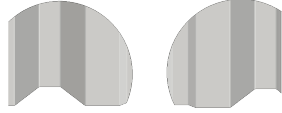




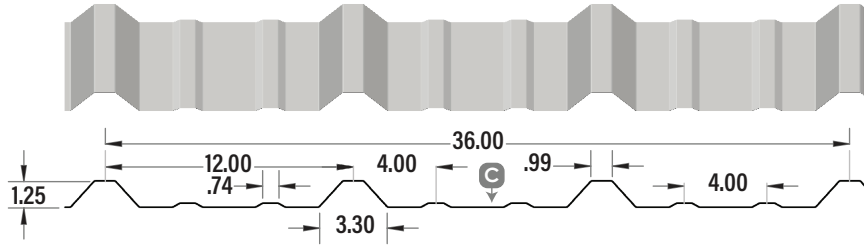
WF-12-36 ROOF

Underlap

Overlap



All dimensions are in inches



SECTION PROPERTIES (PER FOOT OF WIDTH)

IMPERIAL	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)	Specified Web Crippling Data			
				Midspan	Support		P _{e1} End (lb)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
				(in ³)	(in ³)					
	0.018	0.934	80	0.0379	0.0315	0.0428	42.2	10.6	84.7	14.4
	0.018	0.934	33	0.0410	0.0347	0.0438	23.2	5.81	46.6	7.92
	0.024	1.23	33	0.0580	0.0481	0.0584	43.6	10.9	86.6	14.7
	0.030	1.52	33	0.0722	0.0620	0.0728	70.6	17.7	139	23.7

Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (PSF)

SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.018	0.018	0.024	0.030	0.018	0.018	0.024	0.030	0.018	0.018	0.024	0.030
2.0	S	227	135	191	238	189	114	159	205	236	143	198	256
	D	518	531	707	883	1244	1274	1697	2118	980	1004	1336	1668
2.5	S	146	87	122	152	121	73	102	131	151	92	127	164
	D	265	272	362	452	637	652	869	1085	502	514	684	854
3.0	S	101	60	85	106	84	51	71	91	105	64	88	114
	D	154	157	209	262	369	378	503	628	290	297	396	494
3.5	S	74	44	62	78	62	37	52	67	77	47	65	84
	D	97	99	132	165	232	238	317	395	183	187	249	311
4.0	S	57	34	48	60	47	29	40	51	59	36	50	64
	D	65	66	88	110	156	159	212	265	122	125	167	209
4.5	S	45	27	38	47	37	23	31	40	47	28	39	51
	D	46	47	62	77	109	112	149	186	86	88	117	146
5.0	S	36	22	31	38	30	18	25	33	38	23	32	41
	D	33	34	45	56	80	82	109	136	63	64	86	107
5.5	S	30	18	25	31	25	15	21	27	31	19	26	34
	D	25	26	34	42	60	61	82	102	47	48	64	80
6.0	S	25	15	21	26	21	13	18	23	26	16	22	28
	D	19	20	26	33	46	47	63	78	36	37	49	62
6.5	S	22	13	18	23	18	11	15	19	22	14	19	24
	D	15	15	21	26	36	37	49	62	29	29	39	49
7.0	S	19	11	16	19	15	9	13	17	19	12	16	21
	D	12	12	16	21	29	30	40	49	23	23	31	39
7.5	S	16	10	14	17	13	8	11	15	17	10	14	18
	D	10	10	13	17	24	24	32	40	19	19	25	32
8.0	S	14	8	12	15	12	7	10	13	15	9	12	16
	D	8	8	11	14	19	20	27	33	15	16	21	26

Notes:

- 1 Based on ASTM A 653 structural steel. Coating can also be AZ50.
- 2 Values in row "S" are based on strength.
- 3 Values in row "D" are based on deflection of L/180.
- 4 For L/240, multiply values in row "D" by 0.75.
- 5 Web crippling not included in strength calculations. See Example.
- 6 Limit States Design principles were used in accordance with CSA S136-16.
- 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.

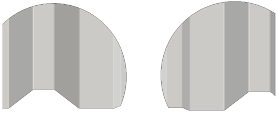




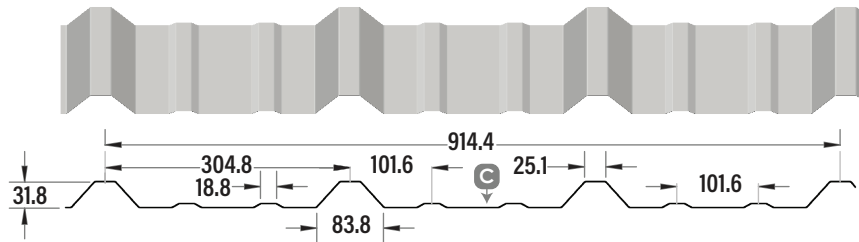
WF-12-36 ROOF

Underlap

Overlap



All dimensions are in millimeters



SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m ²)	Yield Stress (MPa)	Sec. Modulus		Deflection Moment of Inertia (x10 ⁶ mm ⁴)	Specified Web Crippling Data			
				Midspan	Support		P _{e1} End (kN)	P _{e2} End (kN)	P _{i1} Interior (kN)	P _{i2} Interior (kN)
				(x10 ³ mm ³)	(x10 ³ mm ³)					
	0.457	4.56	550	2.04	1.70	0.0584	0.615	0.154	1.23	0.210
	0.457	4.56	230	2.20	1.86	0.0598	0.343	0.0860	0.688	0.117
	0.610	5.99	230	3.12	2.58	0.0797	0.643	0.161	1.28	0.217
	0.762	7.42	230	3.88	3.33	0.0995	1.04	0.260	2.06	0.349

Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (kPa)

SPAN LENGTH (mm)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (mm)				BASE STEEL THICKNESS (mm)				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
1000	S	4.04	2.43	3.44	4.28	3.36	2.06	2.85	3.68	4.20	2.57	3.57	4.60
	D	5.62	5.76	7.67	9.57	13.5	13.8	18.4	23.0	10.6	10.9	14.5	18.1
1200	S	2.80	1.69	2.39	2.97	2.33	1.43	1.98	2.55	2.92	1.79	2.48	3.19
	D	3.26	3.33	4.44	5.54	7.81	8.00	10.7	13.3	6.15	6.30	8.39	10.5
1400	S	2.06	1.24	1.76	2.19	1.71	1.05	1.46	1.88	2.14	1.31	1.82	2.34
	D	2.05	2.10	2.79	3.49	4.92	5.04	6.71	8.37	3.87	3.97	5.28	6.59
1600	S	1.58	0.95	1.34	1.67	1.31	0.80	1.11	1.44	1.64	1.00	1.39	1.80
	D	1.37	1.41	1.87	2.34	3.30	3.37	4.49	5.61	2.60	2.66	3.54	4.42
1800	S	1.25	0.75	1.06	1.32	1.04	0.63	0.88	1.13	1.30	0.79	1.10	1.42
	D	0.96	0.99	1.31	1.64	2.31	2.37	3.16	3.94	1.82	1.87	2.49	3.10
2000	S	1.01	0.61	0.86	1.07	0.84	0.51	0.71	0.92	1.05	0.64	0.89	1.15
	D	0.70	0.72	0.96	1.20	1.69	1.73	2.30	2.87	1.33	1.36	1.81	2.26
2200	S	0.83	0.50	0.71	0.89	0.69	0.42	0.59	0.76	0.87	0.53	0.74	0.95
	D	0.53	0.54	0.72	0.90	1.27	1.30	1.73	2.16	1.00	1.02	1.36	1.70
2400	S	0.70	0.42	0.60	0.74	0.58	0.36	0.50	0.64	0.73	0.45	0.62	0.80
	D	0.41	0.42	0.55	0.69	0.98	1.00	1.33	1.66	0.77	0.79	1.05	1.31
2600	S	0.60	0.36	0.51	0.63	0.50	0.30	0.42	0.54	0.62	0.38	0.53	0.68
	D	0.32	0.33	0.44	0.54	0.77	0.79	1.05	1.31	0.60	0.62	0.82	1.03
2800	S	0.51	0.31	0.44	0.55	0.43	0.26	0.36	0.47	0.54	0.33	0.45	0.59
	D	0.26	0.26	0.35	0.44	0.61	0.63	0.84	1.05	0.48	0.50	0.66	0.82
3000	S	0.45	0.27	0.38	0.48	0.37	0.23	0.32	0.41	0.47	0.29	0.40	0.51
	D	0.21	0.21	0.28	0.35	0.50	0.51	0.68	0.85	0.39	0.40	0.54	0.67

Notes:

- 1 Based on ASTM A 653M structural steel. Coating can also be AZM150.
- 2 Values in row "S" are based on strength.
- 3 Values in row "D" are based on deflection of L/180.
- 4 For L/240, multiply values in row "D" by 0.75.
- 5 Web crippling not included in strength calculations. See Example.
- 6 Limit States Design principles were used in accordance with CSA S136-16.
- 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.



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