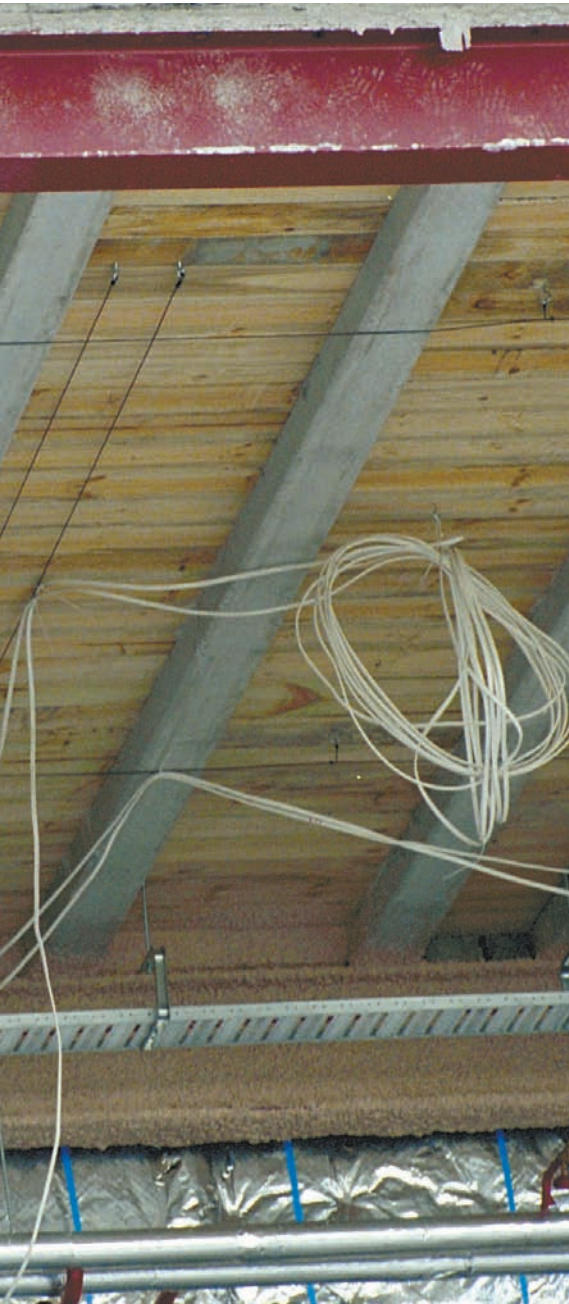


interspan flooring system



DESCRIPTION

The Interspan flooring system consists of 200mm wide precast prestressed concrete ribs spaced generally at 900mm centres with timber infills placed between them. The ribs have variable depth to suit the projects load/span requirements.

This multi piece system is tied together with a 75mm in-situ concrete topping and mesh reinforcing.

This system has the benefit of being suitable for those tricky sites where access is a problem or poor foundation conditions dictate the use of a comparatively lightweight floor.

FLEXIBLE

Interspan is easily adapted to circular floor plans, where the use of other suspended flooring systems is difficult. Large floor openings of up to 700mm between ribs are easily accommodated.

TIMBER INFILLS

Timber infill planks are typically merchant grade rough sawn timber. The infill plank depth is typically 25mm although this does vary depending on availability. Timber infills should be dampened prior to placing the concrete topping. Alternative timber types can be left with an exposed underside finish to create an architectural feature, e.g. polyurethaned macrocarpa or

rimu.

SOUND TRANSMISSION

One of the major features of a concrete floor is the low sound transmission. The table below shows sound transmission ratings achieved by Interspan.

TRANSPORT

Interspan Ribs must be handled and stacked at two points, at, or directly beside the lifting eyes.

ERECTION

It is recommended that Interspan ribs be seated 75mm onto the supporting walls/beams, and bedded on wet mortar, vinyl or plastic bearing strips to ensure an even bearing at the correct level. Less than 75mm seating may be used in consultation with Stresscrete.

FIRE RESISTANCE RATING

Standard Interspan provides a 1 hour fire resistance rating. An increased fire rating can be achieved with specific design.

ALTERNATIVE FLOORING SYSTEMS

Hollowcore and Double Tees are available for longer spans, and/or heavier loads.

MATERIALS

Rib strength = 45 MPa at 28 days
Topping strength = 20 MPa minimum at 28 days (as required by NZS 3101:1995)

AIRBORNE SOUND TRANSMISSION (STC)

75mm topping, no ceiling, no floor covering

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Values calculated by Hegley Acoustic Consultants.

Further reductions in noise transmission can be achieved by installing a ceiling, floor coverings and a sound barrier product below the covering



Ronald McDonald
House, corner Cashel
& Montreal Streets,
Christchurch

A view of 150
Interspan (900
spacing) flooring
system during
construction.

interspan

GENERAL

Topping thickness = 75mm
 Propping = from 1-4 props
 Rib centres = 900mm
 Fire rating 60 minutes

FURTHER TECHNICAL INFORMATION

Specifications for the manufacture, transport and erection of Interspan, and standard details for typical situations, are available from your nearest Stresscrete branch. Experienced and qualified staff will be pleased to discuss design and fixing details. Refer general notes on page 24.

INTERSPAN LOAD/SPAN TABLE (indicative only)

Safe superimposed live load in kilopascals (kPa) with 75mm thick concrete topping (assuming no superimposed dead load, i.e. $SDL=0kPa$).

Rib depth mm	Simply supported span (m)											
	4	5	6	7	8	9	10	11	12	13	14	15
100	13.8	7.3	4.3									
125		9.7	6.3	3.9								
150			7.4	5.4	4.0							
175				11.3	7.5							
200				9.3	6.6	5.0						
225					8.4	6.1	4.5					
250					10.4	7.4	5.6	4.1				
275					12.5	9.3	7.0	5.3	3.6			
300						10.6	8.0	6.1	4.7			

This chart maximises live load capacity for individual, simply supported, Interspan ribs of various depth and span. Spans to the right of the bold (zig zagged) line exceed the maximum recommended span/overall depth ratio of 32. For spans exceeding this value, please check with Stresscrete.



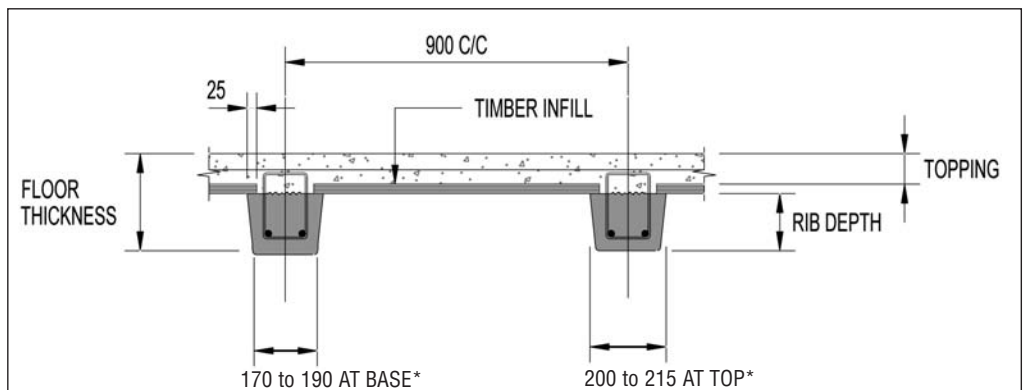
INTERSPAN SECTION PROPERTIES

Section properties are based on a 900mm wide section of floor with a 75mm thick concrete topping. The modular ratio for topping concrete is assumed to be 0.67 for 20MPa concrete for calculating the composite section properties A^i , Y_b^i , I^i , Z_b^i , and Z_t^i .

Section properties are indicative only since the unit widths vary at the different manufacturing locations.

*The overall depth quoted is based on a 25mm deep plank.

Depth of unit (mm)	Bare unit				Composite unit					overall* 900mm wide depth mm	900mm wide mass, kg/m	weight KPa
	A	Y_b	I_b	Z_b	A^i	Y_b^i	I^i	Z_b^i	Z_t^i			
	$\times 10^3 \text{ mm}^2$	mm	$\times 10^8 \text{ mm}^4$	$\times 10^6 \text{ mm}^3$	$\times 10^9 \text{ mm}^2$	mm	$\times 10^9 \text{ mm}^4$	$\times 10^8 \text{ mm}^3$	$\times 10^6 \text{ mm}^3$			
100	20.1	50	0.0161	0.321	66.9	130	0.221	1.70	3.16	200	241	2.62
125	25.0	62	0.0317	0.509	71.7	146	0.316	2.16	3.99	225	253	2.76
150	29.9	75	0.0552	0.740	76.9	161	0.433	2.68	4.85	250	266	2.90
175	34.8	87	0.0883	1.013	81.7	177	0.575	3.25	5.87	275	278	3.03
200	39.8	100	0.1325	1.329	86.9	192	0.743	3.88	6.90	300	292	3.18
225	44.8	112	0.1895	1.687	91.7	206	0.939	4.56	7.89	325	304	3.31
250	49.9	125	0.2608	2.087	96.9	221	1.165	5.28	9.05	350	317	3.46
275	55.3	141	0.3396	2.413	100	231	1.319	5.71	9.16	375	325	3.54
300	60.8	154	0.4462	2.902	106	245	1.593	6.51	10.3	400	339	3.70



TYPICAL INTERSPAN SECTION

*Unit widths vary depending on depth and place of manufacture.