WESTMAN STEEL
STATEMENTS IN STEEL™

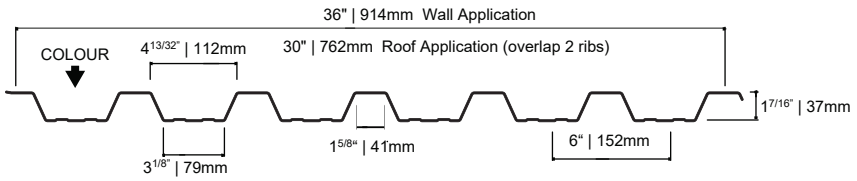
Imperial | Load Table
Ultra Span - Reverse Wall Cladding Profile

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	0.0884	0.0847	0.0923	62.1	15.5	119	20.2
0.0180	1.04	50	0.0822	0.0778	0.0881	94.1	23.5	180	30.5
0.0240	1.36	33	0.130	0.128	0.129	116	29.1	222	37.7
0.0300	1.69	33	0.176	0.175	0.162	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	78	110	115	155			75	104	113	154			94	130	142	193		
4.0	D	168	160	234	295			403	384	562	708			317	303	442	558		
4.5	S	62	87	91	123			59	82	89	122			74	103	112	152		
4.5	D	118	112	164	207			283	270	394	497			223	212	311	392		
5.0	S	50	70	74	99			48	67	72	99			60	83	91	123		
5.0	D	86	82	120	151			206	197	288	362			162	155	226	285		
5.5	S	41	58	61	82			40	55	60	82			49	69	75	102		
5.5	D	65	62	90	113			155	148	216	272			122	116	170	214		
6.0	S	35	49	51	69			33	46	50	69			42	58	63	86		
6.0	D	50	47	69	87			119	114	166	210			94	90	131	165		
6.5	S	30	42	44	59			28	39	43	58			35	49	54	73		
6.5	D	39	37	55	69			94	90	131	165			74	71	103	130		
7.0	S	26	36	38	51			24	34	37	50			31	43	46	63		
7.0	D	31	30	44	55			75	72	105	132			59	56	83	104		
7.5	S	22	31	33	44			21	30	32	44			27	37	40	55		
7.5	D	25	24	36	45			61	58	85	107			48	46	67	85		
8.0	S	20	28	29	39			19	26	28	39			23	33	35	48		
8.0	D	21	20	29	37			50	48	70	88			40	38	55	70		
8.5	S	17	24	26	34			17	23	25	34			21	29	31	43		
8.5	D	17	17	24	31			42	40	59	74			33	32	46	58		
9.0	S	15	22	23	31			15	21	22	30			18	26	28	38		
9.0	D	15	14	21	26			35	34	49	62			28	27	39	46		
9.5	S	14	20	20	28			13	18	20	27			17	23	25	34		
9.5	D	13	12	17	22			30	29	42	53			24	23	33	42		
10.0	S	13	18	18	25			12	17	18	25			15	21	23	31		
10.0	D	11	10	15	19			26	25	36	45			20	19	28	36		

* Y.S. = Yield Stress

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Metric | Load Table
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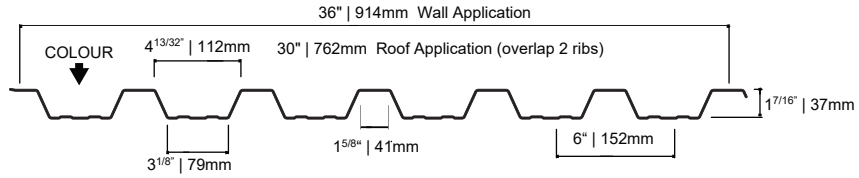
LIMIT STATES DESIGN



SECTION PROPERTIES | Per Metre of Width

Base Steel Thickness (mm)	Mass [Z275] (kg/m²)	Yield Stress (MPa)	Section Modulus		Deflection Moment of Inertia	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	4.74	4.54	0.126	0.916	0.229	1.75	0.297
0.457	5.06	345	4.42	4.18	0.120	1.37	0.344	2.62	0.446
0.610	6.66	230	7.00	6.87	0.176	1.72	0.429	3.27	0.556
0.762	8.26	230	9.43	9.37	0.222	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	5.61	7.84	8.28	11.2			5.37	7.42	8.13	11.1			6.72	9.27	10.2	13.9		
1.0	D	14.6	13.9	20.3	25.6			34.9	33.3	48.7	61.4			27.5	26.3	38.4	48.4		
1.2	S	3.90	5.45	5.75	7.75			3.73	5.15	5.64	7.70			4.66	6.44	7.05	9.62		
1.2	D	8.42	8.04	11.7	14.8			20.2	19.3	28.2	35.6			15.9	15.2	22.2	28.0		
1.4	S	2.86	4.00	4.22	5.69			2.74	3.78	4.15	5.66			3.43	4.73	5.18	7.07		
1.4	D	5.30	5.06	7.40	9.33			12.7	12.2	17.8	22.4			10.0	9.57	14.0	17.6		
1.6	S	2.19	3.06	3.23	4.36			2.10	2.90	3.17	4.33			2.62	3.62	3.97	5.41		
1.6	D	3.55	3.39	4.95	6.25			8.52	8.14	11.9	15.0			6.71	6.41	9.36	11.8		
1.8	S	1.73	2.42	2.55	3.44			1.66	2.29	2.51	3.42			2.07	2.86	3.14	4.28		
1.8	D	2.49	2.38	3.48	4.39			5.99	5.72	8.35	10.5			4.71	4.50	6.58	8.30		
2.0	S	1.40	1.96	2.07	2.79			1.34	1.85	2.03	2.77			1.68	2.32	2.54	3.46		
2.0	D	1.82	1.74	2.54	3.20			4.36	4.17	6.09	7.68			3.44	3.28	4.79	6.05		
2.2	S	1.16	1.62	1.71	2.31			1.11	1.53	1.68	2.29			1.39	1.92	2.10	2.86		
2.2	D	1.37	1.30	1.91	2.40			3.28	3.13	4.57	5.77			2.58	2.46	3.60	4.54		
2.4	S	0.97	1.36	1.44	1.94			0.93	1.29	1.41	1.92			1.17	1.61	1.76	2.41		
2.4	D	1.05	1.00	1.47	1.85			2.53	2.41	3.52	4.44			1.99	1.90	2.77	3.50		
2.6	S	0.83	1.16	1.22	1.65			0.79	1.10	1.20	1.64			0.99	1.37	1.50	2.05		
2.6	D	0.83	0.79	1.15	1.46			1.99	1.90	2.77	3.50			1.56	1.49	2.18	2.75		
2.8	S	0.72	1.00	1.06	1.42			0.69	0.95	1.04	1.41			0.86	1.18	1.30	1.77		
2.8	D	0.66	0.63	0.92	1.17			1.59	1.52	2.22	2.80			1.25	1.20	1.75	2.20		
3.0	S	0.62	0.87	0.92	1.24			0.60	0.82	0.90	1.23			0.75	1.03	1.13	1.54		
3.0	D	0.54	0.51	0.75	0.95			1.29	1.23	1.80	2.28			1.02	0.97	1.42	1.79		

* Y.S. = Yield Stress

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