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 Arizona 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 Arizona. 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)

- Wind Analysis:
  - Wind Category: B, C, and D
  - Roof Zones 1, 2, and 3
  - Wind Directionality Factor (Kd) = 0.85
  - Topographic Factor (Kzt) = 1
- Snow Analysis:
  - Snow Exposure Factor (Ce) = 1.0
  - Thermal Factor (Ct) = 1.0
  - Slope Factor (Cs) per ASCE 7-10, Figure 7-2a
  - Importance Factor (Is) = 1
- Seismic Analysis:
  - Seismic Design Category E or less (Sds = 2.0 max)
  - Importance Factor (Ip) = 1
  - Amplification Factor (ap) = 1.0 per ICC-AC428
  - Component Response Modification Factor (Rp) = 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,

Peter Martin
Engineer III
pmartin@structuralenginuityinc.com

Allan T. Myket, P.E.
President/Founder
amyket@structuralenginuityinc.com

Structural Enginuity Inc.

Registered Professional Engineer (Structural)
CERTIFICATE NO.
59440
ALLAN T.
MYKET
11/19/2020
Date Signed
ARIZONA U.S.A.

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Max Rail Spans for SunModo SMR100 System

Table 1

Mean Roof Height: h ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Portrait

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"

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Table 2

Mean Roof Height: h ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Portrait

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"

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Table 3

Mean Roof Height: h ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Portrait

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"

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Table 5

Mean Roof Height: h ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Portrait

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	47
	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	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	45
	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	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"

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Table 6

Mean Roof Height: h ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Portrait

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	59	58	57	56	55	54	53
	30	60	60	60	60	60	60	59	58	57	56	55	54	53
	40	53	53	53	53	53	53	53	53	52	51	51	50	49
	50	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	43
	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	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
	90	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"

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Max Rail Spans for SunModo SMR100 System

Table 7

Mean Roof Height: h ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Portrait

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"

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Max Rail Spans for SunModo SMR100 System

Table 8

Mean Roof Height: h ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Portrait

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	43	41
	90	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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Portrait

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	59	58	57	56	55	55	54
	30	60	60	60	60	60	60	59	58	57	56	55	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	47	47	46
	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	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	46	45	42
	60	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
	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	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"

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Max Rail Spans for SunModo SMR100 System

Table 15

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Portrait

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	43	43
	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	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	38
	90	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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Landscape

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"

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Max Rail Spans for SunModo SMR100 System

Table 20

Mean Roof Height: h ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Landscape

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"

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Max Rail Spans for SunModo SMR100 System

Table 21

Mean Roof Height: h ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Landscape

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	68
	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	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	56	55	53	50
	80	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	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 ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Landscape

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"

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Max Rail Spans for SunModo SMR100 System

Table 27

Mean Roof Height: h ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Landscape

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Landscape

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Landscape

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Landscape

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	68	64
	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	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"

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Max Rail Spans for SunModo SMR100 System

Table 31

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Landscape

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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Landscape

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	75	73	72	71	70	69	68
	30	76	76	76	76	76	76	75	73	72	71	70	69	68
	40	67	67	67	67	67	67	67	67	66	65	64	64	63
	50	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	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	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	60	58	56	53
	60	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
	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	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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Landscape

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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Landscape

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 35

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Landscape

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	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	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	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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Landscape

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 ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Portrait

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"

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Max Rail Spans for SunModo SMR100 System

Table 40

Mean Roof Height: h ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Portrait

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 41

Mean Roof Height: h ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Portrait

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	53	52	51	50	50	49	49
	30	54	54	54	54	54	54	53	52	51	50	50	49	49
	40	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	42	42
	60	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
	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	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	53	49	45	42	41	40	37
	30	54	54	54	54	54	54	53	49	45	42	41	40	37
	40	48	48	48	48	48	48	48	48	45	42	41	40	37
	50	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	37
	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	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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Portrait

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	37	37
	90	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	37	37
	90	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	37	37
	90	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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 15 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: B
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: C
Panel Orientation: Portrait

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
	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	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	37
	90	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	38	35	33	32	31	29
	90	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"

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Max Rail Spans for SunModo SMR100 System

Table 48

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 0 < θ ≤ 7 degrees
Exposure Category: D
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: B
Panel Orientation: Portrait

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"

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Max Rail Spans for SunModo SMR100 System

Table 50

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: C
Panel Orientation: Portrait

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 ≤ 30 ft
Roof Angle: 7 < θ ≤ 27 degrees
Exposure Category: D
Panel Orientation: Portrait

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	53	52	50	49	49	48	47
	30	54	54	54	54	54	54	53	52	50	49	49	48	47
	40	48	48	48	48	48	48	48	47	46	46	45	45	44
	50	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	39	39
	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	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	35
	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	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 ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: B
Panel Orientation: Portrait

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	37	37
	90	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	37	37
	90	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	37	37
	90	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"

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Max Rail Spans for SunModo SMR100 System

Table 53

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: C
Panel Orientation: Portrait

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"

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Max Rail Spans for SunModo SMR100 System

Table 54

Mean Roof Height: 15 < h ≤ 30 ft
Roof Angle: 27 < θ ≤ 45 degrees
Exposure Category: D
Panel Orientation: Portrait

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"