Span Tables

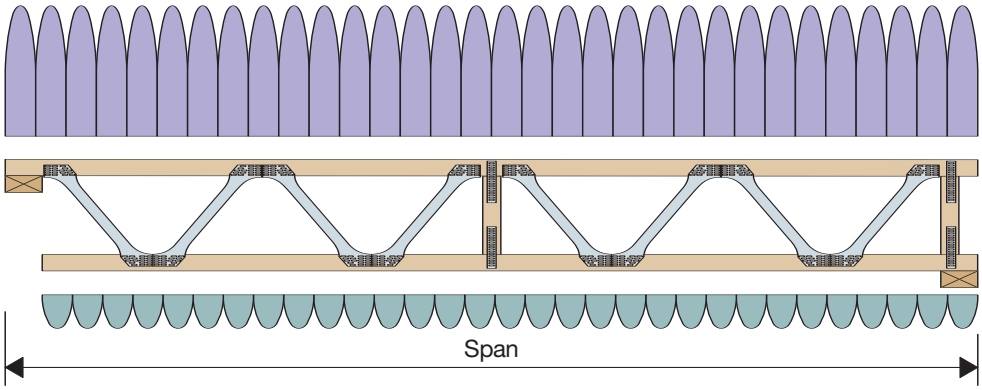
The following span tables are to be used as a basic guide to achievable joist span for given depth and spacing, and should be used for estimating or feasibility only.

Due to variations in timber grades, load sets, support conditions and bearing widths, the tables are not suitable as a design tool. Please consult an easi-joists' manufacturer for more information and design assistance.

Load and Span Description

Top Chord UDL
(Floor: LL + DL + Partition)

Bottom Chord UDL
(Ceiling: DL)



United Kingdom Span Table

WS200 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
219	400	72 x 47	5125
		97 x 47	5450
		122 x 47	5725
	600	72 x 47	4525
		97 x 47	4850
		122 x 47	5075
WS250 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
254	400	72 x 47	5550
		97 x 47	5900
		122 x 47	6200
	600	72 x 47	4950
		97 x 47	5250
		122 x 47	5475
WS300 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
304	400	72 x 47	6075
		97 x 47	6475
		122 x 47	6775
	600	72 x 47	5425
		97 x 47	5475
		122 x 47	5500
WS400 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
417	400	72 x 47	7125
		97 x 47	7575
		122 x 47	7925
	600	72 x 47	6100
		97 x 47	6125
		122 x 47	6145

Load Criteria

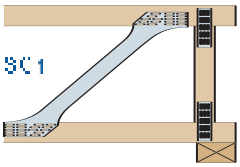
Spans are calculated based on the following applied floor loadings:

Top chord (live)	1500 N/m²	
Top chord (dead)	210 N/m²	
Top chord (partitions)	220 N/m²	
Bottom chord (dead)	200 N/m²	**Total load 2130 N/m²**

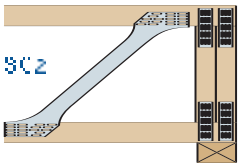
Support Conditions (SC)

There are four typical support conditions used in the design of easi-joists' which provide an important benefit in flexibility for connecting to different bearing members such as timber frame, masonry or steel. For more information on support conditions, see pages 22–27 of this manual.

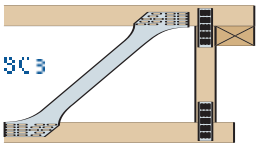
The support conditions below are possible for varying methods of connection to timber frame or masonry walls, or connection to steel or timber beams.



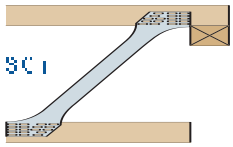
Bottom Chord Trimmable



Bottom Chord Full



Top Chord Closed



Top Chord Open

Republic of Ireland Span Table

WS200 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
219	400	72 x 47	5125
		97 x 47	5475
		122 x 47	5600
	600	72 x 47	4550
		97 x 47	4900
		122 x 47	5125
WS250 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
254	400	72 x 47	5550
		97 x 47	5925
		122 x 47	6225
	600	72 x 47	4975
		97 x 47	5300
		122 x 47	5325
WS300 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
304	400	72 x 47	6100
		97 x 47	6500
		122 x 47	6825
	600	72 x 47	5275
		97 x 47	5295
		122 x 47	5310
WS400 easi-joist®			
Joist depth	Joist centres	Chord dimensions	Maximum permissible span
417	400	72 x 47	7125
		97 x 47	7550
		122 x 47	7925
	600	72 x 47	5850
		97 x 47	5870
		122 x 47	5875

Load Criteria

Spans are calculated based on the following applied floor loadings:

Top chord (live)	1500 N/m²	
Top chord (dead)	210 N/m²	
Top chord (partitions)	220 N/m²	
Bottom chord (dead)	200 N/m²	**Total load 2130 N/m²**

Notes for UK and Republic of Ireland Tables

1. Permissible spans assume 100mm wide supports at each end, with the permissible span being taken between the centre-lines of the supports.
2. Spans are based on deflections being limited to 0.003 x span up to a maximum of 14mm.
3. Joists are simply suppoted at each end, with a minimum bearing of 45mm.
4. Lateral restraint is provided by a suitably fixed floor deck, which will prevent buckling of the compression flange.
5. The joists are assumed to be part of a load-sharing system as defined in BS 5268-2, Clause 2.9.
6. Support conditions and web direction/orientation can affect the spanning capacity of a joist.
7. Spans given in the tables for UK and Ireland have been designed using support condition SC2 and are intended as a guide only.