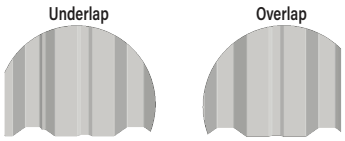
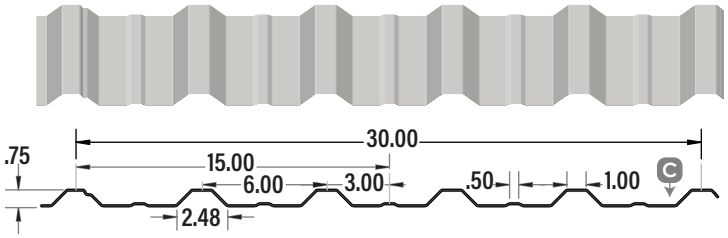
WF-DIAMOND ROOF



All dimensions are in inches



SECTION PROPERTIES (PER FOOT OF WIDTH)

	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Sec. Modulus Midspan (in^3)	Sec. Modulus Support (in^3)	Deflection Moment of Inertia (in^4)	Specified Web Crippling Data P_{e1} End (lb)	P_{e2} End (lb)	P_{i1} Interior (lb)	P_{i2} Interior (lb)
IMPERIAL	0.0135	0.72	33	0.0257	0.0240	0.0156	25.2	6.30	45.7	7.78
	0.0180	0.94	33	0.0376	0.0355	0.0213	47.2	11.8	86.5	14.7
	0.0240	1.23	33	0.0536	0.0489	0.0284	87.9	22.0	162	27.5

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

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.)				
		0.0135	0.0180	0.0240			0.0135	0.0180	0.0240			0.0135	0.0180	0.0240		
2.0	S	85	124	177			79	117	161			99	147	202		
	D	190	258	344			455	620	826			358	488	650		
2.5	S	54	79	113			51	75	103			63	94	129		
	D	97	132	176			233	318	423			183	250	333		
3.0	S	38	55	79			35	52	72			44	65	90		
	D	56	77	102			135	184	245			106	145	193		
3.5	S	28	41	58			26	38	53			32	48	66		
	D	35	48	64			85	116	154			67	91	121		
4.0	S	21	31	44			20	29	40			25	37	50		
	D	24	32	43			57	78	103			45	61	81		
4.5	S	17	25	35			16	23	32			20	29	40		
	D	17	23	30			40	54	72			31	43	57		
5.0	S	14	20	28			13	19	26			16	23	32		
	D	12	17	22			29	40	53			23	31	42		

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.

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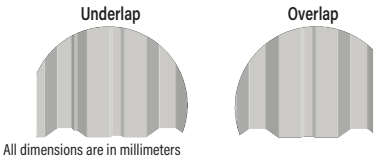
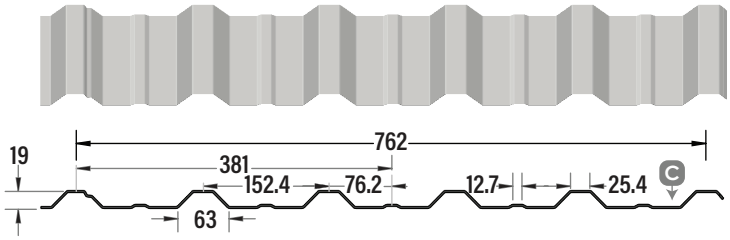
WF-DIAMOND ROOF





SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m^2)	Yield Stress (MPa)	Sec. Modulus Midspan ($x10^3$ mm^3)	Sec. Modulus Support ($x10^3$ mm^3)	Deflection Moment of Inertia ($x10^6 mm^4$)	Specified Web Crippling Data P_{e1} End (kN)	P_{e2} End (kN)	P_{i1} Interior (kN)	P_{i2} Interior (kN)
	0.343	3.51	230	1.38	1.29	0.0213	0.372	0.0930	0.675	0.115
	0.457	4.58	230	2.02	1.91	0.0291	0.697	0.174	1.28	0.217
	0.610	6.02	230	2.88	2.63	0.0388	1.30	0.324	2.39	0.406

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

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (kPa)

SPAN LENGTH (mm)		1-SPAN BASE STEEL THICKNESS (mm)					2-SPAN BASE STEEL THICKNESS (mm)					3-SPAN BASE STEEL THICKNESS (mm)				
		0.343	0.457	0.610			0.343	0.457	0.610			0.343	0.457	0.610		
500	S	6.09	8.91	12.7			5.67	8.43	11.6			7.09	10.5	14.5		
	D	16.4	22.4	29.9			39.4	53.8	71.6			31.1	42.4	56.4		
600	S	4.23	6.19	8.84			3.94	5.85	8.05			4.93	7.31	10.1		
	D	9.51	13.0	17.3			22.8	31.1	41.5			18.0	24.5	32.7		
800	S	2.38	3.48	4.97			2.22	3.29	4.53			2.77	4.11	5.66		
	D	4.01	5.47	7.29			9.63	13.1	17.5			7.58	10.4	13.8		
1000	S	1.52	2.23	3.18			1.42	2.11	2.90			1.77	2.63	3.62		
	D	2.05	2.80	3.73			4.93	6.73	8.95			3.88	5.30	7.05		
1200	S	1.06	1.55	2.21			0.99	1.46	2.01			1.23	1.83	2.52		
	D	1.19	1.62	2.16			2.85	3.89	5.18			2.25	3.07	4.08		
1400	S	0.78	1.14	1.62			0.72	1.07	1.48			0.90	1.34	1.85		
	D	0.75	1.02	1.36			1.80	2.45	3.26			1.41	1.93	2.57		
1500	S	0.68	0.99	1.41			0.63	0.94	1.29			0.79	1.17	1.61		
	D	0.61	0.83	1.11			1.46	1.99	2.65			1.15	1.57	2.09		
1600	S	0.59	0.87	1.24			0.55	0.82	1.13			0.69	1.03	1.42		
	D	0.50	0.68	0.91			1.20	1.64	2.19			0.95	1.29	1.72		

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.
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