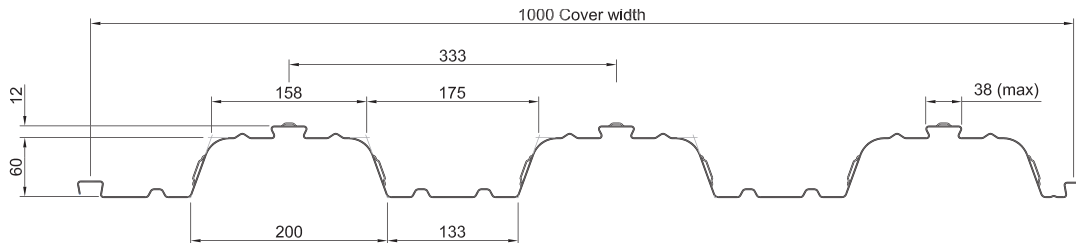


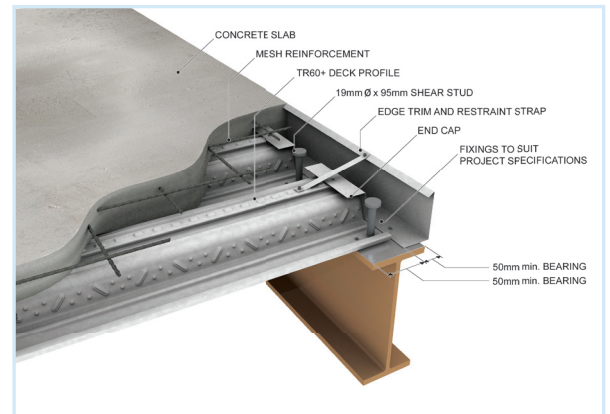
The TR60 profile was SMD's first trapezoidal profile, added to our product range in 1992. Further research and development in recent years has seen our trapezoidal products evolve into the TR+ range. The TR60+ profile enables un-propped spans in excess of 3.5m and is available in 0.9mm, 1.0mm and 1.2mm gauges in both S350 and S450 grade steel.

TR60+ Deck Profile



TR60+ Benefits

- 60mm deep trapezoidal profile
- Reduced concrete volume
- Enhanced speed of installation due to the 1.0m cover width
- Trough stiffeners positioned to ensure central stud position, reducing amount of site checking required
- The steel cross sectional area of this profile makes it the most economical option of the three available profiles
- Soffit 'Wedge Nut' fixings available with load capacity of up to 1kN
- Acoustic Robust Solution – Refer 'Robust Standard Details'
- TAB-Deck™ fibre concrete solution now available



TR60+ Typical Section Detail

Concrete Volume and Weight

Slab Depth mm	Volume of Concrete m ³ /m ²	Weight of Concrete (Normal Weight)		Weight of Concrete (Lightweight)	
		Wet (kN/m ²)	Dry (kN/m ²)	Wet (kN/m ²)	Dry (kN/m ²)
120	0.086	2.02	1.98	1.60	1.52
130	0.096	2.26	2.21	1.79	1.70
140	0.106	2.50	2.44	1.98	1.87
150	0.116	2.73	2.67	2.16	2.05
175	0.141	3.32	3.25	2.63	2.49
200	0.166	3.91	3.83	3.09	2.93
225	0.191	4.50	4.40	3.56	3.37
250	0.216	5.09	4.98	4.03	3.81

Deflection – This table is based on concrete poured to a constant thickness and does not take account for deflection of the decking or supporting beams (as a guide, to account for the deflection of the decking a concrete volume of span/250 should be added to the figures indicated). Concrete Weight – These tables indicate concrete weight only and do not include the weight of decking or reinforcement. Concrete weights are based on the concrete densities specified in BS5950 Part 4 clause 3.3.3 as follows: Normal Weight Concrete – 2400kg/m³ (wet) and 2350 kg/m³ (dry). Lightweight Concrete – 1900kg/m³ (wet) and 1800 kg/m³ (dry).

Sectional Properties								
Nominal thickness mm	Design Thickness (bare steel) mm	Available Grades N/mm ²	Depth of Profile mm	Weight of Profile kg/m ²	Weight of Profile kN/m ²	Height of neutral axis mm	Area of Steel mm ² /m	Moment of Inertia cm ⁴ /m
0.9	0.86	S350 or S450	60 / 72*	9.99	0.098	33.6	1216	93.5
1.0	0.96	S350 or S450	60 / 72*	11.08	0.109	33.6	1355	102.1
1.2	1.16	S350 or S450	60 / 72*	13.26	0.130	33.7	1633	119.8

Refer to page 07 for notes associated with these load/span tables. For more comprehensive tables covering a wider range of slab depths, loadings, fire ratings and mesh sizes visit our website at www.smdltd.co.uk.

Normal Weight Concrete

Span Type	Fire Rating (hours)	Slab Depth (mm)	Steel Fibre	Maximum Permissible Span (m)											
				0.9mm Gauge				1.0mm Gauge				1.2mm Gauge			
				Total Unfactored Applied Load (kN/m ²)											
				3.5	5.0	7.5	10.0	3.5	5.0	7.5	10.0	3.5	5.0	7.5	10.0
Double Span	1.0	130	HE 1.0/50	3.59	3.42	2.99	2.68	3.83	3.54	3.09	2.78	4.19	3.80	3.33	2.99
		150	HE 1.0/50	3.38	3.38	3.30	2.98	3.70	3.70	3.42	3.10	4.12	4.10	3.63	3.28
		200	HE 1.0/50	2.99	2.99	2.99	2.99	3.20	3.20	3.20	3.20	3.78	3.78	3.78	3.78
	1.5	140	HE 1.0/50	3.21	2.90	2.54	2.12	3.29	2.98	2.61	2.18	3.47	3.14	2.75	2.48
		150	HE 1.0/50	3.37	3.06	2.69	2.26	3.46	3.15	2.77	2.50	3.63	3.30	2.90	2.62
		200	HE 1.0/50	2.99	2.99	2.99	2.92	3.20	3.20	3.20	3.20	3.78	3.78	3.63	3.32
	2.0	150	HE 1.0/50	3.21	2.91	2.56	2.14	3.31	3.01	2.64	2.20	3.46	3.14	2.76	2.32
		175	HE 1.0/50	3.17	3.17	2.64	2.40	3.45	3.28	2.71	2.46	3.72	3.42	2.83	2.57
		200	HE 1.0/50	2.99	2.99	2.99	2.79	3.20	3.20	3.20	2.85	3.78	3.78	3.48	2.95

Lightweight Concrete

Span Type	Fire Rating (hours)	Slab Depth (mm)	Steel Fibre	Maximum Permissible Span (m)											
				0.9mm Gauge				1.0mm Gauge				1.2mm Gauge			
				Total Unfactored Applied Load (kN/m ²)											
				3.5	5.0	7.5	10.0	3.5	5.0	7.5	10.0	3.5	5.0	7.5	10.0
Double Span	1.0	120	HE 1.0/50	3.81	3.39	2.93	2.61	3.95	3.52	3.03	2.71	4.21	3.76	3.24	2.89
		150	HE 1.0/50	3.64	3.64	3.39	3.05	3.98	3.98	3.52	3.16	4.43	4.32	3.78	3.40
		200	HE 1.0/50	3.25	3.25	3.25	3.25	3.56	3.56	3.56	3.56	4.12	4.12	4.12	4.07
	1.5	130	HE 1.0/50	3.25	2.90	2.51	2.24	3.34	2.98	2.58	2.31	3.54	3.16	2.74	2.45
		150	HE 1.0/50	3.64	3.31	2.88	2.59	3.76	3.39	2.95	2.65	3.92	3.53	3.08	2.76
		200	HE 1.0/50	3.25	3.25	3.25	3.25	3.56	3.56	3.56	3.36	4.12	4.12	3.84	3.49
	2.0	140	HE 1.0/50	3.34	2.99	2.59	2.15	3.42	3.07	2.66	2.20	3.58	3.21	2.78	2.49
		175	HE 1.0/50	3.43	3.43	3.07	2.57	3.75	3.56	3.13	2.62	4.08	3.71	3.26	2.73
		200	HE 1.0/50	3.25	3.25	3.25	3.21	3.56	3.56	3.56	3.26	4.12	4.12	3.71	3.36

For further guidance on the design of TAB-Deck™ fibre reinforced slabs, download the TAB-Deck™ design manual at www.smdltd.co.uk

TR60+ Fire Insulation Thickness



Minimum Insulation Thickness (x) of Concrete (mm)					
Fire Rating	1 hr	1.5 hr	2 hr	3 hr	4 hr
NWC	70	80	90	115	130
LWC	60	70	80	100	115

The image and table above details the minimum insulation thickness required to suit fire design criteria – in accordance with BS5950 Part 8.