

Our Ref: 1499 – 3 / LvS  
6 January 2015

Clenergy Australia  
18/20 Duerdin Street  
Clayton, VIC 3168

## Array Frame Engineering Certificate

### RE: Postmount PM4-A Installation

Gamcorp (Melbourne) Pty Ltd, being Structural Engineers within the meaning of Australian and NZ Building Regulations, have carried out a structural design check of the PV-ezRack Postmount PM4-A within Australia and New Zealand. The design check has been based on the information in the *PV-ezRack PM4-A Planning and Installation Guide* and schematic drawings of the system components, provided by Clenergy Australia.

Barcode	Part number	Description
13-11011-004	ER-EC-ST	PV-ezRack Standard End clamps
13-11010-004	ER-IC-ST	PV-ezRack Standard Inter clamps
13-10015-042	ER-R-ST2560	PV-ezRack Standard Rail 2560mm
13-15011-008	ER-RT-70/2800	PV-ezRack PM4, Rectangular Tube-Master 70*70*2800mm
13-16011-028	ER-AB-75/45/550	PV-ezRack PM4-A ,Angle Bracket 75*45*550mm
13-16011-025	ER-RT-70/394	PV-ezRack (PM3-A,PM4-A), Adjustable Tube 70*50*394mm
13-16011-017	ER-SC-PM3/PM4	PV-ezRack (PM3-A,PM4-A), Steel Cap Assembly
13-15010-043	ER-P-102/2600	Pipe Diameter $\varnothing$ 102*2600mm (PM3,4-A Pole)

We find the Postmount PM4-A to be structurally sufficient for Australian and New Zealand use, based on the following conditions:

- Wind Loads to AS/NZ1170.2:2011, Amendment 3-2012;
- Wind Terrain Categories 2, 3 & 4;
- Wind average recurrence interval of 100 years — for ultimate state, 20 years — service-ability;
- Wind region A, B, C & D;
- Max. Solar Panel length 1.65m, width 1m;
- Steel yield strength 300 MPa, aluminium 240 MPa;
- Maximum tilt angle and footing options: (refer tables on page 2)

Maximum Tilt Angle and Footing Options:

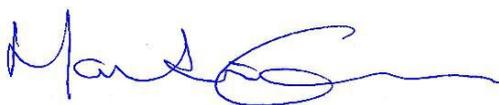
	Wind Region			
	Region A	Region B	Region C	Region D
Wind speed (m/s)	41	48	59	73
Maximum tilt angle (°)	40	20	10	10
Soil Type	Post embedded in concrete pier: 300 mm diameter concrete piers minimum depth (m)			
Hard class soil	1.20	1.00	0.75	0.85
Very Firm class soil	1.30	1.05	0.80	1.05
Firm class soil	1.40	1.15	1.00	1.60
Soft class soil	1.70	1.85	1.70	2.60

Notes:

1. Other piers dimensions are possible, contact Gamcorp, if required.
2. Panel weight calculated: 20kg.
3. Embedment depth is relevant for adhesive soils, in other cases contact Gamcorp.
4. For concrete piers foundation, use 25 MPa strength concrete (minimum). It is recommended to insert N12 bar 200mm long at the bottom of the post into the concrete piers.

Construction is to be carried out strictly on accordance with the instruction manual. This work was designed in accordance with the provisions of Australian Building Regulations and in accordance with sound, widely accepted engineering principles.

Yours faithfully,  
 Gamcorp (Melbourne) Pty Ltd



Martin Gamble  
 Managing Director  
 MAICD



Milan Bjelobrk  
 MIEAust, CPEng, NPER 2210984,  
 RPEQ 12090, RBP EC-38461, NT BPB 139671ES