WESTMAN STEEL
STATEMENTS IN STEEL™

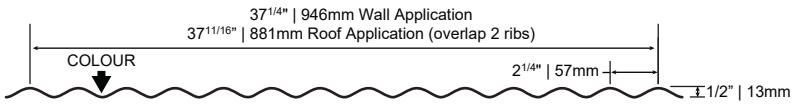
Imperial | Load Table 1/2" Corrugated Roof Profile

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	0.85	33	0.0235	0.0235	0.0059				
0.0180	0.85	50	0.0235	0.0235	0.0059				

LLF = 1.50; IMPF = 0.90; 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)			33	50					33	50					33	50			
1.5	S		138	209					138	209					172	261			
1.5	D		169	169					405	405					319	319			
2.0	S		77	117					78	117					97	147			
2.0	D		71	71					171	171					135	135			
2.5	S		50	75					50	75					62	94			
2.5	D		36	36					87	87					69	69			
3.0	S		34	52					34	52					43	65			
3.0	D		21	21					51	51					40	40			
3.5	S		25	38					25	38					32	48			
3.5	D		13	13					32	32					25	25			
4.0	S								19	29					24	37			
4.0	D								21	21					17	17			
4.5	S								15	23					19	29			
4.5	D								15	15					12	12			
5.0	S								12	19									
5.0	D								11	11									
5.5	S																		
5.5	D																		

* Y.S. = Yield Stress

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Metric | Load Table 1/2" Corrugated Roof Profile

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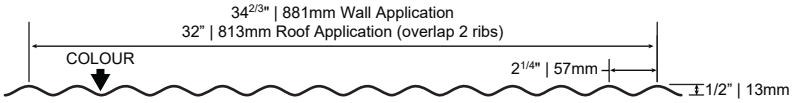
1. Based on ASTM A 653M structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-16.

LIMIT STATES DESIGN



SECTION PROPERTIES | Per Metre of Width

Base Steel Thickness (mm)	Mass [Z275] (kg/m²)	Yield Stress (MPa)	Section Modulus		Deflection Moment of Inertia (x10⁶ mm⁴)	Specified Web Crippling Data			
			Midspan (x10³ mm³)	Support (x10³ mm³)		Pe1 End (kN)	Pe2 End (kN)	Pi1 Interior (kN)	Pi2 Interior (kN)
0.457	4.13	230	1.26	1.26	0.0080				
0.457	4.13	345	1.26	1.26	0.0080				

LLF = 1.50; IMPF = 0.90; 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)		230	345		230	345		230	345	
0.5	S	5.58	8.37		5.58	8.37		6.97	10.5	
0.5	D	6.18	6.18		14.8	14.8		11.7	11.7	
0.6	S	3.87	5.81		3.87	5.81		4.84	7.26	
0.6	D	3.57	3.57		8.58	8.58		6.75	6.75	
0.8	S	2.18	3.27		2.18	3.27		2.72	4.09	
0.8	D	1.51	1.51		3.62	3.62		2.85	2.85	
1.0	S	1.39	2.09		1.39	2.09		1.74	2.61	
1.0	D	0.77	0.77		1.85	1.85		1.46	1.46	
1.2	S				0.97	1.45		1.21	1.82	
1.2	D				1.07	1.07		0.84	0.84	
1.4	S				0.71	1.07		0.89	1.33	
1.4	D				0.68	0.68		0.53	0.53	
1.6	S									
1.6	D									

* Y.S. = Yield Stress

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