

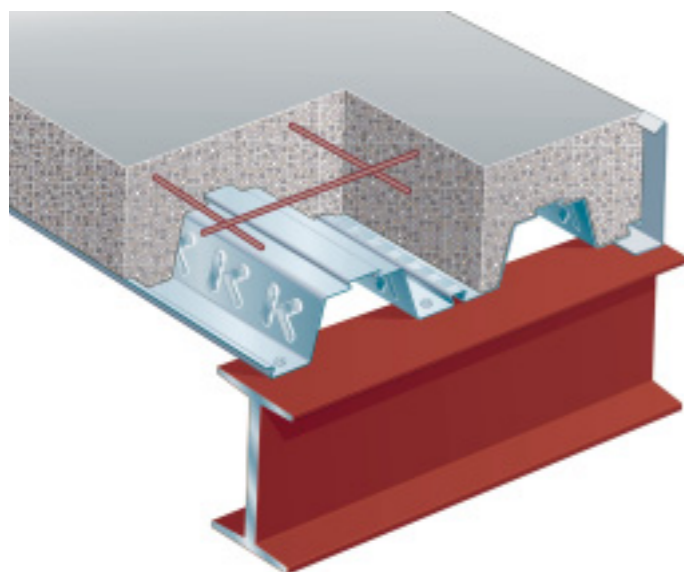
No Limits, No Compromise

With Richard Lees Steel Decking you're dealing with a company which has built its reputation on being first - first to offer decking with 2 hours inherent fire resistance capability; first to provide purpose-made steel deck flooring design software and now first in the UK to produce 4.5m* span steel decking.

Part of Skanska, we are the UK market leader in steel decking, with more knowledge and more experience than anyone else. We've put it to work on some of the world's most prestigious projects. We provide a total service, from initial design advice right through to site installation with after sales and ancillary services.

Advantages of steel deck flooring:

- Permanent shuttering
- Can be used with lightweight or dense concrete
- Up to four hours fire resistance with exposed soffit can be designed
- Composite construction reduces steelwork frame weight
- Lower dead load reduces frame and foundation loading
- Stiffens supporting frame if steelwork used
- Cover for following trades
- Provides a safe working platform
- Easily cut and fitted to awkward shapes
- Minimal site storage requirements
- Separate panels can be manhandled into restricted access situations
- Provides the Tensile reinforcement
- Needs no (or minimal) propping
- Shear studs can be site welded 'through-deck' for composite construction
- Speeds construction programme - essential in fast-tracking
- Ceilings and services can be easily suspended using standard fixings



Detailing of Ribdeck 80 decking is incorporated in 3D+ parametric structural modelling software - an integrated analysis and drafting package operating within the standard AutoCAD environment.

Supplied by CSC (UK) Ltd.
Tel: +44 (0) 113 239 3000
www.cscworld.com

Ribdeck 80 is fully implemented in the RAM Structural System software. Engineers can quickly compare alternative designs using Richard Lees Steel Decking profiles whilst producing calculations, steel tonnages and construction drawings for structural frames.

Supplied by RAM International
Tel: +44 (0) 141 353 5168.
www.ramint.co.uk



The only analysis tool that can predict the damped floor response achievable with Resotec. Providing automatic stud and section design, Compos is the premiere tool for composite analysis and design.

Supplied by Oasys Ltd
Tel: +44 (0) 191 238 7559
www.oasys-software.com

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RLSD

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Ribdeck 80

shallow slabs
longer spans

RICHARD LEES STEEL DECKING

A Revolution in Steel Decking

Now there's an exciting breakthrough in steel decking that will save you time and money. Ribdeck 80 has all the classic strengths of traditional steel decking with a ground breaking difference - you can now have shallow floors and 4.5m* spans with no temporary propping.

Up to 20% less Steelwork

You can substantially reduce the number of components in steel framed buildings with design based on Ribdeck 80. Which means the frames go up quicker, with less time spent on crane usage and assembly work - on site and in the factory. It all adds up to lower overall costs and a potential faster release of capital investments.

Save Now with Ribdeck 80

If you're interested in saving time and money, now's the time to find out how Ribdeck 80 can work for you. Just contact us at the address overleaf today and benefit from our 50 years of innovation and experience.

Design, Supply, Install

The UK's leading decking company gives you all the technical support you need and backs it up with the most experienced installation service - including through deck welding of shear studs.

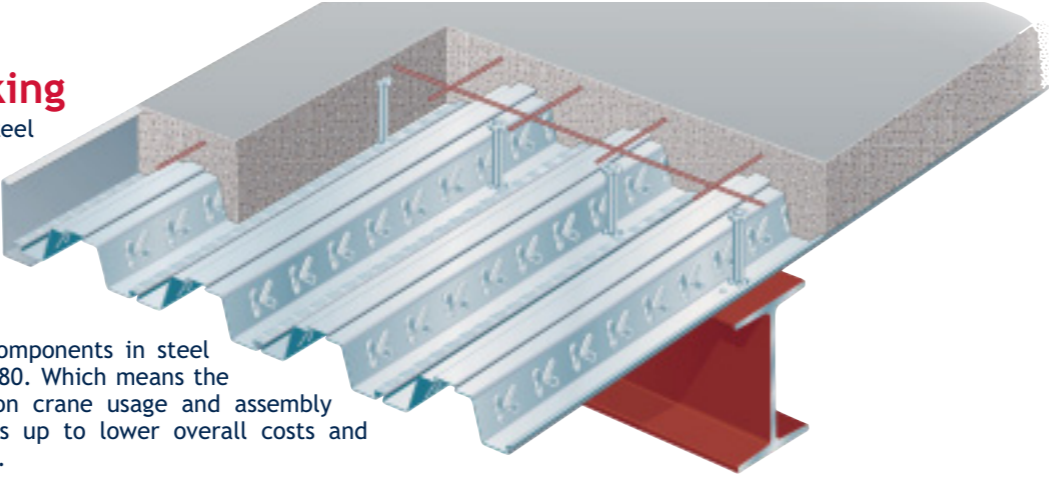
Full composite designs

The Ribdeck 80 profile allows development of efficient, economical composite designs using shear studs.

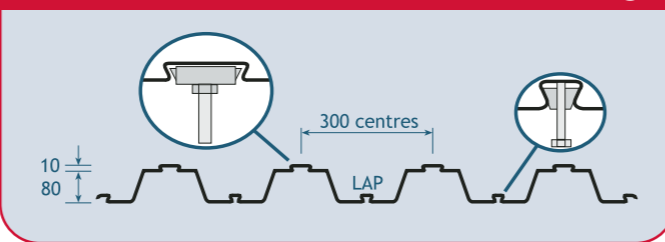
Simple suspension systems

Ribdeck 80 takes standard soffit suspension fittings used with other profiles - simple, well known, effective and widely used for many years.

*For typical office building using dense concrete and no temporary propping. See span/load tables for details.



Ribdeck 80 Standard Soffit Fixings



Ribdeck 80 Section Properties (per Metre width)

	Gauge	Self Weight		Area	Inertia	YNA
	mm	kg/m ²	kN/m ²	mm ²	cm ⁴	mm
	1.2	14.8	0.145	1,848	237.6	42.5

When estimating concrete usage we recommend that -42mm is allowed for voids and +span/250 allowed for ponding, e.g. for a 150mm slab over 4.5m unpropped, equivalent solid slab = 150 - 42 + 4500/250 = 126mm (approximation only)

Ribdeck 80 1.2mm Gauge Span/Load Table

Support Condition	Slab Depth (mm)	Concrete Volume (m ³ /m ²)	Maximum Permissible Spans (m)							
			Normal Weight Concrete				Lightweight Concrete			
			IMPOSED LOAD (kN/m ²)							
			*	5.0	6.7	10.0	*	5.0	6.7	10.0
SINGLE	130	0.088	3.90	3.90	3.90	3.84	3.25	3.25	3.25	3.25
	140	0.098	4.20	4.20	4.20	4.10	3.50	3.50	3.50	3.50
	150	0.108	4.16	4.16	4.16	4.16	3.75	3.75	3.75	3.75
	160	0.118	4.09	4.09	4.09	4.09	4.00	4.00	4.00	4.00
	175	0.133	4.00	4.00	4.00	4.00	4.22	4.22	4.22	4.22
MULTIPLE	130	0.088	4.55	4.55	4.38	3.84	3.90	3.90	3.90	3.84
	140	0.098	4.81	4.81	4.68	4.10	4.20	4.20	4.20	4.10
	150	0.108	4.73	4.73	4.73	4.36	4.50	4.50	4.50	4.36
	160	0.118	4.65	4.65	4.65	4.62	4.80	4.80	4.80	4.62
	175	0.133	4.55	4.55	4.55	4.55	4.79	4.79	4.79	4.79
PROPPED	130	0.088	4.55	4.55	4.38	3.84	3.90	3.90	3.90	3.84
	140	0.098	4.90	4.90	4.68	4.10	4.20	4.20	4.20	4.10
	150	0.108	5.25	5.25	4.98	4.36	4.50	4.50	4.50	4.36
	160	0.118	5.60	5.58	5.23	4.62	4.80	4.80	4.80	4.62
	175	0.133	6.12	5.98	5.62	5.03	5.25	5.25	5.25	5.03
200	0.158	7.02	6.63	6.26	5.50	6.00	6.00	6.00	5.67	

- Notes:**
- The spans indicated assume clear span + 120mm to the centreline of supports.
 - A span to depth ratio limit of 35:1 for normal weight concrete and 30:1 for light weight concrete is generally used. Where isolated single spans occur, these ratios are reduced to 30:1 and 25:1 respectively.
 - Maximum deflections are limited to span/130 after taking account of ponding.
 - Construction stage design includes an allowance of 1.5kN/m² for construction loading.
 - Tables are based on grade C30 concrete of wet density 2,400kg/m³ for normal weight and 1,900kg/m³ for lightweight concrete.
 - The dead weight of the slab has been included in the development of the spans shown. However, consideration should be given to finishes, partitions, walls, etc when reading from these tables.
 - Composite slabs are designed as simply supported irrespective of the deck support configuration. A nominal crack control and distribution mesh is required over the supports in accordance with clause 6.7, 6.8 and 6.9 of BS5950: Part 4.
 - Decking is manufactured from material meeting the following specification: BS EN T0147-S350GD+Z275-N-A-C, i.e.: yield strength = 350N/mm²

Ribdeck 80 Mesh sizes for Simplified Fire Designs

Fire Rating (Hrs)	Slab Depth (mm)	Span (m) for given Imposed Load (kN/m ²)												
		A142			A193			A252			A393			
		5.0	6.7	10.0	5.0	6.7	10.0	5.0	6.7	10.0	5.0	6.7	10.0	
NORMAL WEIGHT CONCRETE	1.0	3.93	3.56	3.08	4.17	3.78	3.26	4.42	4.01	3.46	4.90	4.46	3.85	
	150	4.12	3.76	3.24	4.39	3.99	3.45	4.67	4.24	3.67	5.23	4.75	4.10	
	160	4.28	3.90	3.38	4.57	4.16	3.61	4.87	4.43	3.85	5.47	4.98	4.32	
	175	4.39	4.01	3.50	4.69	4.28	3.73	4.99	4.56	3.98	5.62	5.14	4.47	
	200	4.54	4.17	3.66	4.84	4.45	3.90	5.16	4.74	4.15	5.80	5.32	4.66	
NORMAL WEIGHT CONCRETE	1.5	3.50	3.18	2.76	3.78	3.43	2.98	4.06	3.69	3.19	4.61	4.19	3.62	
	160	3.67	3.35	2.91	3.97	3.62	3.14	4.27	3.89	3.38	4.87	4.44	3.85	
	175	3.63	3.51	3.06	4.16	3.81	3.32	4.49	4.10	3.35	5.14	4.70	4.09	
	200	3.97	3.65	3.20	4.30	3.95	3.47	4.64	4.26	3.74	5.32	4.88	4.28	
	NORMAL WEIGHT CONCRETE	2.0	3.04	2.77	2.42	3.37	3.07	2.67	3.70	3.37	2.93	4.32	3.94	3.42
175		3.24	2.97	2.59	3.60	3.30	2.88	3.96	3.62	3.16	4.65	4.25	3.70	
200		-	-	-	3.73	3.43	3.02	4.11	3.78	3.32	4.84	4.45	3.90	
LIGHTWEIGHT CONCRETE		1.0	3.90	3.50	2.99	3.90	3.71	3.17	3.90	3.90	3.36	3.90	3.90	3.74
		140	4.13	3.72	3.19	4.20	3.97	3.40	4.20	4.20	3.61	4.20	4.20	4.05
	150	4.33	3.91	3.36	4.50	4.18	3.59	4.50	4.50	3.82	4.50	4.50	4.29	
	160	4.47	4.05	3.48	4.79	4.33	3.73	4.80	4.63	3.98	4.80	4.80	4.49	
	175	4.60	4.17	3.60	4.91	4.46	3.85	5.19	4.76	4.11	5.25	5.25	4.63	
LIGHTWEIGHT CONCRETE	200	4.77	4.35	3.78	5.09	4.64	4.03	5.43	4.95	4.30	6.00	5.57	4.84	
	1.5	3.57	3.21	2.76	3.86	3.47	2.98	4.15	3.74	3.20	4.20	4.20	3.64	
	150	3.78	3.42	2.94	4.11	3.71	3.19	4.43	4.00	3.43	4.50	4.50	3.93	
	160	3.95	3.58	3.08	4.30	3.89	3.35	4.65	4.21	3.62	4.80	4.80	4.16	
	175	4.05	3.68	3.18	4.40	3.99	3.45	4.77	4.32	3.73	5.25	4.98	4.30	
LIGHTWEIGHT CONCRETE	200	4.19	3.82	3.32	4.55	4.15	3.60	4.92	4.48	3.89	5.66	5.16	4.48	
	2.0	3.18	2.87	2.47	3.53	3.19	2.75	3.89	3.51	3.02	4.50	4.12	3.54	
	160	3.37	3.05	2.63	3.75	3.39	2.93	4.13	3.74	3.22	4.80	4.39	3.78	
	175	3.49	3.17	2.74	3.89	3.54	3.06	4.30	3.90	3.37	5.09	4.61	3.98	
	200	-	-	-	3.99	3.64	3.17	4.41	4.02	3.49	5.22	4.75	4.13	

- Notes:**
- The simplified fire design tables are based on the SCI appraisal of a product specific fire test at WFR; report reference WARRES 111270, on a Ribdeck 80 composite slab incorporating steel mesh with 15-45mm cover. Tables are applicable for any construction where the mesh may act in tension over a supporting beam or wall (negative bending). This includes end bay conditions i.e. the concrete slab is continuous over more than one span.
 - Loads shown are unfactored working loads and should include all imposed live and dead loads, excluding only the self-weight of the slab. An ultimate load factor of 1.0 is assumed throughout.
 - Mesh should satisfy the minimum elongation requirement given in BS4449:1988.
 - For 2 hour Simplified Fire Design information please contact the Technical Liaison Department.
 - For conditions outside the scope of the simplified tables, including all isolated spans consult the Fire Engineering Design table.
 - Indicates that the area of mesh is less than the recommended minimum for crack control.
 - Tables are based on grade 30 normal weight or lightweight concrete as shown.
 - For conditions outside the scope of the simplified tables, including all isolated spans, consult SCI publication 56 (2nd edition) or RLS's Deckspan software.

Ribdeck 80 Rebar sizes for Fire Engineering Designs

Imposed Load kN/m ²	Top Mesh (min 0.1%)	Slab Depth mm	1.0 Hour Fire								1.5 Hour Fire				2.0 Hour Fire											
			10@	8@	12@	10@	16@	12@	16@	10@	8@	12@	10@	16@	12@	16@	10@	8@	12@	10@	16@	12@	16@			
			300	150	300	150	300	150	150	300	150	300	150	300	150	150	300	150	300	150	300	150	300	150	150	
NORMAL WEIGHT CONCRETE	5.0	A142	140	3.69	4.02	4.25	4.81	4.92	4.92	4.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	A142	150	3.88	4.24	4.47	5.06	5.26	5.26	5.26	3.71	4.06	4.29	4.86	5.26	5.26	5.26	5.26	5.26	5.26	3.71	4.05	4.27	4.84	5.42	5.64	5.70
	A142	165	4.09	4.47	4.72	5.35	5.70	5.70	5.70	3.97	4.33	4.57	5.18	5.56	5.70	5.70	5.70	5.70	5.70	4.05	4.27	4.84	5.42	5.64	5.70	
	A142	175	4.21	4.61	4.86	5.52	5.97	5.97	5.97	4.09	4.47	4.71	5.35	5.97	5.97	5.97	5.97	5.97	5.97	3.85	4.20	4.43	5.02	5.61	5.84	5.97
	A193	200	4.65	5.07	5.32	6.02	6.50	6.50	6.50	4.52	4.92	5.16	5.84	6.49	6.50	6.50	6.50	6.50	6.50	4.28	4.65	4.87	5.50	6.11	6.36	6.50
NORMAL WEIGHT CONCRETE	6.7	A142	140	3.33	3.63	3.84	4.34	4.67	4.67	4.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	A142	150	3.51	3.83	4.05	4.58	4.97	4.97	4.97	3.36	3.67	3.88	4.40	4.93	4.97	4.97	4.97	4.97	4.97	-	-	-	-	-	-	
	A142	165	3.72	4.06	4.28	4.85	5.35	5.35	5.35	3.60	3.94	4.15	4.70	5.26	5.35	5.35	5.35	5.35	5.35	3.37	3.68	3.88	4.40	4.92	5.12	5.35
	A142	175	3.84	4.20	4.42	5.02	5.62	5.62	5.62	3.72	4.07	4.29	4.87	5.44	5.62	5.62	5.62	5.62	5.62	3.50	3.83	4.03	4.57	5.11	5.32	5.62
	A193	200	4.26	4.64	4.87	5.51	6.13	6.25	6.25	4.14	4.50	4.73	5.34	5.95	6.19	6.25	6.25	6.25	6.25	3.92	4.25	4.46	5.03	5.59	5.82	6.25
NORMAL WEIGHT CONCRETE	10.0	A142	140	2.85	3.11	3.29	3.72	4.09	4.09	4.09	2.42	2.71	2.90	3.34	3.81	3.96	4.09	4.09	4.09	-	-	-	-	-	-	-
	A142	150	3.02	3.30	3.48	3.93	4.35	4.35	4.35	2.89	3.16	3.34	3.78	4.24	4.35	4.35	4.35	4.35	4.35	-	-	-	-	-	-	-
	A142	165	3.21	3.51	3.70	4.19	4.69	4.75	4.75	3.11	3.40	3.58	4.06	4.54	4.72	4.75	4.75	4.75	4.75	2.91	3.18	3.35	3.80	4.25	4.42	4.75
	A142	175	3.32	3.64	3.83	4.35	4.86	5.02	5.02	3.23	3.53	3.72	4.22	4.72	4.91	5.02	5.02	5.02	5.02	3.04	3.31	3				