WESTMAN STEEL
STATEMENTS IN STEEL™

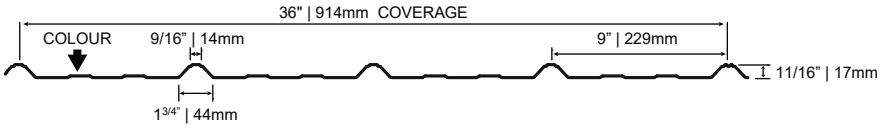
Imperial | Load Table
Tough Rib
Wall Cladding Profile

05.28.21

westmansteel.com

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-16.

LIMIT STATES DESIGN



SECTION PROPERTIES | Per Foot of Width

Base Steel Thickness (in.)	Weight [G90] (psf)	Yield Stress (ksi)	Section Modulus Midspan (in^3)	Section Modulus Support (in^3)	Deflection Moment of Inertia (in^4)	Specified Web Crippling Data Pe1 End (lb)	Pe2 End (lb)	Pi1 Interior (lb)	Pi2 Interior (lb)
0.0135	0.68	80	0.0120	0.0096	0.0069	35.0	8.74	65.0	11.1
0.0180	0.88	50	0.0161	0.0134	0.0092	54.3	13.6	101	17.2

LLF = 1.40; IMPF = 0.75; NORMAL OCCUPANCY = 1.0

LOAD TABLE | Maximum Uniformly Distributed Specified Loads (psf).

Span Length (ft)		1-Span Base Steel Thickness (in.)						2-Span Base Steel Thickness (in.)						3-Span Base Steel Thickness (in.)					
		0.0135	0.0180					0.0135	0.0180					0.0135	0.0180				
Y.S.* (ksi)		80	50					80	50					80	50				
1.5	S	137	153					109	128					137	160				
1.5	D	238	317					571	760					450	599				
2.0	S	77	86					61	72					77	90				
2.0	D	100	134					241	321					190	253				
2.5	S	49	55					39	46					49	58				
2.5	D	51	68					123	164					97	129				
3.0	S	34	38					27	32					34	40				
3.0	D	30	40					71	95					56	75				
3.5	S	25	28					20	23					25	29				
3.5	D	19	25					45	60					35	47				
4.0	S	19	22					15	18					19	22				
4.0	D	13	17					30	40					24	32				
4.5	S	15	17					12	14					15	18				
4.5	D	9	12					21	28					17	22				
5.0	S	12	14					10	12					12	14				
5.0	D	6	9					15	21					12	16				

* Y.S. = Yield Stress

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Metric | Load Table
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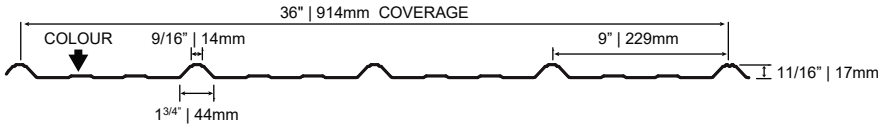
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-16.

LIMIT STATES DESIGN



SECTION PROPERTIES | Per Metre of Width

Base Steel Thickness (mm)	Mass [Z275] (kg/m²)	Yield Stress (MPa)	Section Modulus Midspan (x10³ mm³)	Section Modulus Support (x10³ mm³)	Deflection Moment of Inertia (x10⁶ mm⁴)	Specified Web Crippling Data Pe1 End (kN)	Pe2 End (kN)	Pi1 Interior (kN)	Pi2 Interior (kN)
0.343	3.30	550	0.645	0.514	0.0094	0.509	0.127	0.95	0.161
0.457	4.31	345	0.866	0.721	0.0126	0.793	0.198	1.48	0.252

LLF = 1.40; IMPF = 0.75; NORMAL OCCUPANCY = 1.0

LOAD TABLE | Maximum Uniformly Distributed Specified Loads (kPa).

Span Length (m)		1-Span Base Steel Thickness (mm)						2-Span Base Steel Thickness (mm)						3-Span Base Steel Thickness (mm)					
		0.343	0.457					0.343	0.457					0.343	0.457				
Y.S.* (MPa)		550	345					550	345					550	345				
0.5	S	5.47	6.14					4.36	5.12					5.45	6.40				
0.5	D	8.71	11.6					20.9	27.8					16.5	21.9				
0.6	S	3.80	4.27					3.03	3.56					3.79	4.44				
0.6	D	5.04	6.71					12.1	16.1					9.53	12.7				
0.8	S	2.14	2.40					1.70	2.00					2.13	2.50				
0.8	D	2.13	2.83					5.11	6.79					4.02	5.35				
1.0	S	1.37	1.54					1.09	1.28					1.36	1.60				
1.0	D	1.09	1.45					2.61	3.48					2.06	2.74				
1.2	S	0.95	1.07					0.76	0.89					0.95	1.11				
1.2	D	0.63	0.84					1.51	2.01					1.19	1.59				
1.4	S	0.70	0.78					0.56	0.65					0.70	0.82				
1.4	D	0.40	0.53					0.95	1.27					0.75	1.00				
1.6	S	0.53	0.60					0.43	0.50					0.53	0.63				
1.6	D	0.27	0.35					0.64	0.85					0.50	0.67				

* Y.S. = Yield Stress