WESTMAN STEEL
STATEMENTS IN STEEL™

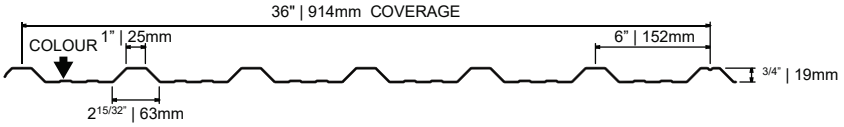
Imperial | Load Table
Diamond Rib
Wall Cladding Profile

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)
0.0180	0.93	50	0.0347	0.0325	0.0211	77.8	19.5	148	25.2
0.0180	0.93	80	0.0336	0.0311	0.0208	93.3	23.3	178	30.2

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.)					
		0.0180	0.0180					0.0180	0.0180					0.0180	0.0180				
Y.S.* (ksi)		50	80					50	80					50	80				
2.0	S	186	216					174	200					218	250				
2.0	D	307	303					737	727					580	572				
2.5	S	119	138					112	128					139	160				
2.5	D	157	155					377	372					297	293				
3.0	S	83	96					77	89					97	111				
3.0	D	91	90					218	215					172	170				
3.5	S	61	70					57	65					71	82				
3.5	D	57	56					138	136					108	107				
4.0	S	46	54					44	50					54	63				
4.0	D	38	38					92	91					73	72				
4.5	S	37	43					34	40					43	49				
4.5	D	27	27					65	64					51	50				
5.0	S	30	35					28	32					35	40				
5.0	D	20	19					47	47					37	37				
5.5	S	25	29					23	26					29	33				
5.5	D	15	15					35	35					28	28				
6.0	S	21	24					19	22					24	28				
6.0	D	11	11					27	27					21	21				

* Y.S. = Yield Stress

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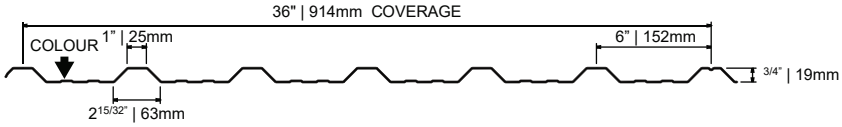
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-16.

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)
0.457	4.56	345	1.86	1.75	0.0288	1.14	0.284	2.16	0.367
0.457	4.56	550	1.81	1.68	0.0284	1.36	0.340	2.58	0.439

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)					
		0.457	0.457					0.457	0.457					0.457	0.457				
Y.S.* (MPa)		345	550					345	550					345	550				
0.6	S	9.18	10.6					8.62	9.87					10.8	12.3				
0.6	D	15.4	15.2					37.0	36.5					29.1	28.7				
0.8	S	5.16	5.98					4.85	5.55					6.06	6.94				
0.8	D	6.50	6.42					15.6	15.4					12.3	12.1				
1.0	S	3.30	3.83					3.10	3.55					3.88	4.44				
1.0	D	3.33	3.28					7.99	7.88					6.29	6.21				
1.2	S	2.30	2.66					2.16	2.47					2.69	3.08				
1.2	D	1.93	1.90					4.63	4.56					3.64	3.59				
1.4	S	1.69	1.95					1.58	1.81					1.98	2.27				
1.4	D	1.21	1.20					2.91	2.87					2.29	2.26				
1.6	S	1.29	1.50					1.21	1.39					1.52	1.74				
1.6	D	0.81	0.80					1.95	1.92					1.54	1.52				
1.8	S	1.02	1.18					0.96	1.10					1.20	1.37				
1.8	D	0.57	0.56					1.37	1.35					1.08	1.06				
2.0	S	0.83	0.96					0.78	0.89					0.97	1.11				
2.0	D	0.42	0.41					1.00	0.99					0.79	0.78				

* Y.S. = Yield Stress