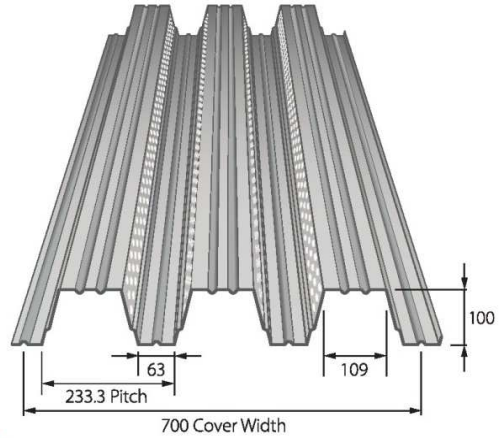
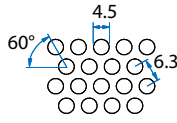


RoofDek D100 perforated web

Perforating pattern 4546 (46%), 4.5mm ø holes

at 6.3mm triangular centres.

Open area is 13.3% of exposed soffit (21.1% of cover area)



Ultimate Section Properties to Eurocode

Material specification	Design t mm	Weight kg/m ²	Broad flange in compression		Narrow flange in compression		100 mm Bearing on steel beam		Shear Capacity kN/m
			Moment Capacity kNm/m	Moment of Inertia cm ⁴ /m	Moment Capacity kNm/m	Moment of Inertia cm ⁴ /m	Transverse Resistance	Internal R _w kN/m	
0.9mm Steel S280 ¹	0.86	10.92	10.63	214.03	10.26	214.03	17.34	3.97	35.53
1.2mm Steel S280 ¹	1.16	14.58	16.17	288.52	14.46	288.52	32.19	7.65	61.98
0.9mm Alu 0.2% 165 ²	0.90	3.79	4.80	197.57	4.73	200.74	7.70	1.77	15.12
1.2mm Alu 0.2% 165 ³	1.20	5.05	7.52	268.67	7.22	276.15	13.88	3.31	26.33

Safe Loads (kN/m²)

		Imposed load - deflection limit span / 200										Wind suction load - deflection limit span / 150						
		SPAN (metres)																
		Span Condition	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
0.9mm Steel S280 ¹	Imposed	Single	2.28	2.05	1.85	1.69	1.56	1.44	1.34	1.25	1.17	1.11	1.04	0.99	0.94	-	-	-
		Double	3.07	2.75	2.50	2.28	2.10	1.95	1.81	1.69	1.59	1.50	1.41	1.34	1.27	1.20	1.13	1.06
		Multi	2.87	2.58	2.34	2.13	1.96	1.82	1.69	1.58	1.49	1.40	1.32	1.25	1.19	1.13	1.08	1.03
	Suction	Single	10.88	8.83	7.31	6.15	5.25	4.54	3.96	3.49	3.10	2.63	2.25	1.95	1.70	-	-	-
		Double	11.27	9.14	7.57	6.37	5.44	4.70	4.10	3.62	3.21	2.87	2.58	2.34	2.13	1.95	1.79	1.65
		Multi	14.07	11.41	9.44	7.95	6.78	5.86	5.11	4.50	4.00	3.57	3.21	2.91	2.64	2.41	2.22	2.04
1.2mm Steel S280 ¹	Imposed	Single	4.44	3.99	3.62	3.31	3.04	2.82	2.63	2.46	2.31	2.17	2.03	1.72	1.46	1.26	1.08	0.93
		Double	5.95	5.35	4.85	4.44	4.09	3.79	3.52	3.21	2.94	2.71	2.50	2.32	2.15	2.01	1.87	1.75
		Multi	5.57	5.01	4.54	4.16	3.83	3.55	3.31	3.09	2.91	2.74	2.59	2.46	2.33	2.22	2.12	1.89
	Suction	Single	15.33	12.44	10.30	8.67	7.40	6.39	5.58	4.92	4.18	3.55	3.04	2.62	2.29	2.01	1.77	1.58
		Double	17.13	13.90	11.50	9.68	8.26	7.14	6.23	5.49	4.87	4.35	3.92	3.55	3.22	2.95	2.70	2.49
		Multi	21.39	17.35	14.35	12.08	10.30	8.90	7.76	6.83	6.06	5.42	4.87	4.41	4.01	3.66	3.22	2.85
0.9mm Alu 0.2% 165 ²	Imposed	Single	1.03	0.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Double	1.38	1.24	1.12	1.03	0.94	-	-	-	-	-	-	-	-	-	-	-
		Multi	1.29	1.16	1.05	0.96	-	-	-	-	-	-	-	-	-	-	-	-
	Suction	Single	5.01	4.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Double	5.08	4.12	3.41	2.87	2.45	-	-	-	-	-	-	-	-	-	-	-
		Multi	6.35	5.15	4.26	3.58	-	-	-	-	-	-	-	-	-	-	-	-
1.2mm Alu 0.2% 165 ³	Imposed	Single	1.93	1.73	1.57	1.44	1.33	1.23	1.15	1.07	-	-	-	-	-	-	-	-
		Double	2.59	2.32	2.11	1.93	1.78	1.65	1.54	1.44	1.35	1.25	1.16	1.07	1.00	0.93	-	-
		Multi	2.42	2.18	1.98	1.81	1.67	1.55	1.44	1.35	1.27	1.19	1.13	1.04	-	-	-	-
	Suction	Single	7.64	6.19	4.81	3.72	2.93	2.36	1.93	1.60	-	-	-	-	-	-	-	-
		Double	7.96	6.45	5.34	4.49	3.83	3.31	2.89	2.54	2.25	2.01	1.81	1.64	1.49	1.36	-	-
		Multi	9.94	8.06	6.66	5.61	4.78	4.13	3.59	2.97	2.48	2.10	1.79	1.54	-	-	-	-

NOTES Black figures are stress limited, the load shown is the ultimate load divided by 1.5.

Blue figures are deflection limited.

Red figures show deck length exceeds 12m, these spans need extended end laps.

Calculations are to Eurocode, however extra checks such as fixings are required

A construction line load 1.5 kN/m has been allowed for.

Deck self weight has been allowed for, so does not have to be included in applied loads

⁰. Colorcoat finish

¹. Interior Liner or Galv finish

². Stucco or colour finish

³. Mill finish

Mar-16

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