



Tauranga Office

7 Aerodrome Road

PO Box 4049

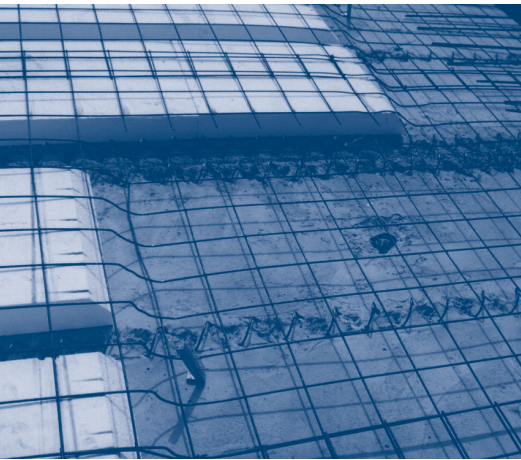
Mount Maunganui South 3149

Phone: 64 7 575 2325

Fax: 64 7 574 6183

www.heb.co.nz

V-span by HEB Precast



Application

V-span is ideal for residential house and apartment suspended floors that require a long span with steps in the topping concrete for balcony weathering. The topping surface can be constructed to accommodate changes in level at weather steps. This is achieved by reducing the depth of the polystyrene voids or by simply deleting them. The result is a floor having reduced overall weight because less concrete topping is required. For these conditions V-span will provide the customer with a very economical and efficient design.

250 V-span - Safe Load/Span Tables

The tables are based on a specified 28 day concrete topping strength of 20 MPa.

Maximum superimposed uniformly distributed live loads by span are shown in the table.

								Comments
V-span 250 thick DesignSpan (m)	8.0	8.5	9.0	9.5	10.0	10.5	11.0	
Uniformly Distributed Live Loads (KPa)	8.0	6.5	5.5	4.3	3.3	2.5	2.0	Minimum Topping Mesh 665
Propping Precamber (mm)	20	20	20	20	25	25	25	Precamber required at the time of construction
Estimated Live Load Deflections (mm)	12	13	13	13	12	11	11	

Greater loads and spans may be possible by specific design, check with HEB Precast.

Loading conditions, such as point and line loads from upper floors or roof, or modified or reduced cross-sectional properties, may reduce the load carrying capacity of the floor. Where these special design cases occur a structural check will be required, please consult HEB Precast.

Other depths are available by specific design.

Temporary Propping During Construction

Specific propping requirements for given loads and spans will be detailed on the shop drawings and are usually in the order of:

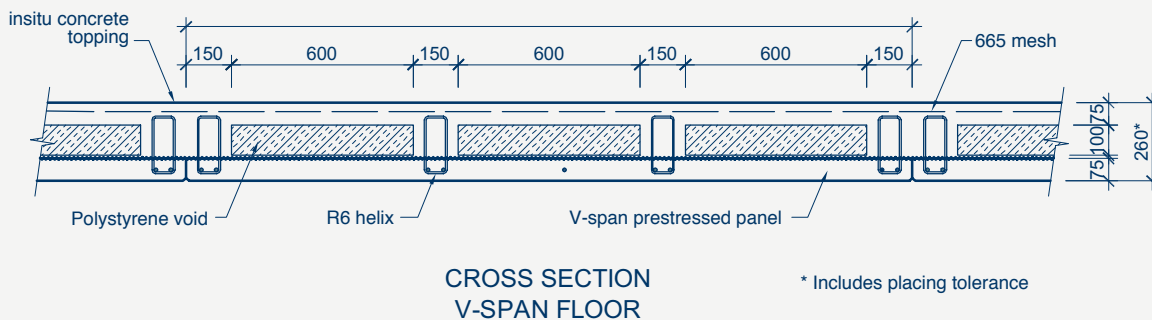
1 row of props for spans up to and including 5 metres

2 or 3 rows of props may be required for spans greater than 5 metres.

- **Long span**
- **Form easy weather steps**
- **Ideal for residential homes and apartments**
- **Fast construction**
- **Flat soffit**

Design Notes

- 1 The maximum safe loads shown are based on simply supported spans for both serviceability (SLS) and ultimate (ULS) limit states. Design for longer spans may be possible where structural continuity is available. The section properties are based on transformed sections for max spans.
- 2 The Load/Span Table is based on simply supported spans up to a floor thickness of span/44.
Spans with floor thickness less than span/44 will require continuity.
- 3 Calculated deflection due to live load has been limited to span/500. If design is required for sustained super dead and/or live loads then long term creep deflection must be checked. This may result in a requirement for a more robust unit.
- 4 Camber over temporary props is approximately 5mm per metre of span over 4 metres and will be shown on shop drawings
- 5 The minimum mesh conditions shown in the Load Span table are specified in accordance with NZS 3101:Part 1:2006. Cl. 8.8 - Shrinkage and temperature reinforcement. If required heavier mesh sizes may be used.



Section Properties (composite section)

Based on a 2400mm wide floor module. The I, Z_b, Z_t properties shown in the table are the composite properties for the 250 V-Span. Concrete density assumed at 24 kN / cu.m.

2400 module	Bare Unit Area m ²	Composite Unit Area m ²	Y _b mm	I 10 ⁻³ m ⁴	Z _b 10 ⁻² m ³	Z _t 10 ⁻² m ³	Bare Unit kg/m	Dead Load	
								Composite Unit kPa	Bare Unit kPa
250 deep V-Span 75 topping, 100 polystyrene	0.180	0.42	108	2.428	2.246	1.711	441	4.20	1.80

Durability

The 250 V-span load/span table is based on the durability requirements specified in NZS 3101:2006 for an A1 internal environment exposure classification. Where a more severe exposure classification is specified then the load/span table live loads may require downgrading. Weathering details, such as weather steps cast into the topping, remain the responsibility of the building designer. V-span can also be adapted for corrosive industrial floor applications. Please consult HEB Precast.

Sound Transmission Class (STC):

A concrete floor such as V-span is ideal for residential dwellings because its mass prevents sound transmission.

Quotation and Preliminary Design

HEB Precast has a free a quotation and preliminary design service. The preliminary design, which is based on spans and loadings provided by the customer, will indicate the construction propping required.

For Free Quotations Contact: HEB Precast

Phone 07 575 2325 Fax 07 574 6183