



**ROOFING & PROFILES (FIJI) PTE LTD**

**Build With Confidence**

# TileDek®

Profiles Tested for Cyclonic Conditions



**Colorbond®**

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## RPFL TileDek® Roofing Profile

When it comes to roofing solutions, few products can seamlessly blend the timeless beauty of concrete tiles with the unmatched durability of steel quite like RPFL TileDek®. This innovative roofing profile offers a distinctive tile-like appearance while providing the strength and longevity that only steel can deliver. If you're seeking a roofing solution that combines aesthetic appeal with unmatched performance, look no further than RPFL TileDek®.

### Specifications

**Profile:** RPFL TileDek® Roofing Profile  
**Material:** G300 Steel Coated with AZ150 or AZ200 Zincalume Hot Dipped Galvanized  
**Coating Options:** Colorbond®  
**Thickness:** 0.42bmt  
**Minimum Roof Pitch:** 5° (1 in 27)  
**Length:** Customizable to suit your project requirements

### Warranty

As per New Zealand Steel Specification & Installation Guide -March 2011.

Note: Warranty will only be provided on Colorbond® XRW® & Colorbond® Ultra®.

### Features

Heat Resistant  
 Sound Insulation  
 Watertight  
 Bird and Pest Proof

### Why Choose RPFL TileDek®

**Proven Performance:** RPFL TileDek® has been extensively tested to ensure superior performance and longevity.

**Custom Solutions:** We offer a range of customization options to meet your specific project requirements, including different thicknesses, coverage widths, and lengths.

**Expert Support:** Our team of roofing professionals is ready to assist you throughout the entire process, from selecting the right profile to providing installation guidance.

**Industry-Leading Warranty:** We stand behind the quality of RPFL TileDek® profile with a comprehensive factory backed warranty, demonstrating our commitment to customer satisfaction.

### Experience RPFL TileDek® in Colorbond® XRW®, Colorbond® Ultra® & Colorsteel® Altimate®

**Colorbond® XRW®** is a world leader in roofing and wall cladding applications, **Colorbond® XRW®** with Zincalume AZ150 Substrate provides ultimate protection against the elements in moderate and inland environments.

**Colorbond® Ultra®** delivers superior resistance to corrosion, especially in coastal and severe environments, the Zincalume AZ200 substrate enables us to offer extended warranties to your next project.

Contact us today to learn more about the availability of RPFL TileDek® in **Colorbond® XRW®** and **Colorbond® Ultra®** and discover how it can enhance your next roofing project.

### Colorbond Colour Chart

#### Colorbond XRW® 0.42BMT / 0.48BMT / 0.55 BMT



Cottage Green



Deep Ocean



Dune



Iron Bark



Jasper



Manor Red

#### Colorbond Ultra® 0.48BMT / 0.55 BMT



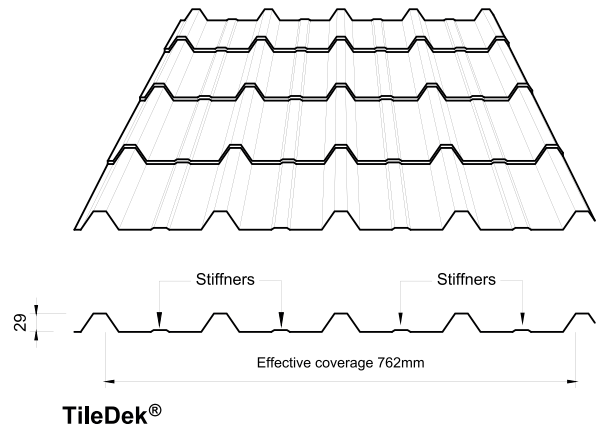
Jasper



Iron Bark



Maxx Ebony



\*The colours you see on screen will vary from actual product colours. We recommend ordering a colour sample to view in natural light before making your final colour selection.

## Technical Specifications

Thermal Expansion And Contraction Of Steel Cladding			
Sheet Length (mm)	Expansion Or Contraction (mm)		
	10° Change	50° Change	75° Change
5000	0.6	3	4.5
10000	1.2	6	9
15000	1.8	8	13.5
20000	2.4	12	18
25000	3	15	22.5
30000	3.6	18	27

Base Metal Thickness		BMT Mass	
0.42mm	0.50TCT	0.42mm	3.47kg/m <sup>2</sup>

Base Materials		Tolerance	
Steel Grade	G550 & G300	Length	+10mm, -10mm
Coating	AZ150, AZ200 & Z450	Width	+4mm, -4mm
Aluminium Alloy	5005H34 / 5052H36		

\*Note that TCT on above table is for Colorbond® range, TCT will vary for unpainted products. 0.90mm is available in Aluminium only.

### For Best Results

These suggestions will improve the appearance of the RPFL TileDek® Roof and make installation easier.

- Keep the roofing sheets dry when closely stacked OR keep the sheets well ventilated if subjected to wet condition.
- Care should be taken to avoid dragging sheets which will cause scratching and scouring to the coated surface.
- Always walk over battens / purlins positions and wear soft soled shoes.
- Lay sheets from right to left to ensure tight fitting.
- Note that the trailing edge of any sheet should not be fixed until the following sheet is installed beneath it.
- Ensure the sheets are not bent unintentionally at the steps during handling.
- Install sheets with fasteners at the eave and ridge only until all sheets have been installed. Fix the roof permanently in position using the required fastener frequency.
- Heads of fasteners to be matching colour-available from RPFL.
- When cutting or trimming RPFL TileDek® sheets, use large metal snips.
- Metal abrasive/ cutting discs should NOT be used at any time.
- Turn up sheet ends at ridges and hips and cover with suitable accessories.
- All accessories should be installed in accordance with good plumbing practice.
- On a daily basis always clean and sweep roof with soft broom and gutters free from pop rivets, loose screws and swarf to avoid rust spots. Upon completion of works clean and wash roof with soft broom.

### Installation Guidelines

RPFL TileDek® is a new type of metal roofing sheet which requires a unique method of installation to match its unique performance characteristics. This procedure has been written to assist those not familiar with the product and to explain the simple installation process.

### Roof Batten/Purlin

Batten sizes are determined by rafter spacing and may be subject to local building practice. The accompanying table can be used as a guide for Approved Fiji Hardwood battens. Battens should be fixed to the rafters in an approved manner to meet local building regulations.

Rafter Spacing	Purlin Dimension
1200mm	140 x 45 MPG 12 Timber Purlins
1000mm	140 x 45 MPG 12 Timber Purlins
900mm	140 x 45 MPG 12 Timber Purlins
750mm	140 x 45 MPG 12 Timber Purlins

### Batten / Purlin Layout

1. Install 1st purlin towards gutter end in line with fascia. The outer edge of fascia should not be above the purlin's outer edge. The 1st purlin should be of equal gauge.
2. 2nd Purlin installation - The distance between upper edge of the 1st purlin to the upper edge of 2nd purlin should be same as the step distance of RPFL TileDek® roofing to be installed.
3. 3rd and subsequent purlins - Same as 2nd purlin.
4. Last purlin (nearest to the ridge) to be installed where specified by designer, architect or structural engineer. Normally 90mm to 150mm from ridge/apex point.

Note: In common practice, there should not be any RPFL TileDek® step allocated at the last purlin as it will be covered by the ridge cap and the profile of ridge cap will provide the impression of step.

### Recommended Fasteners

We recommend BRA Fasteners type with new superior B8 coating protection to AS 3566 minimum Class 4 with 25mm diameter Marine Grade Aluminum/ EPDM universal BRA Cyclone washer (Specially designed cyclone washer). BRA Fasteners exclusively available at RPFL.

### Important Publications

For your installation to perform to its full potential, it is essential that it is designed, installed and maintained in accordance with good trade practice. Please refer to:

- NZ Steel Specification & Installation Guide March 2011.
- NZ Metal Roof & Wall Cladding code of practice version 3.0 / June 2021.

### Length

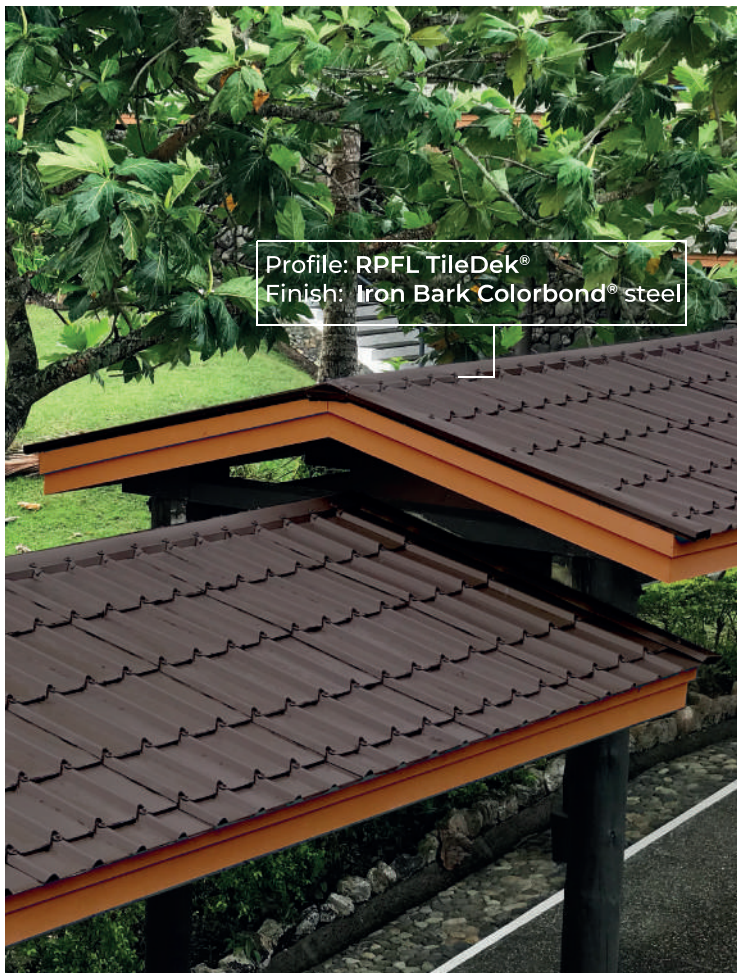
RPFL's TileDek® can be supplied to any length subject to availability of suitable transport and handling facilities. Recommended length up to 6.0m.







Profile: RPFL TileDek®  
Finish: Dune Colorbond® steel



Profile: RPFL TileDek®  
Finish: Iron Bark Colorbond® steel

### Residential Projects With RPFL TileDek® Roofing Profile

Are you embarking on a residential roofing project and seeking the perfect roofing material to enhance your home's aesthetics and durability? Look no further than RPFL TileDek®, your key to achieving roofing excellence for your residential property.

### Why Choose RPFL TileDek® For Your Residential Project?

**Elegance:** RPFL TileDek®'s distinctive tile profile enhances your property's curb appeal, creating a lasting impression.

**Durability That Lasts:** Your home deserves a roof that can withstand the test of time and the harshest elements.

**Low Maintenance:** Say goodbye to the hassles of constant upkeep and enjoy more free time and peace of mind.

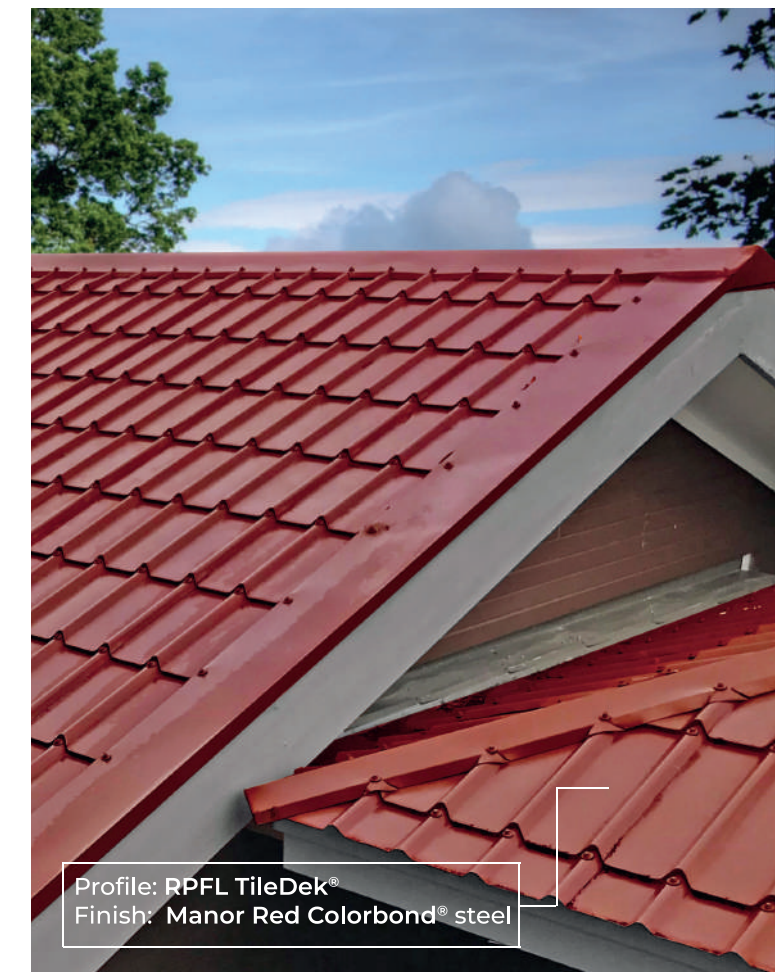
**Energy Efficiency:** RPFL TileDek®'s reflective surface contributes to energy efficiency by keeping your home cooler in the summer, which can lead to lower energy bills and a more comfortable living environment.



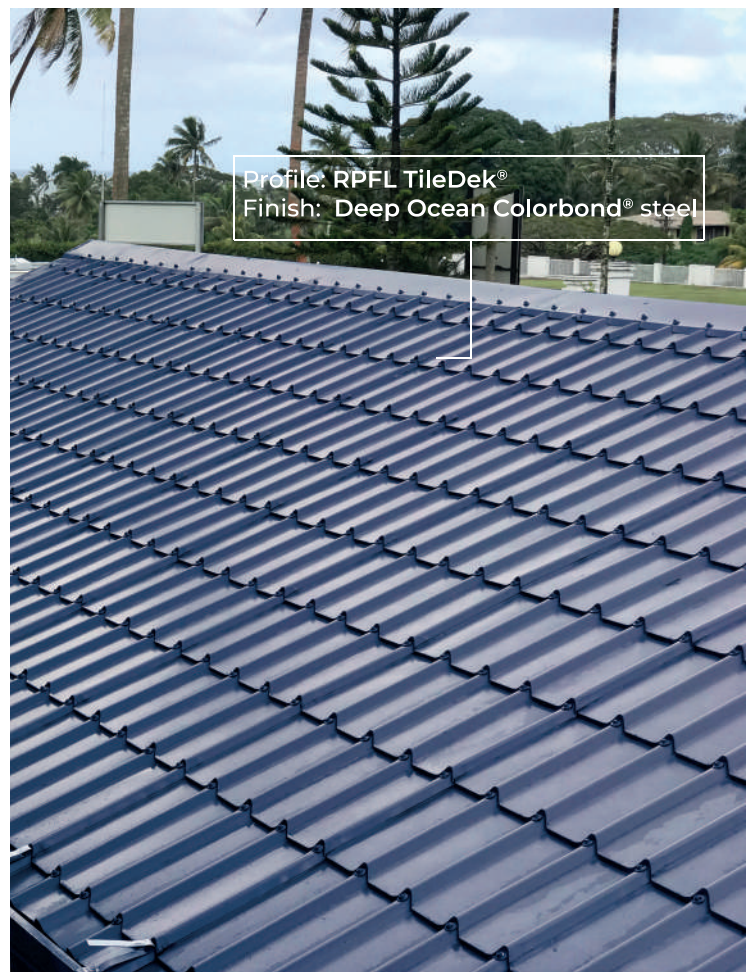
# PROJECTS



Profile: RPFL TileDek®  
Finish: Dune Colorbond® steel



Profile: RPFL TileDek®  
Finish: Manor Red Colorbond® steel



Profile: RPFL TileDek®  
Finish: Deep Ocean Colorbond® steel





## 1. Cyclonic Testing of 0.42bmt RPFL TileDek® G300 Steel Fixed to Timber Purlin

Testing on the RPFL TileDek® Roofing Profile has been carried out at the James Cook Cyclone Testing Station in Townsville, Queensland, Australia. The cyclic tests produced no observable damage to the sheet, screws or washers (refer to Report No. TS913).

The cyclic test results have been used as a basis for development of the load span table below:

### Lo-Hi-Lo Cyclonic Wind Uplift Resistance – Strength Limit State Test Results 0.42bmt RPFL TileDek® Sheeting- Triple Span Configuration (450/450/450)

Span Type	Span Length (mm)	Recommended Cyclone Ultimate Strength Limit State Design Wind Capacity (kPa)
Triple	9.52	600

#### Notes:

- It is our opinion that RPFL TileDek® profiles of span configuration less than 450/450/450 will be able to achieve the Limit State Design Wind Capacity as long as installation details as per Report No. TS913 are maintained,
- 0.42bmt RPFL TileDek® roof cladding
- Timber purlins of grade MGPI2 or equivalent (hardwood or softwood timber)
- 14-10x65mm self drilling Type 17 screws with 25mm diameter Aluminum Bonded washer used under the head of each screw
- It is recommended that a structural qualified engineer check the suitability of the Limit State Design Wind Pressures for the intended site of use
- It is our opinion that installations with purlin/batten spacing's less than 450mm may be conservatively designed for the uplift pressures in the table above
- It is our opinion that four span and longer assemblies at 450mm center to center (c/c) spacing may be designed for the uplift pressure in the table above
- After exposure of cladding to an extreme wind event, it is recommended that inspection be performed to confirm fixing and cladding integrity.

We, Fyfe Pty. Ltd., confirm that the procedures used in carrying out the cyclonic load tests on the product as listed above from for Roofing & Profiles (Fiji) Ltd., conform to the structural requirements of the National Construction Code Series 2012 (NCC) and the relevant Australian Standards:

- NCC 2012 (also known as the Building Code of Australia)

## 2. Windborne Debris Impact Testing of 0.42bmt RPFL TileDek® G300 Roof application Vertical Trajectories

Tests were carried out by the James Cook University, Cyclone Testing Station (CTS), Townsville, Queensland, Australia. Refer to their report no.: TS989, dated 15th December 2014.

#### Test Description

- timber member of 4kg mass with a nominal cross-section of 100 mm x 50 mm
- spherical steel ball 8mm diameter (approximately 2 grams mass) impacting at 3.2.

**Target Velocity-Vertical Trajectories**

Timber member: 10.9m/s  
Spherical steel ball: 32.7m/s

**Equivalent Regional Wind Speed (V500)**

Vr= 88m/s (Region D)

**Tested Sheeting**

Type: RPFL TileDek®  
Base Metal Thickness: 0.42bmt  
Material Grade: G550

**Tested Spans**

Triple Equal Span: 450mm

**Tested Fixings**

Screws: 14-10 x 65mm fixed at each rib.  
Support(s) 140 x 45/m/gp12 Timber Purlins

The wind debris impact tests on the 0.42bmt G300 RPFL TileDek® roof sheeting conform to the structural requirements of the following Australian Standard & CTS Technical note:-

AS/NZS 1170.2 :2011

Structural Design Actions, Part 2: Wind actions, Section 2.5  
Wind actions, Part 2.5.8 Impact loading from windborne

CTS Technical Note No.4 Notes:

Simulated Windborne Debris Impact Testing of Building  
Envelope Components (Version 3)

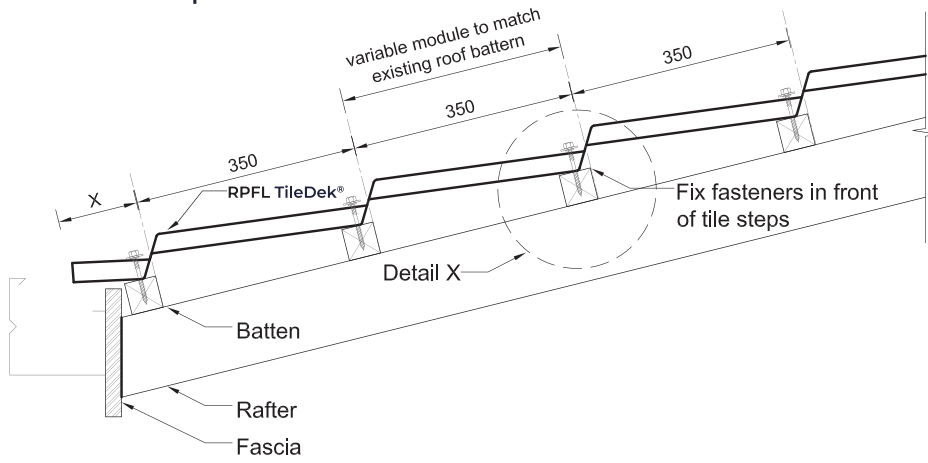
- It is recommended that in the event of an extreme storm/extreme winds the cladding is inspected by a suitably qualified builder/engineer to confirm the adequacy of the cladding and fasteners post event.

We, Fyfe Pty. Ltd., confirm that the procedures used in the testing program has been carried out in accordance with the requirement of the National Code Construction Series (NCC, 2013). The results listed above for the Wind Debris Impact Testing for vertical trajectories only conform to the structural requirements of NCC and the following Australian Standards.

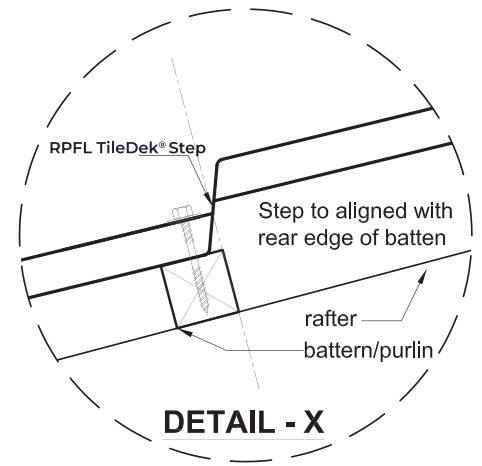
- AS 1170.2 – 2011: Structural Design Actions, Part 2: Wind actions



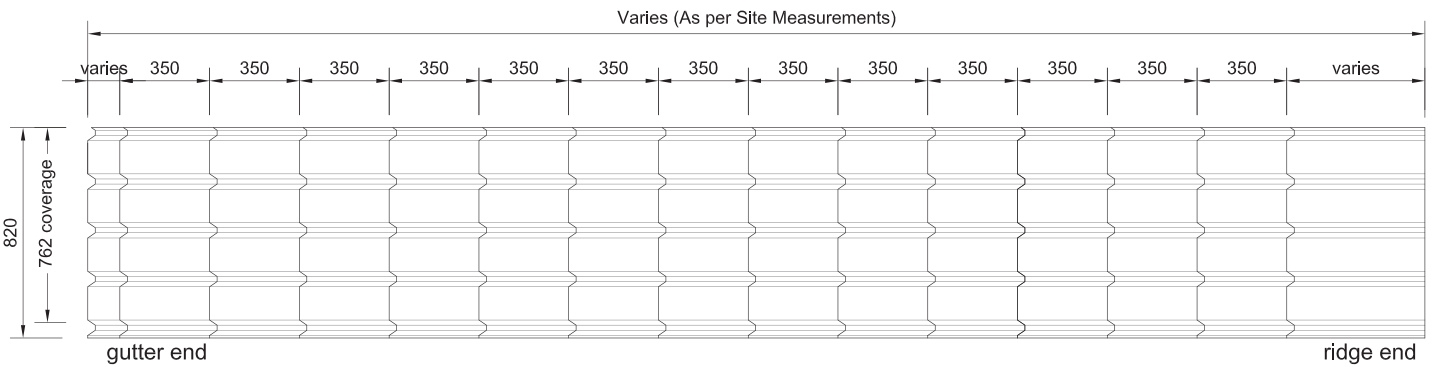
# RPFL TileDek® Installation 350mm Steps



**CONSTRUCTION DETAIL**



**DETAIL - X**

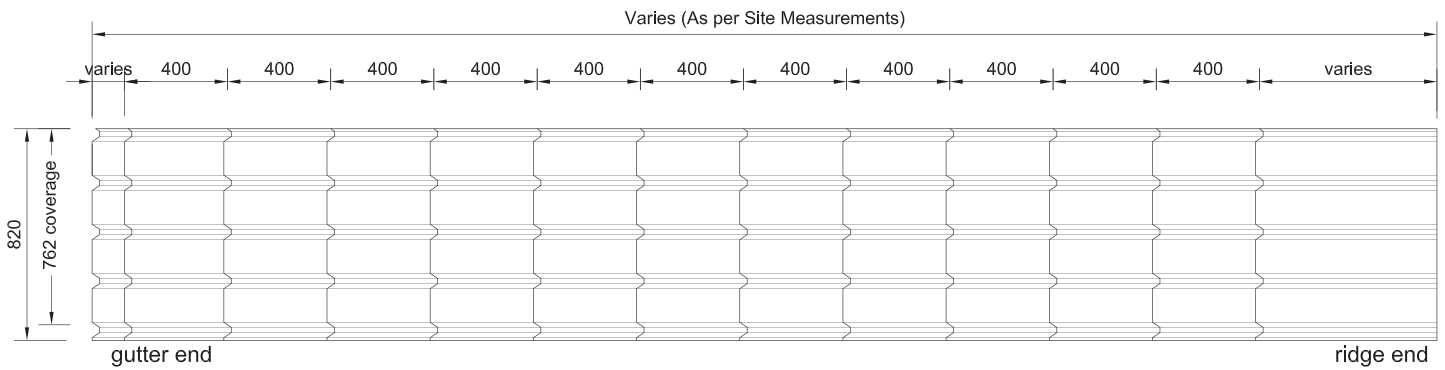
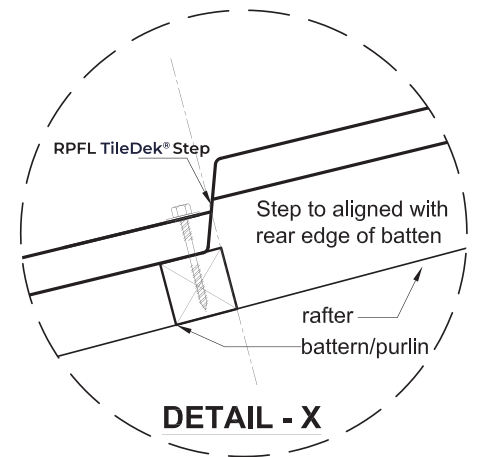
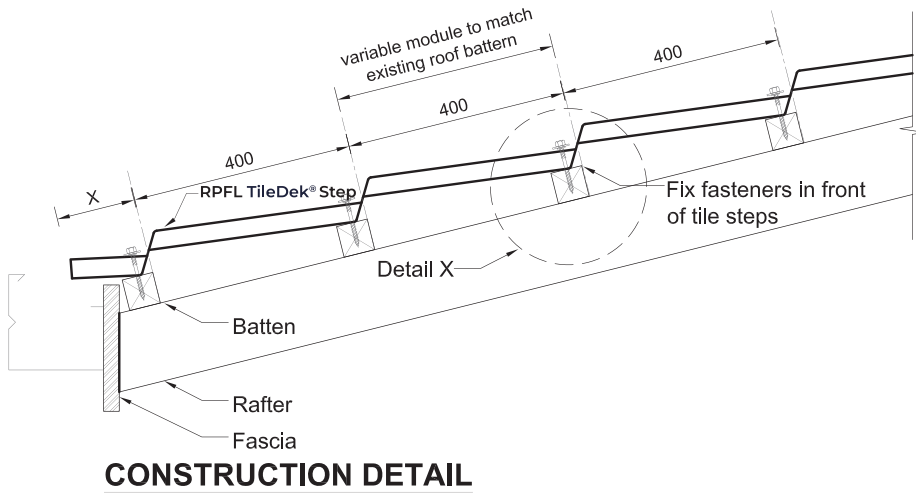


**RPFL TileDek® Sheet Layout 350mm (PAN) Steps**



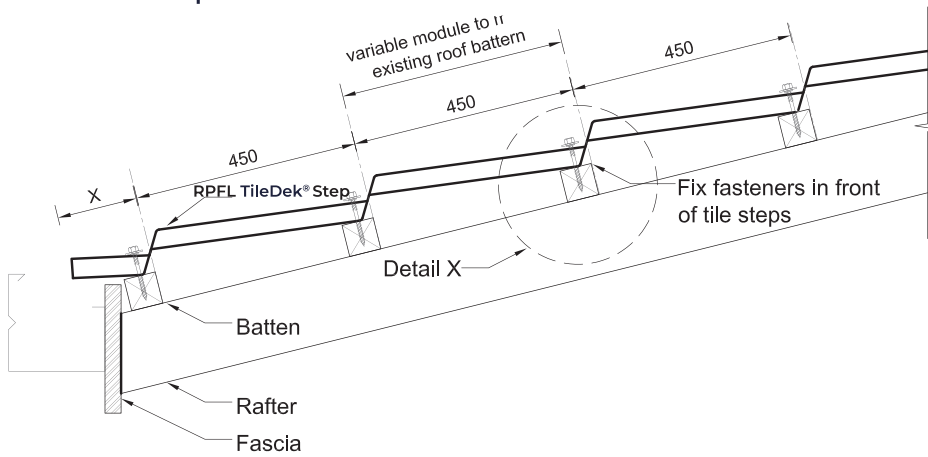


# RPFL TileDek® INSTALLATION 400mm Steps

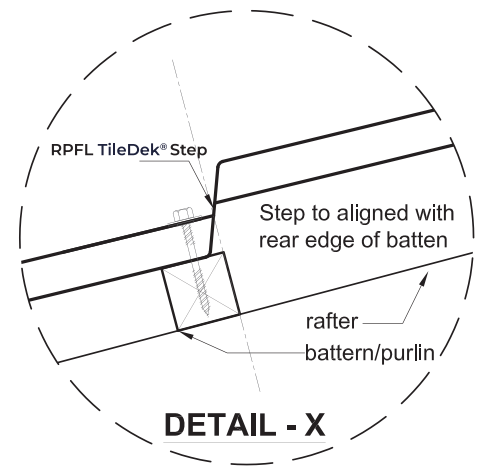




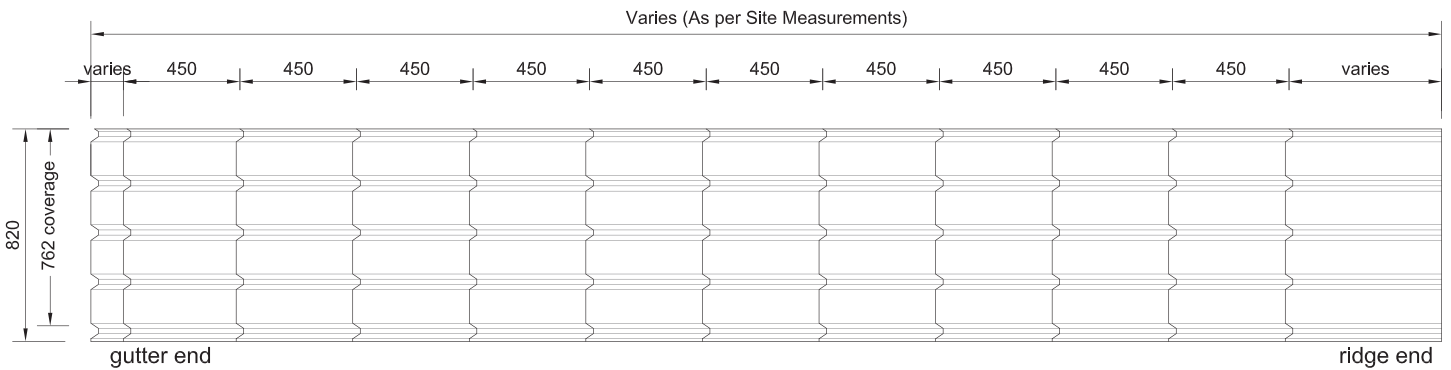
# RPFL TileDek® INSTALLATION 450mm Steps



**CONSTRUCTION DETAIL**



**DETAIL - X**



**RPFL TileDek® Sheet Layout 450mm (PAN) Steps**

