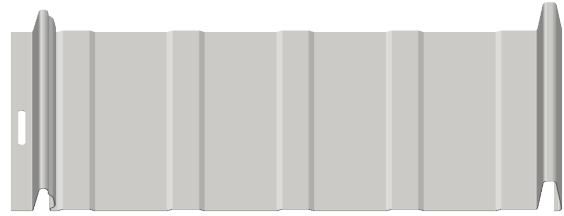
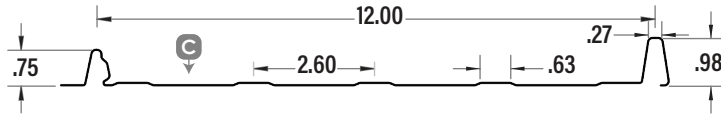




# WF-PROLOK 12 ROOF



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 <sup>4</sup> )	Specified Web Crippling Data			
				Midspan	Support		P <sub>e1</sub> End (lb)	P <sub>e2</sub> End (lb)	P <sub>i1</sub> Interior (lb)	P <sub>i2</sub> Interior (lb)
				(in <sup>3</sup> )	(in <sup>3</sup> )					
	0.018	1.05	33	0.0138	0.0117	0.0125	34.4	8.61	66.8	11.4
	0.024	1.38	33	0.0182	0.0162	0.0165	63.7	15.9	123	20.9

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

## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (PSF)

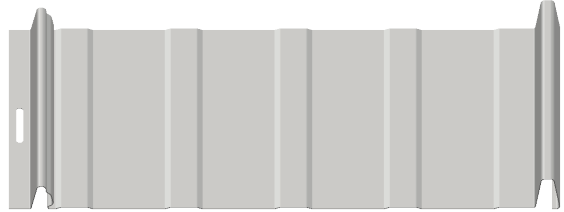
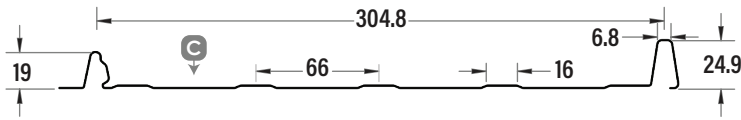
SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.018	0.024			0.018	0.024			0.018	0.024		
1.0	S	183	240			154	213			193	267		
	D	S	S			S	S			S	S		
1.5	S	81	107			69	95			86	118		
	D	S	S			S	S			S	S		
2.0	S	46	60			39	53			48	67		
	D	S	S			S	S			S	S		
2.5	S	29	38			25	34			31	43		
	D	S	S			S	S			S	S		
3.0	S	20	27			17	24			21	30		
	D	S	S			S	S			S	S		
3.5	S	15	20			13	17			16	22		
	D	S	S			S	S			S	S		
4.0	S	11	15			10	13			12	17		
	D	S	S			S	S			S	S		

- 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 Web crippling not included in strength calculations. See Example.
  - 5 Limit States Design principles were used in accordance with CSA S136-16.
  - 6 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.





# WF-PROLOK 12 ROOF



All dimensions are in millimeters

## SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m <sup>2</sup> )	Yield Stress (MPa)	Sec. Modulus		Deflection Moment of Inertia (x10 <sup>6</sup> mm <sup>4</sup> )	Specified Web Crippling Data			
				Midspan	Support		P <sub>e1</sub> End (kN)	P <sub>e2</sub> End (kN)	P <sub>i1</sub> Interior (kN)	P <sub>i2</sub> Interior (kN)
				(x10 <sup>3</sup> mm <sup>3</sup> )	(x10 <sup>3</sup> mm <sup>3</sup> )					
	0.457	5.14	230	0.743	0.628	0.0170	0.508	0.127	0.985	0.167
	0.610	6.76	230	0.979	0.868	0.0225	0.939	0.235	1.81	0.308

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	0.610			0.457	0.610			0.457	0.610		
300	S	9.12	12.0			7.70	10.7			9.63	13.3		
	D	S	S			S	S			S	S		
400	S	5.13	6.76			4.33	5.99			5.42	7.48		
	D	S	S			S	S			S	S		
500	S	3.28	4.32			2.77	3.83			3.47	4.79		
	D	S	S			S	S			S	S		
600	S	2.28	3.00			1.93	2.66			2.41	3.33		
	D	S	S			S	S			S	S		
700	S	1.67	2.21			1.42	1.96			1.77	2.44		
	D	S	S			S	S			S	S		
800	S	1.28	1.69			1.08	1.50			1.35	1.87		
	D	S	S			S	S			S	S		
900	S	1.01	1.33			0.86	1.18			1.07	1.48		
	D	S	S			S	S			S	S		
1000	S	0.82	1.08			0.69	0.96			0.87	1.20		
	D	S	S			S	S			S	S		
1100	S	0.68	0.89			0.57	0.79			0.72	0.99		
	D	S	S			S	S			S	S		
1200	S	0.57	0.75			0.48	0.67			0.60	0.83		
	D	S	S			S	S			S	S		

- 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 Web crippling not included in strength calculations. See Example.
  - 5 Limit States Design principles were used in accordance with CSA S136-16.
  - 6 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.

