AXE^{CP} – Car Port Efficient



Acceptance Inspection	Document No.: AI_AXE_CP_EF Revision: V3
Client: Project:	Date:

Table Configuration	A	B	C	D
Tables				
Rows/Table				
Columns/Table				
Supports/Table				
Support spacing				

Mounting Details	
Table tilt	
Module orientation	
Module edge to ground	
Fixing method	

Layout Positioning		
Criterion	*Accepted*	*Rejected*
Array set out as per drawings: *Distance between tables and position thereof is correct. Post positions and span within 10mm tolerance* ***IM 4 Layout positioning***		
Correct layout drawing revision used: *Site-specific structure, panel type, tilt and table length match approved drawing.* ***IM 4 Layout positioning***		
Post spacing standardised: *East–West post spacing is 7.5m / 5m for three-car / two-car configurations; lateral cantilever of rails at table ends is equal unless otherwise specified.* ***IM 4 Layout positioning***		

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Foundation Fixings		
Criterion	*Accepted*	*Rejected*
Foundations are aligned: *Where natural gradient exceeds 2% along the table length, corrective measures achieve a maximum slope deviation of 2%.* ***IM 5 Foundation fixings***		

Foundation Specifications		
Criterion	*Accepted*	*Rejected*
Concrete foundation: *Constructed on 150mm G5 layers compacted to 95% MOD, then placed on in-situ material compacted to 93% MOD; within 50mm tolerance in width/length.* ***IM 6 Foundation Specifications***		
Concrete strength: *Specified at 30 MPa with a minimum curing duration of 7 days before tensioning bolts.* ***IM 6 Foundation Specifications***		

Foundation Anchorage		
Criterion	*Accepted*	*Rejected*
Foundation connection: *M20 hot-dip galvanised rods used with washers at depth stated in the installation manual.* ***IM 7 Foundation Anchorage***		
Rebar / securing rod integration: *Posts integrated with rebar reinforcement through drilled holes for added stability.*		
Concrete vibrated: *Concrete vibrator used to remove air pockets and ensure concrete fully surrounds the post.*		
I-Beam Foundation Connection: *Flanged I-Beams anchored to cast-in threaded rods, levelled using levelling nuts, void filled with non-shrink grout (< 50 mm).* ***IM 7 Foundation anchorage***		
Base Slot I-Beam Connection: *Base Slot Bracket holes aligned with I-Beam flange holes and secured.* ***IM 7 Foundation anchorage***		
Base Slot Foundation Connection: *Base Slot Brackets anchored to the concrete foundation using cast-in threaded rods.* ***IM 7 Foundation anchorage***		
Correct fasteners used on connections and torqued according to specification:		

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Post Connections		
Criterion	*Accepted*	*Rejected*
I-Beam Connection: *Post positioned inside the Base Slot Bracket, holes aligned and secured per the project-specific layout drawing.* ***IM 8 Post connections***		
Single Base Slot Bracket Connection: *Back Post positioned between the Base Slot Brackets, holes aligned and secured.* ***IM 8 Post connections***		
Post Connector Connection if applicable: *Post Connectors positioned on both sides of the Post; Diagonal Post secured between the Post Connectors.* ***IM 8 Post connections***		
Correct fasteners used on connections and torqued according to specification:		

Mounting/Joining Rafters		
Criterion	*Accepted*	*Rejected*
Rafters aligned correctly: *Bottom and top ends aligned in both vertical and horizontal planes before final torque.* ***IM 9 Mounting rafters***		
Rafter Adaptor Connection: *Rafter Adaptors installed at the correct positions as per the project-specific layout drawing, then secured to the Posts.* ***IM 9 Mounting rafters***		
Rafter joints correctly seated: *Rafter Extensions / joins fully seated and fastened per the Joining Rafters method for this structure.* ***IM 10 Joining Rafters***		
Post Connection: *Rafters secured directly to the Posts, aligned to prevent stress on PV modules during later installation.* ***IM 9 Mounting rafters***		
Rafter slope: *Angle within 1° tolerance.*		
Without deformation and damage: *Zinc paint touch-ups done on areas where galvanising was damaged.*		
Correct fasteners used on connections and torqued according to specification:		

Bracing Installation		
Criterion	*Accepted*	*Rejected*
Bracing method matches layout drawing: *X-Bracing, V-Bracing or Bracing Cables, connected to Posts / Rafters at specified locations.* ***IM 11 Bracing installation***		
Bracing Cable best practice: *Wire rope clamps installed with the saddle on the live end of the wire rope.* ***IM 11 Bracing installation***		
Correct fasteners used on connections and torqued according to specification:		

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Mounting/Joining Rails		
Criterion	*Accepted*	*Rejected*
Rail Clips fastened correctly: *Rails positioned perpendicular to Rafters; Nut Stoppers and Square Nut aligned in the Rafter slot; Rail Clips secured.* ***IM 12 Mounting rails***		
Rail spacing correct: *Per PV module installation guide and project-specific layout drawing.* ***IM 12 Mounting rails***		
Thermal expansion gaps where applicable: *When tables exceed ±35m in length.* ***IM 13 Joining Rails***		
Correct fasteners used on connections and torqued according to specification:		

Purlin Cable Tray Installation		
Criterion	*Accepted*	*Rejected*
Purlin Cable Tray installed correctly: *Cable Tray Housing secured to Rail; Cover interlocked with Housing and secured.* ***IM 14 Purlin cable tray installation***		
Correct fasteners used on connections and torqued according to specification:		

PV Module Installation		
Criterion	*Accepted*	*Rejected*
Table horizontal levelled: *Levelled with the slope of the ground.*		
Modules without damage:		
Modules laid in portrait orientation: *Each module supported by two Rail lengths.* ***IM 15 PV module installation***		
Middle/End clamps overlap module: *>6mm*		
Correct End Clamp used for module frame height: *30mm / 35mm / 40mm, with matching fastener length per Clamps and Fasteners table.* ***IM** 15 **PV module installation***		
Click Fix clamps correctly seated: *Pegs fully seated in Rail slot; not repeatedly inserted/removed.* ***IM 15 PV module installation***		
Nut Stoppers & Square Nuts positioned correctly: *Positioned in Rail cavity to match clamping configuration.* ***IM 15 PV module installation***		
Earthing / Earth Plates installed correctly: *Spikes are pierced through anodised layer; Square Nut aligned with Earth Plate's central hole.* ***IM 15 PV module installation***		
Correct fasteners used on connections and torqued according to specification:		

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End Caps		
Criterion	*Accepted*	*Rejected*
End Caps installed on all rail ends: *Nut Stopper/Square Nut positioned near rail end before cap fitted.* ***IM 16 End caps installation***		
Rafter End Caps installed: *End Caps secured on all Rafter ends.* ***IM 16 End caps installation***		
Purlin Cable Tray End Caps installed: *End Caps secured on all Purlin Cable Tray ends.* ***IM 16 End caps installation***		
Correct fasteners used on connections and torqued according to specification:		

Inspection and Maintenance		
Criterion	*Accepted*	*Rejected*
Zinc paint touch-ups must be done where galvanising layers have been damaged.		
-The products are to be inspected annually in the form of a visual inspection of the whole installation. Axe Struct must be notified of any first appearances of rust and abnormal deformations. -Annual spot checks are to be done on fasteners to ensure that the minimum required torque moment specified in this Manual is met. -Cleaning of the product must be done with water with a pH between 6 and 10, and without chemicals.		

Site Closeout		
Criterion	*Accepted*	*Rejected*
Site-wide cleanup:		
All rubbish has been removed:		
Tools and remaining parts packed in stores:		

Torque Settings Table

The specified settings below are assumed to have a dry application. Should a lubrication agent or anti-seizing be used, 80% of the below-listed values would apply. Fastening should be halted when aluminium sections start to visually deform.

Size	Stainless Steel (N·m)	Galvanised Grade 8.8
M8	18 N.m	N/A
M10	38 N.m	N/A
M12	60 N.m	93 N.m
M16	150 N.m	230 N.m
M20	300 N.m	464 N.m
M24	N/A	798 N.m

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Additional Comments	
Table ID	**Comments**

Inspected by
(Name and surname)

Signature

Date

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