

RIB & INFILL FLOORING

As a proven lightweight pre-stressed flooring system, Ultimate Engineered Concrete Rib and Timber Infill flooring has all the benefits a building owner is looking for. Made from permanent materials the system incorporates the durability of pre-stressed concrete ribs and permanent timber form-work with a cast in place topping to create a lightweight versatile suspended floor.

The lightweight nature of this floor system generally allows for lighter superstructures and foundations with the added benefit of extreme flexibility around openings and irregular shapes. On site crane capacity requirements are also reduced.

Rib and Timber Infill systems can be used successfully in most types of building structures including, but not limited to, residential, commercial, industrial, healthcare and institutional.

Rib and Timber Infill has the added benefit of flexibility when placing services both before and after the concrete topping has been poured. Services can be laid between the ribs and within the rib depth in some cases allowing for minimal overall floor depths. Placement of penetrations for sewer, water and

power can be taken through the timber infill making it easy for tradespeople with standard tools and equipment to carry out their work.

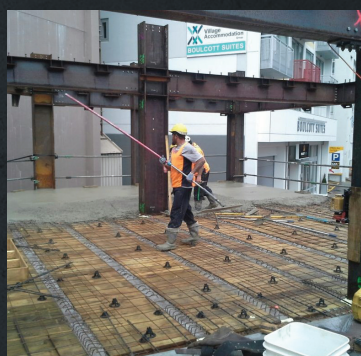
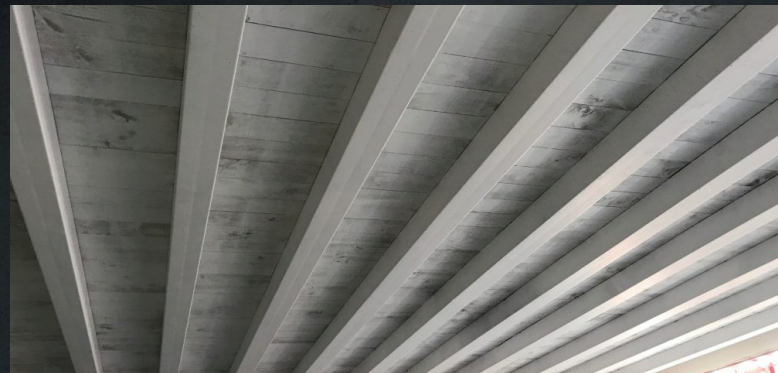
The installation of Rib and Timber systems is relatively straight forward with propping installed to the required heights prior to ribs being placed. The timber infills, typically 25mm thick rough sawn timber, are then laid between the ribs to provide the permanent form-work for the topping. Industry standard lifting eyes are provided at each end of the units for placement.

Fire ratings of 90 minutes are achievable and STC ratings with plasterboard of 55.

Design tables are provided for pricing and sizing purposes but all projects are specifically designed to meet the project requirements. If you have any design queries contact Ultimate Engineered Concrete for advice.



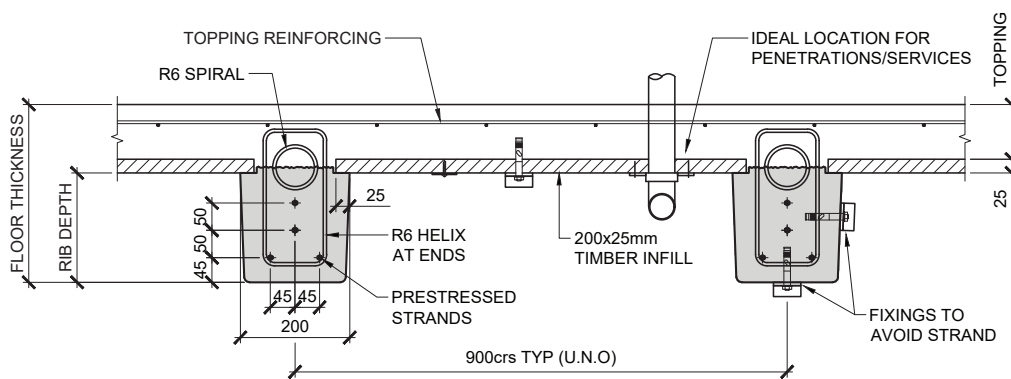
[SEE OUR WEBSITE FOR MORE INFORMATION](#)



Unfactored maximum superimposed live load (Qb) in kilopascals (kPa), (assuming no superimposed dead load ie. SDL – 0kPa). As a guide double the SDL to apply to the table below. eg. Qb + 2 x SDL. Call Ultimate Engineered Concrete for advice.

SIMPLY SUPPORTED SPAN (M)									
Rib Depth (mm)	Self wt (kPa)	5	6	7	8	9	10	11	12
100	2.6	7.0	4.0						
125	2.8	10.8	6.7	4.3					
150	2.9		8.3	5.5	4.0				
175	3.0			8.4	5.5	4.0			
200	3.2				7.1	4.9			
225	3.3				9.0	6.5	4.5		
250	3.5					8.0	6.0	4.0	
275	3.6					9.5	7.0	5.0	3.5
300	3.7						8.5	6.5	4.5

*Table assumes 75mm of 25MPa topping concrete, ribs spaced at 900c/c.
(Increased load capacity available with greater topping thickness and/or reduced spacing).
* Short term live load factor = 0.7 for SLS.



RIB & INFILL TYPICAL SECTION

END SEATING Rib and Infill flooring requires the minimum or greater of, 75mm or L/180 seating onto unarmoured concrete seating. The use of low friction bearing strips is required by the design code.

TEMPORARY PROPPING Rib and Infill flooring usually requires propping during construction, typically 1 row for spans up to 6m, 2 rows up to 9m and 3 rows for spans greater 9m.

HANDLING Ribs are designed to be handled from lifting eyes positioned at ends or at 1/5 points from the ends of each unit. When storing units on site the units should be dunnaged at the designated lifting eye positions with the location being directly above the dunnage below in any stack.

CAMBER Ribs generally contain a positive camber/hog and can vary depending on the number of strands in the design. The props are also set to either maintain or increase the camber during construction and must be in place and set to height prior to placement of units.