

FLOOR JOIST SPAN LIMITATIONS

10psf Dead Load and 125psf Live Load (TL Deflection=L/240)

Member	Yield strength F _y (ksi)	Live Load Deflection L/360						Live Load Deflection L/480					
		Single span spacing (in) o.c.			Two equal span spacing (in) o.c.			Single span spacing (in) o.c.			Two equal span spacing (in) o.c.		
		12	16	24	12	16	24	12	16	24	12	16	24
600S137-33	33	6'4"e	5'6"e	4'6"e	5'11"a	4'9"a	3'6"a	6'4"e	5'6"e	4'6"e	5'11"a	4'9"a	3'6"a
600S137-43	33	7'8"e	6'7"e	5'5"e	7'8"a	6'7"a	5'5"a	7'8"e	6'7"e	5'5"e	7'8"a	6'7"a	5'5"a
600S137-54	50	9'7"	8'8"	7'3"e	10'3"i	8'10"i	7'3"i	8'8"	7'11"	6'11"e	9'9"i	8'10"i	7'3"i
600S137-68	50	10'3"	9'4"	8'2"	11'6"i	10'4"i	8'5"i	9'4"	8'6"	7'5"i	10'6"i	9'6"i	8'4"i
600S137-97	50	11'4"	10'4"	9'0"	12'9"i	11'7"i	10'1"i	10'4"	9'4"	8'2"	11'7"i	10'6"i	9'2"
600S162-33	33	6'10"e	5'11"e	4'9"e	6'2"a	5'0"a	3'7"a	6'10"e	5'11"e	4'9"e	6'2"a	5'0"a	3'7"a
600S162-43	33	8'5"e	7'4"e	6'0"e	8'5"a	7'4"a	5'11"a	8'5"e	7'4"e	6'0"e	8'5"a	7'4"a	5'11"a
600S162-54	50	10'0"	9'1"	7'11"e	11'3"i	9'10"i	8'0"a	9'1"	8'3"	7'3"e	10'2"i	9'3"i	8'0"a
600S162-68	50	10'9"	9'9"	8'6"	12'0"i	10'11"i	9'5"i	9'9"	8'10"	7'9"	10'11"i	9'11"i	8'8"i
600S162-97	50	11'11"	10'10"	9'5"	13'4"i	12'1"i	10'7"i	10'10"	9'10"	8'7"	12'1"i	11'0"	9'7"
600S200-33	33	7'4"e	6'4"e	4'9"e	6'4"a	5'1"a	3'8"a	7'4"e	6'4"e	4'9"e	6'4"a	5'1"a	3'8"a
600S200-43	33	8'9"e	7'7"e	6'2"e	8'9"a	7'7"a	6'0"a	8'9"e	7'7"e	6'2"e	8'9"a	7'7"a	6'0"a
600S200-54	50	10'6"	9'7"	8'3"e	11'8"i	10'1"i	8'3"a	9'7"	8'8"	7'7"e	10'9"i	9'9"i	8'3"a
600S200-68	50	11'3"	10'3"	8'11"	12'8"i	11'6"i	9'11"i	10'3"	9'4"	8'2"	11'6"i	10'5"i	9'2"i
600S200-97	50	12'6"	11'4"	9'11"	14'1"i	12'9"i	11'2"i	11'4"	10'4"	9'0"	12'9"i	11'7"i	10'2"i
600S250-43	33	8'11"e	7'9"e	6'4"e	8'11"a	7'9"a	6'1"a	8'11"e	7'9"e	6'4"e	8'11"a	7'9"a	6'1"a
600S250-54	50	11'0"	9'11"	8'5"e	11'11"i	10'4"i	8'5"a	9'11"	9'1"	7'11"e	11'2"i	10'2"i	8'5"a
600S250-68	50	11'10"	10'9"	9'5"	13'3"i	12'0"i	9'10"i	10'9"	9'9"	8'6"	12'1"i	10'11"i	9'7"i
600S250-97	50	13'2"	11'11"	10'5"	14'9"i	13'5"i	11'9"i	11'11"	10'10"	9'6"	13'5"i	12'2"i	10'8"i
600S300-54	50	11'2"	10'2"e	8'7"e	12'1"i	10'6"i	8'7"a	10'2"	9'3"	8'1"e	11'5"i	10'5"i	8'7"a
600S300-68	50	12'3"	11'1"	9'8"	13'9"i	12'3"i	10'0"i	11'1"	10'1"	8'10"	12'6"i	11'4"i	9'11"i
600S300-97	50	13'8"	12'5"	10'10"	15'4"i	13'11"i	12'2"i	12'5"	11'3"	9'10"	13'11"i	12'8"i	11'1"i
800S137-33	33	7'0"a	5'3"a	3'6"a	5'5"a	4'3"a	2'10"a	7'0"a	5'3"a	3'6"a	5'5"a	4'3"a	2'10"a
800S137-43	33	8'10"e	7'8"e	6'3"e	8'9"a	7'2"a	5'4"a	8'10"e	7'8"e	6'3"e	8'9"a	7'2"a	5'4"a
800S137-54	50	11'10"	10'3"e	8'5"e	11'10"i	10'3"i	8'5"a	10'11"	9'11"e	8'5"e	11'10"i	10'3"i	8'5"a
800S137-68	50	13'0"	11'10"	9'11"e	14'0"i	12'1"i	10'9"i	11'10"	10'9"i	9'5"	13'3"i	12'1"i	9'11"i
800S137-97	50	14'5"	13'1"	11'5"	16'2"i	14'9"i	12'7"i	13'1"	11'11"	10'5"	14'9"i	13'5"i	11'8"i
800S162-33	33	7'0"a	5'3"a	3'6"a	5'7"a	4'3"a	2'10"a	7'0"a	5'3"a	3'6"a	5'7"a	4'3"a	2'10"a
800S162-43	33	9'6"e	8'3"e	6'9"e	9'2"a	7'6"a	5'6"a	9'6"e	8'3"e	6'9"e	9'2"a	7'6"a	5'6"a
800S162-54	50	12'6"	11'0"e	9'0"e	12'9"i	11'0"i	8'10"a	11'4"	10'4"e	9'0"e	12'9"i	11'0"i	8'10"a
800S162-68	50	13'6"	12'3"	10'7"e	14'11"i	12'11"i	10'7"i	12'3"	11'2"	9'9"	13'10"i	12'6"i	10'7"i
800S162-97	50	15'0"	13'8"	11'11"	16'11"i	15'4"i	13'4"i	13'8"	12'5"	10'10"	15'4"i	13'11"i	12'2"i

Notes:

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- 3 "e" indicates that the web stiffeners are required at the end support only.
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- 5 "a" indicates that the web stiffeners are required at all supports.
- 6 Long spans utilizing shallow depth members may result in serviceability (annoying bounce) issues.
- 7 See additional floor/joint notes on page 67.

FLOOR JOIST SPAN LIMITATIONS

10psf Dead Load and 125psf Live Load (TL Deflection=L/240)

Member	Yield strength F _y (ksi)	Live Load Deflection L/360						Live Load Deflection L/480					
		Single span spacing (in) o.c.			Two equal span spacing (in) o.c.			Single span spacing (in) o.c.			Two equal span spacing (in) o.c.		
		12	16	24	12	16	24	12	16	24	12	16	24
800S200-33	33	7'0" a	5'3" a	3'6" a	5'7" a	4'3" a	2'10" a	7'0" a	5'3" a	3'6" a	5'7" a	4'3" a	2'10" a
800S200-43	33	10'2" e	8'10" e	7'2" e	9'7" a	7'9" a	5'9" a	10'2" e	8'10" e	7'2" e	9'7" a	7'9" a	5'9" a
800S200-54	50	13'2" e	11'9" e	9'7" e	13'7" i	11'9" a	11'7" a	12'1" i	10'11" e	13'6" i	11'9" a	11'9" a	9'3" a
800S200-68	50	14'2" i	12'11" i	11'3" e	15'11" i	14'3" i	11'7" a	12'11" i	11'8" i	10'3" e	14'5" i	13'2" i	11'6" a
800S200-97	50	15'9" i	14'4" i	12'6" i	17'8" i	16'1" i	14'1" i	14'4" i	13'0" i	11'4" i	16'1" i	14'7" i	12'9" i
800S250-43	33	10'5" e	9'0" e	7'5" e	9'8" a	7'10" a	5'9" a	10'5" e	9'0" e	7'5" e	9'8" a	7'10" a	5'9" a
800S250-54	50	13'9" e	12'0" e	11'0" e	13'11" i	12'0" a	9'4" a	12'6" i	11'4" e	9'10" e	13'11" i	12'0" a	9'4" a
800S250-68	50	14'9" i	13'5" i	14'1" i	16'4" i	14'1" i	11'6" a	13'5" i	12'2" i	10'8" e	15'1" i	13'8" i	11'6" a
800S250-97	50	16'6" i	15'0" i	13'1" i	18'6" i	16'10" i	14'8" i	15'0" i	13'7" i	11'11" i	16'10" i	15'3" i	13'4" i
800S300-43	50	14'0" e	12'2" e	10'0" e	14'1" i	12'2" a	9'5" a	13'10" i	11'7" e	10'0" e	14'1" i	12'2" a	9'5" a
800S300-68	50	15'3" i	13'10" i	11'8" e	16'7" i	14'4" i	11'8" a	13'10" i	12'7" i	11'0" e	15'6" i	14'1" i	11'8" a
800S300-97	50	17'1" i	15'6" i	13'6" i	19'2" i	17'5" i	14'11" i	15'6" i	14'1" i	12'4" i	17'5" i	15'10" i	13'10" i
1000S162-43	33	10'6" a	9'2" a	6'2" a	8'9" a	7'0" a	4'11" a	10'6" a	9'2" a	6'2" a	8'9" a	7'0" a	4'11" a
1000S162-54	50	14'1" e	12'3" e	10'0" e	13'11" i	11'5" a	8'6" a	13'6" e	12'3" e	10'0" e	13'11" i	11'5" a	8'6" a
1000S162-68	50	16'1" i	14'5" e	11'10" e	16'8" i	14'5" i	11'10" a	14'8" i	13'4" i	11'7" e	16'5" i	14'5" i	11'10" a
1000S162-97	50	18'1" i	16'5" i	14'4" i	20'4" i	18'6" i	15'1" i	16'5" i	14'11" i	13'1" i	18'6" i	16'9" i	14'8" i
1000S200-43	33	11'4" a	9'3" a	6'2" a	9'1" a	7'3" a	4'11" a	11'4" a	9'3" a	6'2" a	9'1" a	7'3" a	4'11" a
1000S200-54	50	15'2" e	13'2" e	10'9" e	14'7" a	11'11" a	8'10" a	14'2" e	12'10" e	10'9" e	14'7" a	11'11" a	8'10" a
1000S200-68	50	16'10" i	15'4" e	12'7" e	17'10" i	15'6" i	12'7" a	15'4" e	13'11" i	12'2" e	17'2" i	15'6" i	12'7" a
1000S200-97	50	18'11" i	17'2" i	15'0" i	21'3" i	19'3" i	16'1" i	17'2" i	15'7" i	13'8" i	19'3" i	17'6" i	15'4" i
1000S250-54	50	15'7" e	13'6" e	11'0" e	14'10" a	12'1" a	8'11" a	14'11" e	13'6" e	11'0" e	14'10" a	12'1" a	8'11" a
1000S250-68	50	17'8" i	15'11" e	13'0" e	18'4" i	15'11" i	13'0" a	16'0" i	14'7" e	12'9" e	18'0" i	15'11" i	13'0" a
1000S250-97	50	19'8" i	17'11" i	15'8" i	22'1" i	20'1" i	17'3" i	17'11" i	16'3" i	14'2" i	20'1" i	18'3" i	15'11" i
1000S300-54	50	15'10" e	13'8" e	11'2" e	14'11" a	12'2" e	9'0" a	15'3" e	13'8" e	11'2" e	14'11" a	12'2" e	9'0" a
1000S300-68	50	18'2" i	16'2" e	13'2" e	18'8" i	16'2" i	13'2" a	16'6" i	15'0" e	13'1" e	18'6" i	16'2" i	13'2" a
1000S300-97	50	20'4" i	18'5" i	16'1" i	22'10" i	20'8" i	16'11" i	18'5" i	16'9" i	14'8" i	20'9" i	18'10" i	16'5" i
1200S162-54	50	15'2" a	13'2" a	10'2" a	13'6" a	10'10" a	7'11" a	15'2" a	13'2" a	10'2" a	13'6" a	10'10" a	7'11" a
1200S162-68	50	18'1" i	15'8" e	12'9" e	18'1" i	15'8" i	12'3" a	16'11" i	15'4" e	12'9" e	18'1" i	15'8" i	12'3" a
1200S162-97	50	21'1" i	19'2" i	16'7" i	23'5" i	20'4" i	16'7" i	19'2" i	17'5" i	15'2" i	21'6" i	19'6" i	16'7" i
1200S200-54	50	16'5" a	14'3" a	10'2" a	14'0" a	11'3" a	8'2" a	16'3" a	14'3" a	10'2" a	14'0" a	11'3" a	8'2" a
1200S200-68	50	19'5" e	16'10" e	13'9" e	19'5" i	16'10" a	12'10" a	17'7" i	16'0" e	13'9" e	19'5" i	16'10" a	12'10" a
1200S200-97	50	21'11" i	19'11" i	17'5" i	24'8" i	21'8" i	17'8" i	19'11" i	18'1" i	15'10" i	22'4" i	20'4" i	17'8" i

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		Single span spacing (in) o.c.			Two equal span spacing (in) o.c.			Single span spacing (in) o.c.			Two equal span spacing (in) o.c.		
		12	16	24	12	16	24	12	16	24	12	16	24
1200S250-54	50	17'0" a	14'9" a	10'2" a	14'3" a	11'5" a	8'2" a	16'11" a	14'9" a	10'2" a	14'3" a	11'5" a	8'2" a
1200S250-68	50	20'1" e	17'5" e	14'2" e	20'1" i	17'4" a	13'0" a	18'4" e	16'8" e	14'2" e	20'1" i	17'4" a	13'0" a
1200S250-97	50	22'9"	20'8"	18'1" e	25'7" i	22'5" i	18'3" i	20'8"	18'10"	16'5"	23'3" i	21'1" i	18'3" i
1200S300-54	50	17'4" a	15'0" a	10'2" a	14'5" a	11'6" a	8'2" a	17'4" a	15'0" a	10'2" a	14'5" a	11'6" a	8'2" a
1200S300-68	50	20'6" e	17'9" e	14'6" e	20'6" i	17'6" a	13'2" a	19'1" e	17'4" e	14'6" e	20'6" i	17'6" a	13'2" a
1200S300-97	50	23'6"	21'4"	18'8" e	26'5" i	22'10" i	18'8" i	21'4"	19'5"	16'11"	24'0" i	21'9" i	18'8" i
1400S162-54	50	16'1" a	13'1" a	8'9" a	12'9" a	10'2" a	7'0" a	16'1" a	13'1" a	8'9" a	12'9" a	10'2" a	7'0" a
1400S162-68	50	19'2" e	16'7" e	13'7" e	19'2" i	15'10" a	11'10" a	19'1" e	16'7" e	13'7" e	19'2" i	15'10" a	11'10" a
1400S162-97	50	23'10"	21'8"	17'9" e	25'2" i	21'9" i	17'9" i	21'8"	19'8"	17'3" e	24'4" i	21'9" i	17'9" i
1400S200-54	50	17'5" a	13'1" a	8'9" a	13'3" a	10'5" a	7'0" a	17'5" a	13'1" a	8'9" a	13'3" a	10'5" a	7'0" a
1400S200-68	50	20'9" e	18'0" e	14'8" e	20'3" i	16'7" a	12'4" a	19'10" e	18'0" e	14'8" e	20'3" i	16'7" a	12'4" a
1400S200-97	50	24'10"	22'6"	19'1" e	26'11" i	23'4" i	19'1" i	22'6"	20'6"	17'11" e	25'4" i	23'0" i	19'1" i
1400S250-54	50	17'5" a	13'1" a	8'9" a	13'6" a	10'5" a	7'0" a	17'5" a	13'1" a	8'9" a	13'6" a	10'5" a	7'0" a
1400S250-68	50	21'6" e	18'8" e	15'3" e	20'9" a	16'11" a	12'6" a	20'8" e	18'8" e	15'3" e	20'9" a	16'11" a	12'6" a
1400S250-97	50	25'9"	23'4"	19'9" e	27'11" i	24'2" i	19'9" a	23'4"	21'3"	18'7" e	26'3" i	23'10" i	19'9" a
1400S300-54	50	17'5" a	13'1" a	8'9" a	13'7" a	10'5" a	7'0" a	17'5" a	13'1" a	8'9" a	13'7" a	10'5" a	7'0" a
1400S300-68	50	22'0" e	19'1" e	15'7" e	21'0" a	17'1" a	12'8" a	21'2" e	19'1" e	15'7" e	21'0" a	17'1" a	12'8" a
1400S300-97	50	26'6"	24'1"	20'3" e	28'7" i	24'9" i	20'3" a	24'1"	21'11"	19'1" e	27'0" i	24'7" i	20'3" a

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