



November 2, 2020

Attn: Mr. Peter Abou Chacra
SunModo
14800 NE 65th St.
Vancouver, WA 98682

RE: SunModo – SMR100 System
PV Panel Racking System
State of Idaho Certification Letter

SEI Project No.: 19498.00

Dear Mr. Abou Chacra:

Structural Enginuity Inc. (SEI) has completed its review of the SunModo – SMR100 Rail System for typical installations in the state of Idaho. The SMR100 Rail is compliant with the sections of the following design references and codes when installed per the conditions and design criteria delineated herein.

Design References and Codes:

- ASCE 7-10 – Minimum Design Loads for Buildings and Other Structures
- 2015 Aluminum Design Manual, by the Aluminum Association
- Materials information and section and details provided by SunModo as appendages to this letter
- 2015 International Building Code and 2015 International Residential Code
- AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Modules, November 2012 by ICC-ES

General Mounting System and Analysis Overview:

The SMR100 Rail consists of 6005-T5 (acceptable alternative materials include 6005A-T61 and 6061-T6) extruded aluminum per ASTM B221-08. The rails are used in pairs to support photovoltaic solar panels in order to span between points of attachment to the existing roof structure. The following tables and information summarize the structural analysis performed by SEI in order to certify the SMR100 Rail for the state noted above.

The analysis for certification included the following parameters for each rail system.

QRail Standard:

- Risk Category II
- Roof Slopes up to 45 degrees
- Portrait & Landscape orientation of photovoltaic panels
- Max Module Dimensions = Varies, see tables
- Max Mean Roof Height = Varies, see tables (If roof slope < 10°, use eave height)

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- Wind Analysis:
 - o Wind Category: B, C, and D
 - o Roof Zones 1, 2, and 3
 - o Wind Directionality Factor (K_d) = 0.85
 - o Topographic Factor (K_{zt}) = 1
- Snow Analysis:
 - o Snow Exposure Factor (C_e) = 1.0
 - o Thermal Factor (C_t) = 1.0
 - o Slope Factor (C_s) per ASCE 7-10, Figure 7-2a
 - o Importance Factor (I_s) = 1
- Seismic Analysis:
 - o Seismic Design Category E or less (S_d = 2.0 max)
 - o Importance Factor (I_p) = 1
 - o Amplification Factor (a_p) = 1.0 per ICC-AC428
 - o Component Response Modification Factor (R_p) = 1.5 per ICC-AC 428

Applicable loading combinations consisting of dead, wind, snow, and seismic loads in accordance with the governing code requirements were used to determine allowable rail span lengths, based on bending stress capacity, shear capacity, axial capacity, and an assumption of a single-span condition with an allowable deflection of $L/60$. Design wind pressures were determined using Components and Cladding calculations per ASCE 7-10, Chapters 26-30 in conjunction with the loading parameters noted above. Applicable roof snow load shall be based on ground snow load maps, equations, and factors of ASCE 7-10, Chapter 7 and applicable sections of the 2015 International Building Code for the location of the project in combination with the loading parameters noted above.

It should be noted that the analysis was limited to the capacity of the SMR100 Rail. Attachments of the rail to the roof structure and analysis of the roof structure itself shall be the responsibility of the installer, and should be reviewed and approved by a registered design professional where required by the local authority having jurisdiction.

Installation Notes:

The SMR100 Rail shall be installed with the following guidelines to be in compliance with attached span tables:

- Tables noted below assume two support rails are being used per each row of photovoltaic modules in a roof solar array.
- Rails shall be continuous and not spliced over a minimum of 2 supports except for span lengths shaded with In these cases it is acceptable to use a minimum of 1 support per rail section as long as all supports are located at a maximum of 48" on center and the first and last rail sections have a minimum of 2 supports. Splices shall be made with SunModo's structural splice.
- System shall be mounted parallel to roof surface with a 2" to 10" gap between roof surface and bottom of module.
- Installation over roof overhangs or within 10" of any roof edge is not recommended
- Maximum end cantilever of aluminum support rail shall not exceed 1/3 of allowable span in the roof wind pressure zone of the cantilever.

- Tables attached are limited to structural capability of the support rails only; therefore, observe all local jurisdiction requirements regarding roof setback requirements when laying out support rails and solar array.
- Actual span lengths used must be within capacity of roof attachment and structural capacity of roof member supporting solar array.

Conclusion and Certification Summary:

Based on the structural analysis performed by SEI in regard to the loading parameters specified above for SMR100 Rail, the following Span Tables for the SunModo SMR100 Rail System were determined. The various span information is controlled by the applicable wind and snow loads to the structure to which the array is being mounted on the roof and based on the roof zone to which the array is installed on the roof. The tables allow for multiple panel sizes and orientations as outlined in the table of contents and on the headers of each table.

This letter is to certify that the loading criteria and design basis used for the structural analysis of the SMR100 Rail PV Panel Racking System for the span tables attached is validated and performed in compliance with the 2015 International Building Code and 2015 International Residential Code.

Please contact our office if you have any further questions relating to this matter.

Sincerely,

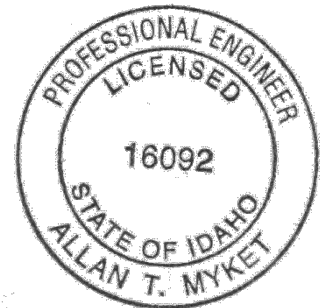


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11/19/2020

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Max Rail Spans for SunModo SMR100 System

| Table 1 | | Mean Roof Height: | $h \leq 15$ ft | | Panel Orientation: Portrait | | | | | | | | | |
|----------------|------------------------|--------------------|-----------------------------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 101 | 101 | 101 | 101 | 101 | 99 | 94 | 88 | 81 | 76 | 73 | 71 | 67 |
| | 10 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 81 | 76 | 73 | 71 | 67 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 67 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 2 | 0 | 101 | 94 | 90 | 85 | 81 | 77 | 70 | 65 | 60 | 56 | 54 | 52 | 49 |
| | 10 | 87 | 87 | 87 | 85 | 81 | 77 | 70 | 65 | 60 | 56 | 54 | 52 | 49 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 65 | 60 | 56 | 54 | 52 | 49 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 65 | 60 | 56 | 54 | 52 | 49 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 54 | 52 | 49 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 49 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 49 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 3 | 0 | 85 | 75 | 71 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 10 | 85 | 75 | 71 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 20 | 69 | 69 | 69 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 30 | 68 | 68 | 68 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 47 | 43 | 42 | 41 | 38 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 43 | 42 | 41 | 38 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 42 | 41 | 38 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 38 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 2 | | Mean Roof Height: | $h \leq 15$ ft | | Panel Orientation: Portrait | | | | | | | | | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 101 | 101 | 101 | 98 | 95 | 92 | 85 | 78 | 73 | 68 | 66 | 64 | 60 |
| | 10 | 87 | 87 | 87 | 87 | 87 | 87 | 85 | 78 | 73 | 68 | 66 | 64 | 60 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 68 | 66 | 64 | 60 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 67 | 66 | 64 | 60 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 2 | 0 | 94 | 84 | 80 | 76 | 72 | 68 | 63 | 58 | 54 | 50 | 48 | 47 | 44 |
| | 10 | 87 | 84 | 80 | 76 | 72 | 68 | 63 | 58 | 54 | 50 | 48 | 47 | 44 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 68 | 63 | 58 | 54 | 50 | 48 | 47 | 44 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 63 | 58 | 54 | 50 | 48 | 47 | 44 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 54 | 50 | 48 | 47 | 44 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 48 | 47 | 44 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 48 | 47 | 44 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 44 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 3 | 0 | 75 | 66 | 62 | 59 | 56 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 10 | 75 | 66 | 62 | 59 | 56 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 20 | 69 | 66 | 62 | 59 | 56 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 30 | 68 | 66 | 62 | 59 | 56 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 40 | 60 | 60 | 60 | 59 | 56 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 49 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 42 | 39 | 38 | 37 | 35 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 39 | 38 | 37 | 35 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 39 | 38 | 37 | 35 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 3 | | Mean Roof Height: | $h \leq 15$ ft | | Panel Orientation: Portrait | | | | | | | | | |
|----------------|------------------------|--------------------|-----------------------------|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 101 | 97 | 94 | 91 | 87 | 83 | 76 | 70 | 65 | 61 | 59 | 57 | 54 |
| | 10 | 87 | 87 | 87 | 87 | 87 | 83 | 76 | 70 | 65 | 61 | 59 | 57 | 54 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 65 | 61 | 59 | 57 | 54 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 67 | 65 | 61 | 59 | 57 | 54 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 57 | 54 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 2 | 0 | 84 | 75 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 10 | 84 | 75 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 20 | 69 | 69 | 69 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 30 | 68 | 68 | 68 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 48 | 45 | 43 | 42 | 40 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 48 | 45 | 43 | 42 | 40 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 43 | 42 | 40 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 42 | 40 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | |
| Zone 3 | 0 | 66 | 58 | 55 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 10 | 66 | 58 | 55 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 20 | 66 | 58 | 55 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 30 | 66 | 58 | 55 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 40 | 60 | 58 | 55 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 50 | 54 | 54 | 54 | 52 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 47 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 40 | 38 | 35 | 34 | 33 | 31 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 38 | 35 | 34 | 33 | 31 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 4 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Portrait |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 101 | 101 | 101 | 101 | 101 | 97 | 92 | 88 | 82 | 79 | 76 | 72 | |
| | 10 | 78 | 78 | 78 | 78 | 77 | 76 | 75 | 74 | 72 | 71 | 70 | 69 | 68 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 58 | 57 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 58 | 57 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 101 | 94 | 91 | 88 | 83 | 79 | 73 | 67 | 62 | 58 | 56 | 54 | 51 | |
| | 10 | 78 | 78 | 78 | 78 | 77 | 76 | 73 | 67 | 62 | 58 | 56 | 54 | 51 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 56 | 54 | 51 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 56 | 54 | 51 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 51 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 3 | 0 | 83 | 74 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 10 | 78 | 74 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 45 | 44 | 42 | 40 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 5 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: Portrait | | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|----|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 101 | 101 | 101 | 99 | 96 | 90 | 84 | 78 | 73 | 70 | 68 | 64 | |
| | 10 | 78 | 77 | 77 | 76 | 75 | 74 | 73 | 71 | 70 | 68 | 67 | 67 | 64 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 57 | 56 | 55 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 57 | 56 | 55 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | 52 | 51 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 2 | 0 | 94 | 87 | 82 | 78 | 74 | 71 | 65 | 60 | 55 | 52 | 50 | 48 | 45 | |
| | 10 | 78 | 77 | 77 | 76 | 74 | 71 | 65 | 60 | 55 | 52 | 50 | 48 | 45 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 55 | 52 | 50 | 48 | 45 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 55 | 52 | 50 | 48 | 45 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 50 | 48 | 45 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 45 |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 3 | 0 | 74 | 66 | 63 | 60 | 57 | 55 | 50 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 10 | 74 | 66 | 63 | 60 | 57 | 55 | 50 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 20 | 60 | 60 | 60 | 60 | 57 | 55 | 50 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 30 | 60 | 60 | 60 | 60 | 57 | 55 | 50 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 50 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 43 | 41 | 39 | 38 | 36 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 41 | 39 | 38 | 36 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 39 | 38 | 36 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 36 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 6 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Portrait | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|--|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 101 | 101 | 98 | 94 | 91 | 89 | 82 | 75 | 70 | 65 | 63 | 61 | 58 | | |
| | 10 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 69 | 67 | 65 | 63 | 61 | 58 | | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 51 | 50 | 49 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 87 | 77 | 73 | 69 | 66 | 63 | 58 | 53 | 49 | 46 | 45 | 43 | 41 | | |
| | 10 | 77 | 76 | 73 | 69 | 66 | 63 | 58 | 53 | 49 | 46 | 45 | 43 | 41 | | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 53 | 49 | 46 | 45 | 43 | 41 | | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 53 | 49 | 46 | 45 | 43 | 41 | | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 49 | 46 | 45 | 43 | 41 | | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 45 | 43 | 41 | | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 41 | | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 3 | 0 | 66 | 59 | 56 | 54 | 51 | 49 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 10 | 66 | 59 | 56 | 54 | 51 | 49 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 20 | 60 | 59 | 56 | 54 | 51 | 49 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 30 | 60 | 59 | 56 | 54 | 51 | 49 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 40 | 53 | 53 | 53 | 53 | 51 | 49 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 45 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 39 | 37 | 36 | 35 | 33 | | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 37 | 36 | 35 | 33 | | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 35 | 33 | | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 7 | | Mean Roof Height: $h \leq 15$ ft | | Panel Orientation: Portrait | | | | | | | | | | |
|----------------------|------------------------------|---|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | |
| Zone 2 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | |
| Zone 3 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 8 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 90 | 85 | 83 | 80 | 78 | 76 | 72 | 68 | 65 | 62 | 60 | 59 | 56 | |
| | 10 | 81 | 78 | 76 | 75 | 74 | 72 | 70 | 67 | 65 | 62 | 60 | 59 | 56 | |
| | 20 | 70 | 68 | 68 | 67 | 66 | 65 | 63 | 61 | 59 | 57 | 56 | 55 | 54 | |
| | 30 | 63 | 62 | 61 | 60 | 60 | 59 | 57 | 56 | 54 | 53 | 52 | 52 | 50 | |
| | 40 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 49 | 47 | |
| | 50 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 45 | 44 | 44 | 43 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | | |
| Zone 2 | 0 | 90 | 85 | 83 | 80 | 78 | 76 | 72 | 68 | 65 | 62 | 60 | 59 | 56 | |
| | 10 | 81 | 78 | 76 | 75 | 74 | 72 | 70 | 67 | 65 | 62 | 60 | 59 | 56 | |
| | 20 | 70 | 68 | 68 | 67 | 66 | 65 | 63 | 61 | 59 | 57 | 56 | 55 | 54 | |
| | 30 | 63 | 62 | 61 | 60 | 60 | 59 | 57 | 56 | 54 | 53 | 52 | 52 | 50 | |
| | 40 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 49 | 47 | |
| | 50 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 45 | 44 | 44 | 43 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | | |
| Zone 3 | 0 | 90 | 85 | 83 | 80 | 78 | 76 | 72 | 68 | 65 | 62 | 60 | 59 | 56 | |
| | 10 | 81 | 78 | 76 | 75 | 74 | 72 | 70 | 67 | 65 | 62 | 60 | 59 | 56 | |
| | 20 | 70 | 68 | 68 | 67 | 66 | 65 | 63 | 61 | 59 | 57 | 56 | 55 | 54 | |
| | 30 | 63 | 62 | 61 | 60 | 60 | 59 | 57 | 56 | 54 | 53 | 52 | 52 | 50 | |
| | 40 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 49 | 47 | |
| | 50 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 45 | 44 | 44 | 43 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 9 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|----------------|------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 85 | 80 | 77 | 75 | 73 | 71 | 67 | 63 | 60 | 57 | 55 | 54 | 52 | |
| | 10 | 78 | 75 | 73 | 72 | 70 | 69 | 66 | 63 | 60 | 57 | 55 | 54 | 52 | |
| | 20 | 68 | 66 | 65 | 64 | 63 | 62 | 60 | 58 | 56 | 54 | 53 | 52 | 51 | |
| | 30 | 62 | 60 | 59 | 59 | 58 | 57 | 55 | 54 | 52 | 51 | 50 | 49 | 48 | |
| | 40 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | 50 | 49 | 48 | 47 | 46 | 45 | |
| | 50 | 52 | 52 | 51 | 51 | 50 | 50 | 49 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 60 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 41 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 39 | 38 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |
| Zone 2 | 0 | 85 | 80 | 77 | 75 | 73 | 71 | 67 | 63 | 60 | 57 | 55 | 53 | 50 | |
| | 10 | 78 | 75 | 73 | 72 | 70 | 69 | 66 | 63 | 60 | 57 | 55 | 53 | 50 | |
| | 20 | 68 | 66 | 65 | 64 | 63 | 62 | 60 | 58 | 56 | 54 | 53 | 52 | 50 | |
| | 30 | 62 | 60 | 59 | 59 | 58 | 57 | 55 | 54 | 52 | 51 | 50 | 49 | 48 | |
| | 40 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | 50 | 49 | 48 | 47 | 46 | 45 | |
| | 50 | 52 | 52 | 51 | 51 | 50 | 50 | 49 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 60 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 41 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 39 | 38 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |
| Zone 3 | 0 | 85 | 80 | 77 | 75 | 73 | 71 | 67 | 63 | 60 | 57 | 55 | 53 | 50 | |
| | 10 | 78 | 75 | 73 | 72 | 70 | 69 | 66 | 63 | 60 | 57 | 55 | 53 | 50 | |
| | 20 | 68 | 66 | 65 | 64 | 63 | 62 | 60 | 58 | 56 | 54 | 53 | 52 | 50 | |
| | 30 | 62 | 60 | 59 | 59 | 58 | 57 | 55 | 54 | 52 | 51 | 50 | 49 | 48 | |
| | 40 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | 50 | 49 | 48 | 47 | 46 | 45 | |
| | 50 | 52 | 52 | 51 | 51 | 50 | 50 | 49 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 60 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 41 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 39 | 38 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 10 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 101 | 101 | 101 | 101 | 99 | 94 | 88 | 81 | 76 | 73 | 71 | 67 | |
| | 10 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 81 | 76 | 73 | 71 | 67 | |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 67 | |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | | |
| Zone 2 | 0 | 101 | 94 | 90 | 85 | 81 | 77 | 70 | 65 | 60 | 56 | 54 | 52 | 49 | |
| | 10 | 87 | 87 | 87 | 85 | 81 | 77 | 70 | 65 | 60 | 56 | 54 | 52 | 49 | |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 65 | 60 | 56 | 54 | 52 | 49 | |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 65 | 60 | 56 | 54 | 52 | 49 | |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 54 | 52 | 49 | |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 49 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 49 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | | |
| Zone 3 | 0 | 85 | 75 | 71 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 10 | 85 | 75 | 71 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 20 | 69 | 69 | 69 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 30 | 68 | 68 | 68 | 67 | 63 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 55 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 47 | 43 | 42 | 41 | 38 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 43 | 42 | 41 | 38 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 42 | 41 | 38 | |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 38 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 11 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 99 | 96 | 93 | 89 | 85 | 78 | 72 | 67 | 63 | 61 | 59 | 56 | |
| | 10 | 87 | 87 | 87 | 87 | 87 | 85 | 78 | 72 | 67 | 63 | 61 | 59 | 56 | |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 63 | 61 | 59 | 56 | |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 67 | 63 | 61 | 59 | 56 | |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 56 | |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | | |
| Zone 2 | 0 | 87 | 77 | 73 | 69 | 66 | 63 | 58 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 10 | 87 | 77 | 73 | 69 | 66 | 63 | 58 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 20 | 69 | 69 | 69 | 69 | 66 | 63 | 58 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 30 | 68 | 68 | 68 | 68 | 66 | 63 | 58 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 46 | 44 | 43 | 41 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 49 | 46 | 44 | 43 | 41 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 44 | 43 | 41 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 41 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 3 | 0 | 68 | 60 | 57 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 10 | 68 | 60 | 57 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 20 | 68 | 60 | 57 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 30 | 68 | 60 | 57 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 40 | 60 | 60 | 57 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 50 | 54 | 54 | 54 | 54 | 51 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 60 | 50 | 50 | 50 | 50 | 50 | 49 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 41 | 39 | 36 | 35 | 34 | 32 | |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 41 | 39 | 36 | 35 | 34 | 32 | |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 39 | 36 | 35 | 34 | 32 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 12 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | Exposure Category: D | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 100 | 93 | 89 | 85 | 81 | 77 | 71 | 66 | 61 | 57 | 56 | 54 | 51 |
| | 10 | 87 | 87 | 87 | 85 | 81 | 77 | 71 | 66 | 61 | 57 | 56 | 54 | 51 |
| | 20 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 66 | 61 | 57 | 56 | 54 | 51 |
| | 30 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 66 | 61 | 57 | 56 | 54 | 51 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 57 | 56 | 54 | 51 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 51 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| Zone 2 | 0 | 78 | 69 | 66 | 63 | 60 | 57 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 10 | 78 | 69 | 66 | 63 | 60 | 57 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 20 | 69 | 69 | 66 | 63 | 60 | 57 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 30 | 68 | 68 | 66 | 63 | 60 | 57 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 40 | 60 | 60 | 60 | 60 | 60 | 57 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 50 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 60 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 48 | 45 | 42 | 40 | 39 | 37 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 42 | 40 | 39 | 37 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 40 | 39 | 37 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 37 | |
| Zone 3 | 0 | 61 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 10 | 61 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 20 | 61 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 30 | 61 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 40 | 60 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 50 | 54 | 54 | 51 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 60 | 50 | 50 | 50 | 49 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 70 | 46 | 46 | 46 | 46 | 46 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| | 80 | 44 | 44 | 44 | 44 | 44 | 44 | 41 | 38 | 35 | 33 | 32 | 31 | 30 |
| 90 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 38 | 35 | 33 | 32 | 31 | 30 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 13 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 101 | 101 | 101 | 101 | 101 | 97 | 92 | 88 | 82 | 79 | 76 | 72 | |
| | 10 | 78 | 78 | 78 | 78 | 77 | 76 | 75 | 74 | 72 | 71 | 70 | 69 | 68 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 58 | 57 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 58 | 57 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 101 | 94 | 91 | 88 | 83 | 79 | 73 | 67 | 62 | 58 | 56 | 54 | 51 | |
| | 10 | 78 | 78 | 78 | 78 | 77 | 76 | 73 | 67 | 62 | 58 | 56 | 54 | 51 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 56 | 54 | 51 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 58 | 56 | 54 | 51 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 51 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 3 | 0 | 83 | 74 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 10 | 78 | 74 | 71 | 67 | 64 | 61 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 56 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 48 | 45 | 44 | 42 | 40 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 45 | 44 | 42 | 40 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 14 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 101 | 100 | 96 | 93 | 90 | 84 | 78 | 72 | 67 | 65 | 63 | 59 | |
| | 10 | 78 | 76 | 75 | 75 | 74 | 73 | 71 | 70 | 68 | 66 | 65 | 63 | 59 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 51 | 51 | 50 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 2 | 0 | 89 | 79 | 75 | 71 | 68 | 65 | 59 | 55 | 51 | 48 | 46 | 45 | 42 | |
| | 10 | 78 | 76 | 75 | 71 | 68 | 65 | 59 | 55 | 51 | 48 | 46 | 45 | 42 | |
| | 20 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 55 | 51 | 48 | 46 | 45 | 42 | |
| | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 59 | 55 | 51 | 48 | 46 | 45 | 42 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 51 | 48 | 46 | 45 | 42 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 45 | 42 |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 3 | 0 | 68 | 61 | 58 | 55 | 53 | 50 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 10 | 68 | 61 | 58 | 55 | 53 | 50 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 20 | 60 | 60 | 58 | 55 | 53 | 50 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 30 | 60 | 60 | 58 | 55 | 53 | 50 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 50 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 40 | 38 | 37 | 36 | 34 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 38 | 37 | 36 | 34 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 37 | 36 | 34 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 34 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 15 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 101 | 96 | 93 | 90 | 87 | 83 | 76 | 70 | 65 | 61 | 59 | 57 | 54 | |
| | 10 | 76 | 75 | 74 | 73 | 72 | 71 | 69 | 67 | 65 | 61 | 59 | 57 | 54 | |
| | 20 | 60 | 60 | 60 | 60 | 59 | 59 | 58 | 57 | 56 | 54 | 54 | 53 | 52 | |
| | 30 | 60 | 60 | 60 | 60 | 59 | 59 | 58 | 57 | 56 | 54 | 54 | 53 | 52 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | 48 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 43 |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 2 | 0 | 80 | 72 | 68 | 64 | 61 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 10 | 76 | 72 | 68 | 64 | 61 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 20 | 60 | 60 | 60 | 60 | 59 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 30 | 60 | 60 | 60 | 60 | 59 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 40 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 43 | 42 | 41 | 38 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 43 | 42 | 41 | 38 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 38 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 3 | 0 | 62 | 55 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 10 | 62 | 55 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 20 | 60 | 55 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 30 | 60 | 55 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 40 | 53 | 53 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 50 | 48 | 48 | 48 | 48 | 48 | 46 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 60 | 44 | 44 | 44 | 44 | 44 | 44 | 42 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 39 | 37 | 35 | 34 | 33 | 31 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 37 | 35 | 34 | 33 | 31 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 | 34 | 33 | 31 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 16 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | Exposure Category: B | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 | |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 | |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 | |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 | |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | | |
| Zone 2 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 | |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 | |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 | |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 | |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | | |
| Zone 3 | 0 | 95 | 90 | 88 | 86 | 83 | 81 | 77 | 73 | 70 | 67 | 65 | 64 | 61 | |
| | 10 | 83 | 81 | 80 | 78 | 77 | 76 | 73 | 71 | 68 | 66 | 65 | 64 | 61 | |
| | 20 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 63 | 62 | 60 | 59 | 58 | 57 | |
| | 30 | 64 | 63 | 63 | 62 | 61 | 61 | 59 | 58 | 57 | 55 | 55 | 54 | 53 | |
| | 40 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | |
| | 50 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 48 | 47 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | 44 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 17 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 86 | 81 | 79 | 76 | 74 | 72 | 68 | 64 | 61 | 58 | 57 | 55 | 53 | |
| | 10 | 79 | 76 | 74 | 73 | 71 | 70 | 67 | 64 | 61 | 58 | 57 | 55 | 53 | |
| | 20 | 69 | 67 | 66 | 65 | 64 | 63 | 61 | 59 | 57 | 55 | 54 | 53 | 51 | |
| | 30 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 50 | 50 | 48 | |
| | 40 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 48 | 47 | 46 | |
| | 50 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |
| Zone 2 | 0 | 86 | 81 | 79 | 76 | 74 | 72 | 68 | 64 | 61 | 58 | 56 | 54 | 51 | |
| | 10 | 79 | 76 | 74 | 73 | 71 | 70 | 67 | 64 | 61 | 58 | 56 | 54 | 51 | |
| | 20 | 69 | 67 | 66 | 65 | 64 | 63 | 61 | 59 | 57 | 55 | 54 | 53 | 51 | |
| | 30 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 50 | 50 | 48 | |
| | 40 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 48 | 47 | 46 | |
| | 50 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |
| Zone 3 | 0 | 86 | 81 | 79 | 76 | 74 | 72 | 68 | 64 | 61 | 58 | 56 | 54 | 51 | |
| | 10 | 79 | 76 | 74 | 73 | 71 | 70 | 67 | 64 | 61 | 58 | 56 | 54 | 51 | |
| | 20 | 69 | 67 | 66 | 65 | 64 | 63 | 61 | 59 | 57 | 55 | 54 | 53 | 51 | |
| | 30 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 50 | 50 | 48 | |
| | 40 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 48 | 47 | 46 | |
| | 50 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | |
| | 60 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 44 | 44 | 43 | 43 | 42 | |
| | 70 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | 39 | |
| 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 38 | 37 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 18 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 82 | 76 | 74 | 72 | 70 | 67 | 64 | 60 | 57 | 54 | 53 | 51 | 49 | |
| | 10 | 76 | 73 | 71 | 70 | 68 | 67 | 64 | 60 | 57 | 54 | 53 | 51 | 49 | |
| | 20 | 67 | 65 | 64 | 63 | 61 | 60 | 58 | 56 | 54 | 52 | 51 | 50 | 49 | |
| | 30 | 61 | 59 | 58 | 57 | 57 | 56 | 54 | 52 | 51 | 49 | 48 | 48 | 46 | |
| | 40 | 56 | 55 | 54 | 53 | 53 | 52 | 50 | 49 | 48 | 46 | 46 | 45 | 44 | |
| | 50 | 52 | 51 | 51 | 50 | 49 | 49 | 48 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 42 | 42 | 41 | 40 | |
| | 70 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 38 | 38 | 37 | |
| | 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 37 | 37 | 36 | |
| Zone 2 | 0 | 82 | 76 | 74 | 72 | 70 | 67 | 64 | 60 | 57 | 53 | 51 | 50 | 47 | |
| | 10 | 76 | 73 | 71 | 70 | 68 | 67 | 64 | 60 | 57 | 53 | 51 | 50 | 47 | |
| | 20 | 67 | 65 | 64 | 63 | 61 | 60 | 58 | 56 | 54 | 52 | 51 | 50 | 47 | |
| | 30 | 61 | 59 | 58 | 57 | 57 | 56 | 54 | 52 | 51 | 49 | 48 | 48 | 46 | |
| | 40 | 56 | 55 | 54 | 53 | 53 | 52 | 50 | 49 | 48 | 46 | 46 | 45 | 44 | |
| | 50 | 52 | 51 | 51 | 50 | 49 | 49 | 48 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 42 | 42 | 41 | 40 | |
| | 70 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 38 | 38 | 37 | |
| | 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 37 | 37 | 36 | |
| Zone 3 | 0 | 82 | 76 | 74 | 72 | 70 | 67 | 64 | 60 | 57 | 53 | 51 | 50 | 47 | |
| | 10 | 76 | 73 | 71 | 70 | 68 | 67 | 64 | 60 | 57 | 53 | 51 | 50 | 47 | |
| | 20 | 67 | 65 | 64 | 63 | 61 | 60 | 58 | 56 | 54 | 52 | 51 | 50 | 47 | |
| | 30 | 61 | 59 | 58 | 57 | 57 | 56 | 54 | 52 | 51 | 49 | 48 | 48 | 46 | |
| | 40 | 56 | 55 | 54 | 53 | 53 | 52 | 50 | 49 | 48 | 46 | 46 | 45 | 44 | |
| | 50 | 52 | 51 | 51 | 50 | 49 | 49 | 48 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 42 | 42 | 41 | 40 | |
| | 70 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 80 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | 40 | 39 | 38 | 38 | 37 | |
| | 90 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 38 | 37 | 37 | 36 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

Max Rail Spans for SunModo SMR100 System

| Table 19 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Landscape | | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|--|--|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 118 | 118 | 118 | 118 | 118 | 116 | 109 | 104 | 99 | 94 | 92 | 90 | 85 | | |
| | 10 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 104 | 99 | 94 | 92 | 90 | 85 | | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 87 | 85 | | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 84 | | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | | | |
| Zone 2 | 0 | 116 | 107 | 103 | 100 | 97 | 94 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | | |
| | 10 | 108 | 107 | 103 | 100 | 97 | 94 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 80 | 74 | 69 | 67 | 65 | 61 | | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 69 | 67 | 65 | 61 | | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 65 | 61 | | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 61 | | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | | | |
| Zone 3 | 0 | 98 | 91 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 10 | 98 | 91 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 20 | 88 | 88 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 30 | 86 | 86 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 58 | 55 | 53 | 52 | 49 | | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 58 | 55 | 53 | 52 | 49 | | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 53 | 52 | 49 | | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 49 | | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 20 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Landscape |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 118 | 118 | 114 | 111 | 107 | 101 | 96 | 92 | 86 | 83 | 81 | 76 | |
| | 10 | 108 | 108 | 108 | 108 | 108 | 107 | 101 | 96 | 92 | 86 | 83 | 81 | 76 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 86 | 83 | 81 | 76 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 85 | 83 | 81 | 76 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | |
| | 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 2 | 0 | 107 | 99 | 96 | 93 | 89 | 85 | 78 | 72 | 67 | 62 | 61 | 59 | 56 | |
| | 10 | 107 | 99 | 96 | 93 | 89 | 85 | 78 | 72 | 67 | 62 | 61 | 59 | 56 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 85 | 78 | 72 | 67 | 62 | 61 | 59 | 56 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 85 | 78 | 72 | 67 | 62 | 61 | 59 | 56 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 72 | 67 | 62 | 61 | 59 | 56 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 61 | 59 | 56 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 61 | 59 | 56 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 56 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | |
| | 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 3 | 0 | 91 | 80 | 76 | 72 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 10 | 91 | 80 | 76 | 72 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 20 | 88 | 80 | 76 | 72 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 30 | 86 | 80 | 76 | 72 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 40 | 76 | 76 | 76 | 72 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 50 | 69 | 69 | 69 | 69 | 68 | 66 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 61 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 56 | 53 | 50 | 48 | 47 | 44 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 53 | 50 | 48 | 47 | 44 | |
| | 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 | 48 | 47 | 44 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 21 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Landscape | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|----|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 113 | 110 | 106 | 103 | 100 | 94 | 89 | 83 | 77 | 75 | 73 | 68 | |
| | 10 | 108 | 108 | 108 | 106 | 103 | 100 | 94 | 89 | 83 | 77 | 75 | 73 | 68 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 83 | 77 | 75 | 73 | 68 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 85 | 83 | 77 | 75 | 73 | 68 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 73 | 68 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 68 |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 2 | 0 | 99 | 92 | 88 | 83 | 79 | 76 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 10 | 99 | 92 | 88 | 83 | 79 | 76 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 20 | 88 | 88 | 88 | 83 | 79 | 76 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 30 | 86 | 86 | 86 | 83 | 79 | 76 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 64 | 60 | 56 | 55 | 53 | 50 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 60 | 56 | 55 | 53 | 50 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 56 | 55 | 53 | 50 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 53 | 50 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 | |
| Zone 3 | 0 | 80 | 71 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 10 | 80 | 71 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 20 | 80 | 71 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 30 | 80 | 71 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 40 | 76 | 71 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 50 | 69 | 69 | 67 | 64 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 60 | 63 | 63 | 63 | 63 | 62 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 51 | 48 | 45 | 44 | 42 | 40 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 48 | 45 | 44 | 42 | 40 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 22 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Landscape | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|--|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 118 | 118 | 118 | 118 | 118 | 113 | 107 | 102 | 98 | 96 | 94 | 90 | |
| | 10 | 97 | 97 | 97 | 97 | 97 | 96 | 95 | 93 | 91 | 89 | 88 | 87 | 85 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 74 | 73 | 72 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 74 | 73 | 72 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |
| Zone 2 | 0 | 117 | 108 | 105 | 101 | 98 | 95 | 90 | 83 | 77 | 72 | 70 | 67 | 64 | |
| | 10 | 97 | 97 | 97 | 97 | 97 | 95 | 90 | 83 | 77 | 72 | 70 | 67 | 64 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 70 | 67 | 64 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 70 | 67 | 64 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 64 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |
| Zone 3 | 0 | 98 | 91 | 88 | 84 | 80 | 77 | 70 | 65 | 61 | 57 | 55 | 54 | 51 | |
| | 10 | 97 | 91 | 88 | 84 | 80 | 77 | 70 | 65 | 61 | 57 | 55 | 54 | 51 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 70 | 65 | 61 | 57 | 55 | 54 | 51 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 70 | 65 | 61 | 57 | 55 | 54 | 51 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 65 | 61 | 57 | 55 | 54 | 51 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | 55 | 54 | 51 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 54 | 51 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 23 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Landscape | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|--|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 118 | 118 | 118 | 115 | 111 | 105 | 100 | 95 | 91 | 89 | 86 | 81 | |
| | 10 | 97 | 97 | 97 | 96 | 95 | 94 | 92 | 90 | 88 | 86 | 85 | 84 | 81 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 73 | 72 | 72 | 71 | 70 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 73 | 72 | 72 | 71 | 70 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 | 66 | 65 | 64 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |
| Zone 2 | 0 | 108 | 100 | 97 | 94 | 91 | 88 | 80 | 74 | 69 | 65 | 63 | 61 | 57 | |
| | 10 | 97 | 97 | 97 | 94 | 91 | 88 | 80 | 74 | 69 | 65 | 63 | 61 | 57 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 69 | 65 | 63 | 61 | 57 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 69 | 65 | 63 | 61 | 57 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 65 | 63 | 61 | 57 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |
| Zone 3 | 0 | 91 | 83 | 79 | 75 | 72 | 69 | 63 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 10 | 91 | 83 | 79 | 75 | 72 | 69 | 63 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 20 | 76 | 76 | 76 | 75 | 72 | 69 | 63 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 30 | 76 | 76 | 76 | 75 | 72 | 69 | 63 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 63 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 59 | 55 | 52 | 50 | 49 | 46 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 52 | 50 | 49 | 46 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 | 49 | 46 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 46 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 24 | | Mean Roof Height: | $h \leq 15$ ft | | Panel Orientation: Landscape | | | | | | | | | |
|-----------------|------------------------|--------------------|------------------------------|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 118 | 118 | 114 | 110 | 106 | 103 | 98 | 93 | 88 | 82 | 80 | 77 | 73 |
| | 10 | 97 | 96 | 95 | 94 | 92 | 91 | 89 | 87 | 84 | 82 | 80 | 77 | 73 |
| | 20 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 73 | 71 | 70 | 69 | 69 | 67 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 73 | 71 | 70 | 69 | 69 | 67 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 | 64 | 64 | 63 | 62 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 58 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 2 | 0 | 100 | 93 | 90 | 86 | 82 | 78 | 72 | 67 | 62 | 58 | 57 | 55 | 52 |
| | 10 | 97 | 93 | 90 | 86 | 82 | 78 | 72 | 67 | 62 | 58 | 57 | 55 | 52 |
| | 20 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 67 | 62 | 58 | 57 | 55 | 52 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 67 | 62 | 58 | 57 | 55 | 52 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 62 | 58 | 57 | 55 | 52 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 58 | 57 | 55 | 52 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 52 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 3 | 0 | 83 | 74 | 71 | 67 | 64 | 62 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 10 | 83 | 74 | 71 | 67 | 64 | 62 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 20 | 76 | 74 | 71 | 67 | 64 | 62 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 30 | 76 | 74 | 71 | 67 | 64 | 62 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 40 | 67 | 67 | 67 | 67 | 64 | 62 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 53 | 50 | 47 | 45 | 44 | 42 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 | 47 | 45 | 44 | 42 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 47 | 45 | 44 | 42 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 44 | 42 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 25 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |
| Zone 2 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |
| Zone 3 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 26 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 114 | 107 | 104 | 101 | 99 | 96 | 91 | 86 | 82 | 78 | 76 | 74 | 71 | |
| | 10 | 102 | 99 | 97 | 95 | 93 | 92 | 88 | 85 | 82 | 78 | 76 | 74 | 71 | |
| | 20 | 89 | 87 | 86 | 84 | 83 | 82 | 79 | 77 | 75 | 72 | 71 | 70 | 68 | |
| | 30 | 80 | 78 | 77 | 77 | 76 | 75 | 73 | 71 | 69 | 67 | 66 | 65 | 64 | |
| | 40 | 72 | 72 | 71 | 71 | 70 | 69 | 68 | 66 | 65 | 63 | 62 | 62 | 60 | |
| | 50 | 66 | 66 | 66 | 66 | 65 | 65 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 51 | 50 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | |
| Zone 2 | 0 | 114 | 107 | 104 | 101 | 99 | 96 | 91 | 86 | 82 | 78 | 76 | 74 | 70 | |
| | 10 | 102 | 99 | 97 | 95 | 93 | 92 | 88 | 85 | 82 | 78 | 76 | 74 | 70 | |
| | 20 | 89 | 87 | 86 | 84 | 83 | 82 | 79 | 77 | 75 | 72 | 71 | 70 | 68 | |
| | 30 | 80 | 78 | 77 | 77 | 76 | 75 | 73 | 71 | 69 | 67 | 66 | 65 | 64 | |
| | 40 | 72 | 72 | 71 | 71 | 70 | 69 | 68 | 66 | 65 | 63 | 62 | 62 | 60 | |
| | 50 | 66 | 66 | 66 | 66 | 65 | 65 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 51 | 50 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | |
| Zone 3 | 0 | 114 | 107 | 104 | 101 | 99 | 96 | 91 | 86 | 82 | 78 | 76 | 74 | 70 | |
| | 10 | 102 | 99 | 97 | 95 | 93 | 92 | 88 | 85 | 82 | 78 | 76 | 74 | 70 | |
| | 20 | 89 | 87 | 86 | 84 | 83 | 82 | 79 | 77 | 75 | 72 | 71 | 70 | 68 | |
| | 30 | 80 | 78 | 77 | 77 | 76 | 75 | 73 | 71 | 69 | 67 | 66 | 65 | 64 | |
| | 40 | 72 | 72 | 71 | 71 | 70 | 69 | 68 | 66 | 65 | 63 | 62 | 62 | 60 | |
| | 50 | 66 | 66 | 66 | 66 | 65 | 65 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 51 | 50 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 27 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 107 | 101 | 98 | 95 | 92 | 89 | 84 | 80 | 76 | 72 | 70 | 68 | 65 | |
| | 10 | 99 | 95 | 93 | 91 | 89 | 87 | 84 | 80 | 76 | 72 | 70 | 68 | 65 | |
| | 20 | 87 | 84 | 83 | 81 | 80 | 79 | 76 | 73 | 71 | 68 | 67 | 66 | 64 | |
| | 30 | 78 | 76 | 75 | 74 | 73 | 72 | 70 | 68 | 66 | 64 | 63 | 62 | 60 | |
| | 40 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 64 | 62 | 60 | 60 | 59 | 57 | |
| | 50 | 66 | 66 | 65 | 64 | 64 | 63 | 62 | 60 | 59 | 57 | 57 | 56 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 54 | 53 | 52 | 52 | 51 | 50 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | 48 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 48 | 48 | 48 | 47 | |
| Zone 2 | 0 | 107 | 101 | 98 | 95 | 92 | 89 | 84 | 80 | 76 | 71 | 69 | 67 | 63 | |
| | 10 | 99 | 95 | 93 | 91 | 89 | 87 | 84 | 80 | 76 | 71 | 69 | 67 | 63 | |
| | 20 | 87 | 84 | 83 | 81 | 80 | 79 | 76 | 73 | 71 | 68 | 67 | 66 | 63 | |
| | 30 | 78 | 76 | 75 | 74 | 73 | 72 | 70 | 68 | 66 | 64 | 63 | 62 | 60 | |
| | 40 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 64 | 62 | 60 | 60 | 59 | 57 | |
| | 50 | 66 | 66 | 65 | 64 | 64 | 63 | 62 | 60 | 59 | 57 | 57 | 56 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 54 | 53 | 52 | 52 | 51 | 50 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | 48 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 48 | 48 | 48 | 47 | |
| Zone 3 | 0 | 107 | 101 | 98 | 95 | 92 | 89 | 84 | 80 | 76 | 71 | 69 | 67 | 63 | |
| | 10 | 99 | 95 | 93 | 91 | 89 | 87 | 84 | 80 | 76 | 71 | 69 | 67 | 63 | |
| | 20 | 87 | 84 | 83 | 81 | 80 | 79 | 76 | 73 | 71 | 68 | 67 | 66 | 63 | |
| | 30 | 78 | 76 | 75 | 74 | 73 | 72 | 70 | 68 | 66 | 64 | 63 | 62 | 60 | |
| | 40 | 72 | 70 | 70 | 69 | 68 | 67 | 65 | 64 | 62 | 60 | 60 | 59 | 57 | |
| | 50 | 66 | 66 | 65 | 64 | 64 | 63 | 62 | 60 | 59 | 57 | 57 | 56 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 54 | 53 | 52 | 52 | 51 | 50 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | 48 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 48 | 48 | 48 | 47 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 28 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 118 | 118 | 118 | 118 | 116 | 109 | 104 | 99 | 94 | 92 | 90 | 85 | |
| | 10 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 104 | 99 | 94 | 92 | 90 | 85 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 87 | 85 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 84 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | | |
| Zone 2 | 0 | 116 | 107 | 103 | 100 | 97 | 94 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | |
| | 10 | 108 | 107 | 103 | 100 | 97 | 94 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 80 | 74 | 69 | 67 | 65 | 61 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 69 | 67 | 65 | 61 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 65 | 61 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 61 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | | |
| Zone 3 | 0 | 98 | 91 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 10 | 98 | 91 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 20 | 88 | 88 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 30 | 86 | 86 | 86 | 81 | 77 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 74 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 58 | 55 | 53 | 52 | 49 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 58 | 55 | 53 | 52 | 49 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 53 | 52 | 49 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 49 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 29 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Landscape | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 118 | 116 | 112 | 108 | 105 | 102 | 96 | 91 | 85 | 79 | 77 | 75 | 70 |
| | 10 | 108 | 108 | 108 | 108 | 105 | 102 | 96 | 91 | 85 | 79 | 77 | 75 | 70 |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 85 | 79 | 77 | 75 | 70 |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 85 | 79 | 77 | 75 | 70 |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 75 | 70 |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 2 | 0 | 101 | 94 | 90 | 86 | 82 | 78 | 71 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 10 | 101 | 94 | 90 | 86 | 82 | 78 | 71 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 20 | 88 | 88 | 88 | 86 | 82 | 78 | 71 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 30 | 86 | 86 | 86 | 86 | 82 | 78 | 71 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 71 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 66 | 62 | 58 | 56 | 55 | 52 |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 58 | 56 | 55 | 52 |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 58 | 56 | 55 | 52 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 52 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 3 | 0 | 83 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 10 | 83 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 20 | 83 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 30 | 83 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 40 | 76 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 50 | 69 | 69 | 69 | 66 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 60 | 63 | 63 | 63 | 63 | 63 | 61 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 56 | 52 | 49 | 46 | 45 | 43 | 41 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 52 | 49 | 46 | 45 | 43 | 41 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 49 | 46 | 45 | 43 | 41 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 30 | | Mean Roof Height: | $15 < h \leq 30$ ft | | | | | | | | | | Panel Orientation: | Landscape | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|----|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 117 | 108 | 105 | 101 | 98 | 95 | 90 | 83 | 77 | 72 | 70 | 68 | 64 | |
| | 10 | 108 | 108 | 105 | 101 | 98 | 95 | 90 | 83 | 77 | 72 | 70 | 68 | 64 | |
| | 20 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 83 | 77 | 72 | 70 | 68 | 64 | |
| | 30 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 83 | 77 | 72 | 70 | 68 | 64 | |
| | 40 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 72 | 70 | 68 | 64 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 68 | 64 |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | |
| Zone 2 | 0 | 94 | 86 | 81 | 77 | 74 | 71 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 10 | 94 | 86 | 81 | 77 | 74 | 71 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 20 | 88 | 86 | 81 | 77 | 74 | 71 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 30 | 86 | 86 | 81 | 77 | 74 | 71 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 40 | 76 | 76 | 76 | 76 | 74 | 71 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 50 | 69 | 69 | 69 | 69 | 69 | 69 | 65 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 60 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 60 | 56 | 53 | 51 | 50 | 47 | |
| | 70 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 56 | 53 | 51 | 50 | 47 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 53 | 51 | 50 | 47 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | 47 | | |
| Zone 3 | 0 | 74 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 10 | 74 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 20 | 74 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 30 | 74 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 40 | 74 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 50 | 69 | 66 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 60 | 63 | 63 | 63 | 61 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 70 | 59 | 59 | 59 | 59 | 58 | 56 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| | 80 | 55 | 55 | 55 | 55 | 55 | 55 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | |
| 90 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 48 | 45 | 42 | 41 | 40 | 38 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 31 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | Panel Orientation: Landscape | | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 118 | 118 | 118 | 118 | 118 | 118 | 113 | 107 | 102 | 98 | 96 | 94 | 90 |
| | 10 | 97 | 97 | 97 | 97 | 97 | 96 | 95 | 93 | 91 | 89 | 88 | 87 | 85 |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 74 | 73 | 72 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 74 | 73 | 72 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 2 | 0 | 117 | 108 | 105 | 101 | 98 | 95 | 90 | 83 | 77 | 72 | 70 | 67 | 64 |
| | 10 | 97 | 97 | 97 | 97 | 97 | 95 | 90 | 83 | 77 | 72 | 70 | 67 | 64 |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 70 | 67 | 64 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 72 | 70 | 67 | 64 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 64 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 3 | 0 | 98 | 91 | 88 | 84 | 80 | 77 | 70 | 65 | 61 | 57 | 55 | 54 | 51 |
| | 10 | 97 | 91 | 88 | 84 | 80 | 77 | 70 | 65 | 61 | 57 | 55 | 54 | 51 |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 70 | 65 | 61 | 57 | 55 | 54 | 51 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 70 | 65 | 61 | 57 | 55 | 54 | 51 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 65 | 61 | 57 | 55 | 54 | 51 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | 55 | 54 | 51 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 54 | 51 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 32 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 118 | 118 | 116 | 112 | 109 | 105 | 100 | 95 | 90 | 85 | 82 | 79 | 75 | |
| | 10 | 97 | 96 | 95 | 94 | 93 | 92 | 90 | 88 | 85 | 83 | 82 | 79 | 75 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 73 | 72 | 71 | 70 | 69 | 68 |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 73 | 72 | 71 | 70 | 69 | 68 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 | 65 | 64 | 64 | 63 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 60 | 60 | 59 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 2 | 0 | 102 | 95 | 92 | 89 | 85 | 81 | 74 | 68 | 64 | 60 | 58 | 56 | 53 | |
| | 10 | 97 | 95 | 92 | 89 | 85 | 81 | 74 | 68 | 64 | 60 | 58 | 56 | 53 | |
| | 20 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 68 | 64 | 60 | 58 | 56 | 53 | |
| | 30 | 76 | 76 | 76 | 76 | 76 | 76 | 74 | 68 | 64 | 60 | 58 | 56 | 53 | |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 64 | 60 | 58 | 56 | 53 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 58 | 56 | 53 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 53 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 3 | 0 | 85 | 76 | 73 | 69 | 66 | 64 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 10 | 85 | 76 | 73 | 69 | 66 | 64 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 20 | 76 | 76 | 73 | 69 | 66 | 64 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 30 | 76 | 76 | 73 | 69 | 66 | 64 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 40 | 67 | 67 | 67 | 67 | 66 | 64 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 59 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 51 | 48 | 47 | 45 | 43 | |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 48 | 47 | 45 | 43 | |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 48 | 47 | 45 | 43 | |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 45 | 43 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 33 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Landscape | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 118 | 112 | 108 | 105 | 102 | 99 | 93 | 89 | 83 | 77 | 75 | 72 | 68 |
| | 10 | 97 | 94 | 93 | 92 | 91 | 90 | 87 | 85 | 82 | 77 | 75 | 72 | 68 |
| | 20 | 76 | 76 | 76 | 76 | 75 | 74 | 73 | 72 | 70 | 69 | 68 | 67 | 66 |
| | 30 | 76 | 76 | 76 | 76 | 75 | 74 | 73 | 72 | 70 | 69 | 68 | 67 | 66 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 66 | 65 | 63 | 63 | 62 | 61 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 59 | 58 | 57 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 55 | 54 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 51 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 2 | 0 | 96 | 89 | 84 | 80 | 77 | 73 | 67 | 63 | 58 | 55 | 53 | 52 | 49 |
| | 10 | 96 | 89 | 84 | 80 | 77 | 73 | 67 | 63 | 58 | 55 | 53 | 52 | 49 |
| | 20 | 76 | 76 | 76 | 76 | 75 | 73 | 67 | 63 | 58 | 55 | 53 | 52 | 49 |
| | 30 | 76 | 76 | 76 | 76 | 75 | 73 | 67 | 63 | 58 | 55 | 53 | 52 | 49 |
| | 40 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 63 | 58 | 55 | 53 | 52 | 49 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 58 | 55 | 53 | 52 | 49 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 55 | 53 | 52 | 49 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 49 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | |
| Zone 3 | 0 | 77 | 69 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 10 | 77 | 69 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 20 | 76 | 69 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 30 | 76 | 69 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 40 | 67 | 67 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 50 | 61 | 61 | 61 | 61 | 61 | 58 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 60 | 56 | 56 | 56 | 56 | 56 | 56 | 54 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 70 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 | 47 | 44 | 43 | 41 | 39 |
| | 80 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 47 | 44 | 43 | 41 | 39 |
| 90 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 44 | 43 | 41 | 39 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 34 | | Mean Roof Height: | $15 < h \leq 30$ ft | | | | | | | | | | Panel Orientation: | Landscape | | |
|----------------------|------------------------------|--------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|----|--|
| | | Roof Angle: | $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |
| Zone 2 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |
| Zone 3 | 0 | 118 | 114 | 111 | 108 | 105 | 103 | 97 | 93 | 88 | 84 | 82 | 80 | 77 | | |
| | 10 | 106 | 102 | 101 | 99 | 97 | 96 | 93 | 89 | 86 | 84 | 82 | 80 | 77 | | |
| | 20 | 92 | 89 | 88 | 87 | 86 | 85 | 83 | 80 | 78 | 76 | 75 | 74 | 72 | | |
| | 30 | 81 | 80 | 79 | 79 | 78 | 77 | 75 | 73 | 72 | 70 | 69 | 68 | 67 | | |
| | 40 | 72 | 72 | 72 | 72 | 72 | 71 | 70 | 68 | 67 | 65 | 65 | 64 | 63 | | |
| | 50 | 66 | 66 | 66 | 66 | 66 | 66 | 65 | 64 | 63 | 62 | 61 | 60 | 59 | | |
| | 60 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 59 | 58 | 58 | 57 | 56 | | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 55 | 54 | | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 52 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 35 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Landscape | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 109 | 103 | 99 | 96 | 94 | 91 | 86 | 81 | 77 | 73 | 72 | 70 | 67 | |
| | 10 | 100 | 96 | 94 | 92 | 90 | 88 | 85 | 81 | 77 | 73 | 72 | 70 | 67 | |
| | 20 | 87 | 85 | 83 | 82 | 81 | 79 | 77 | 74 | 72 | 69 | 68 | 67 | 65 | |
| | 30 | 79 | 77 | 76 | 75 | 74 | 73 | 71 | 69 | 67 | 65 | 64 | 63 | 61 | |
| | 40 | 72 | 71 | 70 | 69 | 68 | 68 | 66 | 64 | 63 | 61 | 60 | 60 | 58 | |
| | 50 | 66 | 66 | 65 | 65 | 64 | 63 | 62 | 61 | 59 | 58 | 57 | 57 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 58 | 56 | 55 | 55 | 54 | 53 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 53 | 52 | 52 | 51 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | 49 | 48 | 48 | 47 |
| Zone 2 | 0 | 109 | 103 | 99 | 96 | 94 | 91 | 86 | 81 | 77 | 73 | 71 | 68 | 65 | |
| | 10 | 100 | 96 | 94 | 92 | 90 | 88 | 85 | 81 | 77 | 73 | 71 | 68 | 65 | |
| | 20 | 87 | 85 | 83 | 82 | 81 | 79 | 77 | 74 | 72 | 69 | 68 | 67 | 65 | |
| | 30 | 79 | 77 | 76 | 75 | 74 | 73 | 71 | 69 | 67 | 65 | 64 | 63 | 61 | |
| | 40 | 72 | 71 | 70 | 69 | 68 | 68 | 66 | 64 | 63 | 61 | 60 | 60 | 58 | |
| | 50 | 66 | 66 | 65 | 65 | 64 | 63 | 62 | 61 | 59 | 58 | 57 | 57 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 58 | 56 | 55 | 55 | 54 | 53 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 53 | 52 | 52 | 51 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | 49 | 48 | 48 | 47 |
| Zone 3 | 0 | 109 | 103 | 99 | 96 | 94 | 91 | 86 | 81 | 77 | 73 | 71 | 68 | 65 | |
| | 10 | 100 | 96 | 94 | 92 | 90 | 88 | 85 | 81 | 77 | 73 | 71 | 68 | 65 | |
| | 20 | 87 | 85 | 83 | 82 | 81 | 79 | 77 | 74 | 72 | 69 | 68 | 67 | 65 | |
| | 30 | 79 | 77 | 76 | 75 | 74 | 73 | 71 | 69 | 67 | 65 | 64 | 63 | 61 | |
| | 40 | 72 | 71 | 70 | 69 | 68 | 68 | 66 | 64 | 63 | 61 | 60 | 60 | 58 | |
| | 50 | 66 | 66 | 65 | 65 | 64 | 63 | 62 | 61 | 59 | 58 | 57 | 57 | 55 | |
| | 60 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 58 | 56 | 55 | 55 | 54 | 53 | |
| | 70 | 57 | 57 | 57 | 57 | 57 | 57 | 56 | 55 | 54 | 53 | 52 | 52 | 51 | |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 50 | 49 | |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 50 | 49 | 48 | 48 | 47 |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 36 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | Panel Orientation: Landscape | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|------------------------------|-----|-----|-----|-----|-----|-----|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 103 | 97 | 94 | 91 | 88 | 85 | 80 | 76 | 72 | 68 | 67 | 65 | 62 |
| | 10 | 96 | 92 | 90 | 88 | 86 | 84 | 80 | 76 | 72 | 68 | 67 | 65 | 62 |
| | 20 | 85 | 82 | 81 | 79 | 78 | 76 | 74 | 71 | 69 | 66 | 65 | 64 | 62 |
| | 30 | 77 | 75 | 74 | 73 | 72 | 71 | 68 | 66 | 64 | 62 | 61 | 60 | 58 |
| | 40 | 71 | 69 | 68 | 68 | 67 | 66 | 64 | 62 | 60 | 59 | 58 | 57 | 55 |
| | 50 | 66 | 65 | 64 | 63 | 63 | 62 | 60 | 59 | 57 | 56 | 55 | 54 | 53 |
| | 60 | 61 | 61 | 60 | 60 | 59 | 59 | 57 | 56 | 55 | 53 | 53 | 52 | 51 |
| | 70 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 52 | 51 | 51 | 50 | 49 |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 49 | 49 | 48 | 47 |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | 47 | 47 | 46 |
| Zone 2 | 0 | 103 | 97 | 94 | 91 | 88 | 85 | 80 | 76 | 71 | 66 | 64 | 63 | 59 |
| | 10 | 96 | 92 | 90 | 88 | 86 | 84 | 80 | 76 | 71 | 66 | 64 | 63 | 59 |
| | 20 | 85 | 82 | 81 | 79 | 78 | 76 | 74 | 71 | 69 | 66 | 64 | 63 | 59 |
| | 30 | 77 | 75 | 74 | 73 | 72 | 71 | 68 | 66 | 64 | 62 | 61 | 60 | 58 |
| | 40 | 71 | 69 | 68 | 68 | 67 | 66 | 64 | 62 | 60 | 59 | 58 | 57 | 55 |
| | 50 | 66 | 65 | 64 | 63 | 63 | 62 | 60 | 59 | 57 | 56 | 55 | 54 | 53 |
| | 60 | 61 | 61 | 60 | 60 | 59 | 59 | 57 | 56 | 55 | 53 | 53 | 52 | 51 |
| | 70 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 52 | 51 | 51 | 50 | 49 |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 49 | 49 | 48 | 47 |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | 47 | 47 | 46 |
| Zone 3 | 0 | 103 | 97 | 94 | 91 | 88 | 85 | 80 | 76 | 71 | 66 | 64 | 63 | 59 |
| | 10 | 96 | 92 | 90 | 88 | 86 | 84 | 80 | 76 | 71 | 66 | 64 | 63 | 59 |
| | 20 | 85 | 82 | 81 | 79 | 78 | 76 | 74 | 71 | 69 | 66 | 64 | 63 | 59 |
| | 30 | 77 | 75 | 74 | 73 | 72 | 71 | 68 | 66 | 64 | 62 | 61 | 60 | 58 |
| | 40 | 71 | 69 | 68 | 68 | 67 | 66 | 64 | 62 | 60 | 59 | 58 | 57 | 55 |
| | 50 | 66 | 65 | 64 | 63 | 63 | 62 | 60 | 59 | 57 | 56 | 55 | 54 | 53 |
| | 60 | 61 | 61 | 60 | 60 | 59 | 59 | 57 | 56 | 55 | 53 | 53 | 52 | 51 |
| | 70 | 57 | 57 | 57 | 57 | 56 | 56 | 55 | 54 | 52 | 51 | 51 | 50 | 49 |
| | 80 | 53 | 53 | 53 | 53 | 53 | 53 | 52 | 51 | 50 | 49 | 49 | 48 | 47 |
| | 90 | 51 | 51 | 51 | 51 | 51 | 51 | 50 | 49 | 49 | 48 | 47 | 47 | 46 |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

Max Rail Spans for SunModo SMR100 System

| Table 37 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Landscape | | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----------|--|--|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 94 | 94 | 94 | 94 | 94 | 93 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | | |
| | 10 | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 74 | 69 | 67 | 65 | 61 | | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 61 | | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | | |
| Zone 2 | 0 | 94 | 88 | 83 | 78 | 74 | 71 | 65 | 59 | 55 | 51 | 49 | 48 | 45 | | |
| | 10 | 79 | 79 | 79 | 78 | 74 | 71 | 65 | 59 | 55 | 51 | 49 | 48 | 45 | | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 59 | 55 | 51 | 49 | 48 | 45 | | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 59 | 55 | 51 | 49 | 48 | 45 | | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 49 | 48 | 45 | | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 48 | 45 | | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | | |
| Zone 3 | 0 | 79 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 10 | 79 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 20 | 63 | 63 | 63 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 30 | 61 | 61 | 61 | 61 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 47 | 43 | 40 | 38 | 37 | 35 | | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 43 | 40 | 38 | 37 | 35 | | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 40 | 38 | 37 | 35 | | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 37 | 35 | | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 | | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 38 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Portrait |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | 0 | 94 | 94 | 94 | 92 | 88 | 84 | 77 | 71 | 66 | 62 | 60 | 58 | 55 |
| | 10 | 79 | 79 | 79 | 79 | 79 | 79 | 77 | 71 | 66 | 62 | 60 | 58 | 55 |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 60 | 58 | 55 |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 58 | 55 |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 2 | 0 | 88 | 77 | 73 | 69 | 66 | 63 | 57 | 53 | 49 | 46 | 44 | 43 | 40 |
| | 10 | 79 | 77 | 73 | 69 | 66 | 63 | 57 | 53 | 49 | 46 | 44 | 43 | 40 |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 57 | 53 | 49 | 46 | 44 | 43 | 40 |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | 53 | 49 | 46 | 44 | 43 | 40 |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 46 | 44 | 43 | 40 |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 46 | 44 | 43 | 40 |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 43 | 40 |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 40 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 3 | 0 | 69 | 61 | 58 | 55 | 52 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 10 | 69 | 61 | 58 | 55 | 52 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 20 | 63 | 61 | 58 | 55 | 52 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 30 | 61 | 61 | 58 | 55 | 52 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 40 | 54 | 54 | 54 | 54 | 52 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 38 | 35 | 34 | 33 | 31 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 35 | 34 | 33 | 31 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 | 34 | 33 | 31 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 39 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | Panel Orientation: | Portrait | |
|----------------------|------------------------------|--------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|--|
| | | Roof Angle: | $0 < \theta \leq 7$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 91 | 87 | 83 | 79 | 75 | 69 | 64 | 59 | 56 | 54 | 52 | 49 | |
| | 10 | 79 | 79 | 79 | 79 | 79 | 75 | 69 | 64 | 59 | 56 | 54 | 52 | 49 | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 59 | 56 | 54 | 52 | 49 | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 59 | 56 | 54 | 52 | 49 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 49 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 77 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 10 | 77 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 20 | 63 | 63 | 63 | 62 | 59 | 56 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 30 | 61 | 61 | 61 | 61 | 59 | 56 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 47 | 44 | 41 | 39 | 38 | 36 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 41 | 39 | 38 | 36 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 39 | 38 | 36 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 36 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | | |
| Zone 3 | 0 | 61 | 54 | 51 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 10 | 61 | 54 | 51 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 20 | 61 | 54 | 51 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 30 | 61 | 54 | 51 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 40 | 54 | 54 | 51 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 50 | 49 | 49 | 49 | 48 | 46 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 44 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 40 | 37 | 34 | 32 | 31 | 30 | 28 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 37 | 34 | 32 | 31 | 30 | 28 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 34 | 32 | 31 | 30 | 28 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 40 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Portrait |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | |
| | | Exposure Category: | B | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 90 | 86 | 80 | 74 | 72 | 69 | 65 |
| | 10 | 71 | 71 | 71 | 71 | 70 | 69 | 68 | 67 | 66 | 64 | 64 | 63 | 62 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 53 | 53 | 52 |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 53 | 53 | 52 |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| Zone 2 | 0 | 94 | 89 | 85 | 80 | 76 | 73 | 66 | 61 | 57 | 53 | 51 | 49 | 46 | |
| | 10 | 71 | 71 | 71 | 71 | 70 | 69 | 66 | 61 | 57 | 53 | 51 | 49 | 46 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 51 | 49 | 46 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 51 | 49 | 46 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| Zone 3 | 0 | 76 | 68 | 64 | 61 | 58 | 56 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 10 | 71 | 68 | 64 | 61 | 58 | 56 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 41 | 40 | 39 | 36 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 36 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 41 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Portrait | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|--|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 94 | 94 | 94 | 93 | 91 | 89 | 83 | 77 | 71 | 66 | 64 | 62 | 58 | | |
| | 10 | 71 | 70 | 70 | 69 | 68 | 68 | 66 | 65 | 63 | 62 | 61 | 61 | 58 | | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 52 | 51 | 50 | | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 52 | 51 | 50 | | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | | |
| Zone 2 | 0 | 89 | 79 | 75 | 71 | 68 | 64 | 59 | 54 | 50 | 47 | 46 | 44 | 41 | | |
| | 10 | 71 | 70 | 70 | 69 | 68 | 64 | 59 | 54 | 50 | 47 | 46 | 44 | 41 | | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 47 | 46 | 44 | 41 | | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 47 | 46 | 44 | 41 | | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 44 | 41 | | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 41 | | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | | |
| Zone 3 | 0 | 68 | 60 | 57 | 55 | 52 | 50 | 46 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 10 | 68 | 60 | 57 | 55 | 52 | 50 | 46 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 20 | 54 | 54 | 54 | 54 | 52 | 50 | 46 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 30 | 54 | 54 | 54 | 54 | 52 | 50 | 46 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 39 | 37 | 36 | 35 | 33 | | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 37 | 36 | 35 | 33 | | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 35 | 33 | | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 33 | | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 42 | | Mean Roof Height: | $h \leq 15$ ft | | | | | | | | | | | Panel Orientation: | Portrait | |
|----------------------|------------------------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------|----|
| | | Roof Angle: | $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: | D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | | |
| Zone 1 | 0 | 94 | 92 | 90 | 88 | 85 | 81 | 74 | 69 | 64 | 59 | 57 | 56 | 52 | | |
| | 10 | 70 | 69 | 68 | 67 | 67 | 66 | 64 | 63 | 61 | 59 | 57 | 56 | 52 | | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 51 | 50 | 50 | 49 | 49 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 51 | 50 | 50 | 49 | 49 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 46 | 46 | 45 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| Zone 2 | 0 | 79 | 70 | 67 | 63 | 60 | 57 | 53 | 49 | 45 | 42 | 41 | 40 | 37 | | |
| | 10 | 70 | 69 | 67 | 63 | 60 | 57 | 53 | 49 | 45 | 42 | 41 | 40 | 37 | | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 45 | 42 | 41 | 40 | 37 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 45 | 42 | 41 | 40 | 37 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 45 | 42 | 41 | 40 | 37 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 37 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 37 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| Zone 3 | 0 | 60 | 54 | 51 | 49 | 47 | 45 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 10 | 60 | 54 | 51 | 49 | 47 | 45 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 20 | 54 | 54 | 51 | 49 | 47 | 45 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 30 | 54 | 54 | 51 | 49 | 47 | 45 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 40 | 48 | 48 | 48 | 48 | 47 | 45 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 41 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 38 | 36 | 33 | 32 | 31 | 30 | | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 33 | 32 | 31 | 30 | | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 33 | 32 | 31 | 30 | | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 32 | 31 | 30 | | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 43 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |
| Zone 2 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |
| Zone 3 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 44 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 82 | 77 | 75 | 73 | 71 | 69 | 65 | 62 | 59 | 56 | 55 | 53 | 51 | |
| | 10 | 73 | 71 | 69 | 68 | 67 | 66 | 63 | 61 | 59 | 56 | 55 | 53 | 51 | |
| | 20 | 64 | 62 | 61 | 60 | 59 | 59 | 57 | 55 | 53 | 52 | 51 | 50 | 49 | |
| | 30 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 47 | 47 | 46 | |
| | 40 | 52 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 39 | 38 | 38 | 37 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | |
| Zone 2 | 0 | 82 | 77 | 75 | 73 | 71 | 69 | 65 | 62 | 59 | 56 | 55 | 53 | 51 | |
| | 10 | 73 | 71 | 69 | 68 | 67 | 66 | 63 | 61 | 59 | 56 | 55 | 53 | 51 | |
| | 20 | 64 | 62 | 61 | 60 | 59 | 59 | 57 | 55 | 53 | 52 | 51 | 50 | 49 | |
| | 30 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 47 | 47 | 46 | |
| | 40 | 52 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 39 | 38 | 38 | 37 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | |
| Zone 3 | 0 | 82 | 77 | 75 | 73 | 71 | 69 | 65 | 62 | 59 | 56 | 55 | 53 | 51 | |
| | 10 | 73 | 71 | 69 | 68 | 67 | 66 | 63 | 61 | 59 | 56 | 55 | 53 | 51 | |
| | 20 | 64 | 62 | 61 | 60 | 59 | 59 | 57 | 55 | 53 | 52 | 51 | 50 | 49 | |
| | 30 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 49 | 48 | 47 | 47 | 46 | |
| | 40 | 52 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 45 | 44 | 43 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 40 | 40 | 39 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 39 | 38 | 38 | 37 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 45 | | Mean Roof Height: $h \leq 15$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 77 | 72 | 70 | 68 | 66 | 64 | 61 | 57 | 54 | 52 | 50 | 49 | 47 | |
| | 10 | 71 | 68 | 66 | 65 | 64 | 62 | 60 | 57 | 54 | 52 | 50 | 49 | 47 | |
| | 20 | 62 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 49 | 48 | 47 | 46 | |
| | 30 | 56 | 55 | 54 | 53 | 52 | 52 | 50 | 49 | 47 | 46 | 45 | 45 | 43 | |
| | 40 | 51 | 50 | 50 | 49 | 49 | 48 | 47 | 46 | 44 | 43 | 43 | 42 | 41 | |
| | 50 | 47 | 47 | 46 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 39 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 38 | 37 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 37 | 36 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | 35 | 35 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | |
| Zone 2 | 0 | 77 | 72 | 70 | 68 | 66 | 64 | 61 | 57 | 54 | 51 | 50 | 48 | 45 | |
| | 10 | 71 | 68 | 66 | 65 | 64 | 62 | 60 | 57 | 54 | 51 | 50 | 48 | 45 | |
| | 20 | 62 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 49 | 48 | 47 | 45 | |
| | 30 | 56 | 55 | 54 | 53 | 52 | 52 | 50 | 49 | 47 | 46 | 45 | 45 | 43 | |
| | 40 | 51 | 50 | 50 | 49 | 49 | 48 | 47 | 46 | 44 | 43 | 43 | 42 | 41 | |
| | 50 | 47 | 47 | 46 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 39 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 38 | 37 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 37 | 36 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | 35 | 35 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | |
| Zone 3 | 0 | 77 | 72 | 70 | 68 | 66 | 64 | 61 | 57 | 54 | 51 | 50 | 48 | 45 | |
| | 10 | 71 | 68 | 66 | 65 | 64 | 62 | 60 | 57 | 54 | 51 | 50 | 48 | 45 | |
| | 20 | 62 | 60 | 59 | 58 | 57 | 56 | 54 | 53 | 51 | 49 | 48 | 47 | 45 | |
| | 30 | 56 | 55 | 54 | 53 | 52 | 52 | 50 | 49 | 47 | 46 | 45 | 45 | 43 | |
| | 40 | 51 | 50 | 50 | 49 | 49 | 48 | 47 | 46 | 44 | 43 | 43 | 42 | 41 | |
| | 50 | 47 | 47 | 46 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 39 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 38 | 37 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 37 | 36 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | 35 | 35 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 46 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 94 | 94 | 94 | 94 | 93 | 87 | 80 | 74 | 69 | 67 | 65 | 61 | |
| | 10 | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 79 | 74 | 69 | 67 | 65 | 61 | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 61 | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 94 | 88 | 83 | 78 | 74 | 71 | 65 | 59 | 55 | 51 | 49 | 48 | 45 | |
| | 10 | 79 | 79 | 79 | 78 | 74 | 71 | 65 | 59 | 55 | 51 | 49 | 48 | 45 | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 59 | 55 | 51 | 49 | 48 | 45 | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 59 | 55 | 51 | 49 | 48 | 45 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 49 | 48 | 45 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 48 | 45 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 3 | 0 | 79 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 10 | 79 | 69 | 65 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 20 | 63 | 63 | 63 | 62 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 30 | 61 | 61 | 61 | 61 | 59 | 56 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 47 | 43 | 40 | 38 | 37 | 35 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 43 | 40 | 38 | 37 | 35 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 40 | 38 | 37 | 35 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 37 | 35 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 47 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 93 | 90 | 85 | 81 | 77 | 71 | 66 | 61 | 57 | 55 | 54 | 51 | |
| | 10 | 79 | 79 | 79 | 79 | 79 | 77 | 71 | 66 | 61 | 57 | 55 | 54 | 51 | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 61 | 57 | 55 | 54 | 51 | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 57 | 55 | 54 | 51 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 2 | 0 | 80 | 71 | 67 | 63 | 60 | 58 | 53 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 10 | 79 | 71 | 67 | 63 | 60 | 58 | 53 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 20 | 63 | 63 | 63 | 63 | 60 | 58 | 53 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 30 | 61 | 61 | 61 | 61 | 60 | 58 | 53 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 45 | 42 | 41 | 39 | 37 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 42 | 41 | 39 | 37 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 39 | 37 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 37 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Zone 3 | 0 | 63 | 56 | 53 | 50 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 10 | 63 | 56 | 53 | 50 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 20 | 63 | 56 | 53 | 50 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 30 | 61 | 56 | 53 | 50 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 40 | 54 | 54 | 53 | 50 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 50 | 49 | 49 | 49 | 49 | 47 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 38 | 35 | 33 | 32 | 31 | 29 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 35 | 33 | 32 | 31 | 29 |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 | 33 | 32 | 31 | 29 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 48 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | Panel Orientation: Portrait | | | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $0 < \theta \leq 7$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 85 | 81 | 77 | 73 | 70 | 65 | 60 | 56 | 52 | 50 | 49 | 46 | |
| | 10 | 79 | 79 | 79 | 77 | 73 | 70 | 65 | 60 | 56 | 52 | 50 | 49 | 46 | |
| | 20 | 63 | 63 | 63 | 63 | 63 | 63 | 62 | 60 | 56 | 52 | 50 | 49 | 46 | |
| | 30 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 56 | 52 | 50 | 49 | 46 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 52 | 50 | 49 | 46 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 46 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | | |
| Zone 2 | 0 | 72 | 64 | 60 | 57 | 55 | 52 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 10 | 72 | 64 | 60 | 57 | 55 | 52 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 20 | 63 | 63 | 60 | 57 | 55 | 52 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 30 | 61 | 61 | 60 | 57 | 55 | 52 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 40 | 54 | 54 | 54 | 54 | 54 | 52 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 48 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 60 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 44 | 41 | 38 | 37 | 36 | 34 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 38 | 37 | 36 | 34 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 38 | 37 | 36 | 34 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 34 | | |
| Zone 3 | 0 | 56 | 50 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 10 | 56 | 50 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 20 | 56 | 50 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 30 | 56 | 50 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 40 | 54 | 50 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 50 | 49 | 49 | 47 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 60 | 45 | 45 | 45 | 45 | 43 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 70 | 42 | 42 | 42 | 42 | 42 | 41 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| | 80 | 39 | 39 | 39 | 39 | 39 | 39 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | |
| 90 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 34 | 32 | 30 | 29 | 28 | 27 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 49 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | Exposure Category: B | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 94 | 94 | 94 | 94 | 94 | 90 | 86 | 80 | 74 | 72 | 69 | 65 | |
| | 10 | 71 | 71 | 71 | 71 | 70 | 69 | 68 | 67 | 66 | 64 | 64 | 63 | 62 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 53 | 53 | 52 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 53 | 53 | 52 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| Zone 2 | 0 | 94 | 89 | 85 | 80 | 76 | 73 | 66 | 61 | 57 | 53 | 51 | 49 | 46 | |
| | 10 | 71 | 71 | 71 | 71 | 70 | 69 | 66 | 61 | 57 | 53 | 51 | 49 | 46 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 51 | 49 | 46 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 51 | 49 | 46 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| Zone 3 | 0 | 76 | 68 | 64 | 61 | 58 | 56 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 10 | 71 | 68 | 64 | 61 | 58 | 56 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 51 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 44 | 41 | 40 | 39 | 36 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 41 | 40 | 39 | 36 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 36 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 50 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: C | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 94 | 91 | 89 | 87 | 84 | 77 | 71 | 65 | 61 | 59 | 57 | 54 | |
| | 10 | 71 | 69 | 69 | 68 | 67 | 66 | 65 | 63 | 62 | 60 | 59 | 57 | 54 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 51 | 50 | 50 | 49 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 51 | 50 | 50 | 49 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 46 | 45 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| Zone 2 | 0 | 82 | 72 | 69 | 65 | 62 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 10 | 71 | 69 | 69 | 65 | 62 | 59 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 50 | 46 | 43 | 42 | 41 | 38 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 46 | 43 | 42 | 41 | 38 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 38 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 38 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| Zone 3 | 0 | 62 | 56 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 10 | 62 | 56 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 20 | 54 | 54 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 30 | 54 | 54 | 53 | 50 | 48 | 46 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 46 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 37 | 34 | 33 | 32 | 30 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 34 | 33 | 32 | 30 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 34 | 33 | 32 | 30 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 32 | 30 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 51 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|--|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $7 < \theta \leq 27$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: D | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 94 | 89 | 87 | 83 | 79 | 76 | 69 | 64 | 59 | 56 | 54 | 52 | 49 | |
| | 10 | 70 | 68 | 67 | 66 | 65 | 65 | 63 | 61 | 59 | 56 | 54 | 52 | 49 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 50 | 49 | 49 | 48 | 47 |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 52 | 50 | 49 | 49 | 48 | 47 |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 47 | 46 | 46 | 45 | 45 | 44 |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 39 |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| Zone 2 | 0 | 73 | 65 | 62 | 59 | 56 | 54 | 49 | 45 | 42 | 39 | 38 | 37 | 35 | |
| | 10 | 70 | 65 | 62 | 59 | 56 | 54 | 49 | 45 | 42 | 39 | 38 | 37 | 35 | |
| | 20 | 54 | 54 | 54 | 54 | 54 | 54 | 49 | 45 | 42 | 39 | 38 | 37 | 35 | |
| | 30 | 54 | 54 | 54 | 54 | 54 | 54 | 49 | 45 | 42 | 39 | 38 | 37 | 35 | |
| | 40 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 45 | 42 | 39 | 38 | 37 | 35 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 39 | 38 | 37 | 35 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 38 | 37 | 35 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 35 |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| Zone 3 | 0 | 56 | 51 | 48 | 46 | 44 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 10 | 56 | 51 | 48 | 46 | 44 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 20 | 54 | 51 | 48 | 46 | 44 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 30 | 54 | 51 | 48 | 46 | 44 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 40 | 48 | 48 | 48 | 46 | 44 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 50 | 43 | 43 | 43 | 43 | 43 | 42 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 60 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 70 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 36 | 33 | 31 | 30 | 29 | 28 | |
| | 80 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 33 | 31 | 30 | 29 | 28 | |
| 90 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 31 | 30 | 29 | 28 | | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 52 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|----------------------|------------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|----|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | | | | | | | |
| | | Exposure Category: B | | | | | | | | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |
| Zone 2 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |
| Zone 3 | 0 | 86 | 82 | 80 | 78 | 76 | 74 | 70 | 67 | 63 | 61 | 59 | 58 | 55 | |
| | 10 | 76 | 73 | 72 | 71 | 70 | 69 | 66 | 64 | 62 | 60 | 59 | 58 | 55 | |
| | 20 | 65 | 64 | 63 | 62 | 62 | 61 | 59 | 58 | 56 | 54 | 54 | 53 | 51 | |
| | 30 | 58 | 57 | 57 | 56 | 56 | 55 | 54 | 53 | 51 | 50 | 50 | 49 | 48 | |
| | 40 | 52 | 52 | 52 | 52 | 51 | 51 | 50 | 49 | 48 | 47 | 46 | 46 | 45 | |
| | 50 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 44 | 43 | 42 | |
| | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | |
| | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 38 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Roof Wind Zone | | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | |
|----------------|--|------------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 |
| Zone 1 | | 0 | 78 | 74 | 71 | 69 | 67 | 65 | 62 | 58 | 55 | 53 | 51 | 50 | 48 |
| | | 10 | 71 | 69 | 67 | 66 | 65 | 63 | 61 | 58 | 55 | 53 | 51 | 50 | 48 |
| | | 20 | 63 | 61 | 60 | 59 | 58 | 57 | 55 | 53 | 52 | 50 | 49 | 48 | 47 |
| | | 30 | 56 | 55 | 54 | 54 | 53 | 52 | 51 | 49 | 48 | 46 | 46 | 45 | 44 |
| | | 40 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 43 | 42 |
| | | 50 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 |
| | | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 39 | 38 |
| | | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 38 | 38 | 37 | 37 | 36 |
| | | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 36 | 36 | 36 | 35 |
| | | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| Zone 2 | | 0 | 78 | 74 | 71 | 69 | 67 | 65 | 62 | 58 | 55 | 53 | 51 | 50 | 47 |
| | | 10 | 71 | 69 | 67 | 66 | 65 | 63 | 61 | 58 | 55 | 53 | 51 | 50 | 47 |
| | | 20 | 63 | 61 | 60 | 59 | 58 | 57 | 55 | 53 | 52 | 50 | 49 | 48 | 47 |
| | | 30 | 56 | 55 | 54 | 54 | 53 | 52 | 51 | 49 | 48 | 46 | 46 | 45 | 44 |
| | | 40 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 43 | 42 |
| | | 50 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 |
| | | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 39 | 38 |
| | | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 38 | 38 | 37 | 37 | 36 |
| | | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 36 | 36 | 36 | 35 |
| | | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| Zone 3 | | 0 | 78 | 74 | 71 | 69 | 67 | 65 | 62 | 58 | 55 | 53 | 51 | 50 | 47 |
| | | 10 | 71 | 69 | 67 | 66 | 65 | 63 | 61 | 58 | 55 | 53 | 51 | 50 | 47 |
| | | 20 | 63 | 61 | 60 | 59 | 58 | 57 | 55 | 53 | 52 | 50 | 49 | 48 | 47 |
| | | 30 | 56 | 55 | 54 | 54 | 53 | 52 | 51 | 49 | 48 | 46 | 46 | 45 | 44 |
| | | 40 | 52 | 51 | 50 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 43 | 42 |
| | | 50 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 43 | 42 | 41 | 41 | 40 | 40 |
| | | 60 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 41 | 40 | 39 | 39 | 39 | 38 |
| | | 70 | 41 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | 38 | 38 | 37 | 37 | 36 |
| | | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 36 | 36 | 36 | 35 |
| | | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"

Max Rail Spans for SunModo SMR100 System

| Table 54 | | Mean Roof Height: $15 < h \leq 30$ ft | | | | | | | Panel Orientation: Portrait | | | | | | |
|-----------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--|
| | | Roof Angle: $27 < \theta \leq 45$ degrees | | | | | | | Exposure Category: D | | | | | | |
| Roof Wind Zone | Ground Snow Load (psf) | Wind Speed (mph) | | | | | | | | | | | | | |
| | | 100 | 110 | 115 | 120 | 125 | 130 | 140 | 150 | 160 | 170 | 175 | 180 | 190 | |
| Zone 1 | 0 | 74 | 69 | 67 | 65 | 63 | 61 | 58 | 55 | 52 | 49 | 48 | 47 | 44 | |
| | 10 | 69 | 66 | 65 | 63 | 62 | 60 | 58 | 55 | 52 | 49 | 48 | 47 | 44 | |
| | 20 | 61 | 59 | 58 | 57 | 56 | 55 | 53 | 51 | 49 | 47 | 47 | 46 | 44 | |
| | 30 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 47 | 46 | 45 | 44 | 43 | 42 | |
| | 40 | 51 | 50 | 49 | 48 | 48 | 47 | 46 | 45 | 43 | 42 | 41 | 41 | 40 | |
| | 50 | 47 | 46 | 46 | 45 | 45 | 44 | 43 | 42 | 41 | 40 | 40 | 39 | 38 | |
| | 60 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 40 | 39 | 38 | 38 | 37 | 36 | |
| | 70 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 36 | 36 | 35 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 35 | 35 | 35 | 34 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | 33 | |
| Zone 2 | 0 | 74 | 69 | 67 | 65 | 63 | 61 | 58 | 55 | 51 | 48 | 47 | 45 | 42 | |
| | 10 | 69 | 66 | 65 | 63 | 62 | 60 | 58 | 55 | 51 | 48 | 47 | 45 | 42 | |
| | 20 | 61 | 59 | 58 | 57 | 56 | 55 | 53 | 51 | 49 | 47 | 47 | 45 | 42 | |
| | 30 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 47 | 46 | 45 | 44 | 43 | 42 | |
| | 40 | 51 | 50 | 49 | 48 | 48 | 47 | 46 | 45 | 43 | 42 | 41 | 41 | 40 | |
| | 50 | 47 | 46 | 46 | 45 | 45 | 44 | 43 | 42 | 41 | 40 | 40 | 39 | 38 | |
| | 60 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 40 | 39 | 38 | 38 | 37 | 36 | |
| | 70 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 36 | 36 | 35 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 35 | 35 | 35 | 34 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | 33 | |
| Zone 3 | 0 | 74 | 69 | 67 | 65 | 63 | 61 | 58 | 55 | 51 | 48 | 47 | 45 | 42 | |
| | 10 | 69 | 66 | 65 | 63 | 62 | 60 | 58 | 55 | 51 | 48 | 47 | 45 | 42 | |
| | 20 | 61 | 59 | 58 | 57 | 56 | 55 | 53 | 51 | 49 | 47 | 47 | 45 | 42 | |
| | 30 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 47 | 46 | 45 | 44 | 43 | 42 | |
| | 40 | 51 | 50 | 49 | 48 | 48 | 47 | 46 | 45 | 43 | 42 | 41 | 41 | 40 | |
| | 50 | 47 | 46 | 46 | 45 | 45 | 44 | 43 | 42 | 41 | 40 | 40 | 39 | 38 | |
| | 60 | 43 | 43 | 43 | 43 | 42 | 42 | 41 | 40 | 39 | 38 | 38 | 37 | 36 | |
| | 70 | 41 | 41 | 41 | 41 | 40 | 40 | 39 | 38 | 37 | 37 | 36 | 36 | 35 | |
| | 80 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 37 | 36 | 35 | 35 | 35 | 34 | |
| | 90 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | 33 | |

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 82"