



McELROY METAL

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TECHNICAL BULLETIN

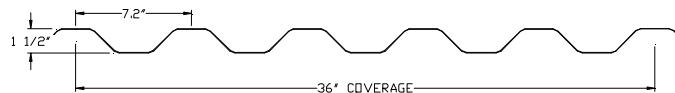
Issue Date : June 1, 2006

Revised : August 29, 2011

No. 07-211-06

Mega-Rib

Bare & Painted



SECTION PROPERTIES						TOP IN COMPRESSION			BOTTOM IN COMPRESSION		
GAUGE	FY (ksi)	WEIGHT (psf)	V _a (kip/ft.)	P _{a_end} (lbs/ft.)	P _{a_int} (lbs/ft.)	I _x (in. ⁴ /ft.)	S _e (in. ³ /ft.)	M _a (kip-in./ft.)	I _x (in. ⁴ /ft.)	S _e (in. ³ /ft.)	M _a (kip-in./ft.)
20	50.0	1.84	2.6820	765.71	1480.16	0.1700	0.2208	6.6100	0.1730	0.2073	6.2070

1. Section properties are calculated in accordance with the 2007 AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
2. V_a is the allowable shear.
3. P_a is the allowable load for web crippling on end & interior supports.
4. I_x is for deflection determination.
5. S_e is for bending.
6. M_a is the allowable bending moment.
7. All values are for one foot of panel width.

Allowable Uniform Loads (PSF)

Span Type	Load Type	Span in Feet															
		3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00
Single	Positive Wind	359	275	217	176	145	122	104	89	78	68	60	54	48	44	39	36
	Negative Wind	337	258	204	165	136	114	97	84	73	64	57	51	45	41	37	34
	Live	359	275	217	176	145	122	104	89	78	68	60	54	48	44	39	36
	Deflection (L/180)	346	232	163	118	89	68	54	43	35	29	24	20	17	14	12	11
	Deflection (L/240)	259	174	122	89	66	51	40	32	26	21	18	15	12	11	9	8
2 Span	Positive Wind	325	251	199	162	134	113	96	83	72	64	56	50	45	41	37	34
	Negative Wind	345	266	212	172	143	120	103	88	77	68	60	54	48	43	39	36
	Live	325	251	199	162	134	113	96	83	72	64	56	50	45	41	37	34
	Deflection (L/180)	500	500	396	288	217	167	131	105	85	70	58	49	42	36	31	27
	Deflection (L/240)	500	423	297	216	162	125	98	78	64	52	44	37	31	27	23	20
3 Span	Positive Wind	400	310	247	201	167	141	120	104	90	79	70	63	56	51	46	42
	Negative Wind	424	329	262	213	177	149	128	110	96	85	75	67	60	54	49	45
	Live	400	310	247	201	167	141	120	104	90	79	70	63	56	51	46	42
	Deflection (L/180)	500	441	310	226	170	130	103	82	67	55	46	38	32	28	24	21
	Deflection (L/240)	494	331	232	169	127	98	77	61	50	41	34	29	24	21	18	15
4 Span	Positive Wind	376	291	231	188	156	131	112	97	84	74	66	59	53	47	43	39
	Negative Wind	398	308	245	200	166	140	119	103	90	79	70	62	56	51	46	42
	Live	376	291	231	188	156	131	112	97	84	74	66	59	53	47	43	39
	Deflection (L/180)	500	469	329	240	180	139	109	87	71	58	48	41	35	30	25	22
	Deflection (L/240)	500	351	247	180	135	104	82	65	53	43	36	30	26	22	19	16

Notes:

1. Allowable uniform loads are based upon equal span lengths.
2. Positive Wind is wind pressure and is NOT increased by 33 1/3%.
3. Negative Wind is wind suction or uplift and is NOT increased by 33 1/3%.
4. Live is the allowable live or snow load.
5. Deflection (L/180) is the allowable load that limits the panel's deflection to L/180 while under positive or live load.
6. Deflection (L/240) is the allowable load that limits the panel's deflection to L/240 while under positive or live load.
7. The weight of the panel has NOT been deducted from the allowable loads.
8. Positive Wind, Negative Wind, and Live Load values are limited to combined shear & bending using Eq. C3.3.1-1 of the AISI Specification.
9. Positive Wind and Live Load values are limited by web crippling using a bearing length of 2".
10. Web crippling values are determined using a ratio of the uniform load actually supported by the top flanges of the section.

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