



4/26/2017

Attn: Mr. Marshall Green
Quick Mount PV
2700 Mitchell Dr.
Walnut Creek, CA, 94598

RE: Quick Mount PV QBlock Mount System for use with
Unirac Solarmount Flush-to-Roof Rail System

SEI Project No.: 17054.00

Dear Mr. Green

Structural Enginuity Inc. (SEI) has completed its review of the Quickmount PV QBlock Mount System for use in conjunction with the Unirac Solarmount Flush-to-Roof Rail System. The QBlock product line includes the E-Mount (QMSE), E-Mount Lag (QMSE-LAG), Classic Composition Mount (QMSC), and the Classic Shake Mount (QMLC).

The review was based on the following reference data:

- Unirac, Design & Engineering Guide – Solarmount: Flush-to-Roof Design, May 19, 2016
- Applied Materials & Engineering, Quick Mount PV Load Testing, Project Number 108443C, May 22, 2009
- Applied Materials & Engineering, Quick Mount PV Load Testing, Project Number 108443C, May 22, 2009
- Applied Materials & Engineering, Laboratory Load Testing of the QMSE-Lag, Project Number 114490C, October 29, 2014
- ICC Evaluation Service, Quick Mount PV Roof Mounts, ESR-2835, April 2015
- ICC Evaluation Service, Quick Mount PV Roof Mounts, ESR-3744, November 2016

SEI has determined that the QMSE, QMSE-Lag, QMSC, and QMLC mounts are suitable for use with the Unirac Solarmount System. The approved installation and allowable loads for the Quick Mount PV QBlock products is outlined in the ICC reports (ESR-2835 & ESR-3744). These values are shown below, no additional load duration factors may be applied to these values.

Table 1: QMSE, QMSC, & QMLC Roof Mounts

Load Direction	Specific Gravity of Lumber Rafter	Allowable Load
Uplift	0.5	811
	0.36	436
Lateral	0.5	671
	0.36	634

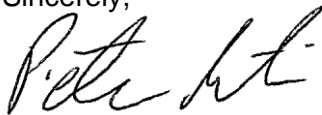
Table 2: QMSE-LAG Roof Mount

Load Direction	Specific Gravity of Lumber Rafter	Allowable Load
Uplift	0.5	732
	-	-
Lateral	0.5	526
	-	-

SEI has prepared allowable rail span charts for the Unirac Solarmount System used in conjunction with the Quick Mount PV QBlock products. These span tables serve as a quick reference for looking up maximum rail spans based on building and site conditions and follow the 2016 CBC, 2015 IBC/IRC and applicable ASCE 7-10 load cases. The tables take into account the strength of the rail system as well as the allowable uplift and lateral forces of the QBlock mounts. A site specific analysis is required if the site conditions or building characteristics do not meet the requirements listed in the attached tables. In all cases, the tables are meant to be used in conjunction with Unirac Solarmount System Structural Report and Calculations and all requirements listed are still applicable for these tables including edge zones and edge distances.

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

Sincerely,



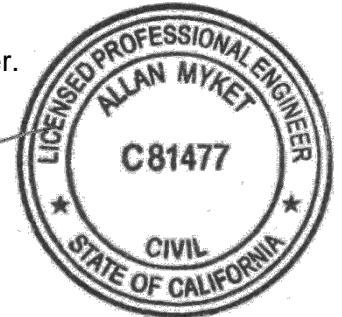
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4/26/17

Structural Enginuity Inc.

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 1A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	150	120	90	66	54	132	132	120	90	66	54	108	108	108	90	66	54
	115	150	132	120	90	66	54	120	120	120	90	66	54	108	108	108	90	66	54
	120	150	132	120	90	66	54	120	120	120	90	66	54	102	102	102	90	66	54
	130	150	132	120	90	66	54	120	120	120	90	66	54	90	90	90	90	66	54
	140	132	132	120	90	66	54	108	108	108	90	66	54	80	80	80	80	66	54
	150	132	132	120	90	66	54	102	102	102	90	66	54	69	69	69	69	66	54
	160	120	120	120	90	66	54	90	90	90	90	66	54	61	61	61	61	61	54
	170	120	120	120	90	66	54	83	83	83	83	66	54	53	53	53	53	53	53
	180	108	108	108	90	66	54	74	74	74	74	66	54	47	47	47	47	47	47
	200	102	102	102	90	66	54	59	59	59	59	59	54	38	38	38	38	38	38

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 1B		Roof Height: 0 - 30 feet						Rafter Species: Western Cedar											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.36											
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	150	120	90	66	54	116	116	116	90	66	54	72	72	72	72	66	54
	115	150	132	120	90	66	54	105	105	105	90	66	54	66	66	66	66	66	54
	120	150	132	120	90	66	54	95	95	95	90	66	54	60	60	60	60	60	54
	130	150	132	120	90	66	54	80	80	80	80	66	54	50	50	50	50	50	50
	140	132	132	120	90	66	54	68	68	68	68	66	54	43	43	43	43	43	43
	150	118	118	118	90	66	54	58	58	58	58	58	54	37	37	37	37	37	37
	160	102	102	102	90	66	54	51	51	51	51	51	51	33	33	33	33	33	33
	170	89	89	89	89	66	54	45	45	45	45	45	45	29	29	29	29	29	29
	180	78	78	78	78	66	54	40	40	40	40	40	40	26	26	26	26	26	26
	200	62	62	62	62	62	54	32	32	32	32	32	32	21	21	21	21	21	21

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 1C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	150	120	90	66	54	132	132	120	90	66	54	108	108	108	90	66	54
	115	150	132	120	90	66	54	120	120	120	90	66	54	108	108	108	90	66	54
	120	150	132	120	90	66	54	120	120	120	90	66	54	100	100	100	90	66	54
	130	150	132	120	90	66	54	120	120	120	90	66	54	85	85	85	85	66	54
	140	132	132	120	90	66	54	108	108	108	90	66	54	72	72	72	72	66	54
	150	132	132	120	90	66	54	98	98	98	90	66	54	63	63	63	63	63	54
	160	120	120	120	90	66	54	85	85	85	85	66	54	55	55	55	55	55	54
	170	120	120	120	90	66	54	75	75	75	75	66	54	48	48	48	48	48	48
	180	108	108	108	90	66	54	67	67	67	67	66	54	43	43	43	43	43	43
	200	102	102	102	90	66	54	53	53	53	53	53	53	34	34	34	34	34	34

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 2A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	132	120	90	66	54	120	120	120	90	66	54	90	90	90	90	66	54
	115	132	132	120	90	66	54	108	108	108	90	66	54	85	85	85	85	66	54
	120	132	132	120	90	66	54	108	108	108	90	66	54	78	78	78	78	66	54
	130	132	132	120	90	66	54	102	102	102	90	66	54	66	66	66	66	66	54
	140	120	120	120	90	66	54	88	88	88	88	66	54	56	56	56	56	56	54
	150	120	120	120	90	66	54	76	76	76	76	66	54	49	49	49	49	49	49
	160	108	108	108	90	66	54	66	66	66	66	66	54	43	43	43	43	43	43
	170	102	102	102	90	66	54	59	59	59	59	59	54	38	38	38	38	38	38
	180	101	101	101	90	66	54	52	52	52	52	52	52	34	34	34	34	34	34
	200	81	81	81	81	66	54	42	42	42	42	42	42	27	27	27	27	27	27

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 2B		Roof Height: 0 - 30 feet						Rafter Species: Western Cedar											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.36											
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	132	120	90	66	54	79	79	79	79	66	54	50	50	50	50	50	50
	115	132	132	120	90	66	54	72	72	72	72	66	54	46	46	46	46	46	46
	120	132	132	120	90	66	54	66	66	66	66	66	54	42	42	42	42	42	42
	130	111	111	111	90	66	54	55	55	55	55	55	54	35	35	35	35	35	35
	140	94	94	94	90	66	54	47	47	47	47	47	47	30	30	30	30	30	30
	150	81	81	81	81	66	54	41	41	41	41	41	41	26	26	26	26	26	26
	160	70	70	70	70	66	54	36	36	36	36	36	36	23	23	23	23	23	23
	170	62	62	62	62	62	54	31	31	31	31	31	31	20	20	20	20	20	20
	180	54	54	54	54	54	54	28	28	28	28	28	28	18	18	18	18	18	18
	200	44	44	44	44	44	44	22	22	22	22	22	22	15	15	15	15	15	15

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 2C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	150	132	120	90	66	54	120	120	120	90	66	54	84	84	84	84	66	54
	115	132	132	120	90	66	54	108	108	108	90	66	54	77	77	77	77	66	54
	120	132	132	120	90	66	54	108	108	108	90	66	54	70	70	70	70	66	54
	130	132	132	120	90	66	54	93	93	93	90	66	54	59	59	59	59	59	54
	140	120	120	120	90	66	54	79	79	79	79	66	54	51	51	51	51	51	51
	150	120	120	120	90	66	54	69	69	69	69	66	54	44	44	44	44	44	44
	160	108	108	108	90	66	54	60	60	60	60	60	54	39	39	39	39	39	39
	170	102	102	102	90	66	54	53	53	53	53	53	53	34	34	34	34	34	34
	180	91	91	91	90	66	54	47	47	47	47	47	47	30	30	30	30	30	30
	200	73	73	73	73	66	54	38	38	38	38	38	38	24	24	24	24	24	24

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 3A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	132	132	120	90	66	54	108	108	108	90	66	54	78	78	78	78	66	54
	115	132	132	120	90	66	54	102	102	102	90	66	54	71	71	71	71	66	54
	120	132	132	120	90	66	54	102	102	102	90	66	54	65	65	65	65	65	54
	130	120	120	120	90	66	54	86	86	86	86	66	54	55	55	55	55	55	54
	140	108	108	108	90	66	54	74	74	74	74	66	54	47	47	47	47	47	47
	150	108	108	108	90	66	54	64	64	64	64	64	54	41	41	41	41	41	41
	160	102	102	102	90	66	54	56	56	56	56	56	54	36	36	36	36	36	36
	170	90	90	90	90	66	54	49	49	49	49	49	49	30	30	30	30	30	30
	180	85	85	85	85	66	54	44	44	44	44	44	44	28	28	28	28	28	28
	200	68	68	68	68	66	54	35	35	35	35	35	35	23	23	23	23	23	23

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 3B		Roof Height: 0 - 30 feet						Rafter Species: Western Cedar											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.36											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	132	132	120	90	66	54	66	66	66	66	66	54	42	42	42	42	42	42
	115	122	122	120	90	66	54	60	60	60	60	60	54	38	38	38	38	38	38
	120	110	110	110	90	66	54	55	55	55	55	55	54	35	35	35	35	35	35
	130	92	92	92	90	66	54	46	46	46	46	46	46	30	30	30	30	30	30
	140	78	78	78	78	66	54	40	40	40	40	40	40	25	25	25	25	25	25
	150	67	67	67	67	66	54	34	34	34	34	34	34	22	22	22	22	22	22
	160	59	59	59	59	59	54	30	30	30	30	30	30	19	19	19	19	19	19
	170	51	51	51	51	51	51	26	26	26	26	26	26	17	17	17	17	17	17
	180	46	46	46	46	46	46	23	23	23	23	23	23	15	15	15	15	15	15
	200	36	36	36	36	36	36	19	19	19	19	19	19	12	12	12	12	12	12

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 3C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 7 - 27 degrees						Specific Gravity: 0.50											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	132	132	120	90	66	54	108	108	108	90	66	54	71	71	71	71	66	54
	115	132	132	120	90	66	54	101	101	101	90	66	54	64	64	64	64	64	54
	120	132	132	120	90	66	54	92	92	92	90	66	54	59	59	59	59	59	54
	130	120	120	120	90	66	54	78	78	78	78	66	54	50	50	50	50	50	50
	140	108	108	108	90	66	54	66	66	66	66	66	54	43	43	43	43	43	43
	150	108	108	108	90	66	54	58	58	58	58	58	54	37	37	37	37	37	37
	160	98	98	98	90	66	54	50	50	50	50	50	50	32	32	32	32	32	32
	170	86	86	86	86	66	54	44	44	44	44	44	44	29	29	29	29	29	29
	180	76	76	76	76	66	54	39	39	39	39	39	39	26	26	26	26	26	26
	200	61	61	61	61	61	54	32	32	32	32	32	32	21	21	21	21	21	21

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 4A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	115	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	120	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	130	132	132	120	90	66	42	132	132	120	90	66	42	132	132	120	90	66	42
	140	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	150	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	160	120	120	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	170	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	180	108	108	108	90	66	42	102	102	102	90	66	42	102	102	102	90	66	42
	200	102	102	96	90	66	42	85	85	85	85	66	42	85	85	85	85	66	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 4B		Roof Height: 0 - 30 feet Roof Angle: 27 - 45 degrees											Rafter Species: Western Cedar Specific Gravity: 0.36						
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	115	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	120	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	130	132	132	120	90	66	42	116	116	116	90	66	42	116	116	116	90	66	42
	140	120	120	120	90	66	42	98	98	98	90	66	42	98	98	98	90	66	42
	150	103	103	103	90	66	42	84	84	84	84	66	42	84	84	84	84	66	42
	160	89	89	89	89	66	42	73	73	73	73	66	42	73	73	73	73	66	42
	170	78	78	78	78	66	42	64	64	64	64	64	42	64	64	64	64	64	42
	180	69	69	69	69	66	42	57	57	57	57	57	42	57	57	57	57	57	42
	200	55	55	55	55	55	42	46	46	46	46	46	42	46	46	46	46	46	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 4C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	115	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	120	132	132	132	90	66	42	132	132	132	90	66	42	132	132	132	90	66	42
	130	132	132	120	90	66	42	132	132	120	90	66	42	132	132	120	90	66	42
	140	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	150	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	160	120	120	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	170	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	180	108	108	108	90	66	42	96	96	96	90	66	42	96	96	96	90	66	42
	200	93	93	93	90	66	42	77	77	77	77	66	42	77	77	77	77	66	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 5A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	120	90	66	42	132	132	120	90	66	42	132	132	120	90	66	42
	115	132	132	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	120	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	130	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	140	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	150	108	108	108	90	66	42	102	102	102	90	66	42	102	102	102	90	66	42
	160	102	102	102	90	66	42	90	90	90	90	66	42	90	90	90	90	66	42
	170	102	102	96	90	66	42	84	84	84	84	66	42	84	84	84	84	66	42
	180	90	90	90	90	66	42	74	74	74	74	66	42	74	74	74	74	66	42
	200	72	72	72	72	66	42	60	60	60	60	60	42	60	60	60	60	60	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 5B		Roof Height: 0 - 30 feet											Rafter Species: Western Cedar						
		Roof Angle: 27 - 45 degrees											Specific Gravity: 0.36						
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	120	90	66	42	116	116	116	90	66	42	116	116	116	90	66	42
	115	129	129	120	90	66	42	105	105	105	90	66	42	105	105	105	90	66	42
	120	117	117	117	90	66	42	95	95	95	90	66	42	95	95	95	90	66	42
	130	98	98	98	90	66	42	80	80	80	80	66	42	80	80	80	80	66	42
	140	83	83	83	83	66	42	68	68	68	68	66	42	68	68	68	68	66	42
	150	71	71	71	71	66	42	59	59	59	59	59	42	59	59	59	59	59	42
	160	62	62	62	62	62	42	51	51	51	51	51	42	51	51	51	51	51	42
	170	55	55	55	55	55	42	45	45	45	45	45	42	45	45	45	45	45	42
	180	48	48	48	48	48	42	40	40	40	40	40	40	40	40	40	40	40	40
	200	39	39	39	39	39	39	32	32	32	32	32	32	32	32	32	32	32	32

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 5C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	132	132	120	90	66	42	132	132	120	90	66	42	132	132	120	90	66	42
	115	132	132	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	120	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	130	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	140	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	150	108	108	108	90	66	42	99	99	99	90	66	42	99	99	99	90	66	42
	160	102	102	102	90	66	42	86	86	86	86	66	42	86	86	86	86	66	42
	170	92	92	92	90	66	42	76	76	76	76	66	42	76	76	76	76	66	42
	180	81	81	81	81	66	42	67	67	67	67	66	42	67	67	67	67	66	42
	200	65	65	65	65	65	42	54	54	54	54	54	42	54	54	54	54	54	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 6A		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	115	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	120	120	120	120	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	130	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	140	108	108	108	90	66	42	102	102	102	90	66	42	102	102	102	90	66	42
	150	102	102	102	90	66	42	90	90	90	90	66	42	90	90	90	90	66	42
	160	90	90	90	90	66	42	80	80	80	80	66	42	80	80	80	80	66	42
	170	85	85	85	85	66	42	70	70	70	70	66	42	70	70	70	70	66	42
	180	75	75	75	75	66	42	62	62	62	62	62	42	62	62	62	62	62	42
	200	61	61	61	61	61	42	50	50	50	50	50	42	50	50	50	50	50	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE, QMSC, QMLC Products

Table 6B		Roof Height: 0 - 30 feet						Rafter Species: Western Cedar											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.36											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	118	118	118	90	66	42	96	96	96	90	66	42	96	96	96	90	66	42
	115	106	106	106	90	66	42	87	87	87	87	66	42	87	87	87	87	66	42
	120	97	97	97	90	66	42	79	79	79	79	66	42	79	79	79	79	66	42
	130	81	81	81	81	66	42	67	67	67	67	66	42	67	67	67	67	66	42
	140	69	69	69	69	66	42	57	57	57	57	57	42	57	57	57	57	57	42
	150	60	60	60	60	60	42	49	49	49	49	49	42	49	49	49	49	49	42
	160	52	52	52	52	52	42	43	43	43	43	43	42	43	43	43	43	43	42
	170	46	46	46	46	46	42	38	38	38	38	38	38	38	38	38	38	38	38
	180	41	41	41	41	41	41	34	34	34	34	34	34	34	34	34	34	34	34
	200	33	33	33	33	33	33	27	27	27	27	27	27	27	27	27	27	27	27

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Unirac Solarmount Rails for use with QMSE-Lag Products

Table 6C		Roof Height: 0 - 30 feet						Rafter Species: Douglas Fir											
		Roof Angle: 27 - 45 degrees						Specific Gravity: 0.50											
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	115	120	120	120	90	66	42	120	120	120	90	66	42	120	120	120	90	66	42
	120	120	120	120	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	130	108	108	108	90	66	42	108	108	108	90	66	42	108	108	108	90	66	42
	140	108	108	108	90	66	42	95	95	95	90	66	42	95	95	95	90	66	42
	150	100	100	100	90	66	42	82	82	82	82	66	42	82	82	82	82	66	42
	160	87	87	87	87	66	42	72	72	72	72	66	42	72	72	72	72	66	42
	170	77	77	77	77	66	42	63	63	63	63	63	42	63	63	63	63	63	42
	180	68	68	68	68	66	42	56	56	56	56	56	42	56	56	56	56	56	42
	200	55	55	55	55	55	42	45	45	45	45	45	42	45	45	45	45	45	42

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"