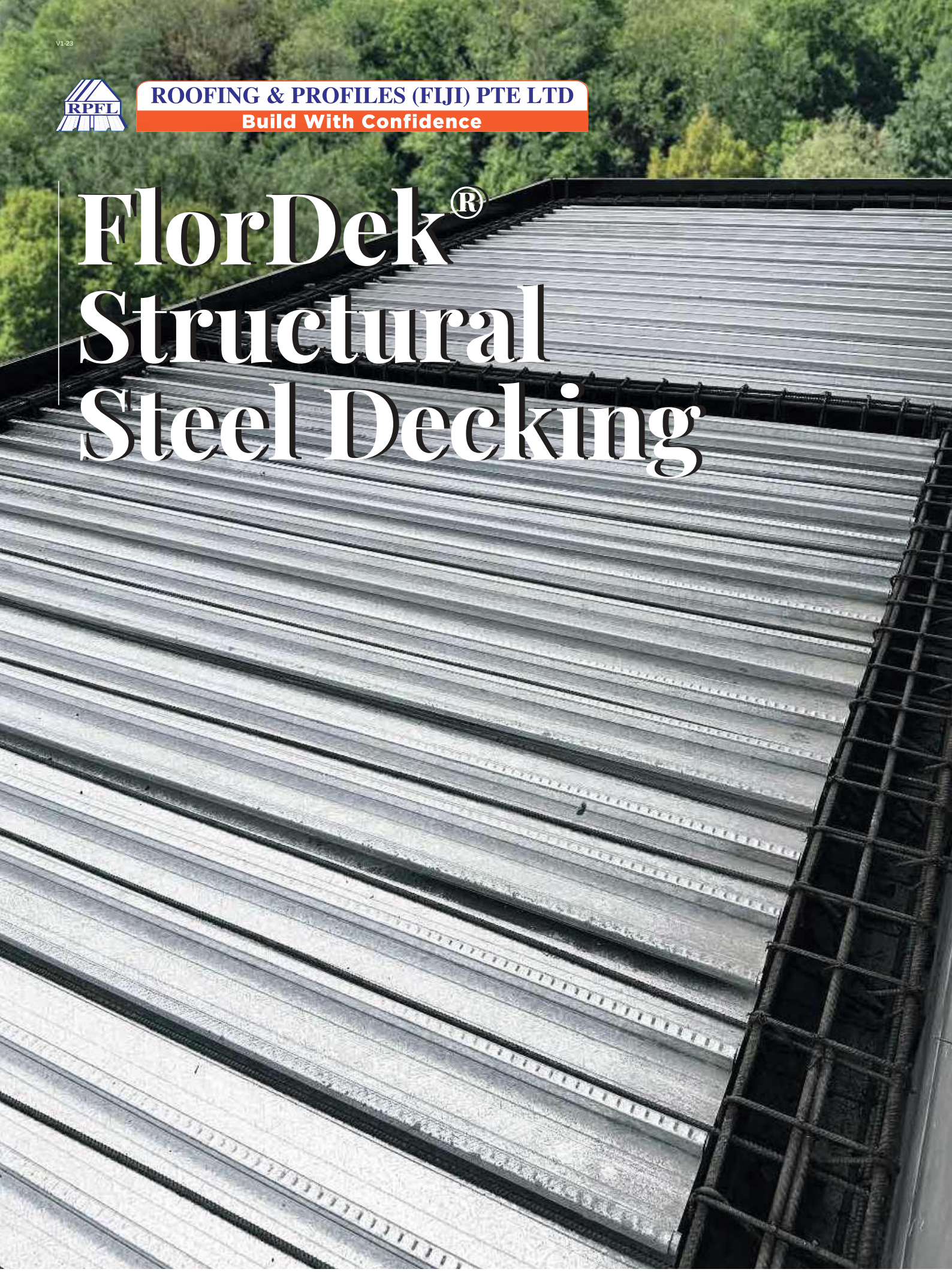
V1-23

ROOFING & PROFILES (FIJI) PTE LTD

Build With Confidence

FlorDek® Structural Steel Decking



ISO 9001 CERTIFIED

FIJIAN MADE

STEEL SUPPLIED BY BLUESCOPE

Colorbond®

info@roofingandprofiles.com.fj

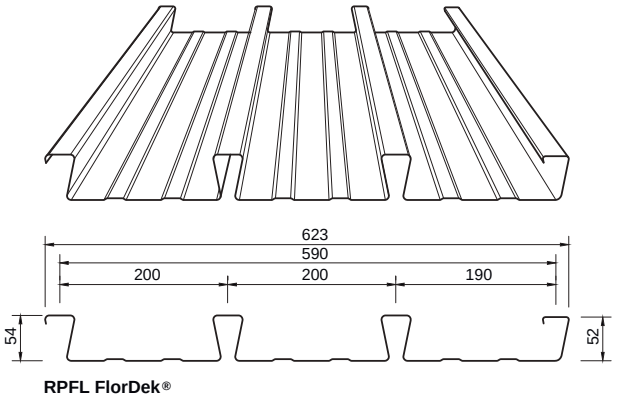
www.roofingandprofiles.com.fj

RPFL FlorDek® Roofing Profile

RPFL FlorDek® is a traditional flat pan or 're-entrant' profile that provides unmatched performance in suspended concrete slabs. RPFL FlorDek® is used in both concrete and steel frame construction and utilizes patented technology to achieve superior spanning capabilities, less deflection and greater composite strength than similar re-entrant profiles. RPFL FlorDek® comes complete with a range of accessories allowing for easy suspension of ceilings and surfaces.

Specifications

Profile: RPFL FlorDek®
Material: G550 (550 MPa) Yield Stress steel
Galvanized Coating Options: Z450 (450gm/2) Galvabond in accordance with AS 1397:2011
Thickness: 1.00mm is standard stocked. 0.60, 0.75 and 0.90BMT can be ordered on special order.
Length: Customizable to suit your project requirements



RPFL FlorDek®

Design Advantages

- Stronger composite strength – RPFL FlorDek® is stronger than similar decks due to Rib locked corner embossments. Rib locking develops a strong mechanical interlock with the concrete slab.
- Greater spanning capacities – RPFL FlorDek® is stronger than similar decks in positive bending and end shear due to the dovetail ribs which resist lateral deflection by up to 10%.
- RPFL FlorDek® has superior corrosion protection with guaranteed minimum yield strength depending on the specification used.

Upon request, FlorDek can also be supplied with Blue anti-glare coating reducing reflected light by a minimum of 80%.

Material

Thickness (mm)	Mass		Yield Strength MPa	Coverage m²/t
	kg/m²	kg/m		
0.60	8.38	5.03	550	119.3
0.75	10.32	6.19	550	96.9
0.90	12.48	7.36	550	80.16
1.00	13.56	8.14	550	73.7

Complete Range of Accessories

Our offering comes complete with a range of accessories designed to simplify the installation process and enhance the overall functionality. From easy suspension of ceilings to seamless integration with surfaces, RPFL FlorDek® ensures a hassle-free construction experience.

- RPFL FlorDek® has superior corrosion protection with guaranteed minimum yield strength depending on the specification used.

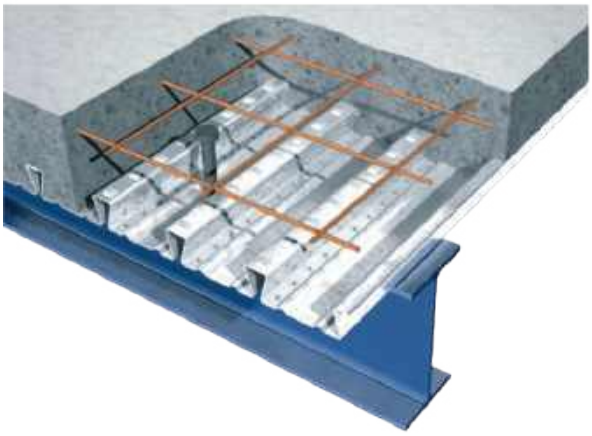
Upon request, RPFL FlorDek® can also be supplied with Blue anti-glare coating reducing reflected light by a minimum of 80%.

Confidence in Construction

Builders, architects, and engineers can place their confidence in RPFL FlorDek®. The amalgamation of cutting-edge design and advanced technology ensures that your construction projects not only meet but exceed expectations. With RPFL FlorDek®, you're not just getting a deck; you're investing in a foundation of strength and reliability.

Quality You Can Trust

When you choose RPFL FlorDek®, you're choosing a commitment to quality. Our product undergoes rigorous testing to meet and exceed industry standards. Trust in a flooring solution that not only enhances the aesthetics of your space but also provides a solid foundation for the years to come.



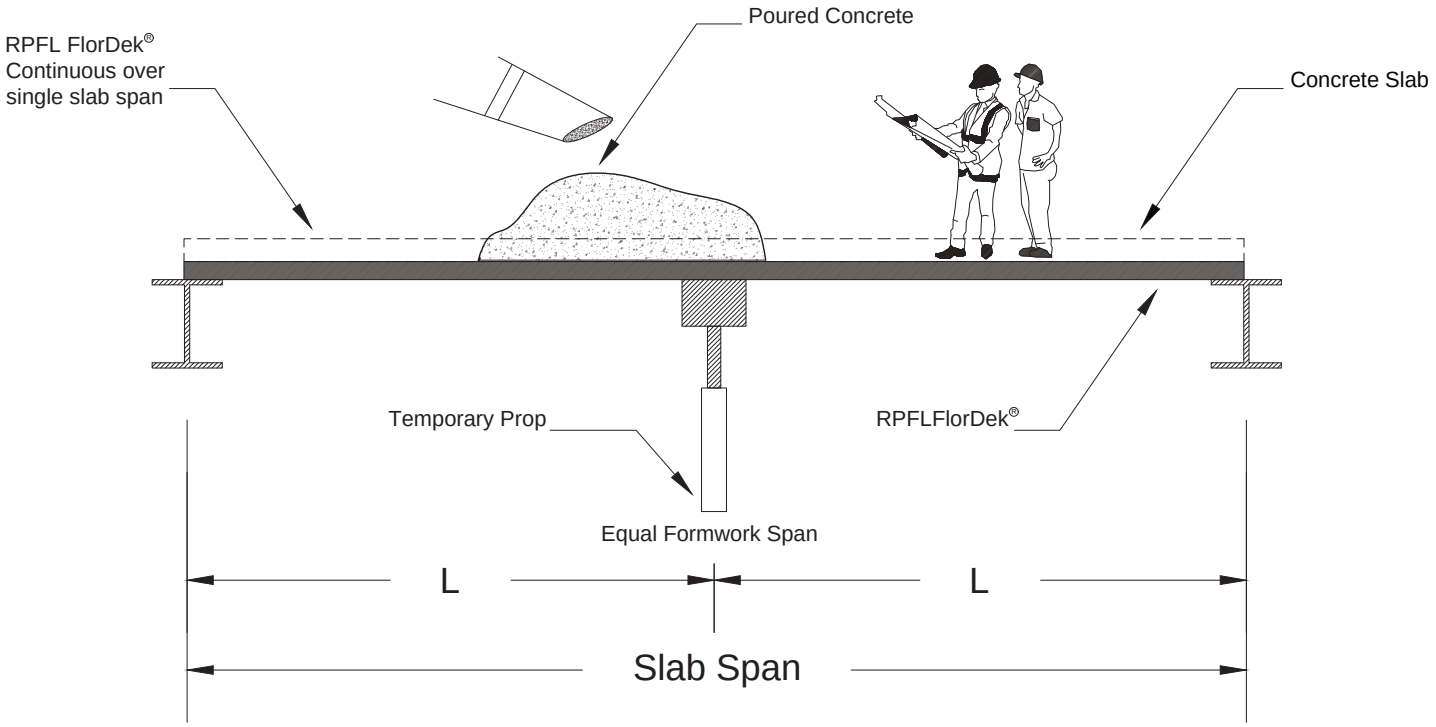
Innovation in Every Detail

Our commitment to innovation is evident in the careful consideration of every detail. RPFL FlorDek® doesn't just provide a surface; it engineers a solution. The integration of rib-locked corner embossments and dovetail features showcases a dedication to pushing boundaries and setting new benchmarks in decking solutions.

RPFL FlorDek® Maximum Slabs Spans (mm) (Continuous over Single Span Slab)

Formwork deflections limits L/240 (visual appearance important)

Slab Depth (mm)	0.60 BMT FlorDek Number of props per span			0.75 BMT FlorDek Number of props per span			0.90 BMT FlorDek Number of props per span			1.0 BMT FlorDek Number of props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	2,000	4,800	7,000	2,250	5,950	8,250	2,370	6,280	8,700	2,450	6,500	9,000
110	2,000	4,800	7,000	2,200	5,750	8,000	2,320	6,080	8,450	2,400	6,300	8,750
120	1,950	4,800	7,000	2,150	5,600	7,800	2,270	5,930	8,250	2,350	6,150	8,550
130	1,900	4,800	6,900	2,100	5,500	7,600	2,190	5,800	8,020	2,250	6,000	8,300
140	1,850	4,550	6,650	2,050	5,350	7,400	2,140	5,650	7,850	2,200	5,850	8,150
150	1,800	4,300	6,400	1,950	5,250	7,200	2,100	5,550	7,650	2,200	5,750	7,950
160	1,750	4,100	6,200	1,900	5,100	6,950	2,210	5,430	7,460	2,150	5,650	7,800
170	1,700	3,900	6,000	1,850	5,000	6,750	2,020	5,300	7,290	2,100	5,500	7,650
180	1,650	3,700	5,800	1,850	4,850	6,550	1,970	5,180	7,150	2,050	5,400	7,550
190	1,600	3,550	5,600	1,800	4,750	6,350	1,940	5,110	6,980	2,000	5,350	7,400
200	1,600	3,400	5,300	1,750	4,600	6,200	1,920	4,990	6,800	2,000	5,250	7,200
210	1,550	3,300	5,150	1,700	4,500	6,050	1,870	4,890	6,470	1,950	5,150	7,000
220	1,550	2,900	4,950	1,700	4,400	5,900	1,820	4,820	6,320	1,900	5,100	6,850
230	1,500	2,850	4,450	1,650	4,300	5,750	1,850	4,720	6,320	1,850	5,000	6,700
240	1,450	2,750	4,300	1,600	4,200	5,600	1,750	4,650	4,170	1,850	4,950	6,550
250	1,450	2,700	4,200	1,600	4,150	5,500	1,720	4,570	4,040	1,800	4,850	6,400



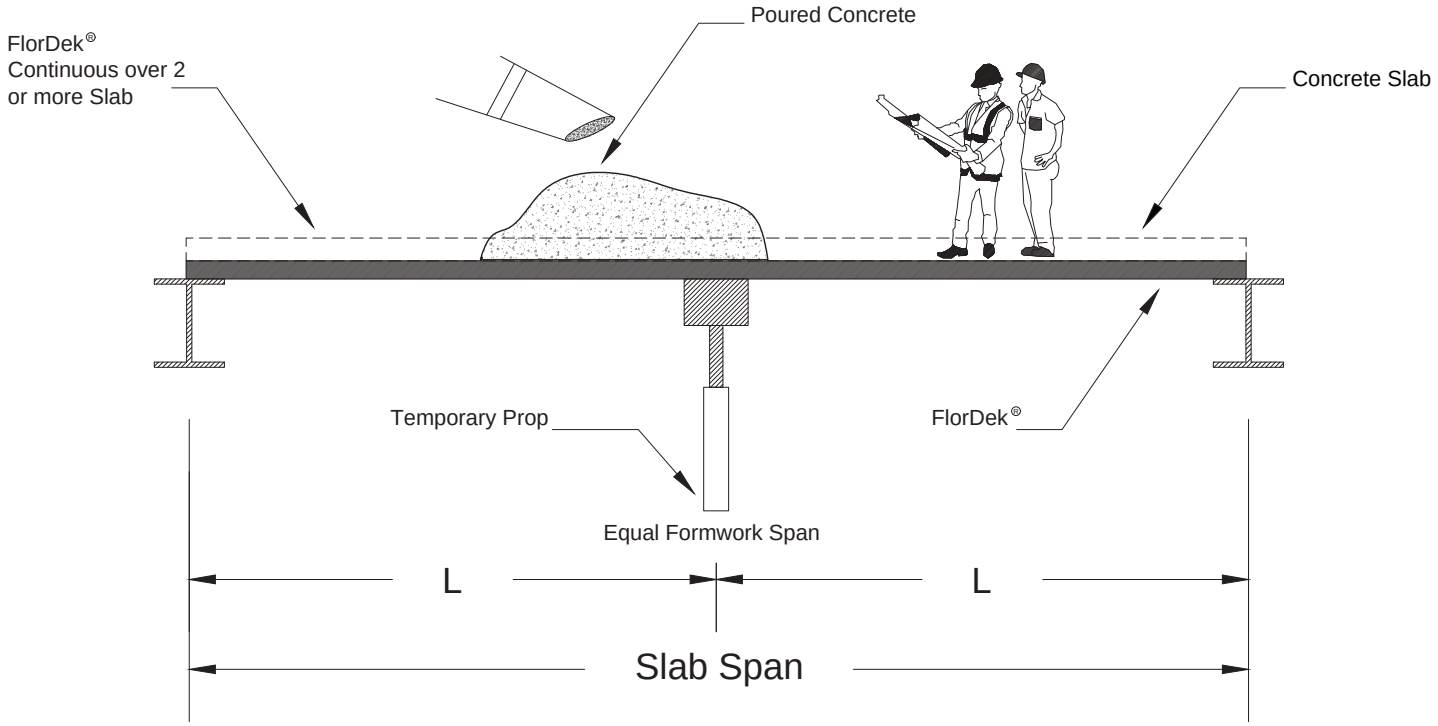
Notes

- The table above denote maximum allowable centreline to centreline span in millimeters between permanent support after temporary propping is removed.
- The practical limit for span to slab depth ratio is considered to be 35 for single span slabs, or 40 for continuous slabs. Values above these limits have been listed in brackets.
- The use of results of the results in brackets must be confirmed with the structural engineer or a RPFL representative as the long term serviceability and composite performance of the resulting concrete slab may not be suitable for the project application.
- Allowance has been made for ponding of wet concrete due to decking deflection, density 2400kg/m3
- Loading is considered in accordance with AS 1170.0:2002, AS 2327.1:2003, AS3610:1995 with a Stage III construction live load allowance of 1.0kPa in accordance with AS 2327.1:2003 Appendix F.
- The requirements for Stage II & IV material staking loads in accordance with AS 2327.1:2003 Appendix F are assumed to be zero.
- It is recommended that an experienced structural engineer design the composite slab to ensure sufficient capacity to meet strength and long term deflection requirements.
- The temporary propping tables have been prepared for a span/240 deflection criterion. A span/240 deflection is generally considered aesthetically satisfactory for exposed offits.
- These tables are based upon effective section properties of the sheeting calculated in accordance to AS 4600:2005
- Care must be taken when placing concrete to avoid mounding. Wide ply strips, of 300mm wide, shall be provided to prevent any concentrated loads being applied to the sheeting, particularly for exposed soffits, to avoid direct point loading of the sheet overlap ribs and unsupported edges of the sheeting.
- When using the table for two or more spans, the adjacent spans should not differ in length by more than 5%.
- A maximum bearing width of the permanent support has been considered to be 50mm.
- Recommend a gauge of 1.00mm BMT for exposed soffits in propped applications to avoid creasing of steel decking. Please contact your local RPFL representative for further information.

RPFL FlorDek® Maximum Slabs Spans (mm) (Continuous over 2 or More Slab)

Formwork deflections limits L/240 (visual appearance important)

Slab Depth (mm)	0.60 BMT FlorDek Number of props per span			0.75 BMT FlorDek Number of props per span			0.90 BMT FlorDek Number of props per span			1.0 BMT FlorDek Number of props per span		
	0	1	2	0	1	2	0	1	2	0	1	2
100	2,350	4,650	7,000	2,700	5,550	8,150	2,850	5,850	8,600	2,950	6,050	8,900
110	2,350	4,650	7,000	2,650	5,400	7,950	2,800	5,700	8,400	2,900	5,900	8,700
120	2,350	4,650	7,000	2,550	5,250	7,750	2,700	5,550	8,170	2,800	5,900	8,450
130	2,250	4,650	6,800	2,500	5,150	7,550	2,650	5,420	7,970	2,750	5,750	8,250
140	2,200	4,500	6,550	2,450	5,000	7,350	2,600	5,300	7,800	2,700	5,600	8,100
150	2,100	4,350	6,350	2,350	4,900	7,100	2,500	5,200	7,580	2,600	5,500	7,900
160	2,050	4,200	6,100	2,300	4,750	6,900	2,450	5,080	7,410	2,550	5,400	7,750
170	2,000	4,000	6,050	2,200	4,600	6,650	2,380	4,960	7,220	2,500	5,300	7,600
180	1,900	3,850	5,750	2,150	4,450	6,450	2,360	4,840	7,080	2,500	5,200	7,500
190	1,800	3,650	5,500	2,100	4,350	6,300	2,310	4,740	6,900	2,450	5,100	7,300
200	1,750	3,500	5,300	2,050	4,200	6,150	2,230	4,620	6,720	2,350	5,000	7,100
210	1,650	3,400	5,100	2,000	4,100	5,950	2,180	4,520	6,550	2,300	4,900	6,950
220	1,500	3,250	4,900	1,950	4,000	5,950	2,130	4,390	6,460	2,250	4,800	6,800
230	1,450	2,900	4,400	1,900	3,900	5,900	2,080	4,290	6,320	2,200	4,650	6,600
240	1,400	2,850	4,250	1,850	3,850	5,750	2,030	4,210	6,200	2,150	4,550	6,500
250	1,350	2,750	4,150	1,800	3,750	5,650	1,980	4,110	6,070	2,100	4,350	6,350



Notes

- The tables above denote maximum allowable centreline to centreline span In milimetres between permanent supports after temporary propping is removed.
- The practical limit for span to slab depth ratio is considered to be 35 for single span slabs, or 40 for continuous slabs.
- Values above these limits have been listed in brackets "[ ]"
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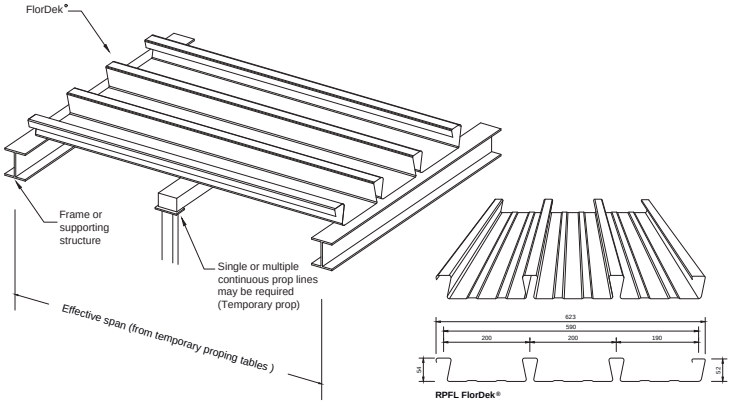
- It is recommended that as experienced structural engineer design the composite slab to ensure sufficient capacity to meet strength and long term deflection requirements.
- The temporary propping tables have been prepared for a span/240 deflection criteria. A span/240 deflection is generally considered aesthetically satisfactory for exposed soffits.
- These tables are based upon effective section properties of the sheeting calculated in accordance to AS 4600:2005
- Care must be exercised when placing concrete to avoid mounding
- Wide ply strips, of 300mm wide shall be provided to prevent any concentrated loads being applied to the sheeting, particularly for exposed soffits, to avoid direct point loading of the sheet overlap ribs nd unsupported edges of the sheeting.
- When using the table for two or more spans the adjacent spans should not differ in length by more than 5%.
- A maximum sheet length of 12m has been considered.
- A minimum bearing width of the permanent support has been considered to be 50mm.
- RPFL recommends a gauge of 1.00mm BMT for exposed soffits in propped applications to avoid creasing of steel decking. Please contact your local rpfl representative for further information.

Installing RPFL FlorDek®

If temporary propping is required (refer to the temporary propping tables). Props should be placed at the correct centres prior to laying the RPFL FlorDek® sheets. Generally, timber or steel bearers with a minimum dimension of 75mm x 75mm are used on vertical props. The props should be installed so as to prevent settlement during loading by wet concrete and other construction loads.

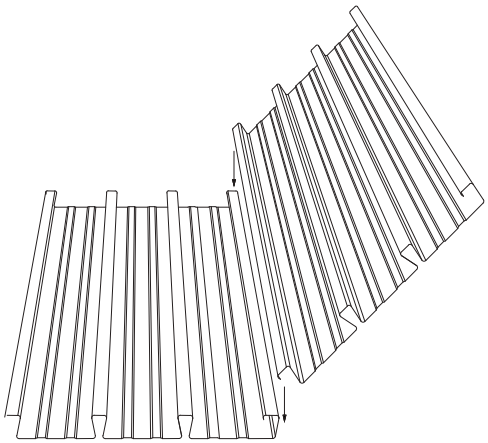
Wide ply strips, of 300mm wide, may be positioned above the header bearers to assist in dispersing the load and minimize any local deformation of the decking due to the headers.

Temporary props should only be removed after the slab has reached sufficient strength (at least 75% of the specified 28-day strength). The full design load may only be applied once the slab has achieved 28-day strength.

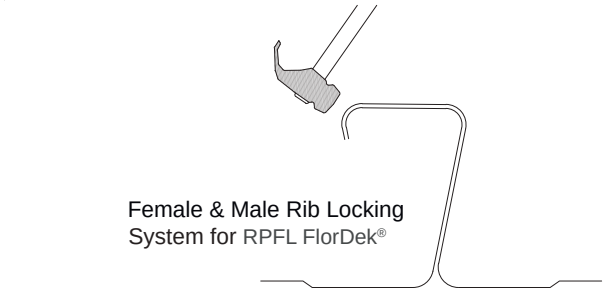


Laying RPFL FlorDek®

1. Place the RPFL FlorDek® sheet over the supports ensuring a minimum end bearing of 50mm. If supporting on a brick or masonry wall, provide a separating strip as malthoid.



2. Tap the female rib with a hammer at a 45 angle to lock into place.



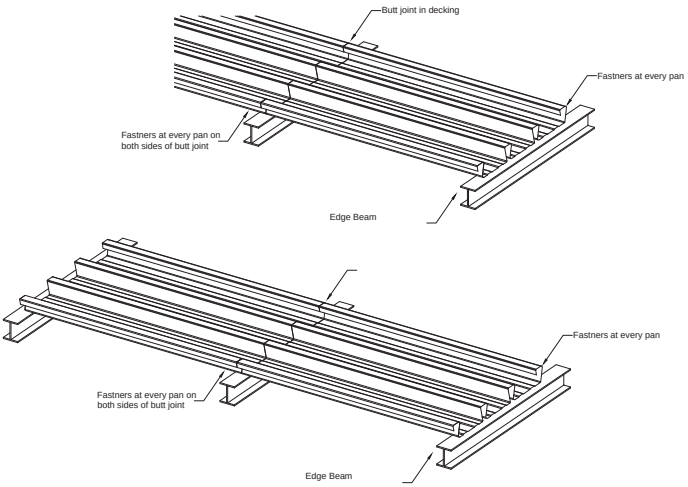
Female & Male Rib Locking System for RPFL FlorDek®

Fasteners and Locations

The decking must be secured to the supporting structure in order to avoid movement and excessive deflection during the pouring of concrete.

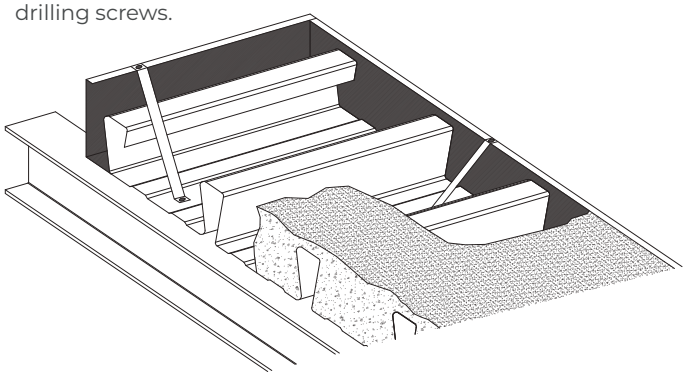
When fixing to a steel support structure, RPFL Shear Studs fasteners should be used. Provide one fastener should be used. Provide one fastener in each pan at every support.

In case of the other support systems, such as brickwork, block work and concrete, the RPFL FlorDek sheets must be temporarily held in place against wind and other effects until the concrete is poured.



Edgeform

Galvanised steel EDGEFORM can be used for the retention of wet concrete to the correct level at the decked floor perimeters. EDGEFORM is usually shot-fired to the steel support structure or to the FlorDek deckand the top of the EDGEFORM is connected back to the decking with restraint straps at approximately 600mm centres using either pop-riverts or self drilling screws.



Reinforcement

Place all reinforcement in strict accordance with the structural engineer's drawings and specifications.

Concrete Placement

The specified grade of concrete and any chemical admixtures must be in strict accordance with AS 3600:2001 and the structural engineer's drawings and specification. The deck must be clear of any excess dirt, grease or debris as this inhibits bonding between the deck concrete.

Ensure that concrete is applied evenly over the decking surface, as mounding of the wet concrete will cause excessive local loading.

Product Description

All descriptions, specifications, illustrations, drawings, data, dimensions and weights contained in this catalogue, all technical literature and websites containing information and identification purposes and do not create a sale by description. RPFL reserves the right anytime to:

a) Supply goods with such minor modifications from its drawings and specifications as it sees fit; and
b) Alter specifications shown in its promotional literature to reflect changes made after the date of such publication.

Disclaimer, Warranties and Limitations of Liability

This publication is intended to be an aid for all trades and professionals involved with specifying and installing RPFL products and not to a substitute for professional judgement.

Terms and conditions of sale available at local RPFL sales offices.

Except to the extent to which liability may not lawfully be excluded or limited, Roofing & Profiles Pte (Fiji) Ltd will not be under or incur any liability to you for any direct or indirect loss or damage (including, without limitation, breach of contract, negligence and/or breach of statute), which you may suffer or incur in connection with this publication.

Workmanship to get best results

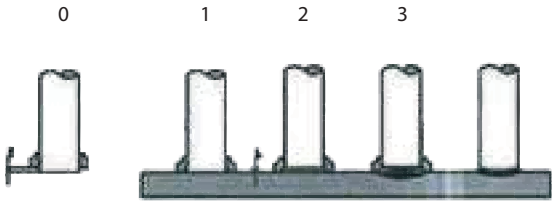
1. Keep the roofing sheets dry when closely stacked or keep the sheets well ventilated if subjected to wet condition.
2. Care should be taken to avoid dragging sheets which will cause scratching and scouring to the coated surface.
3. Fix roof permanently in position using the required Shear Studs or as Specified by project engineers.
4. Shear Studs to be installed by Trained welder, using appropriate draw arc stud welding machine.
5. The key to safe and competent installation of metal decking and shear connectors is the use of a qualified workforce.

SHEAR STUDS

Features

- Time Saving - No need for drilling, punching, threading, riveting, screwing. For mass production, can complete 6-20pcs/min (depends on the stud and welding power)
- High Strength - For DA welding, the strength is higher or similar, compare with traditional MIG/MAG/TIG welding.

Drawn ARC Studs



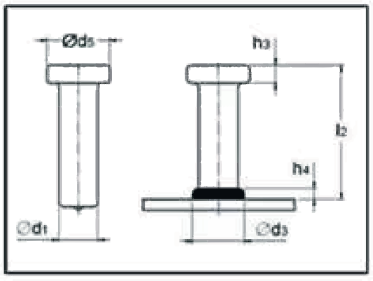
Drawn ARC Stud Welding Machine

KDA-2500i
- Inverter type
- Max current
- Draw arc stud welding

	KDA-2500i
Stud Range	2-28mm
Welding Current	200-2500A
Welding Current	1-3000ms
Power Supply	220/380/400/415/440V, 50/60Hz, 3Ph
Power Supply Cable for Wire	3 x 16 + 1 x 10, 5 meter
Rated Input Power	110KVA
Rated Input Current	114A
Air Switch	160A
Insulation	IP21
Dimension	750 X 450 X 810mm
Weight-Machine Accessories	95KG, 55KG

Features

- Latest IGBT tech
- Just 1/3 weight of thyristor type
- Modular Design, easy and fast to provide after service
- Wide voltage range
- Saves electricity by 30%



ød1	ød5	H3	H4	ød3	Ferrule	Ferrule
D16	32	8	4.5	21	UF16/DS16	Available
D19	32	10	6	23	UF19/DS19	Available
D22	35	10	6	29	UF22/DS22	Upon Order
D25	40	12	7	31	UF25/DS25	Upon Order

TERMS AND CONDITIONS

HIRING OF SHEAR STUD WELDING MACHINE

Stud welding machine can be hired from RPFL on the following terms and conditions:

- Stud welding machine must be operated by trained welders and a refundable deposit for welding machine (Minimum $4,000.00 deposit will need to be paid at time of hiring the machine. Stated rates are subject to change by the company. Refer refund conditions below).
- If the welding machine is hired and operated by clients representative then upon receiving back at factory and checking any damages to the machine, all repair costs will be deducted from the deposit and any shortfall will be billed to client / contractor or both.
- RPFL can provide fully trained Shear Stud welders, which can be hired with the machine at additional cost, subject to site location and extra charges will be applicable for transport, air fares, meals, accommodations etc. Minimum 2 operators will be required per machine.
- 2 weeks advance booking required for Shear Stud welding machine.
- 3 phase EFL power outlets to be provided on site by contractor or client. Any generator power supply must be guaranteed constant supply of 415V 50HZ.
- If any delay occurs in installation of RPFL FlorDek®, resulting in delays of Shear Stud installation, then additional charges to retain RPFL welders on site will be billed and to be paid by customer / contractor or both).

SHEAR STUD REQUIREMENTS

- Specific size of Shear Studs to be recommended by project engineer.
- RPFL stock 19 x 100mm and 25 x 105mm ISO13918, Shear Connector Stud, Before welding length, SWRCH15/18A material, after Phosphorization. with ceramic Shear Studs.
- If the stocked item is unavailable, delivery will be with lead time of 8-10 weeks.
- For other specific sizes required, it can be arranged with lead time of 8-10 weeks.
- For terms and conditions of payment, please refer to quotation.
- Once Shear Studs are delivered on site, it must be stored in a dry place and will not be returned.