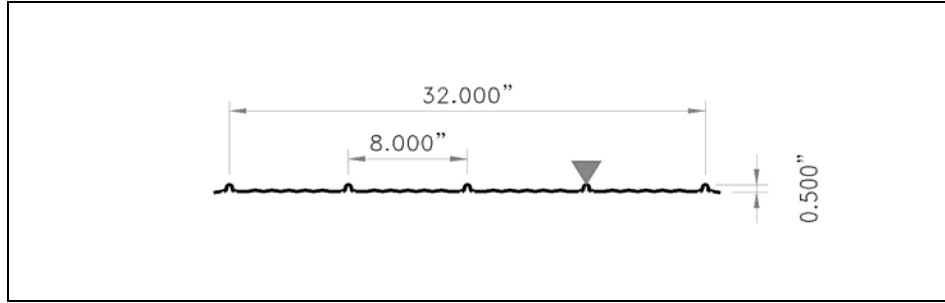


# CLADDING

## Barnmaster

Imperial



### Limit States Design

### PHYSICAL PROPERTIES

(PER FOOT WIDTH)  
In accordance with CSA  
Specification S136-01

Base Steel Nominal Thickness (inches)	Nominal Thickness Z275 Coating (inches)	Mass with Coating (lb/ft <sup>2</sup> )	Section Modulus		Moment of Inertia (in <sup>4</sup> )	Factored Resistance			
			Midspan (in <sup>3</sup> )	Support (in <sup>3</sup> )		Moment (lb-in)		Reaction (lbs)	
							Midspan (lb-in)	Support (lb-in)	Ext. (lbs)
0.012	0.013	0.811	0.0024	0.0022	0.0009	71.8	66.3	89	110
0.015	0.017	1.002	0.0032	0.0028	0.0011	93.9	82.9	130	164
0.018	0.020	1.193	0.0037	0.0033	0.0013	110.5	99.4	185	240
0.024	0.026	1.551	0.0050	0.0047	0.0018	149.2	138.1	315	425

### LOAD TABLE

Maximum Specified  
Uniformly Distributed  
Load in lb/ft<sup>2</sup> (psf)

Support Spacing		1-Span				2-Span				3-Span			
		0.012	0.015	0.018	0.024	0.012	0.015	0.018	0.024	0.012	0.015	0.018	0.024
1.00	B	32	42	49	66	29	37	44	61	37	46	55	77
	D	77	96	115	153	192	240	288	384	145	181	217	289
1.50	B	14	19	22	29	13	16	20	27	16	20	25	34
	D	23	28	34	45	57	71	85	114	43	54	64	86
2.00	B		10	12	17		9	11	15	9	12	14	19
	D		12	14	19		30	36	48	18	23	27	36
2.50	B				11				10			9	12
	D				10				25			14	19
3.00	B												9
	D												11
3.50	B												
	D												
4.00	B												
	D												
4.50	B												
	D												
5.00	B												
	D												
5.50	B												
	D												
6.00	B												
	D												
6.50	B												
	D												
7.00	B												
	D												
7.50	B												
	D												
8.00	B												
	D												

### Notes

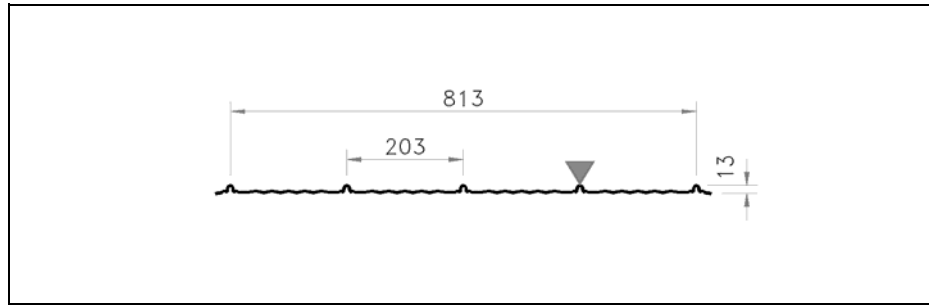
- Properties and loads are based on Grade 33 Steel with a minimum yield stress of 33,000 psi, and a maximum stress under Factored loads of 29,700 psi.
- Row B indicates the load capacity based on strength. Strength capacity should be checked against [Specified Live Load] + [0.833 x Specified Dead Load]
- Row D indicates the load capacity based on a deflection of 1/180th span. For allowable deflection of 1/90th span, values in Row D can be doubled, but must not exceed the value in Row B.
- A highlighted value indicates capacity has been reduced to account for web crippling.

- Deflection values are based upon **service** loads.
- █ Denotes web crippling governs.

# CLADDING

## Barnmaster

Metric



### PHYSICAL PROPERTIES

(PER METRE WIDTH)  
In accordance with CSA  
Specification S136-01

Base Steel Nominal Thickness (mm)	Nominal Thickness Z275 Coating (mm)	Mass with Coating (kg/m <sup>2</sup> )	Section Modulus		Moment of Inertia	Factored Resistance			
			Midspan x 10 <sup>3</sup> (mm <sup>3</sup> )	Support x 10 <sup>3</sup> (mm <sup>3</sup> )	Midspan x 10 <sup>3</sup> (mm <sup>4</sup> )	Moment		Reaction	
						Midspan (Nm)	Support (Nm)	Ext. (kN)	Int. (kN)
0.30	0.34	3.96	0.13	0.12	1.2	26.9	24.8	1.3	1.6
0.38	0.42	4.89	0.17	0.15	1.5	35.2	31.1	1.9	2.4
0.46	0.50	5.83	0.20	0.18	1.8	41.4	37.3	2.7	3.5
0.61	0.65	7.57	0.27	0.25	2.4	55.9	51.8	4.6	6.2

### LOAD TABLE

Maximum Specified  
Uniformly Distributed  
Load in kN/m<sup>2</sup> (kPa)

Support Spacing (mm)		1-Span				2-Span				3-Span			
		0.30	0.38	0.46	0.61	0.30	0.38	0.46	0.61	0.30	0.38	0.46	0.61
300	B	1.6	2.1	2.5	3.3	1.5	1.8	2.2	3.1	1.8	2.3	2.8	3.8
	D	3.8	4.8	5.8	7.7	9.6	12.0	14.5	19.3	7.3	9.1	10.9	14.5
450	B	0.7	0.9	1.1	1.5	0.7	0.8	1.0	1.4	0.8	1.0	1.2	1.7
	D	1.1	1.4	1.7	2.3	2.9	3.6	4.3	5.7	2.2	2.7	3.2	4.3
600	B	0.4	0.5	0.6	0.8	0.4	0.5	0.6	0.8	0.5	0.6	0.7	1.0
	D	0.5	0.6	0.7	1.0	1.2	1.5	1.8	2.4	0.9	1.1	1.4	1.8
750	B			0.4	0.5			0.4	0.5		0.4	0.4	0.6
	D			0.4	0.5			0.9	1.2		0.6	0.7	0.9
900	B				0.4				0.3				0.4
	D				0.3				0.7				0.5
1050	B												
	D												
1200	B												
	D												
1350	B												
	D												
1500	B												
	D												
1650	B												
	D												
1800	B												
	D												
1950	B												
	D												
2100	B												
	D												
2250	B												
	D												
2400	B												
	D												

1. Deflection values are based upon **service** loads.
2.  Denotes web crippling governs.

### Limit States Design

#### Notes

- 1 Properties and loads are based on Grade 230 Steel with a minimum yield stress of 230 MPa, and a maximum stress under Factored loads of 207 MPa.
- 2 Row B indicates the load capacity based on strength. Strength capacity should be checked against [Specified Live Load] + [0.833 x Specified Dead Load]
- 3 Row D indicates the load capacity based on a deflection of 1/180th span. For allowable deflection of 1/90th span, values in Row D can be doubled, but must not exceed the value in Row B.
- 4 A highlighted value indicates capacity has been reduced to account for web crippling.