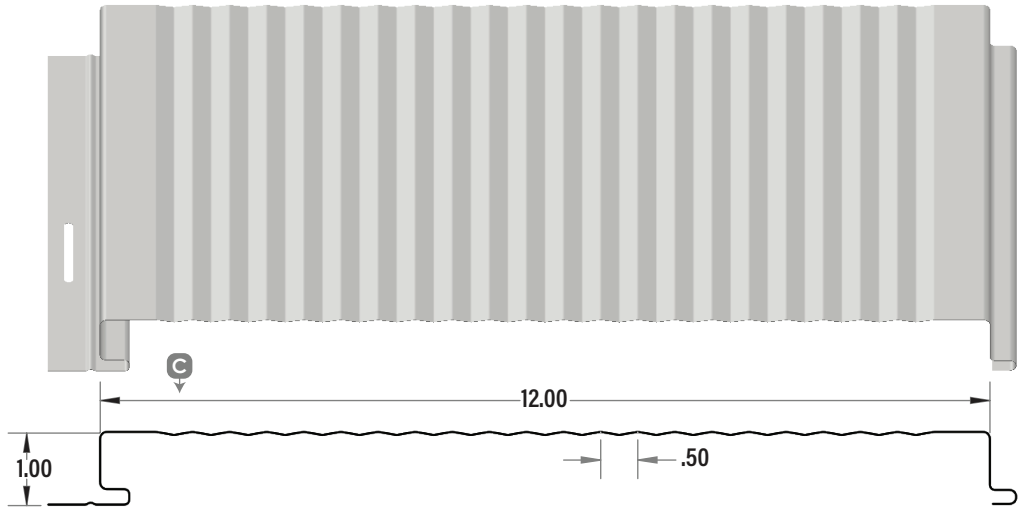




# WF-HF-12W WALL



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	1.04	33	0.0243	0.0408	0.0154	74.7	18.7	142	24.1
	0.024	1.36	33	0.0382	0.0537	0.0227	138	34.4	260	44.2
	0.030	1.69	33	0.0547	0.0663	0.0317	220	55.0	416	70.7
	0.036	2.02	33	0.0684	0.0785	0.0416	322	80.6	608	103

Live load factor = 1.4; Importance factor = 0.75; 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.)			
		0.024	0.030			0.024	0.030			0.024	0.030		
3.0	S	60	86			84	104			94	130		
	D	196	273			470	656			370	517		
3.5	S	44	63			62	77			69	96		
	D	123	172			296	413			233	326		
4.0	S	34	48			47	59			53	73		
	D	83	115			198	277			156	218		
4.5	S	27	38			38	46			42	58		
	D	58	81			139	194			110	153		
5.0	S	22	31			30	37			34	47		
	D	42	59			102	142			80	112		
5.5	S	18	26			25	31			28	39		
	D	32	44			76	107			60	84		
6.0	S	15	21			21	26			23	33		
	D	24	34			59	82			46	65		
6.5	S	13	18			18	22			20	28		
	D	19	27			46	65			36	51		
7.0	S	11	16			16	19			17	24		
	D	15	22			37	52			29	41		
7.5	S	10	14			14	17			15	21		
	D	13	18			30	42			24	33		
8.0	S	8	12			12	15			13	18		
	D	10	14			25	35			20	27		

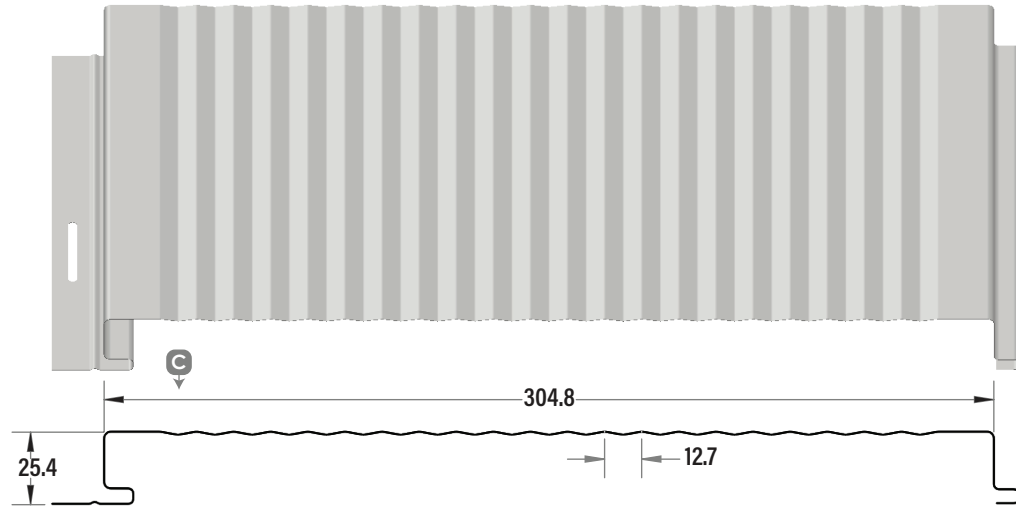
- Notes:**
- 1 Based on ASTM A 653 structural steel. Coating can also be AZ50.
  - 2 Values in row "S" are based on strength.
  - 3 Values in row "D" are based on deflection of L/90.
  - 4 For L/180, multiply values in row "D" by 0.50.
  - 5 Web crippling not included in strength calculations. See Example.
  - 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.



Canadian Sheet Steel Building Institute  
A Division of the Canadian Institute of Steel Construction



# WF-HF-12W WALL



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	5.06	230	1.30	2.19	0.0209	1.10	0.276	2.09	0.355
	0.610	6.66	230	2.05	2.89	0.0310	2.03	0.507	3.84	0.652
	0.762	8.25	230	2.93	3.56	0.0432	3.25	0.811	6.13	1.04
	0.914	9.85	230	3.67	4.22	0.0566	4.76	1.19	8.98	1.53

Live load factor = 1.4; Importance factor = 0.75; 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)			
		0.610	0.762			0.610	0.762			0.610	0.762		
1000	S	2.42	3.46			3.42	4.21			3.78	5.27		
	D	7.15	10.0			17.2	24.0			13.5	18.9		
1200	S	1.68	2.41			2.37	2.93			2.63	3.66		
	D	4.14	5.78			9.93	13.9			7.82	10.9		
1400	S	1.24	1.77			1.74	2.15			1.93	2.69		
	D	2.61	3.64			6.26	8.73			4.93	6.87		
1600	S	0.95	1.35			1.33	1.65			1.48	2.06		
	D	1.75	2.44			4.19	5.85			3.30	4.61		
1800	S	0.75	1.07			1.05	1.30			1.17	1.63		
	D	1.23	1.71			2.94	4.11			2.32	3.23		
2000	S	0.61	0.87			0.85	1.05			0.95	1.32		
	D	0.89	1.25			2.15	2.99			1.69	2.36		
2200	S	0.50	0.72			0.71	0.87			0.78	1.09		
	D	0.67	0.94			1.61	2.25			1.27	1.77		
2400	S	0.42	0.60			0.59	0.73			0.66	0.91		
	D	0.52	0.72			1.24	1.73			0.98	1.36		
2600	S	0.36	0.51			0.51	0.62			0.56	0.78		
	D	0.41	0.57			0.98	1.36			0.77	1.07		
2800	S	0.31	0.44			0.44	0.54			0.48	0.67		
	D	0.33	0.45			0.78	1.09			0.62	0.86		
3000	S	0.27	0.38			0.38	0.47			0.42	0.59		
	D	0.26	0.37			0.64	0.89			0.50	0.70		

### 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/90.
- 4 For L/180, multiply values in row "D" by 0.50.
- 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.

