

# RTL-24

STANDING SEAM ROOF

## SECTION PROPERTIES (Per Foot of Width)

### IMPERIAL

THICKNESS		Yield Strength (ksi)	Coated Steel Thickness (AZ55) (in)	Coated Mass (psf)	Section Modulus		Deflection Moment of Inertia		Specified Web Crippling		Clip Compression Capacity (kips/ft)
Gauge	Base (in)				Midspan (in <sup>3</sup> )	Support (in <sup>3</sup> )	Midspan (in <sup>4</sup> )	Support (in <sup>4</sup> )	End 2.5" Bearing (kips/ft)	Interior 2.5" Bearing (kips/ft)	
24	0.0221	50	0.0236	1.133	0.1517	0.0924	0.3620	0.1520	0.322	0.507	0.596
22	0.0275	50	0.029	1.406	0.1875	0.1235	0.4475	0.1965	0.493	0.932	

#### NOTE:

1. Section properties are calculated in accordance with the North American Specification for the Design of Cold-Formed Steel Structural Members (2001 Edition & 2004 Supplement).
2. Section modulus values are allowable/specified.
3. Specified web crippling values are for bare panel only. End bearing assumes panel fastened to support; interior bearing panel not fastened to support. Clip compression capacity as tested in system assembly governs the interior bearing capacity.
4. All values are for one foot of panel width.
5. Minimum deliverable bare steel thickness should not be less than 0.95 of design base thickness.
6. Material shall be ASTM A792, grade 50.

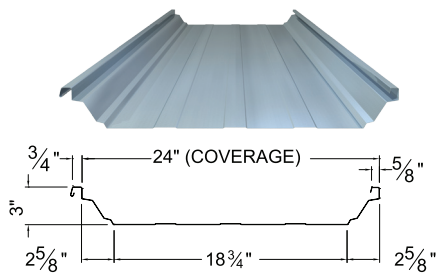
## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (psf)

SPAN LENGTH (ft)		1 - SPAN		2- SPAN		3 - SPAN	
		BASE STEEL THICKNESS (in)		BASE STEEL THICKNESS (in)		BASE STEEL THICKNESS (in)	
		0.0221	0.0275	0.0221	0.0275	0.0221	0.0275
2.0	S	757	938	238 <sup>(7)</sup>	238 <sup>(7)</sup>	261 <sup>(7)</sup>	261 <sup>(7)</sup>
	D	3955	4889	9519	11767	7463	9226
2.5	S	484	600	191 <sup>(7)</sup>	191 <sup>(7)</sup>	208 <sup>(7)</sup>	208 <sup>(7)</sup>
	D	2025	2503	4873	6025	3821	4724
3.0	S	336	417	159 <sup>(7)</sup>	159 <sup>(7)</sup>	174 <sup>(7)</sup>	174 <sup>(7)</sup>
	D	1172	1449	2820	3486	2211	2733
3.5	S	247	306	136 <sup>(7)</sup>	136 <sup>(7)</sup>	149 <sup>(7)</sup>	149 <sup>(7)</sup>
	D	738	912	1776	2195	1392	1721
4.0	S	189	234	109	119 <sup>(7)</sup>	125	130 <sup>(7)</sup>
	D	494	611	1189	1471	933	1153
4.5	S	149	185	87	106 <sup>(7)</sup>	100	116 <sup>(7)</sup>
	D	347	429	835	1033	655	810
5.0	S	121	150	71	95	82	104 <sup>(7)</sup>
	D	253	313	609	753	477	590
6.0	S	84	104	50	66	57	77
	D	146	181	352	435	276	341

#### NOTE:

1. The maximum uniformly distributed specified load obtained from the load table must be equal to or greater than the (Specified live load + 0.833 times the specified dead load). Where 0.833 = 1.25/1.5.
2. Allowable/specified load based on smallest load due to bending, shear and combined bending and shear.
3. Allowable/specified load based on deflection cannot exceed allowable/specified load based on bending.
4. These loads are for panel strength. Frames, clips, fasteners and all supports must be designed to resist all loads imposed on panels.
5. Values in row "S" are based on strength.
6. Values in row "D" are based on deflection of 1/180th span.
7. Governed by 4" floating clip capacity.





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STANDING SEAM ROOF

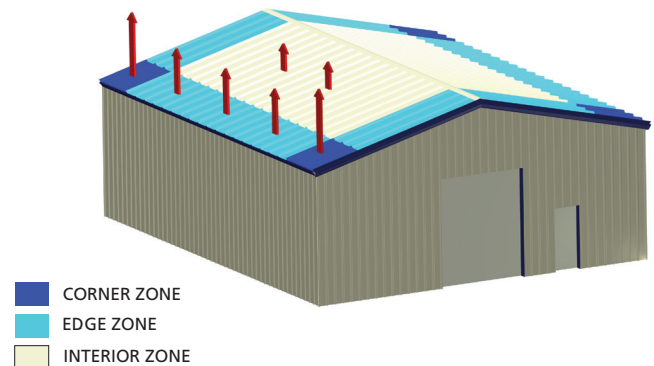
## MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED WIND UPLIFT LOAD (psf) IMPERIAL

FIELD SEAM TYPE	Support Spacing (ft)	Standard 4.5" wide clip Base Steel Thickness (in.)		12" wide clip Base Steel Thickness (in.)	
		0.0221	0.0275	0.0221	0.00275
RollLoc Seam (hand seamed at eave, ridge, and each clip)	2.0				
	2.5	36.7	49.8		
	3.0	33.6	45.7		
	3.5	30.0	41.6		
	4.0	26.3	36.8		
	4.5	23.3	32.7		
	5.0	21.0	29.4		
TripleLoc Seamed	2.0			110.8	
	2.5	54.3	52.0	101.2	
	3.0	50.8	48.4	89.1	
	3.5	47.3	44.8	76.3	
	4.0	43.7	41.2	66.8	
	4.5	40.2	37.6	59.4	
	5.0	36.6	33.9	53.4	
QuadLoc Seamed	2.0			158.8	
	2.5	78.8		144.5	
	3.0	70.0		121.9	
	3.5	60.0		104.5	
	4.0	52.5		91.5	
	4.5	46.6		81.3	
	5.0	42.0		73.2	

### NOTE:

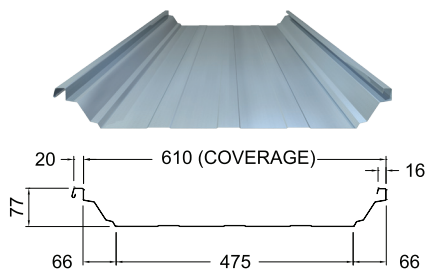
1. Shaded areas have not been tested.
2. The above tabulated loads are generated from certified ASTM E-1592 testing.
3. Intermediate design loads are interpolated from ultimate test loads for 2'-0" and 5'-0" support spacing.
4. Design loads contain a safety factor of 1.896 calculated per North American Specification for the Design of Cold-Formed Structural Members. (2001 Edition & 2004 Supplement).
5. Tested loads are based on minimum purlin thickness of 0.054 in., grade 50; two screws per clip.
6. Calculation of corner, edge and interior zone wind uplift loads (used to determine panel seaming requirements as listed above) for roof panels is not the responsibility of ExSteel or Steelway. Appropriate external and internal wind pressures/suctions must be used as per applicable building code.
7. RTL-24 panels, RollLoc only, no hand seaming, have an uplift capacity of approximately 10 psf.
8. Ensure that both the RTL-24 installation and seaming manuals have been completely reviewed before installing roof system.

### WIND UPLIFT



- CORNER ZONE
- EDGE ZONE
- INTERIOR ZONE





# RTL-24

STANDING SEAM ROOF

## SECTION PROPERTIES (Per Metre of Width)

### METRIC

THICKNESS		Yield Strength (MPa)	Coated Steel Thickness (AZM165)(mm)	Coated Mass (kg/m <sup>2</sup> )	Section Modulus		Deflection Moment of Inertia		Specified Web Crippling		Clip Compression Capacity (kN/m)
Gauge	Base (mm)				Midspan (x10 <sup>3</sup> mm <sup>3</sup> )	Support (x10 <sup>3</sup> mm <sup>3</sup> )	Midspan (x10 <sup>6</sup> mm <sup>4</sup> )	Support (x10 <sup>6</sup> mm <sup>4</sup> )	End 64mm Bearing (kN/m)	Interior 64mm Bearing (kN/m)	
24	0.5613	345	0.5994	5.53	8.15	4.97	0.494	0.208	4.70	7.40	8.70
22	0.6985	345	0.7366	6.86	10.08	6.64	0.611	0.268	7.19	13.60	

#### NOTE:

- Section properties are calculated in accordance with the North American Specification for the Design of Cold-Formed Steel Structural Members (2001 Edition & 2004 Supplement).
- Section modulus values are allowable/specified.
- Specified web crippling values are for bare panel only. End bearing assumes panel fastened to support; interior bearing panel not fastened to support. Clip compression capacity as tested in system assembly governs the interior bearing capacity.
- All values are for one metre of panel width.
- Minimum deliverable bare steel thickness should not be less than 0.95 of design base thickness.
- Material shall be ASTM A792M, grade 345.

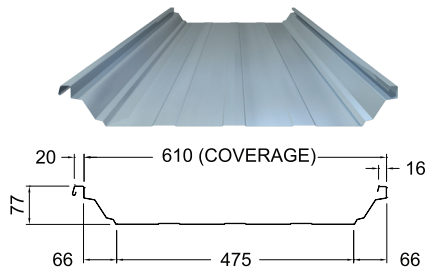
## MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (kPa)

SPAN LENGTH (m)		1 - SPAN		2- SPAN		3 - SPAN	
		BASE STEEL THICKNESS (mm)		BASE STEEL THICKNESS (mm)		BASE STEEL THICKNESS (mm)	
		0.5613	0.6985	0.5113	0.6985	0.5613	0.6985
0.6	S	36.2	44.9	11.4 <sup>(7)</sup>	11.4 <sup>(7)</sup>	12.5 <sup>(7)</sup>	12.5 <sup>(7)</sup>
	D	189.4	234.1	455.8	563.4	357.3	441.7
0.8	S	23.2	28.7	9.1 <sup>(7)</sup>	9.1 <sup>(7)</sup>	10.0 <sup>(7)</sup>	10.0 <sup>(7)</sup>
	D	97.0	119.8	233.3	288.5	182.9	226.2
0.9	S	16.1	20.0	7.6 <sup>(7)</sup>	7.6 <sup>(7)</sup>	8.3 <sup>(7)</sup>	8.3 <sup>(7)</sup>
	D	56.1	69.4	135.0	166.9	105.9	130.9
1.1	S	11.8	14.7	6.5 <sup>(7)</sup>	6.5 <sup>(7)</sup>	7.1 <sup>(7)</sup>	7.1 <sup>(7)</sup>
	D	35.3	43.7	85.0	105.1	66.6	82.4
1.2	S	9.0	11.2	5.2	5.7 <sup>(7)</sup>	6.0	6.2
	D	23.7	29.3	56.9	70.4	44.7	55.2
1.4	S	7.1	8.9	4.2	5.1 <sup>(7)</sup>	4.8	5.6 <sup>(7)</sup>
	D	16.6	20.5	40.0	49.5	31.4	38.8
1.5	S	5.8	7.2	3.4	4.5	3.9	5.0 <sup>(7)</sup>
	D	12.1	15.0	29.2	36.1	22.8	28.2
1.8	S	4.0	5.0	2.4	3.2	2.7	3.7
	D	7.0	8.7	16.9	20.8	13.2	16.3

#### NOTE:

- The maximum uniformly distributed specified load obtained from the load table must be equal to or greater than the (Specified live load + 0.833 times the specified dead load). Where 0.833 = 1.25/1.5.
- Allowable/specified load based on smallest load due to bending, shear and combined bending and shear.
- Allowable/specified load based on deflection cannot exceed allowable/specified load based on bending.
- These loads are for panel strength. Frames, clips, fasteners and all supports must be designed to resist all loads imposed on panels.
- Values in row "S" are based on strength.
- Values in row "D" are based on deflection of 1/180th span.
- Governed by 102mm floating clip capacity.





# RTL-24

STANDING SEAM ROOF

## MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED WIND UPLIFT LOAD (kPa)

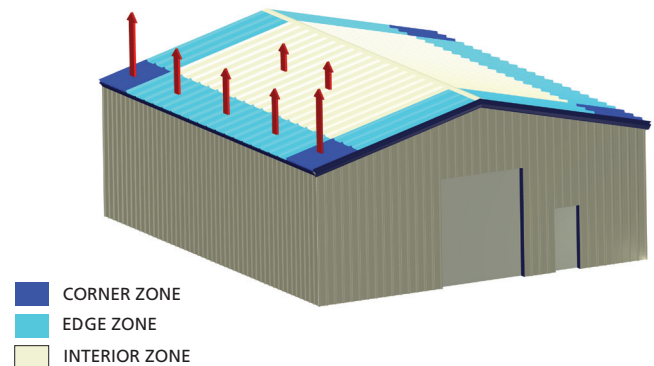
## METRIC

FIELD SEAM TYPE	Support Spacing (m)	Standard 114mm wide clip Base Steel Thickness (mm)		305mm wide clip Base Steel Thickness (mm)	
		0.5613	0.6985	0.5613	0.6985
<b>RollLoc Seam</b> (hand seamed at eave, ridge, and each clip)	0.6				
	0.8	1.8	2.4		
	0.9	1.6	2.2		
	1.1	1.4	2.0		
	1.2	1.3	1.8		
	1.4	1.1	1.6		
	1.5	1.0	1.4		
<b>TripleLoc Seamed</b>	0.6			5.3	
	0.8	2.6	2.5	4.8	
	0.9	2.4	2.3	4.3	
	1.1	2.3	2.1	3.7	
	1.2	2.1	2.0	3.2	
	1.4	1.9	1.8	2.8	
	1.5	1.8	1.6	2.6	
<b>QuadLoc Seamed</b>	0.6			7.6	
	0.8	3.8		6.9	
	0.9	3.4		5.8	
	1.1	2.9		5.0	
	1.2	2.5		4.4	
	1.4	2.2		3.9	
	1.5	2.0		3.5	

### NOTE:

1. Shaded areas have not been tested.
2. The above tabulated loads are generated from certified ASTM E-1592 testing.
3. Intermediate design loads are interpolated from ultimate test loads for 0.6m and 1.5m support spacing.
4. Design loads contain a safety factor of 1.896 calculated per North American Specification for the Design of Cold-Formed Structural Members (2001 Edition & 2004 Supplement).
5. Tested loads are based on minimum purlin thickness of 1.37 mm, grade 345; two screws per clip.
6. Calculation of corner, edge and interior zone wind uplift loads (used to determine panel seaming requirements as listed above) for roof panels is not the responsibility of ExSteel or Steelway. Appropriate external and internal wind pressures/suctions must be used as per applicable building code.
7. RTL-24 panels, RollLoc only, no hand seaming, have an uplift capacity of approximately 0.47 kPa.
8. Ensure that both the RTL-24 installation and seaming manuals have been completely reviewed before installing roof system.

### WIND UPLIFT



- CORNER ZONE
- EDGE ZONE
- INTERIOR ZONE

