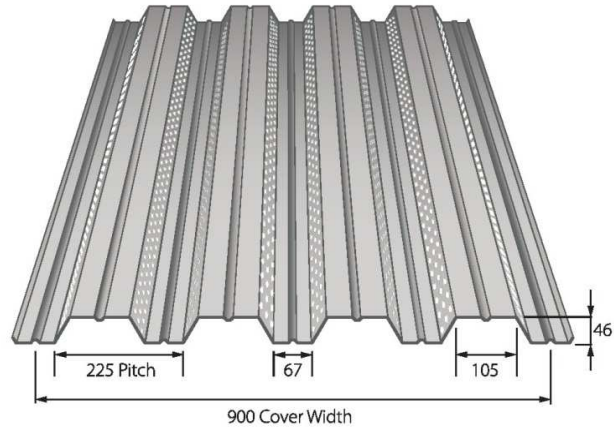
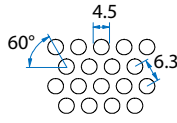


RoofDek D46 perforated web

Perforating pattern 4546 (46%), 4.5mm ø holes
at 6.3mm triangular centres.
Open area is 10.7% of exposed soffit (13% 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	
0.7mm Steel S220 ^o	0.64	6.26	2.21	26.45	2.32	28.29	6.62	1.45	10.04
0.7mm Steel S280 ¹	0.66	6.49	2.73	26.84	2.91	29.40	8.01	1.76	11.27
0.9mm Steel S280 ¹	0.86	8.35	3.93	37.59	4.04	38.31	12.94	2.93	23.75
1.2mm Steel S280 ¹	1.16	11.15	6.41	51.68	5.48	51.68	22.08	5.19	43.21
0.9mm Alu 0.2% 165 ²	0.90	2.89	1.84	35.42	1.92	36.48	5.66	1.29	8.66
1.2mm Alu 0.2% 165 ³	1.20	3.86	2.85	47.94	2.89	50.43	9.45	2.23	18.63

Safe Loads (kN/m²)

	Span Condition	Imposed load - deflection limit span / 200										Wind suction load - deflection limit span / 150							
		SPAN (metres)																	
		1.00	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00		
0.7mm Steel S220 ^o	Imposed	Single	1.89	1.57	1.34	1.16	1.03	0.92	-	-	-	-	-	-	-	-	-		
		Double	2.53	2.10	1.79	1.57	1.39	1.24	1.13	1.03	0.95	-	-	-	-	-	-		
		Multi	2.37	1.97	1.68	1.46	1.30	1.16	1.05	0.96	-	-	-	-	-	-	-		
	Suction	Single	12.39	8.62	6.34	4.87	3.85	3.13	-	-	-	-	-	-	-	-	-		
		Double	11.81	8.21	6.05	4.64	3.67	2.98	2.47	2.08	1.78	-	-	-	-	-	-		
		Multi	14.75	10.26	7.55	5.79	4.58	3.72	3.08	2.60	-	-	-	-	-	-	-		
0.7mm Steel S280 ¹	Imposed	Single	2.30	1.91	1.63	1.42	1.26	1.13	1.02	0.93	-	-	-	-	-	-	-		
		Double	3.08	2.56	2.19	1.91	1.69	1.52	1.38	1.26	1.16	1.07	1.00	0.93	-	-	-		
		Multi	2.89	2.40	2.05	1.79	1.59	1.42	1.29	1.18	1.08	1.00	0.93	-	-	-	-		
	Suction	Single	15.57	10.82	7.96	6.11	4.83	3.92	3.03	2.35	-	-	-	-	-	-	-		
		Double	14.60	10.15	7.47	5.73	4.53	3.68	3.05	2.57	2.20	1.90	1.66	1.46	-	-	-		
		Multi	18.24	12.68	9.32	7.15	5.66	4.59	3.80	3.20	2.73	2.36	2.06	-	-	-	-		
0.9mm Steel S280 ¹	Imposed	Single	3.85	3.20	2.74	2.39	2.12	1.90	1.72	1.57	1.45	1.30	1.04	-	-	-	-		
		Double	5.15	4.29	3.67	3.20	2.84	2.55	2.31	2.12	1.95	1.81	1.67	1.52	1.39	1.27	1.17	1.06	
		Multi	4.83	4.01	3.43	3.00	2.66	2.39	2.17	1.98	1.82	1.69	1.57	1.47	1.37	1.14	0.96	-	
	Suction	Single	21.61	15.02	11.05	8.48	6.71	5.23	3.95	3.06	2.43	1.96	1.61	-	-	-	-		
		Double	21.01	14.61	10.75	8.24	6.52	5.29	4.39	3.69	3.16	2.73	2.38	2.10	1.87	1.67	1.51	1.36	
		Multi	26.25	18.25	13.42	10.29	8.14	6.60	5.47	4.60	3.93	3.40	2.96	2.45	2.06	1.75	1.50	-	
1.2mm Steel S280 ¹	Imposed	Single	6.84	5.69	4.87	4.25	3.77	3.38	3.07	2.81	2.26	1.79	1.43	1.16	0.95	-	-		
		Double	9.15	7.61	6.51	5.69	5.05	4.54	4.05	3.58	3.19	2.86	2.58	2.34	2.14	1.95	1.72	1.46	
		Multi	8.57	7.13	6.10	5.33	4.73	4.25	3.86	3.53	3.25	3.01	2.80	2.29	1.89	1.58	1.32	1.12	
	Suction	Single	29.27	20.35	14.97	11.48	9.09	7.06	5.33	4.13	3.27	2.64	2.17	1.81	1.52	-	-		
		Double	34.28	23.82	17.52	13.43	10.63	8.62	7.14	6.01	5.13	4.44	3.87	3.41	3.03	2.71	2.44	2.20	
		Multi	42.83	29.76	21.89	16.77	13.27	10.76	8.91	7.50	6.08	4.89	3.99	3.31	2.78	2.36	2.02	1.75	
0.9mm Alu 0.2% 165 ²	Imposed	Single	1.70	1.41	1.21	1.05	0.94	-	-	-	-	-	-	-	-	-	-		
		Double	2.27	1.89	1.62	1.41	1.25	1.13	1.02	0.94	-	-	-	-	-	-	-		
		Multi	2.13	1.77	1.51	1.32	1.17	1.05	0.96	-	-	-	-	-	-	-	-		
	Suction	Single	10.26	7.13	4.79	3.22	2.27	-	-	-	-	-	-	-	-	-	-		
		Double	9.83	6.83	5.03	3.85	3.05	2.47	2.05	1.72	-	-	-	-	-	-	-		
		Multi	12.29	8.54	6.28	4.81	3.80	3.09	2.35	-	-	-	-	-	-	-	-		
1.2mm Alu 0.2% 165 ³	Imposed	Single	2.95	2.45	2.10	1.83	1.63	1.46	1.17	-	-	-	-	-	-	-	-		
		Double	3.94	3.28	2.80	2.45	2.18	1.96	1.78	1.63	1.49	1.35	1.11	0.91	-	-	-		
		Multi	3.69	3.07	2.63	2.30	2.04	1.83	1.66	1.52	1.35	1.07	-	-	-	-	-		
	Suction	Single	15.44	10.50	6.62	4.45	3.14	2.30	1.74	-	-	-	-	-	-	-	-		
		Double	15.23	10.58	7.78	5.96	4.72	3.83	3.17	2.66	2.27	1.96	1.65	1.37	-	-	-		
		Multi	19.03	13.22	9.72	7.45	5.89	4.30	3.24	2.50	1.98	1.59	-	-	-	-	-		

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

^o. Colorcoat finish

¹. Interior Liner or Galv finish

². Stucco or colour finish

³. Mill finish