

May 22nd 2013

Schletter Australia Pty Ltd
7 Avalli Road
Preston NSW 2170



Attention: Mr Thanh Nha Nguyen

STRUCTURAL DESIGN CERTIFICATE

Project Description: Schletter FS2.5kW High Load Ground Mounted Solar System

We, Partridge Structural Pty Limited, being professional Structural Engineers within the meaning of the Building Code of Australia, hereby certify that an analysis and structural design review of the Schletter FS2.5kW High Load Ground Mounted Solar System was carried out under the supervision of a structural engineer certified under NPER in order to determine the suitability of the structure for proposed installations in Australia and that this review was carried out in accordance with the relevant Australian Standards and with accepted engineering practice and principles.

Relevant Australian Standards:

- AS/NZS1170.0:2002 - Structural design actions Part 0: General principals
- AS/NZS1170.2:2011 – Structural design actions Part 2: Wind actions
- AS4100:1998 – Steel structures
- AS/NZS4600:2005 – Cold formed steel structures
- AS/NZS1664.1:1997 – Aluminium structures Part1: Limit state design

Referenced Schletter documentation:

- Drawing v.02 - Ground Mount FS 2V x 5 30° High Load Racking Structure – Dimensions and Specifications Sheet 1 & 2 of 2 – Revision 4 dated 27/01/2012
- Drawing 124303-006 – Rail,S1.5, Profile, 6m dated 07/10/2011 (excluding section properties displayed on drawing)
- Drawing 141003-006 – Rail, T3, Fixed Elevation, Profile, 6m – Revision A dated 10/10/2011 (excluding section properties displayed on drawing)
- Excel table with section properties (attached for reference)
- Design calculations FS2V x 5 for mounting of photo voltaic modules in freeland facilities by Schneider Structural Engineers, Ron Schneider (Address: 1700 E Ft. Lowell Road, Suit 109, Tucson, AZ 85719) dated 14/03/2013 (Pages1-12)

Assumptions:

- Geometry, components and footings as per referenced documentation
- Pitch 30°
- Maximum solar panel size 1685mm x 990mm (10 Panels per frame)
- Solar panels to be certified separately

PARTRIDGE
STRUCTURAL | REMEDIAL | EVENT

Schletter FS2.5kW High Load Ground Mounted Solar System

22nd May 2013

Certification:

We have reviewed the Schletter FS2.5kW High Load Ground Mounted Solar System and certify that it is capable of safely withstanding an ultimate wind speed of up to 50m/s.

We further certify that the Schletter FS2.5kW High Load Ground Mounted Solar System for wind areas with the following limitations:

- Wind Regions A, & W, Terrain Categories 2, 2.5, 3 & 4
- Wind Region B, Terrain Categories 2.5, 3 & 4
- Wind Direction Multiplier $M_d=1.0$ (Any wind direction)
- Shielding Multiplier $M_s = 1.0$ (No shielding)
- Topographic Multiplier $M_t = 1.0$ (Flat terrain)

This certificate shall not be construed as relieving any other party of their responsibilities, liabilities or contractual obligations.





Rob O'Reilly

BE(Hons) MIEAust CPEng NPER(Structural) RPEQ

For and on behalf of:

Partridge Structural Pty Ltd

Pictures	Height (mm)	Width (mm)	Name	Weight (Kg/m)	Weight (lb/ft)	Area (mm ²)	Area (in ²)	Sy o (cm ³)	Sy u (cm ³)	Sz (cm ³)	Iy (cm ⁴)	Iz (cm ⁴)	Sy o (in ³)	Sy u (in ³)	Sz (in ³)	Iy (in ⁴)	Iz (in ⁴)
	65	83	S0	1.869	1.256	692.4	1.073	14.1	14.1	7.76	45.9	32.2	0.860	0.860	0.474	1.103	0.774
	82	91	S1,5	2.181	1.466	807.7	1.252	21.89	21.87	9.81	89.72	44.65	1.336	1.335	0.599	2.156	1.073
	85	70.6	T3	2.862	1.923	1061.1	1.645	19.5	19.3	14.8	82.5	52.2	1.190	1.178	0.903	1.982	1.254