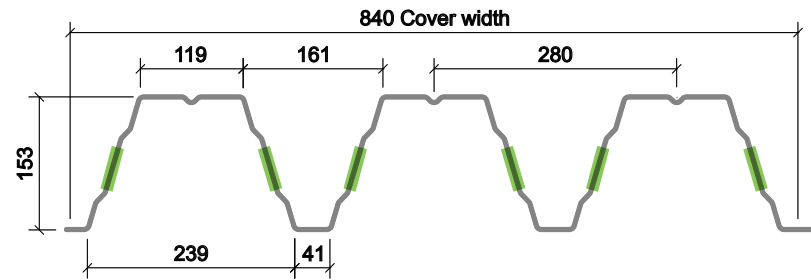


Product Data Sheet SMD Profile Details and Sectional Properties

SR153™



■ Perforated Zone
(where applicable)

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

- 840mm cover width
- 153mm deep
- Available with perforated webs providing 15 to 35% perforation, depending on pattern.

Gauge

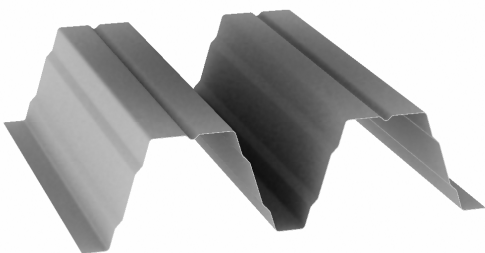
- 0.75mm (Steel)
- 0.88mm (Steel)
- 1.00mm (Steel / Aluminium)
- 1.25mm (Steel / Aluminium)
- 1.50mm (Steel / Aluminium)

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/m ²	Weight kN/m ²	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
STEEL	SR153	0.75	10.51	0.103	12.86	358.66	10.84	366.39
		0.88	12.33	0.121	16.17	436.35	13.84	443.82
		1.00	14.01	0.137	19.26	507.07	17.03	507.11
		1.25	17.52	0.172	25.80	638.83	23.02	638.88
		1.50	21.02	0.206	32.21	770.46	27.76	770.53
	SR153P PERFORATED	0.75	10.51	0.103	12.76	354.73	10.53	360.77
		0.88	12.33	0.121	16.06	431.48	13.64	437.76
		1.00	14.01	0.137	19.09	501.33	16.74	500.18
		1.25	17.52	0.172	25.57	631.59	22.42	630.14
		1.50	21.02	0.206	31.91	761.73	27.03	759.98
ALUMINIUM	SR153A	1.00	5.05	0.050	8.56	475.97	7.24	498.75
		1.25	6.32	0.062	11.83	624.74	10.21	649.03
		1.50	7.58	0.074	15.05	770.43	13.33	789.96
	SR153AP PERFORATED	1.00	5.05	0.050	8.44	468.36	6.70	481.30
		1.25	6.32	0.062	11.74	614.11	9.53	629.37
		1.50	7.58	0.074	14.89	756.66	12.51	767.09

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.

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.

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.

Load Tables _ Steel

Span m Unfactored Applied Load (kN/m²)

SR153 STEEL	Span Condition	Gauge	Unfactored Applied Load (kN/m ²)																		
			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	7.6	7.8	8.0	8.2	
SR153 STEEL	Positive Imposed Load (Gravity) kN/m ²	Single	0.75	-	-	-	1.84	1.65	1.48	1.34	1.21	1.10	-	-	-	-	-	-	-	-	-
			0.88	-	-	-	2.23	2.00	1.80	1.63	1.48	1.34	1.22	1.12	-	-	-	-	-	-	-
			1.00	-	-	-	2.60	2.33	2.10	1.89	1.72	1.56	1.42	1.30	1.19	1.10	-	-	-	-	-
			1.25	-	-	-	3.27	2.93	2.64	2.38	2.16	1.97	1.79	1.64	1.50	1.38	1.27	1.17	-	-	-
			1.50	-	-	-	3.95	3.54	3.18	2.88	2.61	2.37	2.16	1.98	1.81	1.66	1.53	1.42	1.31	1.21	1.13
	Double	0.75	-	-	-	2.15	2.03	1.91	1.81	1.71	1.62	1.54	1.47	1.39	1.32	1.25	1.19	1.13	-	-	
		0.88	-	-	-	2.83	2.67	2.51	2.38	2.24	2.10	1.98	1.86	1.76	1.66	1.57	1.49	1.42	1.35	1.28	
		1.00	-	-	-	3.52	3.28	3.05	2.85	2.67	2.51	2.36	2.22	2.10	1.98	1.88	1.78	1.69	1.61	1.53	
		1.25	-	-	-	4.72	4.39	4.09	3.82	3.58	3.36	3.16	2.98	2.81	2.65	2.51	2.38	2.26	2.15	2.05	
		1.50	-	-	-	5.89	5.48	5.11	4.77	4.47	4.19	3.94	3.72	3.51	3.31	3.14	2.97	2.82	2.68	2.55	
	Multi	0.75	-	-	-	2.35	2.19	2.04	1.91	1.78	1.68	1.58	1.48	1.40	1.32	1.25	1.19	1.13	-	-	
		0.88	-	-	-	2.96	2.75	2.56	2.39	2.24	2.10	1.98	1.86	1.76	1.66	1.57	1.49	1.40	1.30	1.21	
		1.00	-	-	-	3.52	3.28	3.05	2.85	2.67	2.51	2.36	2.22	2.10	1.98	1.88	1.76	1.63	1.51	1.40	
		1.25	-	-	-	4.72	4.39	4.09	3.82	3.58	3.36	3.19	3.03	2.84	2.61	2.40	2.22	2.05	1.90	1.77	
		1.50	-	-	-	5.89	5.48	5.11	4.77	4.49	4.25	4.03	3.74	3.43	3.15	2.90	2.68	2.48	2.30	2.13	
SR153P STEEL PERFORATED	Positive Imposed Load (Gravity) kN/m ²	Single	0.75	-	-	-	1.98	1.84	1.72	1.61	1.50	1.41	-	-	-	-	-	-	-	-	
			0.88	-	-	-	2.53	2.35	2.19	2.05	1.92	1.80	1.66	1.52	-	-	-	-	-	-	
			1.00	-	-	-	3.12	2.90	2.70	2.52	2.29	2.08	1.90	1.73	1.59	1.46	-	-	-	-	
			1.25	-	-	-	4.21	3.91	3.52	3.18	2.88	2.62	2.39	2.18	2.00	1.84	1.70	1.56	-	-	
			1.50	-	-	-	5.08	4.72	4.25	3.84	3.48	3.16	2.88	2.63	2.42	2.22	2.04	1.89	1.75	1.62	1.50
	Double	0.75	-	-	-	2.35	2.19	2.04	1.91	1.78	1.68	1.58	1.48	1.40	1.32	1.25	1.19	1.13	-	-	
		0.88	-	-	-	2.96	2.75	2.56	2.39	2.24	2.10	1.98	1.86	1.76	1.66	1.57	1.49	1.42	1.35	1.28	
		1.00	-	-	-	3.52	3.28	3.05	2.85	2.67	2.51	2.36	2.22	2.10	1.98	1.88	1.78	1.69	1.61	1.53	
		1.25	-	-	-	4.72	4.39	4.09	3.82	3.58	3.36	3.16	2.98	2.81	2.65	2.51	2.38	2.26	2.15	2.05	
		1.50	-	-	-	5.89	5.48	5.11	4.77	4.47	4.19	3.94	3.72	3.51	3.31	3.14	2.97	2.82	2.68	2.55	
	Multi	0.75	-	-	-	2.94	2.73	2.55	2.38	2.23	2.09	1.97	1.85	1.75	1.65	1.57	1.48	1.41	-	-	
		0.88	-	-	-	3.70	3.44	3.20	2.99	2.80	2.63	2.47	2.33	2.20	2.08	1.97	1.87	1.77	1.68	1.60	
		1.00	-	-	-	4.40	4.10	3.82	3.57	3.34	3.14	2.95	2.78	2.62	2.48	2.35	2.22	2.11	2.01	1.87	
		1.25	-	-	-	5.90	5.49	5.11	4.78	4.48	4.20	3.95	3.72	3.51	3.32	3.14	2.96	2.74	2.54	2.36	
		1.50	-	-	-	7.36	6.85	6.38	5.96	5.59	5.24	4.93	4.64	4.38	4.14	3.87	3.57	3.30	3.06	2.84	
SR153P STEEL PERFORATED	Positive Imposed Load (Gravity) kN/m ²	Single	0.75	-	2.16	2.03	1.82	1.63	1.47	1.32	1.20	-	-	-	-	-	-	-	-	-	
			0.88	-	2.78	2.47	2.21	1.98	1.78	1.61	1.46	1.33	1.21	1.11	-	-	-	-	-	-	-
			1.00	-	3.23	2.88	2.57	2.30	2.07	1.87	1.70	1.54	1.41	1.29	1.18	-	-	-	-	-	-
			1.25	-	4.07	3.62	3.23	2.90	2.61	2.36	2.14	1.94	1.77	1.62	1.48	1.36	1.26	1.16	-	-	-
			1.50	-	4.91	4.37	3.90	3.50	3.15	2.84	2.58	2.34	2.14	1.95	1.79	1.65	1.52	1.40	1.29	-	-
	Double	0.75	-	2.16	2.07	1.98	1.87	1.77	1.67	1.58	1.50	1.43	1.36	1.29	1.24	1.18	1.13	-	-	-	
		0.88	-	2.99	2.80	2.64	2.48	2.35	2.22	2.10	1.99	1.89	1.80	1.72	1.64	1.56	1.48	1.41	-	-	
		1.00	-	3.74	3.51	3.30	3.11	2.93	2.77	2.62	2.49	2.34	2.20	2.08	1.96	1.86	1.76	1.67	-	-	
		1.25	-	5.30	4.96	4.66	4.35	4.05	3.79	3.55	3.33	3.13	2.95	2.78	2.63	2.49	2.36	2.24	-	-	
		1.50	-	6.77	6.29	5.84	5.43	5.06	4.73	4.43	4.15	3.91	3.68	3.47	3.28	3.11	2.95	2.80	-	-	
	Multi	0.75	-	2.16	2.07	2.00	1.93	1.86	1.80	1.74	1.66	1.56	1.47	1.39	1.31	1.24	1.18	1.12	-	-	
		0.88	-	3.01	2.89	2.79	2.69	2.55	2.38	2.23	2.09	1.97	1.85	1.75	1.65	1.56	1.48	1.39	-	-	
		1.00	-	3.90	3.75	3.49	3.25	3.03	2.83	2.65	2.49	2.34	2.20	2.08	1.96	1.86	1.74	1.61	-	-	
		1.25	-	5.46	5.04	4.68	4.35	4.05	3.79	3.55	3.33	3.13	2.95	2.78	2.58	2.38	2.19	2.03	-	-	
		1.50	-	6.81	6.29	5.84	5.43	5.06	4.73	4.43	4.15	3.91	3.68	3.39	3.11	2.87	2.65	2.45	-	-	
SR153P STEEL PERFORATED	Positive Imposed Load (Uplift) kN/m ²	Single	0.75	-	2.25	2.08	1.93	1.79	1.67	1.56	1.46	-	-	-	-	-	-	-	-	-	
			0.88	-	2.91	2.69	2.49	2.32	2.16	2.02	1.89	1.78	1.64	1.50	-	-	-	-	-	-	-
			1.00	-	3.57	3.30	3.06	2.85	2.65	2.48	2.26	2.05	1.87	1.71	1.57	-	-	-	-	-	-
			1.25	-	4.78	4.42	4.10	3.81	3.47	3.14	2.84	2.58	2.36	2.15	1.98	1.82	1.67	1.54	-	-	-
			1.50	-	5.77	5.33	4.94	4.60	4.19	3.78	3.43	3.12	2.84	2.60	2.38	2.19	2.02	1.86	1.72	-	-
	Double	0.75	-	2.67	2.49	2.32	2.17	2.02	1.89	1.77	1.66	1.56	1.47	1.39	1.31	1.24	1.18	-	-	-	
		0.88	-	3.43	3.17	2.94	2.73	2.55	2.38	2.23	2.09	1.97	1.85	1.75	1.65	1.56	1.48	1.41	-	-	
		1.00	-	4.07	3.76	3.49	3.25	3.03	2.83	2.65	2.49	2.34	2.20	2.08	1.96	1.86	1.76	1.67	-	-	
		1.25	-	5.46	5.04	4.68	4.35	4.05	3.79	3.55	3.33	3.13	2.95	2.78	2.63	2.49	2.36	2.24	-	-	
		1.50	-	6.81	6.29	5.84	5.43	5.06	4.73	4.43	4.15	3.91	3.68	3.47	3.28	3.11	2.95	2.80	-	-	
	Multi	0.75	-	3.14	2.95	2.78	2.61	2.46	2.32	2.19	2.07	1.95	1.84	1.74	1.64	1.55	1.47	1.40	-	-	
		0.88	-	4.26	3.95	3.67	3.41	3.18	2.97	2.78	2.61	2.46	2.31	2.18	2.06	1.95	1.85	1.76	-	-	
		1.00	-	5.09	4.71	4.36	4.06	3.78	3.53	3.31	3.11	2.92	2.75	2.60	2.45	2.32	2.20	2.09	-	-	
		1.25	-	6.82	6.30	5.85	5.44	5.07	4.74	4.43	4.16	3.91	3.69	3.48	3.29	3.11	2.92	2.70	-	-	
		1.50	-	8.51	7.87	7.30	6.78	6.32	5.91	5.53	5.19	4.88	4.60	4.34	4.10	3.81	3.52	3.26	-	-	

Load Tables - Aluminium

Span m Unfactored Applied Load (kN/m²)

Span Condition	Gauge	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	5.4	5.6	5.8	
Positive Imposed Load (Gravity) kN/m ²	Single	1.00	-	-	3.10	2.91	2.74	2.59	2.33	2.00	1.73	1.50	1.31	1.16	-	-	-	-	-
		1.25	-	-	4.76	4.46	4.20	3.60	3.06	2.62	2.27	1.97	1.73	1.52	1.34	1.19	-	-	-
		1.50	-	-	6.72	6.30	5.27	4.44	3.77	3.24	2.80	2.43	2.13	1.87	1.66	1.47	1.32	1.18	-
	Double	1.00	-	-	3.10	2.91	2.74	2.59	2.45	2.33	2.22	2.12	1.96	1.80	1.66	1.53	1.42	1.32	1.23
		1.25	-	-	4.76	4.46	4.20	3.97	3.76	3.57	3.25	2.96	2.71	2.49	2.29	2.12	1.97	1.83	1.71
		1.50	-	-	6.72	6.30	5.93	5.60	5.05	4.56	4.14	3.77	3.45	3.17	2.92	2.70	2.50	2.33	2.17
	Multi	1.00	-	-	3.66	3.33	3.04	2.78	2.56	2.36	2.22	2.12	1.96	1.80	1.66	1.53	1.42	1.33	1.24
		1.25	-	-	5.37	4.88	4.44	4.06	3.76	3.57	3.25	2.96	2.71	2.51	2.34	2.18	2.02	1.81	1.63
		1.50	-	-	7.28	6.59	5.99	5.60	5.05	4.59	4.23	3.90	3.61	3.35	3.11	2.79	2.49	2.23	2.01
Negative Imposed Load (Uplift) kN/m ²	Single	1.00	-	-	3.90	3.43	3.04	2.71	2.43	2.19	1.99	1.81	1.66	1.52	-	-	-	-	-
		1.25	-	-	5.50	4.83	4.28	3.82	3.43	3.09	2.81	2.56	2.34	2.10	1.86	1.65	-	-	-
		1.50	-	-	7.18	6.31	5.59	4.99	4.48	4.04	3.66	3.32	2.91	2.56	2.26	2.01	1.80	1.61	-
	Double	1.00	-	-	4.59	4.05	3.58	3.20	2.87	2.59	2.35	2.14	1.96	1.80	1.66	1.53	1.42	1.32	1.23
		1.25	-	-	6.37	5.60	4.96	4.43	3.97	3.58	3.25	2.96	2.71	2.49	2.29	2.12	1.97	1.83	1.71
		1.50	-	-	8.11	7.13	6.31	5.63	5.05	4.56	4.14	3.77	3.45	3.17	2.92	2.70	2.50	2.33	2.17
	Multi	1.00	-	-	5.46	4.91	4.42	3.98	3.59	3.24	2.92	2.68	2.45	2.25	2.08	1.92	1.78	1.65	1.54
		1.25	-	-	7.97	7.00	6.20	5.53	4.97	4.48	4.06	3.70	3.39	3.11	2.87	2.65	2.46	2.29	2.13
		1.50	-	-	10.13	8.91	7.89	7.04	6.32	5.70	5.17	4.71	4.31	3.96	3.65	3.37	3.13	2.91	2.71
Positive Imposed Load (Gravity) kN/m ²	Single	1.00	2.68	2.48	2.32	2.17	2.05	1.93	1.83	1.74	1.66	1.48	1.29	1.14	-	-	-	-	-
		1.25	4.11	3.82	3.56	3.34	3.14	2.97	2.81	2.58	2.23	1.94	1.70	1.49	1.32	1.17	-	-	-
		1.50	5.81	5.39	5.03	4.72	4.44	4.20	3.71	3.18	2.75	2.39	2.09	1.84	1.63	1.45	1.29	-	-
	Double	1.00	3.04	2.75	2.50	2.28	2.09	1.93	1.83	1.74	1.66	1.58	1.51	1.45	1.39	1.34	1.29	-	-
		1.25	4.51	4.08	3.70	3.37	3.14	2.97	2.81	2.67	2.55	2.43	2.32	2.23	2.14	2.06	1.95	-	-
		1.50	6.17	5.56	5.04	4.72	4.44	4.20	3.97	3.78	3.60	3.43	3.28	3.13	2.89	2.67	2.48	-	-
	Multi	1.00	3.34	3.11	2.90	2.71	2.49	2.30	2.12	1.97	1.83	1.70	1.59	1.48	1.39	1.34	1.29	-	-
		1.25	5.14	4.77	4.39	4.01	3.68	3.39	3.13	2.89	2.68	2.49	2.32	2.23	2.14	2.06	1.95	-	-
		1.50	7.26	6.60	6.00	5.47	5.01	4.60	4.24	3.92	3.63	3.43	3.28	3.13	2.89	2.67	2.44	-	-
Negative Imposed Load (Uplift) kN/m ²	Single	1.00	4.81	4.14	3.61	3.17	2.81	2.51	2.25	2.03	1.84	1.68	1.54	1.41	-	-	-	-	-
		1.25	6.84	5.89	5.13	4.51	4.00	3.57	3.20	2.89	2.62	2.39	2.18	2.01	1.80	1.60	-	-	-
		1.50	8.97	7.74	6.74	5.92	5.25	4.68	4.20	3.79	3.44	3.13	2.82	2.49	2.20	1.96	1.75	-	-
	Double	1.00	3.85	3.50	3.21	2.95	2.72	2.51	2.33	2.17	2.02	1.88	1.76	1.65	1.54	1.45	1.36	-	-
		1.25	6.63	5.99	5.42	4.93	4.50	4.11	3.77	3.45	3.17	2.92	2.68	2.47	2.27	2.09	1.95	-	-
		1.50	9.83	8.73	7.78	6.95	6.22	5.57	4.99	4.51	4.09	3.73	3.41	3.13	2.89	2.67	2.48	-	-
	Multi	1.00	4.17	3.81	3.51	3.23	3.00	2.78	2.59	2.42	2.27	2.13	2.00	1.88	1.77	1.67	1.58	-	-
		1.25	7.34	6.66	6.07	5.56	5.11	4.71	4.35	4.02	3.73	3.46	3.22	3.00	2.79	2.60	2.43	-	-
		1.50	11.19	10.05	9.06	8.20	7.43	6.76	6.15	5.60	5.11	4.66	4.25	3.92	3.61	3.34	3.09	-	-