

ASCENT

Aluminium Waterproof Carport –
Portrait Concrete Foundation

www.rubiconsa.co.za

General Information

Ascent provides a new highly pre-assembled PV mounting systems, such as this Aluminium ground mounting and carport systems. The pre-assembled structure and unique beams not only guarantee the whole system stability, but also allows for faster and easier installation. The system requires few components, which are all of high quality – saving on installation time and costs.

Ascent products are:

- ⇒ easy to install,
- ⇒ innovative and engineered to speed up installation time,
- ⇒ backed by a 10-year warranty and AS/NZS1170.2:2011 AMDT 3 -2012 compliant.

Applications:

- ⇒ Ground mounting
- ⇒ Residential and Commercial use

Features:

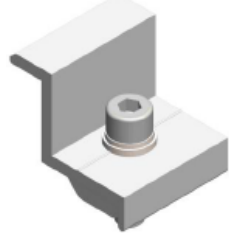
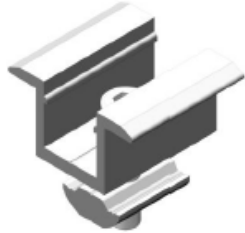
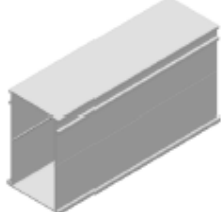
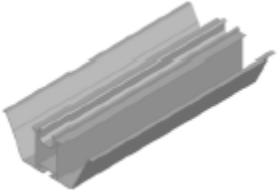
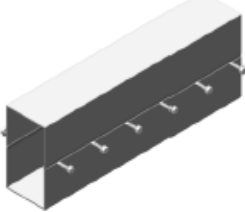
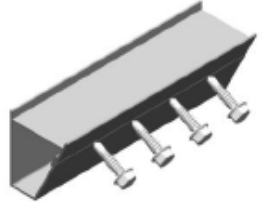
- ⇒ Extruded from Anodised Al 6005-T6 (Aluminium)
- ⇒ Can be preassembled, making installation quick and easy
- ⇒ Suitable for a variety of conditions and with popular PV panels currently in use
- ⇒ Inherent corrosion resistance results in lower maintenance and extended product life.
- ⇒ 10-year limited warranty backed by the parent company (Antai Aluminium)

Material Standard:

Material	Yield Strength [MPa]	
	Tensile Strength	Yield Strength
Al 6005-T6	295	263



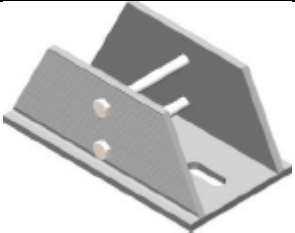
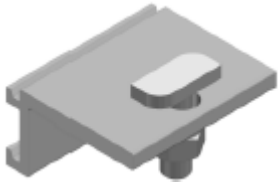
Components

Part Name	ASCENT Part Number	Picture
ASCENT Carport End clamp 40mm M8x25	A5001010	
ASCENT Carport Mid clamp 40mm M8x30	A5001020	
ASCENT Carport NW rail 5000mm 4625mm	A5001030 A5001031	
ASCENT Carport GN rail 4500mm 2000mm	A5001040 A5001041	
ASCENT Carport NW Rail Splice	A5001050	
ASCENT Carport GN Rail Splice	A5001060	



<p>ASCENT Carport Beam 4500mm 2000mm</p>	<p>A5001070 A5001071</p>	
<p>ASCENT Carport Leg Pole 2736mm 2550mm 2540mm 2359mm</p>	<p>A5001080 A5001081 A5001082 A5001083</p>	
<p>ASCENT Carport Beam Connector</p>	<p>A5001090</p>	
<p>ASCENT Carport Bottom Rail Clamp</p>	<p>A5001100</p>	
<p>ASCENT Carport Cover Plate 4500mm 2000mm</p>	<p>A5001110 A5001111</p>	
<p>ASCENT Carport 35x6 EPDM Rubber String</p>	<p>A5001120</p>	
<p>ASCENT Carport Eyelet Anchor Bolt M16*300</p>	<p>A5001130</p>	
<p>ASCENT Carport Guiding Gutter Water Channel 968mm</p>	<p>A5001140</p>	



ASCENT Carport Base	A5001160	
ASCENT Carport W Rail Clamp	A5001170	
ASCENT M12x130 screw	A5001150	
ASCENT Carport Rail EPDM Rubber Rail Cap	A5001180 A5001181	
ASCENT ST6.3x25 Drilling Screw	A0001030	



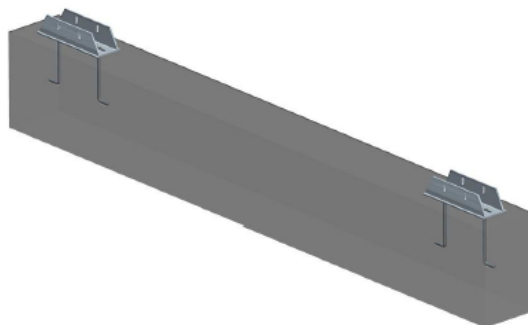
Installation Manual

Tools required for this installation

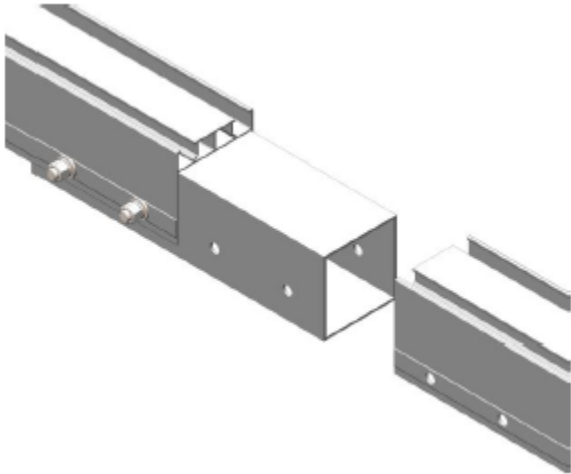
			
6mm Inner Hexagon Spanner	Electric Drill	Measure tape	Marker
			
Torque Spanner	String	Adjustable spanner	Level
			
Box spanner (M12/M16)			

Installation Instructions

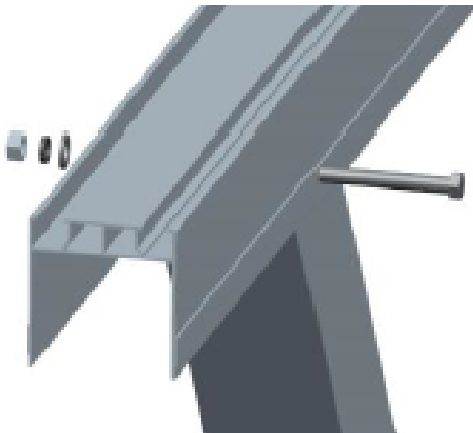
1. Prepare all necessary tools and products before installation.
2. Mark the positions of each of the concrete blocks as per the engineering drawings.
3. Fit the anchor bolts (A5001130) and the base components (A5001160) to the concrete blocks.



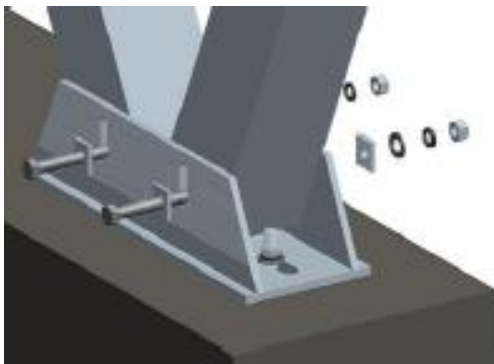
4. If the beam is too short, connect two beams (A5001070/A5001071) using the beam connector (A5001090).



5. Attach the assembled beams (A5001070/A5001071) to the assembled legs (A5001080/A5001081/A5001082/A5001083)



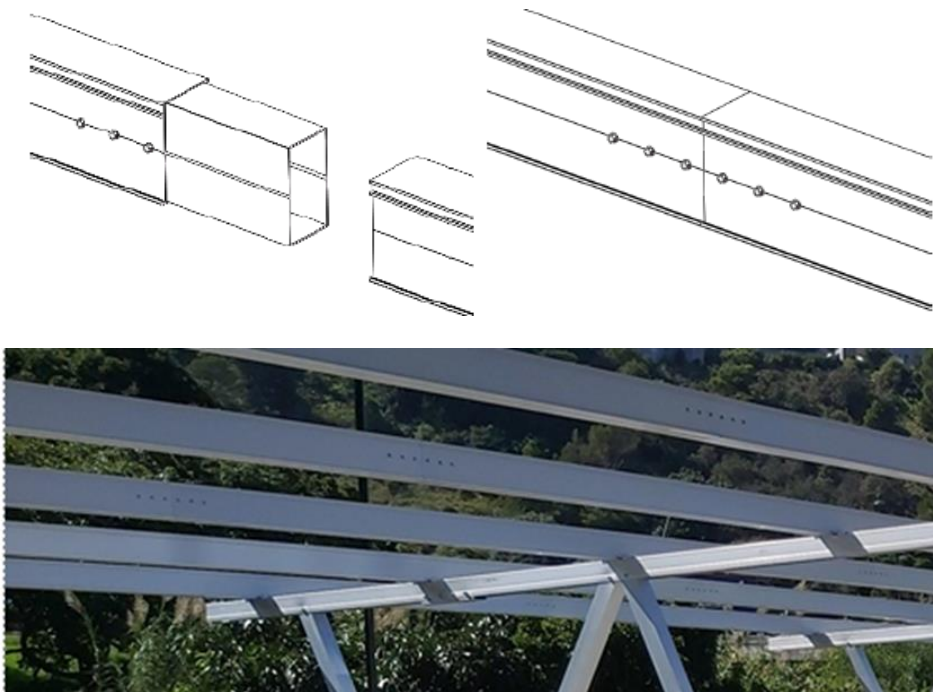
6. Connect the leg poles (A5001080/A5001081/A5001082/A5001083) to the base (A5001160) that is attached to the concrete.



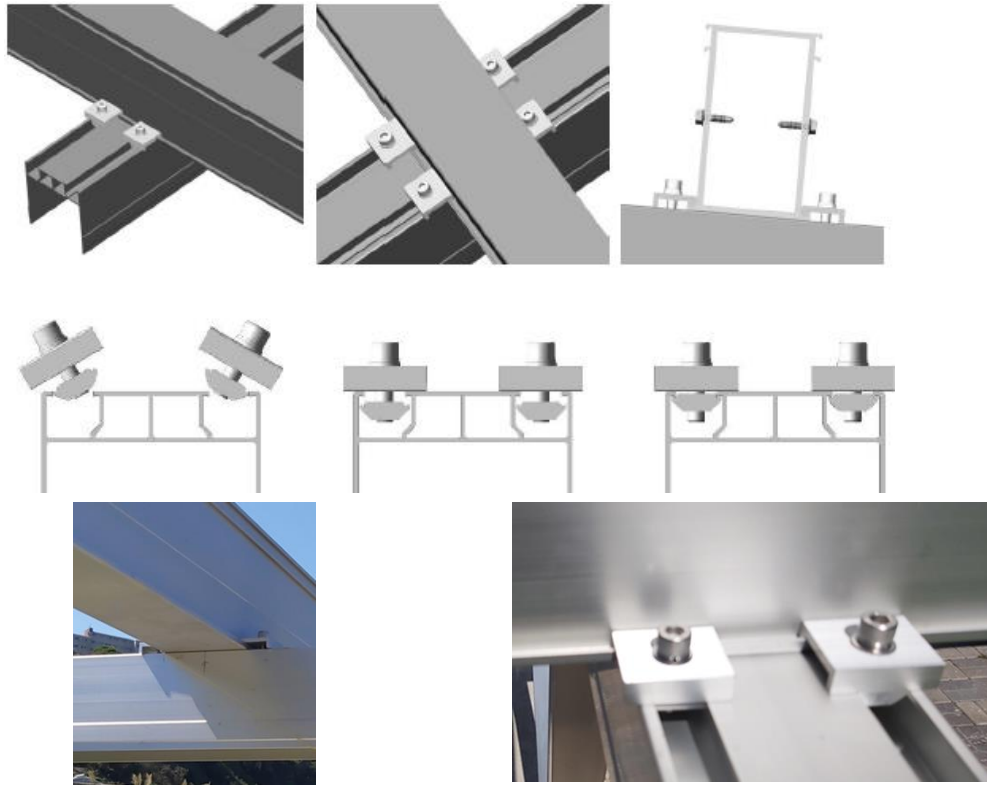
7. Repeat the above steps for all the concrete blocks and mounting structures making sure that the support structures are on the same plane.



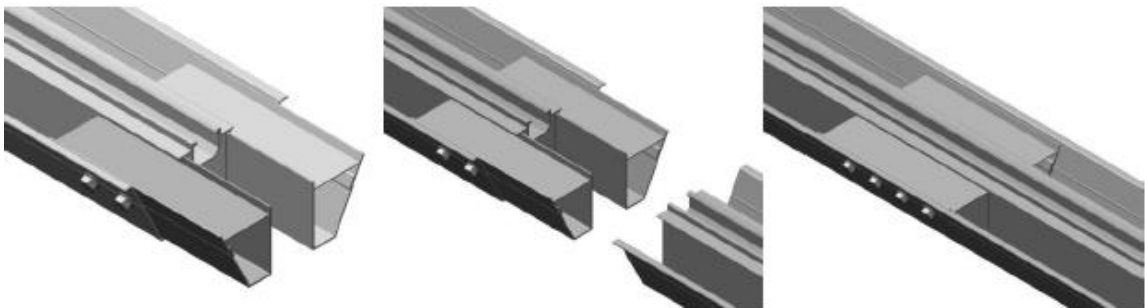
8. If the rails are too short, connect the rails (A5001030/A5001031) by inserting and fix half of the rail splice (A5001050) into the one rail and the other half of the rail splice (A5001050) into the other rail. Fix in place.



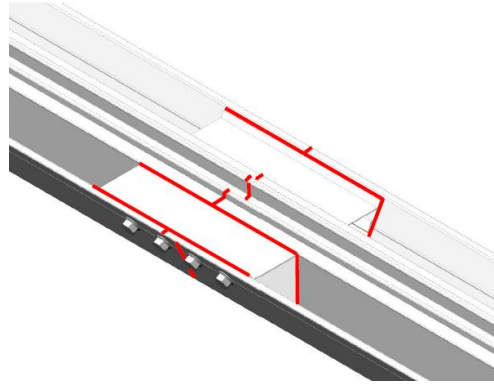
9. Fix the rails (A5001030/A5001031) to the beams (A5001070/A5001071) using 4 rail clamps (A5001100) – 2 clamps on each side.



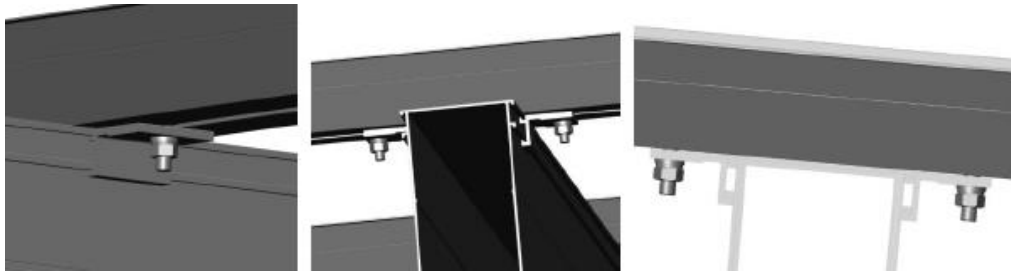
10. To install the water guiding rail, ensure that the W-shaped rail (A5001040/A5001041) is the correct length. If it is too short, insert 2 rail splices (A5001060) on the edge of each of the rail. Ensure that half the splice is on the end of each of the rails and fix in place with 2 screws on each side.



11. Seal the connection above with structural sealant.

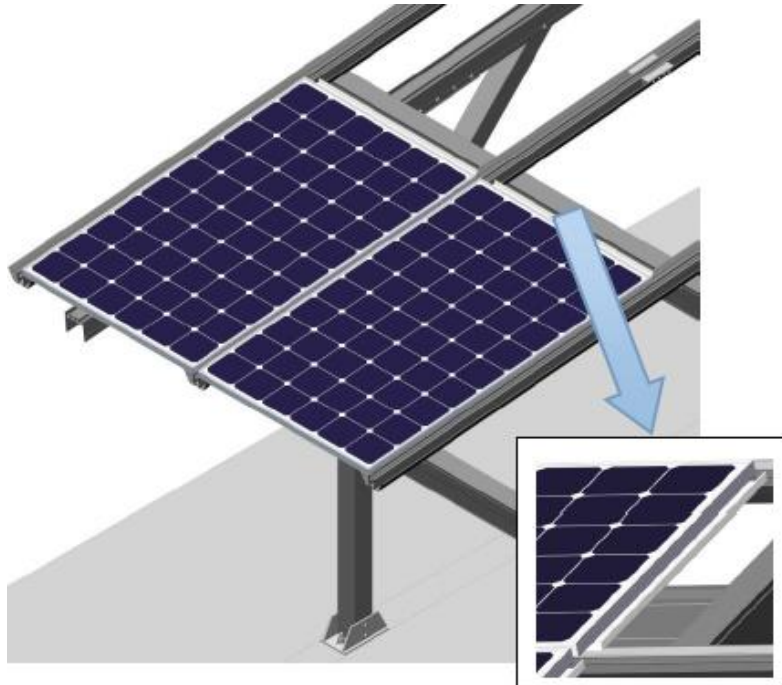


12. Fix the W-rail (A5001040/A5001041) to the bottom rail (A5001030/A5001031) using 2 rail clamps (A5001170), with one on each side.

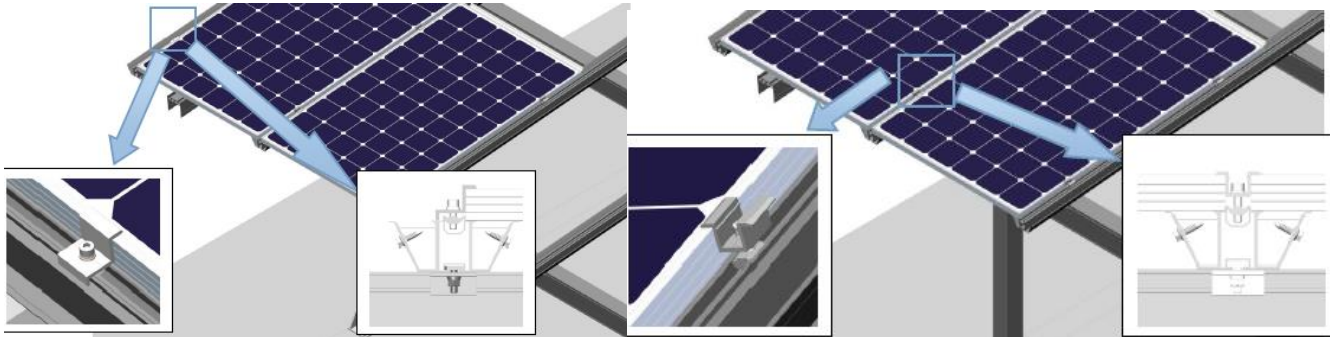


13. Place the horizontal water guiding channel (A5001140) on the W rails (A5001040/A5001041) between where the panels will be placed.

14. Place the panels on the W rails (A5001040/A5001041), ensuring that the water guiding channel (A5001140) is between each of the panels. Ensure that panel installation starts at the bottom.

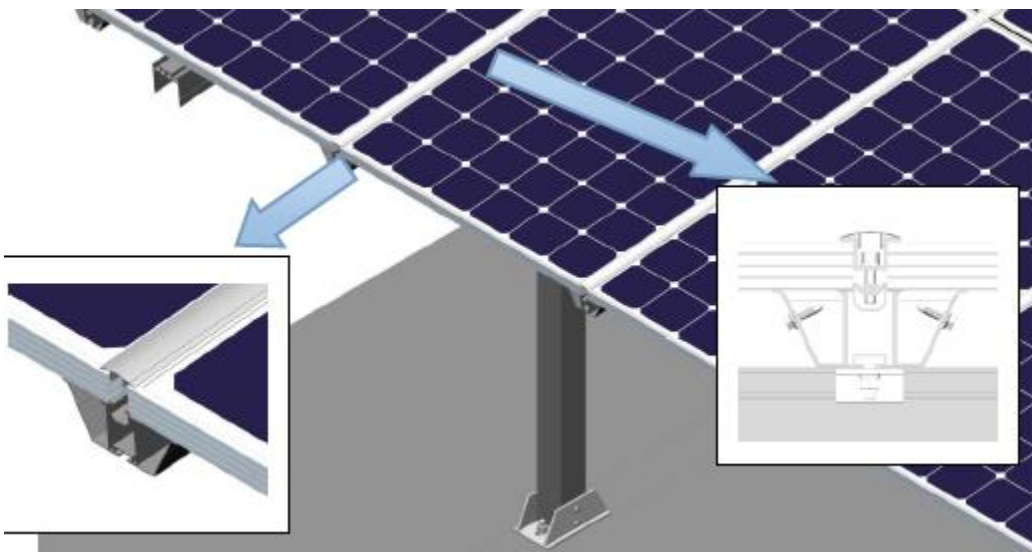


15. Use the clamps to fix the panels in place. The clamps fit above the panels and in the W rail (A5001040/A5001041). The end clamps (A5001010) are used on the edge panels and the mid clamps (A5001020) are used to fix the panels next to one another. Place the rubber string (A5001120) between the panels.



End clamp			
Mid clamp			

16. Place the top covers (A5001110/A5001111) on top of the mid clamps (A5001020) and press it into the W rail.





Installation Precaution

⇒ Dimensions

The specific dimensions of the engineered installation will be subject to the engineering construction drawings. The installation manual is only for the instruction of the product installation.

⇒ Fastener

If used inappropriately, nuts and bolts may lock-up. To avoid this:

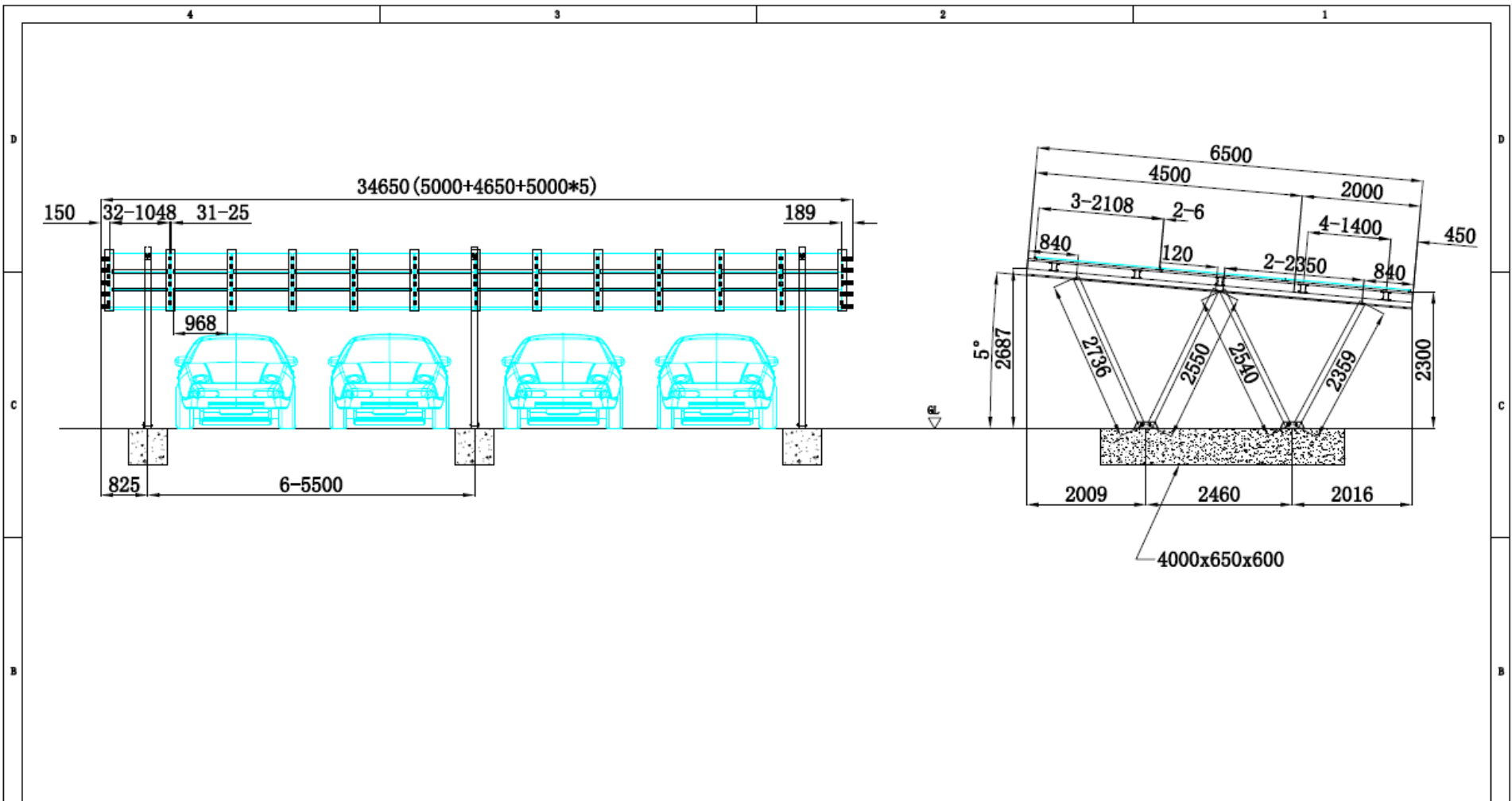
- Reduce the friction coefficient by ensuring the thread is clean and using a lubricant during installation.
- Ensure that the fasteners are installed correctly, perpendicular to the axis of the screw thread. Apply even strength throughout the tightening strength. Use torque or socket wrenches where possible. And do not tighten fasteners at high temperatures or with electric equipment resulting in a rapid rise in temperature.



Appendix







<p>33</p> <p>Left-right Forward-backward Base adjustment</p>				Panel dimension	2108x1048x40	<h1>ASCENT</h1>	<table border="1"> <tr> <td>Mounting System</td> <td>3x32</td> </tr> <tr> <td>Project</td> <td></td> </tr> </table>	Mounting System	3x32	Project	
				Mounting System	3x32						
Project											
Surface roughness	III										
Wind speed	35m/s										
Snow load	0cm										
Date	2020.09.22										
Version	V1										
Design	ELi										
Audit	Johnny tian										
Approval	tian										

