

4/26/2017

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

RE: Quick Mount PV QBase Mount System for use with  
SnapNrack Series 100 Roof Mount System

SEI Project No.: 17054.00

Dear Mr. Green

Structural Enginuity Inc. (SEI) has completed its review of the Quickmount PV QBase Mount System for use in conjunction with the SnapNrack Series 100 Roof Mount System 6063 Alloy Rails. The QBase product line includes the Composition Mount (QMNC), Metal, Shake, & Slate Mount (QMNS), Standard Flat Tile Mount (QMSFT), Universal Tile Mount (QMLC), and the Low Slope Mount (QMLSH).

The review was based on the following reference data:

- SnapNrack, Series 100 Residential Roof Mount System Installation Manual
- Norman Scheel, Structural Report and Calculations for Series 100 Roof Mount, July 6, 2013
- Applied Materials & Engineering, New Construction Composition Mount (QMNC 3-3/4" Finished Height) Load Testing, Project Number 111114C, March 23, 2011
- Applied Materials & Engineering, Quick Mount QBase with 6.5" Post as Used in Low Slope Mount (QMLSH-7) & Universal Tile Mount (QMUTM) Load Testing, Project Number 111316C, July 5, 2011
- Applied Materials & Engineering, Low Slope Mount QMLSH-9 Hardware Load Testing, Project Number 111203C, May 5, 2011
- Applied Materials & Engineering, Low Slope Mount QMLSH-12 Hardware Load Testing, Project Number 111204C, May 9, 2011
- Eclipse Engineering, Allowable Load Capacities for the Quick Mount PV QBase Mount system, June 19, 2014

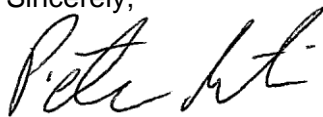
SEI has determined that the QMNC, QMNS, QMSFT, QMUTM, and QMLSH mounts are suitable for use with the SnapNrack Series 100 Roof Mount System, 6063 Alloy Rails. The approved installation and allowable loads for the Quick Mount PV QBase products is outlined in the Eclipse Engineering report referenced above. The allowable load values are shown below, no additional load duration factors may be applied to these values.

Table 1: QBase Roof Mounts					
Load Direction	Specific Gravity of Lumber Rafter	QMNC, QMNS, QMSFT	QMUTM, QMLSH-7	QMLSH-9	QMLSH-12
Tension	0.5	1179 lb.			
Shear - Parallel to Rafter	0.5	686 lb.	257 lb.	257 lb.	168 lb.
Shear - Perpendicular to Rafter	0.5	464 lb.	171 lb.	216 lb.	122 lb.

SEI has prepared allowable rail span charts for the Series 100 Roof Mount System used in conjunction with the Quick Mount PV QBase 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 tension and shear forces of the QBase 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 SnapNrack Series 100 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,



Peter Martin  
Engineer II  
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Allan T. Myket, P.E.  
President/Founder  
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4/26/17

**Structural Engenuity Inc.**

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 1A</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.06	12.09	13.16	14.28	15.45	16.66	17.91	19.22	20.56	21.96	23.4	26.41	29.61	32.99		
	pg	ps	-7.63	-8.34	-9.08	-9.85	-10.7	-11.5	-12.4	-13.3	-14.2	-15.2	-16.1	-18.2	-20.4	-22.8	
	0	0	126	126	126	126	126	123	117	112	107	103	99	93	87	81	
	10	7.315	125	125	125	125	125	123	117	112	107	103	99	93	87	81	
	20	14.63	98	98	98	98	98	98	98	98	98	98	98	98	93	87	81
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	83	83	83	81
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
	50	36.58	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
	60	43.89	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	70	51.21	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
	80	58.52	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	100	73.15	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	120	87.78	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 1B</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-7.6	-8.3	-9.1	-9.9	-10.7	-11.5	-12.4	-13.3	-14.2	-15.2	-16.1	-18.2	-20.4	-22.8	
	0	0	126	126	126	126	126	123	117	112	107	103	99	93	87	81	
	10	7.315	125	125	125	125	125	123	117	112	107	103	99	93	87	81	
	20	14.63	98	98	98	98	98	98	98	98	98	98	98	93	87	81	
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	83	83	81	
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	73	
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	63	
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
	120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 29 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 1C</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-7.6	-8.3	-9.1	-9.9	-10.7	-11.5	-12.4	-13.3	-14.2	-15.2	-16.1	-18.2	-20.4	-22.8	
	0	0	126	126	126	126	126	123	117	112	107	103	99	93	87	81	
	10	7.315	125	125	125	125	125	123	117	112	107	103	99	93	87	81	
	20	14.63	98	98	98	98	98	98	98	98	98	98	98	98	93	87	81
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	83	83	83	81
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 1D</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-7.6	-8.3	-9.1	-9.9	-10.7	-11.5	-12.4	-13.3	-14.2	-15.2	-16.1	-18.2	-20.4	-22.8	
	0	0	126	126	126	126	126	123	117	112	107	103	99	93	87	81	
	10	7.315	125	125	125	125	125	123	117	112	107	103	99	93	87	81	
	20	14.63	90	90	90	90	90	90	90	90	90	90	90	90	87	81	
	30	21.95	64	64	64	64	64	64	64	64	64	64	64	64	64	64	
	40	29.26	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	50	36.58	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	60	43.89	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
	70	51.21	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	80	58.52	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
	100	73.15	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
120	87.78	18	18	18	18	18	18	18	18	18	18	18	18	18	18		

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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 29 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 2A</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.48	16.92	18.42	19.99	21.62	23.32	25.08	26.9	28.79	30.74	32.75	36.98	41.46	46.19		
	pg	ps	-10.7	-11.7	-12.7	-13.8	-14.9	-16.1	-17.3	-18.6	-19.9	-21.2	-22.6	-25.5	-28.6	-31.9	
	0	0	126	121	115	109	104	100	95	92	88	85	82	76	72	68	
	10	7.315	125	121	115	109	104	100	95	92	88	85	82	76	72	68	
	20	14.63	98	98	98	98	98	98	95	92	88	85	82	76	72	68	
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	82	76	72	68
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	72	68
	50	36.58	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
	60	43.89	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	70	51.21	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
	80	58.52	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	100	73.15	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	120	87.78	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 2B</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 8 - 26 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2		
	pg	ps	-10.7	-11.7	-12.7	-13.8	-14.9	-16.1	-17.3	-18.6	-19.9	-21.2	-22.6	-25.5	-28.6	-31.9	
	0	0	126	121	115	109	104	100	95	92	88	85	82	76	72	68	
	10	7.315	125	121	115	109	104	100	95	92	88	85	82	76	72	68	
	20	14.63	98	98	98	98	98	98	95	92	88	85	82	76	72	68	
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	82	76	72	68
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	72	68
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 28 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 2C</b>		Roof Height: 0-30 ft				Roof Angle: 8 - 26 degrees				Rafter Species: Douglas Fir				Specific Gravity: 0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2		
	pg	ps	-10.7	-11.7	-12.7	-13.8	-14.9	-16.1	-17.3	-18.6	-19.9	-21.2	-22.6	-25.5	-28.6	-31.9	
	0	0	126	121	115	109	104	100	95	92	88	85	82	76	72	68	
	10	7.315	125	121	115	109	104	100	95	92	88	85	82	76	72	68	
	20	14.63	98	98	98	98	98	98	95	92	88	85	82	76	72	68	
	30	21.95	83	83	83	83	83	83	83	83	83	83	83	82	76	72	68
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	73	73	72	68
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 2D</b>		Roof Height: 0-30 ft				Roof Angle: 8 - 26 degrees				Rafter Species: Douglas Fir				Specific Gravity: 0.50		
Wind Load (Exposure Category C)																
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190	
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2	
	pg	ps	-10.7	-11.7	-12.7	-13.8	-14.9	-16.1	-17.3	-18.6	-19.9	-21.2	-22.6	-25.5	-28.6	-31.9
	0	0	126	121	115	109	104	100	95	92	88	85	82	76	72	68
	10	7.315	125	121	115	109	104	100	95	92	88	85	82	76	72	68
	20	14.63	90	90	90	90	90	90	90	90	88	85	82	76	72	68
	30	21.95	64	64	64	64	64	64	64	64	64	64	64	64	64	64
	40	29.26	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	50	36.58	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	60	43.89	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	70	51.21	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	80	58.52	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	100	73.15	22	22	22	22	22	22	22	22	22	22	22	22	22	22
120	87.78	18	18	18	18	18	18	18	18	18	18	18	18	18	18	

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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 28 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 3A</b>		Roof Height: 0-30 ft							Rafter Species: Douglas Fir							
		Roof Angle: 8 - 26 degrees							Specific Gravity: 0.50							
Wind Load (Exposure Category D)																
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190	
	qh	18.33	20.03	21.81	23.66	25.59	27.6	29.68	31.84	34.08	36.39	38.77	43.77	49.07	54.67	
	pg	ps	-12.6	-13.8	-15	-16.3	-17.7	-19	-20.5	-22	-23.5	-25.1	-26.8	-30.2	-33.9	-37.7
	0	0	115	109	104	99	94	90	86	83	80	77	74	70	65	62
	10	7.315	115	109	104	99	94	90	86	83	80	77	74	70	65	62
	20	14.63	98	98	98	98	94	90	86	83	80	77	74	70	65	62
	30	21.95	83	83	83	83	83	83	83	83	80	77	74	70	65	62
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	70	65	62
	50	36.58	66	66	66	66	66	66	66	66	66	66	66	66	65	62
	60	43.89	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	70	51.21	57	57	57	57	57	57	57	57	57	57	57	57	57	57
	80	58.52	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	100	73.15	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	120	87.78	44	44	44	44	44	44	44	44	44	44	44	44	44	44

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 3B</b>		Roof Height: 0-30 ft							Rafter Species: Douglas Fir							
		Roof Angle: 8 - 26 degrees							Specific Gravity: 0.50							
Wind Load (Exposure Category D)																
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190	
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7	
	pg	ps	-12.6	-13.8	-15.0	-16.3	-17.7	-19.0	-20.5	-22.0	-23.5	-25.1	-26.8	-30.2	-33.9	-37.7
	0	0	115	109	104	99	94	90	86	83	80	77	74	70	65	62
	10	7.315	115	109	104	99	94	90	86	83	80	77	74	70	65	62
	20	14.63	98	98	98	98	94	90	86	83	80	77	74	70	65	62
	30	21.95	83	83	83	83	83	83	83	83	80	77	74	70	65	62
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	70	65	62
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	62
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 26 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 3C</b>		Roof Height: 0-30 ft				Roof Angle: 8 - 26 degrees				Rafter Species: Douglas Fir				Specific Gravity: 0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7		
	pg	ps	-12.6	-13.8	-15.0	-16.3	-17.7	-19.0	-20.5	-22.0	-23.5	-25.1	-26.8	-30.2	-33.9	-37.7	
	0	0	115	109	104	99	94	90	86	83	80	77	74	70	65	62	
	10	7.315	115	109	104	99	94	90	86	83	80	77	74	70	65	62	
	20	14.63	98	98	98	98	94	90	86	83	80	77	74	70	65	62	
	30	21.95	83	83	83	83	83	83	83	83	80	77	74	70	65	62	
	40	29.26	73	73	73	73	73	73	73	73	73	73	73	70	65	62	
	50	36.58	63	63	63	63	63	63	63	63	63	63	63	63	63	62	
	60	43.89	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
	70	51.21	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
	80	58.52	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	100	73.15	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
120	87.78	28	28	28	28	28	28	28	28	28	28	28	28	28	28		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 3D</b>		Roof Height: 0-30 ft				Roof Angle: 8 - 26 degrees				Rafter Species: Douglas Fir				Specific Gravity: 0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7		
	pg	ps	-12.6	-13.8	-15.0	-16.3	-17.7	-19.0	-20.5	-22.0	-23.5	-25.1	-26.8	-30.2	-33.9	-37.7	
	0	0	115	109	104	99	94	90	86	83	80	77	74	70	65	62	
	10	7.315	115	109	104	99	94	90	86	83	80	77	74	70	65	62	
	20	14.63	90	90	90	90	90	90	86	83	80	77	74	70	65	62	
	30	21.95	64	64	64	64	64	64	64	64	64	64	64	64	64	62	
	40	29.26	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	50	36.58	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	60	43.89	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
	70	51.21	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	80	58.52	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
	100	73.15	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
120	87.78	18	18	18	18	18	18	18	18	18	18	18	18	18	18		

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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 26 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"



**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 4A</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 27 - 45 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.06	12.09	13.16	14.28	15.45	16.66	17.91	19.22	20.56	21.96	23.4	26.41	29.61	32.99		
	pg	ps	-4.76	-5.2	-5.66	-6.14	-6.64	-7.16	-7.7	-8.26	-8.84	-9.44	-10.1	-11.4	-12.7	-14.2	
	0	0	126	126	126	126	126	126	126	126	126	126	126	123	115	107	
	10	5.39	126	126	126	126	126	126	126	126	125	124	123	120	115	107	
	20	10.78	109	109	109	109	109	109	109	108	108	107	106	105	103	101	
	30	16.17	94	94	94	94	94	94	94	94	94	94	94	94	93	91	
	40	21.56	84	84	84	84	84	84	84	84	84	84	84	84	84	84	
	50	26.95	76	76	76	76	76	76	76	76	76	76	76	76	76	76	
	60	32.34	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	70	37.73	66	66	66	66	66	66	66	66	66	66	66	66	66	66	
	80	43.12	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	100	53.9	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
120	64.68	51	51	51	51	51	51	51	51	51	51	51	51	51	51		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 4B</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 27 - 45 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-4.8	-5.2	-5.7	-6.1	-6.6	-7.2	-7.7	-8.3	-8.8	-9.4	-10.1	-11.4	-12.7	-14.2	
	0	0	126	126	126	126	126	126	126	126	126	126	126	123	115	107	
	10	5.39	126	126	126	126	126	126	126	126	125	124	123	120	115	107	
	20	10.78	107	107	107	107	107	107	107	107	107	107	106	105	103	101	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 15 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 4C</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-4.8	-5.2	-5.7	-6.1	-6.6	-7.2	-7.7	-8.3	-8.8	-9.4	-10.1	-11.4	-12.7	-14.2	
	0	0	126	126	126	126	126	126	126	126	126	126	126	123	115	107	
	10	5.39	126	126	126	126	126	126	126	126	125	124	123	120	115	107	
	20	10.78	107	107	107	107	107	107	107	107	107	107	106	105	103	101	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	23	23	23	23	23	23		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 4D</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category B)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	11.1	12.1	13.2	14.3	15.4	16.7	17.9	19.2	20.6	22.0	23.4	26.4	29.6	33.0		
	pg	ps	-4.8	-5.2	-5.7	-6.1	-6.6	-7.2	-7.7	-8.3	-8.8	-9.4	-10.1	-11.4	-12.7	-14.2	
	0	0	126	126	126	126	126	126	126	126	126	126	126	123	115	107	
	10	5.39	110	110	110	110	110	110	110	110	110	110	110	110	110	107	
	20	10.78	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	30	16.17	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	40	21.56	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	50	26.95	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
	60	32.34	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
	70	37.73	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
	80	43.12	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	100	53.9	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
120	64.68	15	15	15	15	15	15	15	15	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 15 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 5A</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 27 - 45 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.48	16.92	18.42	19.99	21.62	23.32	25.08	26.9	28.79	30.74	32.75	36.98	41.46	46.19		
	pg	ps	-6.66	-7.28	-7.92	-8.6	-9.3	-10	-10.8	-11.6	-12.4	-13.2	-14.1	-15.9	-17.8	-19.9	
	0	0	126	126	126	126	126	126	126	122	117	112	108	100	94	88	
	10	5.39	126	126	126	125	124	123	121	120	117	112	108	100	94	88	
	20	10.78	109	109	109	108	107	106	105	104	103	102	102	100	94	88	
	30	16.17	94	94	94	94	94	94	94	94	93	92	91	90	89	87	
	40	21.56	84	84	84	84	84	84	84	84	84	84	84	83	82	81	
	50	26.95	76	76	76	76	76	76	76	76	76	76	76	76	76	75	
	60	32.34	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	70	37.73	66	66	66	66	66	66	66	66	66	66	66	66	66	66	
	80	43.12	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	100	53.9	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
120	64.68	51	51	51	51	51	51	51	51	51	51	51	51	51	51		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 5B</b>		Roof Height: 0-30 ft				Rafter Species: Douglas Fir				Roof Angle: 27 - 45 degrees				Specific Gravity: 0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2		
	pg	ps	-6.7	-7.3	-7.9	-8.6	-9.3	-10.0	-10.8	-11.6	-12.4	-13.2	-14.1	-15.9	-17.8	-19.9	
	0	0	126	126	126	126	126	126	126	122	117	112	108	100	94	88	
	10	5.39	126	126	126	125	124	123	121	120	117	112	108	100	94	88	
	20	10.78	107	107	107	107	107	106	105	104	103	102	102	100	94	88	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 15 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 5C</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2		
	pg	ps	-6.7	-7.3	-7.9	-8.6	-9.3	-10.0	-10.8	-11.6	-12.4	-13.2	-14.1	-15.9	-17.8	-19.9	
	0	0	126	126	126	126	126	126	126	122	117	112	108	100	94	88	
	10	5.39	126	126	126	125	124	123	121	120	117	112	108	100	94	88	
	20	10.78	107	107	107	107	107	106	105	104	103	102	102	100	94	88	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	23	23	23	23	23	23		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 5D</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category C)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	15.5	16.9	18.4	20.0	21.6	23.3	25.1	26.9	28.8	30.7	32.8	37.0	41.5	46.2		
	pg	ps	-6.7	-7.3	-7.9	-8.6	-9.3	-10.0	-10.8	-11.6	-12.4	-13.2	-14.1	-15.9	-17.8	-19.9	
	0	0	126	126	126	126	126	126	126	122	117	112	108	100	94	88	
	10	5.39	110	110	110	110	110	110	110	110	110	110	108	100	94	88	
	20	10.78	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	30	16.17	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	40	21.56	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	50	26.95	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
	60	32.34	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
	70	37.73	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
	80	43.12	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	100	53.9	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
120	64.68	15	15	15	15	15	15	15	15	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 15 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMNC, QMNS, & QMSFT Products**

<b>Table 6A</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.33	20.03	21.81	23.66	25.59	27.6	29.68	31.84	34.08	36.39	38.77	43.77	49.07	54.67		
	pg	ps	-7.88	-8.61	-9.38	-10.2	-11	-11.9	-12.8	-13.7	-14.7	-15.6	-16.7	-18.8	-21.1	-23.5	
	0	0	126	126	126	126	126	120	115	110	105	101	97	91	85	80	
	10	5.39	126	125	124	122	121	119	115	110	105	101	97	91	85	80	
	20	10.78	109	108	107	106	105	104	103	102	101	100	97	91	85	80	
	30	16.17	94	94	94	94	94	93	93	92	91	90	90	88	85	80	
	40	21.56	84	84	84	84	84	84	84	84	84	83	82	81	80	79	
	50	26.95	76	76	76	76	76	76	76	76	76	76	76	76	75	74	
	60	32.34	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	70	37.73	66	66	66	66	66	66	66	66	66	66	66	66	66	66	
	80	43.12	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	100	53.9	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
120	64.68	51	51	51	51	51	51	51	51	51	51	51	51	51	51		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMUTM & QMLSH-7 Products**

<b>Table 6B</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7		
	pg	ps	-7.9	-8.6	-9.4	-10.2	-11.0	-11.9	-12.8	-13.7	-14.7	-15.6	-16.7	-18.8	-21.1	-23.5	
	0	0	126	126	126	126	126	120	115	110	105	101	97	91	85	80	
	10	5.39	126	125	124	122	121	119	115	110	105	101	97	91	85	80	
	20	10.78	107	107	107	106	105	104	103	102	101	100	97	91	85	80	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 16 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-9 Products**

<b>Table 6C</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7		
	pg	ps	-7.9	-8.6	-9.4	-10.2	-11.0	-11.9	-12.8	-13.7	-14.7	-15.6	-16.7	-18.8	-21.1	-23.5	
	0	0	126	126	126	126	126	120	115	110	105	101	97	91	85	80	
	10	5.39	126	125	124	122	121	119	115	110	105	101	97	91	85	80	
	20	10.78	107	107	107	106	105	104	103	102	101	100	97	91	85	80	
	30	16.17	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
	40	21.56	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
	50	26.95	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	60	32.34	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
	70	37.73	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	80	43.12	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
	100	53.9	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
120	64.68	23	23	23	23	23	23	23	23	23	23	23	23	23	23		

**Rail Spans for SnapNrack Series 100 Roof Mount for use with QMLSH-12 Products**

<b>Table 6D</b>		Roof Height:		0-30 ft								Rafter Species:		Douglas Fir			
		Roof Angle:		27 - 45 degrees								Specific Gravity:		0.50			
Wind Load (Exposure Category D)																	
Ground Snow Load (psf)	vult	110	115	120	125	130	135	140	145	150	155	160	170	180	190		
	qh	18.3	20.0	21.8	23.7	25.6	27.6	29.7	31.8	34.1	36.4	38.8	43.8	49.1	54.7		
	pg	ps	-7.9	-8.6	-9.4	-10.2	-11.0	-11.9	-12.8	-13.7	-14.7	-15.6	-16.7	-18.8	-21.1	-23.5	
	0	0	126	126	126	126	126	120	115	110	105	101	97	91	85	80	
	10	5.39	110	110	110	110	110	110	110	110	105	101	97	91	85	80	
	20	10.78	70	70	70	70	70	70	70	70	70	70	70	70	70	70	
	30	16.17	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
	40	21.56	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
	50	26.95	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
	60	32.34	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
	70	37.73	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
	80	43.12	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
	100	53.9	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
120	64.68	15	15	15	15	15	15	15	15	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 test reports.
2. Edge zone reductions are only required at shaded spans where reduction is 16 inches to a minimum of 32 inches.
3. Panels are assumed to be in portrait orientation with a maximum length of 66"