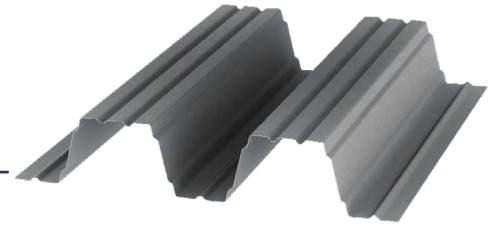




Product Data Sheet SMD Profile Details and Sectional Properties

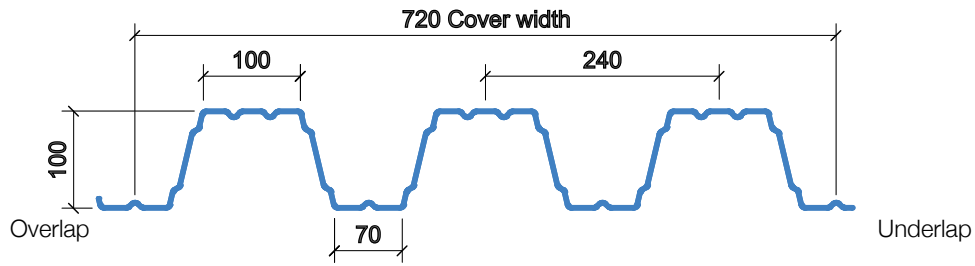
SR100⁺™

Roof deck profile



Deck profile

100mm deck profile typically used as the structural deck for Single Ply Membrane, Double Skin built-up, Standing Seam, Green Roof and Asphalt systems.



Options

- S350 grade steel in accordance with BS EN 10143:2016 and BS EN 10346:2015
- Available in two coating options:-
 - Galvanised** Hot dip galvanised with a minimum coating mass of 275g/m² (S350GD-Z275)
 - Polyester White** Hot dip galvanised with a minimum coating mass of 150g/m² (S350GD-Z150) with 25 micron bright white polyester finish to the underside
- 0.7mm, 0.9mm and 1.2mm gauge options available to suit common steel beam spacings.
- Maximum sheet lengths up to 12m in packs of 10-20 sheets to suit project specific details

Profile properties

Nominal Thickness mm	Available Grade N/mm ²	Depth of Profile mm	Weight kg/m ²	Weight kN/m ²	Area of Steel (mm ² /m)	Top Flange in Compression		Bottom Flange in Compression	
						Moment Capacity kNm/m	Moment of Inertia cm ⁴ /m	Moment Capacity kNm/m	Moment of Inertia cm ⁴ /m
0.7	S350	100	9.24	0.09	1118	7.46	179.06	8.41	154.04
0.9	S350	100	11.91	0.12	1457	11.62	211.3	10.74	196.21
1.2	S350	100	15.90	0.16	1966	21.77	349.87	17.73	351.59

Section properties are calculated assisted by testing in accordance with Eurocode 3.

Load tables

Positive Imposed Load (Gravity) kN/m²

Span Condition	Gauge	Span m																
		3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2
Single	0.7	3.20	3.00	2.83	2.67	2.53	2.26	1.95	1.70	1.48	1.31	1.16	1.03	0.92	0.82	0.74	0.67	0.61
	0.9	5.43	5.09	4.34	3.65	3.11	2.66	2.30	2.00	1.75	1.54	1.36	1.21	1.08	0.97	0.87	0.79	0.71
	1.2	9.76	8.61	7.18	6.05	5.14	4.41	3.81	3.31	2.90	2.55	2.26	2.01	1.79	1.61	1.45	1.31	1.18
Double	0.7	2.91	2.65	2.42	2.22	2.04	1.89	1.75	1.63	1.52	1.42	1.33	1.25	1.18	1.11	1.05	0.99	0.94
	0.9	4.22	3.82	3.48	3.18	2.92	2.69	2.49	2.31	2.15	2.00	1.87	1.75	1.65	1.55	1.46	1.31	1.19
	1.2	7.17	6.49	5.90	5.39	4.94	4.55	4.20	3.90	3.62	3.38	3.15	2.95	2.77	2.61	2.46	2.32	2.19
Multi	0.7	3.45	3.14	2.88	2.64	2.44	2.26	2.09	1.95	1.82	1.70	1.60	1.50	1.42	1.34	1.26	1.20	1.13
	0.9	5.04	4.57	4.16	3.81	3.50	3.23	2.99	2.78	2.59	2.42	2.26	2.02	1.80	1.62	1.46	1.31	1.19
	1.2	8.57	7.77	7.07	6.47	5.94	5.48	5.07	4.70	4.37	4.08	3.82	3.58	3.36	3.07	2.76	2.50	2.26

Negative Imposed Load (Uplift) kN/m²

Span Condition	Gauge	Span m																
		3	3.2	3.4	3.6	3.8	4	4.2	4.4	4.6	4.8	5	5.2	5.4	5.6	5.8	6	6.2
Single	0.7	3.20	3.00	2.83	2.67	2.53	2.40	2.24	1.94	1.70	1.50	1.32	1.18	1.05	0.94	0.85	0.77	0.69
	0.9	5.43	5.09	4.79	4.42	3.84	3.30	2.85	2.48	2.17	1.91	1.69	1.50	1.34	1.20	1.08	0.98	0.89
	1.2	9.76	9.15	8.18	7.30	6.55	5.91	5.10	4.44	3.88	3.42	3.02	2.69	2.40	2.15	1.94	1.75	1.59
Double	0.7	2.75	2.49	2.27	2.08	1.91	1.77	1.64	1.52	1.42	1.32	1.24	1.16	1.09	1.03	0.97	0.92	0.87
	0.9	4.40	3.99	3.63	3.32	3.06	2.82	2.61	2.42	2.25	2.10	1.97	1.85	1.73	1.63	1.54	1.46	1.38
	1.2	7.98	7.24	6.60	6.05	5.56	5.14	4.76	4.42	4.12	3.85	3.60	3.38	3.18	2.99	2.82	2.67	2.53
Multi	0.7	3.27	2.97	2.71	2.49	2.29	2.12	1.96	1.83	1.70	1.59	1.49	1.40	1.32	1.24	1.17	1.11	1.05
	0.9	5.24	4.76	4.34	3.98	3.66	3.38	3.13	2.91	2.71	2.53	2.37	2.23	2.09	1.97	1.80	1.63	1.48
	1.2	9.49	8.63	7.88	7.23	6.66	6.15	5.71	5.31	4.95	4.63	4.33	4.07	3.83	3.59	3.23	2.92	2.64

Tables consider deflection limits of:-

- Positive load (Gravity) - Span /200
- Negative loads (Uplift) - Span /150

Figures shaded indicate where design is governed by deflection.

These tables do not consider loads applied during construction of the roof finish - additional load-distributing measures may be required in some situations.

These load/span tables do not consider plastic design (moment redistribution). Improved loadings may be possible for some double and multi-span configurations. Contact SMD Technical Team for further guidance.

All loads within table consider a partial factor of 1.5.

Fixing checks for uplift must be considered separately.

Tables based on bearing width (steel beam) of 100mm.

Numbers shown **RED** are not recommended as sheet lengths exceed maximum for logistic and manual handling reasons.

Download the latest version, now with roof deck design capability

 Watch SMD's YouTube tutorial on the new roof deck section of Elements