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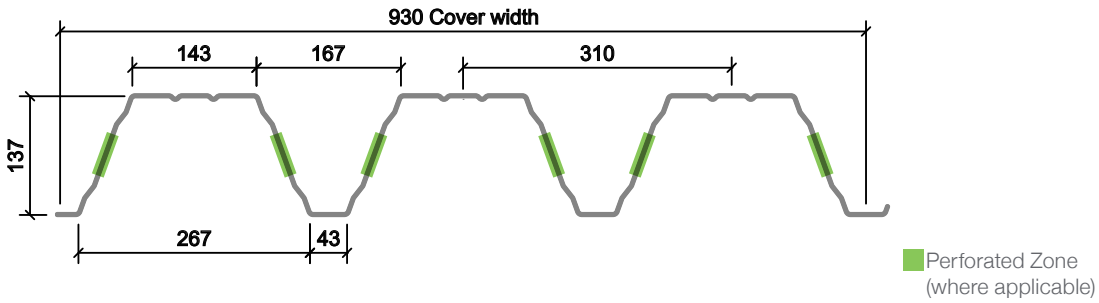
Product Data Sheet SMD Profile Details and Sectional Properties

SR135™



Description

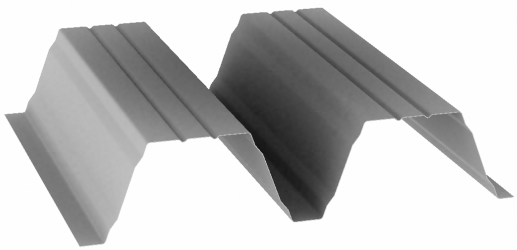
Deck profile typically used as the structural deck for single ply membrane, double skin built-up, standing seam, green roof and asphalt systems.

Benefits

- Provides uncluttered soffit when designed as part of a diaphragm roof
- Perforated option available for enhanced acoustic performance
- Bespoke lifting aid available for ease of installation
- In addition to the standard galvanized steel, Aluminium option is also available where durability is a concern in aggressive environments.

Specification

- 930mm cover width
- 137mm deep
- Available with perforated webs providing 15 to 35% perforation, depending on pattern.



Gauge

- 0.75mm (Steel)
- 0.88mm (Steel)
- 1.00mm (Steel / Aluminium)
- 1.25mm (Steel / Aluminium)
- 1.50mm (Steel / Aluminium)

Grade

- Steel S320
- Aluminium 180 MPa

Coatings and Finishes

- Galvanised Steel
- Galvanised Steel with interior liner coating
- Aluminium
- Perforated

Profile Properties

Product Specification and Options

	Product Code, Material & Option	Nominal Thickness mm	Weight kg/m²	Weight kN/m²	Top Flange in Compression: Moment Capacity kNm/m	Top Flange in Compression: Moment of Inertia cm⁴/m	Bottom Flange in Compression: Moment Capacity kNm/m	Bottom Flange in Compression: Moment of Inertia cm⁴/m
STEEL	SR135	**0.75**	9.70	0.095	9.69	278.22	8.30	276.33
		0.88	11.40	0.112	12.29	336.41	10.90	335.62
		1.00	12.90	0.127	14.81	386.57	13.43	386.57
		1.25	16.10	0.158	20.28	487.04	18.55	487.04
		1.50	19.90	0.191	26.18	587.43	22.54	587.43
	SR135P PERFORATED	**0.75**	9.70	0.092	9.58	273.84	8.14	267.97
		0.88	11.40	0.112	12.17	330.99	10.61	328.82
		1.00	12.90	0.127	14.67	380.31	13.07	378.90
		1.25	16.10	0.158	20.10	479.15	17.86	477.37
		1.50	19.40	0.191	25.74	577.91	21.72	575.76
ALUMINIUM	SR135A	**1.00**	4.56	0.045	6.32	383.41	5.80	380.91
		1.25	5.71	0.056	8.68	492.30	8.11	489.66
		1.50	6.85	0.067	11.15	599.70	10.62	598.56
	SR135AP PERFORATED	**1.00**	4.56	0.045	6.08	371.67	5.27	359.22
		1.25	5.71	0.056	8.42	476.92	7.40	464.18
		1.50	6.85	0.067	10.86	580.70	9.72	568.92

Load Tables Conditions

Tables consider deflection limits of:
Positive load (Gravity) - Span /200
Negative loads (Uplift) - Span /150

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

All loads within table consider a partial factor of 1.5.

The deck self-weight has not been allowed for in the generation of these tables, so must be included in the applied loads referenced.

Fixing checks for uplift must be considered separately.

Tables based on bearing width of minimum 40mm at end supports and 160mm at internal supports.

Numbers shown red exceed maximum Health and Safety manual handling guidelines, additional lifting plant is recommended for these situations.

The SR deep deck range (>100mm) is supplied from various manufacturing facilities. Although all have similar product properties, specific designs must be checked at point of order/contract.

Load Tables _ Steel

Span m Unfactored Applied Load (kN/m²)

SR135 | STEEL

Positive Imposed Load (Gravity) kN/m²

Span Condition	Gauge	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4
Single	0.75	-	-	-	2.30	2.03	1.79	1.60	1.42	1.28	1.15	-	-	-	-	-	-	-	-
	0.88	-	-	-	2.79	2.45	2.17	1.93	1.72	1.54	1.39	1.26	1.14	-	-	-	-	-	-
	1.00	-	-	-	3.20	2.82	2.49	2.22	1.98	1.78	1.60	1.44	1.31	1.19	-	-	-	-	-
	1.25	-	-	-	4.03	3.55	3.14	2.79	2.49	2.24	2.01	1.82	1.65	1.50	1.37	1.25	1.15	-	-
	1.50	-	-	-	4.87	4.28	3.79	3.37	3.01	2.70	2.43	2.19	1.99	1.81	1.65	1.51	1.38	1.27	1.17
Double	0.75	-	-	-	2.26	2.11	1.97	1.85	1.73	1.63	1.54	1.44	1.34	1.26	1.19	1.12	-	-	-
	0.88	-	-	-	3.03	2.83	2.62	2.42	2.25	2.09	1.95	1.82	1.71	1.60	1.50	1.42	1.34	1.26	1.20
	1.00	-	-	-	3.73	3.43	3.16	2.92	2.71	2.52	2.35	2.19	2.05	1.93	1.81	1.71	1.61	1.52	1.44
	1.25	-	-	-	5.11	4.69	4.33	4.00	3.71	3.45	3.22	3.00	2.81	2.64	2.48	2.34	2.21	2.09	1.98
	1.50	-	-	-	6.60	6.06	5.59	5.16	4.79	4.45	4.15	3.88	3.63	3.41	3.21	3.02	2.85	2.69	2.55
Multi	0.75	-	-	-	2.41	2.24	2.07	1.91	1.77	1.65	1.54	1.44	1.34	1.26	1.19	1.12	-	-	-
	0.88	-	-	-	3.10	2.84	2.62	2.42	2.25	2.09	1.95	1.82	1.71	1.60	1.50	1.42	1.34	1.27	1.21
	1.00	-	-	-	3.73	3.43	3.16	2.92	2.71	2.52	2.35	2.19	2.06	1.95	1.85	1.75	1.67	1.58	1.46
	1.25	-	-	-	5.11	4.69	4.33	4.00	3.73	3.50	3.30	3.11	2.94	2.78	2.58	2.36	2.17	1.99	1.83
	1.50	-	-	-	6.60	6.06	5.59	5.16	4.79	4.47	4.20	3.96	3.74	3.42	3.12	2.85	2.61	2.40	2.21

Negative Imposed Load (Uplift) kN/m²

Span Condition	Gauge	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4
Single	0.75	-	-	-	2.09	1.92	1.77	1.64	1.52	1.41	1.32	-	-	-	-	-	-	-	-
	0.88	-	-	-	2.75	2.52	2.33	2.15	1.99	1.85	1.73	1.61	1.51	-	-	-	-	-	-
	1.00	-	-	-	3.39	3.11	2.87	2.65	2.46	2.28	2.13	1.92	1.74	1.59	-	-	-	-	-
	1.25	-	-	-	4.68	4.29	3.96	3.66	3.33	2.98	2.68	2.42	2.20	2.00	1.82	1.67	1.53	-	-
	1.50	-	-	-	5.68	5.22	4.81	4.45	4.01	3.60	3.24	2.92	2.65	2.41	2.20	2.01	1.84	1.69	1.56
Double	0.75	-	-	-	2.44	2.24	2.07	1.91	1.77	1.65	1.54	1.44	1.34	1.26	1.19	1.12	-	-	-
	0.88	-	-	-	3.10	2.84	2.62	2.42	2.25	2.09	1.95	1.82	1.71	1.60	1.50	1.42	1.34	1.26	1.20
	1.00	-	-	-	3.73	3.43	3.16	2.92	2.71	2.52	2.35	2.19	2.05	1.93	1.81	1.71	1.61	1.52	1.44
	1.25	-	-	-	5.11	4.69	4.33	4.00	3.71	3.45	3.22	3.00	2.81	2.64	2.48	2.34	2.21	2.09	1.98
	1.50	-	-	-	6.60	6.06	5.59	5.16	4.79	4.45	4.15	3.88	3.63	3.41	3.21	3.02	2.85	2.69	2.55
Multi	0.75	-	-	-	3.05	2.80	2.58	2.39	2.22	2.06	1.92	1.79	1.68	1.58	1.48	1.40	-	-	-
	0.88	-	-	-	3.87	3.56	3.28	3.03	2.81	2.61	2.44	2.28	2.13	2.00	1.88	1.77	1.67	1.58	1.50
	1.00	-	-	-	4.67	4.29	3.95	3.65	3.39	3.15	2.93	2.74	2.57	2.41	2.27	2.14	2.01	1.90	1.80
	1.25	-	-	-	6.39	5.87	5.41	5.00	4.64	4.31	4.02	3.76	3.52	3.30	3.10	2.92	2.76	2.61	2.44
	1.50	-	-	-	8.25	7.58	6.98	6.45	5.99	5.57	5.19	4.85	4.54	4.26	4.01	3.77	3.48	3.20	2.95

SR135P | STEEL PERFORATED

Positive Imposed Load (Gravity) kN/m²

Span Condition	Gauge	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4
Single	0.75	2.31	2.20	2.10	2.01	1.92	1.77	1.57	1.40	1.26	1.13	-	-	-	-	-	-	-	-
	0.88	3.24	3.08	2.94	2.74	2.41	2.14	1.90	1.70	1.52	1.37	1.24	1.12	-	-	-	-	-	-
	1.00	4.21	4.01	3.60	3.15	2.77	2.45	2.18	1.95	1.75	1.57	1.42	1.29	1.17	-	-	-	-	-
	1.25	6.04	5.22	4.54	3.97	3.49	3.09	2.75	2.45	2.20	1.98	1.79	1.62	1.47	1.34	1.23	-	-	-
	1.50	7.28	6.29	5.47	4.79	4.21	3.73	3.31	2.96	2.65	2.39	2.16	1.96	1.78	1.62	1.48	-	-	-
Double	0.75	2.31	2.20	2.10	2.01	1.92	1.81	1.70	1.60	1.51	1.42	1.35	1.27	1.21	1.15	-	-	-	-
	0.88	3.24	3.08	2.94	2.78	2.59	2.43	2.27	2.14	2.01	1.90	1.79	1.69	1.58	1.49	1.40	-	-	-
	1.00	4.21	4.01	3.75	3.49	3.25	3.04	2.85	2.68	2.49	2.33	2.17	2.04	1.91	1.80	1.69	-	-	-
	1.25	6.30	5.82	5.39	5.01	4.65	4.29	3.96	3.68	3.42	3.19	2.98	2.79	2.62	2.46	2.32	-	-	-
	1.50	8.15	7.51	6.95	6.44	5.96	5.49	5.08	4.71	4.38	4.08	3.81	3.57	3.35	3.15	2.97	-	-	-
Multi	0.75	2.31	2.20	2.10	2.01	1.92	1.85	1.78	1.71	1.63	1.52	1.42	1.33	1.25	1.17	1.10	-	-	-
	0.88	3.24	3.08	2.94	2.81	2.70	2.59	2.40	2.23	2.07	1.93	1.80	1.69	1.58	1.49	1.40	-	-	-
	1.00	4.21	4.01	3.82	3.66	3.40	3.13	2.89	2.68	2.49	2.33	2.17	2.04	1.91	1.80	1.69	-	-	-
	1.25	6.58	6.08	5.54	5.07	4.65	4.29	3.96	3.68	3.42	3.19	2.98	2.79	2.62	2.46	2.32	-	-	-
	1.50	8.58	7.78	7.09	6.49	5.96	5.49	5.08	4.71	4.38	4.08	3.81	3.57	3.35	3.07	2.80	-	-	-

Negative Imposed Load (Uplift) kN/m²

Span Condition	Gauge	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4
Single	0.75	2.71	2.46	2.24	2.05	1.88	1.74	1.61	1.49	1.38	1.29	-	-	-	-	-	-	-	-
	0.88	3.54	3.21	2.92	2.67	2.46	2.26	2.09	1.94	1.80	1.68	1.57	1.47	-	-	-	-	-	-
	1.00	4.36	3.95	3.60	3.29	3.03	2.79	2.58	2.39	2.22	2.07	1.89	1.71	1.55	-	-	-	-	-
	1.25	5.95	5.40	4.92	4.50	4.13	3.81	3.52	3.26	2.92	2.63	2.38	2.15	1.96	1.79	1.63	-	-	-
	1.50	7.24	6.57	5.98	5.47	5.03	4.63	4.28	3.93	3.53	3.17	2.87	2.60	2.36	2.15	1.97	-	-	-
Double	0.75	3.17	2.89	2.64	2.41	2.22	2.04	1.89	1.75	1.63	1.52	1.42	1.33	1.25	1.17	-	-	-	-
	0.88	4.06	3.68	3.35	3.07	2.82	2.60	2.40	2.23	2.07	1.93	1.80	1.69	1.58	1.49	1.40	-	-	-
	1.00	4.89	4.44	4.04	3.70	3.40	3.13	2.89	2.68	2.49	2.33	2.17	2.04	1.91	1.80	1.69	-	-	-
	1.25	6.70	6.08	5.54	5.07	4.65	4.29	3.96	3.68	3.42	3.19	2.98	2.79	2.62	2.46	2.32	-	-	-
	1.50	8.58	7.78	7.09	6.49	5.96	5.49	5.08	4.71	4.38	4.08	3.81	3.57	3.35	3.15	2.97	-	-	-
Multi	0.75	3.75	3.47	3.21	2.97	2.75	2.55	2.36	2.19	2.04	1.90	1.77	1.66	1.56	1.47	1.38	-	-	-
	0.88	5.06	4.60	4.19	3.83	3.52	3.25	3.00	2.78	2.59	2.41	2.25	2.11	1.98	1.86	1.75	-	-	-
	1.00	6.11	5.54	5.05	4.62	4.24	3.91	3.62	3.35	3.12	2.91	2.72	2.54	2.39	2.25	2.12	-	-	-
	1.25	8.38	7.60	6.92	6.33	5.82	5.36	4.96	4.60	4.27	3.98	3.72	3.49	3.27	3.08	2.90	-	-	-
	1.50	10.73	9.73	8.86	8.11	7.45	6.86	6.35	5.88	5.47	5.10	4.77	4.46	4.19	3.94	3.71	-	-	-

Load Tables _ Aluminium

Span m Unfactored Applied Load (kN/m²)

SR135A | ALUMINIUM

Span Condition	Gauge	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2
Positive Imposed Load (Gravity) kN/m²																		
Single	1.00	-	-	3.42	3.16	2.93	2.74	2.56	2.41	2.21	1.88	1.61	1.39	1.21	-	-	-	-
	1.25	-	-	5.26	4.85	4.51	4.21	3.94	3.37	2.84	2.41	2.07	1.79	1.55	1.36	1.20	-	-
	1.50	-	-	7.43	6.86	6.37	5.95	4.92	4.10	3.46	2.94	2.52	2.18	1.89	1.66	1.46	1.29	1.15
Double	1.00	-	-	3.60	3.20	2.93	2.74	2.56	2.41	2.28	2.12	1.92	1.74	1.58	1.45	1.33	1.23	1.13
	1.25	-	-	5.28	4.85	4.51	4.21	3.94	3.64	3.25	2.91	2.63	2.39	2.17	1.99	1.83	1.68	1.56
	1.50	-	-	7.43	6.86	6.37	5.95	5.28	4.68	4.17	3.74	3.38	3.06	2.79	2.55	2.35	2.16	2.00
Multi	1.00	-	-	4.27	3.82	3.44	3.10	2.81	2.56	2.34	2.14	1.97	1.81	1.68	1.55	1.44	1.34	1.25
	1.25	-	-	6.31	5.62	5.04	4.53	4.10	3.72	3.39	3.10	2.84	2.61	2.41	2.23	2.06	1.92	1.78
	1.50	-	-	8.61	7.65	6.84	6.14	5.54	5.01	4.56	4.16	3.80	3.49	3.22	2.97	2.75	2.44	2.17
Negative Imposed Load (Uplift) kN/m²																		
Single	1.00	-	-	4.88	4.16	3.59	3.12	2.75	2.43	2.17	1.95	1.76	1.59	1.45	-	-	-	-
	1.25	-	-	6.83	5.82	5.02	4.37	3.84	3.40	3.03	2.72	2.46	2.23	2.03	1.80	1.59	-	-
	1.50	-	-	8.94	7.62	6.57	5.72	5.03	4.45	3.97	3.57	3.22	2.90	2.52	2.20	1.94	1.72	1.53
Double	1.00	-	-	5.32	4.50	3.91	3.40	2.99	2.65	2.36	2.12	1.92	1.74	1.58	1.45	1.33	1.23	1.13
	1.25	-	-	7.31	6.23	5.37	4.68	4.11	3.64	3.25	2.91	2.63	2.39	2.17	1.99	1.83	1.68	1.56
	1.50	-	-	9.39	8.00	6.90	6.01	5.28	4.68	4.17	3.74	3.38	3.06	2.79	2.55	2.35	2.16	2.00
Multi	1.00	-	-	6.46	5.61	4.88	4.25	3.74	3.31	2.96	2.65	2.39	2.17	1.98	1.81	1.66	1.53	1.42
	1.25	-	-	9.13	7.78	6.71	5.85	5.14	4.55	4.06	3.64	3.29	2.98	2.72	2.49	2.28	2.10	1.95
	1.50	-	-	11.73	10.00	8.62	7.51	6.60	5.85	5.21	4.68	4.22	3.83	3.49	3.19	2.93	2.70	2.50

SR135AP | ALUMINIUM PERFORATED

Span Condition	Gauge	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2
Positive Imposed Load (Gravity) kN/m²																		
Single	1.00	2.98	2.71	2.48	2.29	2.13	1.99	1.86	1.75	1.66	1.57	1.49	1.35	1.17	-	-	-	-
	1.25	4.58	4.17	3.82	3.52	3.27	3.05	2.86	2.70	2.55	2.34	2.00	1.73	1.50	1.32	1.16	-	-
	1.50	6.48	5.90	5.40	4.99	4.63	4.32	4.05	3.81	3.35	2.84	2.44	2.11	1.83	1.60	1.41	-	-
Double	1.00	3.56	3.16	2.82	2.54	2.29	2.08	1.89	1.75	1.66	1.57	1.49	1.42	1.36	1.30	1.24	-	-
	1.25	5.32	4.70	4.19	3.75	3.38	3.05	2.86	2.70	2.55	2.41	2.29	2.18	2.08	1.93	1.77	-	-
	1.50	7.32	6.46	5.74	5.13	4.63	4.32	4.05	3.81	3.60	3.41	3.24	2.98	2.72	2.49	2.29	-	-
Multi	1.00	3.73	3.39	3.11	2.87	2.66	2.47	2.25	2.07	1.90	1.75	1.62	1.50	1.39	1.30	1.24	-	-
	1.25	5.73	5.21	4.77	4.41	4.01	3.64	3.32	3.04	2.78	2.56	2.36	2.19	2.08	1.93	1.77	-	-
	1.50	8.11	7.37	6.76	6.09	5.49	4.97	4.52	4.13	3.78	3.47	3.24	2.98	2.73	2.53	2.35	-	-
Negative Imposed Load (Uplift) kN/m²																		
Single	1.00	6.39	5.28	4.44	3.78	3.26	2.84	2.50	2.21	1.97	1.77	1.60	1.45	1.32	-	-	-	-
	1.25	8.97	7.41	6.23	5.31	4.58	3.99	3.50	3.10	2.77	2.48	2.24	2.03	1.85	1.70	1.50	-	-
	1.50	11.78	9.74	8.18	6.97	6.01	5.24	4.60	4.08	3.64	3.26	2.95	2.67	2.39	2.09	1.84	-	-
Double	1.00	4.87	4.31	3.85	3.45	3.11	2.82	2.56	2.34	2.13	1.95	1.79	1.65	1.51	1.39	1.28	-	-
	1.25	8.28	7.23	6.36	5.62	4.98	4.43	3.95	3.53	3.15	2.81	2.55	2.31	2.11	1.93	1.77	-	-
	1.50	12.24	10.48	9.02	7.77	6.71	5.85	5.14	4.55	4.06	3.65	3.29	2.98	2.72	2.49	2.29	-	-
Multi	1.00	5.30	4.71	4.23	3.82	3.47	3.16	2.89	2.66	2.45	2.26	2.09	1.94	1.80	1.67	1.56	-	-
	1.25	9.19	8.10	7.19	6.42	5.76	5.18	4.68	4.24	3.85	3.50	3.18	2.89	2.63	2.39	2.21	-	-
	1.50	13.99	12.15	10.63	9.33	8.23	7.27	6.43	5.68	5.08	4.56	4.11	3.73	3.40	3.11	2.86	-	-