

# Performance Comparison Tables 3000 F<sub>b</sub> - 2.1E - 290 F<sub>v</sub>

## POWER BEAM® Comparisons

Clear Span	Allowable PLF Load (LL/TL)	Beam Application	Anthony 30F Power Beam®	Multiple Lumber #1 Southern Pine <sup>1</sup>	Multiple Lumber #1 Douglas Fir Larch <sup>2</sup>	Timbers #1 Douglas Fir <sup>3</sup>
8'	600/900	Floor	3-1/2 x 7-1/4	3 ply - 2 x 12	3 ply - 2 x 12	6 x 12, 8 x 10
16'	450/650	Floor	5-1/2 x 11-1/4	6 ply - 2 x 12	8 ply - 2 x 12	8 x 14, 12 x 12
24'	170/250	Floor	3-1/2 x 14	6 ply - 2 x 12	7 ply - 2 x 12	8 x 14, 10 x 12
6'	4425/4425	Roof (1.15)	5-1/2 x 9-1/4	7 ply - 2 x 12	7 ply - 2 x 12	10 x 16, 12 x 14
16'	530/700	Roof (1.15)	3-1/2 x 11-7/8	6 ply - 2 x 12	7 ply - 2 x 12	8 x 14, 10 x 12
18'	480/640	Roof (1.15)	5-1/2 x 11-1/4	7 ply - 2 x 12	8 ply - 2 x 12	8 x 14, 12 x 12
Clear Span	Allowable PLF Load (LL/TL)	Beam Application	Anthony 30F Power Beam®	LVL <sup>4</sup>	Parallam® <sup>5</sup>	Steel <sup>6</sup> 36 ksi
8'	600/900	Floor	3-1/2 x 7-1/4	2 ply - 1-3/4 x 7-1/4	3-1/2 x 7-1/4	W6 x 9, W8 x 10
16'	450/650	Floor	5-1/2 x 11-1/4	3 ply - 1-3/4 x 11-7/8	5-1/4 x 11-7/8	W10 x 12, W8 x 15
24'	170/250	Floor	3-1/2 x 14	2 ply - 1-3/4 x 16	3-1/2 x 16	W10 x 15, W12 x 14
6'	4425/4425	Roof (1.15)	5-1/2 x 9-1/4	2 ply - 1-3/4 x 9-1/2	5-1/4 x 9-1/2	W10 x 12, W8 x 15
16'	530/700	Roof (1.15)	3-1/2 x 11-7/8	2 ply - 1-3/4 x 14	3-1/2 x 14	W8 x 15, W12 x 14
18'	480/640	Roof (1.15)	5-1/2 x 11-1/4	3 ply - 1-3/4 x 11-7/8	5-1/4 x 11-7/8	W10x15, W12 x 14
Design values used for this table follow:						
<sup>1</sup> Southern Pine #1 from NDS Supplement Table 4B						
<sup>2</sup> Douglas Fir Larch #1 from NDS Supplement Table 4A						
<sup>3</sup> Douglas Fir Larch #1 from NDS Supplement Table 4D						
<sup>4</sup> LVL Design Values: F <sub>b</sub> =2925 psi, F <sub>v</sub> =285 psi, MOE=2,000,000 psi						
<sup>5</sup> Parallam® Design Values: F <sub>b</sub> =2900 psi, F <sub>v</sub> =290 psi, MOE=2,000,000 psi. Parallam® is a registered trademark of Trus Joist MacMillian, a limited partnership, Boise, Idaho.						
<sup>6</sup> Steel Design Values are based on 36 ksi steel using the Seventh Edition of the Steel Construction Manual						

## Power Beam Substitution for PSL or LVL

Design Span	Convert from PSL or LVL 3-1/2" by						
	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"
Replace with 30F <sub>b</sub> Power Beam 3-1/2" by							
4' to 30'	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"
Design Span	Convert from PSL or LVL 5-1/4" by						
	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"
Replace with 30F <sub>b</sub> Power Beam 5-1/2" by							
4' to 30'	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"

### Notes:

- Comparisons are based on uniform loads and the most restrictive of simple span and two-span continuous using equal spans. Beams are assumed to be loaded on the top edge with continuous lateral support along top edge.
- Allowable design values used for comparisons are as follows:

	F <sub>b</sub> (psi)	F <sub>v</sub> (psi)	E (psi)
Power Beam*	3000	290	2.1 x 10 <sup>6</sup>
PSL or LVL	2925	290	2.0 x 10 <sup>6</sup>
- PSL and LVL refer to Parallel Strand Lumber and Laminated Veneer Lumber respectively.
- Substitution table should be used only for comparing structural capacity of 30F Power Beam with LVL or PSL. **This table should not be used for size selection.** See Allowable PLF or Size Selection Tables for appropriate design criteria and member size.

\* Refer to page 17 for F<sub>b</sub> and F<sub>v</sub> adjustments.

# Anthony POWER BEAM® 3000 F

## Window, Door and Garage Door Headers

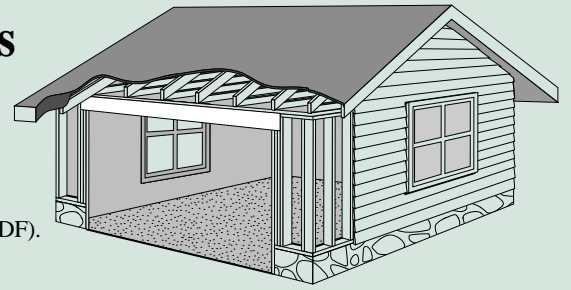
Key - Each cell contains two nominal header sizes:

Row 1: Header size for bearing length = 3.0"

Row 2: Header size for bearing length = 1-1/2"

### Steps in Using This Table:

1. Find the row with the appropriate roof loading conditions (Live Load, Dead Load & LDF).
2. Find the clear opening that meets or exceeds the window, door, or garage door size.
3. Find the span of the trusses or rafters that frame into the header.
4. Select the proper header size.



### POWER BEAM® Selection Table for Window, Door and Garage Door Headers - One Story Application

Roof Loading	Clear Opening	Span of Supported Roof Framing						
		16'	20'	24'	28'	32'	36'	40'
Live 25 PSF Dead 15 PSF LDF 1.15	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	9'3"	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4
	10'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	12'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4
		3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4
16'3"	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	
	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	
18'3"	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 16	5-1/2 x 14	
	3-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	**	
Live 30 PSF Dead 15 PSF LDF 1.15	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4
	9'3"	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	10'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	12'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4
		3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4
16'3"	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	5-1/2 x 11-7/8	
	3-1/2 x 11-1/4	5-1/2 x 9-1/2	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	**	
18'3"	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 16	5-1/2 x 14	5-1/2 x 14	
	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	**	**	
Live 40 PSF Dead 15 PSF LDF 1.15	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	9'3"	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	10'	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 9-1/4	7 x 7-1/4
	12'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8
		3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4
16'3"	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	5-1/2 x 11-7/8	5-1/2 x 14	5-1/2 x 14	
	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	**	**	**	
18'3"	3-1/2 x 14	3-1/2 x 14	3-1/2 x 16	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16	
	5-1/2 x 11-1/4	5-1/2 x 11-7/8	7 x 11-1/4	**	**	**	**	

## POWER BEAM® Selection Table for Window, Door and Garage Door Headers - One Story Application

Roof Loading	Clear Opening	Span of Supported Roof Framing							
		16'	20'	24'	28'	32'	36'	40'	
Live 20 PSF Dead 20 PSF LDF 1.25	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
	9'3"	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	
	10'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	
	12'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	
		3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	
	16'3"	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	
		3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	
	18'3"	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 16	5-1/2 x 14	
		3-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	**	
	Live 20 PSF Dead 15 PSF LDF 1.25	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
			3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
6'		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
8'		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
9'3"		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	
10'		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	
12'		3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	
		3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	
16'3"		3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	
		3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	
18'3"		3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	
		3-1/2 x 11-1/4	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	7 x 11-1/4	7 x 11-1/4	

### Window, Door, and Garage Door Header Example Problem

<b>Load Conditions:</b>	Live = 30 psf Dead = 15 psf LDF = 1.15
<b>Clear Opening:</b>	12'
<b>Span of Supported Roof Framing:</b>	20'
<b>Anthony POWER BEAM® Selected:</b>	3-1/2 x 9-1/4 w/ 1 trimmer

### Load Duration Factor (LDF)

LDF	Duration
1.00	10 years; normal loads
1.15	2 month; snow load
1.25	7 days; non-snow or construction

### Notes: (Single Story Applications)

1. This table is for headers carrying roof loads only. For headers supporting floor, roof and exterior wall loads, see two-story applications.
2. Deflection is limited to L/240 for Live Load and L/180 for Total Load.
3. Design span is assumed to be the clear opening plus the bearing length of 1-1/2" (1 trimmer) or 3.0" (2 trimmers).
4. For bearing lengths longer than 3.0", use the Allowable Roof Load Tables to get required header size. Use of longer bearing lengths may allow the use of a smaller POWER BEAM®.
5. The header size is based on the load carried by 1/2 the span of the roof framing plus a 24" overhang.
6. It is assumed that the header has the truss or rafter framing attached to its top, and is supported laterally at the bearing points.
7. Live Load reductions may be taken per BOCA, UBC and SBC. Live Load reductions have not been taken to produce this table.
8. For loads other than those shown, see Roof PLF table, or use a load condition that applies a higher load than you have.
9. A 9-1/2" depth member may be substituted for a 9-1/4" member, and an 11-7/8" for an 11-1/4", etc.

\*\* These locations require a longer bearing or wider width beam. Consult PLF tables or AFP's Woodworks Sizer Software for proper beam size.

# Anthony POWER BEAM® 3000 F

## Two-Story Applications

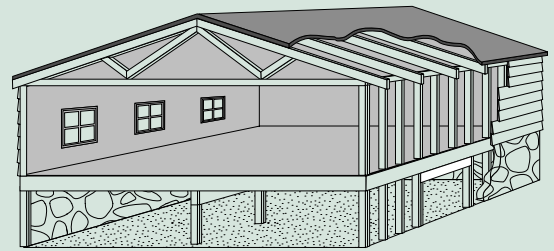
**Key - Each cell contains two nominal header sizes:**

Row 1: Header size for bearing length = 3.0"

Row 2: Header size for bearing length = 1-1/2"

### Steps in Using This Table:

1. Find the row with the appropriate roof loading conditions (Live Load, Dead Load & LDF).
2. Find the clear opening that meets or exceeds the window, door, or garage door size.
3. Find the span of the trusses or rafters that frame into the header.
4. Select the proper header size.



### POWER BEAM® Selection Table for Window, Door and Garage Door Headers - Two Story Applications

Roof Loading	Clear Opening	Span of Supported Roof Framing						
		16'	20'	24'	28'	32'	36'	40'
Roof	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
Live	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
25 PSF	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
15 PSF	9'3"	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4
		3-1/2 x 9-1/4	3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4
Floor	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4
		3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4
40 PSF	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/2	7 x 9-1/4	7 x 9-1/2	**	**
12 PSF	16'3"	3-1/2 x 14	3-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16
		5-1/2 x 11-1/4	7 x 11-1/4	**	**	**	**	**
LDF	1.15	3-1/2 x 16	3-1/2 x 16	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	7 x 16	7 x 16
		7 x 11-7/8	7 x 14	**	**	**	**	**
Roof	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
Live	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
30 PSF	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	7 x 7-1/4
15 PSF	9'3"	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4
		3-1/2 x 9-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4
Floor	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/2
		3-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**
40 PSF	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**	**
12 PSF	16'3"	3-1/2 x 14	3-1/2 x 16	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16	7 x 14
		7 x 11-1/4	7 x 11-1/4	**	**	**	**	**
LDF	1.15	3-1/2 x 16	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	5-1/2 x 16	7 x 16	7 x 16
		7 x 11-7/8	**	**	**	**	**	**
Roof	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
Live	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
40 PSF	8'	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4
		3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	7 x 7-1/4	7 x 7-1/4	7 x 7-1/4
15 PSF	9'3"	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/4
		5-1/2 x 7-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**
Floor	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/2	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**
40 PSF	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-7/8	5-1/2 x 11-7/8
		5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**	**	**
12 PSF	16'3"	3-1/2 x 16	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	7 x 16	7 x 16
		7 x 11-1/4	7 x 11-7/8	**	**	**	**	**
LDF	1.15	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	7 x 16	7 x 16	7 x 16	**
		7 x 14	7 x 14	**	**	**	**	**

## POWER BEAM® Selection Table for Window, Door and Garage Door Headers - Two Story Applications

Roof Loading	Clear Opening	Span of Supported Roof Framing						
		16'	20'	24'	28'	32'	36'	40'
Roof Live	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
20 PSF Dead	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
	9'3"	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4
Floor Live	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4
	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4
12 PSF Dead	16'3"	3-1/2 x 14	3-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16
	18'3"	3-1/2 x 16	3-1/2 x 16	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	7 x 16	7 x 16
LDF 1.25		7 x 11-7/8	7 x 14	**	**	**	**	**

Roof Live	4'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
	6'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4
20 PSF Dead	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
	9'3"	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2
Floor Live	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4
	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	5-1/2 x 11-1/4
12 PSF Dead	16'3"	3-1/2 x 14	3-1/2 x 14	3-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16
	18'3"	3-1/2 x 16	3-1/2 x 16	5-1/2 x 14	5-1/2 x 16	5-1/2 x 16	5-1/2 x 16	7 x 16
LDF 1.25		5-1/2 x 14	7 x 14	**	**	**	**	**

### Window, Door, and Garage Door Header 2-Story Application Example Problem

<b>Roof Load Conditions:</b>	Live = 30 psf Dead = 15 psf LDF = 1.15
<b>Clear Opening:</b>	12'
<b>Span of Supported Roof Framing:</b>	20'
<b>Anthony POWER BEAM® Selected:</b>	3-1/2 x 11-1/4 w/ 2 trimmers

### Load Duration Factor (LDF)

LDF	Duration
1.00	10 years; normal loads
1.15	2 month; snow load
1.25	7 days; non-snow or construction

### Notes: (Two Story Application)

1. This table is for headers carrying floor, roof and wall loads.
2. Deflection is limited to L/360 for Live load and L/240 for Total load.
3. Design span is assumed to be the clear opening plus the bearing length of 1-1/2" (1 trimmer) or 3.0" (2 trimmers).
4. For bearing lengths longer than 3.0", use the Allowable Floor Load Tables to get required header size. Use of longer bearing lengths may allow the use of a smaller POWER BEAM®.
5. The header size is based on the load carried by 1/2 the span of the roof framing plus a 24" overhang plus 1/4 the span of the floor load plus the wall load.
6. The wall load is assumed to be 100 plf.
7. It is assumed that the header has the joist framing attached to its top, and is supported laterally at the bearing points.
8. For loads other than those shown, see the Floor Load PLF Table, or use a load condition that applies a higher load than you have.
9. Live load reductions may be taken per BOCA, UBC and SBC. Live load reductions have not been taken to produce the table below.
10. A 9-1/2" depth member may be substituted for a 9-1/4" member, and an 11-7/8" for an 11-1/4", etc.

\*\* These locations require a longer bearing or wider width beam. Consult PLF tables or AFP WoodWorks-Sizer Software for proper beam size.

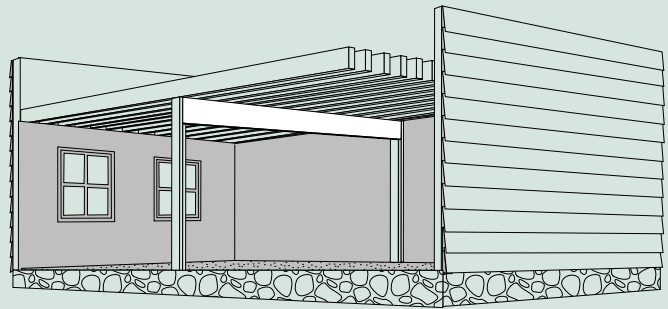
# Anthony POWER BEAM® 3000 F Floor Girder Beams

Key - Each cell contains two nominal header sizes:

- Row 1: Header size for bearing length = 3.0"
- Row 2: Header size for bearing length = 1-1/2"

### Steps in Using This Table:

1. Find the row with the appropriate roof loading conditions (Live Load, Dead Load & LDF).
2. Find the clear opening that meets or exceeds the column spacing.
3. Find the span of the joists that frame into the girder beam.
4. Select the proper header size.



**POWER BEAM® Selection Table for Girder Beams**

Floor Loading	Column Spacing	Span of Supported Joist Framing (the sum of joist spans from both sides of girder beam)						
		20'	24'	26'	28'	30'	32'	36'
Live 40 PSF Dead 12 PSF LDF 1.00	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4
	9'	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	7 x 7-1/4
	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4
		5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4
	11'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4
		5-1/2 x 9-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**
	12'	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/2	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**
	13'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**	**
	14'	3-1/2 x 11-1/4	3-1/2 x 11-7/8	3-1/2 x 14	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-7/8
		5-1/2 x 9-1/2	7 x 9-1/4	7 x 9-1/2	**	**	**	**
	15'	3-1/2 x 11-7/8	3-1/2 x 14	5-1/2 x 11-1/4	5-1/2 x 11-7/8	5-1/2 x 11-7/8	5-1/2 x 11-7/8	5-1/2 x 14
		5-1/2 x 11-1/4	7 x 11-1/4	**	**	**	**	**
	16'	3-1/2 x 14	5-1/2 x 11-7/8	5-1/2 x 11-7/8	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14
		7 x 11-1/4	**	**	**	**	**	**
17'	3-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	7 x 14	
	7 x 11-1/4	**	**	**	**	**	**	
18'	3-1/2 x 16	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16	7 x 14	
	7 x 11-1/4	**	**	**	**	**	**	
Live 40 PSF Dead 20 PSF LDF 1.00	8'	3-1/2 x 7-1/4	3-1/2 x 7-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4
		3-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	7 x 7-1/4
	9'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 11-1/4
		5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	5-1/2 x 7-1/4	7 x 7-1/4	7 x 7-1/4	7 x 7-1/4
	10'	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/4	3-1/2 x 9-1/2	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/4
		5-1/2 x 7-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**
	11'	3-1/2 x 9-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/4	5-1/2 x 9-1/2
		5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**
	12'	3-1/2 x 11-1/4	3-1/2 x 11-1/4	3-1/2 x 11-1/4	5-1/2 x 9-1/2	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	7 x 9-1/4	7 x 9-1/4	**	**	**	**
	13'	3-1/2 x 11-1/4	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4
		5-1/2 x 9-1/4	7 x 9-1/4	**	**	**	**	**
	14'	3-1/2 x 11-7/8	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-1/4	5-1/2 x 11-7/8	5-1/2 x 11-7/8	5-1/2 x 14
		7 x 9-1/4	**	**	**	**	**	**
	15'	3-1/2 x 14	5-1/2 x 11-1/4	5-1/2 x 11-7/8	5-1/2 x 11-7/8	5-1/2 x 14	5-1/2 x 14	7 x 11-7/8
		7 x 11-1/4	**	**	**	**	**	**
	16'	3-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	7 x 14
		7 x 11-1/4	**	**	**	**	**	**
17'	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	7 x 14	7 x 14	
	**	**	**	**	**	**	**	
18'	5-1/2 x 14	5-1/2 x 14	5-1/2 x 14	5-1/2 x 16	7 x 14	7 x 14	7 x 16	
	**	**	**	**	**	**	**	

**Notes: (Floor Girder Beams)**

1. This table is for beams carrying floor loads only. For beams supporting both roof and upper floor loads, see floor load tables.
2. Deflection is limited to L/360 for Live Load and L/240 for Total Load.
3. The column spacing equals the design span. The beam is sized to consider simple or continuous beam applications.
4. For bearing lengths longer than 3.0", use the Allowable Floor Load tables to get the required header size.
5. The beam size is based on the load carried by continuous span joists. The beam load is based upon the load from 5/8 of the span of the supported floor joists. The intermediate bearing is assumed to be 6" or 3" corresponding to the 3" or 1-1/2" end bearing conditions, respectively.
6. For simple span floor joists, multiply the sum of the spans by 0.80 and use the calculated span as span of supported joist framing.
7. It is assumed that the beam has the truss or joist framing attached to its top or to the beam sides using hangers, and is supported laterally at the bearing points.
8. For load conditions other than those shown, see Floor Load Table, or use a load condition that applies a higher load than you have.
9. Live load reductions may be taken per BOCA, UBC and SBC. Live load reductions have not been taken to produce the table above.
10. A 9-1/2" header may be used for a 9-1/4" header, and an 11-7/8" for an 11-1/4", etc.

**\*\* These locations require a longer bearing or wider width beam. Consult PLF tables or AFP's WoodWorks Sizer Software for proper beam size.**

**Floor Girder Beam Example Problem I  
For Simple Span Joists**

<b>Load Conditions:</b>	Live = 40 psf Dead = 12 psf LDF = 1.00
<b>Column Spacing:</b>	14'
<b>Span of Supported Joist Framing:</b>	30' (ie., 15' + 15') Use 0.8 x 30 = 24' equivalent
<b>Anthony POWER BEAM® Selected:</b>	3-1/2 x 11-7/8 w/ 2 trimmers

**Floor Girder Beam Example Problem II  
For Continuous Span I-Joists**

<b>Load Conditions:</b>	Live = 40 psf Dead = 12 psf LDF = 1.00
<b>Column Spacing:</b>	14'
<b>Span of Supported Joist Framing:</b>	30' (ie., 15' + 15')
<b>Anthony POWER BEAM® Selected:</b>	5-1/2 x 11-1/4 w/ 2 trimmers

**General Notes for All Size Selection Tables**

1. Beam weight is included in all tables and does not have to be added to the applied load.
2. The top edge of the beam or header is assumed to have continuous lateral support.
3. Beams and headers are assumed to be used under dry conditions and normal temperatures.
4. All tables assume uniform load conditions. Any concentrated load applications must be analyzed separately or converted to an equivalent uniform load.
5. Dead and Live loads used to select a beam or header should be equal to or greater than the actual loads applied.
6. For other beam widths and depths, or for Architectural Grade Appearance Beams, please contact Anthony Forest Products Company or your local dealer.

# Anthony POWER BEAM® 3000 F

## Allowable Floor Load Tables LDF = 1.0

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

**Key - for each clear span there are three numbers:**

Row 1: Maximum Total Load with LDF of 1.0, and deflection limited to L/240

Row 2: Maximum Live Load limited by deflection of L/360

Row 3: Required Bearing Length in trimmer thickness

(e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

### Allowable Loads for Anthony POWER BEAM® in Pounds per Linear Foot

Actual Span	3 1/2"									5 1/2"								
	Depth (in.)									Depth (in.)								
	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18
6'	1697	2764	2902	3680	3986	4242	5154	6481	8103	2666	4344	4560	5783	6263	6665	8099	10184	12733
	1601	2764	2902	3680	3986	4242	5154	6481	8103	2516	4344	4560	5783	6263	6665	8099	10184	12733
	3	4.5	4.5	6	6	6	7.5	9	12	3	4.5	4.5	6	6	6	7.5	9	12
7'	1245	2028	2140	2960	3190	3380	4047	4982	6073	1956	3188	3363	4652	5012	5312	6359	7828	9543
	1008	2028	2140	2960	3190	3380	4047	4982	6073	1584	3188	3363	4652	5012	5312	6359	7828	9543
	3	3	3	4.5	6	6	6	7.5	10.5	3	3	3	4.5	6	6	6	7.5	10.5
8'	951	1551	1636	2296	2559	2780	3330	4045	4855	1495	2437	2571	3609	4022	4368	5233	6356	7629
	675	1403	1520	2296	2559	2780	3330	4045	4855	1061	2204	2388	3609	4022	4368	5233	6356	7629
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	1.5	3	3	4.5	4.5	4.5	6	7.5	9
9'	705	1224	1291	1812	2020	2194	2810	3404	4043	1107	1923	2029	2848	3174	3448	4415	5349	6353
	474	985	1067	1772	2020	2194	2810	3404	4043	745	1548	1677	2785	3174	3448	4415	5349	6353
	1.5	3	3	4.5	4.5	4.5	6	7.5	7.5	1.5	3	3	4.5	4.5	4.5	6	7.5	7.5
10'	512	989	1044	1466	1634	1775	2273	2938	3463	804	1555	1640	2304	2568	2789	3572	4616	5442
	346	718	778	1292	1520	1720	2273	2938	3463	543	1129	1223	2030	2388	2702	3572	4616	5442
	1.5	3	3	4.5	4.5	4.5	6	6	7.5	1.5	3	3	4.5	4.5	4.5	6	6	7.5
11'	383	801	861	1210	1348	1465	1877	2453	3028	602	1258	1353	1901	2119	2302	2949	3855	4758
	260	540	585	971	1142	1292	1871	2453	3028	408	848	919	1525	1794	2030	2940	3855	4758
	1.5	3	3	3	4.5	4.5	6	7.5	7.5	1.5	3	3	3	4.5	4.5	6	6	7.5
12'	293	615	666	1015	1131	1229	1575	2059	2608	461	966	1047	1595	1778	1931	2475	3235	4098
	200	416	450	748	879	995	1441	2059	2608	314	653	707	1175	1382	1564	2264	3235	4098
	1.5	1.5	3	3	3	3	4.5	6	7.5	1.5	1.5	3	3	3	3	4.5	6	7.5
13'	229	482	522	863	962	1045	1340	1752	2220	360	757	821	1356	1512	1643	2105	2753	3488
	157	327	354	588	692	783	1133	1692	2220	247	514	556	924	1087	1230	1781	2658	3488
	1.5	1.5	1.5	3	3	3	4.5	6	6	1.5	1.5	1.5	3	3	3	4.5	6	6
14'	182	384	416	696	819	900	1153	1509	1912	286	603	654	1093	1288	1414	1812	2371	2993
	126	262	284	471	554	627	907	1354	1912	198	411	446	740	870	985	1426	2128	2993
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
15'	147	310	337	564	664	753	1003	1312	1663	231	488	529	886	1044	1183	1576	2060	2595
	102	213	231	383	450	510	738	1101	1568	161	334	362	602	707	801	1159	1731	2464
	1.5	1.5	1.5	3	3	3	4.5	6	6	1.5	1.5	1.5	3	3	3	4.5	6	6
16'	120	254	276	462	545	618	880	1152	1460	188	400	434	727	857	971	1383	1802	2270
	84	175	190	315	371	420	608	907	1292	133	276	298	496	583	660	955	1426	2030
	1.5	1.5	1.5	3	3	3	4.5	6	6	1.5	1.5	1.5	3	3	3	4.5	6	6
17'	99	210	229	384	453	513	747	1018	1291	155	331	359	603	711	807	1174	1588	2002
	70	146	158	263	309	350	507	757	1077	111	230	249	413	486	550	796	1189	1693
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
18'	82	176	191	322	380	431	627	907	1150	129	276	300	505	596	677	986	1410	1777
	59	123	133	222	261	295	427	637	907	93	194	210	348	409	463	671	1001	1426
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
19'	69	148	161	272	321	364	531	798	1030	108	233	253	427	505	573	835	1253	1588
	50	105	113	188	222	251	363	542	772	79	165	178	296	348	394	570	852	1212
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
20'	58	126	137	232	274	311	454	682	928	91	198	215	364	430	488	713	1071	1427
	43	90	97	161	190	215	311	465	662	68	141	153	254	298	338	489	730	1040
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
21'	49	108	117	199	235	267	390	587	839	77	169	184	312	369	419	613	922	1288
	37	78	84	140	164	186	269	401	571	59	122	132	219	258	292	422	631	898
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
22'	42	92	101	171	203	231	337	508	728	66	145	158	269	319	362	530	799	1145
	32	67	73	121	143	161	234	349	497	51	106	115	191	224	254	367	549	781
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
23'	36	80	87	149	176	200	294	443	635	56	125	137	234	277	315	462	696	998
	28	59	64	106	125	141	205	305	435	45	93	100	167	196	222	322	480	683
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
24'	31	69	75	130	154	175	257	388	557	48	109	119	204	241	275	404	610	876
	25	52	56	93	110	124	180	269	383	39	82	88	147	173	195	283	422	602
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
25'	26	60	66	113	135	153	226	342	491	41	95	103	178	212	241	355	537	772
	22	46	50	83	97	110	159	238	339	35	72	78	130	153	173	250	374	532
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
26'	23	53	57	100	118	135	199	302	435	36	83	90	157	186	212	313	475	683
	20	41	44	74	86	98	142	211	301	31	64	70	116	136	154	223	332	473
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
27'	19	46	50	88	105	119	176	268	386	31	72	79	138	164	188	277	421	607
	18	36	40	66	77	87	127	189	269	28	57	62	103	121	137	199	297	422
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
28'	17	40	44	78	93	106	157	239	345	26	63	69	122	145	166	247	375	541
	16	33	35	59	69	78	113	169	241	25	51	56	92	109	123	178	266	379
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
29'	14	35	39	69	82	94	140	213	308	23	56	61	108	129	148	220	335	485
	14	29	32	53	62	71	102	152	217	22	46	50	83	98	111	160	239	341
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
30'	12	31	34	61	73	84	125	191	277	19	49	54	96	115	132	197	301	435
	12	27	29	48	56	64	92	138	196	19	42	45	75	88	100	145	216	308
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
32'	9	24	27	48	58	67	101	155	225	14	38							

# Allowable Floor Load Tables LDF = 1.0

Key - for each clear span there are three numbers:

Row 1: Maximum Total Load with LDF of 1.0, and deflection limited to L/240

Row 2: Maximum Live Load limited by deflection of L/360

Row 3: Required Bearing Length in trimmer thickness (e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

## Allowable Loads for Anthony POWER BEAM® in Pounds per Linear Foot

Actual Span	7"																
	Depth (in.)																
	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18	19 1/4	20 5/8	22	23 3/8	24 3/4	26 1/8	27 1/2	28 7/8
6'	3166	5158	5442	7360	7971	8483	10308	12962	16206	18627	21746	25478	30024	35681	41238	45696	50383
	3166	5158	5442	7360	7971	8483	10308	12962	16206	18627	21746	25478	30024	35681	41238	45696	50383
	3	4.5	4.5	6	6	6	7.5	9	12	13.5	15	18	22.5	27	33	37.5	42
7'	2322	3785	3993	5604	6245	6760	8093	9964	12146	13705	15631	17822	20337	23254	26676	30748	35673
	2016	3785	3993	5604	6245	6760	8093	9964	12146	13705	15631	17822	20337	23254	26676	30748	35673
	3	3	3	4.5	4.5	6	6	7.5	10.5	10.5	12	15	16.5	19.5	22.5	27	31.5
8'	1775	2894	3053	4285	4776	5188	6643	8090	9710	10837	12197	13700	15371	17241	19346	21733	24464
	1351	2805	3039	4285	4776	5188	6643	8090	9710	10837	12197	13700	15371	17241	19346	21733	24464
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	10.5	10.5	12	13.5	16.5	18	21	24
9'	1399	2283	2408	3381	3769	4094	5243	6808	8086	8960	9997	11123	12351	13695	15171	16801	18609
	949	1970	2134	3381	3769	4094	5243	6808	8086	8960	9997	11123	12351	13695	15171	16801	18609
	1.5	3	3	4.5	4.5	4.5	6	7.5	7.5	9	10.5	12	12	13.5	15	18	19.5
10'	1024	1846	1947	2735	3048	3312	4242	5545	6926	7635	8468	9360	10320	11356	12475	13689	15011
	692	1436	1556	2584	3039	3312	4242	5545	6926	7635	8468	9360	10320	11356	12475	13689	15011
	1.5	3	3	3	4.5	4.5	4.5	6	7.5	9	9	10.5	12	12	13.5	15	16.5
11'	766	1522	1606	2257	2516	2733	3501	4577	5777	6540	7220	7944	8714	9536	10414	11356	12367
	520	1079	1169	1941	2283	2584	3501	4577	5777	6540	7220	7944	8714	9536	10414	11356	12367
	1.5	3	3	3	3	3	4.5	6	7.5	7.5	9	9	10.5	12	12	13.5	15
12'	587	1229	1333	1893	2110	2293	2938	3834	4827	5505	6262	6864	7501	8175	8889	9647	10454
	400	831	900	1495	1759	1990	2882	3834	4827	5505	6262	6864	7501	8175	8889	9647	10454
	1.5	1.5	3	3	3	3	4.5	6	6	7.5	9	9	10.5	10.5	12	13.5	13.5
13'	458	963	1044	1610	1795	1950	2499	3249	4092	4666	5341	6026	6565	7132	7729	8359	9024
	315	654	708	1176	1383	1565	2267	3249	4092	4666	5341	6026	6565	7132	7729	8359	9024
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	7.5	7.5	9	9	10.5	10.5	12	13.5
14'	364	768	833	1385	1544	1678	2145	2787	3510	4004	4583	5200	5824	6310	6820	7355	7917
	252	523	567	942	1108	1253	1815	2709	3510	4004	4583	5200	5824	6310	6820	7355	7917
	1.5	1.5	1.5	3	3	3	4.5	6	6	7.5	7.5	9	9	10.5	10.5	12	12
15'	294	621	674	1127	1328	1458	1858	2415	3043	3471	3973	4509	5077	5678	6135	6601	7088
	205	426	461	766	900	1019	1476	2203	3043	3471	3973	4509	5077	5678	6135	6601	7088
	1.5	1.5	1.5	3	3	3	4.5	6	6	6	7.5	9	9	10.5	10.5	12	12
16'	240	508	552	925	1090	1236	1625	2112	2661	3036	3476	3945	4442	4969	5524	6018	6449
	169	351	380	631	742	840	1216	1815	2584	3036	3476	3945	4442	4969	5524	6018	6449
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
17'	197	421	457	768	905	1027	1432	1862	2346	2677	3065	3479	3918	4383	4873	5388	5916
	141	292	317	526	619	700	1014	1513	2154	2635	3065	3479	3918	4383	4873	5388	5916
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	7.5	7.5	9	10.5	10.5	10.5
18'	164	352	382	643	759	861	1254	1652	2083	2377	2722	3090	3480	3893	4328	4786	5267
	119	246	267	443	521	590	854	1275	1815	2220	2722	3090	3480	3893	4328	4786	5267
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	7.5	7.5	9	9	10.5	10.5
19'	137	297	322	544	642	729	1063	1476	1861	2124	2432	2761	3110	3480	3869	4279	4708
	101	209	227	377	443	501	726	1084	1543	1887	2321	2683	3110	3480	3869	4279	4708
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	7.5	7.5	9	9	9
20'	116	252	274	463	547	621	907	1326	1672	1908	2186	2481	2795	3128	3478	3846	4233
	86	180	194	323	380	430	622	929	1323	1618	1990	2300	2759	3128	3478	3846	4233
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	7.5	7.5	9	9
21'	98	215	234	397	470	534	780	1174	1510	1723	1974	2241	2525	2825	3142	3475	3825
	75	155	168	279	328	371	538	803	1143	1398	1719	1987	2384	2825	3142	3475	3825
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	7.5	7.5	9	9
22'	84	185	201	343	406	461	675	1017	1369	1563	1791	2034	2291	2564	2852	3154	3472
	65	135	146	243	285	323	468	698	994	1216	1495	1728	2073	2461	2852	3154	3472
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	7.5	7.5	9	9
23'	72	160	174	297	352	401	587	886	1247	1424	1631	1853	2088	2337	2599	2875	3165
	57	118	128	212	250	283	409	611	870	1064	1309	1513	1814	2154	2533	2875	3165
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	7.5	7.5
24'	61	138	151	259	307	350	514	776	1114	1302	1492	1695	1910	2138	2378	2631	2896
	50	104	113	187	220	249	360	538	766	936	1152	1331	1597	1896	2229	2600	2896
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	7.5	7.5
25'	53	120	131	227	269	307	452	683	982	1194	1369	1555	1753	1962	2183	2415	2659
	44	92	100	165	194	220	319	476	677	829	1019	1178	1413	1677	1972	2300	2659
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	7.5
26'	45	105	115	199	237	270	398	604	869	1068	1260	1432	1614	1807	2011	2225	2449
	39	82	89	147	173	196	283	423	602	737	906	1047	1256	1491	1753	2045	2367
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	7.5
27'	39	92	101	176	209	239	353	536	772	950	1163	1322	1491	1669	1857	2055	2263
	35	73	79	131	154	175	253	378	538	658	809	935	1122	1331	1566	1826	2114
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	7.5
28'	34	81	88	155	185	212	314	478	689	848	1049	1216	1380	1546	1720	1904	2096
	32	65	71	118	138	157	227	339	482	590	725	838	1006	1194	1404	1637	1896
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	6
29'	29	71	78	138	164	188	280	427	617	760	940	1090	1281	1435	1597	1768	1947
	28	59	64	106	125	141	204	305	434	531	653	755	905	1074	1264	1474	1706
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	6
30'	25	62	68	122	146	168	250	383	554	683	845	981	1182	1336	1487	1646	1813
	25	53	58	96	113	127	184	275	392	479	590	682	818	971	1141	1331	1541
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	6	6	6	6	6	6	6
32'	18	48	53	97	117	134	201	310	450	556	690	801	966	1153	1296	1435	1581
	18	44	47	79	93	105	152	227	323	395	486	562	674	800	941	1097	1270
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6							

# Allowable Roof Load Tables LDF = 1.15

**Key - for each clear span there are three numbers:**

Row 1: Maximum Total Load with LDF of 1.15, and deflection limited to L/180

Row 2: Maximum Live Load limited by deflection of L/240

Row 3: Required Bearing Length in trimmer thickness (e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

## Allowable Loads for Anthony POWER BEAM® in Pounds per Linear Foot

Actual Span	3 1/2"								5 1/2"									
	Depth (in.)								Depth (in.)									
	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18
6'	1952	3180	3339	4234	4585	4880	5929	7455	9321	3068	4997	5246	6653	7205	7668	9317	11715	14647
	1952	3180	3339	4234	4585	4880	5929	7455	9321	3068	4997	5246	6653	7205	7668	9317	11715	14647
	3	4.5	4.5	6	6	7.5	9	10.5	13.5	3	4.5	4.5	6	6	7.5	9	10.5	13.5
7'	1432	2334	2462	3406	3670	3889	4656	5731	6986	2251	3668	3869	5352	5767	6111	7316	9006	10979
	1432	2334	2462	3406	3670	3889	4656	5731	6986	2251	3668	3869	5352	5767	6111	7316	9006	10979
	3	4.5	4.5	6	6	6	7.5	9	12	3	4.5	4.5	6	6	6	7.5	9	12
8'	1095	1785	1883	2643	2945	3199	3832	4654	5586	1721	2805	2959	4153	4628	5026	6021	7313	8778
	1013	1785	1883	2643	2945	3199	3832	4654	5586	1592	2805	2959	4153	4628	5026	6021	7313	8778
	3	3	3	4.5	6	6	7.5	9	10.5	3	3	3	4.5	6	6	7.5	9	10.5
9'	864	1408	1486	2086	2324	2525	3233	3917	4652	1357	2213	2335	3278	3653	3968	5081	6155	7310
	712	1408	1486	2086	2324	2525	3233	3917	4652	1118	2213	2335	3278	3653	3968	5081	6155	7310
	3	3	3	4.5	4.5	6	6	7.5	9	3	3	3	4.5	4.5	6	6	7.5	9
10'	685	1139	1202	1687	1881	2043	2616	3380	3985	1076	1790	1889	2652	2955	3210	4111	5312	6262
	519	1077	1167	1687	1881	2043	2616	3380	3985	815	1693	1834	2652	2955	3210	4111	5312	6262
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	1.5	3	3	4.5	4.5	4.5	6	7.5	9
11'	513	940	992	1393	1552	1686	2160	2823	3485	806	1477	1558	2188	2439	2650	3394	4437	5476
	390	809	877	1393	1552	1686	2160	2823	3485	612	1272	1378	2188	2439	2650	3394	4437	5476
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	1.5	3	3	4.5	4.5	4.5	6	7.5	9
12'	393	788	832	1169	1303	1415	1813	2370	3002	618	1239	1307	1836	2047	2224	2849	3724	4717
	300	623	675	1122	1303	1415	1813	2370	3002	472	980	1061	1762	2047	2224	2849	3724	4717
	1.5	3	3	3	4.5	4.5	4.5	6	7.5	1.5	3	3	3	4.5	4.5	4.5	6	7.5
13'	308	645	699	994	1108	1204	1543	2017	2555	484	1014	1099	1562	1742	1892	2424	3170	4015
	236	490	531	882	1037	1174	1543	2017	2555	371	771	835	1386	1630	1845	2424	3170	4015
	1.5	3	3	3	4.5	4.5	4.5	6	7.5	1.5	3	3	3	4.5	4.5	4.5	6	7.5
14'	245	515	558	856	954	1037	1328	1737	2201	385	809	877	1345	1499	1629	2087	2730	3446
	189	393	425	706	831	940	1328	1737	2201	297	617	668	1110	1305	1477	2087	2730	3446
	1.5	1.5	3	3	3	3	4.5	6	7.5	1.5	1.5	3	3	3	3	4.5	6	7.5
15'	198	417	452	744	830	901	1155	1511	1915	311	655	710	1169	1304	1417	1816	2372	2988
	154	319	346	574	675	764	1107	1511	1915	242	502	543	902	1061	1201	1739	2372	2988
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
16'	162	342	371	620	728	791	1014	1327	1681	255	537	583	975	1144	1243	1593	2075	2614
	127	263	285	473	556	630	912	1327	1681	199	413	448	744	874	990	1433	2075	2614
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
17'	134	284	308	515	607	688	897	1173	1487	210	446	484	810	954	1082	1408	1830	2306
	106	219	238	394	464	525	760	1135	1487	166	345	373	620	729	825	1195	1783	2306
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
18'	112	238	258	432	510	578	798	1045	1325	176	373	405	679	801	908	1250	1625	2048
	89	185	200	332	391	442	640	956	1325	140	290	314	522	614	695	1006	1502	2048
	1.5	1.5	1.5	3	3	3	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6	
19'	94	201	218	366	432	490	713	936	1187	148	315	342	575	679	770	1117	1452	1830
	76	157	170	283	332	376	545	813	1157	119	247	267	444	522	591	856	1277	1819
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
20'	80	171	185	312	369	418	609	844	1070	125	268	291	491	579	657	957	1305	1645
	65	135	146	242	285	322	467	697	992	102	212	229	381	448	507	734	1095	1559
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
21'	68	146	159	268	317	360	524	764	967	107	230	250	422	498	565	824	1178	1486
	56	116	126	209	246	279	403	602	857	88	183	198	329	387	438	634	946	1347
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
22'	58	126	137	232	274	311	454	683	878	91	198	215	365	431	489	714	1069	1348
	49	101	110	182	214	242	351	524	745	77	159	172	286	336	381	551	823	1171
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
23'	50	109	119	202	239	271	396	596	800	79	172	187	317	375	426	622	936	1228
	43	89	96	159	187	212	307	458	652	67	139	151	250	294	333	482	720	1025
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
24'	43	95	104	176	209	237	347	523	732	68	149	163	277	328	373	545	821	1124
	38	78	84	140	165	187	270	403	574	59	122	133	220	259	293	425	634	902
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
25'	37	83	91	155	183	208	305	461	660	59	131	142	243	288	327	480	724	1031
	33	69	75	124	146	165	239	357	508	52	108	117	195	229	259	376	561	798
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
26'	32	73	80	136	162	184	270	408	585	51	115	125	214	254	289	424	641	919
	30	61	66	110	130	147	212	317	452	46	96	104	173	204	231	334	498	710
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
27'	28	64	70	121	143	163	240	362	521	44	101	110	190	225	256	377	570	818
	26	55	59	98	116	131	190	283	403	41	86	93	155	182	206	298	445	634
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
28'	25	57	62	107	127	145	214	323	465	39	89	97	168	200	228	336	508	731
	24	49	53	88	104	118	170	254	362	37	77	84	139	163	185	267	399	568
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
29'	21	50	55	95	113	129	191	290	417	34	79	86	150	178	203	300	455	655
	21	44	48	79	93	106	153	229	325	33	69	75	125	147	166	241	359	511
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
30'	19	44	49	85	101	116	171	260	375	29	70	76	134	159	182	269	409	589
	19	40	43	72	84	96	138	206	294	29	63	68	113	133	150	217	324	462
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
32'	14																	

# Anthony POWER BEAM® 2800 F

## Allowable Roof Load Tables LDF = 1.15

Key - for each clear span there are three numbers:

Row 1: Maximum Total Load with LDF of 1.15, and deflection limited to L/180

Row 2: Maximum Live Load limited by deflection of L/240

Row 3: Required Bearing Length in trimmer thickness (e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

### Allowable Loads for Anthony POWER BEAM® in Pounds per Linear Foot

Actual Span	7"																
	Depth (in.)																
	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18	19 1/4	20 5/8	22	23 3/8	24 3/4	26 1/8	27 1/2	28 7/8
6'	3643	5935	6260	8468	9170	9759	11858	14910	18642	21427	25014	29306	34534	41040	47432	52559	57949
	3643	5935	6260	8468	9170	9759	11858	14910	18642	21427	25014	29306	34534	41040	47432	52559	57949
	3	4.5	4.5	6	6	7.5	9	10.5	13.5	15	18	22.5	27	33	39	45	51
7'	2673	4356	4595	6447	7185	7778	9311	11463	13973	15766	17982	20502	23395	26749	30685	35368	41032
	2673	4356	4595	6447	7185	7778	9311	11463	13973	15766	17982	20502	23395	26749	30685	35368	41032
	3	4.5	4.5	6	6	7.5	9	12	13.5	15	18	22.5	27	33	39	45	51
8'	2043	3331	3514	4931	5496	5969	7643	9308	11171	12468	14032	15761	17684	19834	22255	25001	28142
	2026	3331	3514	4931	5496	5969	7643	9308	11171	12468	14032	15761	17684	19834	22255	25001	28142
	3	3	3	4.5	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	21	24	27
9'	1611	2628	2772	3892	4338	4712	6034	7833	9304	10309	11502	12798	14210	15756	17454	19329	21409
	1423	2628	2772	3892	4338	4712	6034	7833	9304	10309	11502	12798	14210	15756	17454	19329	21409
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5	22.5
10'	1303	2125	2242	3148	3509	3812	4882	6381	7970	8786	9744	10771	11875	13066	14354	15751	17271
	1037	2125	2242	3148	3509	3812	4882	6381	7970	8786	9744	10771	11875	13066	14354	15751	17271
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	10.5	10.5	12	13.5	15	16.5	18	19.5
11'	1025	1753	1850	2598	2896	3146	4030	5268	6648	7526	8309	9142	10028	10973	11984	13067	14231
	779	1619	1754	2598	2896	3146	4030	5268	6648	7526	8309	9142	10028	10973	11984	13067	14231
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	10.5	10.5	12	13.5	15	16.5	18	19.5
12'	787	1471	1552	2180	2430	2640	3382	4413	5557	6336	7207	7900	8633	9408	10230	11102	12031
	600	1247	1351	2180	2430	2640	3382	4413	5557	6336	7207	7900	8633	9408	10230	11102	12031
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	9	10.5	10.5	12	12	13.5	15	16.5
13'	616	1250	1319	1854	2067	2246	2878	3741	4711	5372	6148	6937	7557	8209	8896	9621	10386
	472	981	1062	1764	2067	2246	2878	3741	4711	5372	6148	6937	7557	8209	8896	9621	10386
	1.5	3	3	4.5	4.5	4.5	6	7.5	7.5	9	10.5	10.5	12	12	13.5	15	15
14'	490	1029	1116	1596	1779	1933	2470	3209	4042	4610	5276	5986	6704	7264	7851	8467	9113
	378	785	851	1413	1661	1880	2470	3209	4042	4610	5276	5986	6704	7264	7851	8467	9113
	1.5	1.5	3	3	3	4.5	4.5	6	7.5	7.5	9	10.5	10.5	12	13.5	13.5	15
15'	396	834	904	1387	1547	1681	2141	2782	3504	3997	4575	5191	5845	6537	7062	7599	8159
	307	638	692	1148	1351	1529	2141	2782	3504	3997	4575	5191	5845	6537	7062	7599	8159
	1.5	1.5	1.5	3	3	4.5	4.5	6	7.5	7.5	9	9	10.5	12	12	13.5	13.5
16'	324	684	742	1217	1355	1469	1872	2433	3066	3497	4003	4543	5115	5721	6360	6928	7425
	253	526	570	946	1113	1260	1824	2433	3066	3497	4003	4543	5115	5721	6360	6928	7425
	1.5	1.5	1.5	3	3	3	4.5	6	6	7.5	7.5	9	9	10.5	10.5	12	13.5
17'	268	567	615	1031	1194	1295	1650	2145	2703	3084	3531	4007	4512	5047	5611	6204	6811
	211	439	475	789	928	1050	1520	2145	2703	3084	3531	4007	4512	5047	5611	6204	6811
	1.5	1.5	1.5	3	3	3	4.5	6	6	7.5	7.5	9	9	10.5	10.5	12	12
18'	223	475	516	865	1020	1149	1465	1905	2401	2739	3136	3559	4009	4484	4985	5512	6065
	178	369	400	665	782	885	1281	1905	2401	2739	3136	3559	4009	4484	4985	5512	6065
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	10.5	10.5	12	12
19'	188	401	436	732	864	979	1309	1702	2145	2448	2803	3182	3583	4009	4457	4928	5423
	151	314	340	565	665	752	1089	1626	2145	2448	2803	3182	3583	4009	4457	4928	5423
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
20'	159	342	371	625	737	836	1175	1529	1928	2200	2519	2860	3221	3604	4007	4431	4876
	130	269	292	484	570	645	934	1394	1928	2200	2519	2860	3221	3604	4007	4431	4876
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
21'	136	293	318	537	634	719	1049	1381	1741	1987	2276	2584	2910	3256	3621	4004	4407
	112	233	252	419	492	557	807	1204	1714	1987	2276	2584	2910	3256	3621	4004	4407
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
22'	116	252	274	464	548	623	909	1252	1580	1803	2065	2345	2642	2956	3287	3635	4001
	97	202	219	364	428	484	702	1047	1491	1803	2065	2345	2642	2956	3287	3635	4001
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
23'	100	219	238	403	477	542	792	1141	1439	1643	1882	2137	2408	2694	2996	3314	3648
	85	177	192	319	375	424	614	916	1305	1596	1882	2137	2408	2694	2996	3314	3648
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
24'	86	190	207	353	417	474	694	1043	1316	1502	1721	1955	2203	2465	2742	3033	3338
	75	156	169	280	330	373	540	807	1148	1405	1721	1955	2203	2465	2742	3033	3338
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
25'	75	166	181	309	366	417	611	921	1208	1379	1580	1795	2022	2264	2518	2785	3066
	66	138	149	248	292	330	478	714	1016	1243	1529	1767	2022	2264	2518	2785	3066
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
26'	65	146	159	273	323	368	540	816	1112	1270	1455	1653	1863	2085	2320	2566	2825
	59	123	133	221	259	294	425	634	903	1105	1359	1571	1863	2085	2320	2566	2825
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
27'	57	128	140	241	286	326	479	725	1026	1172	1344	1527	1721	1926	2143	2371	2610
	53	109	119	197	232	262	380	566	807	987	1213	1403	1682	1926	2143	2371	2610
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
28'	49	113	124	214	254	290	427	647	930	1085	1244	1414	1594	1785	1986	2197	2419
	47	98	106	177	208	235	340	508	723	885	1088	1258	1508	1785	1986	2197	2419
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
29'	43	100	110	191	227	259	382	579	834	1008	1155	1313	1480	1657	1844	2041	2247
	43	88	96	159	187	212	306	457	651	796	979	1132	1358	1612	1844	2041	2247
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
30'	37	89	97	170	203	231	342	520	750	922	1075	1222	1378	1543	1717	1900	2093
	37	80	86	144	169	191	277	413	588	719	885	1022	1226	1456	1712	1900	2093
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	6	7.5	7.5	9	9	10.5	10.5	10.5
32'	28	70	77	136	163	186	277	423	612	754	933	1065	1202				

# Allowable Roof Load Tables LDF = 1.25\*

Key - for each clear span there are three numbers:

Row 1: Maximum Total Load with LDF of 1.25, and deflection limited to L/180

Row 2: Maximum Live Load limited by deflection of L/240

Row 3: Required Bearing Length in trimmer thickness (e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.)

These tables can be used to size simple span beams and headers that carry uniform loads. The PLF loads must be calculated and take into account all floor and roof framing loads coming onto the beam or header.

## Allowable Loads for Anthony POWER BEAM® in Pounds per Linear Foot

Actual Span	3 1/2"									5 1/2"								
	Depth (in.)									Depth (in.)								
	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18	7 1/4	9 1/4	9 1/2	11 1/4	11 7/8	12 3/8	14	16	18
6'	2122	3457	3630	4603	4985	5305	6446	8105	10133	3335	5433	5704	7233	7833	8336	10129	12736	15923
	2122	3457	3630	4603	4985	5305	6446	8105	10133	3335	5433	5704	7233	7833	8336	10129	12736	15923
	3	4.5	4.5	6	7.5	7.5	9	12	15	3	4.5	4.5	6	7.5	7.5	9	12	15
7'	1557	2538	2677	3703	3990	4228	5062	6231	7595	2447	3988	4207	5819	6270	6644	7954	9792	11936
	1512	2538	2677	3703	3990	4228	5062	6231	7595	2376	3988	4207	5819	6270	6644	7954	9792	11936
	3	4.5	4.5	6	6	7.5	7.5	10.5	12	3	4.5	4.5	6	6	7.5	7.5	10.5	12
8'	1191	1941	2047	2873	3202	3478	4166	5060	6073	1871	3050	3217	4515	5032	5465	6547	7951	9543
	1013	1941	2047	2873	3202	3478	4166	5060	6073	1592	3050	3217	4515	5032	5465	6547	7951	9543
	3	4.5	4.5	6	6	6	7.5	9	10.5	3	4.5	4.5	6	6	6	7.5	9	10.5
9'	939	1532	1616	2268	2528	2745	3516	4259	5058	1476	2407	2539	3564	3972	4314	5524	6692	7948
	712	1478	1601	2268	2528	2745	3516	4259	5058	1118	2322	2516	3564	3972	4314	5524	6692	7948
	3	3	3	4.5	6	6	7.5	9	10.5	3	3	3	4.5	6	6	7.5	9	10.5
10'	685	1239	1307	1835	2045	2222	2845	3676	4333	1076	1947	2054	2884	3214	3491	4471	5776	6809
	519	1077	1167	1835	2045	2222	2845	3676	4333	815	1693	1834	2884	3214	3491	4471	5776	6809
	1.5	3	3	4.5	4.5	4.5	6	9	9	1.5	3	3	4.5	4.5	4.5	6	9	9
11'	513	1022	1079	1515	1688	1834	2349	3070	3789	806	1607	1695	2380	2653	2882	3691	4825	5954
	390	809	877	1456	1688	1834	2349	3070	3789	612	1272	1378	2288	2653	2882	3691	4825	5954
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	1.5	3	3	4.5	4.5	4.5	6	7.5	9
12'	393	822	891	1271	1417	1539	1972	2577	3264	618	1292	1401	1997	2226	2419	3098	4050	5129
	300	623	675	1122	1319	1493	1972	2577	3264	472	980	1061	1762	2073	2346	3098	4050	5129
	1.5	3	3	4.5	4.5	4.5	6	7.5	9	1.5	3	3	4.5	4.5	4.5	6	7.5	9
13'	308	645	699	1081	1206	1310	1678	2194	2779	484	1014	1099	1699	1895	2058	2637	3448	4367
	236	490	531	882	1037	1174	1678	2194	2779	371	771	835	1386	1630	1845	2637	3448	4367
	1.5	3	3	3	4.5	4.5	6	7.5	7.5	1.5	3	3	3	4.5	4.5	6	7.5	7.5
14'	245	515	558	931	1038	1128	1445	1890	2394	385	809	877	1463	1631	1772	2271	2969	3748
	189	393	425	706	831	940	1361	1890	2394	297	617	668	1110	1305	1477	2139	2969	3748
	1.5	1.5	3	3	3	4.5	4.5	6	7.5	1.5	1.5	3	3	3	4.5	4.5	6	7.5
15'	198	417	452	755	889	981	1257	1644	2083	311	655	710	1186	1397	1541	1975	2581	3250
	154	319	346	574	675	764	1107	1644	2083	242	502	543	902	1061	1201	1739	2581	3250
	1.5	1.5	1.5	3	3	3	4.5	6	7.5	1.5	1.5	1.5	3	3	3	4.5	6	7.5
16'	162	342	371	620	731	828	1103	1443	1829	255	537	583	975	1148	1301	1734	2258	2844
	127	263	285	473	556	630	912	1361	1829	199	413	448	744	874	990	1433	2139	2844
	1.5	1.5	1.5	3	3	3	4.5	6	6	1.5	1.5	1.5	3	3	3	4.5	6	6
17'	134	284	308	515	607	688	976	1277	1618	210	446	484	810	954	1082	1532	1991	2509
	106	219	238	394	464	525	760	1135	1616	166	345	373	620	729	825	1195	1783	2509
	1.5	1.5	1.5	3	3	3	4.5	4.5	6	1.5	1.5	1.5	3	3	3	4.5	4.5	6
18'	112	238	258	432	510	578	841	1137	1441	176	373	405	679	801	908	1321	1768	2228
	89	185	200	332	391	442	640	956	1361	140	290	314	522	614	695	1006	1502	2139
	1.5	1.5	1.5	3	3	3	3	4.5	6	1.5	1.5	1.5	3	3	3	3	4.5	6
19'	94	201	218	366	432	490	713	1019	1292	148	315	342	575	679	770	1120	1580	1992
	76	157	170	283	332	376	545	813	1157	119	247	267	444	522	591	856	1277	1819
	1.5	1.5	1.5	3	3	3	3	4.5	6	1.5	1.5	1.5	3	3	3	3	4.5	6
20'	80	171	185	312	369	418	609	914	1164	125	268	291	491	579	657	957	1420	1790
	65	135	146	242	285	322	467	697	992	102	212	229	381	448	507	734	1095	1559
	1.5	1.5	1.5	3	3	3	3	4.5	6	1.5	1.5	1.5	3	3	3	3	4.5	4.5
21'	68	146	159	268	317	360	524	787	1053	107	230	250	422	498	565	824	1237	1617
	56	116	126	209	246	279	403	602	857	88	183	198	329	387	438	634	946	1347
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
22'	58	126	137	232	274	311	454	683	956	91	198	215	365	431	489	714	1073	1468
	49	101	110	182	214	242	351	524	745	77	159	172	286	336	381	551	823	1171
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
23'	50	109	119	202	239	271	396	596	853	79	172	187	317	375	426	622	936	1338
	43	89	96	159	187	212	307	458	652	67	139	151	250	294	333	482	720	1025
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
24'	43	95	104	176	209	237	347	523	749	68	149	163	277	328	373	545	821	1176
	38	78	84	140	165	187	270	403	574	59	122	133	220	259	293	425	634	902
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
25'	37	83	91	155	183	208	305	461	660	59	131	142	243	288	327	480	724	1038
	33	69	75	124	146	165	239	357	508	52	108	117	195	229	259	376	561	798
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
26'	32	73	80	136	162	184	270	408	585	51	115	125	214	254	289	424	641	919
	30	61	66	110	130	147	212	317	452	46	96	104	173	204	231	334	498	710
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
27'	28	64	70	121	143	163	240	362	521	44	101	110	190	225	256	377	570	818
	26	55	59	98	116	131	190	283	403	41	86	93	155	182	206	298	445	634
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
28'	25	57	62	107	127	145	214	323	465	39	89	97	168	200	228	336	508	731
	24	49	53	88	104	118	170	254	362	37	77	84	139	163	185	267	399	568
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
29'	21	50	55	95	113	129	191	290	417	34	79	86	150	178	203	300	455	655
	21	44	48	79	93	106	153	229	325	33	69	75	125	147	166	241	359	511
	1.5	1.5	1.5	3	3	3	3	4.5	4.5	1.5	1.5	1.5	3	3	3	3	4.5	4.5
30'	19	44	49	85	101	116	171	260	375	29	70	76	134	159	182	269	409	589
	19	40	43	72	84	96	138	206	294									

# Anthony POWER BEAM® 3000 F

## Notes For Allowable Load Tables

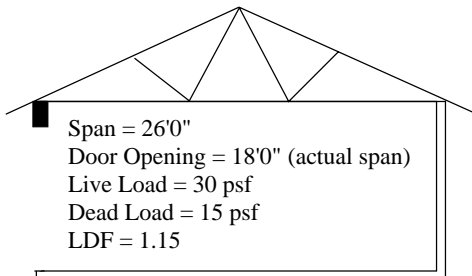
1. Values shown are the maximum uniform loads in pounds per lineal foot (PLF) that can be applied to the beam. Beam weight has been subtracted from the allowable load. Load tables are based on dry use conditions.
2. LDF = Load Duration Factor per code requirements.
3. Bearing length shown is required at each end of header, and is based on an allowable bearing stress of 740 psi. The beam must be sitting directly on top of 1 or more trimmers. A longer bearing length may be required depending on the material that the beam is bearing on. For example, if the beam is sitting on a SPF top plate, a longer bearing length will be required due to the lower compression perpendicular-to-grain design value for SPF.
4. The bearing lengths show the number of trimmers needed (e.g., 1.5 = 1 trimmer, 3.0 = 2 trimmers, etc.). This is based on the maximum PLF loads. Shorter bearing lengths may be used with lighter loads.
5. Tables are based on simple span conditions using the actual span as the center-to-center of bearing.
6. The beam is assumed to be loaded on the top edge and supported at bearing points.
7. For deflection limits of  $L/240$  and  $L/480$ , multiply the Maximum Live Load figure (Row 2) by 1.5 and 0.75, respectively. For deflection factors of  $L/180$  and  $L/360$ , multiply the Maximum Live Load figure (row 2) by 1.333 and 0.667, respectively. The result shall not exceed the Total Load Figure (Row 1).
8. A 9-1/2" depth member may be substituted for a 9-1/4" member, and an 11-7/8" for an 11-1/4", etc.

### Steps in Sizing Beams or Headers:

1. Determine the Total Load (live + dead) on the beam in PLF (pounds per lineal foot)
2. Determine the Live Load in PLF.
3. Find the actual span that is the same or greater than the span you have.
4. From the actual span row selected, find the PLF load that meets or exceeds the required PLF load for Total Load (Row 1) and Live Load (Row 2). The required bearing length is given in Row 3.
5. The beam size is found at the top of the column of the selected cell that meets all of your conditions.
6. If the beam selected is too deep or the bearing length too long, continue in the selected row to find another possibility.

### Examples Using Allowable PLF Tables

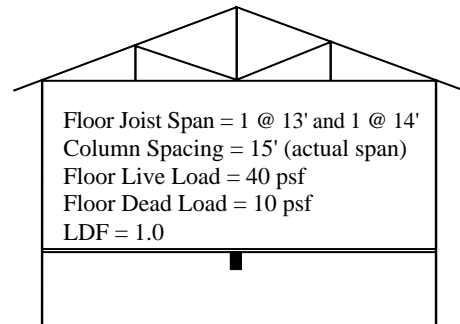
#### Allowable PLF Calculation for Roof Loads



$$\text{Total Load} = (26'0" + 2') \times 45 \text{ psf} (30 + 15) = 675 \text{ plf}$$
$$\text{Live Load} = (26'0" + 2') \times 30 \text{ psf} = 450 \text{ plf}$$

Go to the allowable roof load table using LDF=1.15 and find the 18' actual span row. Using the top row, find a Total Load greater than 675 plf (3-1/2 x 14). Using the middle row, find a Live Load greater than 450 plf (3-1/2 x 14). You must select the larger of the two beams, or 3-1/2 x 14 with 4-1/2" (3 trimmers) of bearing. You could also use the 5-1/2 x 11-1/4 if you only had 3" (2 trimmers) of bearing.

#### Allowable PLF Calculation for Floor Loads



$$\text{Total Load} = (13'2 + 14'2) \times 50 \text{ psf} (40 + 10) = 675 \text{ plf}$$
$$\text{Live Load} = (13'2 + 14'2) \times 40 \text{ psf} = 540 \text{ plf}$$

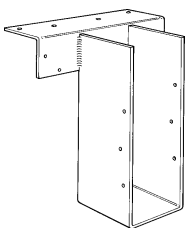
Go to the allowable floor load table and find the 15' actual span. Using the top row, find a total load greater than 675 plf (3-1/2 x 14). Using the middle row, find a live load greater than 540 plf (3-1/2 x 14). You must select the larger of the two beams, or 3-1/2 x 14, and use 3.0" (2 trimmers) of bearing. You could also use a 5-1/2 x 11-1/4 beam with 3" (2 trimmers) of bearing.

Top Mount Hangers				Face Mount Hangers			
Supported Member Width	Supported Member Depth	Hanger	Maximum Load (lbs.)	Supported Member Width	Supported Member Depth	Hanger	Maximum Load (lbs.)
3-1/2"	7-1/4"	WAU3.50/7.25	4165	3-1/2"	7-1/4"	HHUS48	3885
3-1/2"	9-1/4"	HWU3.56/9.25	6335	3-1/2"	9-1/4" - 9-1/2"	HHUS410	5190
		GLTV3.56/9.25	7000			HGUS410	7890
3-1/2"	9-1/2"	HWU3.56/9.5	6335	3-1/2"	11-1/4" - 11-7/8"	HHUS410	5190
		GLTV3.59	7000			HGUS412	9535
3-1/2"	11-1/4"	HWU3.56/11.25	6335	3-1/2"	14" - 18"	HHUS410	5190
		GLTV3.56/11.25	7000			HGUS414	11180
3-1/2"	11-7/8"	HWU3.56/11.88	6335	5-1/2"	7-1/4"	HU5.62/7.25	1875
		GLTV3.511	7000				
3-1/2"	14"	HWU3.56/14	6335	5-1/2"	9-1/4" - 9-1/2"	HGUS5.62/10	7890
		GLTV3.514	7000				
3-1/2"	16"	HWU3.56/16	6335	5-1/2"	11-1/4" - 11-7/8"	HGUS5.62/12	9535
		GLTV3.516	7000				
3-1/2"	18"	HWU3.56/18	6335	5-1/2"	14" - 18"	HGUS5.62/14	11180
		GLTV3.518	7000				
5-1/2"	7-1/4"	WPU5.62/7.25	4165	7"	9-1/4" - 9-1/2"	HHUS7.25/10	5190
						HGUS7.25/10	7890
5-1/2"	9-1/4"	GLTV5.50/9.25	7000	7"	11-1/4" - 11-7/8"	HHUS7.25/10	5190
						HGUS7.25/12	9530
5-1/2"	9-1/2"	GLTV5.59	7000	7"	14" - 18"	HHUS7.25/10	5190
		HGLTV5.59	8665			HGUS7.25/14	9665
5-1/2"	11-1/4"	GLTV5.50/11.25	7000				
5-1/2"	11-7/8"	GLTV5.511	7000				
		HGLTV5.511	8665				
5-1/2"	14"	GLTV5.514	7000				
		HGLTV5.514	8665				
5-1/2"	16"	GLTV5.516	7000				
		HGLTV5.516	8665				
5-1/2"	18"	GLTV5.518	7000				
		HGLTV5.518	8665				
7"	9-1/4"	HWU7.12/9.25	6000				
		GLTV49.25-2	7000				
7"	9-1/2"	HWU7.12/9.5	6000				
		GLTV49.5-2	7000				
7"	11-1/4"	HWU7.12/11.25	6000				
		HGLTV411.25-2	8665				
7"	11-7/8"	HWU7.12/11.88	6000				
		HGLTV411.88-2	8665				
7"	14"	HWU7.12/14	6000				
		HGLTV414-2	8665				
7"	16"	HWU7.12/16	6000				
		HGLTV416-2	8665				
7"	18"	HWU7.12/18	6000				
		HGLTV418-2	8665				

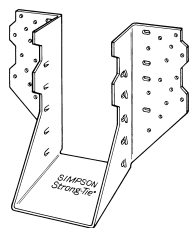
**Notes:**

1. Maximum loads shown are based on 3-1/2" minimum Power Beam header for floor loads at 100% duration. Consult *Simpson's Wood Construction Connectors* catalog for allowable increases when other load durations apply and for installation information. Hangers only achieve maximum load capacity when all nail holes are filled with the proper size nails and the minimum nail penetration. Full bearing is required at hanger seat. Hanger values listed are for dry service conditions only.
2. Top flange hanger configuration and thickness of top flange need to be considered for flush frame conditions.

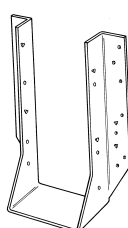
**HWU**



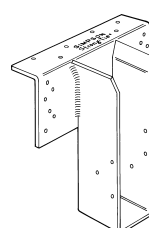
**HGUS**



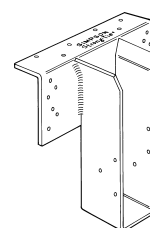
**HU**



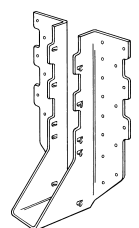
**HGLTV**



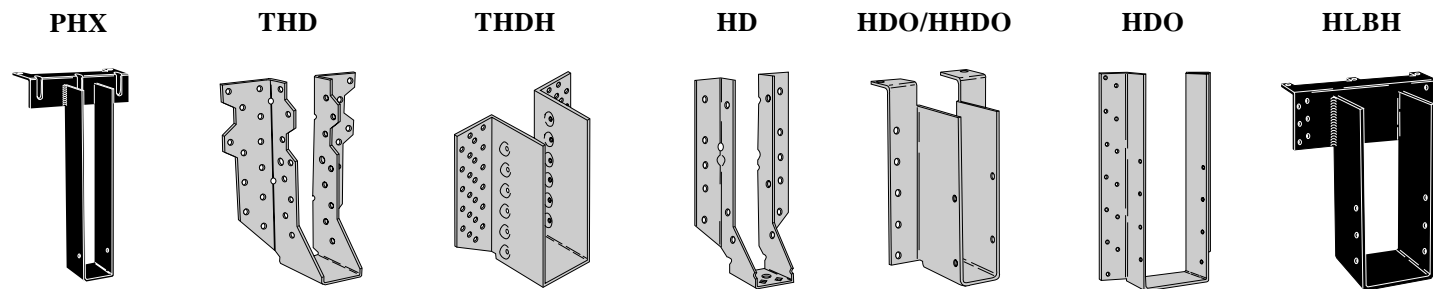
**GLTV**



**HHUS**



Top Mount Hangers				Face Mount Hangers			
Supported Member Width	Supported Member Depth	Hanger	Maximum Load (lbs.)	Supported Member Width	Supported Member Depth	Hanger	Maximum Load (lbs.)
3-1/2"	7-1/4"	HDO48	2855	3-1/2"	7-1/4"	THD48	3750
		HHDO48	3985			THDH48	6205
3-1/2"	9-1/4"	PHX35925	5355	3-1/2"	9-1/4" - 9-1/2"	THD410	5090
		HLBH35925	10565			THDH410	7840
3-1/2"	9-1/2"	PHX3595	5355	3-1/2"	11-1/4" - 11-7/8"	THD412	6430
		HLBH3595	10565			THDH412	9475
3-1/2"	11-1/4"	PHX35112	5355	3-1/2"	14" - 18"	THD414	7770
		HLBH35112	10565			THDH414	10990
3-1/2"	11-7/8"	PHX35118	5355	5-1/2"	7-1/4"	HD68	1630
		HLBH35118	10565			HHDH68	1955
3-1/2"	14"	PHX3514	5355	5-1/2"	9-1/4" - 9-1/2"	THDH610	7840
		HLBH3514	10565				
3-1/2"	16"	PHX3516	5355	5-1/2"	11-1/4" - 11-7/8"	THDH612	9475
		HLBH3516	10565				
3-1/2"	18"	PHX3518	5355	5-1/2"	14" - 18"	THDH614	11105
		HLBH3518	10565				
5-1/2"	7-1/4"	HDO68	2855	7"	9-1/4" - 9-1/2"	THDH7210	7840
		HHDO68	3985				
5-1/2"	9-1/4"	PHX55925	5680	7"	11-1/4" - 11-7/8"	THDH7212	9475
		HLBH55925	10565				
5-1/2"	9-1/2"	PHX5595	5680	7"	14" - 18"	THDH7214	11105
		HLBH5595	10565				
5-1/2"	11-1/4"	PHX55112	5680	<b>Notes:</b> 1. Maximum loads shown are based on 3-1/2" minimum Power Beam header for floor loads at 100% duration. Consult <i>USP Full Line Catalog</i> or <i>EWP Product Guide and Design Manual</i> for allowable increases when other load durations apply. Hangers only achieve maximum load capacity when all nail holes are filled with the proper size nails and the minimum nail penetration. Full bearing is required at hanger seat. Hanger values listed are for dry service conditions only.  2. Top flange hanger configuration and thickness of top flange need to be considered for flush frame conditions.			
		HLBH55112	10565				
5-1/2"	11-7/8"	PHX55118	5680				
		HLBH55118	10565				
5-1/2"	14"	PHX5514	5680				
		HLBH5514	10565				
5-1/2"	16"	PHX5516	5680				
		HLBH5516	10565				
5-1/2"	18"	PHX5518	5680				
		HLBH5518	10565				
7"	9-1/4"	PHX35925-2	5680				
		HLBH71925	10370				
7"	9-1/2"	PHX3595-2	5680				
		HLBH7195	10370				
7"	11-1/4"	PHX35112-2	5680				
		HLBH71112	10370				
7"	11-7/8"	PHX35118-2	5680				
		HLBH71118	10370				
7"	14"	PHX3514-2	5680				
		HLBH7114	10370				
7"	16"	PHX3516-2	5680				
		HLBH7116	10370				
7"	18"	PHX3518-2	5680				
		HLBH7118	10370				



# POWER BEAM® Design Properties

## Allowable Design Stresses (psi)

	Flexural Stress** F <sub>b</sub>		Tension Parallel to Grain F <sub>t</sub>	Compression Perpendicular to Grain F <sub>c⊥</sub>	Horizontal Shear *** F <sub>v</sub>		Modulus of Elasticity E	
3-1/2" & 5-1/2"	3000		1250	740	290		2,100,000	
7"	2800		1300	740	290		2,100,000	
<b>3-1/2" BEAM WIDTH</b>								
Depth (in)	7¼	9¼	9½	11¼	11⅞	14	16	18
Weight* (lbs/ft)	6.9	8.8	9.0	10.7	11.3	13.3	15.2	17.1
C <sub>db</sub> Factor (L=21')	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.999
I (in <sup>4</sup> )	111	231	250	415	488	800	1195	1701
Moment Capacity (lbs-ft)	7665	12478	13161	18457	20565	28583	37333	47193
Shear Capacity (lbs)	4906	6259	6428	7613	8035	9473	10827	12180
<b>5-1/2" BEAM WIDTH</b>								
Depth (in)	7¼	9¼	9½	11¼	11⅞	14	16	18
Weight* (lbs/ft)	10.8	13.8	14.2	16.8	17.7	20.9	23.8	26.8
C <sub>db</sub> Factor (L=21')	1.000	1.000	1.000	1.000	0.997	0.989	0.982	0.976
I (in <sup>4</sup> )	175	363	393	653	768	1258	1877	2673
Moment Capacity (lbs-ft)	12046	19608	20682	28995	32219	44415	57625	72503
Shear Capacity (lbs)	7709	9836	10102	11963	12627	14887	17013	19140
<b>7" BEAM WIDTH</b>								
Depth (in)	9¼	9½	11¼	11⅞	14	16	18	19¼
Weight* (lbs/ft)	17.5	18.0	21.3	22.5	26.5	30.3	34.1	36.5
C <sub>db</sub> Factor (L=21')	0.997	0.996	0.988	0.985	0.977	0.970	0.985	0.962
I (in <sup>4</sup> )	452	500	831	977	1601	2389	3402	4161
Moment Capacity (lbs-ft)	23232	24472	34030	37814	52127	67631	85093	96996
Shear Capacity (lbs)	12518	12857	15225	16071	18947	21653	24360	26052

\* Beam Weights are based on 39 pcf.

\*\* Flexural Stress, F<sub>b</sub>, shall be modified by Volume Factor, C<sub>v</sub>, as outlined in BOCA Report 97-37, SBCCI Report 9625B, ICBO 5263, LA City RR 25381, and AITC 117-Design where;

$$C_v = K_L \times [(21/L)^{0.05} \times (12/d)^{0.05} \times (5.125/b)^{0.05}] \leq 1.0$$

where: K<sub>L</sub> = loading coefficient (1.0 for uniformly distributed),  
L = length of bending member between points of zero moment, ft.,  
d = depth of bending member, in.,  
b = width of bending member, in.

Tabulated Moment Capacities are based on a span of 21 feet and must be modified for other spans. Width and depth portions of Volume Factor, C<sub>v</sub>, are incorporated in tabulated Moment Capacities using C<sub>db</sub> Factor.

\*\*\* Horizontal Shear Stress, F<sub>v</sub>, shall be modified by Shear Factor, C<sub>H</sub>, as outlined in BOCA Report 97-37 & SBCCI Report 9625B where; Horizontal Shear Factor, C<sub>H</sub>, not applicable under ICBO 5623 and LA City RR 25381, F<sub>v</sub>=290 psi.

$$0.93 \leq C_H = K_L \times [850/(b \times L)]^{0.2} \leq 1.0$$

where: K<sub>L</sub> = loading coefficient (1.0 for uniformly distributed),  
b = width of beam, in.,  
L = span of beam, in.

Tabulated Shear Capacities are based on a horizontal shear area of 850 in<sup>2</sup> and must be reduced for larger shear areas using Shear Factor, C<sub>H</sub>, adjustment.

**Note:** Allowable design properties and load capacities are based on a load duration of 100 percent and dry use conditions.