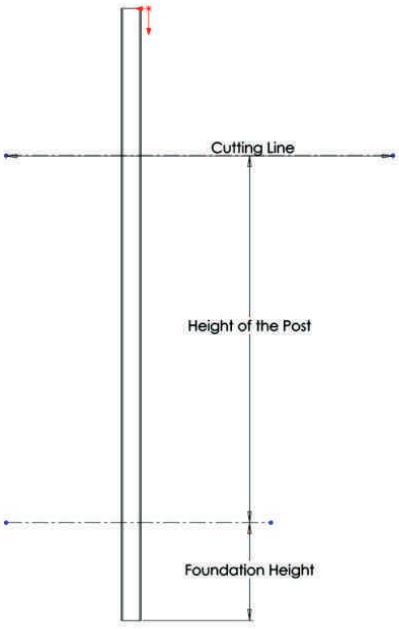
STEP 8

Fitting of Post Feet to Post

Centralise the post foot to the post and attached using **2 No 5.5mm x 25mm self drilling screws**



STEP 9: Cutting the Posts
Measure the height of the canopy/carport at the front and add to this dimension the depth of post that will be going into the ground. The total of this is the length at which your posts need to be cut.



STEP 10

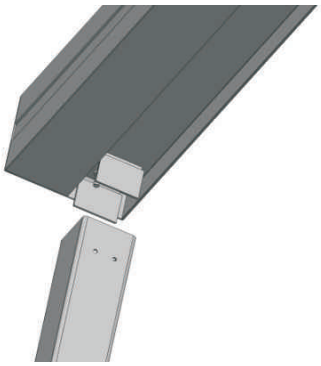
Drill the Posts

Drill each post using a 6mm drill bit at the opposite end to the post foot as follows; mark 25mm down and 25mm from the side on both sides using a pencil and drill the two holes, repeat on the opposite side, ensure that the post fool is facing the desired orientation to suit your hole.

STEP 11

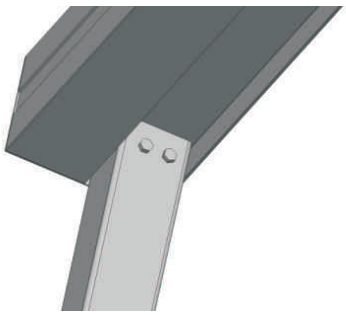
Fitting of Post to Gutter Section

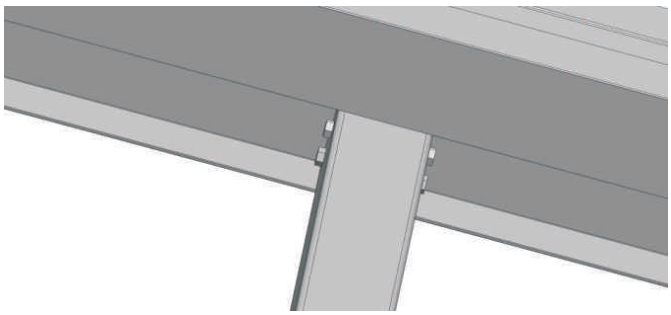
Slide the post over the fixed cleat on the gutter section and ensure the post is touching the underside of the gutter beam i.e. no gap.



If the post is positioned at the end i.e no overhang, then using **2 No 5.5mm x 25mm self drilling screws** fix through the inside of the post into the post cleat.

If it is an intermediate post or a post with an overhang then secure in place using **4 No 5.5mm x 25mm self drilling screws** fitting 2 screw either side of the post, see illustration:

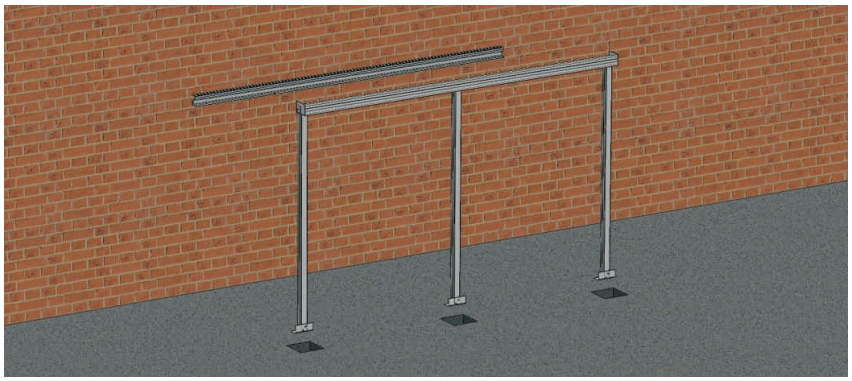




STEP 12

Stand Post & Gutter Beam Up

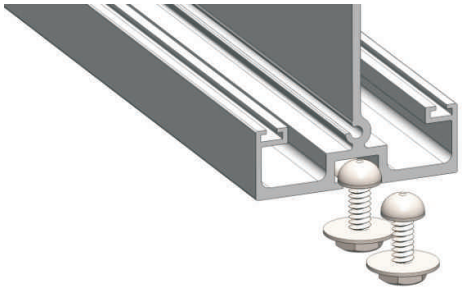
Using the excavated holes position each of the post into the centre of the hole and lean the whole frame forward so that the back of the posts leans against the front of the hole - see diagram:



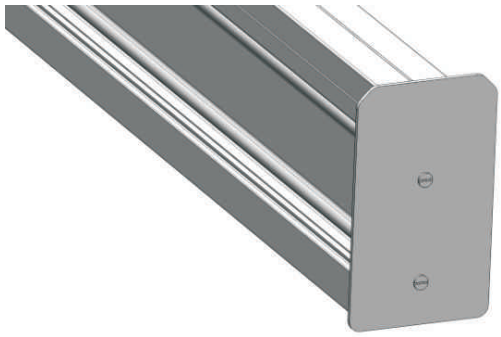
STEP 13

Preparing Glazing Bars for Glazing

Slide bolt A with nut B and washer C into the underside channel of the main bar.



Fit the front plate to the front of the bar using 2 x bolts . Ensure that 2 serrated washers for each screw are located between the bar and the back plate so that there is a gap of about 2 to 3mm between the bar and the front plate.

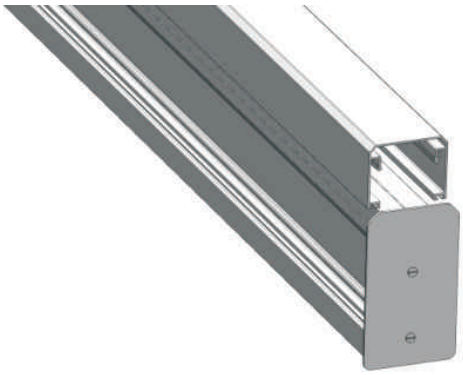


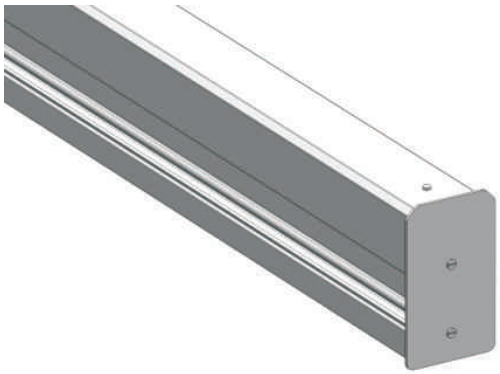
Repeat this process for all Main Bars

STEP 13a

Fitting of Top Caps

Fit top cap into position using rubber mallet, then using 2 x 5.5 x 25 self drill screws secure the top cap 25mm from the end. Repeat at the other end. See diagram:

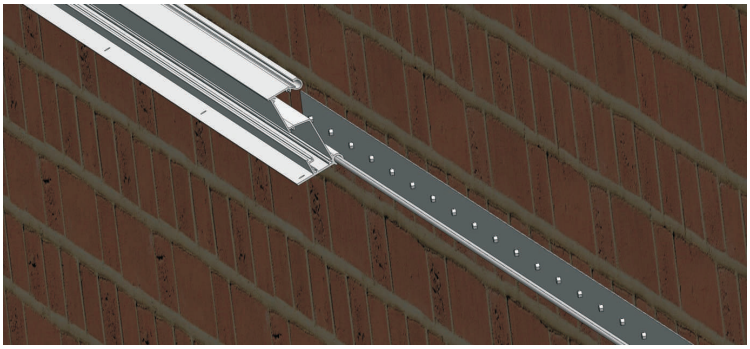




STEP 14

Fitting of Wall Plate

Now fit the wall plate to the pitching strip already located on the wall.

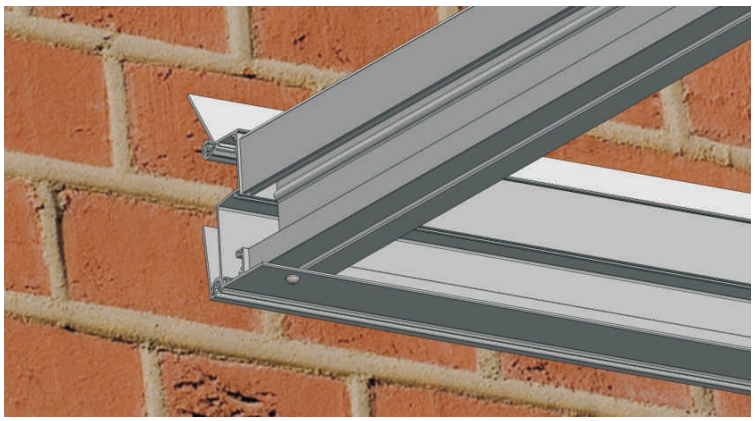


STEP 15

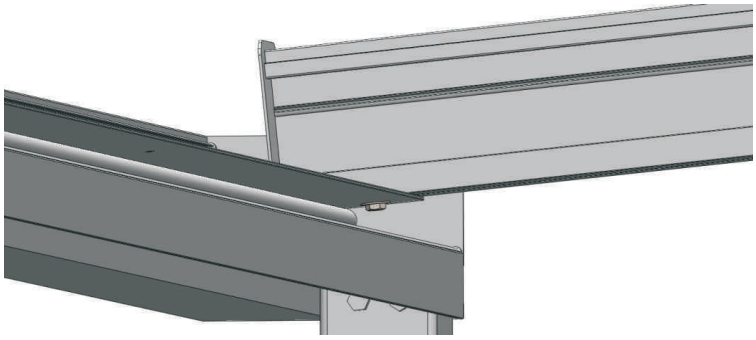
Fitting of Glazing Bars

Starting at ONE end of the wall plate using 1 No bolt A (M8 x 16mm) with nut B (Stainless steel domed nut) and washer C (M8 serrated washer) fix one end of the End glazing bars to the Wall Beam. DO NOT USE the Nut, Bolt and Washer that is already located within the Glazing Bar channel. Tighten up using a 13mm spanner. Important: you must ensure that the serrated washer is sandwiched between the glazing bar and the wall plate.

IMPORTANT: The serrated washer B must be clamped between the wall plate and the Bar, this locks the two together.



Using the Nut, Bolt and Washer already located within the channel; locate these into the pre drilled hole in the flashing strip ensuring that the cerated washer is clamped between the bar and the flashing strip.



Repeat this process at the other end of the Canopy/Carport.

DO NOT FIT ANY MORE GLAZING BARS AT THIS STAGE.

STEP 16

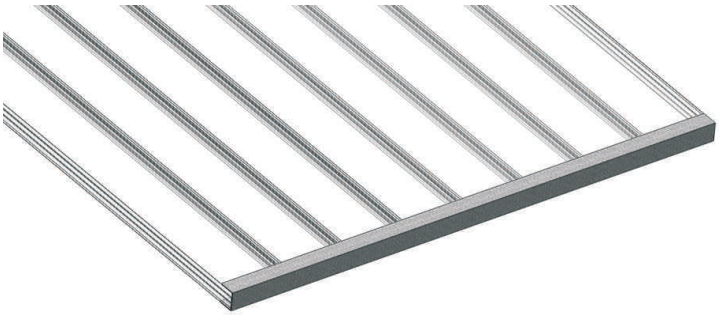
Sealing Wall Plate against the Wall

If flashing is required or silicone to seal the wall plate against the wall it needs to be done prior to the polycarbonate sheets being fitted.

STEP 17

Polycarbonate Sheets

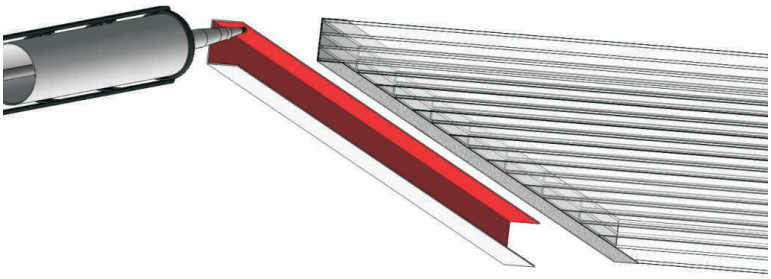
The polycarbonate sheet comes with a protective film fitted to both sides. This needs to be removed prior to fitting. The film with the writing on is the TOP face due to it's coextruded UV coating and therefore needs to be fitted facing the sunlight. The Polycarbonate sheet also has 1 foiled edge



STEP 18

Fitting the Polysheet Capping

Cut the polysheet capping to the width of your polycarbonate sheet and attach using Soudel Crystal Clear Bonding Silicone agent. See product reference. Apply a bead of this silicone along the inside



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

The Polysheet capping is only fitted to the end of the polycarbonate sheet that will be located at the gutter end. This edge should have the silver foil fitted.

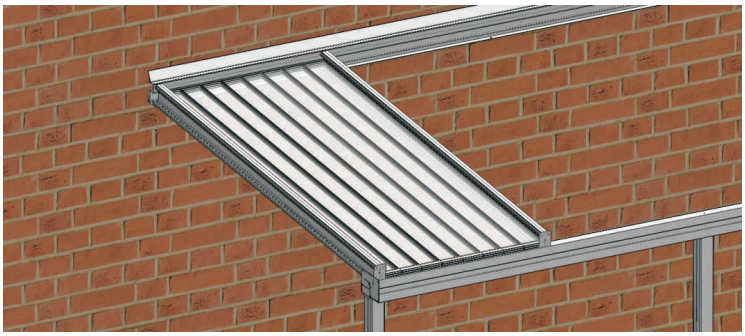
Continue this process across all polycarbonate sheets.

STEP 19

Glazing the Canopy/Carport

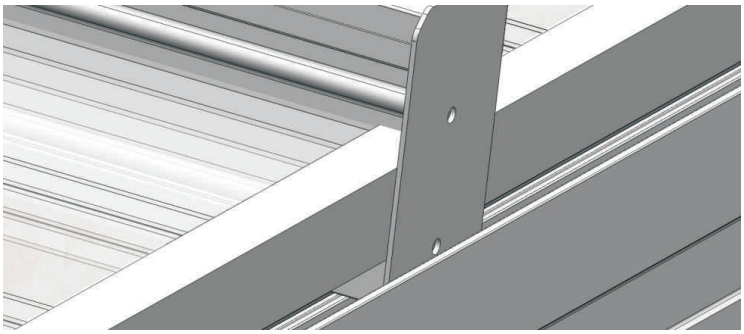
If your Canopy/Carport is fitted against a wall at one end you must start the glazing process from the wall end and work progressively across to the open end.

Install you next glazing bar, next to one of the end bars you have already fitted. Fix and secure the glazing bar onto the wall plate, as previous instruction. DO NOT fix to the flashing strip at the gutter end at this point.



Place the polycarbonate sheet into the fully fixed glazing bar and secure firmly into position. Push the 2nd glazing bar firmly over the polycarbonate sheet and locate with the 2 channels.

Make sure the polysheet capping is positioned between the main bar and the front cap. See illustration:



Now secure your glazing bar to the flashing strip as per previous instruction.

Continue this process until your canopy/carport is fully glazed.

If your canopy/carport is fitted between 2 buildings then the last sheet needs to be installed with the final glazing bar attached to the side of the sheet prior to fitting.

STEP 20

Make Sure your Canopy/Carport 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 20a

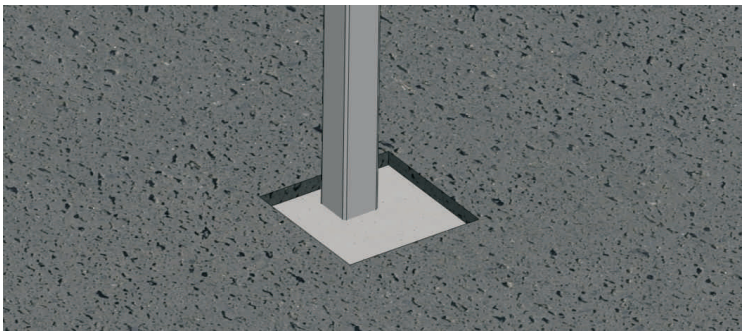
Ensuring the Carport /Canopy is level

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

STEP 21

Concrete in the Posts

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

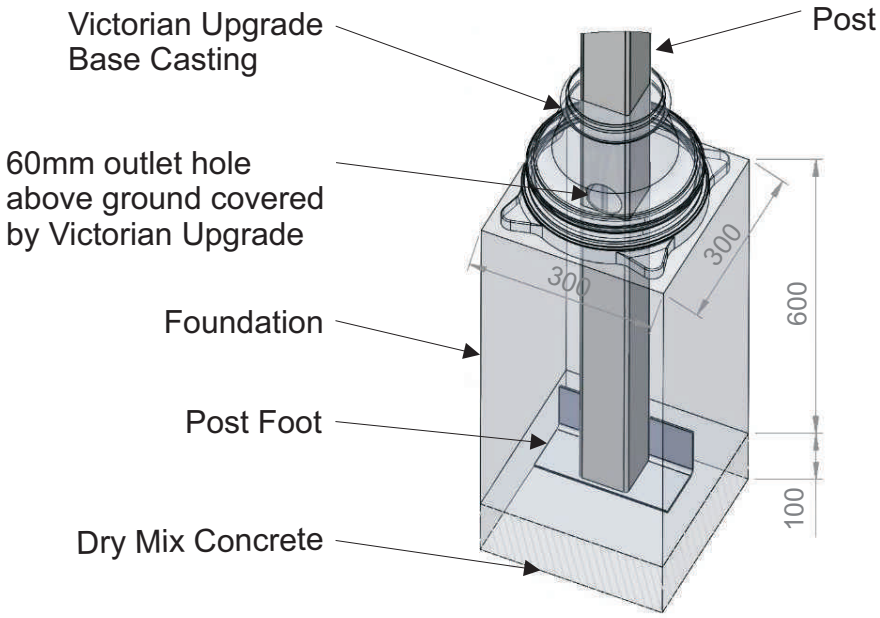


STEP 21a

Victorian Upgrade Drainage System

If you are not installing the Victorian Upgrade, please skip this step and move onto step 21b

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 it 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 60mm hole to prevent rainwater going into the bottom of the post.
3. Ensure this is done when it is not raining.
4. 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 21b

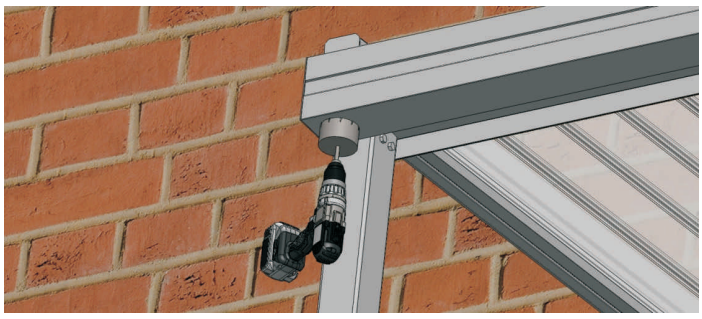
Standard Drainage System

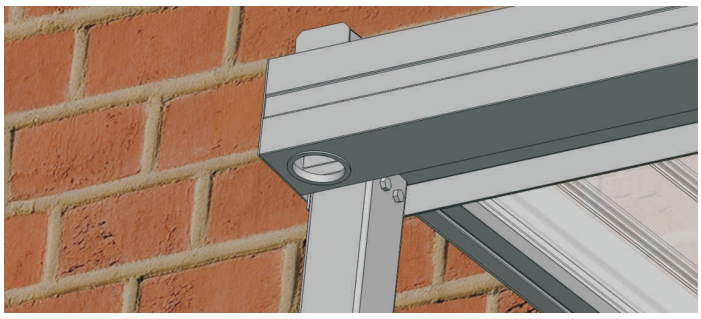
Drill a hole no more than 40mm diameter in the gutter section where your downpipe is to be located. Push the downpipe in to the gutter section below the hole. Using the downpipe clips provided secure to one of the posts.

STEP 22

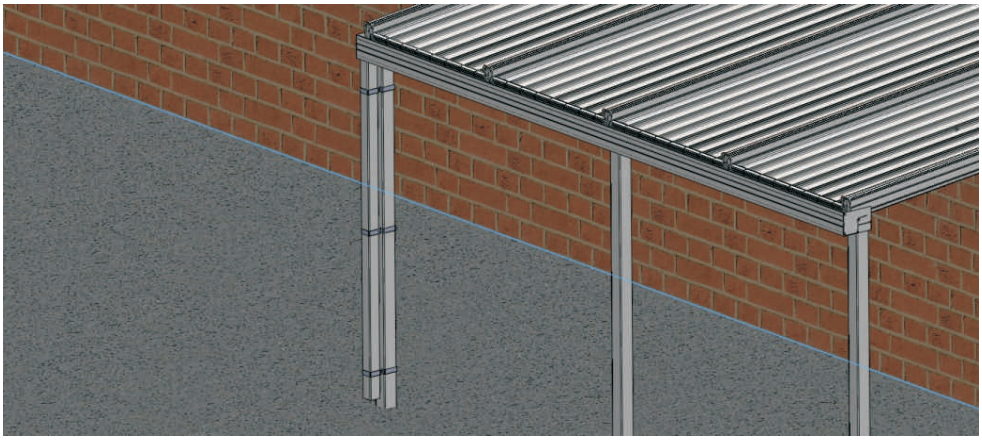
Fitting of Down Pipes

Using a 68mm hole cutter drill a hole in the lower part of the gutter section. Insert spigot into hole and tighten up.





Locate your downpipe over the spigot and clamp to the post using downpipe clips and spacer.

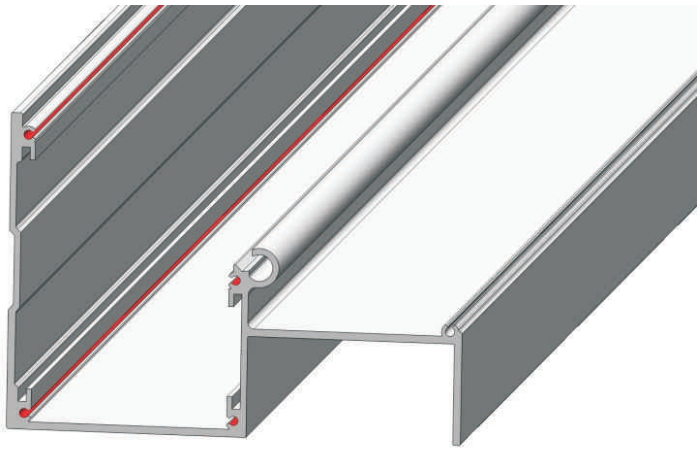


Step 23

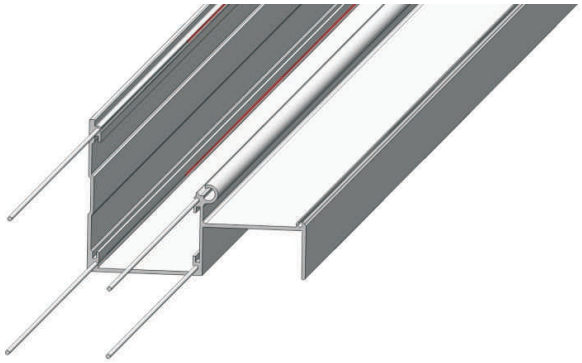
Joining Gutter Sections

You will need the following to join every Eaves Beam:
4No Stainless steel joining rods 400mm long
4No flat aluminium joining plates 400mm long but different widths
1No tubes of sikaflex the same colour as your canopy if possible
1No roll of masking tape
4No 25mm x 5mm self drillers
1No mastic gun
1No drill with 8mm self driller attachment
Industrial wipes
Sikaflex 11FC cleaner
Roll of industrial tissue paper

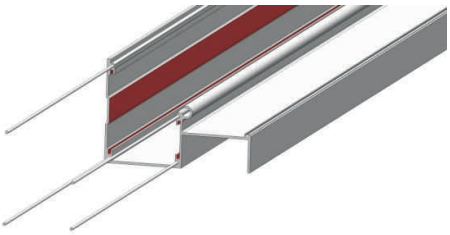
1. Make sure you only use **Sudaflex**; normal silicon sealer will not do.
2. Mask up using the masking tape around both edges of the gutter beam and then apply a generous amount of sealer into the 4 screw channels in the eaves beam.

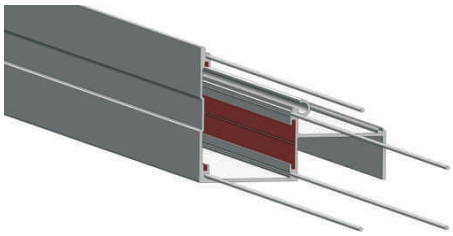


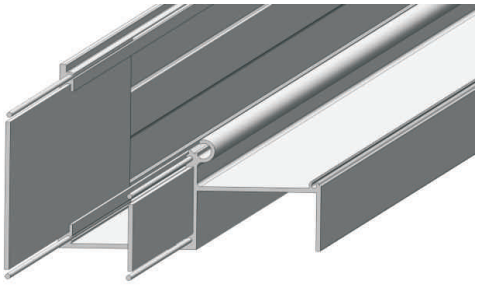
3. Insert the 4 stainless steel rods supplied into the screw channels, once inserted half way, use a spatula to push the Sudaflex sealer into the gaps around the rods.



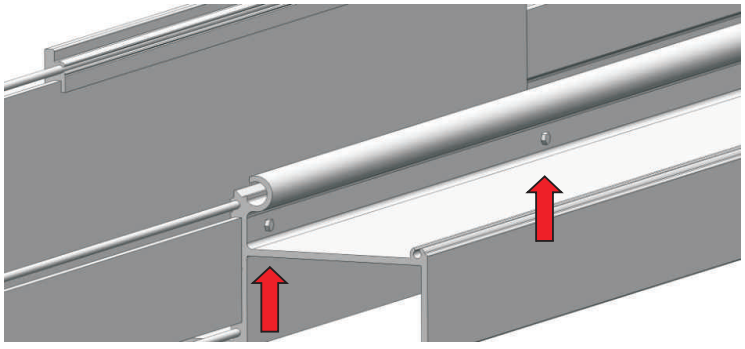
4. Now apply a liberal amount of Sudaflex to both sides of the eaves beam on the vertical sections to enable you to bond the 2 vertical joining plates.







5. On the small vertical plate under the swivel pitch you will need to fix 2 number 25mm x 5mm self drillers.

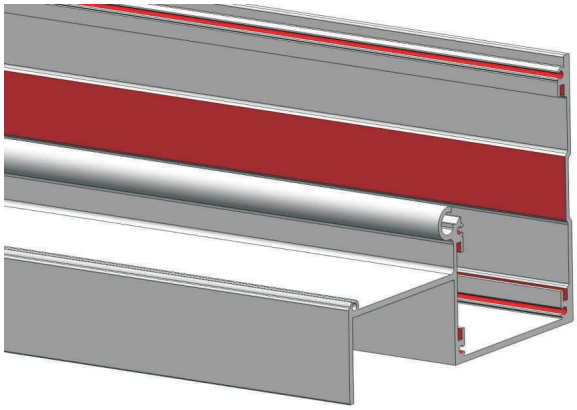


6. Flatten any excess Sudaflex with the spatula and apply a generous amount of sealer around every edge of the both plates.

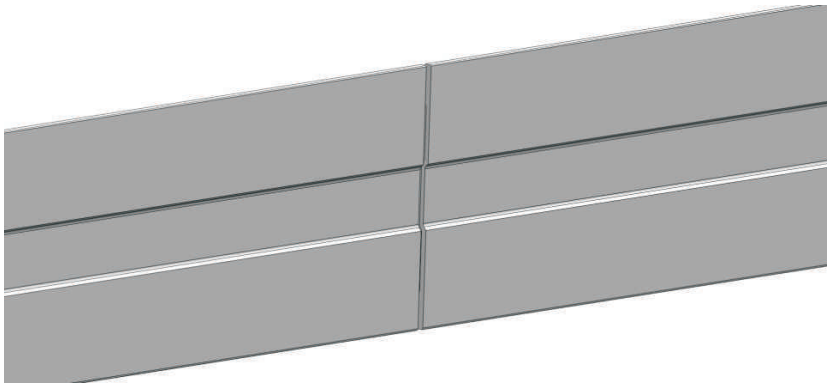
7. Then insert the swivel pitch across the join to ensure alignment.

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

9. Then apply ample amounts of Sudaflex across all corresponding areas of the opposite eaves beam as shown in the diagram overleaf.



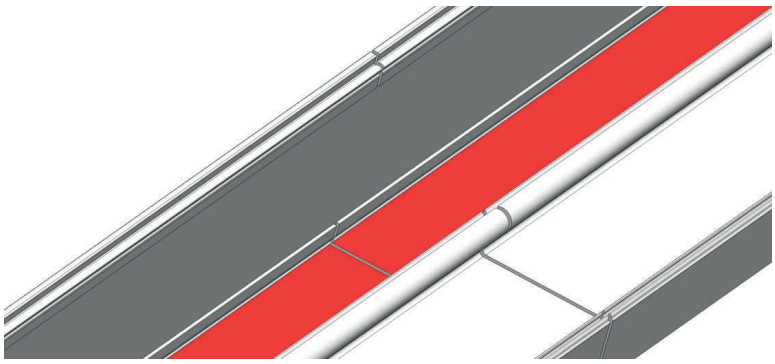
10. Once you have married the two beams together **you must leave at least a 3mm gap between the two but no greater than 5mm**



11. After about 15 to 20 mins stand the eaves beam with legs attached up and attach the bars as described in the above procedure.

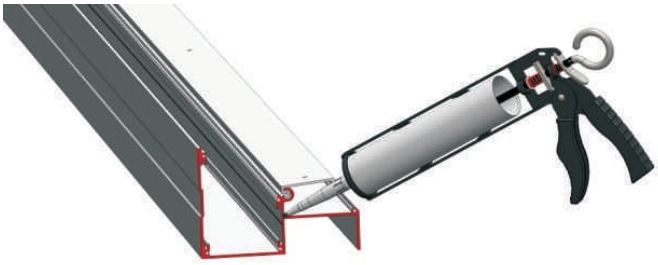
12. Once your canopy is glazed and your legs are square and your eaves beam is level up and down and left and right and front to back ensure your gutter is dry and the surface temperature is at least 4 degrees. If it is winter you may need to use a heat gun.

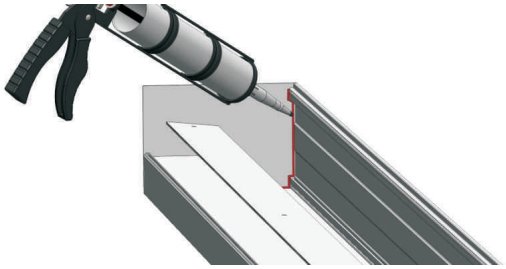
13. Then you will need to apply the final amount of Sudaflex into the bottom of the eaves beam so that you can locate your final horizontal plate.



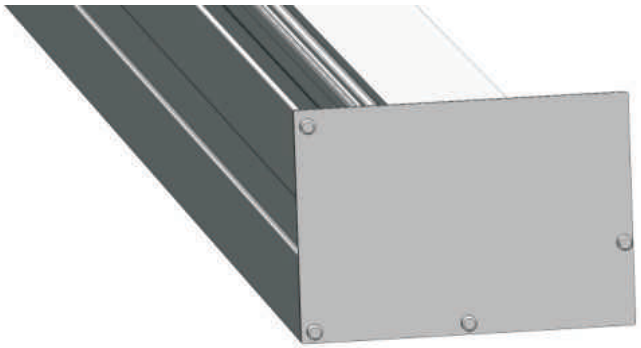
14. Make sure that the plate is sitting flat.

15. Then apply a generous amount around the edge of the flat plate.





16. Finally apply the joining plate cover using 4 No 5.5mm x 25mm sell drilling screws and caps



End.