

Joist & Girder Sizing Charts - Residential

Tables below are for sizing TRIMAX structural joist and girder members in a typical deck situation. Please consult local building codes regarding design and required design Live Loads. Charts assume 90°F working temperature, 246,750 psi Adjusted MOE, and 3,380 psi Adjusted MOR. Blocking between joists must be installed when joists are spanning more than 6'-0". All Deck designs should be reviewed by a Professional Engineer.

Maximum Spans for Deck Joists - Simple Span Condition 40 psf Residential Live Load									
NOM. SIZE	ACTUAL SIZE	12"	16"	24"					
2x6	1.5x5.5	7'-2"	6'-6"	5'-8"					
2x8	1.5x7.5	9'-10"	8'-11"	7'-9"					
2x10	1.5x9.5	12'-5"	11'-4"	9'-10"					
2x12	1.5x11.5	15'-1"	13'-9"	11'- 11"					
3x10*	2.5x9.25	14'-4"	13'-1"	11'-5"					
3x12*	2.5x11.5	17'-10"	16'-3"	14'-2"					

<u>NOTE:</u> When using a joist in a multiple span condition (rather than simple), the uniform allowable load over the multiple span may increase up to 30% <u>OR</u> the allowable span may increase up to 10%.

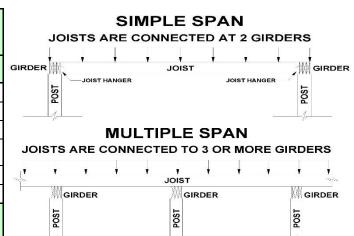


			Table to	Calculate	Girders					
LENGTH OF SPAN (FT)	SPACING BETWEEN POSTS (Ft) {Girder-to-Girder Spacing} NOTE: Other combinations may be possible, only common options are listed. Please contact your TRIMAX rep for details regarding less- common options									
SI-AN (F1)	3	4	5	6	7	8	9	10		
5	(1) 2x6	(2) 2x6, or (1) 2x8	(2) 2x6, or (1) 2x8	(2) 2x6, or (1) 2x8	(3) 2x6, or (1) 2x8	(3) 2x6, or (2) 2x8, or (1) 2x10	(3) 2x6, or (2) 2x8, or (1) 2x10	(4) 2x6, or (2) 2x8, or (1) 2x10		
6	(2) 2x6, or (1) 2x8	(3) 2x6, or (1) 2x8	(3) 2x6, or (2) 2x8, or (1) 2x10	(4) 2x6, or (2) 2x8, or (1) 2x10	(4) 2x6, or (2) 2x8, or (1) 2x10	(2) 2x8, or (1) 2x10	(3) 2x8, or (1) 2x10	(3) 2x8, or (2) 2x10, or (1) 2x12		
7	(4) 2x6, or (2) 2x8, or (1) 2x10	(4) 2x6, or (2) 2x8, or (1) 2x10	(2) 2x8, or (1) 2x10	(3) 2x8, or (2) 2x10, or (1) 2x12	(3) 2x8, or (2) 2x10, or (1) 2x12	(3) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (1) 2x12		
8	(2) 2x8, or (1) 2x10	(3) 2x8, or (2) 2x10, or (1) 2x12	(3) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12		
9	(3) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (1) 2x12	(4) 2x8, or (2) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(4) 2x10, or (2) 2x12	(4) 2x10, or (3) 2x12		
10	(4) 2x8, or (2) 2x10, or (1) 2x12	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(4) 2x10, or (2) 2x12	(4) 2x10, or (3) 2x12	(3) 2x12	(3) 2x12	(3) 2x12		
11	(3) 2x10, or (2) 2x12	(3) 2x10, or (2) 2x12	(4) 2x10, or (2) 2x12	(3) 2x12	(3) 2x12	(4) 2x12	(4) 2x12	(4) 2x12		
12	(3) 2x10, or (2) 2x12	(4) 2x10, or (2) 2x12	(3) 2x12	(3) 2x12	(4) 2x12	(4) 2x12	(3) 3x12*	(3) 3x12*		
13	(4) 2x10, or (2) 2x12	(3) 2x12	(4) 2x12	(4) 2x12	(3) 3x12*	(4) 3x12*	(4) 3x12*	(4) 3x12*		
14	(3) 2x12	(4) 2x12	(4) 2x12	(3) 3x12*	(4) 3x12*	(4) 3x12*				

* 3x10 & 3x12 are uncommon sizes, but are included to show the span options are possible





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