WESTMAN STEEL
STATEMENTS IN STEEL™

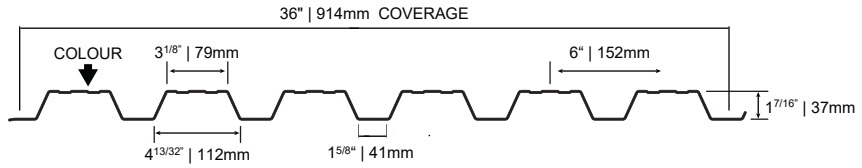
Imperial | Load Table
Ultra Span
Wall Cladding Profile

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		Deflection Moment of Inertia (in^4)	Specified Web Crippling Data			
			Midspan (in^3)	Support (in^3)		Pe1 End (lb)	Pe2 End (lb)	Pi1 Interior (lb)	Pi2 Interior (lb)
0.0180	1.04	33	0.0847	0.0884	0.0754	62.1	15.5	119	20.2
0.0180	1.04	50	0.0778	0.0822	0.0707	94.1	23.5	180	30.5
0.0240	1.36	33	0.128	0.130	0.114	116	29.1	222	37.7
0.0300	1.69	33	0.175	0.176	0.152	188	47.1	359	61.0

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	0.0240	0.0300			0.0180	0.0180	0.0240	0.0300			0.0135	0.0180	0.0240	0.0300		
Y.S.* (ksi)		33	50	33	33			33	50	33	33			33	50	33	33		
4.0	S	75	104	113	154			78	110	115	155			98	138	144	194		
4.0	D	137	128	207	276			329	308	497	662			259	243	391	521		
4.5	S	59	82	89	122			62	87	91	123			77	109	114	153		
4.5	D	96	90	145	194			231	217	349	465			182	171	275	366		
5.0	S	48	67	72	99			50	70	74	99			63	88	92	124		
5.0	D	70	66	106	141			168	158	254	339			133	124	200	267		
5.5	S	40	55	60	82			41	58	61	82			52	73	76	103		
5.5	D	53	49	80	106			126	119	191	255			100	93	151	200		
6.0	S	33	46	50	69			35	49	51	69			43	61	64	86		
6.0	D	41	38	61	82			97	91	147	196			77	72	116	154		
6.5	S	28	39	43	58			30	42	44	59			37	52	55	74		
6.5	D	32	30	48	64			77	72	116	154			60	57	91	121		
7.0	S	24	34	37	50			26	36	38	51			32	45	47	63		
7.0	D	26	24	39	51			61	58	93	123			48	45	73	97		
7.5	S	21	30	32	44			22	31	33	44			28	39	41	55		
7.5	D	21	19	31	42			50	47	75	100			39	37	59	79		
8.0	S	19	26	28	39			20	28	29	39			24	34	36	49		
8.0	D	17	16	26	34			41	39	62	83			32	30	49	65		
8.5	S	17	23	25	34			17	24	26	34			22	30	32	43		
8.5	D	14	13	22	29			34	32	52	69			27	25	41	54		
9.0	S	15	21	22	30			15	22	23	31			19	27	28	38		
9.0	D	12	11	18	24			29	27	44	58			23	21	34	46		
9.5	S	13	18	20	27			14	20	20	28			17	24	26	34		
9.5	D	10	10	15	21			25	23	37	49			19	18	29	39		
10.0	S	12	17	18	25			13	18	18	25			16	22	23	31		
10.0	D	9	8	13	18			21	20	32	42			17	16	25	33		

* Y.S. = Yield Stress

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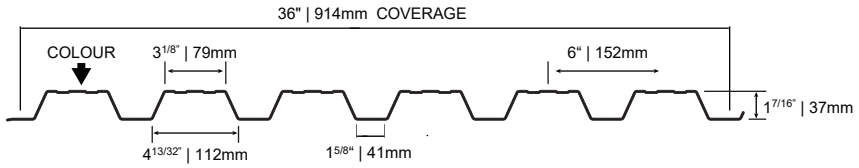

SECTION PROPERTIES | Per Metre of Width

Base Steel Thickness (mm)	Mass [Z275] (kg/m²)	Yield Stress (MPa)	Section Modulus		Deflection Moment of Inertia	Specified Web Crippling Data			
			Midspan (x10³ mm³)	Support (x10³ mm³)	(x10⁶ mm⁴)	Pe1 End (kN)	Pe2 End (kN)	Pi1 Interior (kN)	Pi2 Interior (kN)
0.457	5.06	230	4.54	4.74	0.103	0.916	0.229	1.75	0.297
0.457	5.06	345	4.18	4.42	0.0965	1.37	0.344	2.62	0.446
0.610	6.66	230	6.87	7.00	0.155	1.72	0.429	3.27	0.556
0.762	8.26	230	9.37	9.43	0.207	2.78	0.695	5.29	0.900

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	0.610	0.762			0.457	0.457	0.610	0.762			0.457	0.457	0.610	0.762		
Y.S.* (MPa)		230	345	230	230			230	345	230	230			230	345	230	230		
1.0	S	5.37	7.42	8.13	11.1			5.61	7.84	8.28	11.2			7.01	9.80	10.4	14.0		
1.0	D	11.9	11.2	17.9	23.9			28.5	26.8	43.1	57.3			22.4	21.1	33.9	45.2		
1.2	S	3.73	5.15	5.64	7.70			3.90	5.45	5.75	7.75			4.87	6.81	7.18	9.68		
1.2	D	6.87	6.45	10.4	13.8			16.5	15.5	24.9	33.2			13.0	12.2	19.6	26.1		
1.4	S	2.74	3.78	4.15	5.66			2.86	4.00	4.22	5.69			3.58	5.00	5.28	7.12		
1.4	D	4.32	4.06	6.54	8.71			10.4	9.75	15.7	20.9			8.17	7.68	12.4	16.5		
1.6	S	2.10	2.90	3.17	4.33			2.19	3.06	3.23	4.36			2.74	3.83	4.04	5.45		
1.6	D	2.90	2.72	4.38	5.83			6.95	6.53	10.5	14.0			5.47	5.14	8.28	11.0		
1.8	S	1.66	2.29	2.51	3.42			1.73	2.42	2.55	3.44			2.16	3.03	3.19	4.30		
1.8	D	2.03	1.91	3.08	4.10			4.88	4.59	7.38	9.83			3.85	3.61	5.81	7.74		
2.0	S	1.34	1.85	2.03	2.77			1.40	1.96	2.07	2.79			1.75	2.45	2.59	3.49		
2.0	D	1.48	1.39	2.24	2.99			3.56	3.34	5.38	7.17			2.80	2.63	4.24	5.64		
2.2	S	1.11	1.53	1.68	2.29			1.16	1.62	1.71	2.31			1.45	2.03	2.14	2.88		
2.2	D	1.11	1.05	1.68	2.24			2.67	2.51	4.04	5.39			2.11	1.98	3.18	4.24		
2.4	S	0.93	1.29	1.41	1.92			0.97	1.36	1.44	1.94			1.22	1.70	1.80	2.42		
2.4	D	0.86	0.81	1.30	1.73			2.06	1.94	3.11	4.15			1.62	1.52	2.45	3.27		
2.6	S	0.79	1.10	1.20	1.64			0.83	1.16	1.22	1.65			1.04	1.45	1.53	2.06		
2.6	D	0.68	0.63	1.02	1.36			1.62	1.52	2.45	3.26			1.28	1.20	1.93	2.57		
2.8	S	0.69	0.95	1.04	1.41			0.72	1.00	1.06	1.42			0.89	1.25	1.32	1.78		
2.8	D	0.54	0.51	0.82	1.09			1.30	1.22	1.96	2.61			1.02	0.96	1.54	2.06		
3.0	S	0.60	0.82	0.90	1.23			0.62	0.87	0.92	1.24			0.78	1.09	1.15	1.55		
3.0	D	0.44	0.41	0.66	0.88			1.05	0.99	1.59	2.12			0.83	0.78	1.26	1.67		

* Y.S. = Yield Stress

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