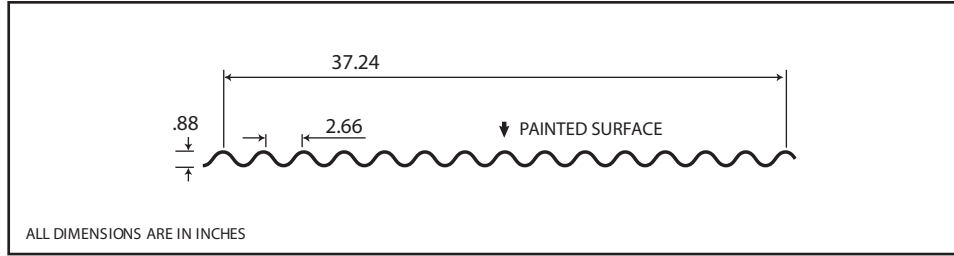




Cladding Specifications for MatrixAir™ Solar Air Heating Collector - imperial 22068



Section Properties

(Per Foot of Width)

Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Section Modulus		Deflection Moment of Inertia Mid Span (in ⁴)	Specified Web Crippling Data (lb)			
			Mid Span (in ³)	Support (in ³)		End Pe1	End Pe2	Interior Pi1	Interior Pi2
0.018	1.00	33	0.0566	0.0566	0.0248				
0.024	1.32	33	0.0743	0.0743	0.0325				
0.030	1.64	33	0.0913	0.0913	0.0399				
0.036	1.95	33	0.108	0.108	0.0471				
0.048	2.58	33	0.139	0.139	0.0607				

Notes:

- Steel conforms to ASTM A653.
- 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.
- 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 psf

Span (ft.)		1-Span Base Steel Thickness (in.)					2-Span Base Steel Thickness (in.)					3-Span Base Steel Thickness (in.)				
		0.018	0.024	0.030	0.036	0.048	0.018	0.024	0.030	0.036	0.048	0.018	0.024	0.030	0.036	0.048
4'-0"	S	50	66	81	95	123	50	66	81	95	123	63	82	101	119	153
	D	45	59	73	86	110	108	142	174	206	265	85	112	137	162	209
4'-6"	S	40	52	64	75	97	40	52	64	75	97	49	65	80	94	121
	D	32	41	51	60	77	76	100	122	144	186	60	78	96	114	146
5'-0"	S	32	42	52	61	78	32	42	52	61	78	40	53	65	76	98
	D	23	30	37	44	56	55	73	89	105	136	44	57	70	83	107
5'-6"	S	26	35	43	50	65	26	35	43	50	65	33	43	53	63	81
	D	17	23	28	33	42	42	55	67	79	102	33	43	53	62	80
6'-0"	S	22	29	36	42	55	22	29	36	42	55	28	36	45	53	68
	D	13	17	22	25	33	32	42	52	61	78	25	33	41	48	62
6'-6"	S	19	25	31	36	46	19	25	31	36	46	24	31	38	45	58
	D	10	14	17	20	26	25	33	41	48	62	20	26	32	38	49
7'-0"	S		21	26	31	40	16	21	26	31	40	20	27	33	39	50
	D		11	14	16	21	20	26	33	38	49	16	21	26	30	39
7'-6"	S			23	27	35	14	19	23	27	35	18	23	29	34	44
	D			11	13	17	16	21	26	31	40	13	17	21	25	32
8'-0"	S				24	31	13	16	20	24	31	16	21	25	30	38
	D				11	14	14	18	22	26	33	11	14	17	20	26
8'-6"	S					27	11	15	18	21	27		18	22	26	34
	D					11	11	15	18	21	28		12	14	17	22
9'-0"	S							13	16	19	24			20	24	30
	D							12	15	18	23			12	14	18



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