

Tables | Ceiling Span (S-Section)
Allowable Ceiling Spans Deflection Limit L/360

Section	Fy (Ksi)	4 psf Lateral Support of Compression Flange									6 psf Lateral Support of Compression Flange									13 psf* Lateral Support of Compression Flange								
		Unsupported Joist Spacing			Midspan						Unsupported Joist Spacing			Midspan						Unsupported Joist Spacing			Midspan					
		12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24
250S137-33	33	11' 9"	10' 10"	9' 9"	13' 0"	11' 10"	10' 4"	10' 6"	9' 9"	8' 8"	11' 4"	10' 4"	9' 0"	8' 6"	7' 11"	6' 11"	8' 9"	8' 0"	6' 11"	12' 9"	11' 10"	10' 4"	12' 9"	11' 10"	10' 4"	12' 9"	11' 10"	10' 4"
250S137-43	33	13' 2"	12' 1"	10' 9"	14' 2"	12' 10"	11' 2"	11' 8"	10' 9"	9' 7"	12' 4"	11' 2"	9' 9"	9' 4"	8' 7"	7' 7"	9' 6"	8' 8"	7' 7"	13' 5"	12' 5"	10' 10"	13' 8"	12' 5"	10' 10"	13' 8"	12' 5"	10' 10"
250S162-33	33	13' 5"	12' 5"	10' 10"	13' 8"	12' 5"	10' 10"	11' 11"	10' 10"	9' 5"	11' 11"	10' 10"	9' 5"	9' 2"	8' 4"	7' 4"	9' 2"	8' 4"	7' 4"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"
250S162-43	33	14' 10"	13' 6"	11' 9"	14' 10"	13' 6"	11' 9"	13' 0"	11' 9"	10' 3"	13' 0"	11' 9"	10' 3"	9' 1"	7' 11"	10' 0"	9' 1"	7' 11"	10' 0"	15' 10"	14' 10"	12' 9"	15' 10"	14' 10"	12' 9"	15' 10"	14' 10"	12' 9"
350S137-33	33	12' 9"	11' 9"	10' 6"	16' 10"	15' 4"	13' 4"	11' 5"	10' 6"	9' 5"	14' 9"	13' 4"	11' 8"	9' 3"	8' 6"	7' 8"	11' 4"	10' 4"	9' 0"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"
350S137-43	33	14' 1"	13' 0"	11' 7"	18' 4"	16' 8"	14' 6"	12' 7"	11' 7"	10' 4"	16' 0"	14' 6"	12' 8"	10' 1"	9' 4"	8' 4"	12' 4"	11' 3"	9' 10"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"
350S162-33	33	14' 6"	13' 5"	12' 0"	17' 8"	16' 1"	14' 0"	13' 0"	12' 0"	10' 9"	15' 5"	14' 0"	12' 3"	10' 6"	9' 9"	8' 9"	11' 11"	10' 10"	9' 5"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"
350S162-43	33	16' 0"	14' 9"	13' 2"	19' 3"	17' 6"	15' 3"	14' 3"	13' 2"	11' 9"	16' 9"	15' 3"	13' 4"	11' 6"	10' 8"	9' 6"	13' 0"	11' 9"	10' 3"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"
362S137-33	33	12' 10"	11' 11"	10' 7"	17' 4"	15' 9"	13' 9"	11' 6"	10' 8"	9' 6"	15' 2"	13' 9"	12' 0"	9' 4"	8' 7"	7' 9"	11' 8"	10' 7"	9' 3"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"	14' 10"	13' 10"	11' 9"
362S137-43	33	14' 3"	13' 1"	11' 8"	18' 10"	17' 1"	14' 11"	12' 8"	11' 8"	10' 5"	16' 5"	14' 11"	13' 1"	10' 2"	9' 5"	8' 5"	12' 8"	11' 6"	10' 1"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"
362S162-33	33	14' 8"	13' 6"	12' 1"	18' 2"	16' 6"	14' 5"	13' 1"	12' 1"	10' 10"	15' 10"	14' 5"	12' 7"	10' 8"	9' 10"	8' 10"	12' 3"	11' 1"	9' 8"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"	16' 10"	15' 10"	13' 9"
362S162-43	33	16' 1"	14' 10"	13' 3"	19' 9"	17' 11"	15' 8"	14' 4"	13' 3"	11' 10"	17' 3"	15' 8"	13' 8"	11' 7"	10' 9"	9' 7"	13' 4"	12' 1"	10' 7"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"
400S137-33	33	13' 2"	12' 2"	10' 11"	18' 8"	17' 0"	14' 10"	11' 9"	10' 11"	9' 9"	16' 4"	14' 10"	12' 11"	9' 7"	8' 10"	7' 11"	12' 7"	11' 5"	10' 0"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"
400S137-43	33	14' 7"	13' 5"	12' 0"	20' 4"	18' 6"	16' 2"	13' 0"	12' 0"	10' 8"	17' 9"	16' 2"	14' 1"	10' 5"	9' 8"	8' 8"	13' 9"	12' 6"	10' 11"	20' 4"	18' 6"	16' 2"	13' 0"	12' 0"	10' 8"	17' 9"	16' 2"	14' 1"
400S162-33	33	15' 0"	13' 10"	12' 5"	19' 7"	17' 10"	15' 6"	13' 5"	12' 5"	11' 2"	17' 1"	15' 6"	13' 7"	10' 11"	10' 1"	9' 1"	13' 3"	12' 0"	10' 6"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"	18' 4"	16' 10"	14' 9"
400S162-43	33	16' 6"	15' 3"	13' 7"	21' 4"	19' 4"	16' 11"	14' 9"	13' 7"	12' 2"	18' 7"	16' 11"	14' 9"	11' 11"	11' 0"	9' 10"	14' 5"	13' 1"	11' 5"	20' 4"	18' 4"	16' 10"	20' 4"	18' 4"	16' 10"	20' 4"	18' 4"	16' 10"
550S137-33	33	14' 6"	13' 5"	12' 0"	20' 10"	19' 4"	17' 5"	13' 0"	12' 0"	10' 10"	18' 9"	17' 5"	15' 8"	10' 7"	9' 10"	8' 10"	15' 4"	14' 3"	12' 8" e	20' 4"	18' 4"	16' 10"	20' 4"	18' 4"	16' 10"	20' 4"	18' 4"	16' 10"
550S137-43	33	15' 10"	14' 7"	13' 1"	22' 6"	20' 10"	18' 9"	14' 2"	13' 1"	11' 9"	20' 2"	18' 9"	16' 10"	11' 6"	10' 7"	9' 6"	16' 6"	15' 3"	13' 8"	22' 6"	20' 10"	18' 9"	22' 6"	20' 10"	18' 9"	22' 6"	20' 10"	18' 9"
550S162-33	33	16' 6"	15' 3"	13' 8"	23' 9"	22' 0"	19' 10"	14' 9"	13' 8"	12' 4"	21' 4"	19' 10"	17' 5"	12' 1"	11' 3"	10' 1"	16' 11"	15' 5"	13' 5" e	24' 4"	22' 6"	20' 10"	24' 4"	22' 6"	20' 10"	24' 4"	22' 6"	20' 10"
550S162-43	33	17' 11"	16' 7"	14' 10"	25' 7"	23' 9"	21' 4"	16' 1"	14' 10"	13' 4"	23' 0"	21' 4"	18' 11"	13' 0"	12' 1"	10' 10"	18' 5"	16' 9"	14' 8"	25' 7"	23' 9"	21' 4"	25' 7"	23' 9"	21' 4"	25' 7"	23' 9"	21' 4"
600S137-33	33	14' 10"	13' 9"	12' 4"	21' 4"	19' 10"	17' 10"	13' 4"	12' 4"	11' 1"	19' 3"	17' 10"	16' 0"	10' 11"	10' 1"	9' 1"	15' 8"	14' 5"	12' 10"	21' 4"	19' 10"	17' 10"	21' 4"	19' 10"	17' 10"	21' 4"	19' 10"	17' 10"
600S137-43	33	16' 2"	14' 11"	13' 5"	23' 1"	21' 4"	19' 2"	14' 6"	13' 5"	12' 0"	20' 9"	19' 2"	17' 3"	11' 9"	10' 10"	9' 9"	16' 11"	15' 8"	14' 1"	23' 1"	21' 4"	19' 2"	23' 1"	21' 4"	19' 2"	23' 1"	21' 4"	19' 2"
600S162-33	33	16' 10"	15' 8"	14' 1"	24' 4"	22' 7"	20' 4"	15' 2"	14' 1"	12' 8"	21' 11"	20' 4"	18' 4"	12' 5"	11' 6"	10' 4"	18' 0"	16' 6"	14' 5" e	24' 4"	22' 7"	20' 4"	24' 4"	22' 7"	20' 4"	24' 4"	22' 7"	20' 4"
600S162-43	33	18' 4"	17' 0"	15' 3"	26' 3"	24' 4"	21' 10"	16' 5"	15' 3"	13' 8"	23' 7"	21' 10"	19' 8"	13' 4"	12' 5"	11' 2"	19' 3"	17' 11"	15' 8"	26' 3"	24' 4"	21' 10"	26' 3"	24' 4"	21' 10"	26' 3"	24' 4"	21' 10"

CEILING JOIST CHART PER ICC ESR-3016, THRU 2021; ANY LISTED MFR. IS ACCEPTABLE

TYPICAL INTERIOR PARTITION DETAILS, I.C.C. STUD & JOIST CHARTS; AND DETAILS INDICATE MINIMUM STANDARDS, VERIFY STUD SIZE AND GAUGE WITH CHART FOR ACTUAL CONDITIONS.

PROVIDE STANDARD FRAMING, FASTENERS AND DRYWALL ACCESSORIES PER THE LATEST EDITION OF THE USG GYPSUM CONSTRUCTION HANDBOOK, AND THE FOLLOWING:

LIGHTGAUGE FRAMING

1. PROVIDE LIGHTGAUGE FRAMING FOR INTERIOR WALL FRAMING IN ACCORDANCE WITH ASTM C-754 INSOFAR AS ANY PORTION IS APPLICABLE.

2. METAL STUDS SHALL BE ROLL FORMED CHANNEL TYPE STUDS, 20 OR 25 GAUGE ELECTROGALVANIZED STEEL, SIZES INDICATED, CONFORMING TO ASTM C-645. USE 18, OR 20 GAUGE AS INDICATED FOR WALLS TO RECEIVE CERAMIC TILE AND FOR WALLS OVER 14 FEET HIGH. PROVIDE METAL FLOOR AND CEILING RUNNERS DESIGNED TO ACCOMMODATE THE SPECIFIED STUDS.

3. METAL FURRING CHANNELS FOR WALLS SHALL BE 25 GAUGE ELECTROGALVANIZED STEEL, CONFORMING TO ASTM C-645.

4. POSITION STUDS VERTICALLY, ENGAGING FLOOR AND CEILING RUNNERS AND SPACED 12", 16" OR 24" O.C. AS INDICATED.

Allowable Ceiling Spans Notes

- For unbraced sections, allowable moment based on AISI S100
section C3 .1.2 with unbraced length = listed span. For midspan braced sections, allowable moment based on AISI S100 C3 .1.2 with unbraced length = (listed span)/2 .
- For spans listed with "e", web stiffeners are required at end reactions . and re-number list of notes
- Web crippling calculation based on bearing length = 1 inch .
- Web crippling and shear capacity have not been reduced for punch-outs . If web punch-outs occur near supports, members must be checked for reduced shear and web crippling in accordance with the AISI S100 .
- Values are for simple span conditions .
- Stud distortional buckling is based on an assumed $K\phi = 0$.

STUD CHARTS PER ICC ESR-2620, THRU 2021 (ANY LISTED MFR. IS ACCEPTABLE)

ESR-2620 Most Widely Accepted and Trusted		TABLE 3—COMPOSITE WALL LIMITING HEIGHTS ^{1,2,3,4} (ft-in)										Page 4 of 16	
DEPTH (ft)	MEMBER (name) (STUD SECTION ID)	SPACING (ft)	5 psf			7.5 psf			10 psf				
			L _{1/16}	L _{1/8}	L _{1/4}	L _{1/16}	L _{1/8}	L _{1/4}	L _{1/16}	L _{1/8}	L _{1/4}		
1 1/2"	Viper25 (162V125-16)	12	13-9	11-4	9-10	12-0	9-11	8-3	10-11	8-10	---		
		16	12-6	10-4	8-8	10-11	8-10	---	9-11	7-11	---		
		24	10-11	8-10	---	9-5	---	---	8-2	---	---		
	Viper20 (162V125-20)	12	14-3	11-3	9-10	12-5	9-10	8-5	11-3	8-10	---		
		16	12-11	10-3	8-10	11-5	8-10	10-5	10-3	7-11	---		
		24	11-3	8-10	---	9-10	---	---	8-10	---	---		
	Viper 18mi (162V125-18)	12	12-10	10-7	9-4	11-3	9-3	8-2	10-3	8-5	---		
		16	11-9	9-8	8-6	10-3	8-5	---	9-4	---	---		
		24	10-3	8-5	---	8-0	---	---	8-2	---	---		
	Viper 27mi (162V125-27)	12	14-4	11-4	9-11	12-6	9-11	8-5	11-5	8-10	---		
		16	13-0	10-4	8-10	11-5	8-10	---	10-4	7-10	---		
		24	11-5	8-10	---	8-10	---	---	8-10	---	---		
2 1/2"	Viper 30mi (162V125-30)	12	14-7	11-6	10-0	12-9	10-0	8-6	11-7	8-11	---		
		16	13-3	10-5	8-11	11-7	8-11	10-6	10-6	7-10	---		
		24	11-7	8-11	---	10-1	---	---	8-10	---	---		
	Viper 33mi (162V125-33)	12	14-11	11-10	10-4	13-0	10-4	8-10	11-10	9-4	7-11		
		16	13-6	10-6	8-4	11-10	8-4	7-11	10-9	8-4	---		
		24	11-10	8-4	7-11	10-4	7-11	---	8-4	---	---		
	Viper25 (250V125-16)	12	17-3	14-5	12-9	18-0	12-7	11-1	13-8	11-6	10-1		
		16	15-8	13-1	11-7	15-8	11-6	10-1	12-3	10-5	8-9		
		24	13-8	11-8	10-1	11-6	10-0	8-2	10-0	8-8	---		
	Viper20 (250V125-20)	12	17-11	14-10	12-8	18-5	13-0	11-6	14-3	11-10	10-5		
		16	16-4	13-6	12-0	14-3	11-10	10-5	12-11	10-9	8-9		
		24	14-3	11-10	10-6	12-6	10-4	8-9	11-5	9-2	---		
3 1/2"	Viper 18mi (250S125-18)	12	17-5	14-5	12-7	14-7	12-7	11-0	12-8	11-5	9-8		
		16	15-8	13-1	11-6	12-8	11-4	9-8	11-1	8-6	---		
		24	12-7	11-3	9-8	10-4	9-8	8-0	8-11	8-8	---		
	Viper 27mi (250S125-27)	12	8-3	14-5	12-8	15-11	12-8	11-0	14-4	11-6	10-0		
		16	16-7	13-2	11-8	14-4	11-6	10-0	12-5	10-5	8-11		
		24	14-0	11-6	10-0	11-6	10-0	8-6	10-5	8-11	---		
	Viper 30mi (250S125-30)	12	18-9	14-10	12-0	16-4	13-0	11-4	14-10	11-10	10-0		
		16	17-0	13-8	11-10	14-10	11-10	10-4	13-6	10-9	9-3		
		24	14-10	11-10	10-4	12-9	10-4	8-10	11-0	8-3	7-10		
	Viper 33mi (250S125-33)	12	19-4	15-4	13-6	16-10	13-5	11-8	15-4	12-2	10-3		
		16	17-7	13-11	12-2	15-4	12-2	11-0	13-3	11-0	8-8		
		24	15-4	12-2	10-8	13-5	10-8	9-2	12-0	8-8	8-8		
4 1/2"	Viper25 (362V125-16)	12	20-0	17-3	15-2	18-2	15-1	13-3	15-10	13-9	10-0		
		16	18-11	15-9	13-9	16-10	13-0	12-0	13-8	12-6	10-1		
		24	15-5	12-11	11-0	12-9	11-0	10-4	12-11	11-4	8-4		
	Viper20 (362V125-20)	12	21-0	17-11	15-9	19-1	15-8	13-9	17-4	14-3	12-6		
		16	19-10	16-4	14-4	17-4	14-3	12-6	15-4	12-11	11-4		
		24	17-4	14-3	12-6	14-6	12-5	10-11	12-7	11-4	9-11		
	Viper 18mi (362V125-18)	12	18-7	15-11	13-11	17-8	15-4	13-5	15-3	13-11	13-2		
		16	18-9	15-9	13-11	17-11	15-1	13-2	13-2	12-11	10-11		
		24	15-3	13-11	12-2	12-6	12-2	10-6	10-10	10-10	9-5		
	Viper 27mi (362V125-27)	12	22-9	18-1	15-10	19-1	15-10	13-10	17-7	14-4	12-6		
		16	20-8	16-5	14-4	17-7	14-4	12-8	15-5	13-0	11-2		
		24	17-4	14-4	12-6	14-6	12-6	10-6	12-5	10-5	11-2		
Viper 30mi (362V125-30)	12	23-3	18-6	15-9	20-4	16-6	14-1	18-6	14-6	12-0			
	16	21-2	16-9	14-8	18-8	14-8	12-10	16-4	13-4	11-1			
	24	18-6	14-5	12-10	15-4	12-10	11-0	13-4	11-8	9-11			
5 1/2"	Viper 33mi (362V125-33)	12	23-10	18-1	16-10	20-0	16-6	14-5	18-11	15-0	13-1		
		16	21-8	17-9	15-9	18-11	15-1	13-2	15-2	12-11	10-11		
		24	18-1	15-0	13-1	16-6	13-1	11-4	14-4	11-10	10-3		