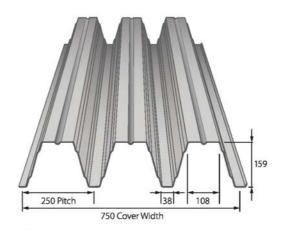
TATA STEEL



RoofDek D159

Aluminium 165 N/mm²



Ultimate Section Properties to Eurocode 9

			Broad flange i	n compression	Narrow flange	in compression	100 mm Bearing on steel beam				
Nominal Thickness	Design Thickness	Weight	Moment Capacity	Moment of Inertia	Moment Capacity	Moment of Inertia	Transverse Res	Shear Capacity			
mm	mm	kg/m²	kNm/m	cm4/m	kNm/m	cm4/m	Internal Rw kN/m	End Rw kN/m	kN/m		
1.50	1.50	7.97	15.49	846.31	13.66	859.19	46.52	12.16	91.08		

Safe Imposed (positive) Loads (kN/m ²
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Imposed load - deflection limit span / 200

Thickness								SPAN (ı	metres)							
mm	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
1.50	3.48	2.99	2.59	2.26	1.98	1.74	1.54	1.37	1.22	1.09	0.98	-	-	-	-	-
1.50	3.23	2.99	2.77	2.57	2.40	2.24	2.10	1.97	1.85	1.74	1.65	1.56	1.47	1.39	1.32	1.26
1.50	3.88	3.60	3.34	3.11	2.90	2.71	2.54	2.39	2.25	2.12	2.00	1.89	1.79	1.70	1.62	1.52
	mm 1.50	mm 4.00 1.50 3.48 1.50 3.23	mm 4.00 4.20 1.50 3.48 2.99 1.50 3.23 2.99	mm 4.00 4.20 4.40 1.50 3.48 2.99 2.59 1.50 3.23 2.99 2.77	mm 4.00 4.20 4.40 4.60 1.50 3.48 2.99 2.59 2.26 1.50 3.23 2.99 2.77 2.57	mm 4.00 4.20 4.40 4.60 4.80 1.50 3.48 2.99 2.59 2.26 1.98 1.50 3.23 2.99 2.77 2.57 2.40	mm 4.00 4.20 4.40 4.60 4.80 5.00 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.50 3.23 2.99 2.77 2.57 2.40 2.24	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85 1.74	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 0.98 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85 1.74 1.65	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 0.98 - 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85 1.74 1.65 1.56	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20 6.40 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 0.98 - - - 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85 1.74 1.65 1.56 1.47	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20 6.40 6.60 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 0.98 - - - - 1.50 3.23 2.99 2.77 2.57 2.40 2.24 2.10 1.97 1.85 1.74 1.65 1.56 1.47 1.39	mm 4.00 4.20 4.40 4.60 4.80 5.00 5.20 5.40 5.60 5.80 6.00 6.20 6.40 6.60 6.80 1.50 3.48 2.99 2.59 2.26 1.98 1.74 1.54 1.37 1.22 1.09 0.98 -

Safe Wind Suction (negative) Loads (kN/m²)

Wind suction load - deflection limit span / 90

Span	Thickness								SPAN (metres)							
Condition	mm	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00
Single	1.50	4.60	4.18	3.81	3.49	3.21	2.97	2.75	2.55	2.37	2.22	2.08	-	-	-	-	-
Double	1.50	5.22	4.74	4.32	3.96	3.64	3.36	3.11	2.89	2.69	2.51	2.35	2.20	2.07	1.95	1.84	1.74
Multi	1.50	6.51	5.91	5.39	4.93	4.53	4.18	3.87	3.59	3.35	3.12	2.92	2.74	2.57	2.42	2.29	2.16

 $\textbf{NOTES} \ \ \textbf{Black figures are stress limited, the load shown is the ultimate load divided by 1.5.}$

Blue figures are deflection limited.

 $Red\ figures\ indicate\ that\ deck\ length\ exceeds\ 12m\ the\ maximum\ advisable.\ Consider\ extended\ end\ laps$

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

A construction line load 2 kN/m has been allowed for.

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