SnapNrack
Solar Mounting Solutions

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SnapNrack Series 200 Ground Mount System

COVER LETTER

The loading criteria used in this report is from ASCE 7-10. For codes that reference ASCE 7-05, Appendix A is provided to convert the wind speeds in ASCE 7-05 to the wind speeds used in this report. Instructions for this conversion are provided in Appendix A. This report covers wind speeds (V_{ult}) to 170 MPH and ground snow to 120 PSF.

The following codes are covered in this report:

- IBC 2015
- IBC 2012
- IBC 2009
- IBC 2006

The mounting system structural submittal package shall consist of the following:

- Pages 1 – 18 of the report (this includes this cover letter).
- Only the applicable configuration table from pages 19 – 96.
- Pages C1 – C29.
- Appendix A (if applicable).
- The applicable installation details.

This report provides structural engineering calculations and installation criteria for the mounting system only. It does not certify the capacity of the supporting soil. The soil criteria are based on soil class 4 (IBC Chapter 18). This is the generally accepted code minimum. The capacity of the supporting soil is to be approved by the Authority Having Jurisdiction (AHJ). For unusual soil conditions or where required by the AHJ, a geotechnical investigation shall be performed.

Please contact SnapNrack at (877) 732-2860, or Contact@snapnrack.com, for questions regarding this report.

Norman Scheel, PE, SE
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Structural Report and Calculations

Series 200
Ground Mount

For

SnapNrack
775 Fiero Lane, Suite 200
San Luis Obispo, CA 93401

Prepared By

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July 6, 2016

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Introduction

This summary letter is referencing the Structural Calculation Packet for the SnapNrack Series 200 Mounting System. We performed the calculations in accordance with the International Building Code (IBC) and the ASCE 7-10. The racking system has been designed to withstand code-prescribed forces due to the racking system's own weight, the weight of the solar panels, the snow loads, and both the wind and seismic forces. The limits of the structural design are as listed below.

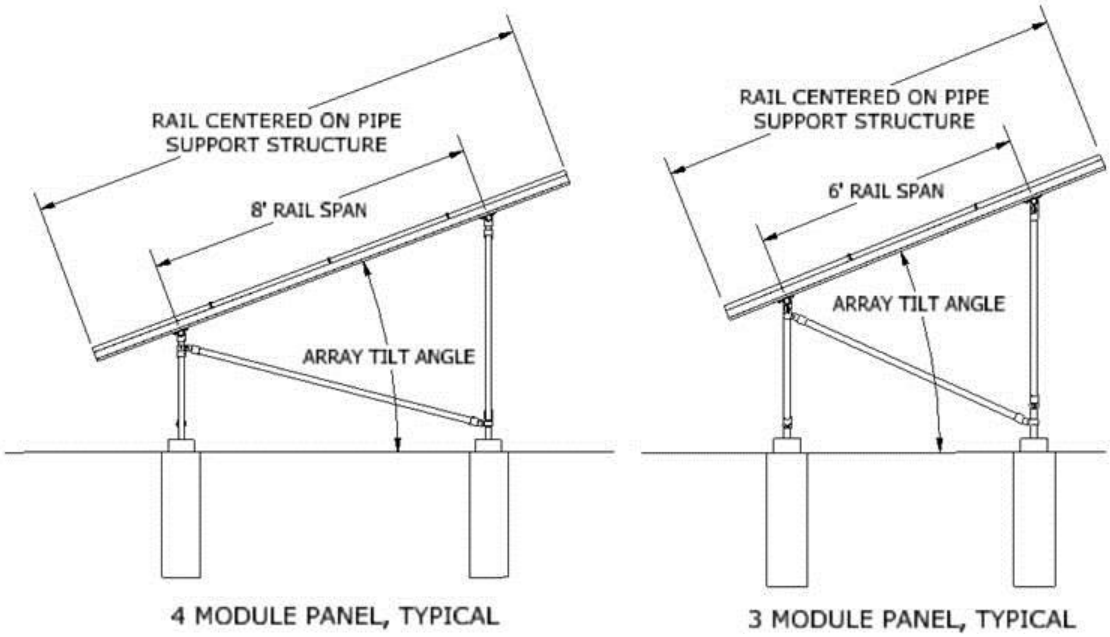
- Wind Speed from 100 mph to 170 mph (Page C3 of calculations)
- Seismic Design Category D (Page C4 of calculations)
- Ground Snow Loads from 0 to 120 psf (Page C5 of calculations)

In our opinion, the racking system, outlined in the SnapNrack Series 200 PV Mounting System Code Compliant Installation Manual, is acceptable and meets the loading requirements stated above.

It should also be noted that the provided summary charts assume the site has a slope less than 15:1 or 15%. For sites with slopes greater than 15%, the listed foundation depths will be required to be increased as per the soils engineer or, if the project does not involve a soils engineer, SnapNrack's drawing S200-D06.

Aluminum Ground Rail Spans

The aluminum ground rails used to connect the PV panels to the racking system should be installed per the dimensions on the following detail for all tilt angles. With these lengths being constant the horizontal span between the footings will be different for every tilt angle. See detail and chart on page C2 for dimensions. The standard installation of the aluminum rail is two rails per row of PV panels. See chart located on page C14 for conditions where three rails per row of PV panels are required. The rails are to be connected to horizontal pipes with SnapNrack pipe clamps on the bottom of the rail and module clamps on the top in order to secure the PV panels.

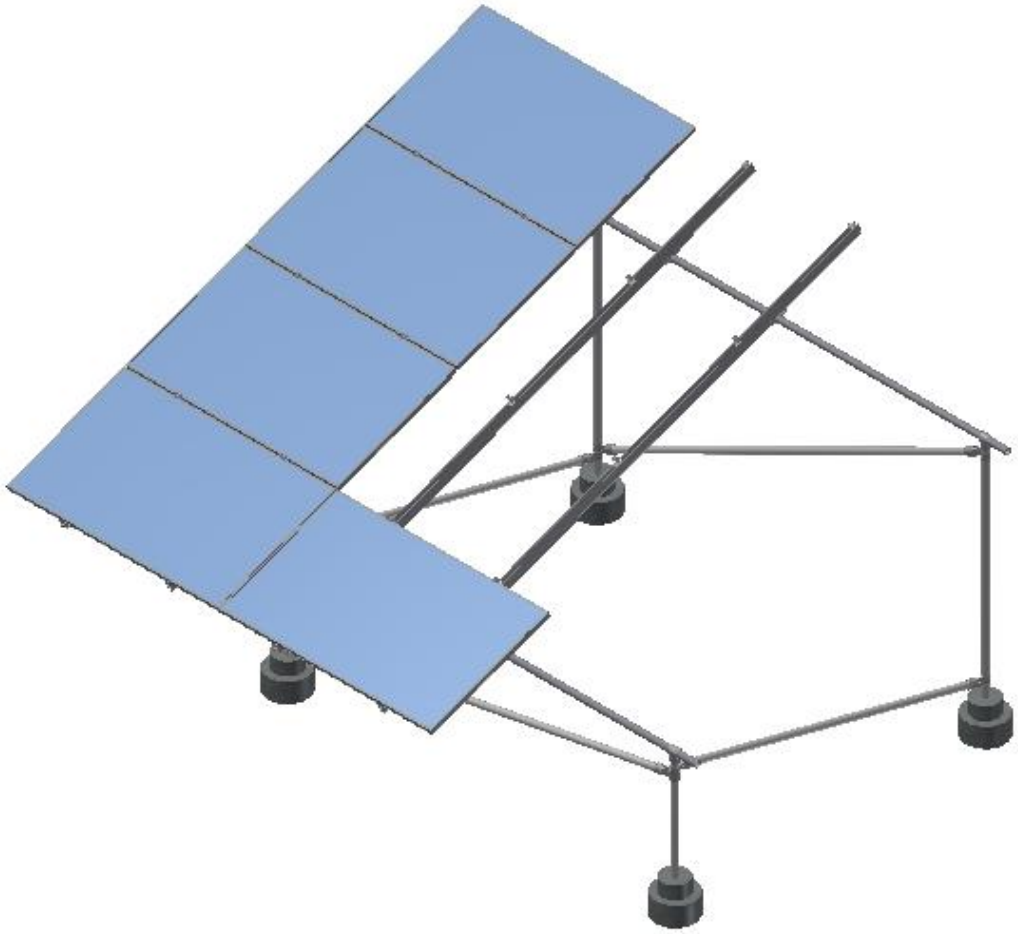


Pipe Rails, Braces, and Vertical Post

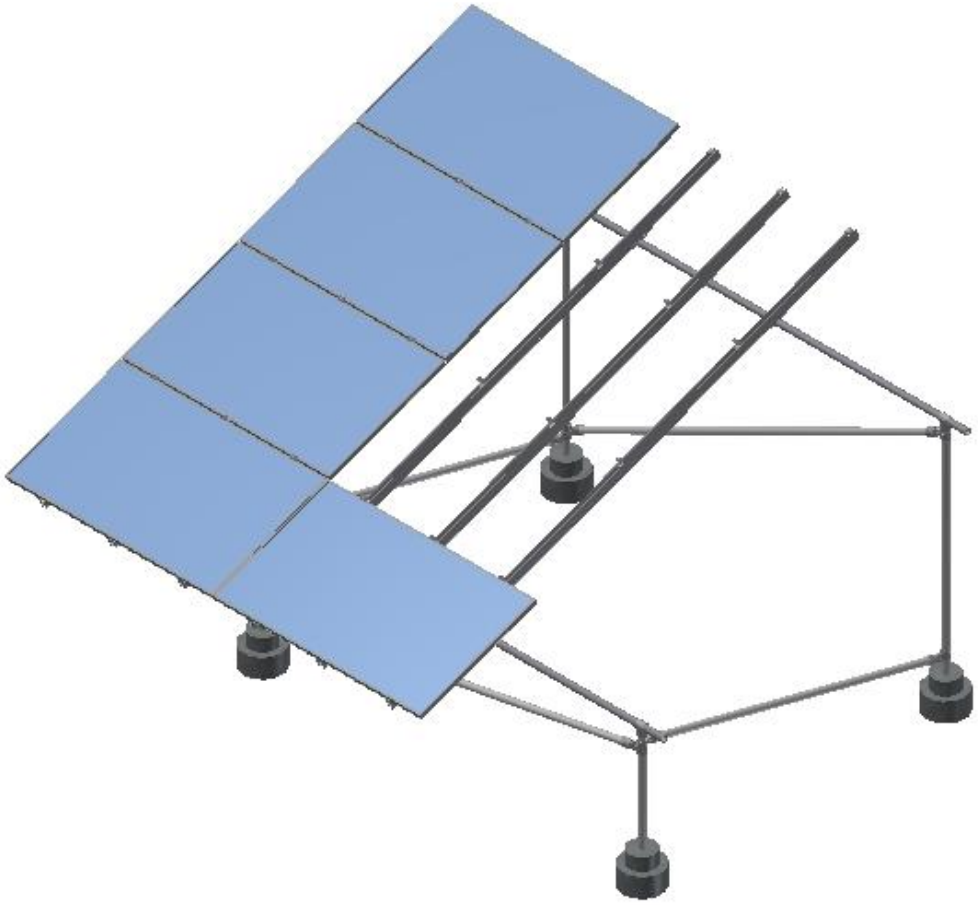
The racking system is composed of either a schedule 40 or a schedule 80 pipe, both of which are 1 ½" in diameter and have a minimum yield strength of 35 ksi. See following details for labels for individual pieces. The 50 ksi Flo-Coat Tube may be used as an alternative for the typical schedule 40 and 80 pipe as listed in these calculations. See manufacturer's specifications for this pipe.

There are two different kinds on installations: standard and braced. Each option comes with a 4 module panel or a 3 module panel choice. Using 2 rails is standard at the more common lower loads, but higher wind and snow loads will require 3 rails per panel. This makes for a total of 8 possible installation configurations.

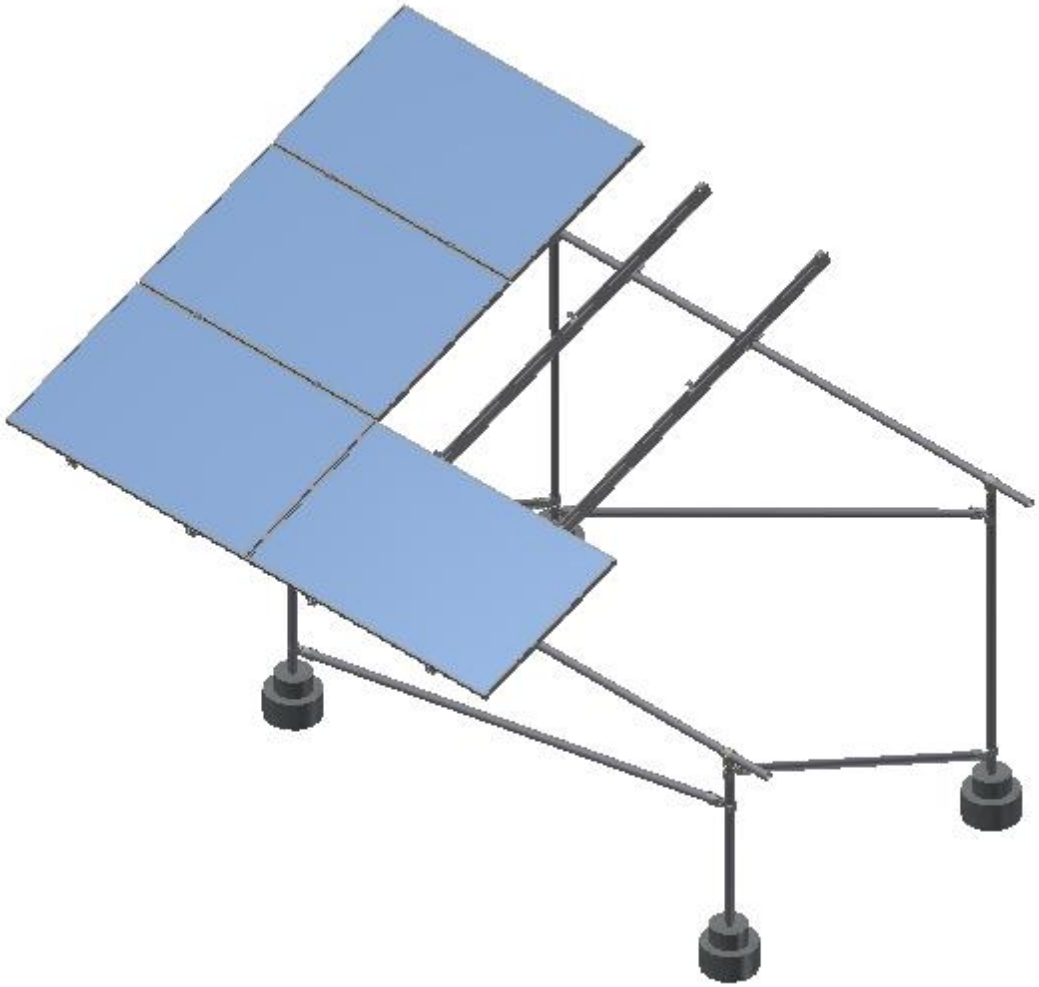
Each configuration has unique load capabilities for the wind and snow loads specific to each project. Pages C6-C13 illustrate the minimum number of rails required for every snow and wind load combination as well as for every tilt angle. Pages 7 through 14 show each of the 8 possible system configurations.



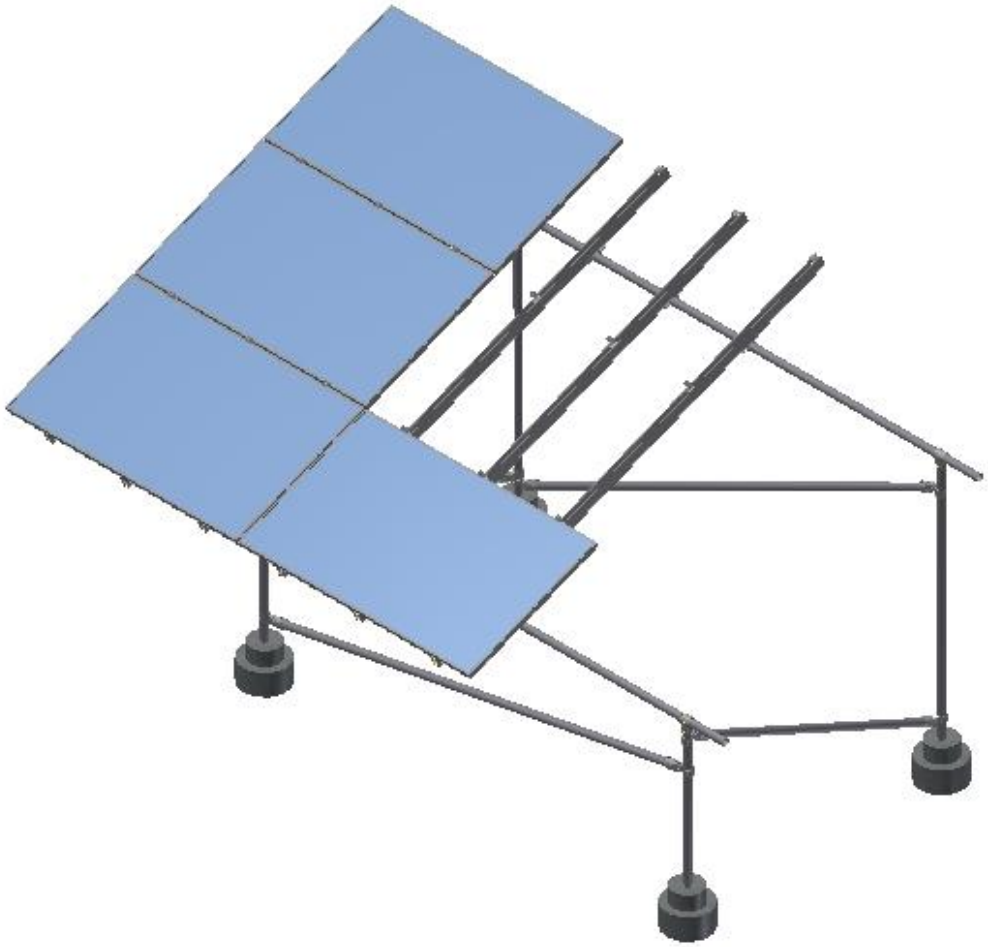
Standard Installation (4 Module Panels and 2 Rails per Panel)



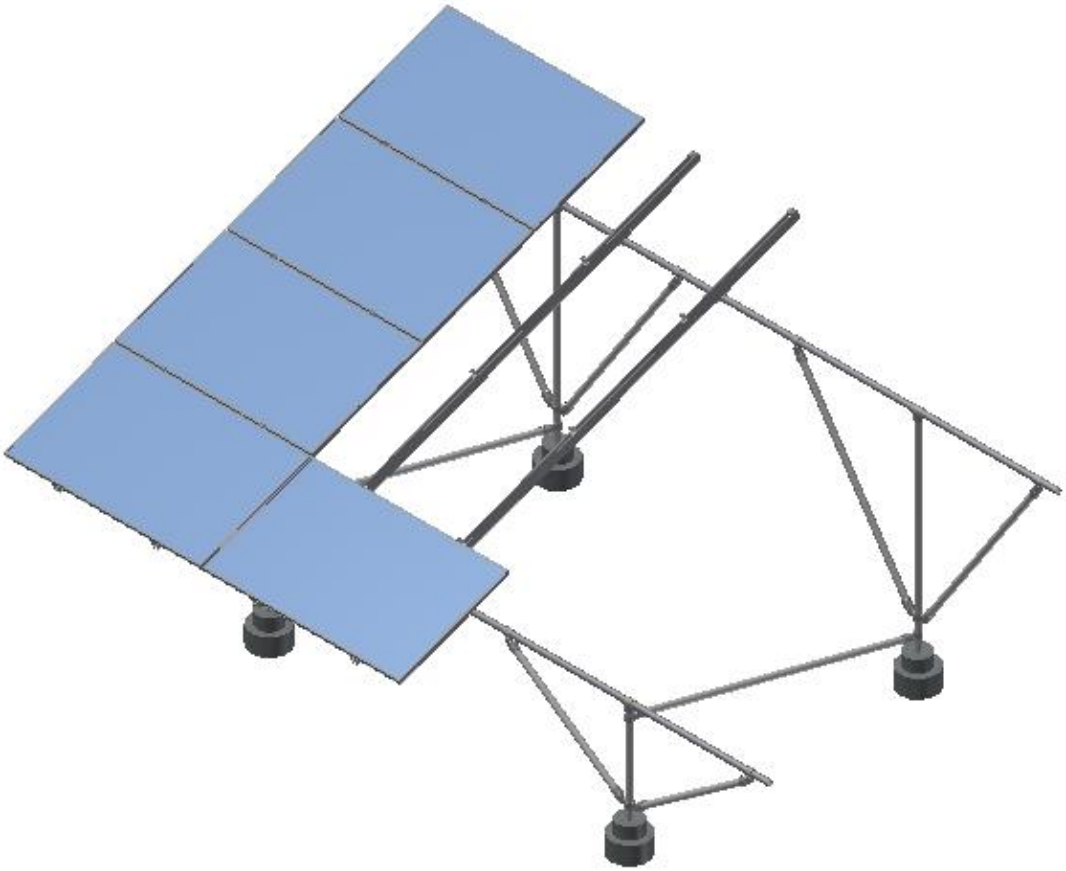
Standard Installation (4 Module Panels and 3 Rails per Panel)



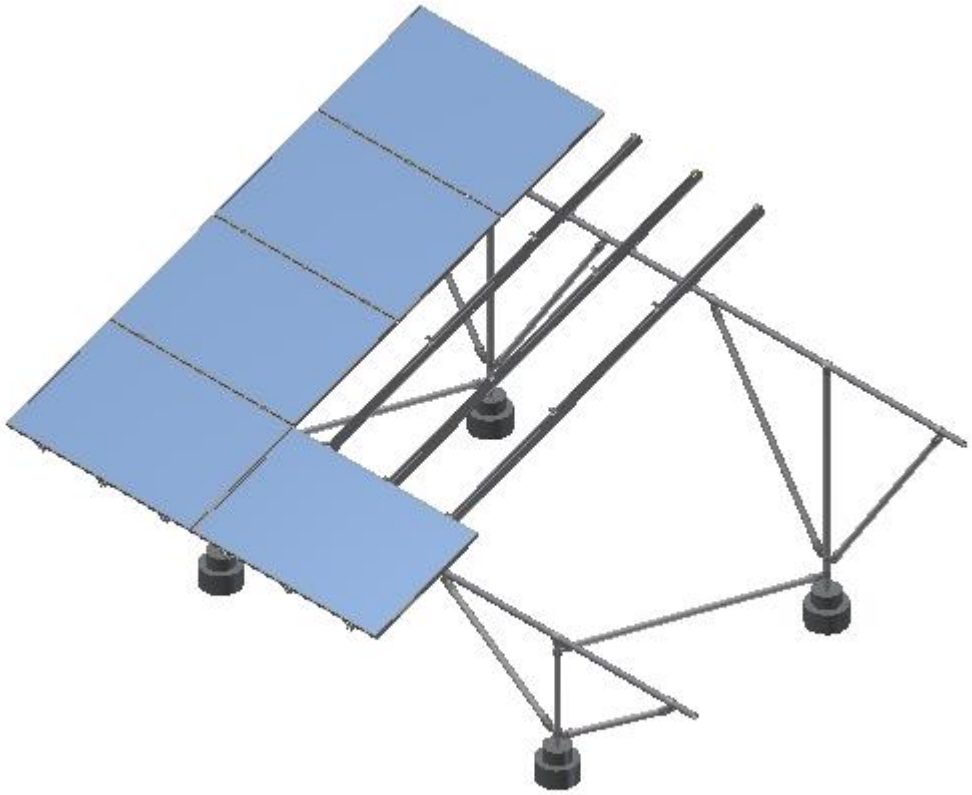
Standard Installation (3 Module Panels and 2 Rails per Panel)



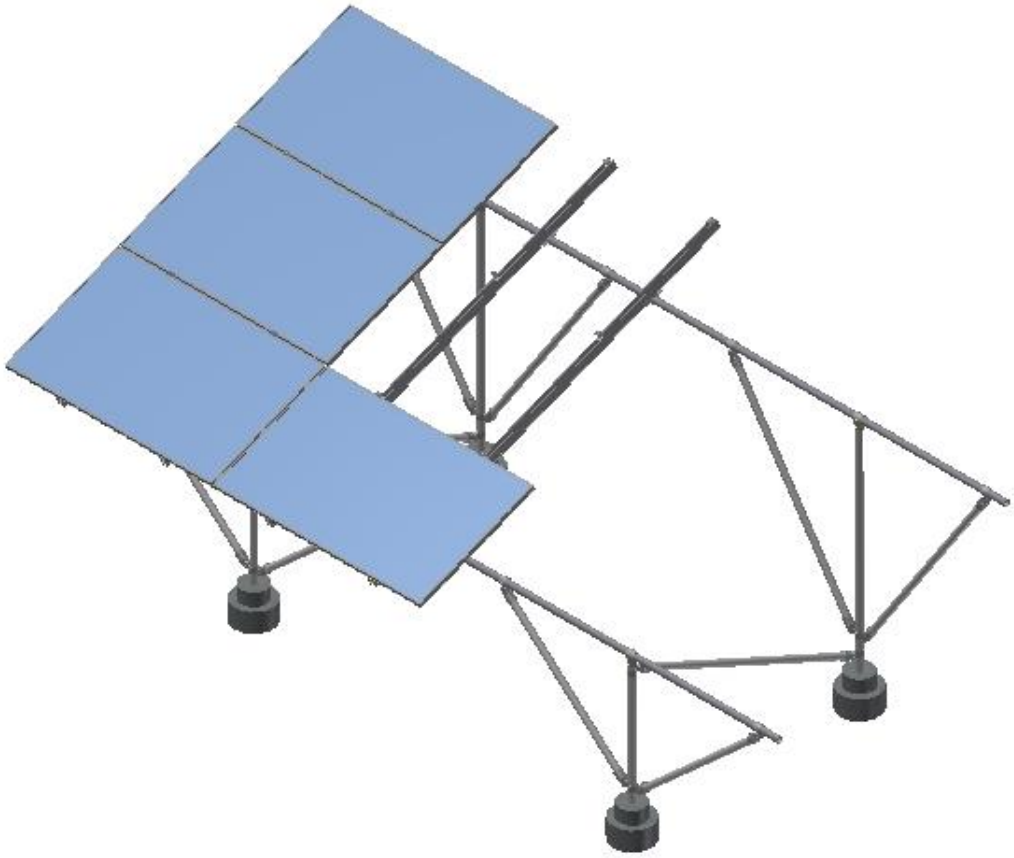
Standard Installation (3 Module Panels and 3 Rails per Panel)



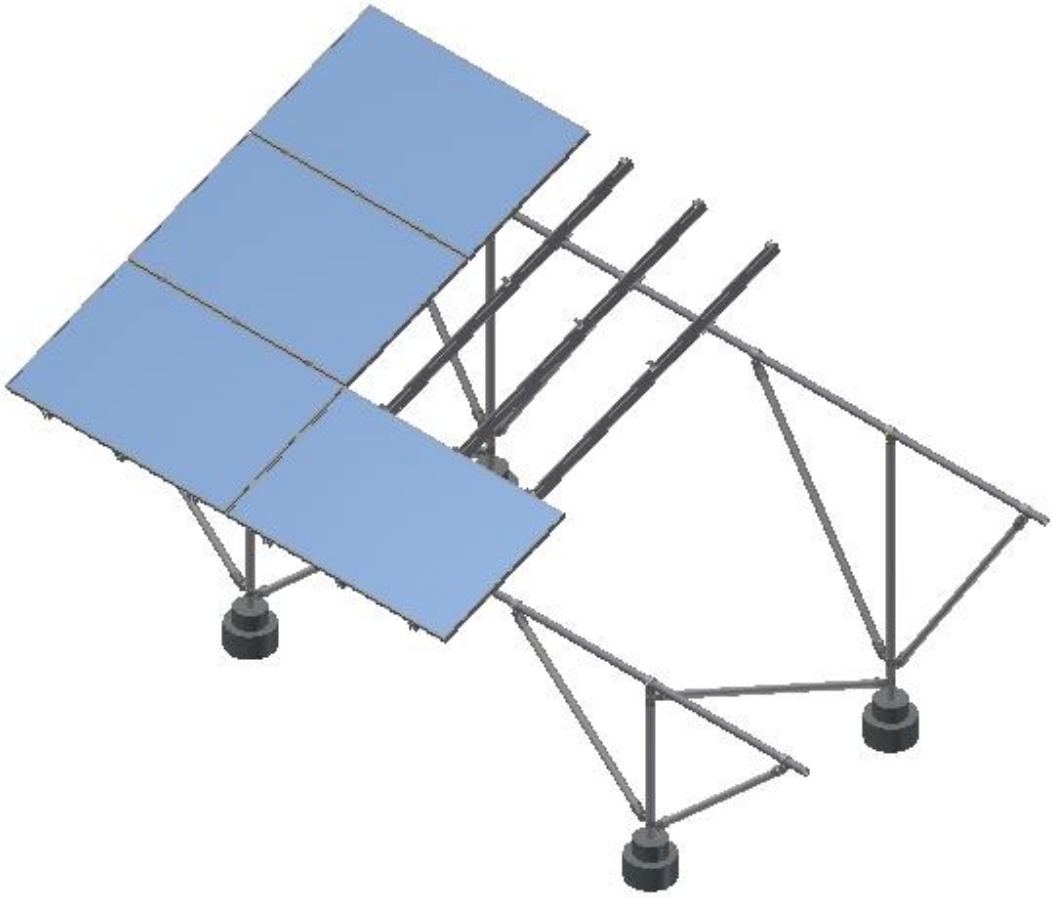
Braced Installation (4 Module Panels and 2 Rails per Panel)



Braced Installation (4 Module Panels and 3 Rails per Panel)



Braced Installation (3 Module Panels and 2 Rails per Panel)



Braced Installation (3 Module Panels and 3 Rails per Panel)

Configuration Tables

See pages 19 thru 96 for installation of racking system per wind and snow load requirements. See example below for instructions on how to read tables. All dimensions are in inches.

100 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	39" x 65"	39" x 78"
θ = 0	135	154	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	114	130	30	30	Yes	Every 3rd Bay	No	180	180	30	31	Yes	Yes	Yes	2	2
7.5 > θ < 15	107	122	30	33	Yes	Every 3rd Bay	No	180	180	30	40	Yes	Yes	Yes	2	2
15 > θ < 22.5	101	115	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	47	Yes	Yes	Yes	2	2
22.5 > θ < 30	96	110	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	50	Yes	Yes	Yes	2	2
30 > θ < 37.5	98	112	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	101	115	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	63	Yes	Yes	Yes	2	2

Standard Installation

Tilt Angle
Horizontal pipe spans (in)
Footing depth at short pipe (in)
Footing depth at tall pipe (in)
Brace A requirements
Brace C requirements
Brace D requirements

	Standard Installation						
Tilt Angle θ	Max (PS)		12" Dia Pier		Required Braces		
	Sch 40	Sch 80	Short	Tall	A	C	D
θ = 0	135	154	30	30	No	Every 3rd Bay	No
0 > θ < 7.5	114	130	30	30	Yes	Every 3rd Bay	No
7.5 > θ < 15	107	122	30	33	Yes	Every 3rd Bay	No
15 > θ < 22.5	101	115	30	38	Yes	Every 3rd Bay	Every 3rd Bay
22.5 > θ < 30	96	110	30	41	Yes	Every 3rd Bay	Every 3rd Bay
30 > θ < 37.5	98	112	30	51	Yes	Every 3rd Bay	Every 3rd Bay
37.5 > θ < 45	101	115	30	51	Yes	Every 3rd Bay	Every 3rd Bay

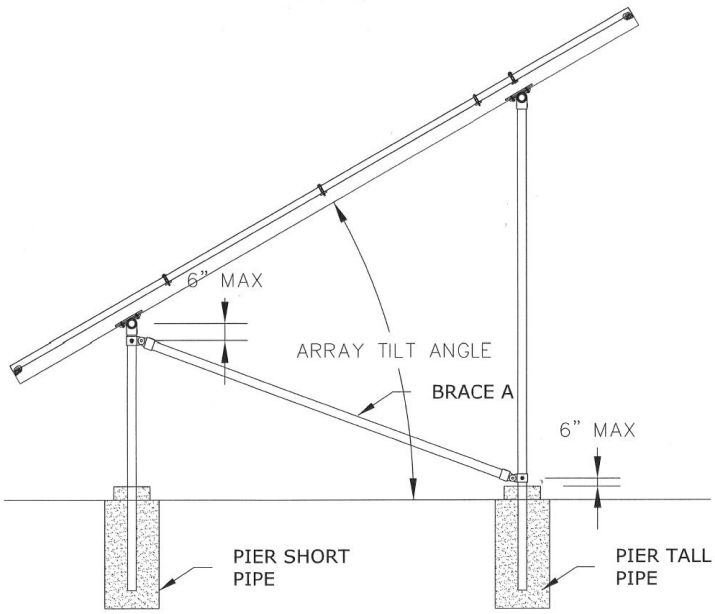
Braced Installation

Horizontal pipe spans (in)
Footing depth at short pipe (in)
Footing depth at tall pipe (in)
Brace A requirements
Brace E requirements
Brace F requirements

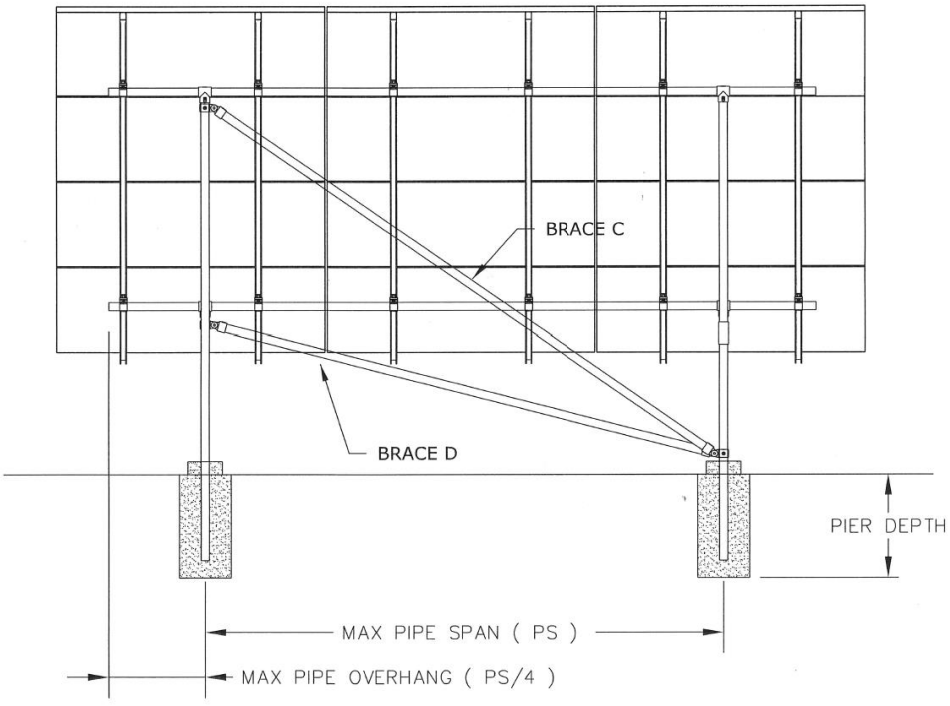
Braced Installation						
Max (PS)		12" Dia Pier		Required Braces		
Sch 40	Sch 80	Short	Tall	A	E	F
180	180	30	30	Yes	Yes	Yes
180	180	30	31	Yes	Yes	Yes
180	180	30	40	Yes	Yes	Yes
180	180	30	47	Yes	Yes	Yes
180	180	30	50	Yes	Yes	Yes
180	180	30	63	Yes	Yes	Yes
180	180	30	63	Yes	Yes	Yes

Number of aluminum ground rails required for either the standard or braced options per panel size. See pages C6 through C13 for 2 or 3 rail configurations.

Number of Rails Required Per Panel	
Module Size	
39" x 65"	39" x 78"
2	2
2	2
2	2
2	2
2	2
2	2
2	2



Frame Section



Standard Installation Rear View Bracing

Foundation Options

- Pier foundations: piers will be 12" in diameter and be at the depth required in the following charts based on wind speed, panel tilt, and snow load. The minimum depth of the footings is set to 30 inches and the concrete will be 2500 psi minimum.
- Grade beam option: a grade beam may be used in place of the pier foundations See SnapNrack's drawing S200 D07 for grade beam configuration. Grade beams will be a minimum of 12" wide x 12" deep and will run a minimum of 12'-0" centered under the posts. Two #4 Bars will be used at the top and the bottom of the grade beam, one on each side for the vertical pipe. These must have a minimum of 3" clear concrete cover and shall be Grade 40 minimum. See table on page C16 for grade beam sizes.

SOIL BEARING CAPACITY
ALLOWABLE FOUNDATION AND LATERAL PRESSURE

Class of Materials	Allowable Foundation Pressure (psf)[d]	Lateral Bearing (psf/f below natural grade)[d]	Lateral Sliding	
			Coefficient of friction	Resistance (psf)[b]
1. Crystalline bedrock	12,000	1,200	0.70	—
2. Sedimentary and foliated rock	4,000	400	0.35	—
3. Sandy gravel and/or gravel (GW and GP)	3,000	200	0.35	—
4. Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM and GC)	2,000	150	0.25	—
5. Clay, sandy clay, silty clay, clayey silt, silt and sand silt (CL, ML, MH and CH)	1,500[c]	100	—	130

Referring to page C15, this report uses 1500 pcf foundation pressure into the calculations, In addition, it uses a footing diameter of 1 ft., making the foundation pressure 1500 psf. From these calculations, which are in terms of the worst-possible conditions, any of the choices for the Class of Materials listed above in the table would work for the ground-mount solar panels.

Site – Specific Analysis

A site-specific analysis will be required if the location of the solar panel installation corresponds to any of the following criteria:

- The pitch of the solar panel is greater than 45 degrees above the horizontal.
- A topographic factor applies to the location. Topographic factors apply, for general purposes, when the structure is on a hill, mesa or bluff, or is adjacent to a large body of water. For complete descriptions of topographic, factors please refer to ASCE 7-10 section 26.8
- A combination of loads and/or site conditions applies when not addressed in the attached charts.

If one or more of these factors applies to the project location, please contact NSSE, and we will analyze the site conditions and recommend post spacing for each specific site.

Topographic Factors and Limits

It must be noted for any site location where the topographic factor is applied (e.g. hills, mesas, and seashore) the configurations listed in this packet may not be adequate for the given site. A registered structural engineer should evaluate the exact topographic conditions for this specific site prior to construction.

Please note all sizes, material specifications, and weights have been provided by SnapNrack. Please see SnapNrack's plans for limits on the bolt parameters. Torque all 5/16" diameter hardware as specified in SnapNrack' plans (10-16 ft-lbs for Silver Stainless Steel and 7-9 ft-lbs for black Stainless Steel). SnapNrack has also provided estimated soil values, referenced on page 17, used to calculate the optimized size and depths of the footings. It is the responsibility of SnapNrack's customer, otherwise known as the contractor or professional solar installer, to verify, that the site specific soil conditions match or exceed the estimated values given within this report. Installation of Series 200 is to be conducted in accordance with SnapNrack's drawings S200 D01 thru D09 (all drawings are REV G).

Please feel free to contact me with any questions or concerns, Thank you.

Sincerely,

Norman Scheel PE, SE
LEED-AP BD+C, LEED-AP Homes
Fellow SEAOC
Fellow A.S.C.E.

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	119	136	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	102	116	30	30	Yes	Every 3rd Bay	No	180	180	30	35	Yes	Yes	Yes	2	2
7.5 > θ < 15	96	109	30	34	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	91	104	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	87	100	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	90	103	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	49	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	115	132	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	98	112	30	30	Yes	Every 3rd Bay	No	180	180	30	38	Yes	Yes	Yes	2	2
7.5 > θ < 15	92	105	30	37	Yes	Every 3rd Bay	No	180	180	30	48	Yes	Yes	Yes	2	2
15 > θ < 22.5	87	100	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	84	96	30	46	Yes	Every 3rd Bay	Every 3rd Bay	174	180	30	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	87	99	30	49	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	101	30	52	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	112	128	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	95	108	30	31	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	89	101	30	39	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	84	96	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	92	30	49	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	83	95	30	52	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	85	97	30	55	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	108	124	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	91	104	30	33	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	86	98	30	41	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	81	93	30	48	Yes	Every 3rd Bay	Every 3rd Bay	178	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	77	88	30	52	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	91	30	55	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	58	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	105	120	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	88	101	30	35	Yes	Every 3rd Bay	No	180	180	32	47	Yes	Yes	Yes	2	2
7.5 > θ < 15	83	94	30	44	Yes	Every 3rd Bay	No	180	180	32	61	Yes	Yes	Yes	2	2
15 > θ < 22.5	78	89	30	51	Yes	Every 3rd Bay	Every 3rd Bay	166	180	32	67	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	85	30	55	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	77	88	30	59	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	79	90	30	62	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	102	117	30	30	No	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
0 > θ < 7.5	85	97	30	37	Yes	Every 3rd Bay	No	180	180	35	51	Yes	Yes	Yes	2	2
7.5 > θ < 15	80	91	30	46	Yes	Every 3rd Bay	No	180	180	35	65	Yes	Yes	Yes	2	2
15 > θ < 22.5	76	86	30	54	Yes	Every 3rd Bay	Every 3rd Bay	155	176	35	70	Yes	Yes	Yes	2	3
22.5 > θ < 30	72	82	30	58	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	2	3
30 > θ < 37.5	74	85	30	59	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	76	86	30	62	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	99	113	30	30	No	Every 3rd Bay	No	180	180	37	37	Yes	Yes	Yes	2	2
0 > θ < 7.5	83	94	30	39	Yes	Every 3rd Bay	No	180	180	37	55	Yes	Yes	Yes	2	2
7.5 > θ < 15	77	88	30	48	Yes	Every 3rd Bay	No	180	180	37	68	Yes	Yes	Yes	2	3
15 > θ < 22.5	73	83	30	56	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	70	79	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	72	82	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	96	110	30	30	No	Every 3rd Bay	No	180	180	40	40	Yes	Yes	Yes	2	2
0 > θ < 7.5	80	91	30	41	Yes	Every 3rd Bay	No	180	180	40	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	75	86	30	51	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	71	81	30	59	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	67	77	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	70	79	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	106	121	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	95	108	30	30	Yes	Every 3rd Bay	No	180	180	30	35	Yes	Yes	Yes	2	2
7.5 > θ < 15	91	104	30	34	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	88	101	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	87	99	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	90	103	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	49	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	104	119	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	92	105	30	30	Yes	Every 3rd Bay	No	180	180	30	38	Yes	Yes	Yes	2	2
7.5 > θ < 15	88	101	30	36	Yes	Every 3rd Bay	No	180	180	30	48	Yes	Yes	Yes	2	2
15 > θ < 22.5	85	97	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	83	95	30	46	Yes	Every 3rd Bay	Every 3rd Bay	174	180	30	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	87	99	30	49	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	88	101	30	52	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	102	117	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	89	102	30	30	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	85	97	30	36	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	82	94	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	80	92	30	47	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	83	95	30	51	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	85	97	30	54	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	100	114	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	86	75	30	30	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	83	76	30	36	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	79	79	30	43	Yes	Every 3rd Bay	Every 3rd Bay	178	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	77	81	30	47	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	87	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	69	Yes	Yes	Yes	2	2

140 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	98	111	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	84	96	30	30	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	80	91	30	38	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	77	88	30	46	Yes	Every 3rd Bay	Every 3rd Bay	166	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	85	30	51	Yes	Every 3rd Bay	Every 3rd Bay	137	156	30	67	Yes	Yes	Yes	2	3
30 > θ < 37.5	77	88	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	30	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	79	90	30	58	Yes	Every 3rd Bay	Every 3rd Bay	120	137	30	68	Yes	Yes	Yes	2	3

150 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	95	108	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	81	93	30	35	Yes	Every 3rd Bay	No	180	180	32	47	Yes	Yes	Yes	2	2
7.5 > θ < 15	77	88	30	43	Yes	Every 3rd Bay	No	180	180	32	61	Yes	Yes	Yes	2	2
15 > θ < 22.5	74	85	30	51	Yes	Every 3rd Bay	Every 3rd Bay	155	176	32	67	Yes	Yes	Yes	2	3
22.5 > θ < 30	72	82	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	74	85	30	59	Yes	Every 3rd Bay	Every 3rd Bay	119	136	32	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	76	86	30	62	Yes	Every 3rd Bay	Every 3rd Bay	118	135	32	74	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	93	106	30	30	No	Every 3rd Bay	No	180	180	37	37	Yes	Yes	Yes	2	2
0 > θ < 7.5	79	90	30	38	Yes	Every 3rd Bay	No	180	180	37	55	Yes	Yes	Yes	2	2
7.5 > θ < 15	75	86	30	48	Yes	Every 3rd Bay	No	180	180	37	68	Yes	Yes	Yes	2	3
15 > θ < 22.5	72	82	30	57	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	70	79	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	72	82	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	90	103	30	30	No	Every 3rd Bay	No	180	180	40	40	Yes	Yes	Yes	2	2
0 > θ < 7.5	77	88	30	40	Yes	Every 3rd Bay	No	180	180	40	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	73	83	30	51	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	70	80	30	59	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	67	77	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	70	79	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	88	101	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	83	95	30	30	Yes	Every 3rd Bay	No	180	180	30	35	Yes	Yes	Yes	2	2
7.5 > θ < 15	83	95	30	33	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	85	97	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	84	96	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	89	101	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	49	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	87	100	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	81	93	30	30	Yes	Every 3rd Bay	No	180	180	30	38	Yes	Yes	Yes	2	2
7.5 > θ < 15	82	93	30	36	Yes	Every 3rd Bay	No	180	180	30	48	Yes	Yes	Yes	2	2
15 > θ < 22.5	82	94	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	92	30	46	Yes	Every 3rd Bay	Every 3rd Bay	174	180	30	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	86	98	30	49	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	88	101	30	52	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	86	98	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	80	91	30	30	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	80	91	30	38	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	79	91	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	78	89	30	49	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	83	94	30	52	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	85	97	30	55	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 11-20 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	85	97	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	79	90	30	32	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	79	90	30	40	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	77	88	30	48	Yes	Every 3rd Bay	Every 3rd Bay	178	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	86	30	52	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	91	30	55	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	58	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 11-20 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	84	95	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	77	88	30	34	Yes	Every 3rd Bay	No	180	180	32	47	Yes	Yes	Yes	2	2
7.5 > θ < 15	76	87	30	43	Yes	Every 3rd Bay	No	180	180	32	61	Yes	Yes	Yes	2	2
15 > θ < 22.5	75	85	30	50	Yes	Every 3rd Bay	Every 3rd Bay	166	180	32	67	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	55	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	77	88	30	59	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	79	90	30	62	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 11-20 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	82	94	30	30	No	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
0 > θ < 7.5	76	86	30	36	Yes	Every 3rd Bay	No	180	180	35	51	Yes	Yes	Yes	2	2
7.5 > θ < 15	74	85	30	45	Yes	Every 3rd Bay	No	180	180	35	65	Yes	Yes	Yes	2	2
15 > θ < 22.5	72	82	30	53	Yes	Every 3rd Bay	Every 3rd Bay	155	176	35	70	Yes	Yes	Yes	2	3
22.5 > θ < 30	71	81	30	58	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	2	3
30 > θ < 37.5	74	85	30	59	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	76	86	30	62	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 11-20 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	81	93	30	30	No	Every 3rd Bay	No	180	180	37	37	Yes	Yes	Yes	2	2
0 > θ < 7.5	74	85	30	38	Yes	Every 3rd Bay	No	180	180	37	55	Yes	Yes	Yes	2	2
7.5 > θ < 15	72	83	30	48	Yes	Every 3rd Bay	No	180	180	37	68	Yes	Yes	Yes	2	3
15 > θ < 22.5	70	80	30	56	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	69	78	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	72	82	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 11-20 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	80	91	30	30	No	Every 3rd Bay	No	180	180	40	40	Yes	Yes	Yes	2	2
0 > θ < 7.5	72	83	30	40	Yes	Every 3rd Bay	No	180	180	40	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	80	30	50	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	68	78	30	59	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	66	76	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	70	79	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	79	90	30	30	No	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
0 > θ < 7.5	75	85	30	30	Yes	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
7.5 > θ < 15	76	87	30	32	Yes	Every 3rd Bay	No	180	180	35	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	79	90	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	80	92	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	86	98	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	49	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	78	89	30	30	No	Every 3rd Bay	No	180	180	38	38	Yes	Yes	Yes	2	2
0 > θ < 7.5	74	84	30	30	Yes	Every 3rd Bay	No	180	180	38	38	Yes	Yes	Yes	2	2
7.5 > θ < 15	75	85	30	35	Yes	Every 3rd Bay	No	180	180	30	48	Yes	Yes	Yes	2	2
15 > θ < 22.5	77	88	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	78	89	30	45	Yes	Every 3rd Bay	Every 3rd Bay	174	180	30	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	95	30	49	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	88	101	30	52	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 65"	40" x 78"
θ = 0	77	88	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	72	83	30	30	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	73	84	30	37	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	75	86	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	87	30	48	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	81	92	30	52	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	85	97	30	55	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 21-30 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	76	87	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	71	81	30	31	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	72	82	30	39	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	74	84	30	47	Yes	Every 3rd Bay	Every 3rd Bay	178	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	74	84	30	51	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	89	30	55	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	58	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 21-30 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	75	86	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	70	80	30	33	Yes	Every 3rd Bay	No	180	180	32	47	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	81	30	42	Yes	Every 3rd Bay	No	180	180	32	61	Yes	Yes	Yes	2	2
15 > θ < 22.5	72	82	30	50	Yes	Every 3rd Bay	Every 3rd Bay	166	180	32	67	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	82	30	54	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	76	86	30	59	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	79	90	30	62	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 21-30 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	74	85	30	30	No	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
0 > θ < 7.5	69	79	30	35	Yes	Every 3rd Bay	No	180	180	35	51	Yes	Yes	Yes	2	2
7.5 > θ < 15	70	79	30	45	Yes	Every 3rd Bay	No	180	180	35	65	Yes	Yes	Yes	2	2
15 > θ < 22.5	70	80	30	53	Yes	Every 3rd Bay	Every 3rd Bay	155	176	35	70	Yes	Yes	Yes	2	3
22.5 > θ < 30	69	79	30	58	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	2	3
30 > θ < 37.5	73	84	30	59	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	76	86	30	62	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	73	84	30	30	No	Every 3rd Bay	No	180	180	37	37	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	78	30	37	Yes	Every 3rd Bay	No	180	180	37	55	Yes	Yes	Yes	2	2
7.5 > θ < 15	68	78	30	47	Yes	Every 3rd Bay	No	180	180	37	68	Yes	Yes	Yes	2	3
15 > θ < 22.5	68	78	30	56	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	67	77	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	71	81	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	73	83	30	30	No	Every 3rd Bay	No	180	180	40	40	Yes	Yes	Yes	2	2
0 > θ < 7.5	67	77	30	39	Yes	Every 3rd Bay	No	180	180	40	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	67	77	30	50	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	65	74	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	69	79	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	71	81	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	78	30	30	Yes	Every 3rd Bay	No	180	180	35	35	Yes	Yes	Yes	2	2
7.5 > θ < 15	70	80	30	31	Yes	Every 3rd Bay	No	180	180	35	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	73	84	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	35	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	87	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	82	94	30	45	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	89	101	30	48	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	71	81	30	30	No	Every 3rd Bay	No	180	180	38	38	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	77	30	30	Yes	Every 3rd Bay	No	180	180	38	38	Yes	Yes	Yes	2	2
7.5 > θ < 15	69	79	30	34	Yes	Every 3rd Bay	No	180	180	38	48	Yes	Yes	Yes	2	2
15 > θ < 22.5	72	82	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	38	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	74	85	30	44	Yes	Every 3rd Bay	Every 3rd Bay	174	180	30	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	92	30	49	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	52	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	70	80	30	30	No	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
0 > θ < 7.5	67	76	30	30	Yes	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	68	78	30	36	Yes	Every 3rd Bay	No	180	180	41	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	71	81	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	48	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	89	30	52	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	84	95	30	55	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	69	79	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
0 > θ < 7.5	66	75	30	30	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	67	76	30	39	Yes	Every 3rd Bay	No	180	180	44	56	Yes	Yes	Yes	2	3
15 > θ < 22.5	70	79	30	46	Yes	Every 3rd Bay	Every 3rd Bay	178	180	30	65	Yes	Yes	Yes	2	3
22.5 > θ < 30	71	81	30	51	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	2
30 > θ < 37.5	76	87	30	55	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	81	93	30	58	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	69	78	30	30	No	Every 3rd Bay	No	180	180	47	47	Yes	Yes	Yes	2	3
0 > θ < 7.5	65	74	30	32	Yes	Every 3rd Bay	No	180	180	47	47	Yes	Yes	Yes	2	3
7.5 > θ < 15	66	75	30	41	Yes	Every 3rd Bay	No	180	180	32	61	Yes	Yes	Yes	2	3
15 > θ < 22.5	68	78	30	49	Yes	Every 3rd Bay	Every 3rd Bay	166	180	32	67	Yes	Yes	Yes	2	3
22.5 > θ < 30	69	79	30	54	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	74	85	30	59	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	79	90	30	62	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	68	78	30	30	No	Every 3rd Bay	No	180	180	51	51	Yes	Yes	Yes	2	3
0 > θ < 7.5	64	73	30	34	Yes	Every 3rd Bay	No	180	180	35	51	Yes	Yes	Yes	2	3
7.5 > θ < 15	65	74	30	44	Yes	Every 3rd Bay	No	180	180	35	65	Yes	Yes	Yes	2	3
15 > θ < 22.5	67	76	30	52	Yes	Every 3rd Bay	Every 3rd Bay	155	176	35	70	Yes	Yes	Yes	2	3
22.5 > θ < 30	68	77	30	57	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	2	3
30 > θ < 37.5	72	82	30	59	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	76	86	30	62	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	67	77	30	30	No	Every 3rd Bay	No	180	180	37	37	Yes	Yes	Yes	2	3
0 > θ < 7.5	63	72	30	36	Yes	Every 3rd Bay	No	180	180	37	55	Yes	Yes	Yes	2	3
7.5 > θ < 15	64	73	30	46	Yes	Every 3rd Bay	No	180	180	37	68	Yes	Yes	Yes	3	3
15 > θ < 22.5	66	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	66	75	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	70	80	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	67	76	30	30	No	Every 3rd Bay	No	180	180	40	40	Yes	Yes	Yes	3	3
0 > θ < 7.5	62	71	30	38	Yes	Every 3rd Bay	No	180	180	40	59	Yes	Yes	Yes	3	3
7.5 > θ < 15	63	72	30	49	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	64	73	30	59	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	64	73	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	68	78	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 41-50 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	66	75	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
0 > θ < 7.5	64	73	30	30	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	74	30	31	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
15 > θ < 22.5	69	78	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	35	52	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	35	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	45	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	48	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 41-50 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	65	75	30	30	No	Every 3rd Bay	No	180	180	48	48	Yes	Yes	Yes	2	3
0 > θ < 7.5	63	72	30	30	Yes	Every 3rd Bay	No	180	180	48	48	Yes	Yes	Yes	2	3
7.5 > θ < 15	64	74	30	33	Yes	Every 3rd Bay	No	180	180	48	48	Yes	Yes	Yes	2	3
15 > θ < 22.5	68	77	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	38	57	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	81	30	44	Yes	Every 3rd Bay	Every 3rd Bay	174	180	38	61	Yes	Yes	Yes	2	2
30 > θ < 37.5	77	88	30	48	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	83	95	30	51	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 41-50 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	65	74	30	30	No	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	3
0 > θ < 7.5	62	71	30	30	Yes	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	3
7.5 > θ < 15	64	73	30	35	Yes	Every 3rd Bay	No	180	180	41	52	Yes	Yes	Yes	2	3
15 > θ < 22.5	67	76	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	41	62	Yes	Yes	Yes	2	3
22.5 > θ < 30	70	79	30	47	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	75	86	30	51	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	81	93	30	54	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	64	73	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	3
0 > θ < 7.5	62	70	30	30	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	3
7.5 > θ < 15	63	72	30	38	Yes	Every 3rd Bay	No	180	180	44	56	Yes	Yes	Yes	2	3
15 > θ < 22.5	66	75	30	45	Yes	Every 3rd Bay	Every 3rd Bay	178	180	44	65	Yes	Yes	Yes	2	3
22.5 > θ < 30	68	78	30	50	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	3
30 > θ < 37.5	74	84	30	55	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	79	90	30	58	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	64	73	30	30	No	Every 3rd Bay	No	180	180	47	47	Yes	Yes	Yes	2	3
0 > θ < 7.5	61	69	30	31	Yes	Every 3rd Bay	No	180	180	47	47	Yes	Yes	Yes	2	3
7.5 > θ < 15	62	71	30	40	Yes	Every 3rd Bay	No	180	180	47	61	Yes	Yes	Yes	3	3
15 > θ < 22.5	65	74	30	48	Yes	Every 3rd Bay	Every 3rd Bay	166	180	32	67	Yes	Yes	Yes	3	3
22.5 > θ < 30	67	76	30	53	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	72	82	30	58	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	77	88	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	63	72	30	30	No	Every 3rd Bay	No	180	180	51	51	Yes	Yes	Yes	3	3
0 > θ < 7.5	60	69	30	33	Yes	Every 3rd Bay	No	180	180	51	51	Yes	Yes	Yes	3	3
7.5 > θ < 15	61	70	30	43	Yes	Every 3rd Bay	No	180	180	51	65	Yes	Yes	Yes	3	3
15 > θ < 22.5	64	73	30	52	Yes	Every 3rd Bay	Every 3rd Bay	155	176	35	70	Yes	Yes	Yes	3	3
22.5 > θ < 30	65	74	30	57	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	3	3
30 > θ < 37.5	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	75	85	30	61	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	63	72	30	30	No	Every 3rd Bay	No	180	180	55	55	Yes	Yes	Yes	3	3
0 > θ < 7.5	59	68	30	35	Yes	Every 3rd Bay	No	178	180	55	55	Yes	Yes	Yes	3	3
7.5 > θ < 15	60	69	30	45	Yes	Every 3rd Bay	No	180	180	55	68	Yes	Yes	Yes	3	3
15 > θ < 22.5	63	71	30	55	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	64	73	30	60	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	68	78	30	66	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	62	71	30	30	No	Every 3rd Bay	No	180	180	59	59	Yes	Yes	Yes	3	3
0 > θ < 7.5	59	67	30	37	Yes	Every 3rd Bay	No	176	180	59	59	Yes	Yes	Yes	3	3
7.5 > θ < 15	59	68	30	48	Yes	Every 3rd Bay	No	178	180	40	70	Yes	Yes	Yes	3	3
15 > θ < 22.5	62	70	30	58	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	3
22.5 > θ < 30	62	71	30	64	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	67	76	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	71	81	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 51 to 60 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	61	70	30	30	No	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	3
0 > θ < 7.5	60	68	30	30	Yes	Every 3rd Bay	No	179	180	52	52	Yes	Yes	Yes	2	3
7.5 > θ < 15	61	70	30	30	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	3
15 > θ < 22.5	65	74	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	44	52	Yes	Yes	Yes	2	3
22.5 > θ < 30	70	80	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	35	56	Yes	Yes	Yes	2	2
30 > θ < 37.5	76	87	30	44	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	83	95	30	47	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	59	Yes	Yes	Yes	2	2

110 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	61	70	30	30	No	Every 3rd Bay	No	180	180	57	57	Yes	Yes	Yes	2	3
0 > θ < 7.5	59	67	30	30	Yes	Every 3rd Bay	No	177	180	57	57	Yes	Yes	Yes	2	3
7.5 > θ < 15	61	69	30	32	Yes	Every 3rd Bay	No	180	180	48	48	Yes	Yes	Yes	2	3
15 > θ < 22.5	64	73	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	38	57	Yes	Yes	Yes	2	3
22.5 > θ < 30	68	78	30	43	Yes	Every 3rd Bay	Every 3rd Bay	174	180	38	57	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	85	30	47	Yes	Every 3rd Bay	Every 3rd Bay	163	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	81	92	30	50	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	61	Yes	Yes	Yes	2	2

120 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	61	69	30	30	No	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	3
0 > θ < 7.5	58	67	30	30	Yes	Every 3rd Bay	No	175	180	52	52	Yes	Yes	Yes	2	3
7.5 > θ < 15	60	69	30	34	Yes	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	3
15 > θ < 22.5	63	72	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	41	62	Yes	Yes	Yes	2	3
22.5 > θ < 30	67	76	30	46	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	62	Yes	Yes	Yes	2	3
30 > θ < 37.5	73	83	30	51	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	62	Yes	Yes	Yes	2	2
37.5 > θ < 45	79	90	30	54	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 51 to 60 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	60	69	30	30	No	Every 3rd Bay	No	180	180	56	56	Yes	Yes	Yes	3	3
0 > θ < 7.5	58	66	30	30	Yes	Every 3rd Bay	No	174	180	56	56	Yes	Yes	Yes	3	3
7.5 > θ < 15	59	68	30	37	Yes	Every 3rd Bay	No	178	180	56	56	Yes	Yes	Yes	3	3
15 > θ < 22.5	62	71	30	45	Yes	Every 3rd Bay	Every 3rd Bay	178	180	44	65	Yes	Yes	Yes	3	3
22.5 > θ < 30	66	75	30	49	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	67	Yes	Yes	Yes	2	3
30 > θ < 37.5	71	81	30	54	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	77	88	30	57	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	60	68	30	30	No	Every 3rd Bay	No	179	180	61	61	Yes	Yes	Yes	3	3
0 > θ < 7.5	57	65	30	30	Yes	Every 3rd Bay	No	172	180	61	61	Yes	Yes	Yes	3	3
7.5 > θ < 15	59	67	30	39	Yes	Every 3rd Bay	No	176	180	47	61	Yes	Yes	Yes	3	3
15 > θ < 22.5	61	70	30	48	Yes	Every 3rd Bay	Every 3rd Bay	166	180	47	67	Yes	Yes	Yes	3	3
22.5 > θ < 30	64	73	30	53	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	70	79	30	58	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	2	3
37.5 > θ < 45	75	86	30	61	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 51-60 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	59	68	30	30	No	Every 3rd Bay	No	178	180	51	51	Yes	Yes	Yes	3	3
0 > θ < 7.5	57	65	30	32	Yes	Every 3rd Bay	No	170	180	51	51	Yes	Yes	Yes	3	3
7.5 > θ < 15	58	66	30	42	Yes	Every 3rd Bay	No	174	180	51	65	Yes	Yes	Yes	3	3
15 > θ < 22.5	61	69	30	51	Yes	Every 3rd Bay	Every 3rd Bay	155	176	51	70	Yes	Yes	Yes	3	3
22.5 > θ < 30	63	72	30	56	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	3	3
30 > θ < 37.5	68	78	30	58	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	83	30	61	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 51 to 60 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	59	67	30	30	No	Every 3rd Bay	No	177	180	55	55	Yes	Yes	Yes	3	3
0 > θ < 7.5	56	64	30	34	Yes	Every 3rd Bay	No	168	180	55	55	Yes	Yes	Yes	3	3
7.5 > θ < 15	57	65	30	44	Yes	Every 3rd Bay	No	172	180	55	68	Yes	Yes	Yes	3	3
15 > θ < 22.5	60	68	30	54	Yes	Every 3rd Bay	Every 3rd Bay	145	165	37	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	62	70	30	59	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	3
30 > θ < 37.5	67	76	30	65	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	71	81	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	58	67	30	30	No	Every 3rd Bay	No	175	180	59	59	Yes	Yes	Yes	3	NG
0 > θ < 7.5	56	63	30	36	Yes	Every 3rd Bay	No	167	180	59	59	Yes	Yes	Yes	3	NG
7.5 > θ < 15	57	64	30	47	Yes	Every 3rd Bay	No	170	180	59	70	Yes	Yes	Yes	3	NG
15 > θ < 22.5	59	67	30	57	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	NG
22.5 > θ < 30	60	69	30	63	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	65	74	30	69	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	70	79	30	72	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	58	66	30	30	No	Every 3rd Bay	No	173	180	59	59	Yes	Yes	Yes	3	3
0 > θ < 7.5	56	64	30	30	Yes	Every 3rd Bay	No	169	180	59	59	Yes	Yes	Yes	3	3
7.5 > θ < 15	58	66	30	30	Yes	Every 3rd Bay	No	175	180	52	52	Yes	Yes	Yes	3	3
15 > θ < 22.5	62	70	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	44	52	Yes	Yes	Yes	2	3
22.5 > θ < 30	67	76	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	35	56	Yes	Yes	Yes	2	3
30 > θ < 37.5	73	84	30	43	Yes	Every 3rd Bay	Every 3rd Bay	179	180	35	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	81	92	30	46	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	66	30	30	No	Every 3rd Bay	No	172	180	57	57	Yes	Yes	Yes	3	3
0 > θ < 7.5	56	64	30	30	Yes	Every 3rd Bay	No	167	180	57	57	Yes	Yes	Yes	3	3
7.5 > θ < 15	58	66	30	31	Yes	Every 3rd Bay	No	173	180	57	57	Yes	Yes	Yes	3	3
15 > θ < 22.5	61	70	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	48	57	Yes	Yes	Yes	3	3
22.5 > θ < 30	66	75	30	42	Yes	Every 3rd Bay	Every 3rd Bay	174	180	38	61	Yes	Yes	Yes	2	3
30 > θ < 37.5	72	82	30	47	Yes	Every 3rd Bay	Every 3rd Bay	163	180	38	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	79	90	30	50	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	171	180	62	62	Yes	Yes	Yes	3	3
0 > θ < 7.5	55	63	30	30	Yes	Every 3rd Bay	No	166	180	62	62	Yes	Yes	Yes	3	3
7.5 > θ < 15	57	65	30	34	Yes	Every 3rd Bay	No	171	180	52	52	Yes	Yes	Yes	3	3
15 > θ < 22.5	60	69	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	52	62	Yes	Yes	Yes	3	3
22.5 > θ < 30	65	74	30	45	Yes	Every 3rd Bay	Every 3rd Bay	159	180	41	64	Yes	Yes	Yes	2	3
30 > θ < 37.5	70	80	30	50	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	3
37.5 > θ < 45	77	88	30	53	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	170	180	65	65	Yes	Yes	Yes	3	3
0 > θ < 7.5	55	63	30	30	Yes	Every 3rd Bay	No	165	180	56	56	Yes	Yes	Yes	3	3
7.5 > θ < 15	56	64	30	36	Yes	Every 3rd Bay	No	169	180	56	56	Yes	Yes	Yes	3	3
15 > θ < 22.5	60	68	30	44	Yes	Every 3rd Bay	Every 3rd Bay	178	180	44	65	Yes	Yes	Yes	3	3
22.5 > θ < 30	63	72	30	49	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	67	Yes	Yes	Yes	3	3
30 > θ < 37.5	69	79	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	75	86	30	56	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	2

140 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	64	30	30	No	Every 3rd Bay	No	169	180	61	61	Yes	Yes	Yes	3	3
0 > θ < 7.5	54	62	30	30	Yes	Every 3rd Bay	No	163	180	61	61	Yes	Yes	Yes	3	3
7.5 > θ < 15	56	64	30	38	Yes	Every 3rd Bay	No	167	180	61	61	Yes	Yes	Yes	3	3
15 > θ < 22.5	59	67	30	47	Yes	Every 3rd Bay	Every 3rd Bay	166	180	47	67	Yes	Yes	Yes	3	3
22.5 > θ < 30	62	71	30	52	Yes	Every 3rd Bay	Every 3rd Bay	137	156	32	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	68	77	30	57	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	73	84	30	60	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	64	30	30	No	Every 3rd Bay	No	168	180	65	65	Yes	Yes	Yes	3	3
0 > θ < 7.5	54	61	30	31	Yes	Every 3rd Bay	No	162	180	65	65	Yes	Yes	Yes	3	3
7.5 > θ < 15	55	63	30	41	Yes	Every 3rd Bay	No	166	180	51	65	Yes	Yes	Yes	3	3
15 > θ < 22.5	58	66	30	50	Yes	Every 3rd Bay	Every 3rd Bay	155	176	51	70	Yes	Yes	Yes	3	3
22.5 > θ < 30	61	70	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	35	72	Yes	Yes	Yes	3	3
30 > θ < 37.5	66	75	30	57	Yes	Every 3rd Bay	Every 3rd Bay	119	136	35	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	72	82	30	60	Yes	Every 3rd Bay	Every 3rd Bay	118	135	35	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	63	30	30	No	Every 3rd Bay	No	167	180	68	68	Yes	Yes	Yes	3	NG
0 > θ < 7.5	53	61	30	33	Yes	Every 3rd Bay	No	160	180	68	68	Yes	Yes	Yes	3	NG
7.5 > θ < 15	55	62	30	44	Yes	Every 3rd Bay	No	164	180	55	68	Yes	Yes	Yes	3	NG
15 > θ < 22.5	57	65	30	53	Yes	Every 3rd Bay	Every 3rd Bay	145	165	55	73	Yes	Yes	Yes	3	NG
22.5 > θ < 30	60	68	30	59	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	NG
30 > θ < 37.5	65	74	30	64	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	3
37.5 > θ < 45	70	80	30	67	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	55	63	30	30	No	Every 3rd Bay	No	166	180	69	69	Yes	Yes	Yes	3	NG
0 > θ < 7.5	53	60	30	36	Yes	Every 3rd Bay	No	159	180	69	69	Yes	Yes	Yes	3	NG
7.5 > θ < 15	54	62	30	47	Yes	Every 3rd Bay	No	162	180	59	70	Yes	Yes	Yes	3	NG
15 > θ < 22.5	56	64	30	56	Yes	Every 3rd Bay	Every 3rd Bay	136	156	40	75	Yes	Yes	Yes	3	NG
22.5 > θ < 30	59	67	30	62	Yes	Every 3rd Bay	Every 3rd Bay	113	128	40	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	63	72	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	40	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	68	78	30	71	Yes	Every 3rd Bay	Every 3rd Bay	99	113	40	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	62	62	Yes	Yes	Yes	3	3
0 > θ < 7.5	53	61	30	30	Yes	Every 3rd Bay	No	160	180	62	62	Yes	Yes	Yes	3	3
7.5 > θ < 15	55	63	30	30	Yes	Every 3rd Bay	No	166	180	59	59	Yes	Yes	Yes	3	3
15 > θ < 22.5	59	67	30	35	Yes	Every 3rd Bay	Every 3rd Bay	177	180	52	52	Yes	Yes	Yes	3	3
22.5 > θ < 30	64	73	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	44	56	Yes	Yes	Yes	2	3
30 > θ < 37.5	71	81	30	43	Yes	Every 3rd Bay	Every 3rd Bay	179	180	35	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	79	90	30	46	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	66	66	Yes	Yes	Yes	3	3
0 > θ < 7.5	53	61	30	30	Yes	Every 3rd Bay	No	159	180	63	63	Yes	Yes	Yes	3	3
7.5 > θ < 15	55	63	30	31	Yes	Every 3rd Bay	No	165	180	57	57	Yes	Yes	Yes	3	3
15 > θ < 22.5	58	67	30	38	Yes	Every 3rd Bay	Every 3rd Bay	175	180	48	57	Yes	Yes	Yes	3	3
22.5 > θ < 30	63	72	30	42	Yes	Every 3rd Bay	Every 3rd Bay	174	180	48	61	Yes	Yes	Yes	2	3
30 > θ < 37.5	70	80	30	46	Yes	Every 3rd Bay	Every 3rd Bay	163	180	38	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	77	88	30	49	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	162	180	64	64	Yes	Yes	Yes	3	3
0 > θ < 7.5	53	60	30	30	Yes	Every 3rd Bay	No	158	180	64	64	Yes	Yes	Yes	3	3
7.5 > θ < 15	54	62	30	33	Yes	Every 3rd Bay	No	163	180	62	62	Yes	Yes	Yes	3	3
15 > θ < 22.5	58	66	30	40	Yes	Every 3rd Bay	Every 3rd Bay	173	180	52	62	Yes	Yes	Yes	3	3
22.5 > θ < 30	62	71	30	45	Yes	Every 3rd Bay	Every 3rd Bay	159	180	41	64	Yes	Yes	Yes	3	3
30 > θ < 37.5	68	78	30	49	Yes	Every 3rd Bay	Every 3rd Bay	149	170	30	66	Yes	Yes	Yes	2	3
37.5 > θ < 45	75	86	30	52	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	61	30	30	No	Every 3rd Bay	No	162	180	65	65	Yes	Yes	Yes	3	3
0 > θ < 7.5	52	60	30	30	Yes	Every 3rd Bay	No	157	179	65	65	Yes	Yes	Yes	3	3
7.5 > θ < 15	54	61	30	35	Yes	Every 3rd Bay	No	162	180	65	65	Yes	Yes	Yes	3	3
15 > θ < 22.5	57	65	30	43	Yes	Every 3rd Bay	Every 3rd Bay	171	180	56	65	Yes	Yes	Yes	3	3
22.5 > θ < 30	61	70	30	48	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	67	Yes	Yes	Yes	3	3
30 > θ < 37.5	67	76	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	73	84	30	56	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	3

140 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	61	30	30	No	Every 3rd Bay	No	161	180	67	67	Yes	Yes	Yes	3	NG
0 > θ < 7.5	52	59	30	30	Yes	Every 3rd Bay	No	155	177	67	67	Yes	Yes	Yes	3	NG
7.5 > θ < 15	53	61	30	38	Yes	Every 3rd Bay	No	160	180	61	61	Yes	Yes	Yes	3	NG
15 > θ < 22.5	56	64	30	46	Yes	Every 3rd Bay	Every 3rd Bay	166	180	61	67	Yes	Yes	Yes	3	3
22.5 > θ < 30	60	69	30	51	Yes	Every 3rd Bay	Every 3rd Bay	137	156	47	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	66	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	128	146	32	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	72	82	30	59	Yes	Every 3rd Bay	Every 3rd Bay	120	137	32	74	Yes	Yes	Yes	2	3

150 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	53	61	31	31	No	Every 3rd Bay	No	160	180	65	65	Yes	Yes	Yes	3	NG
0 > θ < 7.5	51	59	30	31	Yes	Every 3rd Bay	No	154	176	65	65	Yes	Yes	Yes	3	NG
7.5 > θ < 15	53	60	30	40	Yes	Every 3rd Bay	No	158	180	65	65	Yes	Yes	Yes	3	NG
15 > θ < 22.5	56	64	30	49	Yes	Every 3rd Bay	Every 3rd Bay	155	176	51	70	Yes	Yes	Yes	3	NG
22.5 > θ < 30	59	67	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	34	72	Yes	Yes	Yes	3	3
30 > θ < 37.5	64	73	30	57	Yes	Every 3rd Bay	Every 3rd Bay	119	136	34	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	70	80	30	60	Yes	Every 3rd Bay	Every 3rd Bay	118	135	34	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	53	60	30	30	No	Every 3rd Bay	No	159	180	68	68	Yes	Yes	Yes	3	NG
0 > θ < 7.5	51	58	30	33	Yes	Every 3rd Bay	No	153	174	68	68	Yes	Yes	Yes	3	NG
7.5 > θ < 15	52	60	30	43	Yes	Every 3rd Bay	No	157	179	68	68	Yes	Yes	Yes	3	NG
15 > θ < 22.5	55	63	30	53	Yes	Every 3rd Bay	Every 3rd Bay	145	165	55	73	Yes	Yes	Yes	3	NG
22.5 > θ < 30	58	66	30	58	Yes	Every 3rd Bay	Every 3rd Bay	120	136	37	74	Yes	Yes	Yes	3	NG
30 > θ < 37.5	63	72	30	64	Yes	Every 3rd Bay	Every 3rd Bay	112	128	37	76	Yes	Yes	Yes	3	NG
37.5 > θ < 45	68	78	30	67	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	3

170 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	53	60	30	30	No	Every 3rd Bay	No	158	180	70	70	Yes	Yes	Yes	3	NG
0 > θ < 7.5	50	58	30	35	Yes	Every 3rd Bay	No	151	173	70	70	Yes	Yes	Yes	3	NG
7.5 > θ < 15	52	59	30	46	Yes	Every 3rd Bay	No	155	177	59	70	Yes	Yes	Yes	3	NG
15 > θ < 22.5	54	62	30	56	Yes	Every 3rd Bay	Every 3rd Bay	136	156	59	75	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	65	30	62	Yes	Every 3rd Bay	Every 3rd Bay	113	128	39	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	62	71	30	68	Yes	Every 3rd Bay	Every 3rd Bay	105	120	39	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	67	76	30	71	Yes	Every 3rd Bay	Every 3rd Bay	99	113	39	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	59	30	30	No	Every 3rd Bay	No	154	176	62	62	Yes	Yes	Yes	3	NG
0 > θ < 7.5	51	58	30	30	Yes	Every 3rd Bay	No	153	175	62	62	Yes	Yes	Yes	3	NG
7.5 > θ < 15	53	60	30	30	Yes	Every 3rd Bay	No	159	180	62	62	Yes	Yes	Yes	3	NG
15 > θ < 22.5	57	65	30	34	Yes	Every 3rd Bay	Every 3rd Bay	170	180	56	56	Yes	Yes	Yes	3	3
22.5 > θ < 30	62	70	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	44	56	Yes	Yes	Yes	2	3
30 > θ < 37.5	69	79	30	42	Yes	Every 3rd Bay	Every 3rd Bay	179	180	35	59	Yes	Yes	Yes	2	3
37.5 > θ < 45	77	87	30	45	Yes	Every 3rd Bay	Every 3rd Bay	168	180	30	62	Yes	Yes	Yes	2	2

110 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	59	30	30	No	Every 3rd Bay	No	154	176	66	66	Yes	Yes	Yes	3	NG
0 > θ < 7.5	51	58	30	30	Yes	Every 3rd Bay	No	152	174	66	66	Yes	Yes	Yes	3	NG
7.5 > θ < 15	53	60	30	30	Yes	Every 3rd Bay	No	158	180	63	63	Yes	Yes	Yes	3	NG
15 > θ < 22.5	56	64	30	37	Yes	Every 3rd Bay	Every 3rd Bay	168	180	57	57	Yes	Yes	Yes	3	3
22.5 > θ < 30	61	69	30	41	Yes	Every 3rd Bay	Every 3rd Bay	174	180	48	61	Yes	Yes	Yes	3	3
30 > θ < 37.5	68	77	30	46	Yes	Every 3rd Bay	Every 3rd Bay	163	180	38	63	Yes	Yes	Yes	2	3
37.5 > θ < 45	75	85	30	49	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	59	30	30	No	Every 3rd Bay	No	154	176	69	69	Yes	Yes	Yes	3	NG
0 > θ < 7.5	50	57	30	30	Yes	Every 3rd Bay	No	151	172	69	69	Yes	Yes	Yes	3	NG
7.5 > θ < 15	52	59	30	32	Yes	Every 3rd Bay	No	156	178	64	64	Yes	Yes	Yes	3	NG
15 > θ < 22.5	55	63	30	40	Yes	Every 3rd Bay	Every 3rd Bay	166	180	62	62	Yes	Yes	Yes	3	3
22.5 > θ < 30	60	69	30	44	Yes	Every 3rd Bay	Every 3rd Bay	159	180	52	64	Yes	Yes	Yes	3	3
30 > θ < 37.5	66	76	30	49	Yes	Every 3rd Bay	Every 3rd Bay	149	170	40	66	Yes	Yes	Yes	2	3
37.5 > θ < 45	73	84	30	52	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	59	30	30	No	Every 3rd Bay	No	154	176	71	71	Yes	Yes	Yes	3	NG
0 > θ < 7.5	50	57	30	30	Yes	Every 3rd Bay	No	150	171	67	67	Yes	Yes	Yes	3	NG
7.5 > θ < 15	52	59	30	35	Yes	Every 3rd Bay	No	155	177	65	65	Yes	Yes	Yes	3	NG
15 > θ < 22.5	55	63	30	43	Yes	Every 3rd Bay	Every 3rd Bay	165	180	56	65	Yes	Yes	Yes	3	3
22.5 > θ < 30	59	68	30	47	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	67	Yes	Yes	Yes	3	3
30 > θ < 37.5	65	74	30	52	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	3	3
37.5 > θ < 45	72	82	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	3

140 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	58	30	30	No	Every 3rd Bay	No	153	175	69	69	Yes	Yes	Yes	3	NG
0 > θ < 7.5	50	57	30	30	Yes	Every 3rd Bay	No	149	170	67	67	Yes	Yes	Yes	3	NG
7.5 > θ < 15	51	58	30	37	Yes	Every 3rd Bay	No	154	175	67	67	Yes	Yes	Yes	3	NG
15 > θ < 22.5	54	62	30	46	Yes	Every 3rd Bay	Every 3rd Bay	163	180	61	67	Yes	Yes	Yes	3	NG
22.5 > θ < 30	58	67	30	51	Yes	Every 3rd Bay	Every 3rd Bay	137	156	47	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	64	73	30	56	Yes	Every 3rd Bay	Every 3rd Bay	128	146	31	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	70	80	30	59	Yes	Every 3rd Bay	Every 3rd Bay	120	137	31	74	Yes	Yes	Yes	3	3

150 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	58	30	30	No	Every 3rd Bay	No	152	174	70	70	Yes	Yes	Yes	3	NG
0 > θ < 7.5	49	56	30	30	Yes	Every 3rd Bay	No	148	168	70	70	Yes	Yes	Yes	3	NG
7.5 > θ < 15	51	58	30	40	Yes	Every 3rd Bay	No	152	174	65	65	Yes	Yes	Yes	3	NG
15 > θ < 22.5	54	61	30	49	Yes	Every 3rd Bay	Every 3rd Bay	155	176	65	70	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	66	30	54	Yes	Every 3rd Bay	Every 3rd Bay	128	146	50	72	Yes	Yes	Yes	3	3
30 > θ < 37.5	63	72	30	56	Yes	Every 3rd Bay	Every 3rd Bay	119	136	33	72	Yes	Yes	Yes	3	3
37.5 > θ < 45	69	78	30	59	Yes	Every 3rd Bay	Every 3rd Bay	118	135	33	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	56	64	30	57	Yes	Every 3rd Bay	Every 3rd Bay	120	136	36	74	Yes	Yes	Yes	3	NG
30 > θ < 37.5	62	70	30	63	Yes	Every 3rd Bay	Every 3rd Bay	112	128	36	76	Yes	Yes	Yes	3	NG
37.5 > θ < 45	67	77	30	66	Yes	Every 3rd Bay	Every 3rd Bay	105	120	36	79	Yes	Yes	Yes	3	3

170 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	56	63	30	61	Yes	Every 3rd Bay	Every 3rd Bay	113	128	38	77	Yes	Yes	Yes	3	NG
30 > θ < 37.5	60	69	30	67	Yes	Every 3rd Bay	Every 3rd Bay	105	120	38	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	66	75	30	70	Yes	Every 3rd Bay	Every 3rd Bay	99	113	38	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	49	56	30	30	No	Every 3rd Bay	No	147	167	62	62	Yes	Yes	Yes	3	NG
0 > θ < 7.5	49	56	30	30	Yes	Every 3rd Bay	No	147	167	62	62	Yes	Yes	Yes	3	NG
7.5 > θ < 15	51	58	30	30	Yes	Every 3rd Bay	No	153	174	62	62	Yes	Yes	Yes	3	NG
15 > θ < 22.5	54	62	30	34	Yes	Every 3rd Bay	Every 3rd Bay	163	180	59	59	Yes	Yes	Yes	3	NG
22.5 > θ < 30	59	68	30	38	Yes	Every 3rd Bay	Every 3rd Bay	178	180	52	56	Yes	Yes	Yes	3	3
30 > θ < 37.5	67	76	30	42	Yes	Every 3rd Bay	Every 3rd Bay	179	180	44	59	Yes	Yes	Yes	2	3
37.5 > θ < 45	75	85	30	45	Yes	Every 3rd Bay	Every 3rd Bay	168	180	34	62	Yes	Yes	Yes	2	2

110 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	49	56	30	30	No	Every 3rd Bay	No	147	167	66	66	Yes	Yes	Yes	3	NG
0 > θ < 7.5	49	55	30	30	Yes	Every 3rd Bay	No	146	166	66	66	Yes	Yes	Yes	3	NG
7.5 > θ < 15	50	58	30	30	Yes	Every 3rd Bay	No	151	173	66	66	Yes	Yes	Yes	3	NG
15 > θ < 22.5	54	62	30	36	Yes	Every 3rd Bay	Every 3rd Bay	162	180	61	61	Yes	Yes	Yes	3	NG
22.5 > θ < 30	59	67	30	41	Yes	Every 3rd Bay	Every 3rd Bay	174	180	48	61	Yes	Yes	Yes	3	3
30 > θ < 37.5	66	75	30	45	Yes	Every 3rd Bay	Every 3rd Bay	163	180	37	63	Yes	Yes	Yes	2	3
37.5 > θ < 45	73	83	30	48	Yes	Every 3rd Bay	Every 3rd Bay	153	175	30	66	Yes	Yes	Yes	2	2

120 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	49	56	30	30	No	Every 3rd Bay	No	147	167	69	69	Yes	Yes	Yes	3	NG
0 > θ < 7.5	48	55	30	30	Yes	Every 3rd Bay	No	145	165	69	69	Yes	Yes	Yes	3	NG
7.5 > θ < 15	50	57	30	32	Yes	Every 3rd Bay	No	150	171	69	69	Yes	Yes	Yes	3	NG
15 > θ < 22.5	53	61	30	39	Yes	Every 3rd Bay	Every 3rd Bay	160	180	62	62	Yes	Yes	Yes	3	NG
22.5 > θ < 30	58	66	30	44	Yes	Every 3rd Bay	Every 3rd Bay	159	180	52	64	Yes	Yes	Yes	3	3
30 > θ < 37.5	65	74	30	48	Yes	Every 3rd Bay	Every 3rd Bay	149	170	40	66	Yes	Yes	Yes	3	3
37.5 > θ < 45	72	82	30	51	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	49	56	30	30	No	Every 3rd Bay	No	147	167	71	71	Yes	Yes	Yes	3	NG
0 > θ < 7.5	48	55	30	30	Yes	Every 3rd Bay	No	144	164	71	71	Yes	Yes	Yes	3	NG
7.5 > θ < 15	50	57	30	34	Yes	Every 3rd Bay	No	149	170	67	67	Yes	Yes	Yes	3	NG
15 > θ < 22.5	53	60	30	42	Yes	Every 3rd Bay	Every 3rd Bay	159	180	65	65	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	65	30	47	Yes	Every 3rd Bay	Every 3rd Bay	147	168	56	67	Yes	Yes	Yes	3	3
30 > θ < 37.5	63	72	30	52	Yes	Every 3rd Bay	Every 3rd Bay	138	157	43	68	Yes	Yes	Yes	3	3
37.5 > θ < 45	70	80	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	2	3

140 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	49	56	30	30	No	Every 3rd Bay	No	147	167	74	74	Yes	Yes	Yes	3	NG
0 > θ < 7.5	48	54	30	30	Yes	Every 3rd Bay	No	143	163	71	71	Yes	Yes	Yes	3	NG
7.5 > θ < 15	49	56	30	36	Yes	Every 3rd Bay	No	148	169	67	67	Yes	Yes	Yes	3	NG
15 > θ < 22.5	52	60	30	45	Yes	Every 3rd Bay	Every 3rd Bay	157	179	61	67	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	65	30	50	Yes	Every 3rd Bay	Every 3rd Bay	137	156	46	69	Yes	Yes	Yes	3	NG
30 > θ < 37.5	62	71	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	31	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	69	78	30	58	Yes	Every 3rd Bay	Every 3rd Bay	120	137	31	74	Yes	Yes	Yes	3	3

150 mph Wind Load 91-100 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	56	64	30	53	Yes	Every 3rd Bay	Every 3rd Bay	128	146	49	72	Yes	Yes	Yes	3	NG
30 > θ < 37.5	61	70	30	56	Yes	Every 3rd Bay	Every 3rd Bay	119	136	33	72	Yes	Yes	Yes	3	NG
37.5 > θ < 45	67	77	30	59	Yes	Every 3rd Bay	Every 3rd Bay	118	135	33	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	55	63	30	57	Yes	Every 3rd Bay	Every 3rd Bay	120	136	53	74	Yes	Yes	Yes	3	NG
30 > θ < 37.5	60	69	30	63	Yes	Every 3rd Bay	Every 3rd Bay	112	128	35	76	Yes	Yes	Yes	3	NG
37.5 > θ < 45	66	75	30	66	Yes	Every 3rd Bay	Every 3rd Bay	105	120	35	79	Yes	Yes	Yes	3	NG

170 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	59	67	30	67	Yes	Every 3rd Bay	Every 3rd Bay	105	120	37	79	Yes	Yes	Yes	3	NG
37.5 > θ < 45	64	74	30	70	Yes	Every 3rd Bay	Every 3rd Bay	99	113	37	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 101-110 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	53	60	30	33	Yes	Every 3rd Bay	Every 3rd Bay	158	180	62	62	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	66	30	37	Yes	Every 3rd Bay	Every 3rd Bay	172	180	52	56	Yes	Yes	Yes	3	3
30 > θ < 37.5	65	74	30	42	Yes	Every 3rd Bay	Every 3rd Bay	179	180	44	59	Yes	Yes	Yes	2	3
37.5 > θ < 45	73	83	30	45	Yes	Every 3rd Bay	Every 3rd Bay	168	180	34	62	Yes	Yes	Yes	2	2

110 mph Wind Load 101-110 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	52	59	30	36	Yes	Every 3rd Bay	Every 3rd Bay	156	178	63	63	Yes	Yes	Yes	3	NG
22.5 > θ < 30	57	65	30	40	Yes	Every 3rd Bay	Every 3rd Bay	171	180	57	61	Yes	Yes	Yes	3	3
30 > θ < 37.5	64	73	30	45	Yes	Every 3rd Bay	Every 3rd Bay	163	180	48	63	Yes	Yes	Yes	2	3
37.5 > θ < 45	71	82	30	48	Yes	Every 3rd Bay	Every 3rd Bay	153	175	36	66	Yes	Yes	Yes	2	2

120 mph Wind Load 101-110 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	52	59	30	39	Yes	Every 3rd Bay	Every 3rd Bay	155	177	64	64	Yes	Yes	Yes	3	NG
22.5 > θ < 30	56	64	30	43	Yes	Every 3rd Bay	Every 3rd Bay	159	180	51	64	Yes	Yes	Yes	3	3
30 > θ < 37.5	63	72	30	48	Yes	Every 3rd Bay	Every 3rd Bay	149	170	39	66	Yes	Yes	Yes	3	3
37.5 > θ < 45	70	80	30	51	Yes	Every 3rd Bay	Every 3rd Bay	140	160	30	69	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	51	58	30	41	Yes	Every 3rd Bay	Every 3rd Bay	153	175	65	65	Yes	Yes	Yes	3	NG
22.5 > θ < 30	56	63	30	46	Yes	Every 3rd Bay	Every 3rd Bay	147	168	55	67	Yes	Yes	Yes	3	NG
30 > θ < 37.5	62	71	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	157	42	68	Yes	Yes	Yes	3	3
37.5 > θ < 45	69	78	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	3	3

140 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	55	63	30	49	Yes	Every 3rd Bay	Every 3rd Bay	137	156	45	69	Yes	Yes	Yes	3	NG
30 > θ < 37.5	61	69	30	55	Yes	Every 3rd Bay	Every 3rd Bay	128	146	45	71	Yes	Yes	Yes	3	3
37.5 > θ < 45	67	77	30	58	Yes	Every 3rd Bay	Every 3rd Bay	120	137	30	74	Yes	Yes	Yes	3	3

150 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	54	62	30	53	Yes	Every 3rd Bay	Every 3rd Bay	128	146	48	72	Yes	Yes	Yes	3	NG
30 > θ < 37.5	60	68	30	55	Yes	Every 3rd Bay	Every 3rd Bay	119	136	32	72	Yes	Yes	Yes	3	NG
37.5 > θ < 45	66	75	30	58	Yes	Every 3rd Bay	Every 3rd Bay	118	135	32	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	59	67	30	62	Yes	Every 3rd Bay	Every 3rd Bay	112	128	34	76	Yes	Yes	Yes	3	NG
37.5 > θ < 45	65	74	30	65	Yes	Every 3rd Bay	Every 3rd Bay	105	120	34	79	Yes	Yes	Yes	3	NG

170 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
37.5 > θ < 45	63	72	30	69	Yes	Every 3rd Bay	Every 3rd Bay	99	113	36	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	56	64	30	37	Yes	Every 3rd Bay	Every 3rd Bay	167	180	56	56	Yes	Yes	Yes	3	3
30 > θ < 37.5	63	72	30	41	Yes	Every 3rd Bay	Every 3rd Bay	179	180	43	59	Yes	Yes	Yes	2	3
37.5 > θ < 45	71	81	30	44	Yes	Every 3rd Bay	Every 3rd Bay	168	180	33	62	Yes	Yes	Yes	2	2

110 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	55	63	30	40	Yes	Every 3rd Bay	Every 3rd Bay	165	180	57	61	Yes	Yes	Yes	3	NG
30 > θ < 37.5	62	71	30	44	Yes	Every 3rd Bay	Every 3rd Bay	163	180	47	63	Yes	Yes	Yes	2	3
37.5 > θ < 45	70	80	30	47	Yes	Every 3rd Bay	Every 3rd Bay	153	175	36	66	Yes	Yes	Yes	2	3

120 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	55	62	30	43	Yes	Every 3rd Bay	Every 3rd Bay	159	180	62	64	Yes	Yes	Yes	3	NG
30 > θ < 37.5	61	70	30	47	Yes	Every 3rd Bay	Every 3rd Bay	149	170	51	66	Yes	Yes	Yes	3	3
37.5 > θ < 45	69	78	30	50	Yes	Every 3rd Bay	Every 3rd Bay	140	160	38	69	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	54	62	30	46	Yes	Every 3rd Bay	Every 3rd Bay	147	168	54	67	Yes	Yes	Yes	3	NG
30 > θ < 37.5	60	69	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	157	41	68	Yes	Yes	Yes	3	3
37.5 > θ < 45	67	77	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	148	30	68	Yes	Yes	Yes	3	3

140 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	53	61	30	49	Yes	Every 3rd Bay	Every 3rd Bay	137	156	59	69	Yes	Yes	Yes	3	NG
30 > θ < 37.5	60	68	30	54	Yes	Every 3rd Bay	Every 3rd Bay	128	146	44	71	Yes	Yes	Yes	3	NG
37.5 > θ < 45	66	75	30	57	Yes	Every 3rd Bay	Every 3rd Bay	120	137	30	74	Yes	Yes	Yes	3	3

150 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	59	67	30	55	Yes	Every 3rd Bay	Every 3rd Bay	119	136	32	72	Yes	Yes	Yes	3	NG
37.5 > θ < 45	65	74	30	58	Yes	Every 3rd Bay	Every 3rd Bay	118	135	32	75	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (4 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	58	66	30	62	Yes	Every 3rd Bay	Every 3rd Bay	112	128	34	76	Yes	Yes	Yes	3	NG
37.5 > θ < 45	63	72	30	65	Yes	Every 3rd Bay	Every 3rd Bay	105	120	34	79	Yes	Yes	Yes	3	NG

170 mph Wind Load 111-120 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
0 > θ < 7.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
7.5 > θ < 15	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
15 > θ < 22.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
22.5 > θ < 30	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
30 > θ < 37.5	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
37.5 > θ < 45	62	71	30	69	Yes	Every 3rd Bay	Every 3rd Bay	99	113	36	82	Yes	Yes	Yes	3	NG

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	144	164	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	121	139	30	30	Yes	Every 3rd Bay	No	180	180	30	31	Yes	Yes	Yes	2	2
7.5 > θ < 15	114	130	30	33	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	108	123	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	103	117	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	106	121	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	108	124	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	135	154	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	112	128	30	30	Yes	Every 3rd Bay	No	180	180	30	33	Yes	Yes	Yes	2	2
7.5 > θ < 15	112	128	30	34	Yes	Every 3rd Bay	No	180	180	30	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	99	113	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	95	108	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	98	112	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	114	30	49	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	126	144	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	105	119	30	30	Yes	Every 3rd Bay	No	180	180	30	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	98	111	30	36	Yes	Every 3rd Bay	No	180	180	30	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	92	105	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	88	100	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	91	103	30	48	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	51	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	118	135	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	98	111	30	30	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	91	104	30	37	Yes	Every 3rd Bay	No	180	180	30	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	86	98	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	93	30	47	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	96	30	50	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	53	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	111	127	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	92	104	30	31	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	85	97	30	39	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	80	91	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	87	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 0 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	105	120	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	86	98	30	32	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	80	91	30	40	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	75	86	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	81	30	50	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	84	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 0 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	100	114	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	81	93	30	33	Yes	Every 3rd Bay	No	180	180	32	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	76	86	30	41	Yes	Every 3rd Bay	No	180	180	32	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	71	81	30	48	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	67	77	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	30	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	30	73	Yes	Yes	Yes	2	2

170 mph Wind Load 0 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	94	108	30	30	No	Every 3rd Bay	No	180	180	34	34	Yes	Yes	Yes	2	2
0 > θ < 7.5	77	88	30	34	Yes	Every 3rd Bay	No	180	180	34	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	81	30	42	Yes	Every 3rd Bay	No	180	180	34	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	67	76	30	49	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	63	72	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	30	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	30	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	127	145	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	113	129	30	30	Yes	Every 3rd Bay	No	180	180	30	31	Yes	Yes	Yes	2	2
7.5 > θ < 15	108	124	30	32	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	105	120	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	103	117	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	106	121	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	108	124	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	122	139	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	106	121	30	30	Yes	Every 3rd Bay	No	180	180	30	33	Yes	Yes	Yes	2	2
7.5 > θ < 15	106	121	30	34	Yes	Every 3rd Bay	No	180	180	30	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	97	111	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	95	108	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	98	112	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	100	114	30	49	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	116	133	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	99	113	30	30	Yes	Every 3rd Bay	No	180	180	30	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	94	108	30	33	Yes	Every 3rd Bay	No	180	180	30	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	91	103	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	88	100	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	91	103	30	46	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	49	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	110	126	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	93	85	30	30	Yes	Every 3rd Bay	No	180	180	30	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	89	86	30	33	Yes	Every 3rd Bay	No	180	180	30	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	85	87	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	88	30	43	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	94	30	46	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	49	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	104	119	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	88	100	30	30	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	83	95	30	36	Yes	Every 3rd Bay	No	180	180	30	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	80	91	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	87	30	46	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	50	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	53	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	64	Yes	Yes	Yes	2	2

150 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	99	113	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	83	95	30	31	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	79	90	30	39	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	75	86	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	81	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	84	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 1 to 10 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	95	108	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	79	90	30	33	Yes	Every 3rd Bay	No	180	180	32	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	74	85	30	41	Yes	Every 3rd Bay	No	180	180	32	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	71	81	30	48	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	67	77	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 1-10 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	90	103	30	30	No	Every 3rd Bay	No	180	180	34	34	Yes	Yes	Yes	2	2
0 > θ < 7.5	75	85	30	34	Yes	Every 3rd Bay	No	180	180	34	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	70	80	30	42	Yes	Every 3rd Bay	No	180	180	34	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	67	76	30	49	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	63	72	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	105	119	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	98	112	30	30	Yes	Every 3rd Bay	No	180	180	30	31	Yes	Yes	Yes	2	2
7.5 > θ < 15	99	113	30	30	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	100	114	30	34	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	99	113	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	105	120	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	108	124	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	102	116	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	95	108	30	30	Yes	Every 3rd Bay	No	180	180	30	33	Yes	Yes	Yes	2	2
7.5 > θ < 15	95	108	30	34	Yes	Every 3rd Bay	No	180	180	30	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	94	107	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	92	105	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	98	112	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	100	114	30	49	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	99	113	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	91	104	30	30	Yes	Every 3rd Bay	No	180	180	30	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	91	103	30	35	Yes	Every 3rd Bay	No	180	180	30	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	88	100	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	86	98	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	91	103	30	48	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	51	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	96	109	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	88	100	30	30	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	85	97	30	37	Yes	Every 3rd Bay	No	180	180	30	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	82	94	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	92	30	47	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	96	30	49	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	52	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	93	106	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	83	95	30	31	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	81	92	30	38	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	78	89	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	76	86	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	90	103	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	79	90	30	32	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	76	87	30	40	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	73	84	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	81	30	50	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	84	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 11 to 20 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	87	100	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	76	86	30	33	Yes	Every 3rd Bay	No	180	180	32	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	72	83	30	41	Yes	Every 3rd Bay	No	180	180	32	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	69	79	30	48	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	67	77	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 11-20 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	84	96	30	30	No	Every 3rd Bay	No	180	180	34	34	Yes	Yes	Yes	2	2
0 > θ < 7.5	72	82	30	34	Yes	Every 3rd Bay	No	180	180	34	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	69	79	30	42	Yes	Every 3rd Bay	No	180	180	34	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	66	75	30	49	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	63	72	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	92	106	30	30	No	Every 3rd Bay	No	180	180	31	31	Yes	Yes	Yes	2	2
0 > θ < 7.5	88	100	30	30	Yes	Every 3rd Bay	No	180	180	31	31	Yes	Yes	Yes	2	2
7.5 > θ < 15	90	102	30	30	Yes	Every 3rd Bay	No	180	180	31	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	93	106	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	94	108	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	101	116	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	107	122	30	51	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	90	103	30	30	No	Every 3rd Bay	No	180	180	33	33	Yes	Yes	Yes	2	2
0 > θ < 7.5	85	97	30	30	Yes	Every 3rd Bay	No	180	180	33	33	Yes	Yes	Yes	2	2
7.5 > θ < 15	85	97	30	33	Yes	Every 3rd Bay	No	180	180	30	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	88	101	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	89	102	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	96	109	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	99	113	30	49	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	88	101	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	83	94	30	30	Yes	Every 3rd Bay	No	180	180	30	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	83	95	30	35	Yes	Every 3rd Bay	No	180	180	30	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	84	96	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	84	96	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	89	102	30	48	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	51	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	86	98	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	80	91	30	30	Yes	Every 3rd Bay	No	180	180	30	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	81	92	30	36	Yes	Every 3rd Bay	No	180	180	30	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	80	92	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	79	90	30	47	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	96	30	50	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	53	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	84	96	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	78	88	30	30	Yes	Every 3rd Bay	No	180	180	30	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	78	89	30	38	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	76	87	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	74	85	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	77	88	30	30	No	Every 3rd Bay	No	180	180	30	30	Yes	Yes	Yes	2	2
0 > θ < 7.5	71	81	30	31	Yes	Every 3rd Bay	No	180	180	30	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	70	80	30	39	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	70	80	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	69	79	30	50	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	73	84	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	76	86	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 21 to 30 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	80	91	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	73	83	30	33	Yes	Every 3rd Bay	No	180	180	32	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	81	30	41	Yes	Every 3rd Bay	No	180	180	32	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	68	78	30	48	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	66	76	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 21-30 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	78	89	30	30	No	Every 3rd Bay	No	180	180	34	34	Yes	Yes	Yes	2	2
0 > θ < 7.5	70	79	30	34	Yes	Every 3rd Bay	No	180	180	34	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	67	77	30	42	Yes	Every 3rd Bay	No	180	180	34	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	65	74	30	49	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	63	72	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	84	96	30	30	No	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
0 > θ < 7.5	80	92	30	30	Yes	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	82	94	30	30	Yes	Every 3rd Bay	No	180	180	31	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	87	99	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	90	102	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	97	110	30	50	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	104	119	30	50	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	82	94	30	30	No	Every 3rd Bay	No	180	180	33	33	Yes	Yes	Yes	2	2
0 > θ < 7.5	78	89	30	30	Yes	Every 3rd Bay	No	180	180	33	33	Yes	Yes	Yes	2	2
7.5 > θ < 15	78	89	30	32	Yes	Every 3rd Bay	No	180	180	33	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	83	95	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	85	97	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	92	105	30	45	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	98	112	30	48	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	81	92	30	30	No	Every 3rd Bay	No	180	180	36	36	Yes	Yes	Yes	2	2
0 > θ < 7.5	76	87	30	30	Yes	Every 3rd Bay	No	180	180	36	36	Yes	Yes	Yes	2	2
7.5 > θ < 15	78	88	30	34	Yes	Every 3rd Bay	No	180	180	36	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	80	91	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	93	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	87	99	30	48	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	91	104	30	51	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	79	90	30	30	No	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
0 > θ < 7.5	74	85	30	30	Yes	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	75	86	30	36	Yes	Every 3rd Bay	No	180	180	39	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	77	87	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	77	88	30	46	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	82	94	30	50	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	53	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	77	88	30	30	No	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
0 > θ < 7.5	72	82	30	30	Yes	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	73	83	30	37	Yes	Every 3rd Bay	No	180	180	30	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	74	84	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	89	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	76	86	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
0 > θ < 7.5	70	80	30	31	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	80	30	39	Yes	Every 3rd Bay	No	180	180	30	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	70	80	30	46	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	69	79	30	50	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	73	84	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 31 to 40 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	74	85	30	30	No	Every 3rd Bay	No	180	180	32	32	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	78	30	32	Yes	Every 3rd Bay	No	180	180	32	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	68	78	30	40	Yes	Every 3rd Bay	No	180	180	32	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	67	76	30	47	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	65	75	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 31-40 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	72	83	30	30	No	Every 3rd Bay	No	180	180	34	34	Yes	Yes	Yes	2	2
0 > θ < 7.5	66	76	30	33	Yes	Every 3rd Bay	No	180	180	34	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	66	75	30	42	Yes	Every 3rd Bay	No	180	180	34	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	64	73	30	49	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	62	71	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	75	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	77	88	30	30	No	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
0 > θ < 7.5	74	85	30	30	Yes	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	77	87	30	30	Yes	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
15 > θ < 22.5	81	92	30	30	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	85	97	30	35	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	93	106	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	101	115	30	49	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	76	87	30	30	No	Every 3rd Bay	No	180	180	42	42	Yes	Yes	Yes	2	2
0 > θ < 7.5	73	83	30	30	Yes	Every 3rd Bay	No	180	180	42	42	Yes	Yes	Yes	2	2
7.5 > θ < 15	73	83	30	30	Yes	Every 3rd Bay	No	180	180	42	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	79	90	30	31	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	82	93	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	88	101	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	95	109	30	45	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	66	75	30	30	No	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	77	30	30	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	70	79	30	30	Yes	Every 3rd Bay	No	180	180	36	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	75	86	30	33	Yes	Every 3rd Bay	Every 3rd Bay	180	180	36	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	81	93	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	84	96	30	43	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	90	103	30	47	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	73	84	30	30	No	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
0 > θ < 7.5	70	79	30	30	Yes	Every 3rd Bay	No	180	180	39	39	Yes	Yes	Yes	2	2
7.5 > θ < 15	71	81	30	30	Yes	Every 3rd Bay	No	180	180	39	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	73	84	30	35	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	85	30	42	Yes	Every 3rd Bay	Every 3rd Bay	170	180	30	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	91	30	46	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	85	96	30	49	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	72	82	30	30	No	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	77	30	30	Yes	Every 3rd Bay	No	180	180	41	41	Yes	Yes	Yes	2	2
7.5 > θ < 15	69	78	30	30	Yes	Every 3rd Bay	No	180	180	41	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	71	80	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	41	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	71	81	30	44	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	76	87	30	48	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	51	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	71	81	30	30	No	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
0 > θ < 7.5	66	75	30	30	Yes	Every 3rd Bay	No	180	180	44	44	Yes	Yes	Yes	2	2
7.5 > θ < 15	67	76	30	30	Yes	Every 3rd Bay	No	180	180	44	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	68	77	30	38	Yes	Every 3rd Bay	Every 3rd Bay	179	180	30	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	68	78	30	45	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	72	83	30	50	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 41 to 50 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	69	79	30	30	No	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
0 > θ < 7.5	64	74	30	30	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	74	30	32	Yes	Every 3rd Bay	No	180	180	46	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	65	75	30	40	Yes	Every 3rd Bay	Every 3rd Bay	167	180	32	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	65	74	30	47	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	78	30	51	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	55	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 41-50 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	68	78	30	30	No	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
0 > θ < 7.5	63	72	30	30	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	63	72	30	33	Yes	Every 3rd Bay	No	180	180	49	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	63	71	30	41	Yes	Every 3rd Bay	Every 3rd Bay	158	180	34	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	61	70	30	49	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	74	30	53	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	56	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 51 to 60 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	72	82	30	30	No	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
0 > θ < 7.5	70	80	30	30	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	72	82	30	30	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	76	87	30	34	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	82	93	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	89	102	30	48	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	98	111	30	48	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	71	81	30	30	No	Every 3rd Bay	No	180	180	50	50	Yes	Yes	Yes	2	2
0 > θ < 7.5	68	78	30	30	Yes	Every 3rd Bay	No	180	180	50	50	Yes	Yes	Yes	2	2
7.5 > θ < 15	68	78	30	31	Yes	Every 3rd Bay	No	180	180	42	42	Yes	Yes	Yes	2	2
15 > θ < 22.5	74	85	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	42	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	78	89	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	85	97	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	47	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	70	80	30	30	No	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
0 > θ < 7.5	67	76	30	30	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	69	78	30	33	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
15 > θ < 22.5	72	83	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	36	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	86	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	36	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	81	93	30	47	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	88	100	30	50	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

130 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	69	78	30	30	No	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
0 > θ < 7.5	66	75	30	30	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	67	76	30	35	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	70	80	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	72	82	30	45	Yes	Every 3rd Bay	Every 3rd Bay	170	180	39	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	89	30	49	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	83	95	30	52	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	68	77	30	30	No	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	2
0 > θ < 7.5	64	73	30	30	Yes	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	75	30	36	Yes	Every 3rd Bay	No	180	180	41	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	68	77	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	41	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	69	79	30	47	Yes	Every 3rd Bay	Every 3rd Bay	158	180	30	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	85	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	79	90	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	67	76	30	30	No	Every 3rd Bay	No	180	180	56	56	Yes	Yes	Yes	2	2
0 > θ < 7.5	63	72	30	30	Yes	Every 3rd Bay	No	180	180	56	56	Yes	Yes	Yes	2	2
7.5 > θ < 15	64	73	30	38	Yes	Every 3rd Bay	No	180	180	44	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	66	75	30	45	Yes	Every 3rd Bay	Every 3rd Bay	179	180	44	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	66	76	30	49	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	71	81	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	74	85	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 51 to 60 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	65	75	30	30	No	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
0 > θ < 7.5	61	70	30	31	Yes	Every 3rd Bay	No	180	180	46	46	Yes	Yes	Yes	2	2
7.5 > θ < 15	62	71	30	39	Yes	Every 3rd Bay	No	180	180	46	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	63	72	30	47	Yes	Every 3rd Bay	Every 3rd Bay	167	180	46	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	64	73	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	68	78	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 51-60 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	64	73	30	30	No	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
0 > θ < 7.5	60	68	30	32	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
7.5 > θ < 15	60	69	30	41	Yes	Every 3rd Bay	No	180	180	49	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	61	70	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	49	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	61	69	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	74	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	67	77	30	30	No	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
0 > θ < 7.5	66	75	30	30	Yes	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
7.5 > θ < 15	68	78	30	30	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	73	83	30	34	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	78	89	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	86	98	30	48	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	95	108	30	48	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	67	76	30	30	No	Every 3rd Bay	No	180	180	53	53	Yes	Yes	Yes	2	2
0 > θ < 7.5	65	74	30	30	Yes	Every 3rd Bay	No	180	180	53	53	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	74	30	30	Yes	Every 3rd Bay	No	180	180	50	50	Yes	Yes	Yes	2	2
15 > θ < 22.5	71	81	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	42	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	86	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	82	94	30	44	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	90	103	30	47	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	66	75	30	30	No	Every 3rd Bay	No	180	180	54	54	Yes	Yes	Yes	2	2
0 > θ < 7.5	63	72	30	30	Yes	Every 3rd Bay	No	180	180	54	54	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	74	30	32	Yes	Every 3rd Bay	No	180	180	54	54	Yes	Yes	Yes	2	2
15 > θ < 22.5	69	79	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	36	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	79	90	30	46	Yes	Every 3rd Bay	Every 3rd Bay	172	180	30	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	49	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	65	74	30	30	No	Every 3rd Bay	No	180	180	58	58	Yes	Yes	Yes	2	2
0 > θ < 7.5	62	71	30	30	Yes	Every 3rd Bay	No	180	180	58	58	Yes	Yes	Yes	2	2
7.5 > θ < 15	64	73	30	34	Yes	Every 3rd Bay	No	180	180	49	49	Yes	Yes	Yes	2	2
15 > θ < 22.5	67	77	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	49	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	70	80	30	45	Yes	Every 3rd Bay	Every 3rd Bay	170	180	39	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	76	86	30	49	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	52	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	64	73	30	30	No	Every 3rd Bay	No	180	180	62	62	Yes	Yes	Yes	2	2
0 > θ < 7.5	61	70	30	30	Yes	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	2
7.5 > θ < 15	62	71	30	36	Yes	Every 3rd Bay	No	180	180	52	52	Yes	Yes	Yes	2	2
15 > θ < 22.5	65	75	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	41	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	67	77	30	47	Yes	Every 3rd Bay	Every 3rd Bay	158	180	41	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	72	83	30	51	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	78	89	30	54	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 61-70 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	63	72	30	30	No	Every 3rd Bay	No	180	180	56	56	Yes	Yes	Yes	2	2
0 > θ < 7.5	60	68	30	30	Yes	Every 3rd Bay	No	179	180	56	56	Yes	Yes	Yes	2	2
7.5 > θ < 15	61	70	30	37	Yes	Every 3rd Bay	No	180	180	56	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	63	72	30	45	Yes	Every 3rd Bay	Every 3rd Bay	179	180	44	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	65	74	30	49	Yes	Every 3rd Bay	Every 3rd Bay	147	168	30	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	74	84	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 61 to 70 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	62	71	30	30	No	Every 3rd Bay	No	180	180	59	59	Yes	Yes	Yes	2	2
0 > θ < 7.5	59	67	30	31	Yes	Every 3rd Bay	No	176	180	59	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	60	68	30	39	Yes	Every 3rd Bay	No	179	180	59	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	61	70	30	46	Yes	Every 3rd Bay	Every 3rd Bay	167	180	46	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	62	71	30	51	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	67	76	30	55	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	58	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 61-70 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	61	70	30	30	No	Every 3rd Bay	No	180	180	63	63	Yes	Yes	Yes	2	2
0 > θ < 7.5	57	65	30	32	Yes	Every 3rd Bay	No	172	180	63	63	Yes	Yes	Yes	2	2
7.5 > θ < 15	58	66	30	40	Yes	Every 3rd Bay	No	174	180	49	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	59	68	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	49	68	Yes	Yes	Yes	2	2
22.5 > θ < 30	60	68	30	53	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	2
30 > θ < 37.5	64	73	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	76	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	63	72	30	30	No	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
0 > θ < 7.5	62	71	30	30	Yes	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
7.5 > θ < 15	65	74	30	30	Yes	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
15 > θ < 22.5	69	79	30	33	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	46	Yes	Yes	Yes	2	2
22.5 > θ < 30	75	86	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	83	95	30	47	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	92	105	30	47	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	63	72	30	30	No	Every 3rd Bay	No	180	180	59	59	Yes	Yes	Yes	2	2
0 > θ < 7.5	61	70	30	30	Yes	Every 3rd Bay	No	180	180	59	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	61	70	30	30	Yes	Every 3rd Bay	No	180	180	53	53	Yes	Yes	Yes	2	2
15 > θ < 22.5	68	77	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	50	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	73	83	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	42	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	80	91	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	88	100	30	46	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	62	71	30	30	No	Every 3rd Bay	No	180	180	61	61	Yes	Yes	Yes	2	2
0 > θ < 7.5	60	69	30	30	Yes	Every 3rd Bay	No	180	180	61	61	Yes	Yes	Yes	2	2
7.5 > θ < 15	62	71	30	32	Yes	Every 3rd Bay	No	180	180	54	54	Yes	Yes	Yes	2	2
15 > θ < 22.5	66	75	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	70	80	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	36	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	77	87	30	46	Yes	Every 3rd Bay	Every 3rd Bay	172	180	36	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	84	95	30	49	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	62	70	30	30	No	Every 3rd Bay	No	180	180	62	62	Yes	Yes	Yes	2	2
0 > θ < 7.5	59	68	30	30	Yes	Every 3rd Bay	No	178	180	62	62	Yes	Yes	Yes	2	2
7.5 > θ < 15	61	70	30	34	Yes	Every 3rd Bay	No	180	180	58	58	Yes	Yes	Yes	2	2
15 > θ < 22.5	65	74	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	49	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	68	77	30	44	Yes	Every 3rd Bay	Every 3rd Bay	170	180	39	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	74	84	30	48	Yes	Every 3rd Bay	Every 3rd Bay	159	180	30	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	51	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	61	69	30	30	No	Every 3rd Bay	No	180	180	62	62	Yes	Yes	Yes	2	2
0 > θ < 7.5	58	67	30	30	Yes	Every 3rd Bay	No	175	180	62	62	Yes	Yes	Yes	2	2
7.5 > θ < 15	60	68	30	35	Yes	Every 3rd Bay	No	179	180	62	62	Yes	Yes	Yes	2	2
15 > θ < 22.5	63	72	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	52	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	65	74	30	46	Yes	Every 3rd Bay	Every 3rd Bay	158	180	41	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	71	81	30	50	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	76	87	30	53	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 71-80 psf Snow																	
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	60	69	30	30	No	Every 3rd Bay	No	180	180	65	65	Yes	Yes	Yes	2	2
0 > θ < 7.5	57	65	30	30	Yes	Every 3rd Bay	No	172	180	65	65	Yes	Yes	Yes	2	2
7.5 > θ < 15	59	67	30	37	Yes	Every 3rd Bay	No	176	180	56	56	Yes	Yes	Yes	2	2
15 > θ < 22.5	61	70	30	44	Yes	Every 3rd Bay	Every 3rd Bay	179	180	56	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	63	72	30	48	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	68	77	30	53	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	73	83	30	56	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 71 to 80 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	59	68	30	30	No	Every 3rd Bay	No	178	180	66	66	Yes	Yes	Yes	2	2
0 > θ < 7.5	56	64	30	30	Yes	Every 3rd Bay	No	168	180	66	66	Yes	Yes	Yes	2	2
7.5 > θ < 15	57	65	30	39	Yes	Every 3rd Bay	No	172	180	59	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	60	68	30	46	Yes	Every 3rd Bay	Every 3rd Bay	167	180	46	66	Yes	Yes	Yes	2	2
22.5 > θ < 30	61	69	30	50	Yes	Every 3rd Bay	Every 3rd Bay	138	158	32	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	74	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	69	79	30	57	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 71-80 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	58	67	30	30	No	Every 3rd Bay	No	175	180	63	63	Yes	Yes	Yes	2	2
0 > θ < 7.5	55	63	30	31	Yes	Every 3rd Bay	No	165	180	63	63	Yes	Yes	Yes	2	2
7.5 > θ < 15	56	64	30	40	Yes	Every 3rd Bay	No	168	180	63	63	Yes	Yes	Yes	2	3
15 > θ < 22.5	58	66	30	48	Yes	Every 3rd Bay	Every 3rd Bay	158	180	49	68	Yes	Yes	Yes	2	3
22.5 > θ < 30	59	67	30	52	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	3
30 > θ < 37.5	63	72	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	66	75	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	60	68	30	30	No	Every 3rd Bay	No	180	180	63	63	Yes	Yes	Yes	2	2
0 > θ < 7.5	60	68	30	30	Yes	Every 3rd Bay	No	179	180	63	63	Yes	Yes	Yes	2	2
7.5 > θ < 15	62	71	30	30	Yes	Every 3rd Bay	No	180	180	60	60	Yes	Yes	Yes	2	2
15 > θ < 22.5	66	76	30	33	Yes	Every 3rd Bay	Every 3rd Bay	180	180	60	60	Yes	Yes	Yes	2	2
22.5 > θ < 30	72	83	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	81	92	30	47	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	90	102	30	47	Yes	Every 3rd Bay	Every 3rd Bay	180	180	30	60	Yes	Yes	Yes	2	2

110 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	60	68	30	30	No	Every 3rd Bay	No	180	180	59	59	Yes	Yes	Yes	2	2
0 > θ < 7.5	59	67	30	30	Yes	Every 3rd Bay	No	176	180	59	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	59	67	30	30	Yes	Every 3rd Bay	No	176	180	59	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	65	74	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	50	50	Yes	Yes	Yes	2	2
22.5 > θ < 30	70	80	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	42	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	88	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	86	98	30	46	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	59	68	30	30	No	Every 3rd Bay	No	178	180	64	64	Yes	Yes	Yes	2	2
0 > θ < 7.5	58	66	30	30	Yes	Every 3rd Bay	No	173	180	64	64	Yes	Yes	Yes	2	2
7.5 > θ < 15	60	68	30	31	Yes	Every 3rd Bay	No	179	180	61	61	Yes	Yes	Yes	2	2
15 > θ < 22.5	64	73	30	38	Yes	Every 3rd Bay	Every 3rd Bay	180	180	54	54	Yes	Yes	Yes	2	2
22.5 > θ < 30	68	78	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	75	85	30	46	Yes	Every 3rd Bay	Every 3rd Bay	172	180	36	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	82	93	30	49	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	59	67	30	30	No	Every 3rd Bay	No	177	180	67	67	Yes	Yes	Yes	2	2
0 > θ < 7.5	57	65	30	30	Yes	Every 3rd Bay	No	171	180	67	67	Yes	Yes	Yes	2	2
7.5 > θ < 15	59	67	30	33	Yes	Every 3rd Bay	No	176	180	62	62	Yes	Yes	Yes	2	2
15 > θ < 22.5	62	71	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	58	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	66	75	30	44	Yes	Every 3rd Bay	Every 3rd Bay	170	180	49	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	72	82	30	48	Yes	Every 3rd Bay	Every 3rd Bay	159	180	39	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	78	89	30	51	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	58	66	30	30	No	Every 3rd Bay	No	174	180	69	69	Yes	Yes	Yes	2	2
0 > θ < 7.5	56	64	30	30	Yes	Every 3rd Bay	No	168	180	69	69	Yes	Yes	Yes	2	2
7.5 > θ < 15	57	66	30	35	Yes	Every 3rd Bay	No	172	180	62	62	Yes	Yes	Yes	2	2
15 > θ < 22.5	61	69	30	42	Yes	Every 3rd Bay	Every 3rd Bay	180	180	52	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	64	73	30	46	Yes	Every 3rd Bay	Every 3rd Bay	158	180	41	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	69	79	30	50	Yes	Every 3rd Bay	Every 3rd Bay	148	168	30	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	75	85	30	53	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	66	30	30	No	Every 3rd Bay	No	172	180	68	68	Yes	Yes	Yes	2	2
0 > θ < 7.5	55	63	30	30	Yes	Every 3rd Bay	No	165	180	66	66	Yes	Yes	Yes	2	2
7.5 > θ < 15	56	64	30	37	Yes	Every 3rd Bay	No	169	180	65	65	Yes	Yes	Yes	2	2
15 > θ < 22.5	59	68	30	44	Yes	Every 3rd Bay	Every 3rd Bay	178	180	56	65	Yes	Yes	Yes	2	2
22.5 > θ < 30	61	70	30	48	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	66	76	30	52	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	72	82	30	55	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 81 to 90 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	170	180	69	69	Yes	Yes	Yes	2	3
0 > θ < 7.5	54	62	30	30	Yes	Every 3rd Bay	No	162	180	66	66	Yes	Yes	Yes	2	3
7.5 > θ < 15	55	63	30	38	Yes	Every 3rd Bay	No	166	180	66	66	Yes	Yes	Yes	2	3
15 > θ < 22.5	58	66	30	46	Yes	Every 3rd Bay	Every 3rd Bay	167	180	59	66	Yes	Yes	Yes	2	3
22.5 > θ < 30	59	68	30	50	Yes	Every 3rd Bay	Every 3rd Bay	138	158	46	69	Yes	Yes	Yes	2	2
30 > θ < 37.5	64	73	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	69	78	30	57	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 81-90 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	64	30	30	No	Every 3rd Bay	No	168	180	68	68	Yes	Yes	Yes	2	3
0 > θ < 7.5	53	61	30	31	Yes	Every 3rd Bay	No	159	180	68	68	Yes	Yes	Yes	2	3
7.5 > θ < 15	54	62	30	40	Yes	Every 3rd Bay	No	162	180	63	63	Yes	Yes	Yes	2	3
15 > θ < 22.5	56	64	30	47	Yes	Every 3rd Bay	Every 3rd Bay	158	180	63	68	Yes	Yes	Yes	2	3
22.5 > θ < 30	57	65	30	52	Yes	Every 3rd Bay	Every 3rd Bay	130	148	34	70	Yes	Yes	Yes	2	3
30 > θ < 37.5	62	70	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	34	73	Yes	Yes	Yes	2	2
37.5 > θ < 45	65	75	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	34	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	171	180	63	63	Yes	Yes	Yes	2	2
0 > θ < 7.5	57	65	30	30	Yes	Every 3rd Bay	No	171	180	63	63	Yes	Yes	Yes	2	2
7.5 > θ < 15	59	68	30	30	Yes	Every 3rd Bay	No	178	180	63	63	Yes	Yes	Yes	2	2
15 > θ < 22.5	64	73	30	32	Yes	Every 3rd Bay	Every 3rd Bay	180	180	60	60	Yes	Yes	Yes	2	2
22.5 > θ < 30	70	80	30	36	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	49	Yes	Yes	Yes	2	2
30 > θ < 37.5	78	89	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	87	100	30	46	Yes	Every 3rd Bay	Every 3rd Bay	180	180	31	60	Yes	Yes	Yes	2	2

110 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	171	180	59	59	Yes	Yes	Yes	2	2
0 > θ < 7.5	56	64	30	30	Yes	Every 3rd Bay	No	169	180	59	59	Yes	Yes	Yes	2	2
7.5 > θ < 15	56	64	30	30	Yes	Every 3rd Bay	No	169	180	59	59	Yes	Yes	Yes	2	2
15 > θ < 22.5	63	71	30	35	Yes	Every 3rd Bay	Every 3rd Bay	180	180	56	56	Yes	Yes	Yes	2	2
22.5 > θ < 30	68	78	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	50	53	Yes	Yes	Yes	2	2
30 > θ < 37.5	75	86	30	43	Yes	Every 3rd Bay	Every 3rd Bay	180	180	33	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	84	95	30	46	Yes	Every 3rd Bay	Every 3rd Bay	177	180	30	59	Yes	Yes	Yes	2	2

120 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	57	65	30	30	No	Every 3rd Bay	No	171	180	64	64	Yes	Yes	Yes	2	2
0 > θ < 7.5	55	63	30	30	Yes	Every 3rd Bay	No	166	180	64	64	Yes	Yes	Yes	2	2
7.5 > θ < 15	57	66	30	31	Yes	Every 3rd Bay	No	172	180	64	64	Yes	Yes	Yes	2	2
15 > θ < 22.5	61	70	30	37	Yes	Every 3rd Bay	Every 3rd Bay	180	180	58	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	66	76	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	46	58	Yes	Yes	Yes	2	2
30 > θ < 37.5	73	83	30	45	Yes	Every 3rd Bay	Every 3rd Bay	172	180	36	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	80	91	30	48	Yes	Every 3rd Bay	Every 3rd Bay	162	180	30	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	64	30	30	No	Every 3rd Bay	No	169	180	67	67	Yes	Yes	Yes	2	2
0 > θ < 7.5	55	62	30	30	Yes	Every 3rd Bay	No	164	180	67	67	Yes	Yes	Yes	2	2
7.5 > θ < 15	56	64	30	33	Yes	Every 3rd Bay	No	169	180	67	67	Yes	Yes	Yes	2	2
15 > θ < 22.5	60	68	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	58	58	Yes	Yes	Yes	2	2
22.5 > θ < 30	64	73	30	43	Yes	Every 3rd Bay	Every 3rd Bay	170	180	49	62	Yes	Yes	Yes	2	2
30 > θ < 37.5	70	80	30	48	Yes	Every 3rd Bay	Every 3rd Bay	159	180	39	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	77	88	30	51	Yes	Every 3rd Bay	Every 3rd Bay	150	171	30	64	Yes	Yes	Yes	2	2

140 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	56	64	30	30	No	Every 3rd Bay	No	167	180	69	69	Yes	Yes	Yes	2	3
0 > θ < 7.5	54	61	30	30	Yes	Every 3rd Bay	No	162	180	69	69	Yes	Yes	Yes	2	3
7.5 > θ < 15	55	63	30	34	Yes	Every 3rd Bay	No	166	180	66	66	Yes	Yes	Yes	2	2
15 > θ < 22.5	59	67	30	41	Yes	Every 3rd Bay	Every 3rd Bay	176	180	62	62	Yes	Yes	Yes	2	2
22.5 > θ < 30	62	71	30	45	Yes	Every 3rd Bay	Every 3rd Bay	158	180	52	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	68	77	30	50	Yes	Every 3rd Bay	Every 3rd Bay	148	168	41	66	Yes	Yes	Yes	2	2
37.5 > θ < 45	74	84	30	53	Yes	Every 3rd Bay	Every 3rd Bay	139	158	30	69	Yes	Yes	Yes	2	2

150 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	55	63	30	30	No	Every 3rd Bay	No	165	180	71	71	Yes	Yes	Yes	2	3
0 > θ < 7.5	53	60	30	30	Yes	Every 3rd Bay	No	159	180	71	71	Yes	Yes	Yes	2	3
7.5 > θ < 15	54	62	30	36	Yes	Every 3rd Bay	No	163	180	66	66	Yes	Yes	Yes	2	3
15 > θ < 22.5	57	66	30	43	Yes	Every 3rd Bay	Every 3rd Bay	172	180	56	65	Yes	Yes	Yes	2	3
22.5 > θ < 30	60	68	30	48	Yes	Every 3rd Bay	Every 3rd Bay	147	168	44	66	Yes	Yes	Yes	2	2
30 > θ < 37.5	65	74	30	52	Yes	Every 3rd Bay	Every 3rd Bay	138	157	30	68	Yes	Yes	Yes	2	2
37.5 > θ < 45	70	80	30	55	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 91 to 100 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	73	73	Yes	Yes	Yes	2	3
0 > θ < 7.5	52	59	30	30	Yes	Every 3rd Bay	No	156	178	73	73	Yes	Yes	Yes	2	3
7.5 > θ < 15	53	61	30	38	Yes	Every 3rd Bay	No	160	180	66	66	Yes	Yes	Yes	2	3
15 > θ < 22.5	56	64	30	45	Yes	Every 3rd Bay	Every 3rd Bay	167	180	59	66	Yes	Yes	Yes	2	3
22.5 > θ < 30	58	66	30	49	Yes	Every 3rd Bay	Every 3rd Bay	138	158	46	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	63	72	30	54	Yes	Every 3rd Bay	Every 3rd Bay	129	147	32	70	Yes	Yes	Yes	2	2
37.5 > θ < 45	68	77	30	57	Yes	Every 3rd Bay	Every 3rd Bay	121	139	32	73	Yes	Yes	Yes	2	2

170 mph Wind Load 91-100 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	61	30	30	No	Every 3rd Bay	No	162	180	76	76	Yes	Yes	Yes	2	3
0 > θ < 7.5	51	58	30	31	Yes	Every 3rd Bay	No	154	175	73	73	Yes	Yes	Yes	2	3
7.5 > θ < 15	52	60	30	39	Yes	Every 3rd Bay	No	157	179	68	68	Yes	Yes	Yes	2	3
15 > θ < 22.5	55	63	30	47	Yes	Every 3rd Bay	Every 3rd Bay	158	180	63	68	Yes	Yes	Yes	2	3
22.5 > θ < 30	56	64	30	51	Yes	Every 3rd Bay	Every 3rd Bay	130	148	49	70	Yes	Yes	Yes	2	3
30 > θ < 37.5	61	69	30	56	Yes	Every 3rd Bay	Every 3rd Bay	122	139	33	73	Yes	Yes	Yes	2	3
37.5 > θ < 45	65	74	30	59	Yes	Every 3rd Bay	Every 3rd Bay	114	130	33	76	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	63	63	Yes	Yes	Yes	2	3
0 > θ < 7.5	55	62	30	30	Yes	Every 3rd Bay	No	164	180	63	63	Yes	Yes	Yes	2	3
7.5 > θ < 15	55	63	30	30	Yes	Every 3rd Bay	No	165	180	63	63	Yes	Yes	Yes	2	3
15 > θ < 22.5	56	64	30	30	Yes	Every 3rd Bay	Every 3rd Bay	168	180	63	63	Yes	Yes	Yes	2	3
22.5 > θ < 30	58	66	30	33	Yes	Every 3rd Bay	Every 3rd Bay	173	180	63	63	Yes	Yes	Yes	2	2
30 > θ < 37.5	61	69	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	63	63	Yes	Yes	Yes	2	2
37.5 > θ < 45	64	73	30	41	Yes	Every 3rd Bay	Every 3rd Bay	180	180	60	60	Yes	Yes	Yes	2	2

110 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	59	59	Yes	Yes	Yes	2	3
0 > θ < 7.5	54	62	30	30	Yes	Every 3rd Bay	No	162	180	59	59	Yes	Yes	Yes	2	3
7.5 > θ < 15	54	62	30	30	Yes	Every 3rd Bay	No	162	180	59	59	Yes	Yes	Yes	2	3
15 > θ < 22.5	55	63	30	33	Yes	Every 3rd Bay	Every 3rd Bay	165	180	59	59	Yes	Yes	Yes	2	3
22.5 > θ < 30	57	65	30	36	Yes	Every 3rd Bay	Every 3rd Bay	170	180	59	59	Yes	Yes	Yes	2	2
30 > θ < 37.5	60	69	30	39	Yes	Every 3rd Bay	Every 3rd Bay	180	180	59	59	Yes	Yes	Yes	2	2
37.5 > θ < 45	63	72	30	42	Yes	Every 3rd Bay	Every 3rd Bay	177	180	59	59	Yes	Yes	Yes	2	2

120 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	64	64	Yes	Yes	Yes	2	3
0 > θ < 7.5	53	61	30	30	Yes	Every 3rd Bay	No	160	180	64	64	Yes	Yes	Yes	2	3
7.5 > θ < 15	54	61	30	30	Yes	Every 3rd Bay	No	161	180	64	64	Yes	Yes	Yes	2	3
15 > θ < 22.5	54	62	30	35	Yes	Every 3rd Bay	Every 3rd Bay	163	180	64	64	Yes	Yes	Yes	2	3
22.5 > θ < 30	56	64	30	38	Yes	Every 3rd Bay	Every 3rd Bay	167	180	64	64	Yes	Yes	Yes	2	2
30 > θ < 37.5	59	67	30	41	Yes	Every 3rd Bay	Every 3rd Bay	172	180	64	64	Yes	Yes	Yes	2	2
37.5 > θ < 45	62	70	30	44	Yes	Every 3rd Bay	Every 3rd Bay	162	180	58	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	62	30	30	No	Every 3rd Bay	No	163	180	67	67	Yes	Yes	Yes	2	3
0 > θ < 7.5	53	60	30	30	Yes	Every 3rd Bay	No	158	180	67	67	Yes	Yes	Yes	2	3
7.5 > θ < 15	53	60	30	32	Yes	Every 3rd Bay	No	158	180	67	67	Yes	Yes	Yes	2	3
15 > θ < 22.5	53	61	30	37	Yes	Every 3rd Bay	Every 3rd Bay	160	180	67	67	Yes	Yes	Yes	2	3
22.5 > θ < 30	55	63	30	40	Yes	Every 3rd Bay	Every 3rd Bay	164	180	67	67	Yes	Yes	Yes	2	3
30 > θ < 37.5	58	66	30	43	Yes	Every 3rd Bay	Every 3rd Bay	159	180	67	67	Yes	Yes	Yes	2	2
37.5 > θ < 45	60	69	30	46	Yes	Every 3rd Bay	Every 3rd Bay	150	171	58	64	Yes	Yes	Yes	2	2

140 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	54	61	30	30	No	Every 3rd Bay	No	161	180	69	69	Yes	Yes	Yes	2	3
0 > θ < 7.5	52	59	30	30	Yes	Every 3rd Bay	No	156	178	69	69	Yes	Yes	Yes	2	3
7.5 > θ < 15	52	59	30	33	Yes	Every 3rd Bay	No	156	178	69	69	Yes	Yes	Yes	2	3
15 > θ < 22.5	52	60	30	39	Yes	Every 3rd Bay	Every 3rd Bay	157	180	69	69	Yes	Yes	Yes	2	3
22.5 > θ < 30	54	61	30	43	Yes	Every 3rd Bay	Every 3rd Bay	158	180	69	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	56	64	30	46	Yes	Every 3rd Bay	Every 3rd Bay	148	168	62	66	Yes	Yes	Yes	2	3
37.5 > θ < 45	59	67	30	49	Yes	Every 3rd Bay	Every 3rd Bay	139	158	52	69	Yes	Yes	Yes	2	2

150 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	53	61	30	30	No	Every 3rd Bay	No	159	180	71	71	Yes	Yes	Yes	2	3
0 > θ < 7.5	51	58	30	30	Yes	Every 3rd Bay	No	154	175	71	71	Yes	Yes	Yes	2	3
7.5 > θ < 15	51	58	30	35	Yes	Every 3rd Bay	No	153	175	71	71	Yes	Yes	Yes	2	3
15 > θ < 22.5	52	59	30	41	Yes	Every 3rd Bay	Every 3rd Bay	155	176	71	71	Yes	Yes	Yes	2	3
22.5 > θ < 30	53	60	30	45	Yes	Every 3rd Bay	Every 3rd Bay	147	168	66	66	Yes	Yes	Yes	2	3
30 > θ < 37.5	55	62	30	48	Yes	Every 3rd Bay	Every 3rd Bay	138	157	65	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	57	65	30	51	Yes	Every 3rd Bay	Every 3rd Bay	130	148	55	71	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 101 to 110 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	53	60	30	30	No	Every 3rd Bay	No	158	180	73	73	Yes	Yes	Yes	2	3
0 > θ < 7.5	50	58	30	30	Yes	Every 3rd Bay	No	151	173	73	73	Yes	Yes	Yes	2	3
7.5 > θ < 15	50	57	30	36	Yes	Every 3rd Bay	No	151	172	73	73	Yes	Yes	Yes	2	3
15 > θ < 22.5	51	58	30	43	Yes	Every 3rd Bay	Every 3rd Bay	152	173	73	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	51	59	30	47	Yes	Every 3rd Bay	Every 3rd Bay	138	158	66	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	53	61	30	50	Yes	Every 3rd Bay	Every 3rd Bay	129	147	58	70	Yes	Yes	Yes	2	3
37.5 > θ < 45	55	63	30	53	Yes	Every 3rd Bay	Every 3rd Bay	121	139	46	73	Yes	Yes	Yes	2	3

170 mph Wind Load 101-110 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	59	30	30	No	Every 3rd Bay	No	156	178	76	76	Yes	Yes	Yes	3	3
0 > θ < 7.5	50	57	30	30	Yes	Every 3rd Bay	No	149	170	76	76	Yes	Yes	Yes	3	3
7.5 > θ < 15	49	56	30	38	Yes	Every 3rd Bay	No	148	169	76	76	Yes	Yes	Yes	3	3
15 > θ < 22.5	50	57	30	45	Yes	Every 3rd Bay	Every 3rd Bay	149	170	73	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	50	57	30	48	Yes	Every 3rd Bay	Every 3rd Bay	130	148	61	70	Yes	Yes	Yes	3	3
30 > θ < 37.5	52	59	30	52	Yes	Every 3rd Bay	Every 3rd Bay	122	139	61	73	Yes	Yes	Yes	3	3
37.5 > θ < 45	54	62	30	55	Yes	Every 3rd Bay	Every 3rd Bay	114	130	48	76	Yes	Yes	Yes	3	3

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

100 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	60	30	30	No	Every 3rd Bay	No	157	179	63	63	Yes	Yes	Yes	2	3
0 > θ < 7.5	52	60	32	32	Yes	Every 3rd Bay	No	157	179	63	63	Yes	Yes	Yes	2	3
7.5 > θ < 15	53	61	30	30	Yes	Every 3rd Bay	No	159	180	63	63	Yes	Yes	Yes	2	3
15 > θ < 22.5	54	62	30	30	Yes	Every 3rd Bay	Every 3rd Bay	162	180	63	63	Yes	Yes	Yes	2	3
22.5 > θ < 30	56	63	30	32	Yes	Every 3rd Bay	Every 3rd Bay	167	180	63	63	Yes	Yes	Yes	2	2
30 > θ < 37.5	59	67	30	40	Yes	Every 3rd Bay	Every 3rd Bay	176	180	60	60	Yes	Yes	Yes	2	2
37.5 > θ < 45	62	71	30	40	Yes	Every 3rd Bay	Every 3rd Bay	180	180	39	60	Yes	Yes	Yes	2	2

110 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	60	30	30	No	Every 3rd Bay	No	157	179	59	59	Yes	Yes	Yes	2	3
0 > θ < 7.5	52	60	33	33	Yes	Every 3rd Bay	No	157	179	59	59	Yes	Yes	Yes	2	3
7.5 > θ < 15	52	60	30	30	Yes	Every 3rd Bay	No	157	179	59	59	Yes	Yes	Yes	2	3
15 > θ < 22.5	53	61	30	33	Yes	Every 3rd Bay	Every 3rd Bay	160	180	59	59	Yes	Yes	Yes	2	3
22.5 > θ < 30	55	62	30	36	Yes	Every 3rd Bay	Every 3rd Bay	164	180	59	59	Yes	Yes	Yes	2	3
30 > θ < 37.5	58	66	30	38	Yes	Every 3rd Bay	Every 3rd Bay	174	180	53	56	Yes	Yes	Yes	2	2
37.5 > θ < 45	61	70	30	41	Yes	Every 3rd Bay	Every 3rd Bay	177	180	42	59	Yes	Yes	Yes	2	2

120 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	60	30	30	No	Every 3rd Bay	No	157	179	64	64	Yes	Yes	Yes	2	3
0 > θ < 7.5	52	59	30	30	Yes	Every 3rd Bay	No	155	177	64	64	Yes	Yes	Yes	2	3
7.5 > θ < 15	52	59	30	30	Yes	Every 3rd Bay	No	155	177	64	64	Yes	Yes	Yes	2	3
15 > θ < 22.5	52	60	30	35	Yes	Every 3rd Bay	Every 3rd Bay	157	180	64	64	Yes	Yes	Yes	2	3
22.5 > θ < 30	54	62	30	38	Yes	Every 3rd Bay	Every 3rd Bay	162	180	64	64	Yes	Yes	Yes	2	3
30 > θ < 37.5	57	65	30	41	Yes	Every 3rd Bay	Every 3rd Bay	172	180	54	61	Yes	Yes	Yes	2	2
37.5 > θ < 45	60	68	30	44	Yes	Every 3rd Bay	Every 3rd Bay	162	180	36	64	Yes	Yes	Yes	2	2

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

130 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	60	30	30	No	Every 3rd Bay	No	157	179	67	67	Yes	Yes	Yes	2	3
0 > θ < 7.5	51	58	31	31	Yes	Every 3rd Bay	No	153	174	67	67	Yes	Yes	Yes	2	3
7.5 > θ < 15	51	58	31	31	Yes	Every 3rd Bay	No	153	175	67	67	Yes	Yes	Yes	2	3
15 > θ < 22.5	52	59	30	37	Yes	Every 3rd Bay	Every 3rd Bay	155	177	67	67	Yes	Yes	Yes	2	3
22.5 > θ < 30	53	61	30	40	Yes	Every 3rd Bay	Every 3rd Bay	159	180	67	67	Yes	Yes	Yes	2	3
30 > θ < 37.5	56	64	30	43	Yes	Every 3rd Bay	Every 3rd Bay	159	180	58	64	Yes	Yes	Yes	2	3
37.5 > θ < 45	58	67	30	46	Yes	Every 3rd Bay	Every 3rd Bay	150	171	38	64	Yes	Yes	Yes	2	2

140 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	52	59	30	30	No	Every 3rd Bay	No	155	177	69	69	Yes	Yes	Yes	2	3
0 > θ < 7.5	50	57	33	33	Yes	Every 3rd Bay	No	151	172	69	69	Yes	Yes	Yes	2	3
7.5 > θ < 15	50	57	30	33	Yes	Every 3rd Bay	No	151	172	69	69	Yes	Yes	Yes	2	3
15 > θ < 22.5	51	58	30	39	Yes	Every 3rd Bay	Every 3rd Bay	153	174	69	69	Yes	Yes	Yes	2	3
22.5 > θ < 30	52	60	30	42	Yes	Every 3rd Bay	Every 3rd Bay	157	179	69	69	Yes	Yes	Yes	2	3
30 > θ < 37.5	55	62	30	45	Yes	Every 3rd Bay	Every 3rd Bay	148	168	52	66	Yes	Yes	Yes	2	3
37.5 > θ < 45	57	65	30	48	Yes	Every 3rd Bay	Every 3rd Bay	139	158	40	69	Yes	Yes	Yes	2	3

150 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	59	30	30	No	Every 3rd Bay	No	154	176	71	71	Yes	Yes	Yes	2	3
0 > θ < 7.5	50	57	34	34	Yes	Every 3rd Bay	No	149	170	71	71	Yes	Yes	Yes	2	3
7.5 > θ < 15	49	56	30	34	Yes	Every 3rd Bay	No	148	169	71	71	Yes	Yes	Yes	3	3
15 > θ < 22.5	50	57	30	41	Yes	Every 3rd Bay	Every 3rd Bay	150	171	71	71	Yes	Yes	Yes	3	3
22.5 > θ < 30	51	59	30	44	Yes	Every 3rd Bay	Every 3rd Bay	147	168	65	66	Yes	Yes	Yes	3	3
30 > θ < 37.5	53	61	30	47	Yes	Every 3rd Bay	Every 3rd Bay	138	157	55	68	Yes	Yes	Yes	2	3
37.5 > θ < 45	56	63	30	50	Yes	Every 3rd Bay	Every 3rd Bay	130	148	30	71	Yes	Yes	Yes	2	3

Series 200

Configuration Tables for Ground Mount System 111 to 120 psf Snow Loads (3 Module Panels)

SnapNrack™ PV Mounting Systems

160 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	51	58	30	30	No	Every 3rd Bay	No	152	174	73	73	Yes	Yes	Yes	3	3
0 > θ < 7.5	49	56	30	30	Yes	Every 3rd Bay	No	147	167	73	73	Yes	Yes	Yes	3	3
7.5 > θ < 15	49	56	30	36	Yes	Every 3rd Bay	No	146	167	73	73	Yes	Yes	Yes	3	3
15 > θ < 22.5	49	56	30	43	Yes	Every 3rd Bay	Every 3rd Bay	147	168	73	73	Yes	Yes	Yes	3	3
22.5 > θ < 30	50	57	30	46	Yes	Every 3rd Bay	Every 3rd Bay	138	158	66	69	Yes	Yes	Yes	3	3
30 > θ < 37.5	52	59	30	49	Yes	Every 3rd Bay	Every 3rd Bay	129	147	45	70	Yes	Yes	Yes	3	3
37.5 > θ < 45	54	62	30	52	Yes	Every 3rd Bay	Every 3rd Bay	121	139	31	73	Yes	Yes	Yes	2	3

170 mph Wind Load 111-120 psf Snow																
Tilt Angle θ	Standard Installation							Braced Installation							Number of Rails Required Per Panel	
	Max (PS)		12" Dia Pier		Required Braces			Max (PS)		12" Dia Pier		Required Braces			Module Size	
	Sch 40	Sch 80	Short	Tall	A	C	D	Sch 40	Sch 80	Short	Tall	A	E	F	40" x 66"	40" x 78"
θ = 0	50	57	30	30	No	Every 3rd Bay	No	151	172	76	76	Yes	Yes	Yes	3	3
0 > θ < 7.5	48	55	30	30	Yes	Every 3rd Bay	No	144	165	76	76	Yes	Yes	Yes	3	3
7.5 > θ < 15	48	55	30	38	Yes	Every 3rd Bay	No	144	164	76	76	Yes	Yes	Yes	3	3
15 > θ < 22.5	48	55	30	44	Yes	Every 3rd Bay	Every 3rd Bay	145	165	76	76	Yes	Yes	Yes	3	3
22.5 > θ < 30	49	56	30	48	Yes	Every 3rd Bay	Every 3rd Bay	130	148	60	70	Yes	Yes	Yes	3	3
30 > θ < 37.5	51	58	30	52	Yes	Every 3rd Bay	Every 3rd Bay	122	139	47	73	Yes	Yes	Yes	3	3
37.5 > θ < 45	53	60	30	55	Yes	Every 3rd Bay	Every 3rd Bay	114	130	32	76	Yes	Yes	Yes	3	3

Notes:

1) Design guidelines for these calculations are listed below.

Wind Loads	100 to 170 mph Exposure C	Risk Category	I
Seismic	Seismic Design Category D		
Snow Loads	0 to 120 psf Ground Snow		

2) Design calculations assume rail span and overhangs are constant as shown on following sketch.

3) Rail design values are as follows

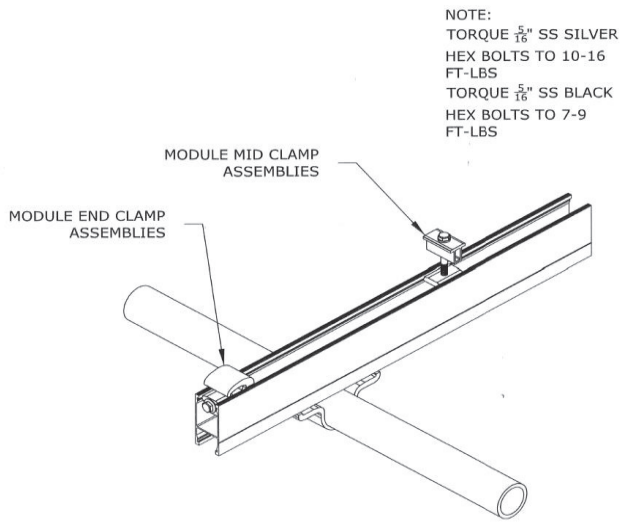
A	=	0.68	in^2
S	=	0.40	in^3
I	=	0.63	in^4
Fb	=	15.20	ksi

4) Schedule 40 and Schedule 80 pipe design values are as follows

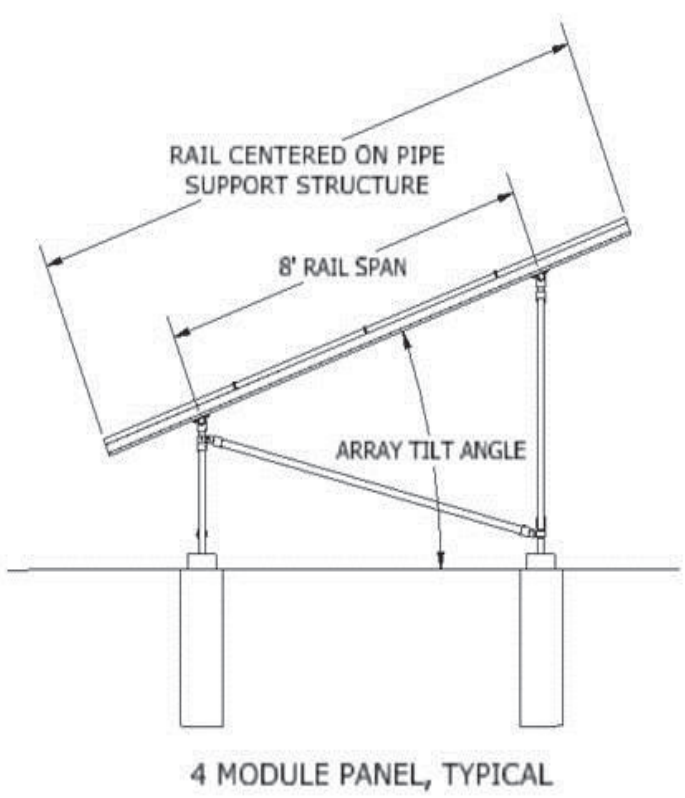
	Sch 40 Pipe			Sch 80 Pipe		
A	=	0.75 in^2	A	=	1.00	in^2
S	=	0.31 in^3	S	=	0.39	in^3
I	=	0.29 in^4	I	=	0.37	in^4
Max M	=	8832 in-lb	Max M	=	11496	in-lb

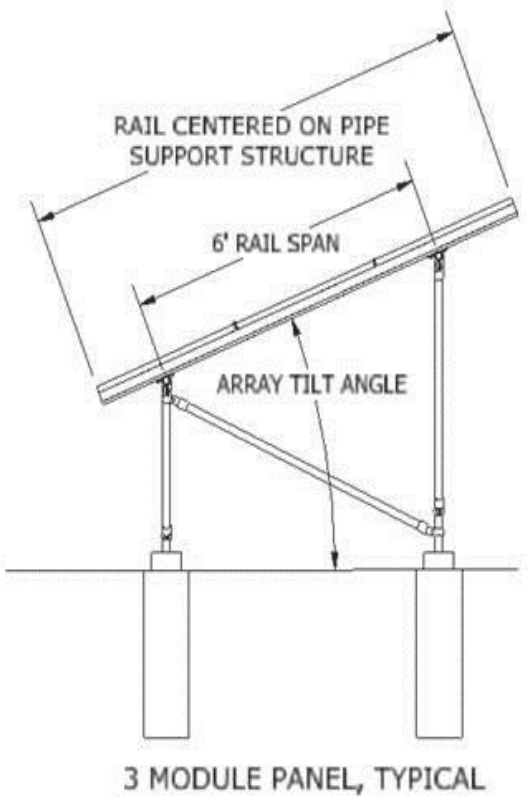
5) Load Combinations for calculations are as follows

D + S
D + W
D + 0.75 S + 0.75 W
0.6D + W



Panel Attachment to Rails





Frame Design Sketch and Dimension Parameters

Velocity Pressure 27.3.2 ASCE 7-10

$$q_h = 0.00256\, k_z\, k_{zt}\, k_d\, V^2$$

k_z	=	0.85	Velocity Pressure Exposure Coefficients (Table 26.8-1)
K_{zt}	=	1.00	Topographic Factor (Fig. 26.8-1)
K_d	=	0.85	Wind Directionality Factor (Table 26.6-1)
V	=	100-170	Basic Wind Speed (mph)

Notes:

1) Wind designed for exposure C
2) The calculations in this report use the ASD values

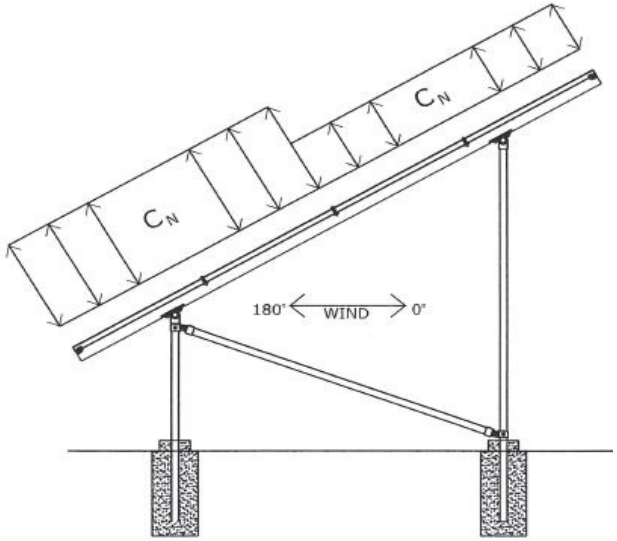
Velocity Pressure (psf)														
q_h	V													
	100	105	110	115	120	125	130	135	140	145	150	155	160	170
Strength	18.50	20.39	22.38	24.46	26.63	28.90	31.26	33.71	36.25	38.89	41.62	44.44	47.35	53.45
ASD (0.6 * St.)	11.10	12.24	13.43	14.68	15.98	17.34	18.75	20.23	21.75	23.33	24.97	26.66	28.41	32.07

Main Force Resisting System 27.4.3 ASCE 7-10 Monoslope Structure

$$P = q_h\, G\, C_N$$

q_h	=	*See Table*	Velocity Pressure (psf)
G	=	0.85	Gust Effect Factor
C_n	=	*See Table*	Net Pressure Coefficient

C_N					
Tilt Angle	Load Case	Wind Direction 0°		Wind Direction 180°	
		C_{NW}	C_{NL}	C_{NW}	C_{NL}
0°	A	1.2	0.3	1.2	0.3
	B	-1.1	-0.1	-1.1	-0.1
7.5°	A	-0.6	-1.0	0.9	1.5
	B	-1.4	0.0	1.6	0.3
15°	A	-0.9	-1.3	1.3	1.6
	B	-1.9	0.0	1.8	0.6
22.5°	A	-1.5	-1.6	1.7	1.8
	B	-2.4	-0.3	2.2	0.7
30°	A	-1.8	-1.8	2.1	2.1
	B	-2.5	-0.5	2.6	1.0
37.5°	A	-1.8	-1.8	2.1	2.2
	B	-2.4	-0.6	2.7	1.1
45°	A	-1.6	-1.8	2.2	2.5
	B	-2.3	-0.7	2.6	1.4



Wind Loading Diagram

Seismic Design Section Chapter 11 and 12 ASCE 7-10

$S_{MS} = F_a S_s$ (11.4-1)

$S_{M1} = F_v S_1$ (11.4-2)

$S_{DS} = {}^2/_3 S_{MS}$ (11.4-3)

$S_{D1} = {}^2/_3 S_{M1}$ (11.4-4)

$$C_s = \frac{S_{DS}}{\left(\frac{R}{I}\right)}$$

C_s = 0.5128

C_s = 2.8794 Max

C_s = 0.1538 Min

Site Classification	=	D	Default "D"
Seismic Use Group	=	II	Table 11.5-1

R	=	3.25	Input from Table 13.6-1 ASCE 7-10
I	=	1.00	Input from Table 11.5-1 ASCE 7-10
S_s	=	2.50	Input from USGS Program
S_1	=	1.00	Input from USGS Program
F_a	=	1.00	Site Coefficient Table 11.4-1
F_v	=	1.50	Site Coefficient Table 11.4-2
S_{ms}	=	2.50	ASCE 7-10 Section 11.4.3
S_{m1}	=	1.50	ASCE 7-10 Section 11.4.3
S_{ds}	=	1.67	ASCE 7-10 Section 11.4.3
S_{d1}	=	1.00	ASCE 7-10 Section 11.4.3
W	=	4.00	psf

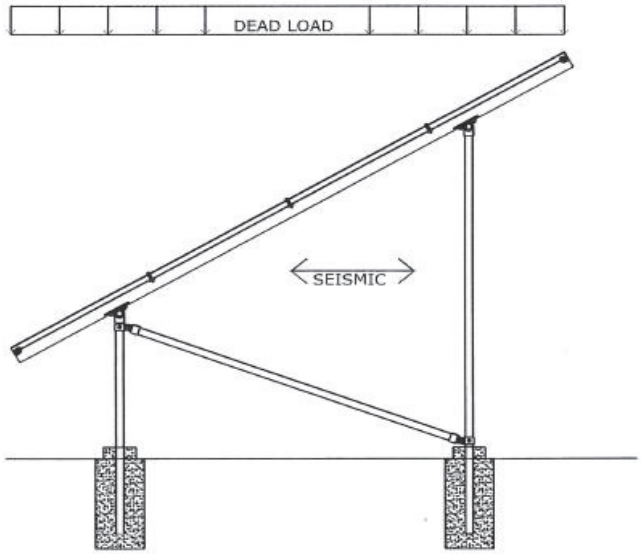
V = C_s W

Notes:

1) Seismic Design based on Seismic Design Category D

V = 1.44 psf (ASD)

Wind Loads Govern Design



Seismic Loading Diagram

Series 200

Snow Load Calculations ASCE 7-10 Chapter 7

SnapNrack™ PV Mounting Systems

Snow Loads Section 7.2 to 7.4 ASCE 7-10

$P_f = 0.7\ C_e\ C_t\ I\ P_g$ Section 7.3 Eq. (7-1)

$P_s = C_s\ P_f$ Section 7.4 Eq. (7.2)

Tilt Angle	=	0 To 45°	Tilt Angle of PV Array
C_e	=	1.00	Exposure Factor
C_t	=	1.10	Thermal Factor
I	=	0.80	Importance Factor
C_s	=	*See Table*	Slope Factor

Tilt Angle Slope Factor	
Tilt Angle	C_s
0	1.00
7.5	1.00
15	0.92
22.5	0.79
30	0.67
37.5	0.54
45	0.42

Notes:

1) Snow loads based on unobstructed slippery surface factor Cs for Ct = 1.1.

Pg Ground Snow Load															
0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0

Pf Flat Roof Snow Load 0 Tilt Angle															
0.0	6.2	12.3	18.5	24.6	30.8	37.0	43.1	49.3	55.4	61.6	67.8	73.9	80.1	86.2	92.4

Ps Sloped Roof Snow Load 7.5 Degree Tilt															
0.0	6.2	12.3	18.5	24.6	30.8	37.0	43.1	49.3	55.4	61.6	67.8	73.9	80.1	86.2	92.4

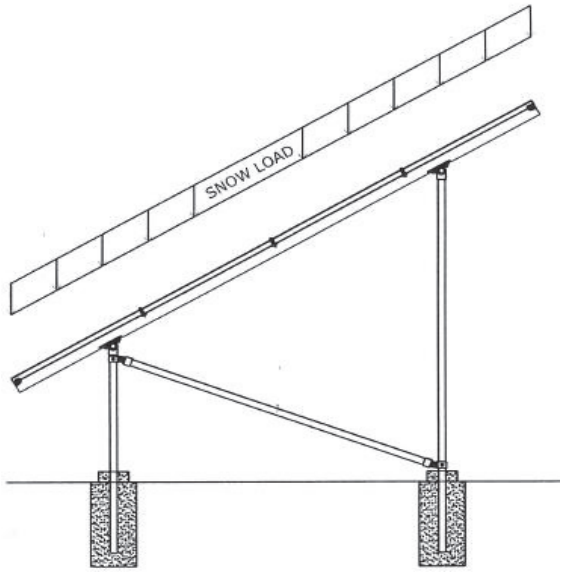
Ps Sloped Roof Snow Load 15 Degree Tilt															
0.0	5.6	11.3	16.9	22.6	28.2	33.9	39.5	45.2	50.8	56.5	62.1	67.7	73.4	79.0	84.7

Ps Sloped Roof Snow Load 22.5 Degree Tilt															
0.0	4.9	9.7	14.6	19.5	24.4	29.2	34.1	39.0	43.9	48.7	53.6	58.5	63.4	68.2	73.1

Ps Sloped Roof Snow Load 30 Degree Tilt															
0.0	4.1	8.2	12.3	16.4	20.5	24.6	28.7	32.8	36.9	41.0	45.1	49.2	53.3	57.4	61.5

Ps Sloped Roof Snow Load 37.5 Degree Tilt															
0.0	3.3	6.7	10.0	13.3	16.7	20.0	23.3	26.6	30.0	33.3	36.6	40.0	43.3	46.6	50.0

Ps Sloped Roof Snow Load 45 Degree Tilt															
0.0	2.6	5.1	7.7	10.2	12.8	15.4	17.9	20.5	23.0	25.6	28.2	30.7	33.3	35.8	38.4



Snow Loading Diargam

Series 200

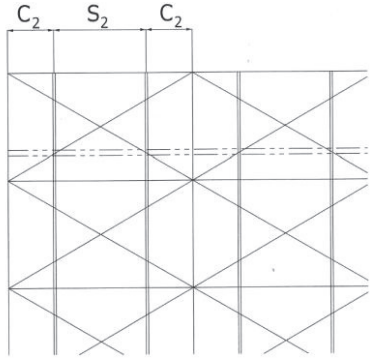
Number of Rails for Four 66" Panels

SnapNrack™ PV Mounting Systems

0 to 7.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	3	3	3	3	NG	NG
110	2	2	2	2	2	2	2	3	3	3	3	NG	NG
120	2	2	2	2	2	2	2	3	3	3	3	NG	NG
130	2	2	2	2	2	2	3	3	3	3	3	NG	NG
140	2	2	2	2	2	2	3	3	3	3	3	NG	NG
150	2	2	2	2	2	3	3	3	3	3	NG	NG	NG
160	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
170	2	2	2	2	3	3	3	3	3	NG	NG	NG	NG

7.5 to 15 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	3	3	3	3	NG	NG
110	2	2	2	2	2	2	2	3	3	3	3	NG	NG
120	2	2	2	2	2	2	2	3	3	3	3	NG	NG
130	2	2	2	2	2	2	3	3	3	3	3	NG	NG
140	2	2	2	2	2	3	3	3	3	3	3	NG	NG
150	2	2	2	2	2	3	3	3	3	3	NG	NG	NG
160	2	2	2	2	3	3	3	3	3	NG	NG	NG	NG
170	3	3	3	3	3	3	3	3	3	NG	NG	NG	NG

16 to 22.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	3	3	3	3	NG
110	2	2	2	2	2	2	2	3	3	3	3	3	NG
120	2	2	2	2	2	2	2	3	3	3	3	3	NG
130	2	2	2	2	2	2	3	3	3	3	3	3	NG
140	2	2	2	2	2	3	3	3	3	3	3	NG	NG
150	2	2	2	2	2	3	3	3	3	3	NG	NG	NG
160	3	3	3	3	3	3	3	3	3	NG	NG	NG	NG
170	3	3	3	3	3	3	3	3	3	NG	NG	NG	NG

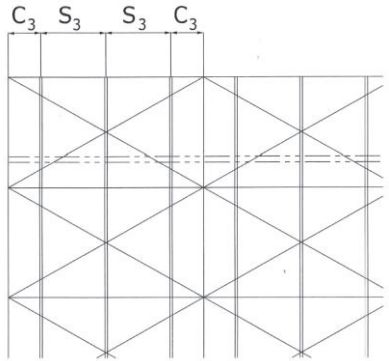


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

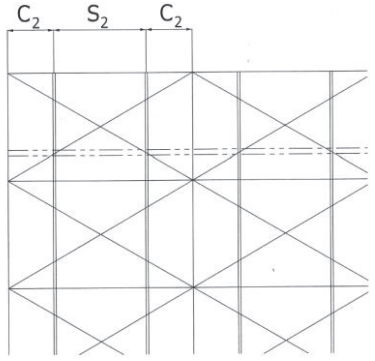
Number of Rails for Four 66" Panels

SnapNrack™ PV Mounting Systems

22.6 to 30 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	3	3	3
110	2	2	2	2	2	2	2	2	2	3	3	3	3
120	2	2	2	2	2	2	2	2	3	3	3	3	3
130	2	2	2	2	2	2	2	3	3	3	3	3	3
140	2	2	2	2	2	2	3	3	3	3	3	3	3
150	2	2	2	2	2	3	3	3	3	3	3	3	NG
160	3	3	3	3	3	3	3	3	3	3	3	NG	NG
170	3	3	3	3	3	3	3	3	3	3	NG	NG	NG

31 to 37.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	3	3	3
130	2	2	2	2	2	2	2	2	2	3	3	3	3
140	2	2	2	2	2	2	2	3	3	3	3	3	3
150	3	3	3	3	3	3	3	3	3	3	3	3	3
160	3	3	3	3	3	3	3	3	3	3	3	3	3
170	3	3	3	3	3	3	3	3	3	3	3	NG	NG

37.6 to 45 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	3	3
140	2	2	2	2	2	2	2	2	2	3	3	3	3
150	3	3	3	3	3	3	3	3	3	3	3	3	3
160	3	3	3	3	3	3	3	3	3	3	3	3	3
170	3	3	3	3	3	3	3	3	3	3	3	3	3

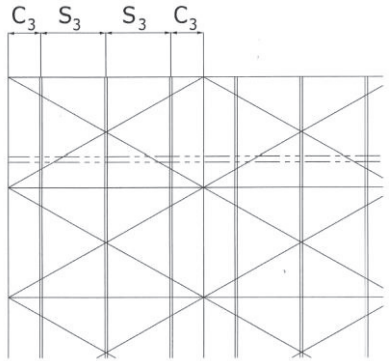


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

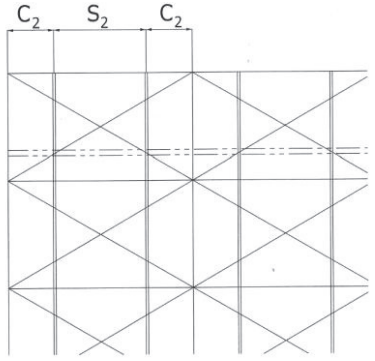
Number of Rails for Four 78" Panels

SnapNrack™ PV Mounting Systems

0 to 7.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	3	3	3	NG	NG	NG	NG
110	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
120	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
130	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
140	2	2	2	2	3	3	3	3	NG	NG	NG	NG	NG
150	2	2	2	2	3	3	3	3	NG	NG	NG	NG	NG
160	2	2	2	2	3	3	3	NG	NG	NG	NG	NG	NG
170	2	2	2	2	3	3	NG	NG	NG	NG	NG	NG	NG

7.5 to 15 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	3	3	3	NG	NG	NG	NG
110	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
120	2	2	2	2	2	3	3	3	3	NG	NG	NG	NG
130	2	2	2	2	3	3	3	3	3	NG	NG	NG	NG
140	2	2	2	2	3	3	3	3	NG	NG	NG	NG	NG
150	2	2	2	2	3	3	3	3	NG	NG	NG	NG	NG
160	3	3	3	3	3	3	3	NG	NG	NG	NG	NG	NG
170	3	3	3	3	3	3	NG	NG	NG	NG	NG	NG	NG

16 to 22.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	3	3	3	3	NG	NG	NG
110	2	2	2	2	2	2	3	3	3	3	NG	NG	NG
120	2	2	2	2	2	3	3	3	3	3	NG	NG	NG
130	2	2	2	2	3	3	3	3	3	3	NG	NG	NG
140	2	2	2	2	3	3	3	3	3	NG	NG	NG	NG
150	3	3	3	3	3	3	3	3	NG	NG	NG	NG	NG
160	3	3	3	3	3	3	3	NG	NG	NG	NG	NG	NG
170	3	3	3	3	3	3	NG	NG	NG	NG	NG	NG	NG

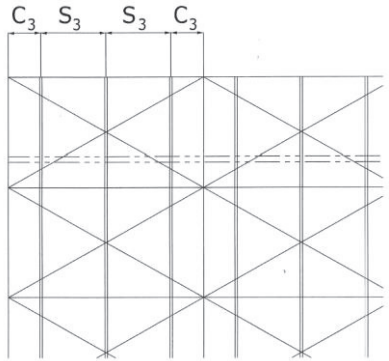


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

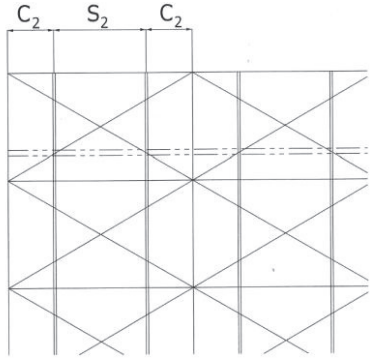
Number of Rails for Four 78" Panels

SnapNrack™ PV Mounting Systems

22.6 to 30 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	3	3	3	3	3	3
110	2	2	2	2	2	2	2	3	3	3	3	3	NG
120	2	2	2	2	2	2	3	3	3	3	3	3	NG
130	2	2	2	2	2	3	3	3	3	3	3	NG	NG
140	3	3	3	3	3	3	3	3	3	3	NG	NG	NG
150	3	3	3	3	3	3	3	3	3	3	NG	NG	NG
160	3	3	3	3	3	3	3	NG	NG	NG	NG	NG	NG
170	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG

31 to 37.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	3	3	3	3
110	2	2	2	2	2	2	2	2	2	3	3	3	3
120	2	2	2	2	2	2	2	3	3	3	3	3	3
130	2	2	2	2	2	2	3	3	3	3	3	3	3
140	3	3	3	3	3	3	3	3	3	3	3	3	NG
150	3	3	3	3	3	3	3	3	3	3	NG	NG	NG
160	3	3	3	3	3	3	3	3	NG	NG	NG	NG	NG
170	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG

37.6 to 45 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	3
120	2	2	2	2	2	2	2	2	2	3	3	3	3
130	2	2	2	2	2	2	2	2	3	3	3	3	3
140	3	3	3	3	3	3	3	3	3	3	3	3	3
150	3	3	3	3	3	3	3	3	3	3	3	3	3
160	3	3	3	3	3	3	3	3	3	3	NG	NG	NG
170	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG

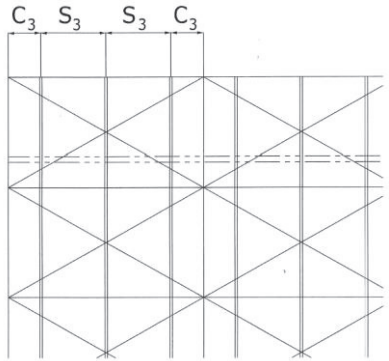


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

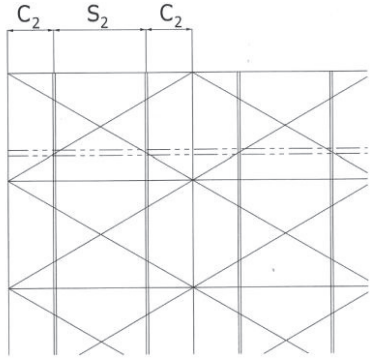
Number of Rails for Three 66" Panels

SnapNrack™ PV Mounting Systems

0 to 7.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	2
160	2	2	2	2	2	2	2	2	2	2	2	2	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

7.5 to 15 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	3
160	2	2	2	2	2	2	2	2	2	2	2	2	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

16 to 22.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	3
160	2	2	2	2	2	2	2	2	2	2	2	3	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

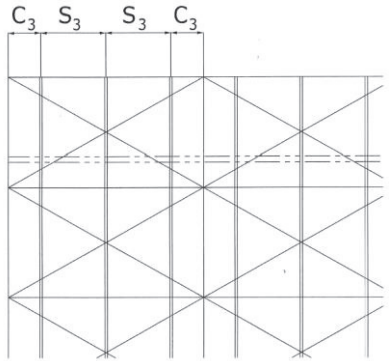


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

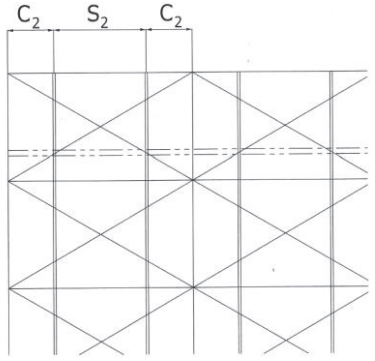
Number of Rails for Three 66" Panels

SnapNrack™ PV Mounting Systems

22.6 to 30 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	3
160	2	2	2	2	2	2	2	2	2	2	2	3	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

31 to 37.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	2
160	2	2	2	2	2	2	2	2	2	2	2	2	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

37.6 to 45 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 66" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	2	2	2	2
160	2	2	2	2	2	2	2	2	2	2	2	2	2
170	2	2	2	2	2	2	2	2	2	2	2	3	3

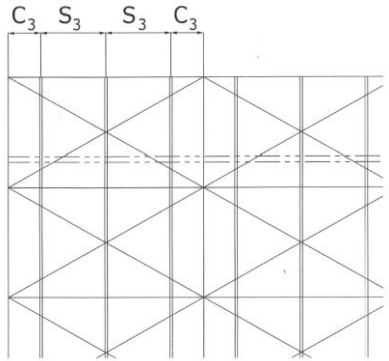


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

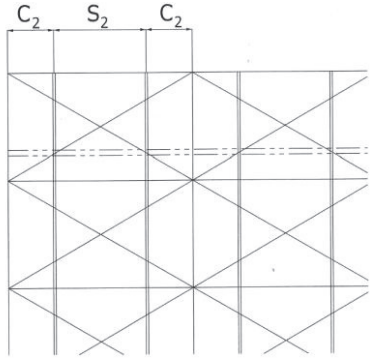
Number of Rails for Three 78" Panels

SnapNrack™ PV Mounting Systems

0 to 7.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	3	3
110	2	2	2	2	2	2	2	2	2	2	2	3	3
120	2	2	2	2	2	2	2	2	2	2	2	3	3
130	2	2	2	2	2	2	2	2	2	2	2	3	3
140	2	2	2	2	2	2	2	2	2	2	3	3	3
150	2	2	2	2	2	2	2	2	2	2	3	3	3
160	2	2	2	2	2	2	2	2	2	3	3	3	3
170	2	2	2	2	2	2	2	2	2	3	3	3	3

7.5 to 15 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	3	3
110	2	2	2	2	2	2	2	2	2	2	2	3	3
120	2	2	2	2	2	2	2	2	2	2	2	3	3
130	2	2	2	2	2	2	2	2	2	2	2	3	3
140	2	2	2	2	2	2	2	2	2	2	2	3	3
150	2	2	2	2	2	2	2	2	2	2	3	3	3
160	2	2	2	2	2	2	2	2	2	3	3	3	3
170	2	2	2	2	2	2	2	2	3	3	3	3	3

16 to 22.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	3	3
110	2	2	2	2	2	2	2	2	2	2	2	3	3
120	2	2	2	2	2	2	2	2	2	2	2	3	3
130	2	2	2	2	2	2	2	2	2	2	2	3	3
140	2	2	2	2	2	2	2	2	2	2	2	3	3
150	2	2	2	2	2	2	2	2	2	2	3	3	3
160	2	2	2	2	2	2	2	2	2	3	3	3	3
170	2	2	2	2	2	2	2	2	3	3	3	3	3

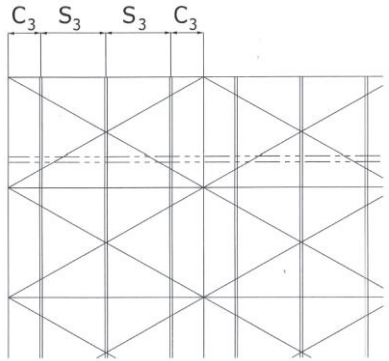


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

Series 200

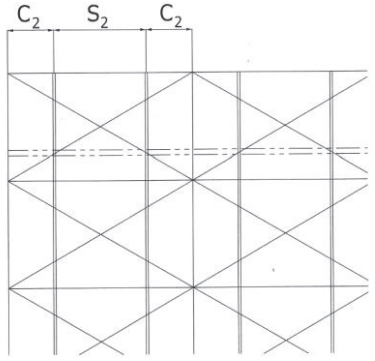
Number of Rails for Three 78" Panels

SnapNrack™ PV Mounting Systems

22.6 to 30 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	3
120	2	2	2	2	2	2	2	2	2	2	2	2	3
130	2	2	2	2	2	2	2	2	2	2	2	3	3
140	2	2	2	2	2	2	2	2	2	2	2	3	3
150	2	2	2	2	2	2	2	2	2	2	2	3	3
160	2	2	2	2	2	2	2	2	2	2	3	3	3
170	2	2	2	2	2	2	2	2	3	3	3	3	3

31 to 37.5 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	3
140	2	2	2	2	2	2	2	2	2	2	2	3	3
150	2	2	2	2	2	2	2	2	2	2	2	3	3
160	2	2	2	2	2	2	2	2	2	2	2	3	3
170	2	2	2	2	2	2	2	2	2	2	3	3	3

37.6 to 45 Degrees													
Wind Velocity (V_{ult}) mph	Number of Rails Per 40" x 78" PV Panel												
	Snow Load												
	0	10	20	30	40	50	60	70	80	90	100	110	120
100	2	2	2	2	2	2	2	2	2	2	2	2	2
110	2	2	2	2	2	2	2	2	2	2	2	2	2
120	2	2	2	2	2	2	2	2	2	2	2	2	2
130	2	2	2	2	2	2	2	2	2	2	2	2	2
140	2	2	2	2	2	2	2	2	2	2	2	2	3
150	2	2	2	2	2	2	2	2	2	2	2	3	3
160	2	2	2	2	2	2	2	2	2	2	2	3	3
170	2	2	2	2	2	2	2	2	2	2	2	3	3

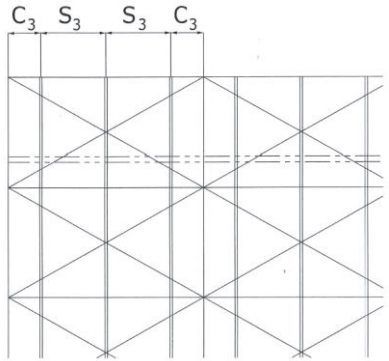


2 Rails Per Panel

40" x 66" Panel			
S_2	=	32.50	in
C_2	=	16.25	in

2 Rails Per Panel

40" x 78" Panel			
S_2	=	39.00	in
C_2	=	19.50	in



3 Rails Per Panel

40" x 66" Panel			
S_3	=	21.50	in
C_3	=	11.00	in

3 Rails Per Panel

40" x 78" Panel			
S_3	=	26.00	in
C_3	=	13.00	in

Maximum Moments for Two or Three Rail Configuration

Maximum Moment (2 Rails - 66" panels)	=	187.1	in-lb / in
Maximum Moment (3 Rails - 66" panels)	=	280.6	in-lb / in
Maximum Moment (2 Rails - 78" panels)	=	155.9	in-lb / in
Maximum Moment (3 Rails - 78" panels)	=	233.8	in-lb / in

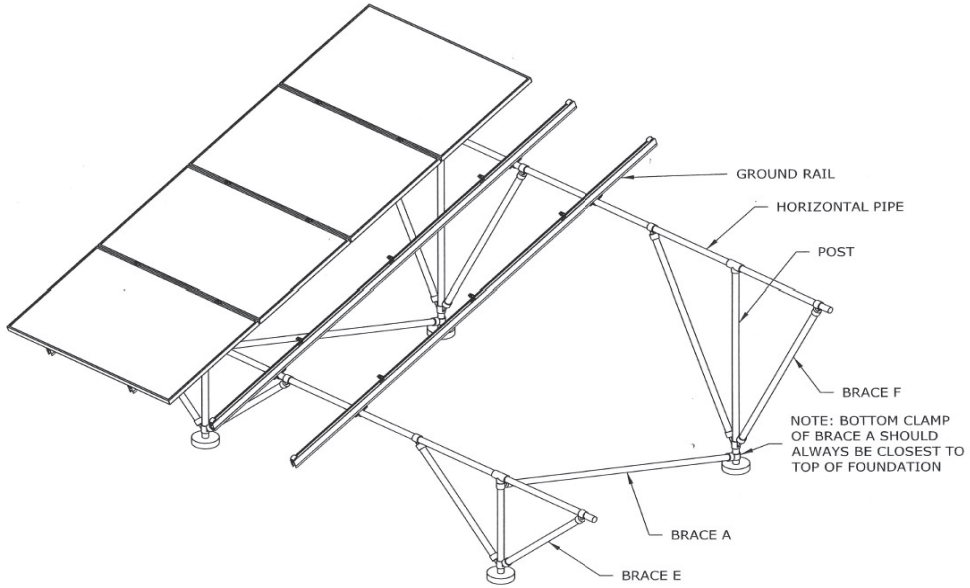
Series 200

Pipe Rail Specifications

SnapNrack™ PV Mounting Systems

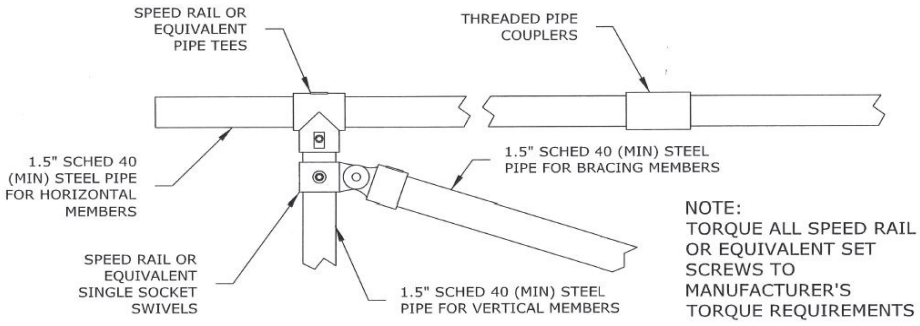
Schedule 40 and Schedule 80 pipe design values are as follows

	Sch 40 Pipe		Sch 80 Pipe	
A	=	0.75 in^2	=	1.00 in^2
S	=	0.31 in^3	=	0.39 in^3
I	=	0.29 in^4	=	0.37 in^4
Mmax	=	7872 in-lb	=	9816 in-lb



Diaghragm of Typical Mounting System with Braces

* For Standard Installation Braces E and F are Omitted



Typical Connection Specifications

NON-CONSTRAINED FOOTING CALCULATION

$$d = \frac{A}{2}\left(1 + \sqrt{1 + \frac{4.36\,h}{A}}\right)$$

$$A = \frac{2.34\,p}{S_1\ b}$$

$$S_1 = 150\left(\frac{d}{3}\right)\left(2\right)$$

P = R_H (lbs)

h = 0.5 (FT)

d = FOOTING DEPTH (FT)

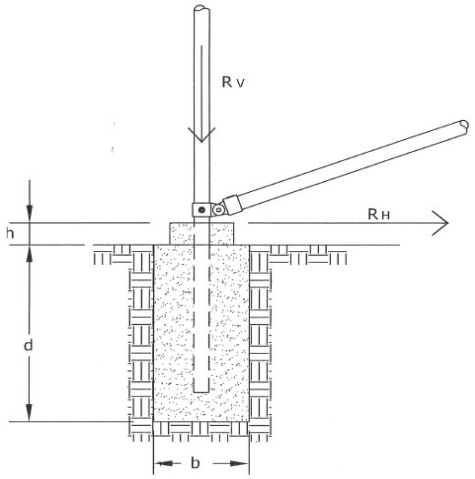
b = 1.0 (FT)

SKIN FRICTION

SURFACE AREA

$S_A = 2\pi rd$

ARROW SF = $2\pi rd\left(\frac{1500}{6}\right)$



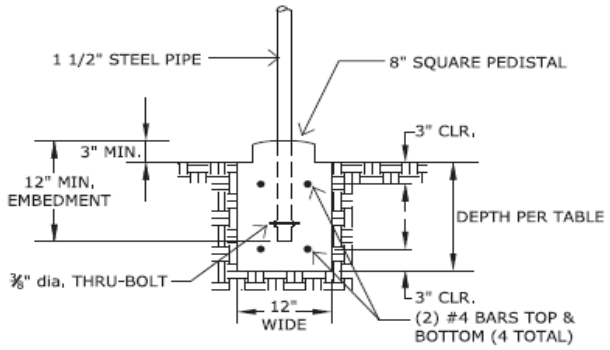
Notes:

1) Footing design assumes 1500 psf soil bearing pressures, 150 pcf lateral bearing pressure and a skin friction value of 250 psf.

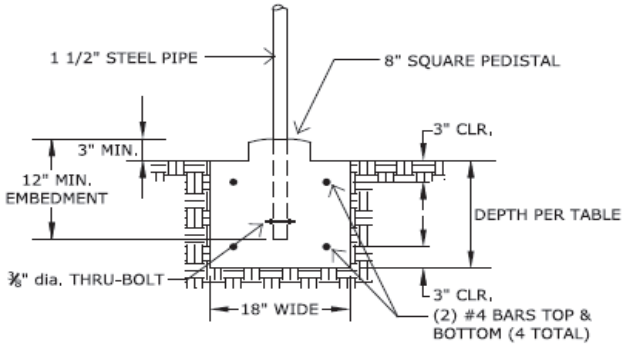
Footing Calculations

Footing Calculations							
d	S1	b	h	A	P	D	SF
3	466	1.0	0.33	3.16	629	3	2735
4	599	1.0	0.33	4.16	1064	4	3529
5	732	1.0	0.33	5.15	1612	5	4313
6	865	1.0	0.33	6.15	2274	6	5098
7	998	1.0	0.33	7.15	3051	7	5885
8	1132	1.0	0.33	8.15	3941	8	6670

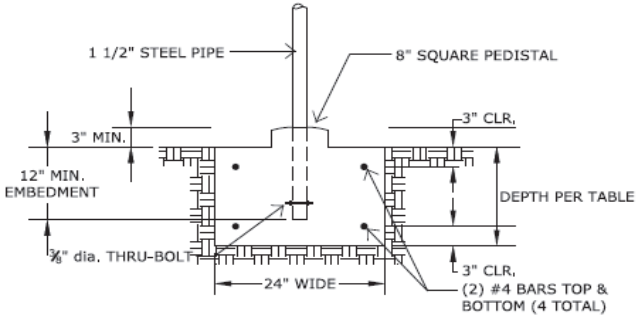
Footing Option for Grade Beam Foundation



12" Wide Grade Beam



18" Wide Grade Beam



24" Wide Grade Beam

Conversion Chart for Pier to Grade Beam Footings			
12 dia. Pier Depth	12" wide Grade Beams Depth (in)	18" wide Grade Beams Depth (in)	24" wide Grade Beams Depth (in)
3 ft	12	12	12
4 ft	17	15	13
5 ft	20	18	17
6 ft	24	22	20
7 ft	29	26	23

Notes:

1) Footing design assumes 1500 psf soil bearing pressures, 150 pcf lateral bearing pressure and a skin friction value of 250 psf.

Norman Scheel
Structural Engineer
5022 Sunrise Boulevard
Fair Oaks, CA 95628
(916) 536-9585

Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

Printed: 9 JAN 2014, 10:06AM

Steel Column

File = G:\Jobfiles\12065\Enercalc\12065.ec6
ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace A

Code References

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : 2006 IBC & ASCE 7-05

General Information

Steel Section Name :	**HSS 1.900X0.145**
Analysis Method :	Allowable Strength
Steel Stress Grade	A-36, Carbon Steel, Fy = 36 ksi
Fy : Steel Yield	36.0 ksi
E : Elastic Bending Modulus	29,000.0 ksi
Load Combination :	2006 IBC & ASCE 7-05

Overall Column Height 8.150 ft
Top & Bottom Fixity Top & Bottom Pinned

Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 8.5 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 8.5 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 22.171 lbs * Dead Load Factor
AXIAL LOADS . . .
Axial Load at 8.150 ft, D = 4.20 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9957** : 1

Load Combination	D Only
Location of max.above base	0.0 ft
At maximum location values are . . .	
Pa : Axial	4.222 k
Pn / Omega : Allowable	4.240 k
Ma-x : Applied	0.0 k-ft
Mn-x / Omega : Allowable	0.7563 k-ft
Ma-y : Applied	0.0 k-ft
Mn-y / Omega : Allowable	0.7563 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1

Load Combination	
Location of max.above base	0.0 ft
At maximum location values are . . .	
Va : Applied	0.0 k
Vn / Omega : Allowable	0.0 k

Maximum SERVICE Load Reactions . .

Top along X-X	0.0 k
Bottom along X-X	0.0 k
Top along Y-Y	0.0 k
Bottom along Y-Y	0.0 k

Maximum SERVICE Load Deflections . . .

Along Y-Y 0.0 in at 0.0 ft above base
for load combination :

Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios: Stress Ratio	Status	Location	Maximum Shear Ratios: Stress Ratio	Status	Location
D Only	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+W+H	0.597	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+H	0.597	PASS	0.00 ft	0.000	PASS	0.00 ft

Norman Scheel
Structural Engineer
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(916) 536-9585

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Engineer:
Project Descr:
Project ID: 12065

Printed: 9 JAN 2014, 10:06AM

Steel Column

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace A

Maximum Reactions - Unfactored

Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Axial Reaction @ Base
D Only		k		k	4.222 k

Maximum Deflections for Load Combinations - Unfactored Loads

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	0.000 in	0.000 ft

Steel Section Properties : HSS 1.900X0.145

Depth	=	1.900	in	I xx	=	0.29	in^4	J	=	0.586 in^4
				S xx	=	0.31	in^3			
Diameter	=	1.900	in	R xx	=	0.626	in			
Wall Thick	=	0.145	in	Zx	=	0.421	in^3			
Area	=	0.749	in^2	I yy	=	0.293	in^4	C	=	0.617 in^3
Weight	=	2.720	plf	S yy	=	0.309	in^3			
				R yy	=	0.626	in			
Ycg	=	0.000	in							

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace C

Code References

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : 2006 IBC & ASCE 7-05

General Information

Steel Section Name :	**HSS 1.900X0.145**
Analysis Method :	Allowable Strength
Steel Stress Grade	A-36, Carbon Steel, Fy = 36 ksi
Fy : Steel Yield	36.0 ksi
E : Elastic Bending Modulus	29,000.0 ksi
Load Combination :	2006 IBC & ASCE 7-05

Overall Column Height 11.310 ft
Top & Bottom Fixity Top & Bottom Pinned

Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 8.5 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 8.5 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 30.767 lbs * Dead Load Factor
AXIAL LOADS . . .
Axial Load at 11.310 ft, D = 4.20 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9977** : 1

Load Combination	D Only
Location of max.above base	0.0 ft
At maximum location values are . . .	
Pa : Axial	4.231 k
Pn / Omega : Allowable	4.240 k
Ma-x : Applied	0.0 k-ft
Mn-x / Omega : Allowable	0.7563 k-ft
Ma-y : Applied	0.0 k-ft
Mn-y / Omega : Allowable	0.7563 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1

Load Combination	
Location of max.above base	0.0 ft
At maximum location values are . . .	
Va : Applied	0.0 k
Vn / Omega : Allowable	0.0 k

Maximum SERVICE Load Reactions . .

Top along X-X	0.0 k
Bottom along X-X	0.0 k
Top along Y-Y	0.0 k
Bottom along Y-Y	0.0 k

Maximum SERVICE Load Deflections . . .

Along Y-Y 0.0 in at 0.0 ft above base
for load combination :

Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios: Stress Ratio	Status	Location	Maximum Shear Ratios: Stress Ratio	Status	Location
D Only	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+W+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.750W+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.750W+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.5250E+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.998	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+W+H	0.599	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+H	0.599	PASS	0.00 ft	0.000	PASS	0.00 ft

Norman Scheel
Structural Engineer
5022 Sunrise Boulevard
Fair Oaks, CA 95628
(916) 536-9585

Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

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Steel Column

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace C

Maximum Reactions - Unfactored

Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Axial Reaction @ Base
	k		k		
D Only					4.231 k

Maximum Deflections for Load Combinations - Unfactored Loads

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	0.000 in	0.000 ft

Steel Section Properties : HSS 1.900X0.145

Depth	=	1.900	in	I xx	=	0.29	in^4	J	=	0.586 in^4
				S xx	=	0.31	in^3			
Diameter	=	1.900	in	R xx	=	0.626	in			
Wall Thick	=	0.145	in	Zx	=	0.421	in^3			
Area	=	0.749	in^2	I yy	=	0.293	in^4	C	=	0.617 in^3
Weight	=	2.720	plf	S yy	=	0.309	in^3			
				R yy	=	0.626	in			
Ycg	=	0.000	in							

Norman Scheel
Structural Engineer
5022 Sunrise Boulevard
Fair Oaks, CA 95628
(916) 536-9585

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Engineer:
Project Descr:
Project ID: 12065

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Steel Column

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace D

Code References

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : 2006 IBC & ASCE 7-05

General Information

Steel Section Name :	**HSS 1.900X0.145**
Analysis Method :	Allowable Strength
Steel Stress Grade	A-36, Carbon Steel, Fy = 36 ksi
Fy : Steel Yield	36.0 ksi
E : Elastic Bending Modulus	29,000.0 ksi
Load Combination :	2006 IBC & ASCE 7-05

Overall Column Height 8.060 ft
Top & Bottom Fixity Top & Bottom Pinned
Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 8.5 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 8.5 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 21.926 lbs * Dead Load Factor
AXIAL LOADS . . .
Axial Load at 8.060 ft, D = 4.20 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9956** : 1

Load Combination	D Only
Location of max.above base	0.0 ft
At maximum location values are . . .	
Pa : Axial	4.222 k
Pn / Omega : Allowable	4.240 k
Ma-x : Applied	0.0 k-ft
Mn-x / Omega : Allowable	0.7563 k-ft
Ma-y : Applied	0.0 k-ft
Mn-y / Omega : Allowable	0.7563 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1

Load Combination	
Location of max.above base	0.0 ft
At maximum location values are . . .	
Va : Applied	0.0 k
Vn / Omega : Allowable	0.0 k

Maximum SERVICE Load Reactions . .

Top along X-X	0.0 k
Bottom along X-X	0.0 k
Top along Y-Y	0.0 k
Bottom along Y-Y	0.0 k

Maximum SERVICE Load Deflections . . .

Along Y-Y 0.0 in at 0.0 ft above base
for load combination :

Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios: Stress Ratio	Status	Location	Maximum Shear Ratios: Stress Ratio	Status	Location
D Only	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+W+H	0.597	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+H	0.597	PASS	0.00 ft	0.000	PASS	0.00 ft

Norman Scheel
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(916) 536-9585

Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

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Steel Column

File = G:\Jobfiles\12065\Enercalc\12065.ec6
ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace D

Maximum Reactions - Unfactored

Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Axial Reaction @ Base
	k		k		
D Only					4.222 k

Maximum Deflections for Load Combinations - Unfactored Loads

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	0.000 in	0.000 ft

Steel Section Properties : HSS 1.900X0.145

Depth	=	1.900	in	I xx	=	0.29	in^4	J	= 0.586 in^4
				S xx	=	0.31	in^3		
Diameter	=	1.900	in	R xx	=	0.626	in		
Wall Thick	=	0.145	in	Zx	=	0.421	in^3		
Area	=	0.749	in^2	I yy	=	0.293	in^4	C	= 0.617 in^3
Weight	=	2.720	plf	S yy	=	0.309	in^3		
				R yy	=	0.626	in		
Ycg	=	0.000	in						

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Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

Printed: 9 JAN 2014, 10:07AM

Steel Column

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace E

Code References

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : 2006 IBC & ASCE 7-05

General Information

Steel Section Name :	**HSS 1.900X0.145**
Analysis Method :	Allowable Strength
Steel Stress Grade	A-36, Carbon Steel, Fy = 36 ksi
Fy : Steel Yield	36.0 ksi
E : Elastic Bending Modulus	29,000.0 ksi
Load Combination :	2006 IBC & ASCE 7-05

Overall Column Height 9.360 ft
Top & Bottom Fixity Top & Bottom Pinned

Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 8.5 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 8.5 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 25.463 lbs * Dead Load Factor
AXIAL LOADS . . .
Axial Load at 9.360 ft, D = 4.20 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9965** : 1

Load Combination	D Only
Location of max.above base	0.0 ft
At maximum location values are . . .	
Pa : Axial	4.225 k
Pn / Omega : Allowable	4.240 k
Ma-x : Applied	0.0 k-ft
Mn-x / Omega : Allowable	0.7563 k-ft
Ma-y : Applied	0.0 k-ft
Mn-y / Omega : Allowable	0.7563 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1

Load Combination	
Location of max.above base	0.0 ft
At maximum location values are . . .	
Va : Applied	0.0 k
Vn / Omega : Allowable	0.0 k

Maximum SERVICE Load Reactions . .

Top along X-X	0.0 k
Bottom along X-X	0.0 k
Top along Y-Y	0.0 k
Bottom along Y-Y	0.0 k

Maximum SERVICE Load Deflections . . .

Along Y-Y 0.0 in at 0.0 ft above base
for load combination :

Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios: Stress Ratio	Status	Location	Maximum Shear Ratios: Stress Ratio	Status	Location
D Only	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.750W+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.996	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+W+H	0.598	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+H	0.598	PASS	0.00 ft	0.000	PASS	0.00 ft

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Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

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Steel Column

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace E

Maximum Reactions - Unfactored

Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Axial Reaction @ Base
D Only		k		k	4.225 k

Maximum Deflections for Load Combinations - Unfactored Loads

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	0.000 in	0.000 ft

Steel Section Properties : HSS 1.900X0.145

Depth	=	1.900	in	I xx	=	0.29	in^4	J	=	0.586 in^4
				S xx	=	0.31	in^3			
Diameter	=	1.900	in	R xx	=	0.626	in			
Wall Thick	=	0.145	in	Zx	=	0.421	in^3			
Area	=	0.749	in^2	I yy	=	0.293	in^4	C	=	0.617 in^3
Weight	=	2.720	plf	S yy	=	0.309	in^3			
				R yy	=	0.626	in			
Ycg	=	0.000	in							

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Engineer:
Project Descr:
Project ID: 12065

Printed: 9 JAN 2014, 10:07AM

Steel Column

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Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace F

Code References

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-10
Load Combinations Used : 2006 IBC & ASCE 7-05

General Information

Steel Section Name :	**HSS 1.900X0.145**
Analysis Method :	Allowable Strength
Steel Stress Grade	A-36, Carbon Steel, Fy = 36 ksi
Fy : Steel Yield	36.0 ksi
E : Elastic Bending Modulus	29,000.0 ksi
Load Combination :	2006 IBC & ASCE 7-05

Overall Column Height 5.060 ft
Top & Bottom Fixity Top & Bottom Pinned
Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 8.5 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 8.5 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 13.765 lbs * Dead Load Factor
AXIAL LOADS . . .
Axial Load at 5.060 ft, D = 4.20 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9937** : 1

Load Combination	D Only
Location of max.above base	0.0 ft
At maximum location values are . . .	
Pa : Axial	4.214 k
Pn / Omega : Allowable	4.240 k
Ma-x : Applied	0.0 k-ft
Mn-x / Omega : Allowable	0.7563 k-ft
Ma-y : Applied	0.0 k-ft
Mn-y / Omega : Allowable	0.7563 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1

Load Combination	
Location of max.above base	0.0 ft
At maximum location values are . . .	
Va : Applied	0.0 k
Vn / Omega : Allowable	0.0 k

Maximum SERVICE Load Reactions . .

Top along X-X	0.0 k
Bottom along X-X	0.0 k
Top along Y-Y	0.0 k
Bottom along Y-Y	0.0 k

Maximum SERVICE Load Deflections . . .

Along Y-Y 0.0 in at 0.0 ft above base
for load combination :

Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios: Stress Ratio	Status	Location	Maximum Shear Ratios: Stress Ratio	Status	Location
D Only	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+W+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.750W+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.750W+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.5250E+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.994	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+W+H	0.596	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+H	0.596	PASS	0.00 ft	0.000	PASS	0.00 ft

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Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

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Steel Column

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Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Brace F

Maximum Reactions - Unfactored

Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Axial Reaction @ Base
D Only		k		k	4.214 k

Maximum Deflections for Load Combinations - Unfactored Loads

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	0.000 in	0.000 ft

Steel Section Properties : HSS 1.900X0.145

Depth	=	1.900	in	I xx	=	0.29	in^4	J	=	0.586 in^4
				S xx	=	0.31	in^3			
Diameter	=	1.900	in	R xx	=	0.626	in			
Wall Thick	=	0.145	in	Zx	=	0.421	in^3			
Area	=	0.749	in^2	I yy	=	0.293	in^4	C	=	0.617 in^3
Weight	=	2.720	plf	S yy	=	0.309	in^3			
				R yy	=	0.626	in			
Ycg	=	0.000	in							

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Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

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2-D Frame Analysis

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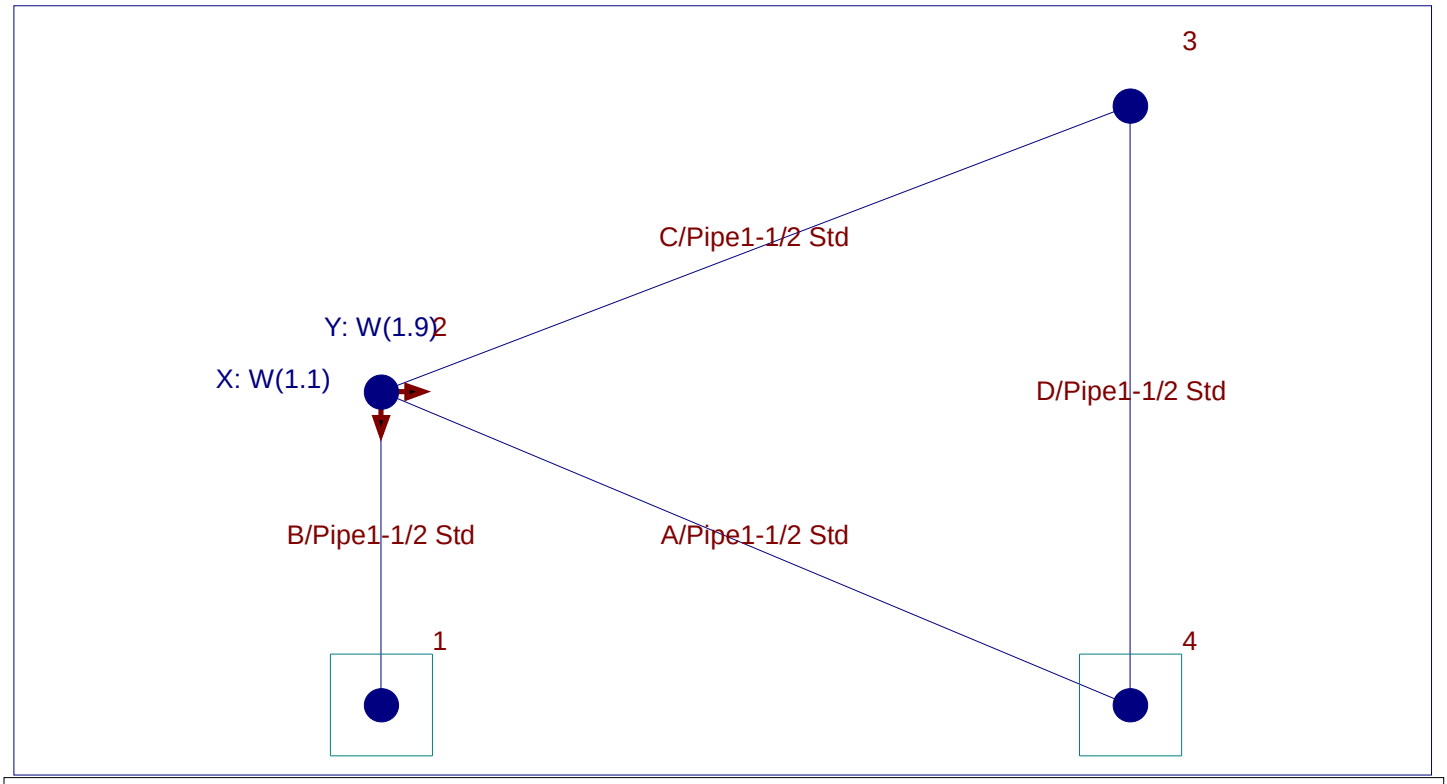
ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320
Licensee : NORMAN SCHEEL SE

Description : Frame



Joints...

Joint Label	Joint Coordinates X ft	Y ft	X Restraint	Y Restraint	Z Restraint	Joint Temp deg F
1	0.0	0.0	Fixed	Fixed		0
2	0.0	3.060				0
3	7.310	5.850				0
4	7.310	0.0	Fixed	Fixed		0

Members...

Member Label	Property Label	Endpoint Joints I Joint	J Joint	Member Length ft	I End Releases x	y	z	J End Releases x	y	z
A	Pipe1-1/2 Std	2	4	7.925	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
B	Pipe1-1/2 Std	1	2	3.060	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
C	Pipe1-1/2 Std	2	3	7.824	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
D	Pipe1-1/2 Std	3	4	5.850	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Member Stress Check Data...

Member Label	Unbraced Lengths ft Lu : z	Lu : y	Slenderness Factors K : z	K : y	AISC Bending & Stability Factors Cm	Cb
A	7.925	7.925	1.00	1.00	1.000	1.000
B	3.060	3.060	1.00	1.00	1.000	1.000
C	7.824	7.824	1.00	1.00	1.000	1.000
D	5.850	5.850	1.00	1.00	1.000	1.000

Materials...

Member Label	Youngs ksi	Density kcf	Thermal in/degr	Yield ksi
Default	1.00	0.000	0.000000	1.00
Steel	29,000.00	0.490	0.000650	50.00
Tube	29,000.00	0.490	0.000650	42.00

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Engineer:
Project Descr:
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2-D Frame Analysis

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ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320
Licensee : NORMAN SCHEEL SE

Description : Frame

Member Sections...

Prop Label	Group Tag	Material	Area	Depth	Width	Ixx	Iyy
Default	Group	Tube	1.0 in^2	0.0 in	0.0 in	1.0 in^4	1.0 in^4
Pipe1-1/2 Std	Group	Tube	0.750 in^2	1.90 in	1.90 in	0.2930 in^4	0.2930 in^4

Joint Loads....

Joint Label	Load Direction	Load Magnitude						
		Dead	Roof Live	Live	Snow	Seismic	Wind	Earth
2	Global X						1.10	k
2	Global Y						1.90	k

Load Combinations...

Load Combination Description	Group Multiplier	Self Weight Factors		Load Combination Factors						
		X	Y	Dead	Roof Live	Live	Snow	Seismic	Wind	Earth
+D+S+H	1.0		-1.0	1.0			1.0			1.0
+D+W+H	1.0		-1.0	1.0					1.0	1.0
+D+0.750L+0.750S+0.750W+H	1.0		-1.0	1.0		0.750	0.750		0.750	1.0
+0.60D+W+H	1.0		-1.0	0.60					1.0	1.0

Joint Displacements & Reactions by Load Combination :

Joint Label	LoadCombination	Joint Displacements			Joint Reactions		
		X in	Y in	Z Radians	X k	Y k	Z k-ft
1	+D+S+H	0.0	0.0	0.000127	0.004783	0.02791	
2	+D+S+H	-.000010	-.0000410	-0.000253			
3	+D+S+H	-.0000230	-.0000530	0.000175			
4	+D+S+H	0.0	0.0	0.000179	-0.004783	0.03503	
1	+D+W+H	0.0	0.0	-.000040	0.003241	1.467	
2	+D+W+H	0.004614	-0.002471	-0.000297			
3	+D+W+H	0.003672	-.0000550	0.000166			
4	+D+W+H	0.0	0.0	0.000149	-1.103	0.4955	
1	+D+0.750L+0.750S+0.750W+H	0.0	0.0	.0000020	0.003627	1.108	
2	+D+0.750L+0.750S+0.750W+H	0.003458	-0.001863	-0.000286			
3	+D+0.750L+0.750S+0.750W+H	0.002748	-.0000540	0.000169			
4	+D+0.750L+0.750S+0.750W+H	0.0	0.0	0.000157	-0.8286	0.3804	
1	+0.60D+W+H	0.0	0.0	-.000040	0.003241	1.467	
2	+0.60D+W+H	0.004614	-0.002471	-0.000297			
3	+0.60D+W+H	0.003672	-.0000550	0.000166			
4	+0.60D+W+H	0.0	0.0	0.000149	-1.103	0.4955	

Extreme Member End Forces

Only Load Combinations giving maximum values are listed

Member Label	Member " I " End Forces			Member " J " End Forces		
	Axial k	Shear k	Moment k-ft	Axial k	Shear k	Moment k-ft
A	1.188	0.008910	0.007445	-0.005292	0.01022	-0.01076
Max	*+D+W+H*	*+D+S+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*	*+D+S+H*
A	-0.002517	0.008435	0.005459	-1.196	0.009746	-0.01254
Min	*+D+S+H*	*+D+W+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*	*+D+W+H*
B	1.467	-0.003241	0.0	-0.02010	0.004783	-0.009918
Max	*+D+W+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*
B	0.02791	-0.004783	0.0	-1.460	0.003241	-0.01464
Min	*+D+S+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*
C	0.00780	0.008882	0.007191	-0.000192	0.01040	-0.01068
Max	*+D+W+H*	*+D+S+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*	*+D+S+H*
C	0.007312	0.008252	0.004459	-0.000680	0.009774	-0.01288
Min	*+D+S+H*	*+D+W+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*	*+D+W+H*
D	0.009478	0.004345	0.01288	-0.02399	-0.003665	0.01254
Max	*+D+W+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*
D	0.009063	0.003665	0.01068	-0.02441	-0.004345	0.01076
Min	*+D+S+H*	*+D+S+H*	*+D+S+H*	*+D+W+H*	*+D+W+H*	*+D+S+H*

Norman Scheel
Structural Engineer
5022 Sunrise Boulevard
Fair Oaks, CA 95628
(916) 536-9585

Project Title: 200 Series Ground Mount
Engineer:
Project Descr:
Project ID: 12065

Printed: 9 JAN 2014, 10:05AM

2-D Frame Analysis

File = G:\Jobfiles\12065\Enercalc\12065.ec6
ENERCALC, INC. 1983-2013, Build:6.13.8.31, Ver:6.13.8.31

Lic. # : KW-06002320 **Licensee : NORMAN SCHEEL SE**

Description : Frame

Extreme Member Forces

Only Load Combinations giving maximum values are listed

Mmbr Label		Axial	Dist from "I" Joint	Moment	Dist from "I" Joint	Shear	Dist from "I" Joint
A		0.002517 k	0.0 ft	0.01254 k-ft	7.925 ft	0.008910 k	0.0 ft
	Max		*+D+S+H*		*+D+W+H*		*+D+S+H*
		-1.196 k	7.925 ft	-0.009651 k-ft	3.558 ft	-0.01022 k	7.925 ft
	Min		*+D+W+H*		*+D+W+H*		*+D+W+H*
B		-0.02010 k	3.060 ft	0.01464 k-ft	3.060 ft	-0.003241 k	0.0 ft
	Max		*+D+S+H*		*+D+S+H*		*+D+W+H*
		-1.467 k	0.0 ft	0.0 k-ft	0.0 ft	-0.004783 k	0.0 ft
	Min		*+D+W+H*		*+D+S+H*		*+D+S+H*
C		-0.000192 k	7.824 ft	0.01288 k-ft	7.824 ft	0.008882 k	0.0 ft
	Max		*+D+S+H*		*+D+W+H*		*+D+S+H*
		-0.00780 k	0.0 ft	-0.009816 k-ft	3.513 ft	-0.01040 k	7.824 ft
	Min		*+D+W+H*		*+D+W+H*		*+D+W+H*
D		-0.009063 k	0.0 ft	0.01288 k-ft	0.0 ft	0.004345 k	0.0 ft
	Max		*+D+S+H*		*+D+W+H*		*+D+W+H*
		-0.02441 k	5.850 ft	-0.01254 k-ft	5.850 ft	0.003665 k	0.0 ft
	Min		*+D+W+H*		*+D+W+H*		*+D+S+H*

Member Stress Checks...

Member Label	Section Label	Material	Max. Axial + Bending Stress Ratios				Max. Shear Stress Ratios			
			Load Combination	Ratio	Status	Dist (ft)	Load Combination	Ratio	Status	Dist (ft)
A	Group	Steel	+D+W+H	0.245	PASS	6.47	+D+W+H	0.002	PASS	7.92
B	Group	Steel	+D+W+H	0.096	PASS	0.00	+D+S+H	0.001	PASS	0.00
C	Group	Steel	+D+W+H	0.015	PASS	7.82	+D+W+H	0.002	PASS	7.82
D	Group	Steel	+D+W+H	0.016	PASS	5.85	+D+W+H	0.001	PASS	0.00

Appendix A: ASCE-2010 to 2005 conversion sheet

The 200 Series report's results have been calculated according to the ASCE-2010 guidelines. If the results would rather be examined in terms of the ASCE-2005 codes, the following conversions must be applied for the two codes' results to be of equivalence.

This appendix also applies for converting to different years for IBC codes. For 2006 and 2009 IBC, use the ASCE-2005 codes, and for the 2012 and 2015 IBC, use the ASCE-2010 codes.

Factors specific to this report

1) The ground-mounted solar panels are in terms of Risk Category I
2) The importance factor for the ASCE-2005 code is I = .77
3) The ASCE-2010 code has no importance factor for the wind loads
4) The snow load's importance factor remains the same for both the 2005 and 2010 codes
5) Thus, calculations that utilize wind loads are the ONLY ones that need conversions

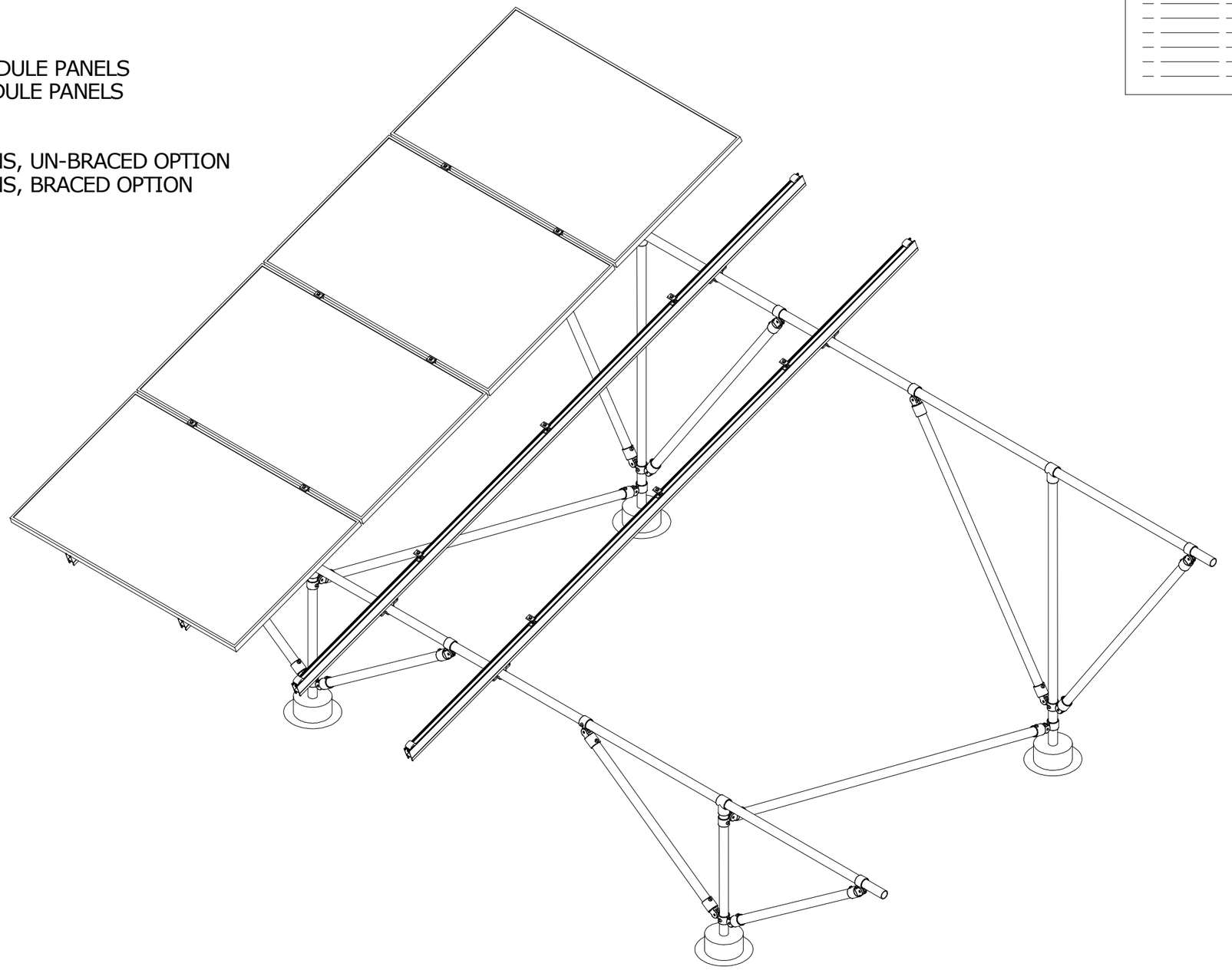
Velocity Equivalence (mph)

$V_{3\text{-sec}}$ (ASCE7-05)	$V_{ult.}$ (ASCE7-10)
85	100
90	116
100	129
110	142
120	155
130	168
140	181
150	194

The following velocities listed in the graph refer to some V_{2005} being equal to some V_{2010}. In other words, use the following velocities in accordance with either ASCE-2005 or ASCE-2010.

S200 D00: SERIES 200 DRAWING SET COVER
S200 D01: SERIES 200 OVERVIEW
S200 D02: SERIES 200 SYSTEM DETAILS
S200 D03: SERIES 200 BRACED OPTION
S200 D04: SERIES 200 SYSTEM DETAILS, 3 MODULE PANELS
S200 D05: SERIES 200 BRACED OPTION, 3 MODULE PANELS
S200 D06: SERIES 200 PIER DETAILS
S200 D07: SERIES 200 GRADE BEAM OPTION
S200 D08: SERIES 200 3-RAIL CONFIGURATIONS, UN-BRACED OPTION
S200 D09: SERIES 200 3-RAIL CONFIGURATIONS, BRACED OPTION

REVISION:



SnapNrack™ PV Mounting Systems

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775 FIERO LANE, SUITE 200 • SAN LUIS OBISPO, CA 93401 USA
PHONE (805) 528-9705 • FAX (805) 528-9701

THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF MAINSTREAM ENERGY CORPORATION.

DESIGNER: G McPheeters
DRAFTER: D Ryan
APPROVED BY:

SCALE: DNS
DATE: 120113

PART NUMBER: S200 D00

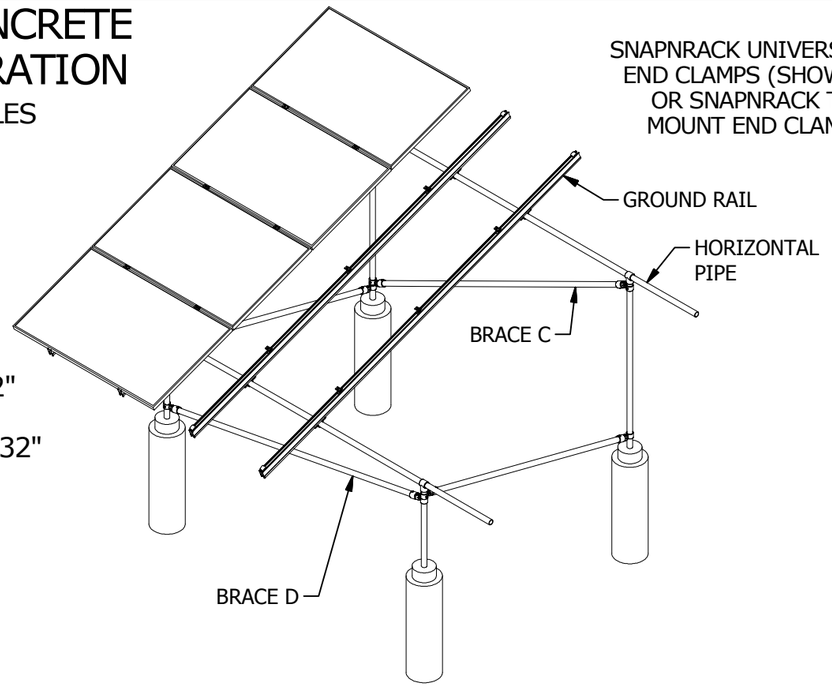
DESCRIPTION: SERIES 200 DRAWING SET COVER

REV: G

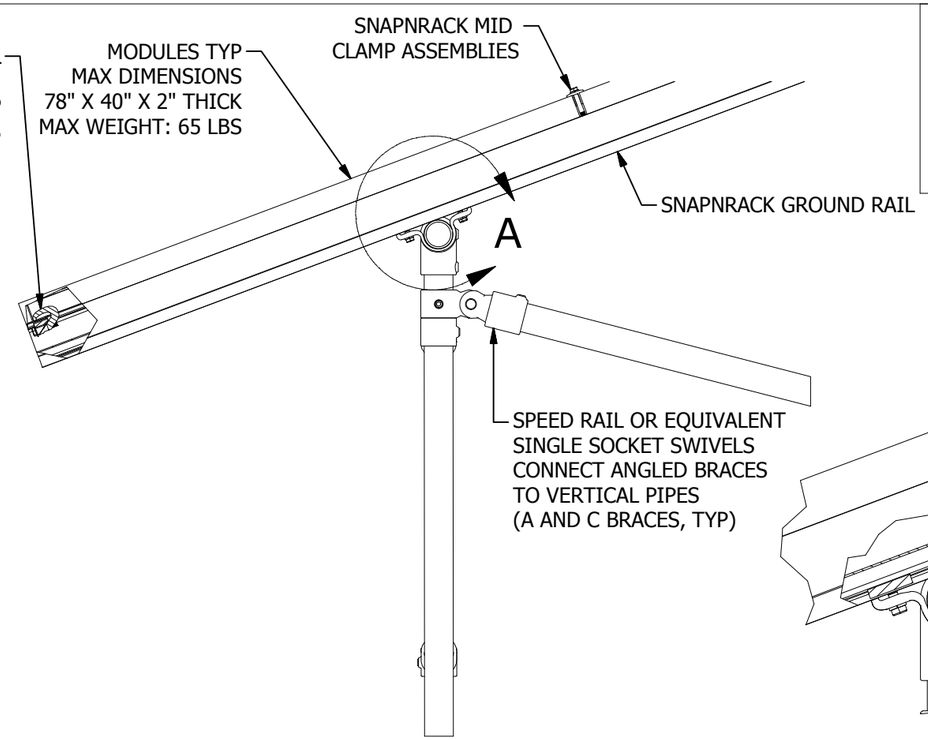
STANDARD CONCRETE PIER CONFIGURATION

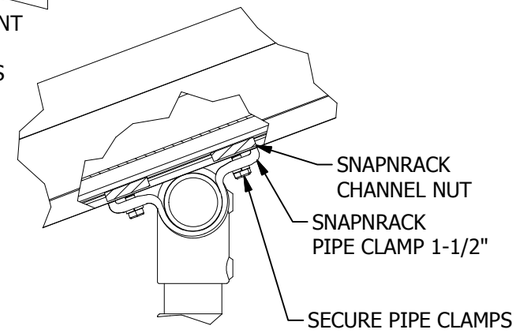
SEE ENGINEERNG TABLES FOR PIER DEPTHS AND SPAN LIMITATIONS.

UNLESS OTHERWISE SPECIFIED IN ENGINEERING DOCS, THE FOLLOWING VALUES APPLY:
MAX RAIL LENGTH: 162"
RAIL SPAN: 96"
MAX RAIL OVERHANG: 32"



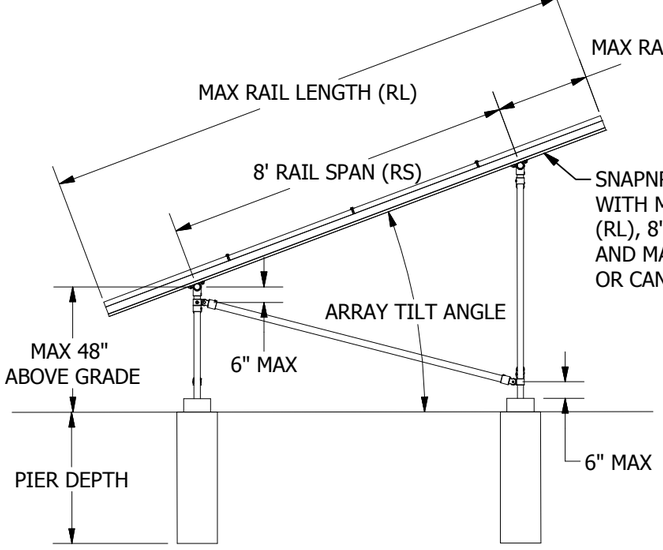
ISO VIEW OF RACKING ASSEMBLY





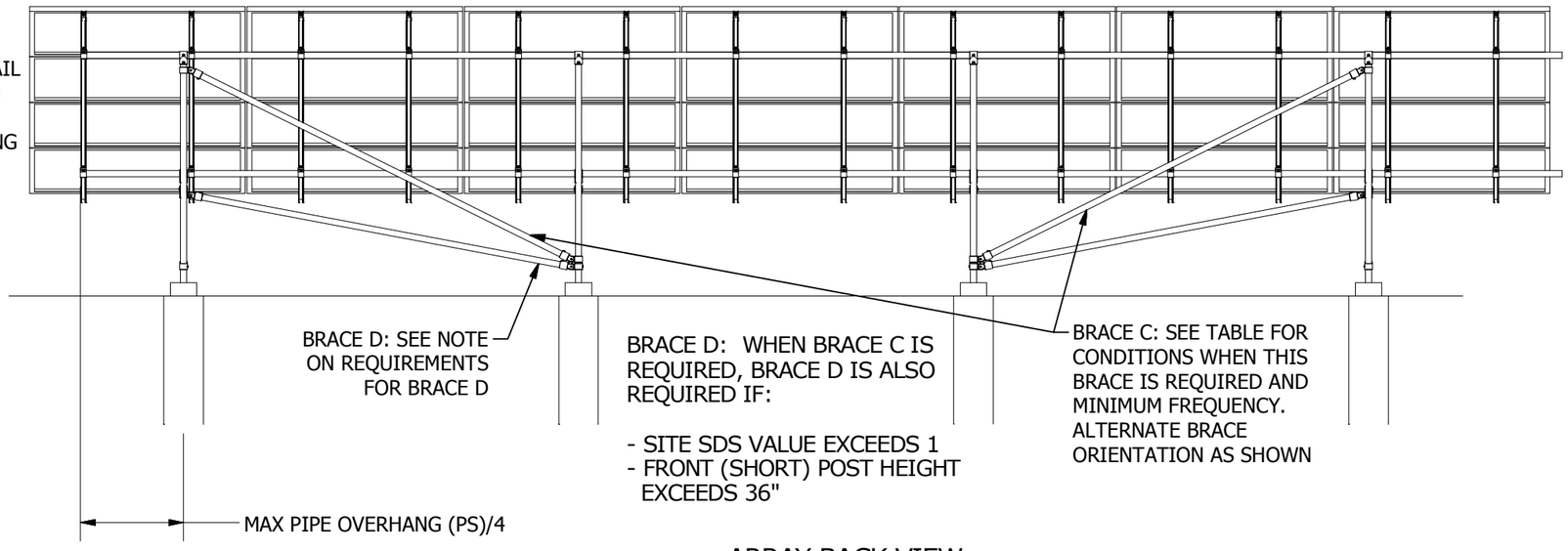
DETAIL A
SCALE 1 / 5

REVISION:



ARRAY SIDE VIEW

DETAILED VIEW OF PIPE TO RAIL AND BRACING INTERFACE



ARRAY BACK VIEW

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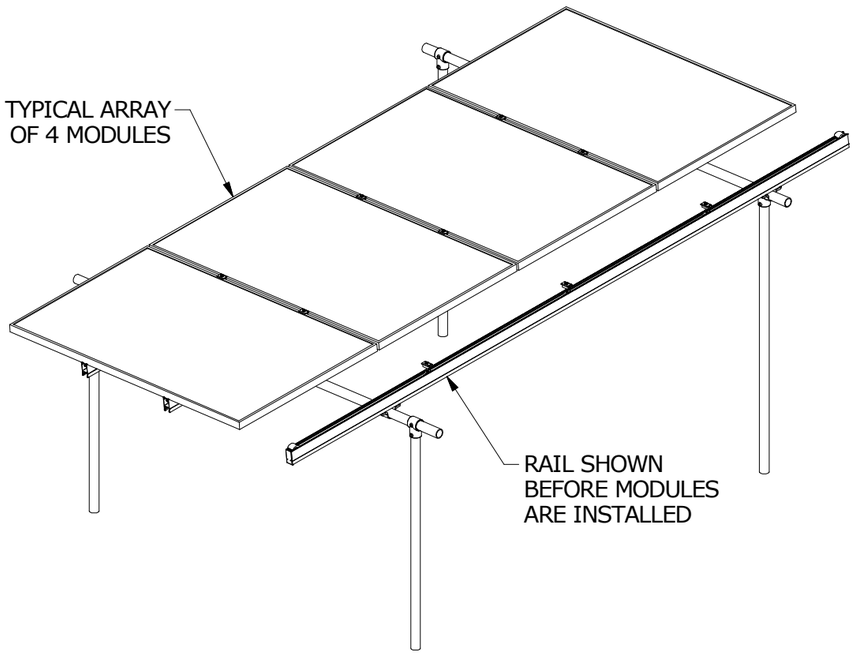
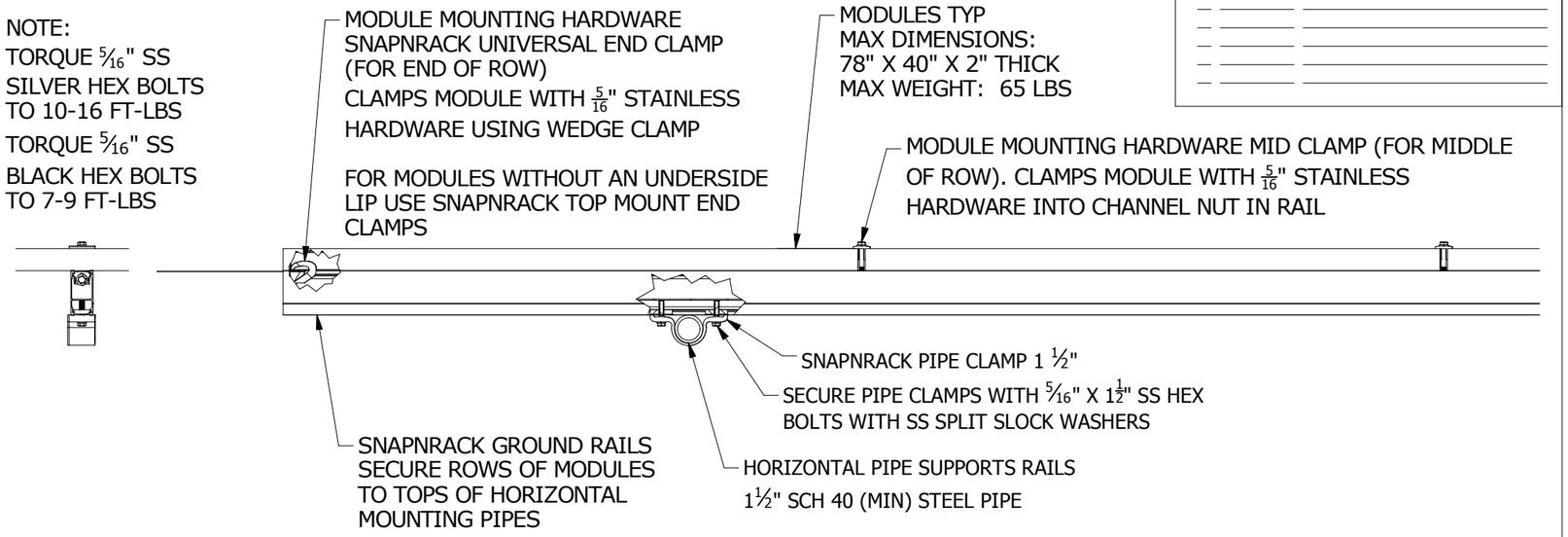
DESIGNER:	DRAFTER:	APPROVED BY:	SCALE:	DATE:	PART NUMBER:	DESCRIPTION:	REV
G McPheeters	D Ryan		DNS	120113	S200 D01	SERIES 200 OVERVIEW	G

REVISION:



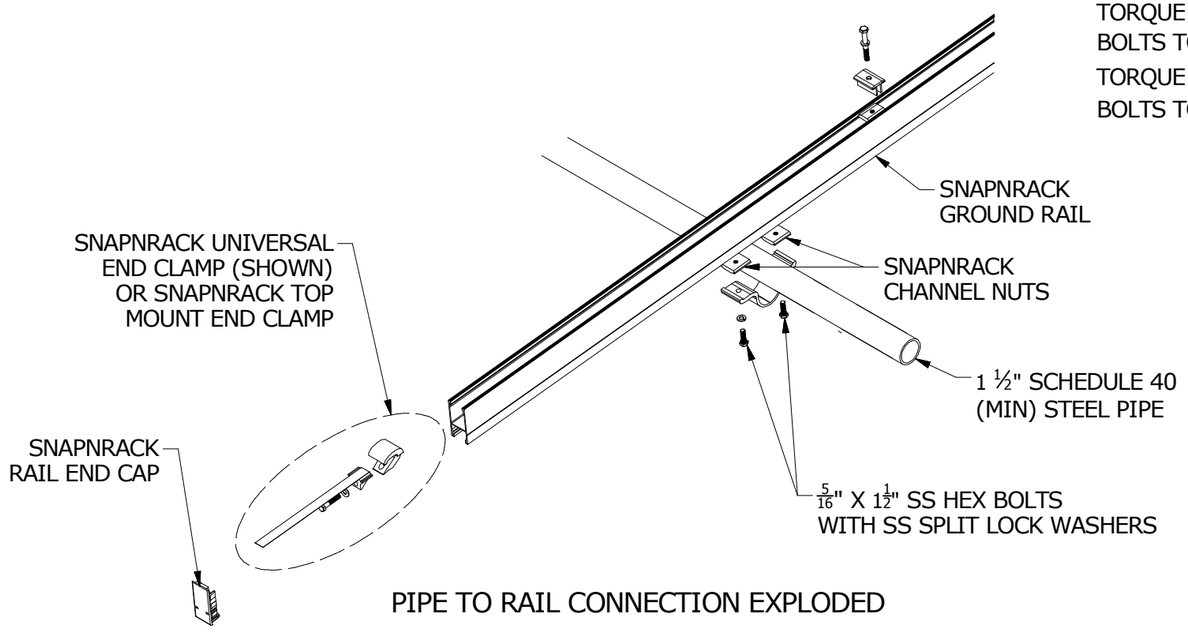
ISO VIEW OF RACKING ASSEMBLY

NOTE:
TORQUE 5/16" SS SILVER HEX BOLTS TO 10-16 FT-LBS
TORQUE 5/16" SS BLACK HEX BOLTS TO 7-9 FT-LBS

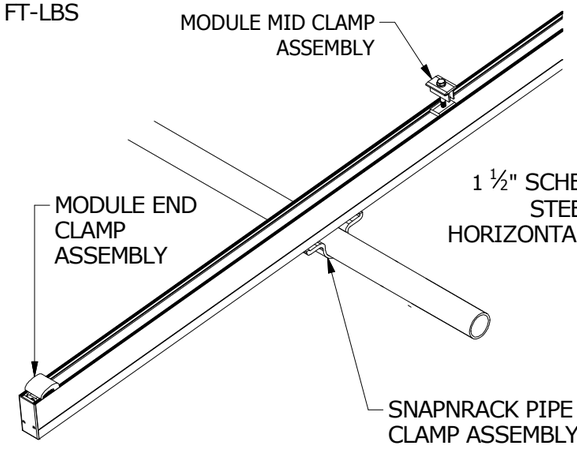


MODULE AND RAIL ATTACHMENT DETAILS

NOTE:
TORQUE 5/16" SS SILVER HEX BOLTS TO 10-16 FT-LBS
TORQUE 5/16" SS BLACK HEX BOLTS TO 7-9 FT-LBS



PIPE TO RAIL CONNECTION EXPLODED



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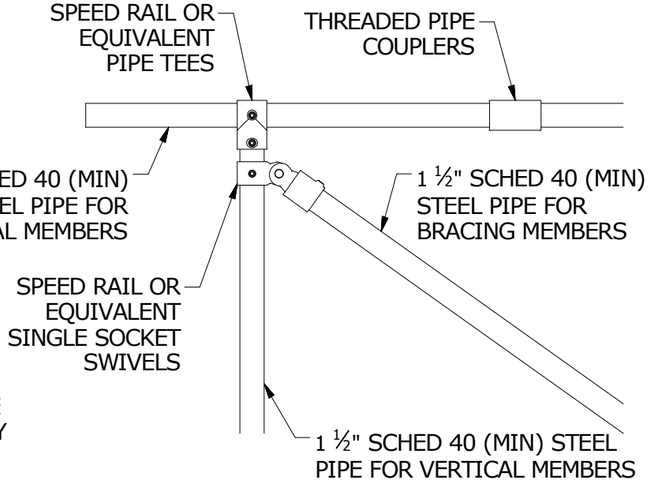

PIPE FITTING DETAILS

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DESIGNER: G. McPheeters	SCALE: DNS	PART NUMBER: S200 D02	DESCRIPTION: SERIES 200 SYSTEM DETAILS	REV G
DRAFTER: D. Ryan				
APPROVED BY:	DATE: 120131			

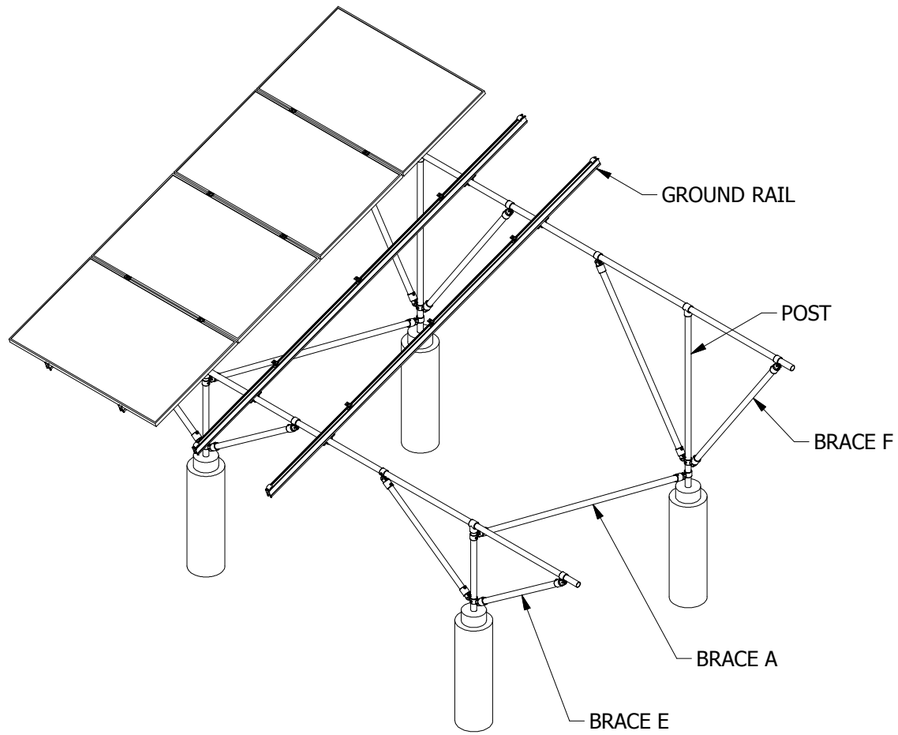
BRACING OPTION FOR HIGH LOAD OR LONGER SPAN APPLICATIONS

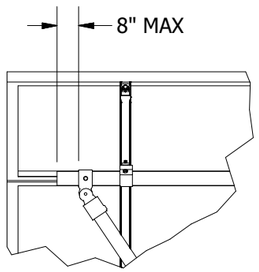
SEE ENGINEERNG TABLES FOR PIER DEPTHS AND SPAN LIMITATIONS.

COMPATIBLE WITH ALL PIER OPTIONS INCLUDING STANDARD PIERS AND GRADE BEAMS

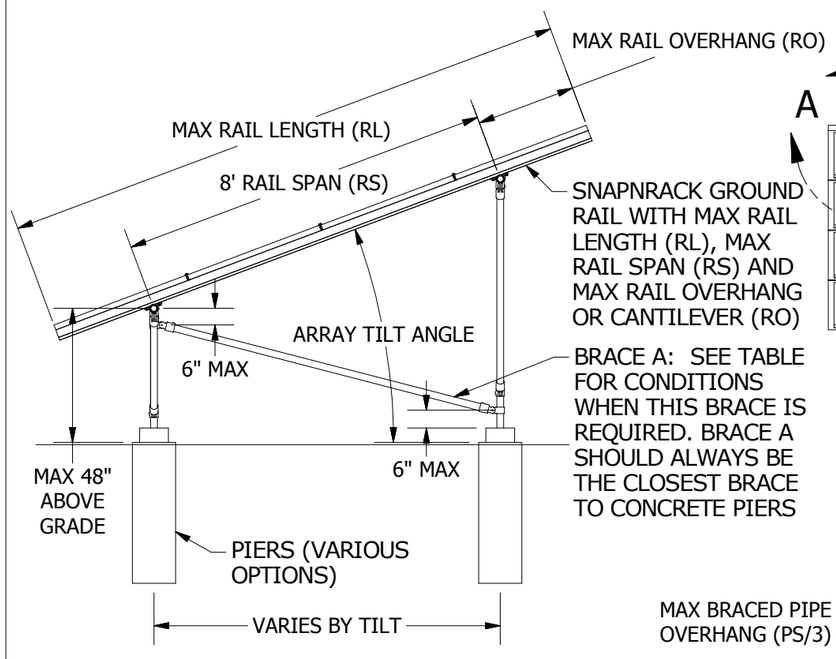
UNLESS OTHERWISE SPECIFIED IN ENGINEERING DOCS, THE FOLLOWING VALUES APPLY:
MAX RL: 162"
RS: 96"
MAX RO: 32"

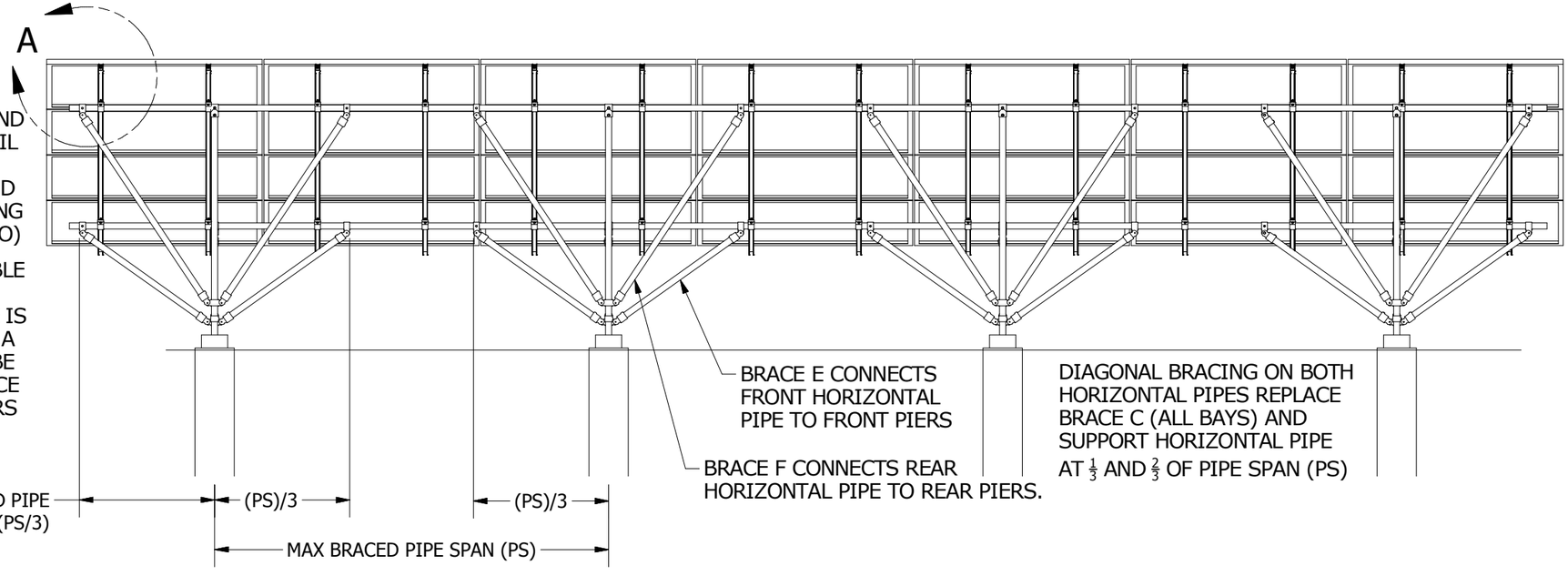
REVISION:





DETAIL A





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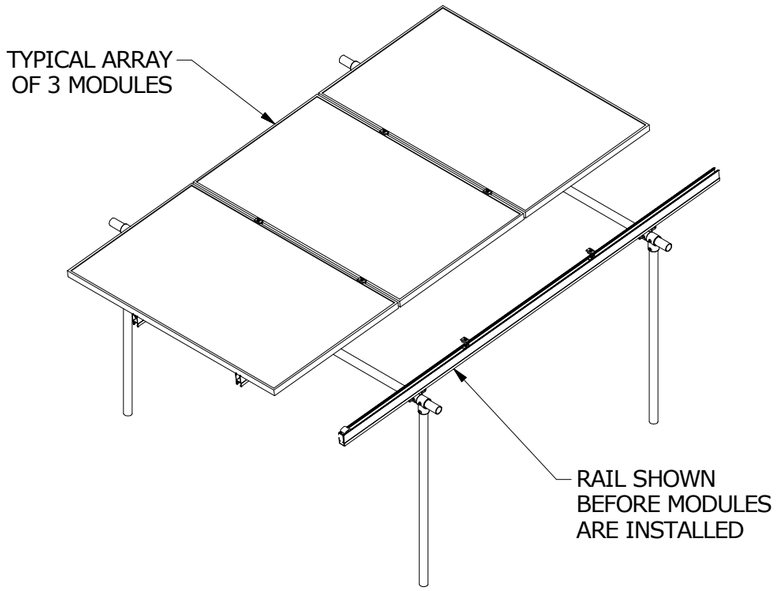
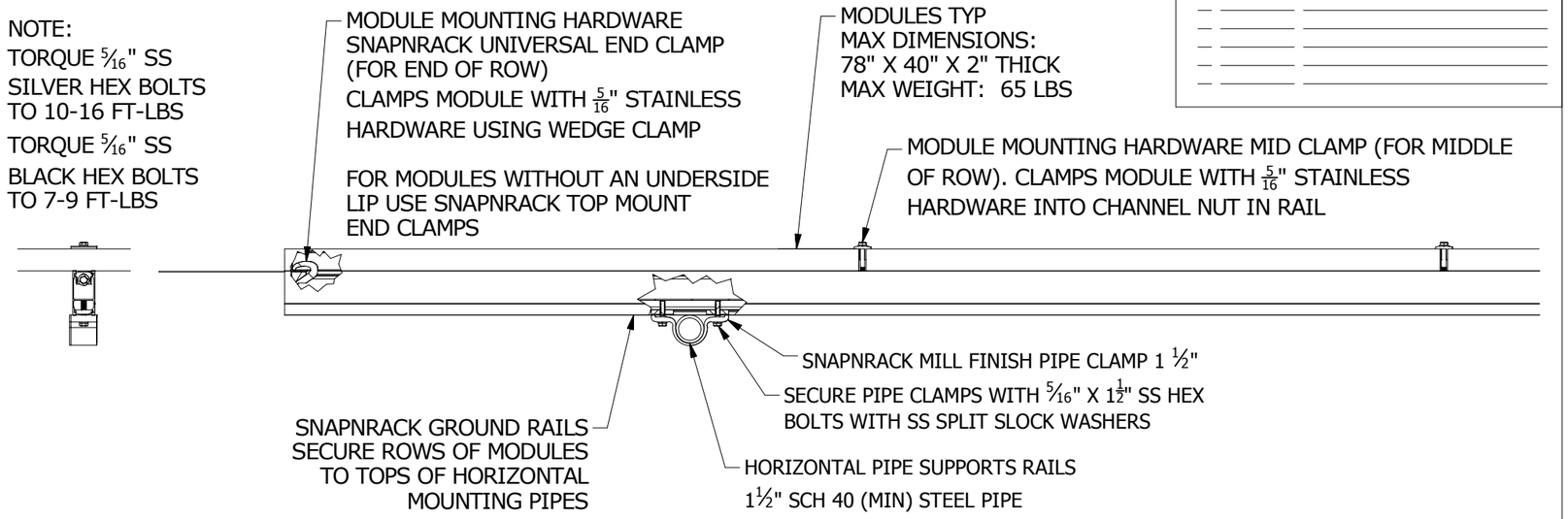
REVISION:



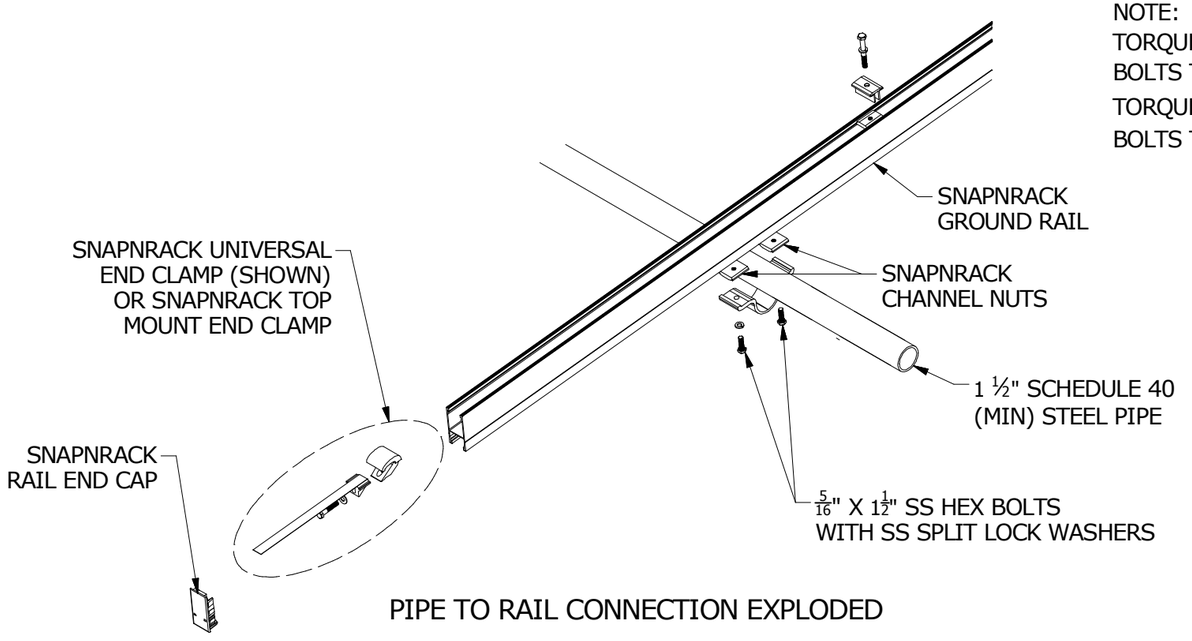
ISO VIEW OF RACKING ASSEMBLY

NOTE:
TORQUE 5/16" SS SILVER HEX BOLTS TO 10-16 FT-LBS
TORQUE 5/16" SS BLACK HEX BOLTS TO 7-9 FT-LBS

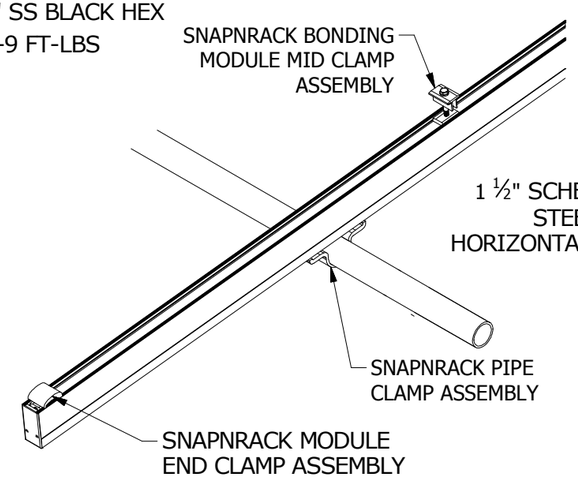


MODULE AND RAIL ATTACHMENT DETAILS

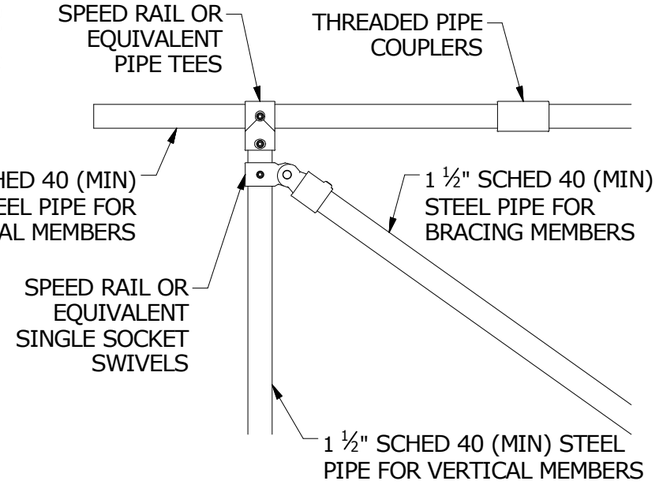
NOTE:
TORQUE 5/16" SS SILVER HEX BOLTS TO 10-16 FT-LBS
TORQUE 5/16" SS BLACK HEX BOLTS TO 7-9 FT-LBS



PIPE TO RAIL CONNECTION EXPLODED



PIPE TO RAIL CONNECTION



PIPE FITTING DETAILS

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DESIGNER: G. McPheeters DRAFTER: D. Ryan APPROVED BY:	SCALE: DNS DATE: 120113	PART NUMBER: S200 D04	DESCRIPTION: SERIES 200 SYSTEM DETAILS, 3 MODULE PANELS	REV G

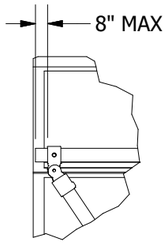
BRACING OPTION FOR HIGH LOAD OR LONGER SPAN APPLICATIONS - 3 MODULE PANELS

REVISION:

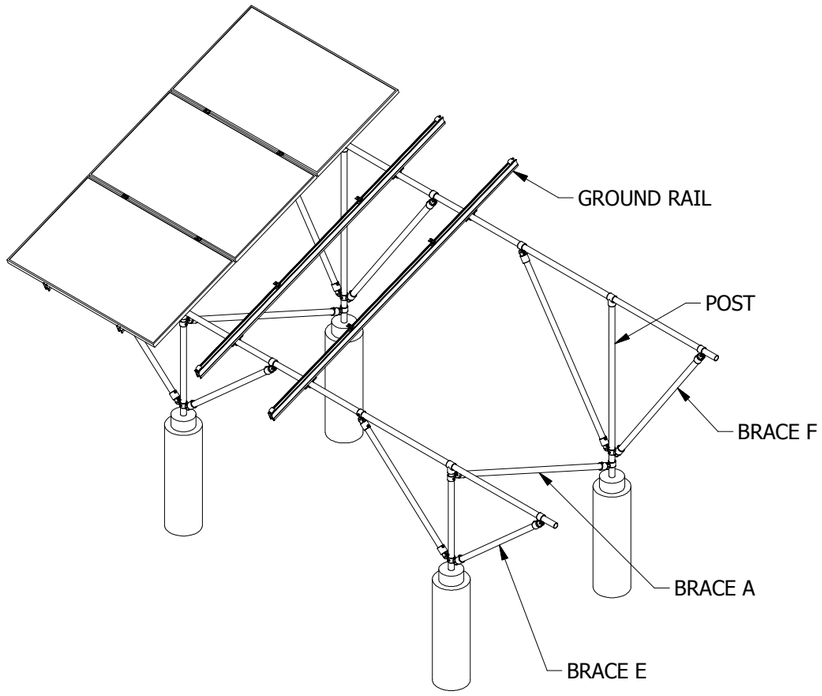
SEE ENGINEERNG TABLES FOR PIER DEPTHS AND SPAN LIMITATIONS.

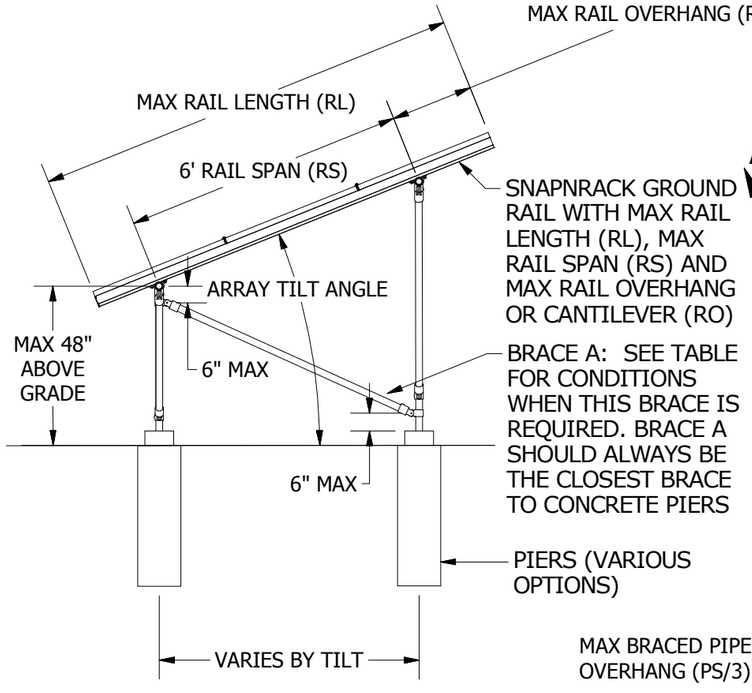
COMPATIBLE WITH ALL PIER OPTIONS INCLUDING STANDARD PIERS AND GRADE BEAMS

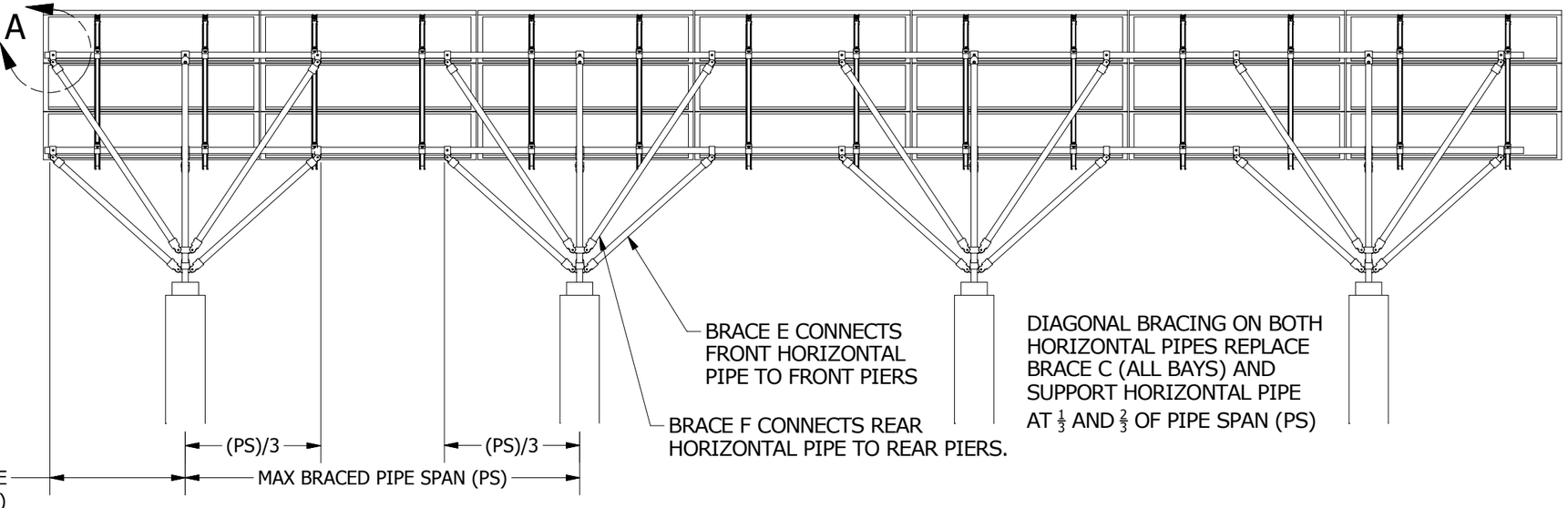
UNLESS OTHERWISE SPECIFIED IN ENGINEERING DOCS, THE FOLLOWING VALUES APPLY:
MAX RL: 122"
RS: 72"
MAX RO: 24"



DETAIL A







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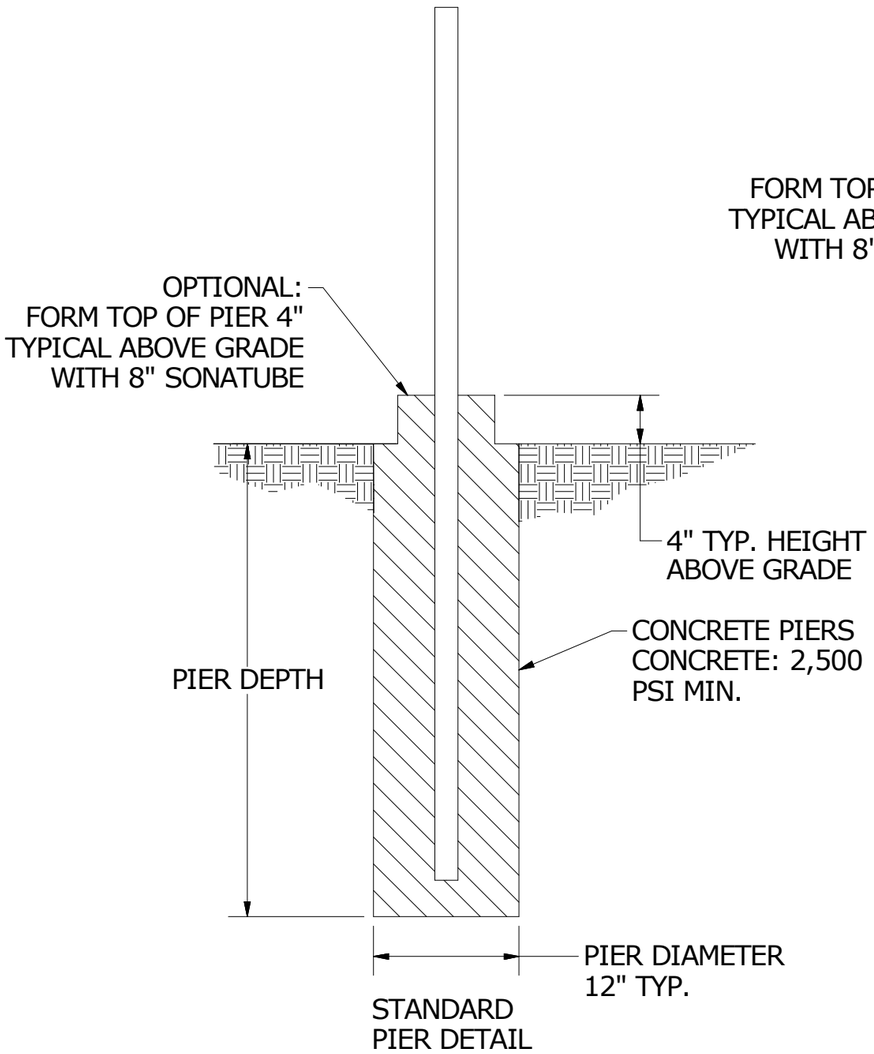
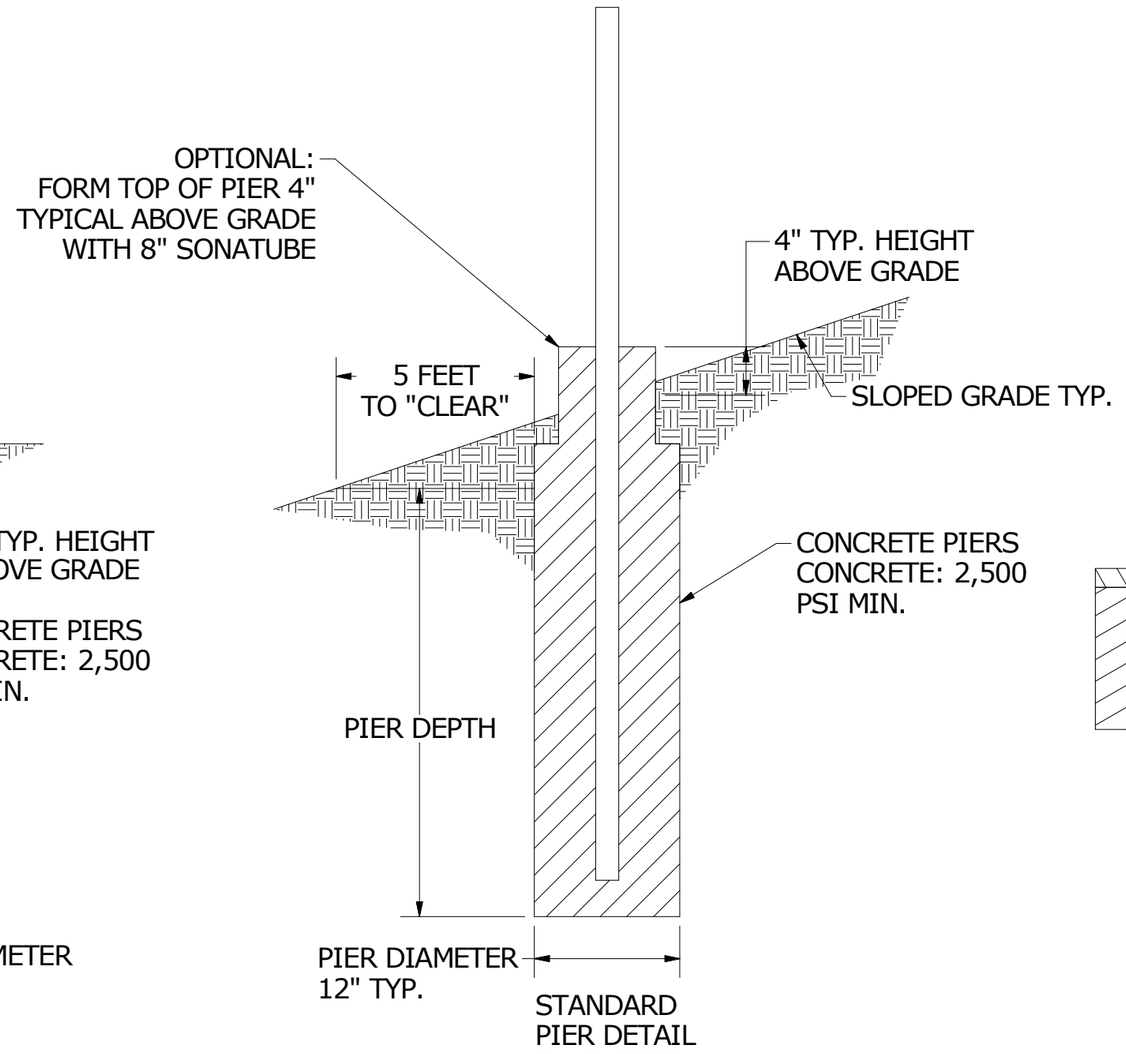
DESIGNER: G. McPheeters DRAFTER: D. Ryan APPROVED BY:	SCALE: DNS DATE: 120113	PART NUMBER: S200 D05	DESCRIPTION: SERIES 200 BRACED OPTION 3 MODULE PANELS	REV G

NOTE:
FLANGE MOUNTS ARE A VIABLE OPTION FOR INSTALLATION OF GROUND MOUNT SYSTEMS ON CONCRETE PADS OR VARIOUS TYPES OF ROOF TOP STRUCTURES, BUT ARE NOT SPECIFIED IN DETAIL IN THE STANDARD ENGINEERING REVIEW FOR 2013.

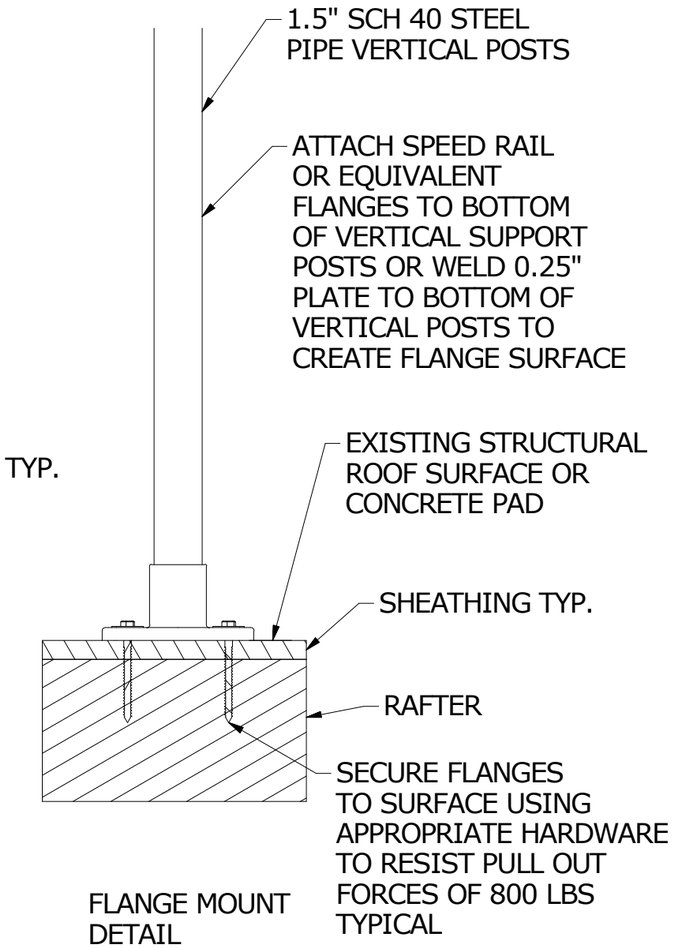
REVISION:



STANDARD
PIER DETAIL



STANDARD
PIER DETAIL
ON SLOPED
GRADE



FLANGE MOUNT
DETAIL

SnapNrack™
PV Mounting Systems

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PHONE (805) 528-9705 • FAX (805) 528-9701

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DESIGNER: G. McPheeters	SCALE: DNS	PART NUMBER: S200 D06	DESCRIPTION: SERIES 200 PIER DETAILS	REV G
DRAFTER: D. Ryan	DATE: 120113			
APPROVED BY:				

GRADE BEAM FOUNDATION CONFIGURATION

SEE ENGINEERING TABLES FOR SPAN LIMITATIONS.

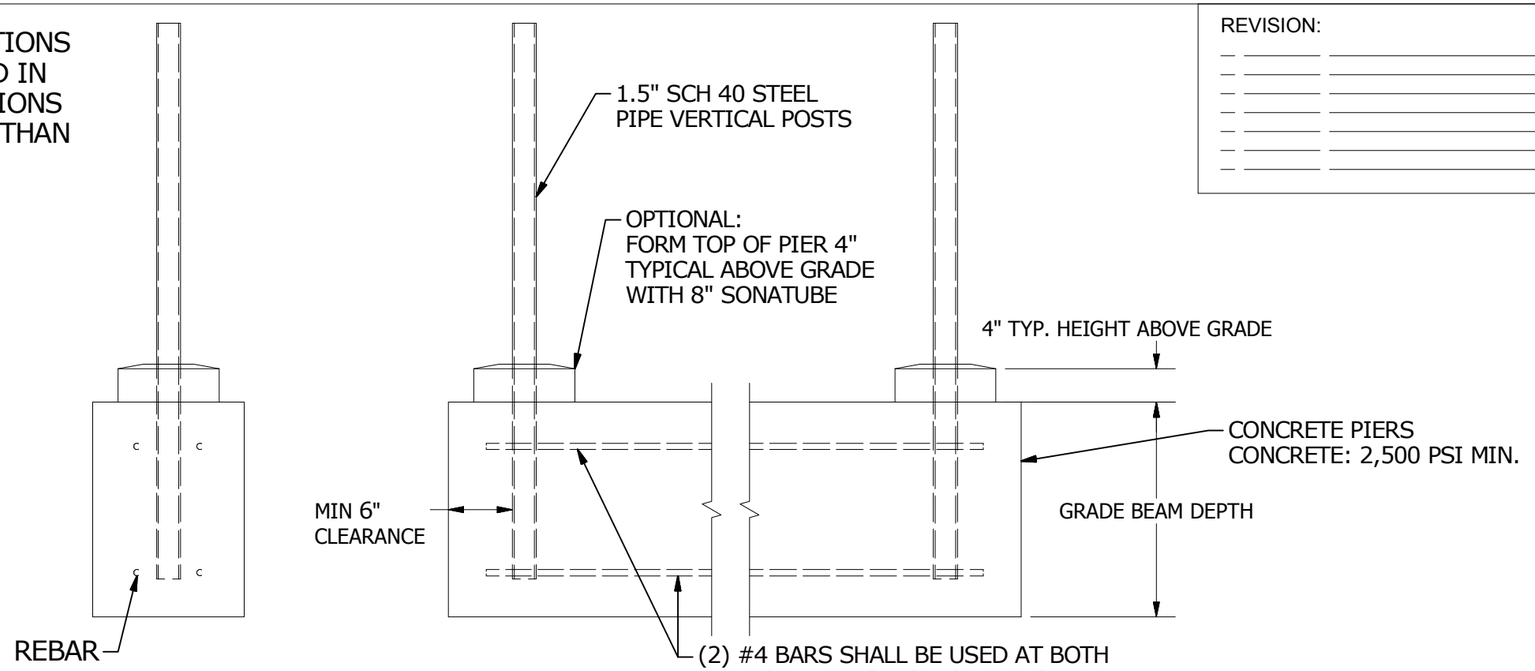
UNLESS OTHERWISE SPECIFIED IN ENGINEERING DOCS, THE FOLLOWING VALUES APPLY:
MAX RL: 162"
RS: 96"
MAX RO: 32"

MIN GBW: 12"
MIN GBD: 18"

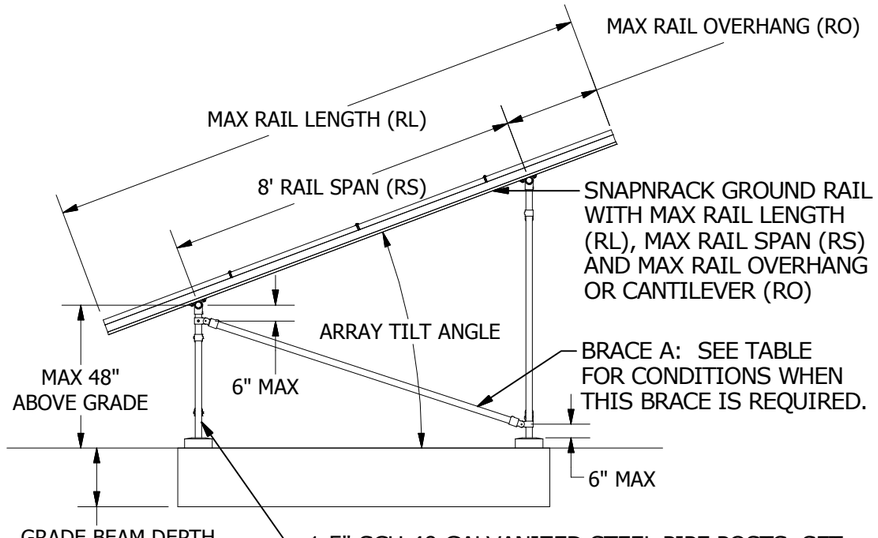
GRADE BEAM FOUNDATIONS SHOULD ONLY BE USED IN FLAT GROUND CONDITIONS (GROUND SLOPE LESS THAN 5 DEGREES TYPICAL)

COMPATIBLE WITH ALL BRACING OPTIONS

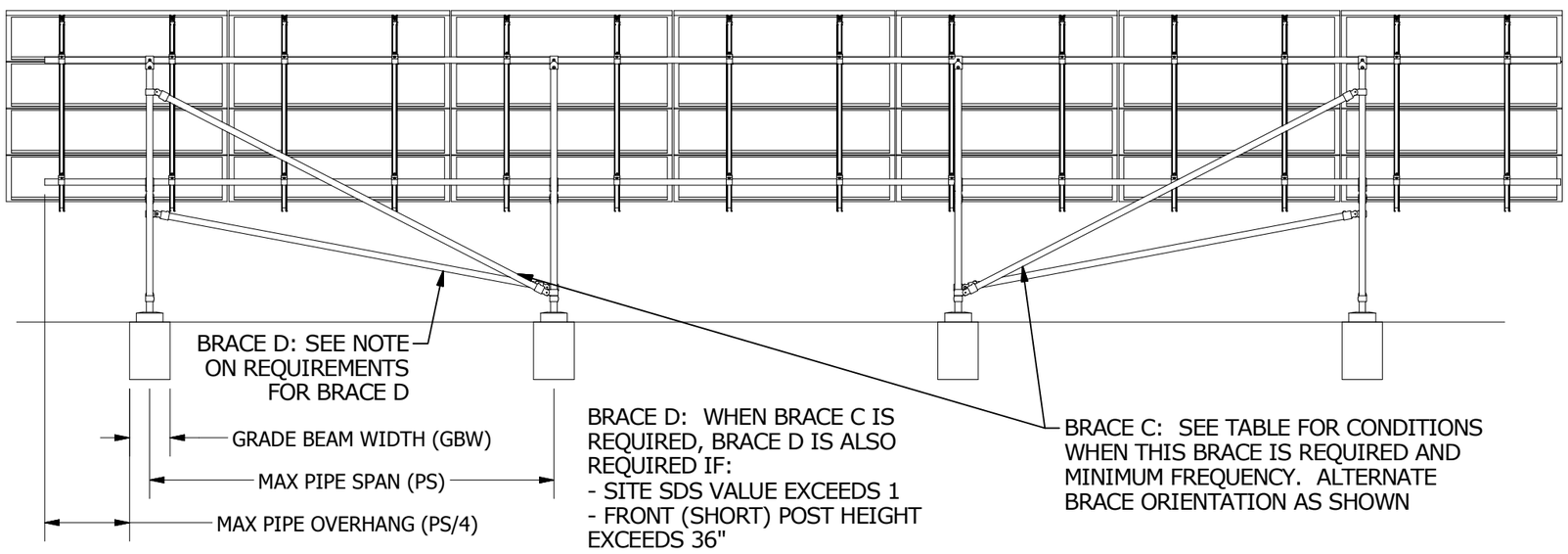
REVISION:



GRADE BEAM FOUNDATION DETAIL



ARRAY SIDE VIEW



ARRAY BACK VIEW

SnapNrack™ PV Mounting Systems

MAINSTREAM ENERGY CORP.
775 FIERO LANE, SUITE 200 • SAN LUIS OBISPO, CA 93401 USA
PHONE (805) 528-9705 • FAX (805) 528-9701

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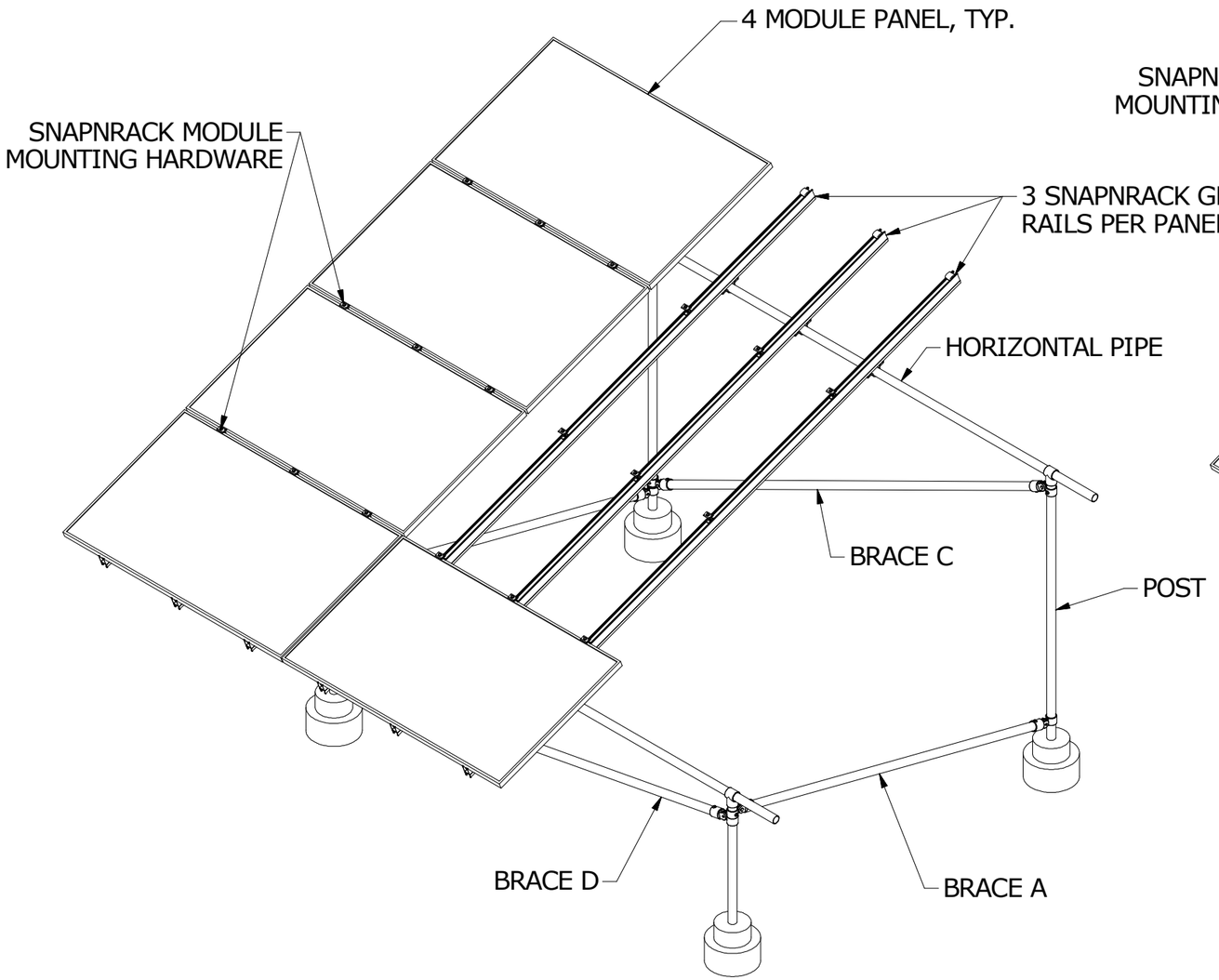
DESIGNER: G McPheeters	SCALE: DNS	PART NUMBER: S200 D07	DESCRIPTION: SERIES 200 GRADE BEAM OPTION	REV G
DRAFTER: D Ryan				
APPROVED BY:	DATE: 120113			

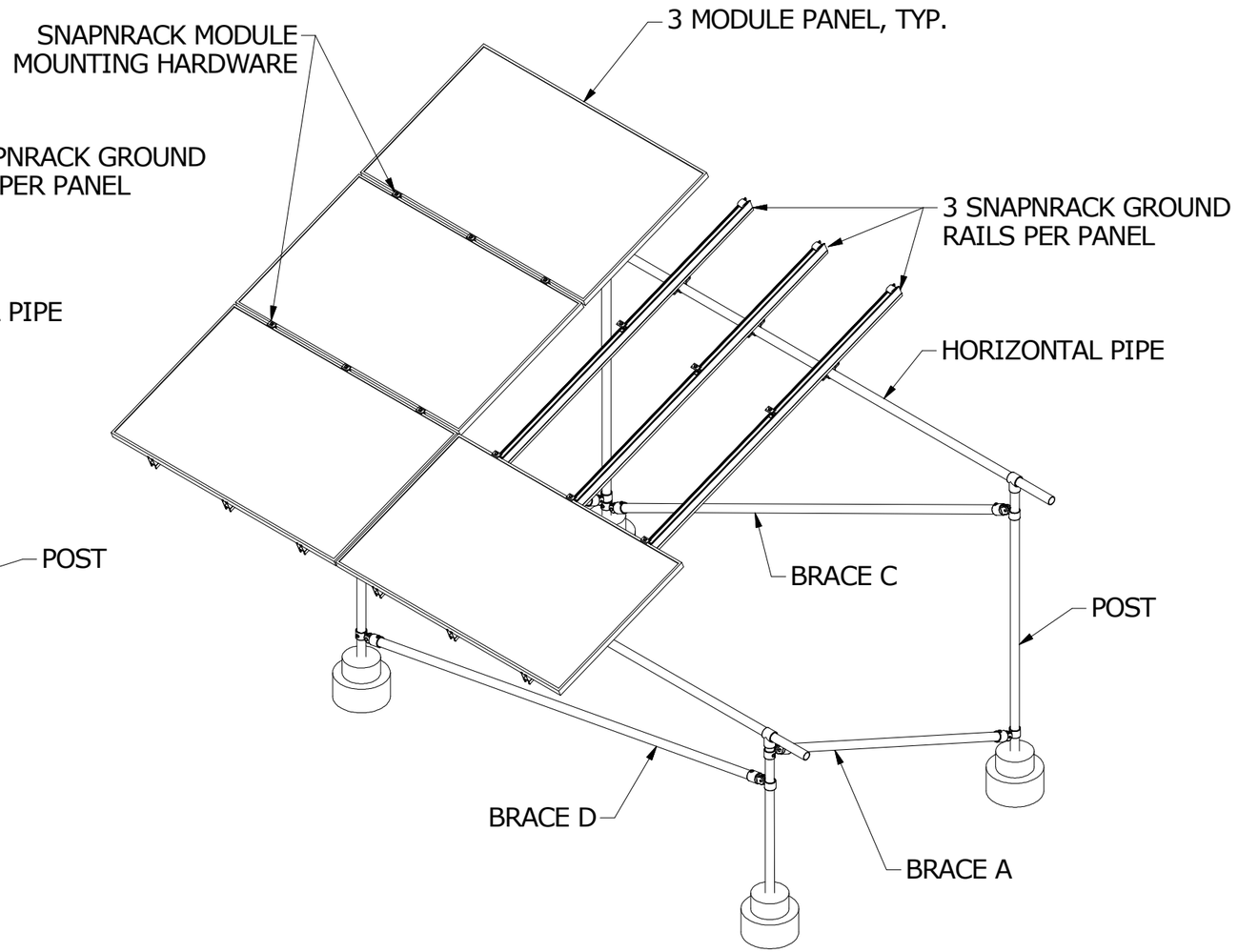
SERIES 200 3-RAIL CONFIGURATIONS

THE SERIES 200 3-RAIL OPTION CAN BE SET UP FOR 3 MODULE AND 4 MODULE PANELS USING 3 RAILS PER PANEL.

REVISION:



4 MODULE PANEL CONFIGURATION



3 MODULE PANEL CONFIGURATION

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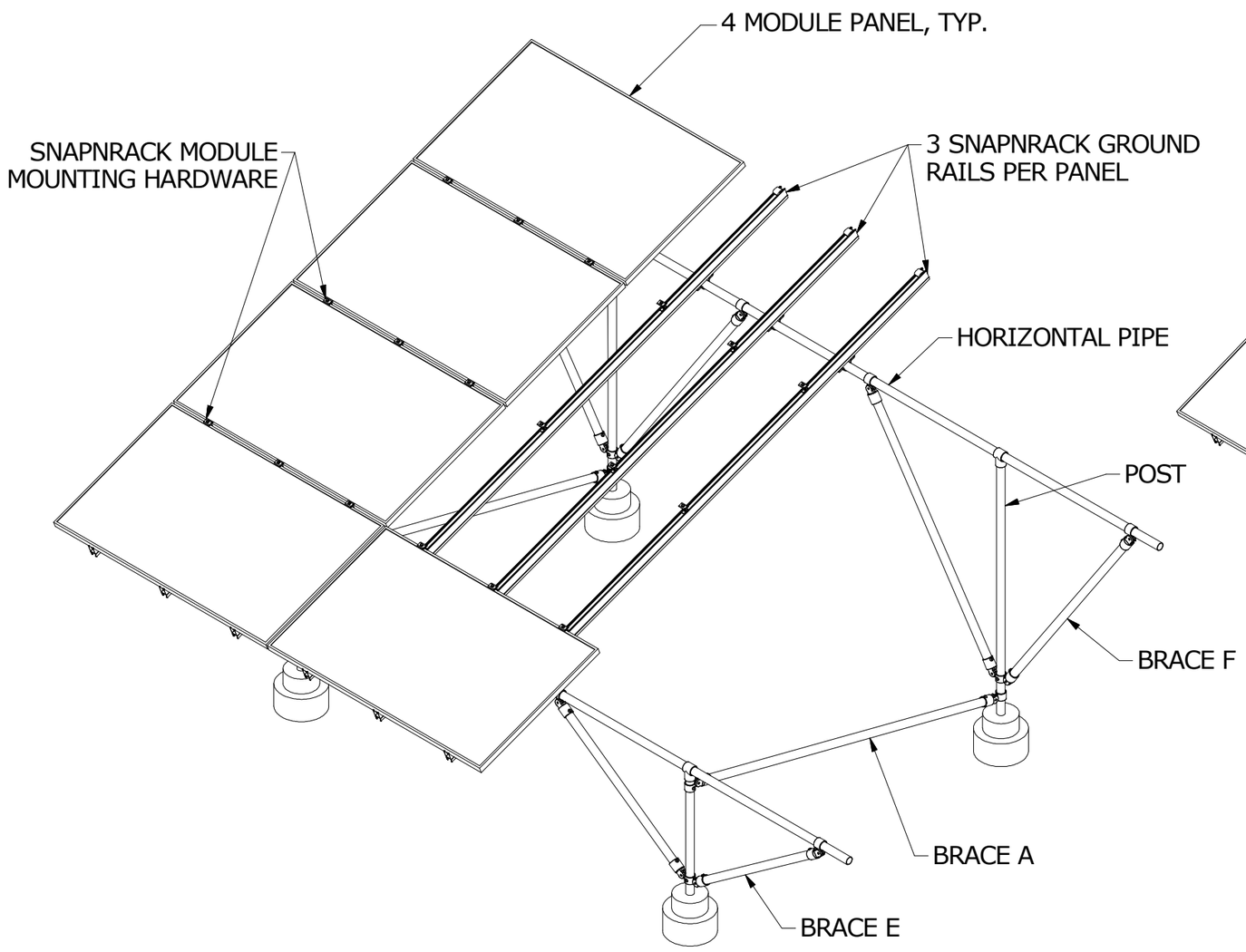
DESIGNER: GMcPheeters DRAFTER: DRyan APPROVED BY:	SCALE: DNS DATE: 120113	PART NUMBER: S200 D08	DESCRIPTION: SERIES 200, 3-RAIL CONFIGURATIONS, UN-BRACED OPTION	REV G

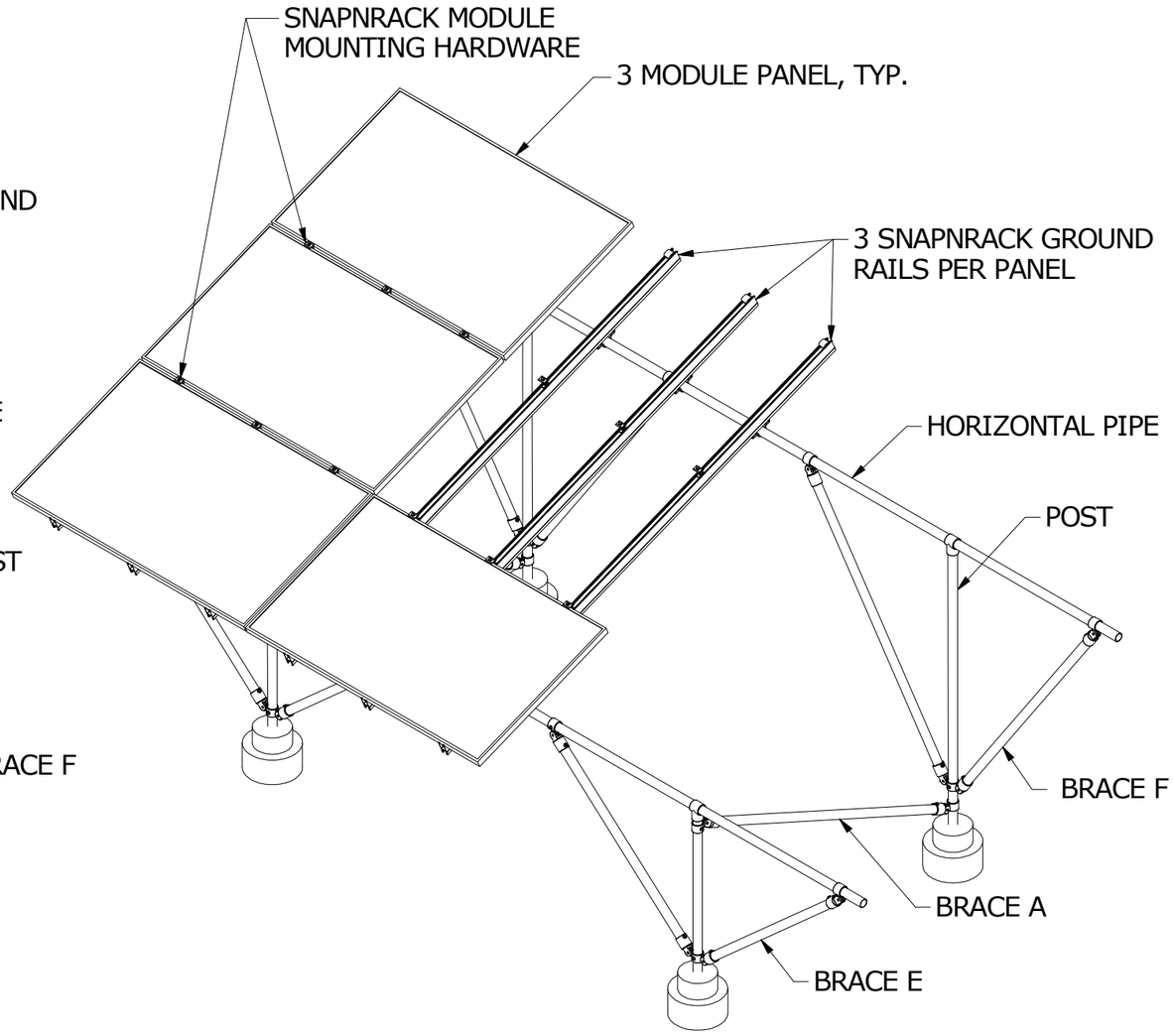
SERIES 200 3-RAIL CONFIGURATIONS

THE SERIES 200 3-RAIL OPTION CAN BE SET UP FOR 3 MODULE AND 4 MODULE PANELS USING 3 RAILS PER PANEL.

REVISION:



4 MODULE PANEL CONFIGURATION



3 MODULE PANEL CONFIGURATION

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DESIGNER: GMcPheeters DRAFTER: DRyan APPROVED BY:	SCALE: DNS DATE: 120113	PART NUMBER: S200 D09	DESCRIPTION: SERIES 200, 3-RAIL CONFIGURATIONS, BRACED OPTION	REV G