



JUNE 05, 2023

Mr. Milton P. Nogueira Jr.
Roof Tech Inc.
10620 Treena St. Suite 230
San Diego, CA 92131

Dear Mr. Nogueira,

Re: Roof Tech RT APEX – Structural Review - for Ontario, Canada – OBC 2012 w/ addendum.
Project No: 21016-T1 / 23023

Thank you for retaining our office to carry out the structural review of the Roof Tech RT APEX for use to install Photovoltaic (PV) panels.

The purpose of the review was to assess the spacing requirement for the Roof Tech RT APEX photovoltaic (PV) panel roof mount system. Our determination is that the system can be safely connected to roof structures in Ontario according to Ontario Building Code (OBC 2012 w/ addendum) requirements for various site conditions and arrangements as detailed in the attached tables.

The review consisted of calculating the factored connection resistance of the Roof Tech RT APEX for shear, downward force and tension based on load test results. These resistances were compared to the factored loading on the connection for various roof substrates, orientations of PV panel on a roof, for various wind roof zones, terrains, and roof slopes. The maximum corresponding wind and snow environmental site parameters were then determined and the spacings of the mounts determined from an analysis of the capacities observed in load tests.

The analyses presumes that all connections and associated hardware are installed according to Roof RT APEX Installation Manual and accepted standards of practice for construction. All materials used shall be free of defects and wood substrates shall be according to the minimum thicknesses and grades specified in this report. The installation contractor is responsible for verifying the strength of the roof framing, the structural strength of the PV panels and the capacities of all materials supplied by others as a pre-condition for determining the suitability of use of these tables. Refer to Exhibit A for connection and panel mount orientation as prepared by Starling Madison Lofquist, Inc., for SML project report 471-13.

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If you require any further information please contact the undersigned.

Reviewed by:
Mohamed Gaafar, Msc, P.Eng





Project Name:	RT-APEX-ON(OBC-2012 w/addendums)	Date :	05/06/2023	Design:	SA
Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG

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Summary

Four roof substrates were reviewed: a) 15/32" thick Plywood on 2x4 SPF No. 2 Rafter, b) 7/16" thick OSB only and c) 15/32" thick Plywood only. The Roof Tech RT APEX is connected at each mount to the substrates as shown in Exhibit A. Load tests data from Institute of Building Technology (IBT) for each of these connection types was used to assess the spacing requirements of the mounts for the allowable range of regional climatic parameters from the OBC 2012 W/ ADDENDUM .

System Description

The Roof Tech RT APEX Photovoltaic Panel Roof Mount System consists of a 6000 Series aluminum assembly. The aluminum assembly from the bottom up are Base, Pillar, U-D bracket and End or Mid Clamps. The U-D Splice Bracket, End Splice Clamp, and Mid Splice Clamp are longer versions of their standard length counterpart, and may be used instead of the standard parts with the same minimum spacing. A 6 mm stainless steel set screw SHCS attaches the Base to the Pillar with an installation torque of 9.0 lb-ft. A 12 mm stainless steel hex screw stud attaches the pillar to U-D Bracket, and is field adjustable up and down. A 8 mm stainless steel SHCS and conical stainless steel star washer attaches either the End or Mid Clamp to the U-D Bracket with the minimum installation torque indicated in Roof Tech installation manual. The installation of RT-APEX must be with long direction parallel to the roof framing, and in accordance with Roof Tech's installation Manual. The system is attached to the roof wood substrate with 5.0 mm x 60 mm or 5.0 mm x 90 mm long stainless wood screws. **Two (2)** wood screws are required at the "Rafter" installation, and **five (5)** wood screws are required at the "OSB only" and "Plywood only" installations.

Connection Load Tests

Load tests conducted by IBT measured the failure capacity of the connection assembly with 4 different roof wood substrates. In these tests, failure occurred by pullout of the wood screws, attached component failure and failure of substrate.

Tests showed that critical failure occurs in one of three ways:

1. Pullout of wood screws from the 2x Rafter/OSB/Plywood.
2. Failure of APEX mount.
3. Failure of wood substrate.

In order to establish connection capacities, the lowest value of each failure mechanism for each wood substrate was multiplied by a material resistance factor of 0.55 for tension loads, 0.72 for shear loads and 0.81 for compression loads. The resistance factor was based on formulas presented in CAN/CSA-086-19 (Engineering Design in Wood) for similar proprietary wood connection products where the capacity is assessed through load testing. The material resistance factor of 0.6 for tension, 0.8 in shear and 0.9 in compression/bending is multiplied by a test reliability factor of 0.91 for a minimum of ten tests. These values are shown in Table 1 below. The tests for rafter connections were conducted for D.Fir-L, which is not the commonly used lumber in Canada, thus values for rafter connections were adjusted for SPF lumber by

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reduction factor of 0.9 and 0.75 for shear and tension capacities, respectively. The factored connection resistance was compared to factored loads as per OBC 2012 W/ ADDENDUM .

Table 1: Factored test resistance of roof wood substrates

Serial No.	Substrate Material with 2 layers Asphalt Shingles	Factored test resistance =		
		$\emptyset \times (\text{minimum test result}) \text{ kN}$		
		Tension	Shear	Compression
1	7/16" OSB Sheathing only with (5)-60 mm screws-with Sumo clip.	-	0.700	-
2	7/16" OSB Sheathing only with (5)-60 mm screws-without Sumo clip	0.844	0.743	1.756
3	15/32" Plywood only with (5)-60 mm screws-with Sumo clip.	-	0.977	-
4	15/32" Plywood only with (5)-60 mm screws-without Sumo clip.	0.924	0.853	2.198
5	15/32" plywood over 2x4 D.Fir-L #2 Rafter with (2)-60mm screws-with Sumo clip.	-	1.755	-
6	15/32" plywood over 2x4 D.Fir-L #2 Rafter with (2)-60mm screws-without Sumo clip.	2.898 ⁽¹⁾	0.775 ⁽²⁾	9.504
7	15/32" plywood over 2x4 D.Fir-L #2 Rafter with (2)-90mm screws-with Sumo clip.	-	1.748 ⁽²⁾	-
8	15/32" plywood over 2x4 D.Fir-L #2 Rafter with (2)-90mm screws-without Sumo clip.	2.665 ⁽¹⁾	0.723 ⁽²⁾	8.944

Note:

- 1) Tension resistance adjusted for SPF#2 with reduction factor of 0.75 as per CSA-086-19 .
- 2) Shear resistance adjusted for SPF#2 with reduction factor of 0.9 as per CSA-086-19 .
- 3) “-“ Indicates no test was conducted with Sumo clip and test values of connection without Sumo clip is utilized in developing APEX spacing table.

The parameters and results of our review are summarized below. Refer to Exhibit A for details of the roof mount attachment and mount orientation diagrams.

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Connection Load Analysis

Codes:

- Design load and climatic data ranges as per British Columbia Building Code 2018 (OBC 2012 W/ ADDENDUM).
- Design codes as per Engineering Design in Wood (CSA 086-19) and Strength Design in Aluminum (CSA S157-05).

Institute of Building Technology:

- Report Number 2426-19006, Project Number 31772, Report Issued May 22, 2019, for Compression capacities of RT APEX on OSB and Plywood.
- Report Number 2426-21008, Project Number 35392, Report Issued May 19, 2021, for Shear and Tension capacities of RT APEX on all four-wood substrate and compression capacities of RT APEX on 2X4 Rafter.

Design Loads and Parameters:

- Dead Loads: 0.19 kPa (4 psf) photovoltaic (PV) panel self-weight including assumed weight of rails.
- Wind Loads: 1 in 50 year wind pressure “q” per OBC 2012 W/ ADDENDUM . In determining the external wind pressure “p” acting statically and normal to the surface, the following factors have been used per Clause 4.1.7.3 of OBC 2012 W/ ADDENDUM :
 - I_w = Importance factor for wind = 1.0 for the ULS loading cases;
 - q = Reference velocity pressure based on a probability of exceedance in any one year of 1 in 50, and which values are used in the Tables;
 - C_e = Exposure factor = 1.0 for Open terrain and 0.7 for Rough terrain;
 - C_t = Topographic factor = 1.0, assuming that the building is not located on a hill or escarpment with a slope greater than 10%;
 - $C_g C_p$ = Values based on Figure 4.1.7.6.-C and 4.1.7.6.-E of OBC 2012 W/ ADDENDUM
 - $p = I_w \cdot q \cdot C_e \cdot C_t \cdot C_g \cdot C_p$, where p is as mentioned above.
 - If any of the above factors are different for a particular situation, the Tables can still be used by appropriately modifying wind load and using the corresponding value of the “q” listed. Such modification must be done by a person familiar with the requirements of OBC 2012 W/ ADDENDUM .
- Snow and Rain Loads: 1 in 50 year combined snow and rain load calculated per OBC 2012 W/ ADDENDUM . In order to use the Tables, the total snow and rain loads have to be calculated by a person familiar with the requirements of OBC 2012 W/ ADDENDUM based on the formulae mentioned in the Tables. Importance factor I_s = 1.0 for the ULS loading cases.
- Live Loads: No live load on top of PV cells.

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- Seismic Loads: excluded; does not govern by inspection.

Materials and Geometry:

- Roof rafters to be SPF No. 2 spaced at 24" on centre maximum.
- OSB to be minimum 7/16" (11.1 mm) thick, CSA O437 O1 grade with panel edges supported.
- Plywood to be minimum 15/32" (11.9 mm) thick, tongue and groove, Douglas Fir conforming to CSA O121 with panel edges supported.
- Solar panels to be compliant with UL 1703.
- A range of slopes were considered for the roof loads. A conversion table between slopes and angles is provided below for reference.

Table 2: Roof Slope to Roof Angle Conversion

Roof Slope	(m/m)	0 : 12	1 : 12	2 : 12	3 : 12	4 : 12	5 : 12	6 : 12	7 : 12	8 : 12	9 : 12	10 : 12	11 : 12	12 : 12
Roof angle	(deg)	0.0	4.8	9.5	14.0	18.4	22.6	26.6	30.3	33.7	36.9	39.8	42.5	45.0

Wind Roof Zones

The following notation is used in the report in line with OBC 2012 W/ ADDENDUM Clause 4.1.7.5. 4 c). Refer to figure 4.1.7.6-C and Figure 4.1.7.6-E in OBC 2012 W/ ADDENDUM for location of following zones :

- R = roof in general, except as follows:
- S = within a distance equal to the larger of 0.1D and 0.1W from the roof edge,
- C = within a distance equal to the larger of 0.2W and 0.2D from the roof corner,
where D and W are the widths of the building.

Results

The tables in the following pages summarize the maximum spacing of RT APEX clamps for 1 in 50 year snow and wind loads for each roof wood substrate. The installation contractor is responsible for verifying the strength of the roof framing, the structural strength of the PV panels and the capacities of all materials supplied by others as a pre-condition for determining the suitability of use of these tables.

An individual who is competent and familiar with OBC 2012 W/ ADDENDUM will be required for the use of the tables, prior to installation of the roof connections.

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Table 3: Metres to feet conversion

Metres	0.00	0.30	0.61	0.91	1.22	1.52	1.83	2.13	2.44	2.74	3.05
Feet	0	1	2	3	4	5	6	7	8	9	10

Provincial Range Of Environmental Loads

Province		Ss kPa	Sr kPa	q (1/50) kPa
British Columbia	MIN	1.1	0.10	0.30
	MAX	3.3	0.30	1.01

Table Notes for Tables RT1 to RT24

The tabulated values are based on the following criteria in addition to the notes above:

1. Building mean roof height = 10m (30 ft) maximum.
2. Importance factor 1.0.
3. Tables are based on solar panel maximum tributary widths of:
 - a. Landscape tables: 1.02 m (40 in)
 - b. Portrait 60 Cell tables: 1.73 m (68 in)
 - c. Portrait 72 Cell tables: 1.97 m (77.5 in)

If larger tributary widths are being examined the maximum spacings shown in tables must be proportionally reduced. As an example, for a table based on a tributary width of 1.02 m (40 in) and the maximum spacing is given as 2.44 m (96 in), if a larger tributary width of 1.12 m (44 in) is desired, the maximum mount spacing is to be proportionally reduced as $1.02/1.12 \times 2.44 = 2.22$ m spacing (87.3 in).

4. Solar panel dead load = approximately 0.19 kPa (4.0 psf).
5. Loading on the connections assuming simply supported frames with no continuity over connections.
6. OSB shall be 24/16 APA rated sheathing minimum (7/16" thick).
7. Plywood shall be 32/16 APA rated sheathing minimum (15/32" thick).
8. Sheathing shall be free of defects including, but not limited to water damage and delamination.
9. Roof rafters or trusses spaced at 0.61m (24") on centre maximum.
10. PV panels must be supported per the PV manufacturer's required orientation, location and/or spacing. Loads shall be limited to the recommended values of PV manufacturer.
11. The mounts are attached through a maximum of 2 layers of composite asphalt roof shingles. Tables not valid on concrete roof tile.
12. The capacities of the mounts have been checked for shear, compression, and interaction of shear and tension, and the sum of the (factored actual/ factored allowable) is < 1.0.
13. The blanks in the tables are inadmissible loading for the particular mount in that location and loads.



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RT-APEX - TABLES

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT1: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg $< \alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg $< \alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
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			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg $< \alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT1: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT2: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50	OPEN	0 TO 6	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.610	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
1.00	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
1.50	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT2: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
2.50	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT3: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 72Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
			S	0.610	0.305	0.305	-	-	-	-	-	-		
			C	0.305	-	-	-	-	-	-	-	-		
		7 TO 27	R	0.610	0.305	0.305	-	-	-	-	-	-		
			S	0.305	0.305	-	-	-	-	-	-	-		
			C	0.305	-	-	-	-	-	-	-	-		
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-		
		7 TO 27	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
			S	0.610	0.305	0.305	-	-	-	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			S	0.305	0.305	0.305	-	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	-	-	-	-	-	-	-	
			S	0.305	0.305	-	-	-	-	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			S	0.305	0.305	0.305	-	-	-	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			S	0.305	0.305	0.305	-	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	-	-	-	-	-	-	-	
			S	0.305	0.305	-	-	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			S	0.305	0.305	0.305	-	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT4: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE		
						0.20			0.30		
						0.40			0.50		
						0.60			0.70		
						0.80			0.90		
						1.00			1.10		
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg						R	0.610	0.610	0.305	0.305	-
						S	0.610	0.305	0.305	-	-
						C	0.305	-	-	-	-
						R	0.610	0.305	0.305	-	-
						S	0.305	0.305	-	-	-
						C	0.305	-	-	-	-
						R	0.305	0.305	0.305	0.305	-
						S	0.305	0.305	0.305	-	-
						C	0.305	0.305	0.305	-	-
						R	0.610	0.610	0.305	0.305	0.305
						S	0.610	0.305	0.305	-	-
						C	0.305	-	-	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg						R	0.305	0.305	0.305	0.305	-
						S	0.305	0.305	-	-	-
						C	0.305	-	-	-	-
						R	0.305	0.305	0.305	-	-
						S	0.305	0.305	-	-	-
						C	0.305	-	-	-	-
						R	0.305	0.305	0.305	0.305	0.305
						S	0.305	0.305	0.305	-	-
						C	0.305	-	-	-	-
						R	0.305	0.305	0.305	0.305	0.305
						S	0.305	0.305	0.305	-	-
						C	0.305	-	-	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg						R	0.305	0.305	0.305	0.305	-
						S	0.305	0.305	-	-	-
						C	0.305	-	-	-	-
						R	0.305	0.305	0.305	-	-
						S	0.305	0.305	-	-	-
						C	0.305	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-
						R	0.305	0.305	0.305	0.305	-
						S	0.305	0.305	0.305	-	-
						C	0.305	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-
						R	-	-	-	-	-
						S	-	-	-	-	-
						C	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT5: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	0.914	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.610	0.305	0.305	-	-	-	-	-	-
			S	0.610	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	0 TO 6	R	1.219	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	1.219	0.914	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.305	0.305	-	-	-	-	-	-
			S	0.610	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT5: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT6: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables Suggested values $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	0.914	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.610	0.305	0.305	-	-	-	-	-	-
			S	0.610	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.914	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.305	-	-	-	-	-	-	-	-
	1.00	0 TO 6	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.305	0.305	-	-	-	-	-	-
			S	0.610	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.305	-	-	-	-	-	-	-	-
	1.50	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

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Description

Calculation of mount capacities

Checker: MG

Table: RT6: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation														
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SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			S	0.305	0.305	-	-	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
2.50	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
3.00	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT7: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 72 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.610	0.305	-	-	-	-	-	-	-
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT7: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 72 Cells PV Panels - Portrait Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE		
									BASIC WIND PRESSURE q (1 IN 50) kPa		
						0.20			0.30		
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			0.305	0.305	0.305	0.305	0.305	-
			S			0.305	0.305	0.305	-	-	-
			C			0.305	-	-	-	-	-
		7 TO 27	R			0.305	0.305	0.305	-	-	-
			S			0.305	0.305	-	-	-	-
			C			0.305	-	-	-	-	-
		28 TO 45	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		ROUGH	0 TO 6			R	0.305	0.305	0.305	0.305	0.305
			S			S	0.305	0.305	0.305	0.305	0.305
			C			C	0.305	0.305	-	-	-
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		7 TO 27	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		28 TO 45	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		ROUGH	0 TO 6			R	-	-	-	-	-
			S			S	-	-	-	-	-
			C			C	-	-	-	-	-
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		7 TO 27	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		28 TO 45	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		ROUGH	0 TO 6			R	-	-	-	-	-
			S			S	-	-	-	-	-
			C			C	-	-	-	-	-
		7 TO 27	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-
		28 TO 45	R			-	-	-	-	-	-
			S			-	-	-	-	-	-
			C			-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT8: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.610	0.305	0.305	-	-	-	-	-	-
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			S	0.610	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	-	-	-	-	-	-	-
			S	0.305	0.305	-	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT8: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg</i>	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			S	0.305	0.305	0.305	-	-	-	-	-	-	-
			C	0.305	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	-	-	-	-	-	-	-	-
2.50 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg</i>	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg</i>	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG
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Table: RT9: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.134	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305
			S	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
	ROUGH	0 TO 6	R	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	1.219	1.219	0.914	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	2.134	2.134	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305
			S	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
	1.00	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610
			S	2.438	2.134	1.524	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			S	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
	1.50	0 TO 6	R	2.134	2.134	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305
			S	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-	-
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT9: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables Suggested values $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	ROUGH	0 TO 6	R	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610		
			S	1.524	1.524	1.524	0.914	0.914	0.610	0.610	0.610	0.305		
			C	1.219	0.610	0.610	0.305	0.305	0.305	0.305	-	-		
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305		
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305		
			C	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-		
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
2.50 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables Suggested values $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	ROUGH	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	
			S	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305	0.305	
			C	1.219	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
3.00 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables Suggested values $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.610	
			C	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT9: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	
			C	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT10: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < α < 70 deg	OPEN	0 TO 6	R	2.438	2.134	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305
			S	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
	1.00	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610
			S	2.438	2.134	1.524	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
	1.50	OPEN	0 TO 6	R	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.305	0.305
			S	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT10: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 $S = Is(Ss^*Cb^*Cw^*Cs^*Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0 \text{ for } \alpha \leq 30 \text{ deg}$ $Cs = (70 - \alpha)/40 \text{ for } 30 \text{ deg} < \alpha < 70 \text{ deg}$	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
2.50 $S = Is(Ss^*Cb^*Cw^*Cs^*Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0 \text{ for } \alpha \leq 30 \text{ deg}$ $Cs = (70 - \alpha)/40 \text{ for } 30 \text{ deg} < \alpha < 70 \text{ deg}$	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
3.00 $S = Is(Ss^*Cb^*Cw^*Cs^*Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0 \text{ for } \alpha \leq 30 \text{ deg}$ $Cs = (70 - \alpha)/40 \text{ for } 30 \text{ deg} < \alpha < 70 \text{ deg}$	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT10: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa							
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.305	0.305	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
		28 TO 45	S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
			R	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.305	0.305	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
	ROUGH	28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	-	-
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
	ROUGH	28 TO 45	S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		0 TO 6	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
	ROUGH	28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT11: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 72 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50	OPEN	0 TO 6	R	2.438	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	1.219	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		ROUGH	0 TO 6	R	2.438	2.438	1.829	1.524	1.219	0.914	0.610	0.610	0.610
			S	2.438	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			7 TO 27	R	1.829	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	1.219	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			28 TO 45	R	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610
			S	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305	0.305
1.00	OPEN	0 TO 6	R	2.438	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
		ROUGH	0 TO 6	R	2.438	2.438	1.829	1.524	1.219	0.914	0.610	0.610	0.610
			S	2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			7 TO 27	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.914	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
1.50	OPEN	0 TO 6	R	1.829	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		ROUGH	0 TO 6	R	1.829	1.829	1.219	1.524	1.219	0.914	0.610	0.610	0.610
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
			7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	-
			C	0.610	0.610	0.610	0.610	0.610	0.610	-	-	-	-
			28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT11: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 72 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE					
									0.20					
									0.30					
									0.40					
									0.50					
									0.60					
									0.70					
									0.80					
									0.90					
									1.00					
									1.10					
2.00			OPEN			0 TO 6			R	1.219	1.219			
<i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr)</i>							S	1.219	1.219	0.610	0.610			
<i>Ss and Sr from Code Tables</i>							C	0.610	0.305	0.305	-			
<i>Suggested values</i>							R	0.610	0.610	0.610	0.305			
<i>Is = 1.0</i>							S	0.610	0.305	0.305	0.305			
<i>Cb = 0.8</i>							C	0.610	0.305	0.305	-			
<i>Cw = 1.0</i>							R	0.305	0.305	0.305	0.305			
<i>Ca = 1.0</i>							S	0.305	0.305	0.305	0.305			
<i>Cs = 1.0 for $\alpha \leq 30$ deg</i>							C	0.305	0.305	0.305	0.305			
<i>Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg</i>							R	1.219	1.219	1.219	1.219			
							S	1.219	1.219	0.914	0.610			
							C	1.219	0.610	0.305	0.305			
2.50			OPEN			0 TO 6			R	0.914	0.914			
<i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr)</i>							S	0.914	0.914	0.610	0.610			
<i>Ss and Sr from Code Tables</i>							C	0.610	0.305	0.305	-			
<i>Suggested values</i>							R	0.305	0.305	0.305	0.305			
<i>Is = 1.0</i>							S	0.305	0.305	0.305	0.305			
<i>Cb = 0.8</i>							C	0.305	0.305	0.305	-			
<i>Cw = 1.0</i>							R	0.305	0.305	0.305	0.305			
<i>Ca = 1.0</i>							S	0.305	0.305	0.305	0.305			
<i>Cs = 1.0 for $\alpha \leq 30$ deg</i>							C	0.305	0.305	0.305	0.305			
<i>Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg</i>							R	0.914	0.914	0.914	0.914			
							S	0.914	0.914	0.610	0.610			
							C	0.914	0.610	0.305	0.305			
3.00			OPEN			0 TO 6			R	0.914	0.914			
<i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr)</i>							S	0.914	0.914	0.610	0.610			
<i>Ss and Sr from Code Tables</i>							C	0.610	0.305	0.305	-			
<i>Suggested values</i>							R	0.305	0.305	0.305	0.305			
<i>Is = 1.0</i>							S	0.305	0.305	0.305	0.305			
<i>Cb = 0.8</i>							C	0.305	0.305	0.305	-			
<i>Cw = 1.0</i>							R	-	-	-	-			
<i>Ca = 1.0</i>							S	-	-	-	-			
<i>Cs = 1.0 for $\alpha \leq 30$ deg</i>							C	-	-	-	-			
<i>Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg</i>							R	0.914	0.914	0.914	0.914			
							S	0.914	0.914	0.610	0.610			
							C	0.914	0.610	0.305	0.305			
ROUGH			ROUGH			0 TO 6			R	0.914	0.914			
							S	0.914	0.914	0.610	0.610			
							C	0.914	0.610	0.305	0.305			
							R	0.305	0.305	0.305	0.305			
							S	0.305	0.305	0.305	0.305			
							C	0.305	0.305	0.305	0.305			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			
							S	-	-	-	-			
							C	-	-	-	-			
							R	-	-	-	-			

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT11: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 72 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
	OPEN	7 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.00 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
	OPEN	28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
4.50 $S = Is(Ss \cdot Cb \cdot Cw \cdot Cs \cdot Ca + Sr)$ Ss and Sr from Code Tables <i>Suggested values</i> $Is = 1.0$ $Cb = 0.8$ $Cw = 1.0$ $Ca = 1.0$ $Cs = 1.0$ for $\alpha \leq 30$ deg $Cs = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT12: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation												
MAXIMUM SPACING OF RT-E MOUNT MINI (m)												
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY												
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa								
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	1.829	1.219	0.914	0.610	0.610	0.305	0.305	
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
	ROUGH	0 TO 6	R	2.438	2.438	1.829	1.524	1.219	0.914	0.610	0.610	
			S	2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.610	
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.610	0.610	0.610	0.610	0.305	0.305	-	-	
	1.00	0 TO 6	R	1.829	1.829	1.219	0.914	0.610	0.610	0.305	0.305	
			S	1.829	1.219	0.610	0.610	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	1.50	OPEN	0 TO 6	R	1.219	1.219	1.219	0.914	0.610	0.610	0.305	0.305
			S	1.219	1.219	0.610	0.610	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT12: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation												
MAXIMUM SPACING OF RT-E MOUNT MINI (m)												
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY												
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa								
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	
2.00	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	
			C	0.914	0.610	0.305	0.305	0.305	0.305	-	-	
2.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
3.00	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT12: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
			7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
			7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT13: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation															
MAXIMUM SPACING OF RT-E MOUNT MINI (m)															
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY															
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE			BASIC WIND PRESSURE q (1 IN 50) kPa			
						0.20			0.30			0.40			
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S			2.134	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R			1.829	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S			1.219	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			C			0.914	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R			2.438	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610
			S			2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C			1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R			1.829	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S			1.829	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C			1.219	0.610	0.610	0.305	0.305	0.305	-	-	-	-
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S			2.134	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R			0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S			0.914	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			C			0.914	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R			0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S			0.610	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C			0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R			0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S			0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.914	0.610	0.610	0.305	0.305	0.305	-	-	-	-
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R			1.829	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S			1.829	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R			0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S			0.610	0.610	0.610	0.305	0.305	0.305	-	-	-	-
			C			0.610	0.305	0.305	0.305	-	-	-	-	-	-
	ROUGH	0 TO 6	R			0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S			0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R			0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S			0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.610	0.610	0.610	0.610	0.305	0.305	-	-	-	-
		28 TO 45	R			0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S			0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C			0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT13: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			S	1.524	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
	OPEN	28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		0 TO 6	R	1.524	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610	
			S	1.524	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
	ROUGH	7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			S	1.219	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
	ROUGH	28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		0 TO 6	R	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	
			S	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
	OPEN	7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.914	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
	ROUGH	28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
	OPEN	7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT13: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
4.00	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
4.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG
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Table: RT14: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	2.134	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-	-	-
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610
			S	2.438	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	1.219	0.610	0.305	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.829	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	1.829	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	1.829	1.829	1.829	1.524	1.219	0.914	0.914	0.610	0.610	0.610
			S	1.829	1.829	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	1.219	0.610	0.305	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	1.219	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610
			S	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT14: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT14: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT15: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 72Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50	OPEN	0 TO 6	R	2.438	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	2.438	2.438	1.829	1.219	0.914	0.914	0.610	0.610	0.610	0.610
			S	2.438	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	1.524	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			C	1.219	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		28 TO 45	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.305	0.305
1.00	OPEN	0 TO 6	R	2.438	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	2.438	2.438	1.829	1.219	0.914	0.914	0.610	0.610	0.610	0.610
			S	2.438	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			C	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
1.50	OPEN	0 TO 6	R	1.829	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			S	1.829	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	1.829	1.829	1.219	0.914	0.914	0.610	0.610	0.610	0.610	0.610
			S	1.829	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT15: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 72Cells PV Panels - Portrait Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa							
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
2.00	OPEN	0 TO 6	R	1.219	1.219	0.914	0.914	0.610	0.610	0.305	0.305
			S	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610
			S	1.219	1.219	1.219	0.914	0.610	0.610	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
2.50	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
3.00	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305
			C	0.914	0.610	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT15: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 72Cells PV Panels - Portrait Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
4.00	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
4.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT16: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			S	1.829	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	ROUGH	0 TO 6	R	2.438	2.438	1.829	1.219	0.914	0.914	0.610	0.610	0.610	0.610	
			S	2.438	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			S	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.610	
			S	1.524	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			S	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.610	
			S	1.219	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT16: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT16: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 72 Cells PV Panels - Portrait Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
	ROUGH	28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT17: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.914	0.610	0.305	0.305	-	-	-	-	-		
			C	0.610	0.305	-	-	-	-	-	-	-		
		28 TO 45	R	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	1.524	1.524	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.610	0.610	0.305	0.305	-	-	-	-	-	-	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT17: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-		
			S	0.305	0.305	0.305	0.305	-	-	-	-	-		
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-		
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-		
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-		
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = $(70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-		
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT17: RT-Apex - OSB with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT18: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.914	0.610	0.305	0.305	-	-	-	-	-	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		28 TO 45	R	0.914	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	1.524	1.524	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	1.524	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.914	0.610	0.305	0.305	-	-	-	-	-	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			C	0.914	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.305	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			S	0.610	0.610	0.305	0.305	-	-	-	-	-	-	
			C	0.610	0.305	0.305	-	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT18: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - q)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-		
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - q)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Cs = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - q)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-	-		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT18: RT-Apex - OSB with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50 S = $I_s(S_s \cdot C_b \cdot C_w \cdot C_a + S_r)$ Ss and Sr from Code Tables <i>Suggested values</i> $I_s = 1.0$ $C_b = 0.8$ $C_w = 1.0$ $C_a = 1.0$ $C_s = 1.0$ for $\alpha \leq 30$ deg $C_s = (70 - \alpha)/40$ for $30 \text{ deg} < \alpha < 70$ deg	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
4.00 S = $I_s(S_s \cdot C_b \cdot C_w \cdot C_a + S_r)$ Ss and Sr from Code Tables <i>Suggested values</i> $I_s = 1.0$ $C_b = 0.8$ $C_w = 1.0$ $C_a = 1.0$ $C_s = 1.0$ for $\alpha \leq 30$ deg $C_s = (70 - \alpha)/40$ for $30 \text{ deg} < \alpha < 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
4.50 S = $I_s(S_s \cdot C_b \cdot C_w \cdot C_a + S_r)$ Ss and Sr from Code Tables <i>Suggested values</i> $I_s = 1.0$ $C_b = 0.8$ $C_w = 1.0$ $C_a = 1.0$ $C_s = 1.0$ for $\alpha \leq 30$ deg $C_s = (70 - \alpha)/40$ for $30 \text{ deg} < \alpha < 70$ deg	OPEN	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		7 TO 27	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		
		28 TO 45	R	-	-	-	-	-	-	-	-		
			S	-	-	-	-	-	-	-	-		
			C	-	-	-	-	-	-	-	-		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT19: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panes - Landscape Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50	OPEN	0 TO 6	R	2.134	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	2.134	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	2.134	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
	1.00	0 TO 6	R	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
	1.50	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT19 : RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
			C	0.610	0.610	0.305	0.305	0.305	-	-	-	-	-
	2.50	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
	3.00	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
	28 TO 45	0 TO 6	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT19: RT-Apex - Plywood with (5)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg</i>	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
4.00 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg</i>	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	
4.50 <i>S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha \leq 70$ deg</i>	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	
			C	0.305	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT20: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
0.50	OPEN	0 TO 6	R	2.134	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	
		7 TO 27	R	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.914	0.610	0.305	0.305	0.305	-	-	-	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	
		28 TO 45	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
			C	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	2.134	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.610	0.610
			S	2.134	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.610	0.305	0.305	-	-	-	-	-	
		7 TO 27	R	1.829	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.914	0.610	0.305	0.305	0.305	-	-	-	-	
		28 TO 45	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
1.00	OPEN	0 TO 6	R	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	
			C	0.610	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	
			S	0.914	0.610	0.305	0.305	0.305	-	-	-		
			C	0.610	0.305	0.305	-	-	-	-	-		
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	
	ROUGH	0 TO 6	R	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.610	0.610	
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			C	0.914	0.610	0.305	0.305	-	-	-	-		
		7 TO 27	R	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.914	0.914	0.610	0.305	0.305	0.305	-	-		
			C	0.914	0.610	0.305	0.305	0.305	-	-	-		
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610		
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305		
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305		
1.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-		
			C	0.610	0.305	0.305	-	-	-	-	-		
		7 TO 27	R	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-		
			S	0.610	0.610	0.305	0.305	0.305	-	-			
			C	0.610	0.305	0.305	-	-	-	-			
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-		
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610		
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305		
			C	0.610	0.305	0.305	-	-	-	-			
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	-		
			S	0.610	0.610	0.610	0.305	0.305	0.305	-			
			C	0.610	0.610	0.305	0.305	0.305	-	-			
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT20: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			S	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.610	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			S	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
		ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.305	0.305	-	-	-	-	-	-
			7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
2.50	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-	-	-
			7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			28 TO 45	R	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
3.00	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-
			S	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	-	-	-	-	-	-	-
			7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	0.305	0.305	-	-	-	-	-
			28 TO 45	R	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT20: RT-Apex - Plywood with (5)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa							
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
3.50	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	-	-	-
			C	0.305	0.305	0.305	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-
4.00	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-
4.50	OPEN	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
			C	0.305	0.305	0.305	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT21: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90		
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	2.438	2.438	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			S	2.438	1.524	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219	1.219	0.914
			S	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.914	0.610
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.914	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	2.438	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
		28 TO 45	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219	1.219	0.914
			S	2.438	2.438	2.438	2.134	1.829	1.524	1.219	1.219	0.914	0.914
			C	2.438	2.438	2.438	2.134	1.829	1.524	1.219	1.219	0.914	0.914
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	2.134	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			S	2.134	1.524	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219	1.219	0.914
			S	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.914	0.610
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	2.134	2.134	2.134	1.829	1.524	1.219	0.914	0.914	0.914	0.610
			S	2.134	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	2.134	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
		28 TO 45	R	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
			S	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
			C	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			S	1.524	1.524	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	1.524	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			C	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
		7 TO 27	R	1.524	1.524	1.524	1.524	1.219	1.219	0.914	0.914	0.914	0.610
			S	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	1.524	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
		28 TO 45	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			C	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table:RT21: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			S	0.914	0.914	0.914	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
2.50	OPEN	0 TO 6	R	2.134	2.134	2.134	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	2.134	2.134	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			S	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	0.305	0.305
			C	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			C	0.914	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305
3.00	OPEN	0 TO 6	R	1.829	1.829	1.829	1.829	1.524	1.219	0.914	0.914	0.610	0.610
			S	1.829	1.829	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
	28 TO 45	R	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT21: RT-Apex - Rafter with (2)-60 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50 S = $I_s(S_s \cdot C_b \cdot C_w \cdot C_s \cdot C_a + S_r)$ Ss and Sr from Code Tables <i>Suggested values</i> $I_s = 1.0$ $C_b = 0.8$ $C_w = 1.0$ $C_a = 1.0$ $C_s = 1.0$ for $\alpha \leq 30$ deg $C_s = (70 - \alpha)/40$ for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610
			S	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
	4.00	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610
			S	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
	4.50	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610
			S	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	28 TO 45	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG
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Table: RT22: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa							
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	1.524	1.524	1.524	1.219	0.914	0.914	0.610	0.610
			S	1.524	1.524	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.524	0.914	0.610	0.610	0.305	0.305	0.305	-
	ROUGH	28 TO 45	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			C	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	1.524	1.524	1.524	1.524	1.219	0.914	0.914	0.610
			S	1.524	1.524	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.524	1.524	0.914	0.914	0.610	0.610	0.305	0.305
		28 TO 45	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			C	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.305	0.305	0.305	-
	ROUGH	28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.914	0.610	0.610
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
	ROUGH	28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.914
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT22: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE		
						0.20			0.30		
						0.40			0.50		
						0.60			0.70		
						0.80			0.90		
						1.00			1.10		
2.00			OPEN	0 TO 6			R	1.829	1.829	1.829	1.829
				S	1.829	1.829	1.524	1.219	0.914	0.914	0.610
				C	1.524	0.914	0.610	0.305	0.305	0.305	-
				R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				S	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				C	0.305	0.305	0.305	0.305	0.305	0.305	-
				R	-	-	-	-	-	-	-
				S	-	-	-	-	-	-	-
				C	-	-	-	-	-	-	-
				R	1.829	1.829	1.829	1.829	1.829	1.829	1.219
				S	1.829	1.829	1.829	1.829	1.524	1.219	0.914
				C	1.829	1.219	0.914	0.610	0.610	0.914	0.610
2.50			ROUGH	0 TO 6			R	1.524	1.524	1.524	1.524
				S	1.524	1.524	1.524	1.219	0.914	0.914	0.610
				C	1.524	0.914	0.610	0.305	0.305	0.305	-
				R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				S	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				C	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				R	-	-	-	-	-	-	-
				S	-	-	-	-	-	-	-
				C	-	-	-	-	-	-	-
				R	1.524	1.524	1.524	1.524	1.524	1.524	1.219
				S	1.524	1.524	1.524	1.524	1.219	0.914	0.914
				C	1.524	1.219	0.914	0.610	0.610	0.914	0.610
3.00			OPEN	0 TO 6			R	1.219	1.219	1.219	1.219
				S	1.219	1.219	1.219	1.219	0.914	0.914	0.610
				C	1.219	0.914	0.610	0.305	0.305	0.305	-
				R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				S	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				C	0.305	0.305	0.305	0.305	0.305	0.305	-
				R	-	-	-	-	-	-	-
				S	-	-	-	-	-	-	-
				C	-	-	-	-	-	-	-
				R	1.219	1.219	1.219	1.219	1.219	1.219	1.219
				S	1.219	1.219	1.219	1.219	1.219	0.914	0.914
				C	1.219	1.219	0.914	0.610	0.610	0.914	0.610
OPEN			ROUGH	0 TO 6			R	1.219	1.219	1.219	1.219
				S	1.219	1.219	1.219	1.219	1.219	0.914	0.914
				C	1.219	1.219	0.914	0.610	0.610	0.914	0.610
				R	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				S	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				C	0.305	0.305	0.305	0.305	0.305	0.305	0.305
				R	-	-	-	-	-	-	-
				S	-	-	-	-	-	-	-
				C	-	-	-	-	-	-	-
				R	1.219	1.219	1.219	1.219	1.219	1.219	1.219
				S	1.219	1.219	1.219	1.219	1.219	0.914	0.914
				C	1.219	1.219	0.914	0.610	0.610	0.914	0.610

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT22: RT-Apex - Rafter with (2)-60 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation

MAXIMUM SPACING OF RT-E MOUNT MINI (m)

SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY

SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
3.50	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
4.00	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
4.50	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG
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Table: RT23: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa							
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610
			S	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-
	ROUGH	28 TO 45	R	2.134	2.134	2.134	1.524	1.219	0.914	0.914	0.610
			S	2.134	2.134	1.829	1.219	0.914	0.610	0.610	0.610
			C	2.134	2.134	1.829	1.219	0.914	0.610	0.610	0.610
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.134	1.829	1.219	0.914	0.914	0.610
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	2.438	2.438	2.438	1.829	1.524	1.219	0.914	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.305
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		28 TO 45	R	2.134	2.134	2.134	2.134	1.829	1.524	1.524	1.219
			S	2.134	2.134	2.134	2.134	1.524	1.219	1.219	0.914
			C	2.134	2.134	2.134	2.134	1.524	1.219	1.219	0.914
1.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	-	-
		7 TO 27	R	1.829	1.829	1.524	1.219	0.914	0.610	0.610	0.305
			S	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305
			C	1.524	0.914	0.610	0.305	0.305	0.305	0.305	-
	ROUGH	28 TO 45	R	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610
			S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.610
			C	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.610
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.134	1.829	1.219	1.219	0.914	0.610
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	1.829	1.829	1.829	1.829	1.524	1.219	0.914	0.610
			S	1.829	1.219	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.829	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		28 TO 45	R	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
			S	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
			C	1.219	1.219	1.219	1.219	1.219	1.219	1.219	0.914
1.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables <i>Suggested values</i> Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	-	-
		7 TO 27	R	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.305
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	-	-
	ROUGH	28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
		0 TO 6	R	2.438	2.438	2.438	2.438	2.134	1.829	1.524	1.219
			S	2.438	2.438	2.134	1.829	1.219	1.219	0.914	0.610
			C	2.134	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		7 TO 27	R	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610
			S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.305
			C	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305
		28 TO 45	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT23: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation													
MAXIMUM SPACING OF RT-E MOUNT MINI (m)													
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY													
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa									
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914	0.610	0.610
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			S	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
		7 TO 27	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.134	2.134	2.134	1.524	1.219	1.219	0.914	0.914	0.610	0.610
			S	2.134	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.829	1.829	1.829	1.524	1.219	1.219	0.914	0.914	0.610	0.610
			S	1.829	1.829	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305
	28 TO 45	R	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT23: RT-Apex - Rafter with (2)-90 mm screws - with Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation												
MAXIMUM SPACING OF RT-E MOUNT MINI (m)												
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY												
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa								
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	
3.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	1.524	1.524	1.219	1.219	0.914	0.914	
			S	1.524	1.524	1.524	1.219	0.914	0.610	0.610	0.610	
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	
			S	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	
	4.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914
				S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.305
				C	1.219	0.914	0.610	0.305	0.305	0.305	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	4.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914
				S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.305
				C	1.219	0.914	0.610	0.305	0.305	0.305	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
	28 TO 45	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	
		C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.:	23023	Description	Calculation of mount capacities	Checker:	MG
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Table: RT24: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 or 72 Cells PV Panles - Landscape Orientation															
MAXIMUM SPACING OF RT-E MOUNT MINI (m)															
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY															
SNOW & RAIN LOAD (kPa)		TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
					0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
0.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914	0.610	0.610		
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305		
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-		
		7 TO 27	R	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305		
			S	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305		
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	0.305	-	-		
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610		
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610		
			C	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610		
		7 TO 27	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914	0.610	0.610		
			S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.610	0.305	0.305		
			C	1.219	1.219	0.914	0.610	0.610	0.305	0.305	0.305	0.305			
	1.00	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914	0.610	0.610		
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305		
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-		
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305		
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305		
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
		7 TO 27	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610		
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305		
			C	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610		
	1.50	0 TO 6	R	2.438	2.438	2.134	1.524	1.219	1.219	0.914	0.914	0.610	0.610		
			S	2.438	2.134	1.524	1.219	0.914	0.610	0.610	0.610	0.305	0.305		
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	-	-		
	ROUGH	0 TO 6	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
	28 TO 45	R	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305		

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

Table: RT24: RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation											
MAXIMUM SPACING OF RT-E MOUNT MINI (m)											
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY											
SNOW & RAIN LOAD (kPa)			TERRAIN			ROOF ANGLE α (deg.)			ROOF ZONE		
						0.20			0.30		
						0.40			0.50		
						0.60			0.70		
						0.80			0.90		
						1.00			1.10		
2.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.829	1.829	1.829	1.524	1.219	1.219	0.914	0.914
			S	1.829	1.829	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
2.50 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.524	1.524	1.524	1.524	1.219	1.219	0.914	0.914
			S	1.524	1.524	1.524	1.219	0.914	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			S	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
			C	0.305	0.305	0.305	0.305	0.305	0.305	0.305	0.305
3.00 S = Is(Ss*Cb*Cw*Cs*Ca + Sr) Ss and Sr from Code Tables Suggested values Is = 1.0 Cb = 0.8 Cw = 1.0 Ca = 1.0 Cs = 1.0 for $\alpha \leq 30$ deg Cs = (70 - α)/40 for 30 deg < $\alpha < 70$ deg	OPEN	0 TO 6	R	1.219	1.219	1.219	1.219	1.219	1.219	0.914	0.914
			S	1.219	1.219	1.219	1.219	0.914	0.610	0.610	0.305
			C	1.219	0.914	0.610	0.305	0.305	0.305	0.305	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
	ROUGH	0 TO 6	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		7 TO 27	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-
		28 TO 45	R	-	-	-	-	-	-	-	-
			S	-	-	-	-	-	-	-	-
			C	-	-	-	-	-	-	-	-

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023 Description Calculation of mount capacities Checker: MG

Table: RT24 : RT-Apex - Rafter with (2)-90 mm screws - without Snow clip - 60 or 72 Cells PV Panels - Landscape Orientation														
MAXIMUM SPACING OF RT-E MOUNT MINI (m)														
SPACING OF MOUNTS MUST NOT EXCEED THE MAXIMUM RECOMMENDED SPACING FOR THE RAILS USED AND THE RAFTER CAPACITY														
SNOW & RAIN LOAD (kPa)	TERRAIN	ROOF ANGLE α (deg.)	ROOF ZONE	BASIC WIND PRESSURE q (1 IN 50) kPa										
				0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	
3.50	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.00	OPEN	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	
			S	0.914	0.914	0.914	0.914	0.914	0.610	0.610	0.610	0.305	0.305	
			C	0.914	0.914	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	
			S	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.914	0.610	0.610	
			C	0.914	0.914	0.914	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
4.50	OPEN	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.305	0.305	
			C	0.610	0.610	0.610	0.305	0.305	0.305	0.305	-	-	-	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
	ROUGH	0 TO 6	R	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			S	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	0.610	
			C	0.610	0.610	0.610	0.610	0.610	0.305	0.305	0.305	0.305	0.305	
		7 TO 27	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	
		28 TO 45	R	-	-	-	-	-	-	-	-	-	-	
			S	-	-	-	-	-	-	-	-	-	-	
			C	-	-	-	-	-	-	-	-	-	-	



Project Name: RT-APEX-ON(OBC-2012 w/addendums)

Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG

EXHIBIT – A

Project Name: RT-APEX-ON(OBC-2012 w/addendums)

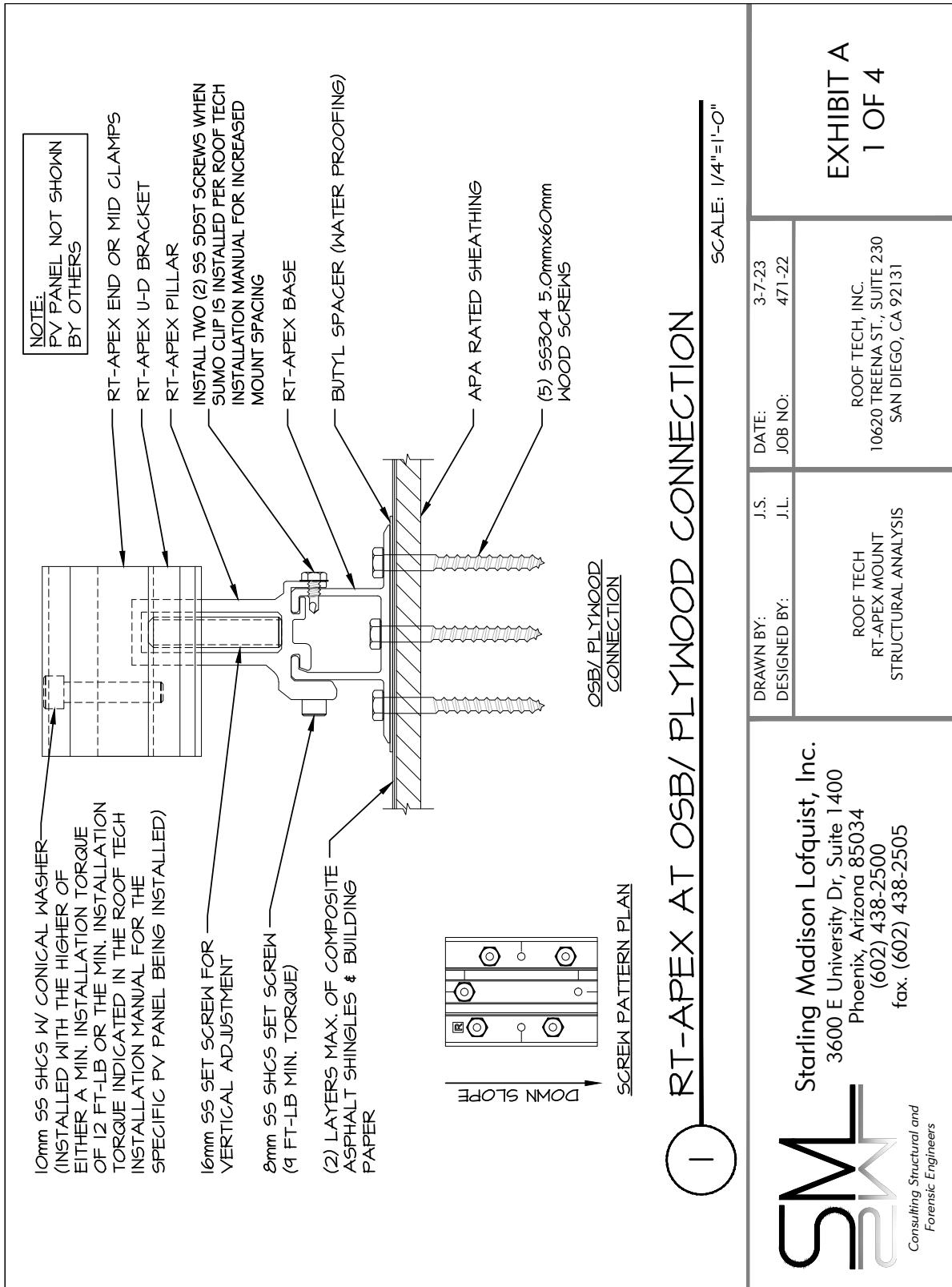
Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG



Project Name: RT-APEX-ON(OBC-2012 w/addendums)

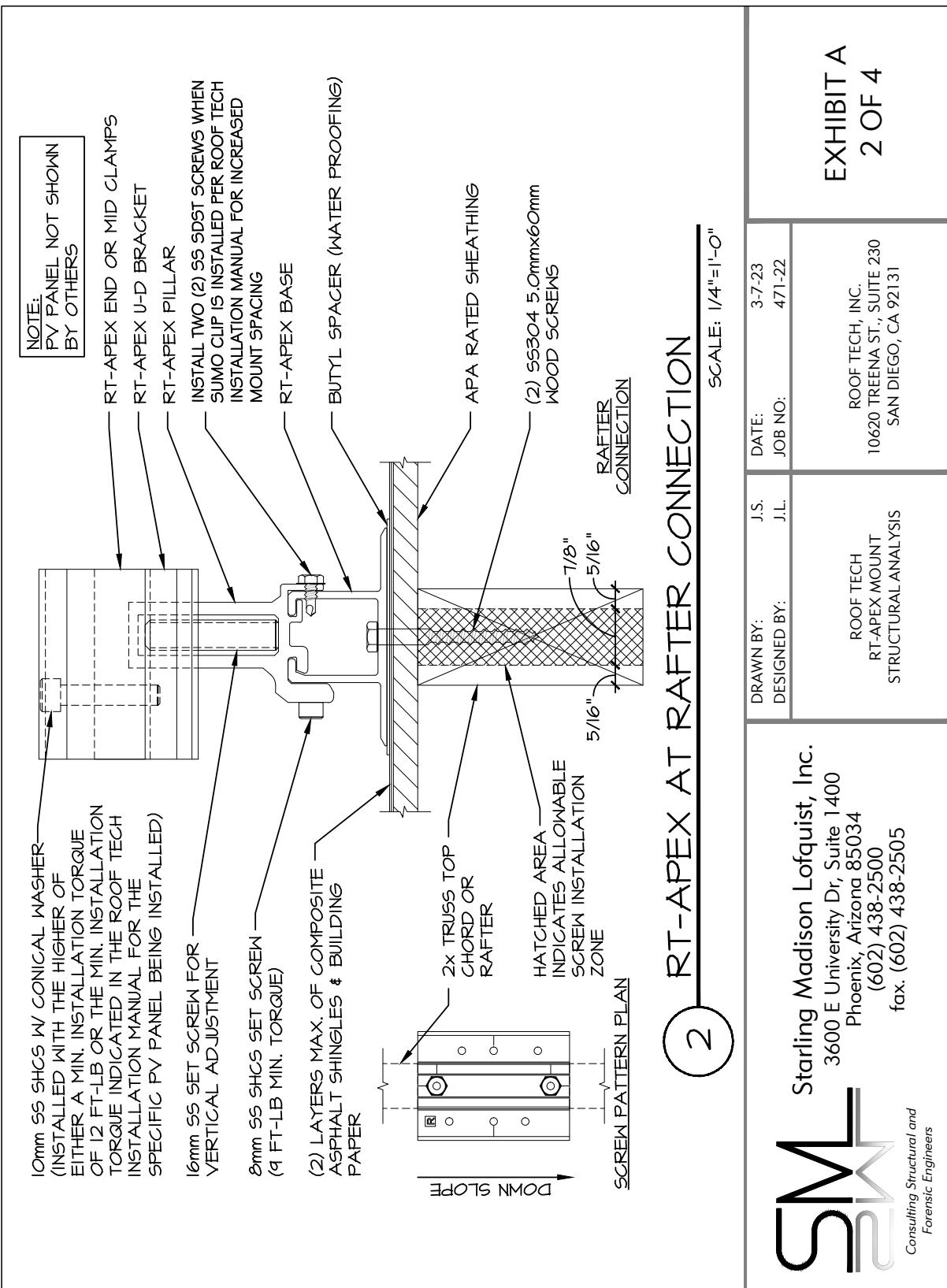
Date : 05/06/2023 Design: SA

Project No.: 23023

Description

Calculation of mount capacities

Checker: MG



Project Name: RT-APEX-ON(OBC-2012 w/addendums)

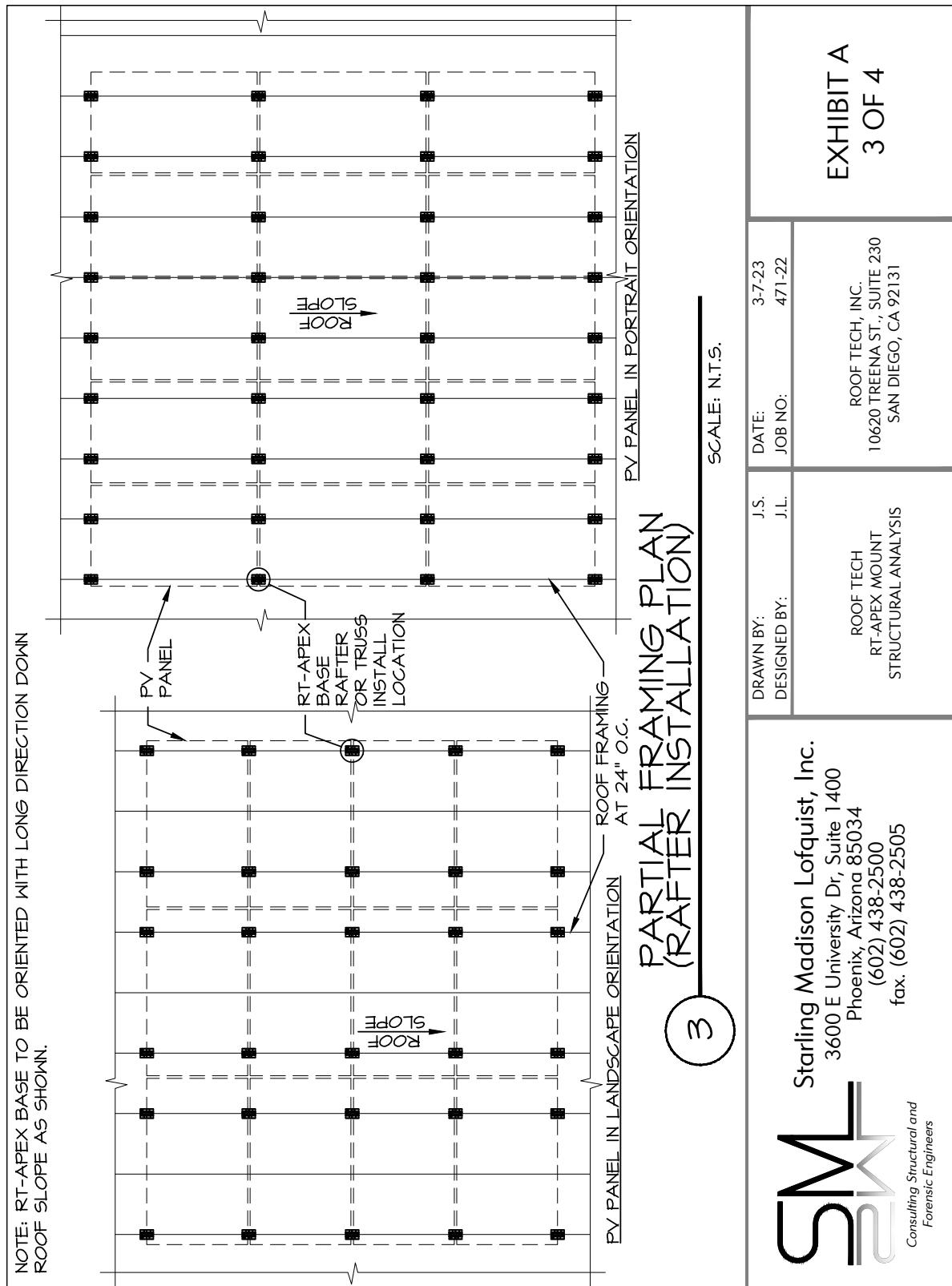
Date : 05/06/2023 Design: SA

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