

# Speedfloor Steel Joist System - Span Tables

## Floor Joist

Profile	Web	Flange	Lip	Material	Max Span*		
					400 Centres	450 Centres	600 Centres
FJ140	140	45	15	1.55	3.9	3.8	3.5
FJ190	190	45	15	1.55	4.7	4.5	4.2
FJ240	240	45	15	1.85	5.7	5.5	5.1
FJ290	290	45	15	2.50	6.9	6.7	6.2

\*Maximum Span (m) of joists at Nominated Spacing (mm) for 1.5kPa floor live load typical for Residential applications.

FJ140	140	45	15	1.55	3.5	3.4	3.1
FJ190	190	45	15	1.55	4.3	4.0	3.5
FJ240	240	45	15	1.85	5.1	5.0	4.4
FJ290	290	45	15	2.50	6.2	6.0	5.6

\*\*Maximum Span (m) of joists at Nominated Spacing (mm) for 3kPa floor live load typical for Commercial applications.

FJ140	140	45	15	1.55	3.0	2.8	2.4
FJ190	190	45	15	1.55	3.4	3.2	2.8
FJ240	240	45	15	1.85	4.3	4.1	3.5
FJ290	290	45	15	2.50	5.6	5.3	4.6

\*\*\*Maximum Span (m) of joists at Nominated Spacing (mm) for 5kPa floor live load typical for Industrial applications.

## Perimeter Channel\*

Joist Span up to:	Size	Max Perimeter Channel Span		
		1.5kPa	3kPa	5kPa
3000*	FJ140	1800	1300	1100
	FJ190	2100	1600	1200
	FJ240	2700	2000	1600
	FJ290	3700	2700	2200
4000*	FJ140	1600	1100	-
	FJ190	1800	1400	1100
	FJ240	2300	1700	1400
	FJ290	3200	2400	1900
5000*	FJ140	1400	1000	-
	FJ190	1600	1200	1000
	FJ240	2100	1600	1200
	FJ290	2800	2100	1700
6000*	FJ140	1300	-	-
	FJ190	1500	1100	-
	FJ240	1900	1400	1100
	FJ290	2600	1900	1500

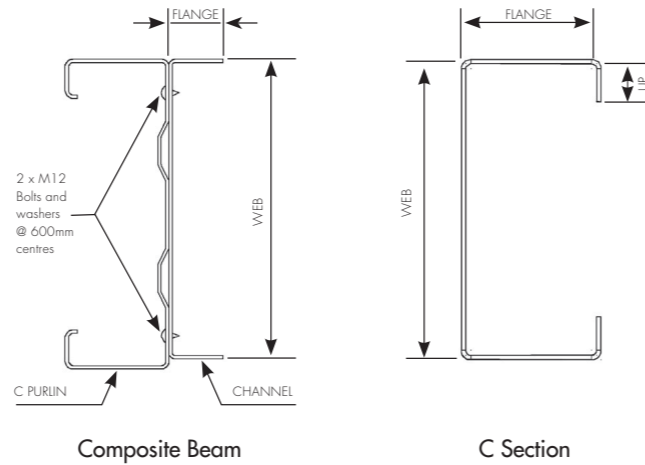
\* Perimeter Channel spans are not applicable for support of a loadbearing wall or roof loads.

\* Balustrade connecting to the channel need to be independently assessed for suitability.

\*Note: This complies with the relevant provisions of the following Building Codes  
 AS/NZS 1170.0 Structural Design Actions Part 0: General Principles  
 AS/NZS 1170.1 Structural Design Actions Part 1: Permanent, Imposes and Other Actions  
 AS/NZS 1170.2 Structural Design Actions Part 2: Wind Actions  
 AS/NZS 1170.4 Structural Design Actions Part 4: Earthquake Loads  
 AS4600: Cold Formed Steel Structures

## Composite Beam

Joist Span up to:	Composite Section Size	1.5kPa	3kPa	5kPa
3000*	PC140 + C200/18	4.2	3.6	2.8
	PC190 + C200/18	4.3	3.6	2.9
	PC240 + C250/18	5.1	4.4	3.6
	PC290 + C300/18	6.0	5.2	4.5
4000*	PC140 + C200/18	3.9	3.1	2.5
	PC190 + C200/18	4.0	3.1	2.5
	PC240 + C250/18	4.7	3.9	3.1
	PC290 + C300/18	5.6	4.8	3.9
5000*	PC140 + C200/18	3.7	2.8	2.2
	PC190 + C200/18	3.8	2.8	2.2
	PC240 + C250/18	4.5	3.5	2.8
	PC290 + C300/18	5.3	4.4	3.5
6000*	PC140 + C200/18	3.4	2.5	2.0
	PC190 + C200/18	3.4	2.5	2.0
	PC240 + C250/18	4.3	3.2	2.5
	PC290 + C300/18	5.0	4.0	3.2



\* Tables relate to single span floors. Perimeter Channels to be fixed every 600mm with 2 x M12 bolts and washers to C Purlin

## Cantilever Joist

Profile	Web	Flange	Lip	Material	Max Span Overhang at Spacing		
					400 Centres	450 Centres	600 Centres
FJ140	140	45	15	1.55	0.9	0.9	0.8
FJ190	190	45	15	1.55	1.2	1.1	1.0
FJ240	240	45	15	1.85	1.5	1.5	1.3
FJ290	290	45	15	2.50	2.0	1.9	1.7

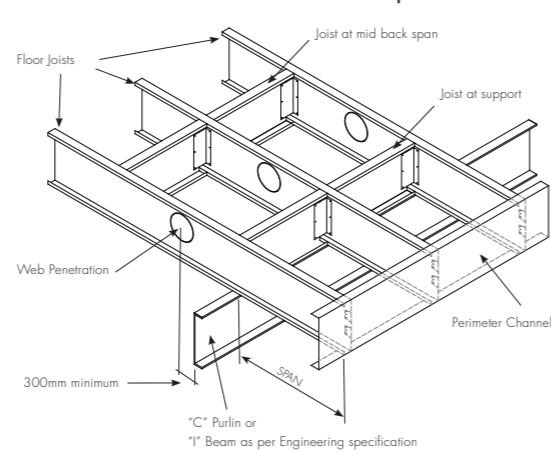
NOTE: Minimum Back Span required is 2 x Cantilever Span

## I + Z 'C' Section Properties

'C' Section	Thickness (mm)	Depth (mm)	Width (mm)	Second moment area (full)		Section modulus (full)
				$I_x (10^6 \text{mm}^4)$	$I_y (10^6 \text{mm}^4)$	
140x45x16	1.55	140	45	1.110	0.103	15.860
190x45x16	1.55	190	45	2.305	0.112	24.270
240x45x19	1.85	240	45	4.822	0.138	40.180
290x45x25	2.50	290	45	10.250	0.185	70.690

NOTES: The section modulus  $Z_x$  in the table is for the full section. The actual section modulus varies depending on design stress. This table should be used in conjunction with the design requirements of AS/NZS 4600:2005.

## Cantilever Joist example



High performance steel floor joist system

# STEEL JOIST SYSTEM



FASTER

LIGHTER

EASIER

**SPEEDFLOOR**

High performance steel floor joist system

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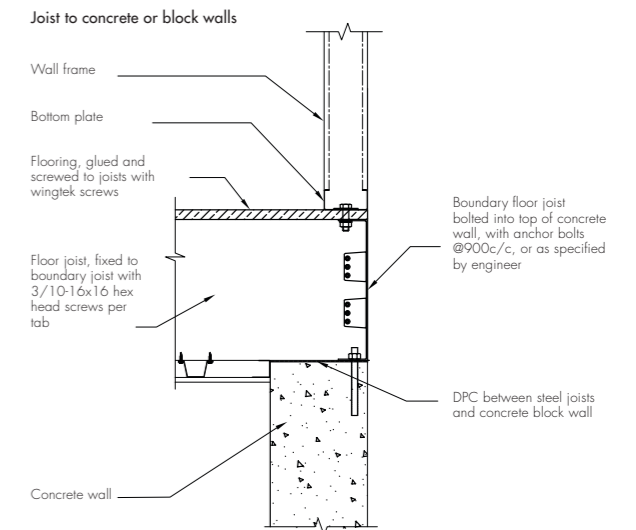
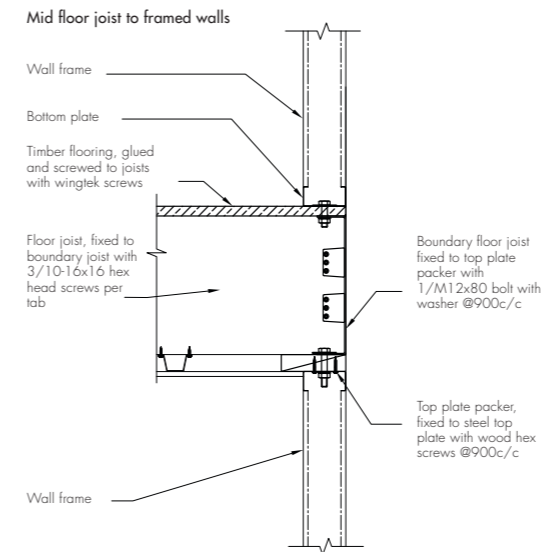
[www.speedfloor.co.nz](http://www.speedfloor.co.nz)

The Speedfloor Steel Joist span table is pre-engineered to AS/NZS 4600:2005. The Speedfloor steel joist are designed to comply with the sensitivity deflection and dynamic vibration requirements imposed by AS 3623. The Speedfloor Joist System will also meet the requirements set out in AS 4100, NZS 3404 and AS 3660.1.





## Speedfloor Steel Joist System - Standard Construction Details



# STEEL JOIST SYSTEM



The Speedfloor steel joist system is an engineered solution providing exceptional performance and construction efficiency.

The steel joist system has been successfully used in a large number of projects. Designed for strength and ease of installation while offering economical spanning performance that is adaptable to a variety of building designs and construction methods.

Whether its mezzanine floors in commercial buildings or portal framed sheds, platforms for industrial structures, residential sub floors on piles and bearers or for transportable units, the Speedfloor steel joist system is the smart choice.

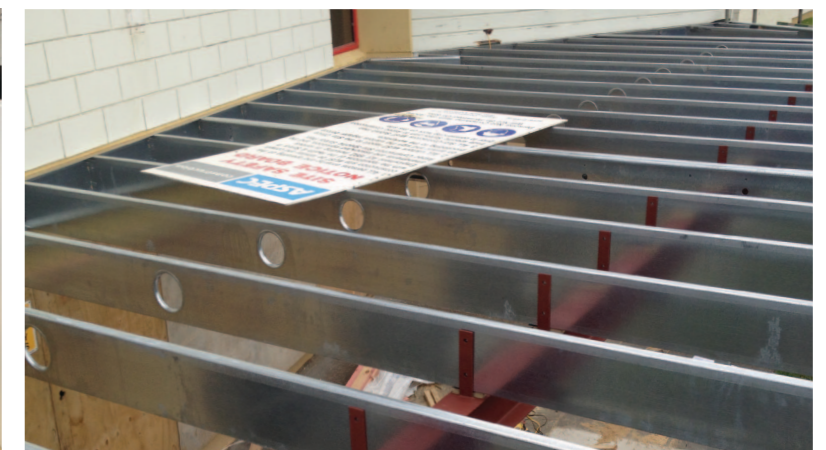
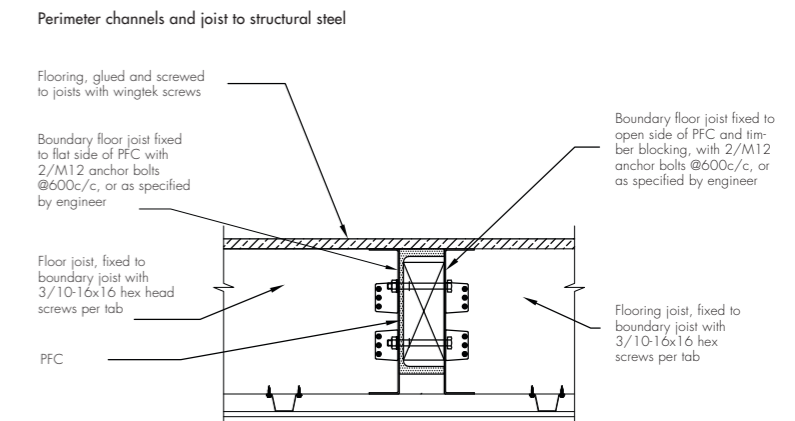
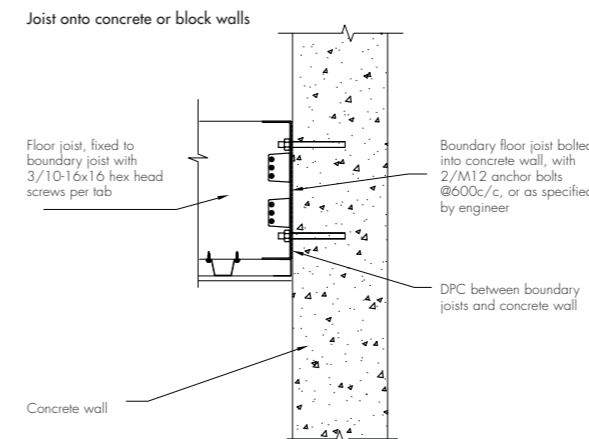
In addition to being a logical decision when cost and design count, the Speedfloor system offers piece of mind in the knowledge that's its span tables are pre-engineered making council approvals uncomplicated including specifications for both Fire and Noise ratings.

### The Speedfloor Steel Joist System makes specifying a steel floor a simple solution.

- Durability – Joist are galvanised steel providing long term protection against corrosion
- Practical – pre-cut to length, eliminating on-site cutting time and cost
- Selection – four sizes to choose from and the added option of pre-punched service holes in the 190, 240 & 290mm joist web sections
- Service – design and engineering support

Speedfloor Systems are available nationally. Design Certificates and Producer Statements available on request.

Contact us directly to receive further information.



**Speedfloor Steel Joist System - FASTER, LIGHTER, EASIER**

The Speedfloor Steel Joist System provides a simple effective solution to your floor structure requirements.