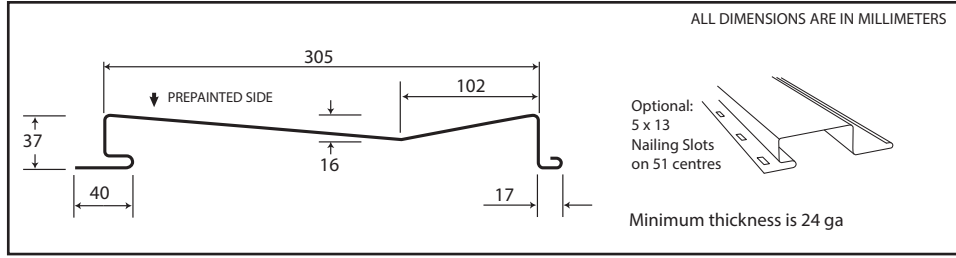




Cladding Specifications for MatrixAir™ Solar Air Heating Collector - Metric 30038V



Section Properties

(Per Metre of Width)

Base Steel Thickness (mm)	Mass Z275 (kg/m ²)	Yield Stress (MPa)	Section Modulus (x 10 ³ mm ³)		Deflection Moment of Inertia Mid Span (x 10 ⁶ mm ⁴)	Specified Web Crippling Data (kN)			
			Mid Span	Support		End Pe1	End Pe2	Interior Pi1	Interior Pi2
0.762	8.85	230	4.84	7.10	0.111	2.87	0.718	5.55	0.943
0.914	10.6	230	6.45	8.50	0.144	4.24	1.06	8.16	1.39
1.22	14.2	230	9.88	11.3	0.221	7.78	1.94	14.9	2.54

Notes:

- Steel conforms to ASTM A653M.
- Section properties are in accordance with CSA-S136-07.
- Values in row "S" are based on strength.
- Values in row "D" are based on a deflection limit of 1/180 of the span.
- Web crippling not included in strength values. See example calculation in notes to designer.
- Oil canning may be present due to various factors. Oil canning is not a valid reason for rejection of this product.
- Contact the sales department for stocked colours and gauges.
- The load table contained on this data sheet was prepared by Dr. R.M. Schuster P.Eng. Professor Emeritus of Structural Engineering, University of Waterloo, Ontario, Canada.

Live Load Factor = 1.4; Importance Factor (I_{w-SLS}) = 0.75; Importance Factor (I_{w-ULS}) = 1.0

Load Table

Maximum Specified Uniformly Distributed Loads in kPa

Span (mm)		1-Span Base Steel Thickness (mm)			2-Span Base Steel Thickness (mm)			3-Span Base Steel Thickness (mm)		
		0.762	0.914	1.22	0.762	0.914	1.22	0.762	0.914	1.22
1200	S	3.97	5.30	8.12	5.83	6.98	9.26	6.21	8.28	11.6
	D	7.44	9.62	14.8	17.9	23.1	35.5	14.1	18.2	28.0
1400	S	2.92	3.89	5.96	4.28	5.13	6.80	4.56	6.08	8.50
	D	4.69	6.06	9.32	11.3	14.5	22.4	8.86	11.5	17.6
1500	S	2.54	3.39	5.20	3.73	4.47	5.93	3.97	5.30	7.41
	D	3.81	4.93	7.57	9.14	11.8	18.2	7.20	9.31	14.3
1600	S	2.24	2.98	4.57	3.28	3.93	5.21	3.49	4.66	6.51
	D	3.14	4.06	6.24	7.53	9.74	15.0	5.93	7.67	11.8
1800	S	1.77	2.36	3.61	2.59	3.10	4.12	2.76	3.68	5.14
	D	2.20	2.85	4.38	5.29	6.84	10.5	4.17	5.39	8.29
2000	S	1.43	1.91	2.92	2.10	2.51	3.33	2.24	2.98	4.17
	D	1.61	2.08	3.20	3.86	4.99	7.67	3.04	3.93	6.04
2200	S	1.18	1.58	2.42	1.74	2.08	2.76	1.85	2.46	3.44
	D	1.21	1.56	2.40	2.90	3.75	5.76	2.28	2.95	4.54
2400	S	0.99	1.33	2.03	1.46	1.75	2.32	1.55	2.07	2.89
	D	0.93	1.20	1.85	2.23	2.89	4.44	1.76	2.27	3.50
2500	S	0.92	1.22	1.87	1.34	1.61	2.13	1.43	1.91	2.67
	D	0.82	1.06	1.64	1.98	2.55	3.93	1.56	2.01	3.09
2600	S	0.85	1.13	1.73	1.24	1.49	1.97	1.32	1.76	2.47
	D	0.73	0.95	1.45	1.76	2.27	3.49	1.38	1.79	2.75
2800	S	0.73	0.97	1.49	1.07	1.28	1.70	1.14	1.52	2.13
	D	0.59	0.76	1.16	1.41	1.82	2.80	1.11	1.43	2.20