



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  
IronRidge XR100 Roof Flush Mount 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 IronRidge XR100 Rail, Roof Flush Mount 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:

- Starling Madison Lofquist, Inc., IronRidge XR100 Rail, Roof Flush Mounting System – Structural Analysis, March 14, 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 IronRidge XR100 Rail, Roof Flush Mount 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

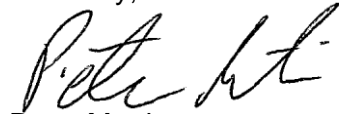
**Table 2: QMSE-LAG Roof Mount**

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 IronRidge XR100 Rail, Roof Flush Mount 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 IronRidge XR100 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,



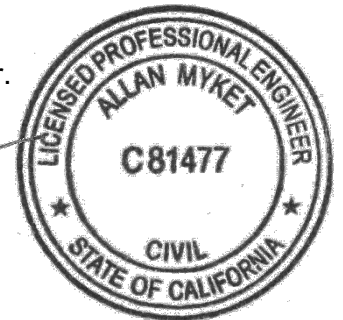
Peter Martin  
Engineer II

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Allan T. Myket, P.E.  
President/Founder

[amyket@structuralenginuityinc.com](mailto:amyket@structuralenginuityinc.com) 4/26/17



**Structural Enginuity Inc.**

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 1A</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	1									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	112	97	83	72	64	58	53	49	46	43	
	105	112	97	83	72	64	58	53	49	46	43	
	110	112	97	83	72	64	58	53	49	46	43	
	120	112	97	83	72	64	58	53	49	46	43	
	130	112	97	83	72	64	58	53	49	46	43	
	140	105	97	83	72	64	58	53	49	46	43	
	150	98	96	82	72	64	58	53	49	46	43	
	160	92	92	81	72	64	58	53	49	46	43	
Category C	170	87	87	79	71	64	58	53	49	46	43	
	100	112	97	83	72	64	58	53	49	46	43	
	105	112	97	83	72	64	58	53	49	46	43	
	110	112	97	83	72	64	58	53	49	46	43	
	120	103	97	83	72	64	58	53	49	46	43	
	130	96	95	82	72	64	58	53	49	46	43	
	140	89	89	80	71	64	58	53	49	46	43	
	150	84	84	78	70	64	58	53	49	46	43	
Category D	160	79	79	76	69	63	58	53	49	46	43	
	170	74	74	74	67	62	57	53	49	46	43	
	100	112	97	83	72	64	58	53	49	46	43	
	105	108	97	83	72	64	58	53	49	46	43	
	110	103	97	83	72	64	58	53	49	46	43	
	120	95	95	82	72	64	58	53	49	46	43	
	130	88	88	80	71	64	58	53	49	46	43	
	140	82	82	78	70	63	58	53	49	46	43	
150	77	77	76	68	62	58	53	49	46	43		
160	73	73	73	67	61	57	53	49	46	43		
170	68	68	68	65	60	56	53	49	46	43		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 1B</b>		Roof Height:	0-30 ft					Rafter Species:	Western Cedar				
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.36				
		Roof Wind Zone:	1										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	112	97	83	72	64	58	53	49	46	43		
	105	112	97	83	72	64	58	53	49	46	43		
	110	112	97	83	72	64	58	53	49	46	43		
	120	112	97	83	72	64	58	53	49	46	43		
	130	112	97	83	72	64	58	53	49	46	43		
	140	105	97	83	72	64	58	53	49	46	43		
	150	98	96	82	72	64	58	53	49	46	43		
	160	92	92	81	72	64	58	53	49	46	43		
Category C	170	87	87	79	71	64	58	53	49	46	43		
	100	112	97	83	72	64	58	53	49	46	43		
	105	112	97	83	72	64	58	53	49	46	43		
	110	112	97	83	72	64	58	53	49	46	43		
	120	103	97	83	72	64	58	53	49	46	43		
	130	96	95	82	72	64	58	53	49	46	43		
	140	89	89	80	71	64	58	53	49	46	43		
	150	79	79	78	70	64	58	53	49	46	43		
Category D	160	69	69	69	69	63	58	53	49	46	43		
	170	60	60	60	60	60	57	53	49	46	43		
	100	112	97	83	72	64	58	53	49	46	43		
	105	108	97	83	72	64	58	53	49	46	43		
	110	103	97	83	72	64	58	53	49	46	43		
	120	95	95	82	72	64	58	53	49	46	43		
	130	88	88	80	71	64	58	53	49	46	43		
	140	76	76	76	70	63	58	53	49	46	43		
150	66	66	66	66	62	58	53	49	46	43			
160	57	57	57	57	57	57	57	53	49	46	43		
170	50	50	50	50	50	50	50	50	49	46	43		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 1C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	1									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	112	97	83	72	64	58	53	49	46	43	
	105	112	97	83	72	64	58	53	49	46	43	
	110	112	97	83	72	64	58	53	49	46	43	
	120	112	97	83	72	64	58	53	49	46	43	
	130	112	97	83	72	64	58	53	49	46	43	
	140	105	97	83	72	64	58	53	49	46	43	
	150	98	96	82	72	64	58	53	49	46	43	
	160	92	92	81	72	64	58	53	49	46	43	
Category C	170	87	87	79	71	64	58	53	49	46	43	
	100	112	97	83	72	64	58	53	49	46	43	
	105	112	97	83	72	64	58	53	49	46	43	
	110	112	97	83	72	64	58	53	49	46	43	
	120	103	97	83	72	64	58	53	49	46	43	
	130	96	95	82	72	64	58	53	49	46	43	
	140	89	89	80	71	64	58	53	49	46	43	
	150	84	84	78	70	64	58	53	49	46	43	
Category D	160	79	79	76	69	63	58	53	49	46	43	
	170	74	74	74	67	62	57	53	49	46	43	
	100	112	97	83	72	64	58	53	49	46	43	
	105	108	97	83	72	64	58	53	49	46	43	
	110	103	97	83	72	64	58	53	49	46	43	
	120	95	95	82	72	64	58	53	49	46	43	
	130	88	88	80	71	64	58	53	49	46	43	
	140	82	82	78	70	63	58	53	49	46	43	
150	77	77	76	68	62	58	53	49	46	43		
160	73	73	73	67	61	57	53	49	46	43		
170	68	68	68	65	60	56	53	49	46	43		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 2A</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	2									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	106	97	83	72	64	58	53	49	46	43	
	105	102	97	83	72	64	58	53	49	46	43	
	110	97	97	83	72	64	58	53	49	46	43	
	120	90	90	83	72	64	58	53	49	46	43	
	130	83	83	83	72	64	58	53	49	46	43	
	140	77	77	77	72	64	58	53	49	46	43	
	150	73	73	73	72	64	58	53	49	46	43	
	160	68	68	68	68	64	58	53	49	46	43	
Category C	100	91	91	83	72	64	58	53	49	46	43	
	105	87	87	83	72	64	58	53	49	46	43	
	110	83	83	83	72	64	58	53	49	46	43	
	120	76	76	76	72	64	58	53	49	46	43	
	130	71	71	71	71	64	58	53	49	46	43	
	140	66	66	66	66	64	58	53	49	46	43	
	150	62	62	62	62	62	58	53	49	46	43	
	160	58	58	58	58	58	58	53	49	46	43	
Category D	100	84	84	83	72	64	58	53	49	46	43	
	105	80	80	80	72	64	58	53	49	46	43	
	110	77	77	77	72	64	58	53	49	46	43	
	120	70	70	70	70	64	58	53	49	46	43	
	130	65	65	65	65	64	58	53	49	46	43	
	140	61	61	61	61	61	58	53	49	46	43	
	150	57	57	57	57	57	57	53	49	46	43	
	160	53	53	53	53	53	53	53	49	46	43	
	170	48	48	48	48	48	48	48	48	46	43	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 2B</b>		Roof Height:	0-30 ft					Rafter Species:	Western Cedar				
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.36				
		Roof Wind Zone:	2										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	106	97	83	72	64	58	53	49	46	43		
	105	102	97	83	72	64	58	53	49	46	43		
	110	97	97	83	72	64	58	53	49	46	43		
	120	90	90	83	72	64	58	53	49	46	43		
	130	78	78	78	72	64	58	53	49	46	43		
	140	66	66	66	66	64	58	53	49	46	43		
	150	57	57	57	57	57	57	53	49	46	43		
	160	50	50	50	50	50	50	50	49	46	43		
Category C	100	91	91	83	72	64	58	53	49	46	43		
	105	86	86	83	72	64	58	53	49	46	43		
	110	78	78	78	72	64	58	53	49	46	43		
	120	64	64	64	64	64	58	53	49	46	43		
	130	54	54	54	54	54	54	53	49	46	43		
	140	46	46	46	46	46	46	46	46	46	43		
	150	40	40	40	40	40	40	40	40	40	40		
	160	35	35	35	35	35	35	35	35	35	35		
Category D	100	80	80	80	72	64	58	53	49	46	43		
	105	72	72	72	72	64	58	53	49	46	43		
	110	65	65	65	65	64	58	53	49	46	43		
	120	54	54	54	54	54	54	53	49	46	43		
	130	45	45	45	45	45	45	45	45	45	43		
	140	39	39	39	39	39	39	39	39	39	39		
	150	33	33	33	33	33	33	33	33	33	33		
	160	29	29	29	29	29	29	29	29	29	29		
	170	26	26	26	26	26	26	26	26	26	26		

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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 2C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir				
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50				
		Roof Wind Zone:	2										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	106	97	83	72	64	58	53	49	46	43		
	105	102	97	83	72	64	58	53	49	46	43		
	110	97	97	83	72	64	58	53	49	46	43		
	120	90	90	83	72	64	58	53	49	46	43		
	130	83	83	83	72	64	58	53	49	46	43		
	140	77	77	77	72	64	58	53	49	46	43		
	150	73	73	73	72	64	58	53	49	46	43		
	160	68	68	68	68	64	58	53	49	46	43		
Category C	100	91	91	83	72	64	58	53	49	46	43		
	105	87	87	83	72	64	58	53	49	46	43		
	110	83	83	83	72	64	58	53	49	46	43		
	120	76	76	76	72	64	58	53	49	46	43		
	130	71	71	71	71	64	58	53	49	46	43		
	140	66	66	66	66	64	58	53	49	46	43		
	150	62	62	62	62	62	58	53	49	46	43		
	160	58	58	58	58	58	58	53	49	46	43		
Category D	100	84	84	83	72	64	58	53	49	46	43		
	105	80	80	80	72	64	58	53	49	46	43		
	110	77	77	77	72	64	58	53	49	46	43		
	120	70	70	70	70	64	58	53	49	46	43		
	130	65	65	65	65	64	58	53	49	46	43		
	140	61	61	61	61	61	58	53	49	46	43		
	150	56	56	56	56	56	56	53	49	46	43		
	160	49	49	49	49	49	49	49	49	46	43		
170	43	43	43	43	43	43	43	43	43	43			

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"



**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 3A</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	3									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	87	87	83	72	64	58	53	49	46	43	
	105	83	83	83	72	64	58	53	49	46	43	
	110	80	80	80	72	64	58	53	49	46	43	
	120	73	73	73	72	64	58	53	49	46	43	
	130	68	68	68	68	64	58	53	49	46	43	
	140	63	63	63	63	63	58	53	49	46	43	
	150	59	59	59	59	59	58	53	49	46	43	
	160	56	56	56	56	56	56	53	49	46	43	
Category C	100	74	74	74	72	64	58	53	49	46	43	
	105	71	71	71	71	64	58	53	49	46	43	
	110	68	68	68	68	64	58	53	49	46	43	
	120	62	62	62	62	62	58	53	49	46	43	
	130	58	58	58	58	58	58	53	49	46	43	
	140	54	54	54	54	54	54	53	49	46	43	
	150	48	48	48	48	48	48	48	48	46	43	
	160	42	42	42	42	42	42	42	42	42	42	
Category D	100	68	68	68	68	64	58	53	49	46	43	
	105	65	65	65	65	64	58	53	49	46	43	
	110	62	62	62	62	62	58	53	49	46	43	
	120	57	57	57	57	57	57	53	49	46	43	
	130	53	53	53	53	53	53	53	49	46	43	
	140	46	46	46	46	46	46	46	46	46	43	
	150	40	40	40	40	40	40	40	40	40	40	
	160	35	35	35	35	35	35	35	35	35	35	
	170	31	31	31	31	31	31	31	31	31	31	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 3B</b>		Roof Height:	0-30 ft					Rafter Species:	Western Cedar				
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.36				
		Roof Wind Zone:	3										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	87	87	83	72	64	58	53	49	46	43		
	105	78	78	78	72	64	58	53	49	46	43		
	110	71	71	71	71	64	58	53	49	46	43		
	120	58	58	58	58	58	58	53	49	46	43		
	130	49	49	49	49	49	49	49	49	46	43		
	140	42	42	42	42	42	42	42	42	42	42		
	150	36	36	36	36	36	36	36	36	36	36		
	160	32	32	32	32	32	32	32	32	32	32		
Category C	100	60	60	60	60	60	58	53	49	46	43		
	105	54	54	54	54	54	54	53	49	46	43		
	110	49	49	49	49	49	49	49	49	46	43		
	120	41	41	41	41	41	41	41	41	41	41		
	130	35	35	35	35	35	35	35	35	35	35		
	140	30	30	30	30	30	30	30	30	30	30		
	150	26	26	26	26	26	26	26	26	26	26		
	160	22	22	22	22	22	22	22	22	22	22		
Category D	100	50	50	50	50	50	50	50	49	46	43		
	105	45	45	45	45	45	45	45	45	45	43		
	110	41	41	41	41	41	41	41	41	41	41		
	120	34	34	34	34	34	34	34	34	34	34		
	130	29	29	29	29	29	29	29	29	29	29		
	140	25	25	25	25	25	25	25	25	25	25		
	150	22	22	22	22	22	22	22	22	22	22		
	160	19	19	19	19	19	19	19	19	19	19		
170	17	17	17	17	17	17	17	17	17	17			

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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 3C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	7 - 27 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	3									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	87	87	83	72	64	58	53	49	46	43	
	105	83	83	83	72	64	58	53	49	46	43	
	110	80	80	80	72	64	58	53	49	46	43	
	120	73	73	73	72	64	58	53	49	46	43	
	130	68	68	68	68	64	58	53	49	46	43	
	140	63	63	63	63	63	58	53	49	46	43	
	150	59	59	59	59	59	58	53	49	46	43	
	160	53	53	53	53	53	53	53	49	46	43	
Category C	100	74	74	74	72	64	58	53	49	46	43	
	105	71	71	71	71	64	58	53	49	46	43	
	110	68	68	68	68	64	58	53	49	46	43	
	120	62	62	62	62	62	58	53	49	46	43	
	130	58	58	58	58	58	58	53	49	46	43	
	140	50	50	50	50	50	50	50	49	46	43	
	150	43	43	43	43	43	43	43	43	43	43	
	160	38	38	38	38	38	38	38	38	38	38	
Category D	100	68	68	68	68	64	58	53	49	46	43	
	105	65	65	65	65	64	58	53	49	46	43	
	110	62	62	62	62	62	58	53	49	46	43	
	120	57	57	57	57	57	57	53	49	46	43	
	130	49	49	49	49	49	49	49	49	46	43	
	140	42	42	42	42	42	42	42	42	42	42	
	150	36	36	36	36	36	36	36	36	36	36	
	160	32	32	32	32	32	32	32	32	32	32	
170	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 ICC reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 4A</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	1									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	96	91	80	72	66	61	56	52	49	46	
	140	91	88	78	70	65	60	56	52	49	46	
	150	87	85	76	69	64	59	56	52	49	46	
	160	83	82	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	95	91	80	72	66	61	56	52	49	46	
	120	90	87	77	70	65	60	56	52	49	46	
	130	85	84	75	68	63	59	56	52	49	46	
	140	81	80	72	66	62	58	55	52	49	46	
	150	77	76	70	65	60	57	53	51	49	46	
	160	73	73	68	63	59	55	52	50	48	46	
Category D	100	96	91	80	72	66	61	56	52	49	46	
	105	93	89	79	71	65	61	56	52	49	46	
	110	90	87	77	70	65	60	56	52	49	46	
	120	85	83	75	68	63	59	55	52	49	46	
	130	80	80	72	66	61	58	54	52	49	46	
	140	75	75	70	64	60	56	53	51	48	46	
	150	71	71	67	62	58	55	52	50	48	46	
	160	68	68	65	60	57	54	51	49	47	45	
	170	64	64	52	58	55	52	50	48	46	44	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 4B</b>		Roof Height:	0-30 ft					Rafter Species:	Western Cedar				
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.36				
		Roof Wind Zone:	1										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	107	98	84	75	67	61	56	52	49	46		
	105	107	98	84	75	67	61	56	52	49	46		
	110	106	97	84	75	67	61	56	52	49	46		
	120	101	94	82	74	67	61	56	52	49	46		
	130	96	91	80	72	66	61	56	52	49	46		
	140	91	88	78	70	65	60	56	52	49	46		
	150	87	85	76	69	64	59	56	52	49	46		
	160	83	82	74	67	62	58	55	52	49	46		
Category C	100	101	94	82	74	67	61	56	52	49	46		
	105	98	93	81	73	67	61	56	52	49	46		
	110	95	91	80	72	66	61	56	52	49	46		
	120	90	87	77	70	65	60	56	52	49	46		
	130	85	84	75	68	63	59	56	52	49	46		
	140	81	80	72	66	62	58	55	52	49	46		
	150	77	70	70	65	60	57	53	51	49	46		
	160	61	61	61	61	59	55	52	50	48	46		
Category D	100	96	91	80	72	66	61	56	52	49	46		
	105	93	89	79	71	65	61	56	52	49	46		
	110	90	87	77	70	65	60	56	52	49	46		
	120	85	83	75	68	63	59	55	52	49	46		
	130	79	79	72	66	61	58	54	52	49	46		
	140	67	67	67	64	60	56	53	51	48	46		
	150	58	58	58	58	58	55	52	50	48	46		
	160	51	51	51	51	51	51	51	49	47	45		
170	45	45	45	45	45	45	45	45	45	44			

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 4C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	1									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	96	91	80	72	66	61	56	52	49	46	
	140	91	88	78	70	65	60	56	52	49	46	
	150	87	85	76	69	64	59	56	52	49	46	
	160	83	82	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	95	91	80	72	66	61	56	52	49	46	
	120	90	87	77	70	65	60	56	52	49	46	
	130	85	84	75	68	63	59	56	52	49	46	
	140	81	80	72	66	62	58	55	52	49	46	
	150	77	76	70	65	60	57	53	51	49	46	
	160	73	73	68	63	59	55	52	50	48	46	
Category D	100	96	91	80	72	66	61	56	52	49	46	
	105	93	89	79	71	65	61	56	52	49	46	
	110	90	87	77	70	65	60	56	52	49	46	
	120	85	83	75	68	63	59	55	52	49	46	
	130	80	80	72	66	61	58	54	52	49	46	
	140	75	75	70	64	60	56	53	51	48	46	
	150	71	71	67	62	58	55	52	50	48	46	
	160	68	68	65	60	57	54	51	49	47	45	
	170	64	64	52	58	55	52	50	48	46	44	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 5A</b>		Roof Height:	0-30 ft				Rafter Species:	Douglas Fir				
		Roof Angle:	28 - 45 degrees				Specific Gravity:	0.50				
		Roof Wind Zone:	2									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	94	91	80	72	66	61	56	52	49	46	
	140	88	88	78	70	65	60	56	52	49	46	
	150	83	83	76	69	64	59	56	52	49	46	
	160	78	78	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	94	91	80	72	66	61	56	52	49	46	
	120	87	87	77	70	65	60	56	52	49	46	
	130	81	81	75	68	63	59	56	52	49	46	
	140	76	76	72	66	62	58	55	52	49	46	
	150	71	71	70	65	60	57	53	51	49	46	
	160	67	67	67	63	59	55	52	50	48	46	
Category D	100	95	91	80	72	66	61	56	52	49	46	
	105	91	89	79	71	65	61	56	52	49	46	
	110	87	87	77	70	65	60	56	52	49	46	
	120	81	81	75	68	63	59	55	52	49	46	
	130	75	75	72	66	61	58	54	52	49	46	
	140	70	70	70	64	60	56	53	51	48	46	
	150	66	66	66	62	58	55	52	50	48	46	
	160	62	62	62	60	57	54	51	49	47	45	
170	59	59	59	58	55	52	50	48	46	44		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 5B</b>		Roof Height:	0-30 ft				Rafter Species:	Western Cedar				
		Roof Angle:	28 - 45 degrees				Specific Gravity:	0.36				
		Roof Wind Zone:	2									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	94	91	80	72	66	61	56	52	49	46	
	140	88	88	78	70	65	60	56	52	49	46	
	150	82	82	76	69	64	59	56	52	49	46	
	160	72	72	72	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	94	91	80	72	66	61	56	52	49	46	
	120	87	87	77	70	65	60	56	52	49	46	
	130	78	78	75	68	63	59	56	52	49	46	
	140	66	66	66	66	62	58	55	52	49	46	
	150	57	57	57	57	57	57	53	51	49	46	
	160	50	50	50	50	50	50	50	50	48	46	
Category D	100	95	91	80	72	66	61	56	52	49	46	
	105	91	89	79	71	65	61	56	52	49	46	
	110	87	87	77	70	65	60	56	52	49	46	
	120	77	77	75	68	63	59	55	52	49	46	
	130	65	65	65	65	61	58	54	52	49	46	
	140	56	56	56	56	56	56	53	51	48	46	
	150	48	48	48	48	48	48	48	48	48	46	
	160	42	42	42	42	42	42	42	42	42	42	
170	37	37	37	37	37	37	37	37	37	37		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"



**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 5C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	2									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	94	91	80	72	66	61	56	52	49	46	
	140	88	88	78	70	65	60	56	52	49	46	
	150	83	83	76	69	64	59	56	52	49	46	
	160	78	78	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	94	91	80	72	66	61	56	52	49	46	
	120	87	87	77	70	65	60	56	52	49	46	
	130	81	81	75	68	63	59	56	52	49	46	
	140	76	76	72	66	62	58	55	52	49	46	
	150	71	71	70	65	60	57	53	51	49	46	
	160	67	67	67	63	59	55	52	50	48	46	
Category D	100	95	91	80	72	66	61	56	52	49	46	
	105	91	89	79	71	65	61	56	52	49	46	
	110	87	87	77	70	65	60	56	52	49	46	
	120	81	81	75	68	63	59	55	52	49	46	
	130	75	75	72	66	61	58	54	52	49	46	
	140	70	70	70	64	60	56	53	51	48	46	
	150	66	66	66	62	58	55	52	50	48	46	
	160	62	62	62	60	57	54	51	49	47	45	
	170	59	59	59	58	55	52	50	48	46	44	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 6A</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	3									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	94	91	80	72	66	61	56	52	49	46	
	140	88	88	78	70	65	60	56	52	49	46	
	150	83	83	76	69	64	59	56	52	49	46	
	160	78	78	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	94	91	80	72	66	61	56	52	49	46	
	120	87	87	77	70	65	60	56	52	49	46	
	130	81	81	75	68	63	59	56	52	49	46	
	140	76	76	72	66	62	58	55	52	49	46	
	150	71	71	70	65	60	57	53	51	49	46	
	160	67	67	67	63	59	55	52	50	48	46	
Category D	100	95	91	80	72	66	61	56	52	49	46	
	105	91	89	79	71	65	61	56	52	49	46	
	110	87	87	77	70	65	60	56	52	49	46	
	120	81	81	75	68	63	59	55	52	49	46	
	130	75	75	72	66	61	58	54	52	49	46	
	140	70	70	70	64	60	56	53	51	48	46	
	150	66	66	66	62	58	55	52	50	48	46	
	160	62	62	62	60	57	54	51	49	47	45	
170	59	59	59	58	55	52	50	48	46	44		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE, QMSC, QMLC Products**

<b>Table 6B</b>		Roof Height:	0-30 ft					Rafter Species:	Western Cedar				
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.36				
		Roof Wind Zone:	3										
XR100 Rail	Wind Speed	Ground Snow Load											
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf		
Category B	100	107	98	84	75	67	61	56	52	49	46		
	105	107	98	84	75	67	61	56	52	49	46		
	110	106	97	84	75	67	61	56	52	49	46		
	120	101	94	82	74	67	61	56	52	49	46		
	130	94	91	80	72	66	61	56	52	49	46		
	140	88	88	78	70	65	60	56	52	49	46		
	150	82	82	76	69	64	59	56	52	49	46		
	160	72	72	72	67	62	58	55	52	49	46		
Category C	100	101	94	82	74	67	61	56	52	49	46		
	105	98	93	81	73	67	61	56	52	49	46		
	110	94	91	80	72	66	61	56	52	49	46		
	120	87	87	77	70	65	60	56	52	49	46		
	130	78	78	75	68	63	59	56	52	49	46		
	140	66	66	66	66	62	58	55	52	49	46		
	150	57	57	57	57	57	57	53	51	49	46		
	160	50	50	50	50	50	50	50	50	48	46		
Category D	100	95	91	80	72	66	61	56	52	49	46		
	105	91	89	79	71	65	61	56	52	49	46		
	110	87	87	77	70	65	60	56	52	49	46		
	120	77	77	75	68	63	59	55	52	49	46		
	130	65	65	65	65	61	58	54	52	49	46		
	140	56	56	56	56	56	56	53	51	48	46		
	150	48	48	48	48	48	48	48	48	48	46		
	160	42	42	42	42	42	42	42	42	42	42		
170	37	37	37	37	37	37	37	37	37	37			

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"

**Rail Spans for IronRidge Series XR100 Roof Mount for use with QMSE-Lag Products**

<b>Table 6C</b>		Roof Height:	0-30 ft					Rafter Species:	Douglas Fir			
		Roof Angle:	28 - 45 degrees					Specific Gravity:	0.50			
		Roof Wind Zone:	3									
XR100 Rail	Wind Speed	Ground Snow Load										
Exposure	mph	0 psf	10 psf	20 psf	30 psf	40 psf	50 psf	60 psf	70 psf	80 psf	90 psf	
Category B	100	107	98	84	75	67	61	56	52	49	46	
	105	107	98	84	75	67	61	56	52	49	46	
	110	106	97	84	75	67	61	56	52	49	46	
	120	101	94	82	74	67	61	56	52	49	46	
	130	94	91	80	72	66	61	56	52	49	46	
	140	88	88	78	70	65	60	56	52	49	46	
	150	83	83	76	69	64	59	56	52	49	46	
	160	78	78	74	67	62	58	55	52	49	46	
Category C	100	101	94	82	74	67	61	56	52	49	46	
	105	98	93	81	73	67	61	56	52	49	46	
	110	94	91	80	72	66	61	56	52	49	46	
	120	87	87	77	70	65	60	56	52	49	46	
	130	81	81	75	68	63	59	56	52	49	46	
	140	76	76	72	66	62	58	55	52	49	46	
	150	71	71	70	65	60	57	53	51	49	46	
	160	67	67	67	63	59	55	52	50	48	46	
Category D	100	95	91	80	72	66	61	56	52	49	46	
	105	91	89	79	71	65	61	56	52	49	46	
	110	87	87	77	70	65	60	56	52	49	46	
	120	81	81	75	68	63	59	55	52	49	46	
	130	75	75	72	66	61	58	54	52	49	46	
	140	70	70	70	64	60	56	53	51	48	46	
	150	66	66	66	62	58	55	52	50	48	46	
	160	62	62	62	60	57	54	51	49	47	45	
170	59	59	59	58	55	52	50	48	46	44		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable 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 67.5"